

| QUERY                  | 1   | 10  | 20  | 30 | 40 |
|------------------------|---|---|---|----|----|
| UniRef90_E1ZKH6        | P   | V I Q T F V S T P L D H H K R E N   | L A Q V Y R A V T R D V L G K P E D L V M M |    |    |
| UniRef90_Q02960        | P T F N L   | Q T N V P G D R V S A S Q I V A D L S K A V A Q A T G K P E G Y V M V       |   |    |    |
| UniRef90_A9SRE7        | P M F T I   | H T N V C K D A V P D S D I L L G E L T Q Q L A K A T G K P A Q Y I A V     |   |    |    |
| UniRef90_D8QR97        | P T L N L   | S T N V P L D G V V T S D I L L K D A S K A V A Q I L S K P E S Y V L I     |   |    |    |
| UniRef90_D8R6J7        | P T L N I   | S T N V P L D G V V T S D I L L K D A S R T V A R V L G K P E S Y V M I     |   |    |    |
| UniRef90_F7DCF9        | P I F T L   | Q T N V S R A A V P A D T L L S D L T K Q L A K A T G K P A Q Y I A V       |   |    |    |
| UniRef90_Q76BK2        | P V F T I   | R T N V C R D S V P D S L L S E L L T S Q L A K A T G K P P Q Y I A V       |   |    |    |
| UniRef90_H9H6Q2        | P M F V L   | T N V P R S A V P D S L L S E L L T S Q L A K A T G K P V Q Y V A V         |   |    |    |
| UniRef90_Q7ZZB8        | P T F V I   | H T N V S A D R V S A S V H D E V T A L V A K A L G K P V Q Y V A V         |   |    |    |
| UniRef90_Q0ZBR7        | P M F V W   | N T V N V A K D S V P A E D L L S E A T Q E L A K A M G K P Q Q Y I A V     |   |    |    |
| UniRef90_A9NRK6        | P T L N L   | S T N V P V D S V S S D I L L K D A S K V A R I I G K P E S Y V M V         |   |    |    |
| UniRef90_D4ZT52        | P L I K V   | K T S I S Q P K S Q V E S I L L K D L S A S A L A K H L S K P E S Y V M T   |   |    |    |
| UniRef90_J3S4M0        | P A F V   | V S T N I P R D A L P E G L L A E L T E E L A K A T G K P A Q Y I A V       |   |    |    |
| UniRef90_W5MIK4        | P M F V   | V S T N V S K D A I P A S L L S E A T Q E L A K A M G K P A Q Y I A V       |   |    |    |
| UniRef90_H3AS62        | P M F I L   | I N T N V S K G D V P A A M L G D I T Q E L S K T M G K P A Q Y I A V       |   |    |    |
| UniRef90_A8IQJ2        | P T L N I   | I T N V A G D R V T T S D V L K A L S K A V A S S V G K P E Q W V M A       |   |    |    |
| UniRef90_K9XEW0        | P L I K V   | Q T S V A V E K S D A E E A L L K S L S S A L A K H L G K P E S Y V M T     |   |    |    |
| UniRef90_A2I461        | P Y F K L   | D T N V P R S K I T P D F L K S T S K L V A S T L G K P E S Y V V V         |   |    |    |
| UniRef90_A9NTC0        | P S L N I   | S T N V P L E G L N T S E I V L S E T S K S V A R I I G K P E A Y V M V     |   |    |    |
| UniRef90_E7CW70        | P V L E L   | V F T N V P K E K V T P E I V L T G L S K L S E M L G K S E Q Y C M V       |   |    |    |
| UniRef90_F2UBZ7        | P L L E L   | H T N V N R P E N V A A I V E G L L S A L L A E A T G K P L Q Y I M V       |   |    |    |
| UniRef90_B7KCM0        | P L I K V   | Q S S L S A D K T V V Q D L L K T L S S K L A K H L G K P E S Y V M T       |   |    |    |
| UniRef90_UPI0003FFD424 | P Y L T I   | Q T N R A V S P D R R E P L T A A S R L A K E L G K P E S Y V M V           |   |    |    |
| UniRef90_UPI0003D0B20E | P L F E T   | V T T N V S K V P L E G F L G E V T E Q L S K A L G K P A Q Y I Q I         |   |    |    |
| UniRef90_A0A022PPH1    | P T L N L   | F T N V P V D A V V A S D I L L K D A T K A V A K I L S K P E S Y V M I     |   |    |    |
| UniRef90_UPI0003449A0F | P L I K V   | Q T S V S A P K S A V E G L L K S L S A K L A Q H L G K P E S Y V M T       |   |    |    |
| UniRef90_D4LEH4        | P Y I I D   | L K T N V T V S E E K K T A L K S A L L G Q A I T T L L P G K S E Q W L M V |   |    |    |
| UniRef90_UPI0002E508C0 | P L I K V   | Q T S V S P D R A E V E G L L K Q L S S A S S A T H L G K P E S Y V M T     |   |    |    |
| UniRef90_UPI00034CE672 | P L I Q V   | K T S V A P E K T A I E G L L K Q L S S S K L A G H L G K P E S Y V M T     |   |    |    |
| UniRef90_Q7U982        | P F I S V   | K T N I T D V Q T P N G L L K K Q L S S A A L A T A T G K P E S Y V M T     |   |    |    |
| UniRef90_B0C0S3        | P L I K V   | Q S S I N A P E Q P V E A L L K Q L S A Q L A Q H L G K P E S Y V M T       |   |    |    |
| UniRef90_Q616Y5        | P C F T I   | N T N V P S D K V P Q D F L K K T S A L V A K S L A Q H L G K P E S Y V A V |   |    |    |
| UniRef90_UPI00030DC5D6 | P L I Q I K S S   | V S P D K A Q V E S L L K N L S S A K L A Q H L G K P E S Y V M T           |   |    |    |
| UniRef90_K9TS02        | P L I K V   | Q T S V S T P E N A A A T L L K G L L S S S L A K H L G K P E S Y V M T     |   |    |    |
| UniRef90_A3INV1        | P L I Q V K   | T S V S Q P S S V I E S L L T T L S A K L A Q H L G K P E S Y V M T         |   |    |    |
| UniRef90_C6T069        | P C L N L   | S T N V N L D G I D T S I L S E A T S T V A S I I G K P E A Y V M I         |   |    |    |
| UniRef90_W0DJH1        | P L L S V E T N   | V P L P A D P S P L T E E F S A A V A R W L G K P E G Y V M V               |   |    |    |
| UniRef90_Q5Z858        | P Q L S L   | T T N V P V D A V V A A D I I K D C C S K A L A R I I G K P E S Y V M V     |   |    |    |
| UniRef90_I4F9T2        | P L I K I V   | Q T S V S L L D D E T V N Q L L Q S L S A K L A K H L G K P E S Y V M T     |   |    |    |
| UniRef90_B7K4V1        | P F I K V   | Q S S V S T T N S Q T E D L L T L S S K V A K S V A K H L G K P E S Y V M T |   |    |    |
| UniRef90_K9T4R3        | P L I K V   | Q S S V A A P D S T T D E L L K S L S A K L A K H L G K P E S Y V M T       |   |    |    |
| UniRef90_UPI0002B4AAA4 | P T L N L   | F T N V P V D T V V A A D I L L K D A S K A V S K I L G K P E S Y V M I     |   |    |    |
| UniRef90_UPI000328EA9D | P M F V   | V N T V P R A S V P D G L L S E L T Q Q L A Q A T G K P A Q Y I A V         |   |    |    |
| UniRef90_Q2JNVI6       | P L I K L Q T S V   | Q P E I A V E E L L K V L S A A L S E Q L G K S E A Y V M T                 |   |    |    |
| UniRef90_Q698K0        | P S F V L   | K T N L A R S A I P K D F L T E T S K L V A D I I L G K P E G C C V         |   |    |    |
| UniRef90_B9IGI2        | P C L N I   | S T N V N L D G V N T S A I L S E A S S Q V A K I I K K P E S Y V M I       |   |    |    |
| UniRef90_K9YLR1        | P L I K V   | Q S S I I N I N D N Q V Q N L L T T L S A K L A K H L G K P E S Y V M T     |   |    |    |
| UniRef90_UPI00020011E9 | P L I N V   | R T S L P E L A D A A G L L K E E L T S K L A R E L L G K P K Q Y I A V     |   |    |    |
| UniRef90_K4FSD7        | P T F T L   | S T N L S R E A V S P S L A E E L T G L L A R E L L G K P E S Y V M T       |   |    |    |
| UniRef90_UPI000349FC8B | P L I K V   | Q T S A T A P A Q S E E T T M L K S L S A A L A K H L G K P E S Y V M T     |   |    |    |
| UniRef90_G9RT92        | P F I N V   | V K T N I P V S E N A Q E A L K T R L L G Q A I E A I P G K S E A W L M V   |   |    |    |
| UniRef90_UPI0003479915 | P L I K V   | Q S S V S Q P K E Q V E S L L T S L S A N L A K H L G K P E S Y V M T       |   |    |    |
| UniRef90_K9XSZ4        | P L I K V   | K S S V S A P D T V E S L L K N L S T K L A K H L G K P E S Y V M T         |   |    |    |
| UniRef90_A0ZSF9        | P T I L T I   | N T N L P A D K L P S D F L A T T S K V V A D S L G K P V S Y V V V         |   |    |    |
| UniRef90_B8HLF8        | P L I K V   | Q T S A P L P P E Q I E T L L K T L S N R L A K H L G K P E A Y V M T       |   |    |    |
| UniRef90_Q9GUA9        | P T I L T I   | N T N I P A S K I P N D F L K T A N V V A D S L G K P L S Y V V V           |   |    |    |
| UniRef90_A2CAJ7        | P L I N I Q A S V   | P A V I A D A S S L L Q E L S S K L A E L L G K P E K Y V M T               |   |    |    |
| UniRef90_UPI000344E9C7 | P L I K V   | Q T S L A A P E P Q A E T L L K R L L S A S S L A Q H L G K P E S Y V M T   |   |    |    |
| UniRef90_UPI000347B61F | P L I K V   | Q T S V S T S S T D L E T T L L K S L L S A D L A Q H L G K S E A Y I M T   |   |    |    |
| UniRef90_M5DYS2        | P Y I K V   | Q T N Q E V E A E Q G L L K K L S A E M A E K L G K P E S Y V M T           |   |    |    |
| UniRef90_K8GRP4        | P L I K V   | Q T S V S V E K A F I E S L L K T L S A S S L A K H I G K P E S Y V M T     |   |    |    |
| UniRef90_B9HAY8        | P T I L N L   | F T N V P V D A V T T S D I L L K D A T K A L S K I I G K P E S Y V M V     |   |    |    |
| UniRef90_G2FDN9        | P L L K I Q T N Q P I E P D Q R K S D L L R K A S A E V A A L L G K P E R F V M V |   |   |    |    |
| UniRef90_S6BVZ7        | P L L K I K   | N T N R T V E A T D A V L Q Q A S R A V A E M L G K P E R Y V M V           |   |    |    |
| UniRef90_Q31JZ0        | P L I K L Q T S I   | A L P S D Q T T S L L Q S L S T T L A Q Q L G K P E R Y V M T               |   |    |    |
| UniRef90_P81529        | P I F T I   | N T N I K A T D V P S D F L S S T S A L V G N I L S K P G S Y V A V         |   |    |    |
| UniRef90_UPI000328A084 | P M F I V   | D A N V P R A S V P D G L L S K I L T Q Q L V Q A T G K P A Q Y I T V       |   |    |    |
| UniRef90_Q2F5Y8        | P H F R I   | E T N I S R S K I P A D F V V K A I I P V L A K A L G K P E Q Y C V V       |   |    |    |
| UniRef90_G6FR20        | P L I K V   | Q T S V S A S K A E I E A M L K M N L S V K L A K H T G K P E S Y V M T     |   |    |    |
| UniRef90_UPI0003805D63 | P F I K L   | N T N S T L D K E L K S K L L G E L S Q L V S K E T G K P E R Y V M I       |   |    |    |
| UniRef90_B4WSL6        | P L I K V   | Q T S V E A P K T T V E A L L K Q L L S A S S L A K H L N K P E S Y V M T   |   |    |    |
| UniRef90_F4XYL2        | P L I K V   | Q T S V I D A P E S A A E G L L K L S G K L A E H V G K P E A Y V M T       |   |    |    |
| UniRef90_C0D7H6        | P F I N V   | K T N V P V G S D K E K A I K S A L G R D I T A L P G K T E S S W L M V     |   |    |    |
| UniRef90_Q114A4        | P L I K V   | K T S V Q L E K D K I D N L L K Q L L S S S M A K H F S K S E S S Y V M T   |   |    |    |
| UniRef90_E6UCY2        | P F I N I K T N A A V T P D K E E S I K S A M G Q A I T A I P G K S E S S W L M V |   |   |    |    |
| UniRef90_B1XPU6        | P L I K V   | Q T S L P A S Q G D V E A L L L N L S R K L A A H L G K P E S Y V M T       |   |    |    |
| UniRef90_UPI0003828A7F | P Y I K L L   | N T N I S V G D Q D Q T P L L R Q L S Q L V A D G T N K P E S Y V M V       |   |    |    |
| UniRef90_S8CUG6        | P C L N L   | S T N V S L D G V N T S A I L S E A S A S V A K I I G K P E A Y V M V       |   |    |    |
| UniRef90_UPI0003463439 | P L I K V   | Q T S V A A P E A A E I E L L K S L S A K L A K H T G K P E S Y V M T       |   |    |    |
| UniRef90_E1R419        | P F I V S   | E T N L A I D T E K R K Q F C H L S A S S A A Q A V G K P E Q Y V M A       |   |    |    |
| UniRef90_UPI00034627C4 | P L I K V   | Q T S V S T P A K T E E T L L K N L S A S A L A K H T G K P E S Y V M T     |   |    |    |
| UniRef90_A0YU03        | P L I K V   | Q T S V S T P K S E V E T L L K S L S A A L A K H L G K P E S Y V M T       |   |    |    |
| UniRef90_D6DET0        | P F I N S K L   | S V K V S D E K K E A I K T K L L G H A I E A I P G K T E S S W L M V       |   |    |    |
| UniRef90_B4VWY5        | P L I K V   | Q S S V S V N P E P T V E G L L K T L S G K L A Q H V G K P E S Y V M T     |   |    |    |
| UniRef90_H2TTT2        | P R F L   | V N T N V A K A D V P V A L L S V A T N E L A K A M G I P A Q Y I A V       |   |    |    |
| UniRef90_R5TOJ1        | P F I N S R   | V N V P L T D G E K E T L L K G K L L G Q A I S L I P G K S E S S W L M V   |   |    |    |
| UniRef90_W6K8Z1        | P L L T L R   | T N V P I A E A D Q I A M A E L L S H Q M A S A L G K P E S Y V M V         |   |    |    |
| UniRef90_B8GPP5        | P L L S I   | E T N Q R A D D A S L A H L K L T S R A L A E Q L G K P E R Y V M V         |   |    |    |
| UniRef90_UPI000346B636 | P L I K V   | Q T S T P N P E S Q K Q N L L T N L S S S K L A K H L G K P E S Y V M T     |   |    |    |
| UniRef90_E14G57        | P T F T L   | S T N I P Q D R I S I D F L K K A S S T V A K A L G K P E S Y V S V         |   |    |    |
| UniRef90_UPI000479B82E | P F I S T K   | T N V S V D K E K E I Q I K E K L L G Q A I A L L P G K S E N W L M L       |   |    |    |

50            60            70            80

| QUERY | UniRef90_E1ZKH6                               | UniRef90_Q02960                               | UniRef90_A9SRE7                                 | UniRef90_D8QR97 | UniRef90_D8R6J7 | UniRef90_F7DCF9 | UniRef90_Q76BK2 | UniRef90_H9H6Q2 | UniRef90_Q7ZZB8 | UniRef90_Q02BR7 | UniRef90_A9NRK6 | UniRef90_D4ZT52 | UniRef90_J3S4M0 | UniRef90_W5MIK4 | UniRef90_H3AS62 | UniRef90_A8IQJ2 | UniRef90_K9XEW0 | UniRef90_A2I461 | UniRef90_A9NTC0 | UniRef90_E7CW70 | UniRef90_F2UBZ7 | UniRef90_B7KCM0 | UniRef90_UPI0003FFD424 | UniRef90_UPI0003D0B20E | UniRef90_A0A022PPH1 | UniRef90_UPI0003449A0F | UniRef90_D4LEH4 | UniRef90_UPI0002E508C0 | UniRef90_UPI00034CE672 | UniRef90_Q7U982 | UniRef90_B0C0S3 | UniRef90_Q616Y5 | UniRef90_UPI00030DC5D6 | UniRef90_K9TS02 | UniRef90_A3INV1 | UniRef90_C6T069 | UniRef90_W0DJH1 | UniRef90_Q5Z858 | UniRef90_I4F9T2 | UniRef90_B7K4V1 | UniRef90_K9T4R3 | UniRef90_UPI0002B4AAA4 | UniRef90_UPI000328EA9D | UniRef90_Q2JNVI6 | UniRef90_Q698K0 | UniRef90_B9IGI2 | UniRef90_K9YLR1 | UniRef90_UPI00020011E9 | UniRef90_K4FSD7 | UniRef90_UPI000349FC8B | UniRef90_G9RT92 | UniRef90_UPI0003479915 | UniRef90_K9XSZ4 | UniRef90_A0ZSF9 | UniRef90_B8HLF8 | UniRef90_Q9GUA9 | UniRef90_A2CAJ7 | UniRef90_UPI000344E9C7 | UniRef90_UPI000347B61F | UniRef90_M5DYS2 | UniRef90_K8GRP4 | UniRef90_B9HAY8 | UniRef90_G2FDN9 | UniRef90_S6BVZ7 | UniRef90_Q31JZ0 | UniRef90_P81529 | UniRef90_UPI000328A084 | UniRef90_Q2F5Y8 | UniRef90_G6FR20 | UniRef90_UPI0003805D63 | UniRef90_B4WSL6 | UniRef90_F4XYL2 | UniRef90_C0D7H6 | UniRef90_Q114A4 | UniRef90_E6UCY2 | UniRef90_B1XPU6 | UniRef90_UPI0003828A7F | UniRef90_S8CUG6 | UniRef90_UPI0003463439 | UniRef90_E1R419 | UniRef90_UPI00034627C4 | UniRef90_A0YU03 | UniRef90_D6DET0 | UniRef90_B4VWY5 | UniRef90_H2TTT2 | UniRef90_R5TOJ1 | UniRef90_W6K8Z1 | UniRef90_B8GPP5 | UniRef90_UPI000346B636 | UniRef90_E14G57 | UniRef90_UPI000479B82E |
|-------|---|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|------------------------|---------------------|------------------------|-----------------|------------------------|------------------------|-----------------|-----------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|------------------------|------------------|-----------------|-----------------|-----------------|------------------------|-----------------|------------------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|------------------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|------------------------|
|       | T F H D S T P M H F F G S T D P V A C V R     | S I E T G K Q M M F G G T E E P C A F G E     | V E A L G G Y G P S E P E K V T S I V           |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | S L E T G K Q M M F G G T E E P C A F G E     | H I V P D Q M M S F G G S T D P C A L C S     | L I S I G S I G G E K N K K I I S A A L         |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | H I R G G I P M S F G G T E E P C A F G E     | S L R G G I P M S F G G T E E P C A F G E     | L Y S I G S I G G Q Q N K T Y T K L L           |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | V L K D S V P M S F G G T E E P C A F G E     | V L K D S V P M S F G G T E E P C A F G E     | V I S I G G L G P S V N K E L S E A A L         |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | I I N G A V P S F G G T E E P C A F G E       | I I N G A V P S F G G T E E P C A F G E       | V L V S I G A I S P D S N K K L L S K A I       |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | H I S P D Q L M A F G G T S D P C A L C S     | H I V P D Q L M A F G G T S D P C A L C S     | L H S I G S I G G K I G G P Q N K T Y S K L L   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | H I V P D Q I M S F G D S T D P C A L C S     | H I A T D Q L M A F G G S A E P C A F G E     | L H S I G S I G G K I G G P Q N K S Y T K Q L L |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | H I V P D Q M M F G G K G D P C A L C S       | H I V P D Q M M F G G K G D P C A L C S       | L H S I G G K I S G A Q N K Q Y S K L L         |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | Q V P D Q M M F G G K G D P C A L C S         | Q V P D Q M M F G G K G D P C A L C S         | L L K L G G V P M F G G S E E P C A I C S       |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | A F E P D V P M T F G G T T D P V C Y M E     | A F E P D V P M T F G G T T D P V C Y M E     | I K S I G S I G G L G P G V N G K I S S A A I   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | Q V N P D Q V M S F G G S S A P C A I C S     | Q V N P D Q V M S F G G S S A P C A I C S     | I K S I G K I S A P Q N K A Y S A M L           |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | H I N A D Q T M M F G G K S D P C A L C S     | H I L P D Q M M S F G G K T D P C A L C S     | I K S I G K I G G Q Q N K Q Y S K L L           |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | H I L P D Q M M S F G G K T D P C A L C S     | S V T T D K P M I Y G G T E E P C A F G Y     | S Y S I G S I G G D K N K K I S S A A I         |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | A L I E S G I P M T F A G T L D P V C Y I E   | A L I E S G I P M T F A G T L D P V C Y I E   | A L I E S G I P M T F A G T L D P V C Y I E     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | Q V N G D Q S I I W G G T E E P C G Y A T L   | Q V N G D Q S I I W G G T E E P C G Y A T L   | M S I G S I G K I S M P E Q T K A M S Q D F     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | Q L K G S V A I S F G G T E E P C G Y A T L   | Q L K G S V A I S F G G T E E P C G Y A T L   | M S I G K I L G I E E N K K H A A A I           |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | R I I P D Q L M S F G G T T D P V C Y V E I   | R I I P D Q L M S F G G T T D P V C Y V E I   | R I I P D Q L M S F G G T T D P V C Y V E I     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | R T S F D E A M A M G G T T A P A A F L R     | R T S F D E A M A M G G T T A P A A F L R     | R T S F D E A M A M G G T T A P A A F L R       |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | A F E P G V N M T F A G T F E P V C Y V E I   | A F E P G V N M T F A G T F E P V C Y V E I   | A F E P G V N M T F A G T F E P V C Y V E I     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | S L N S D V P M L F A G T S Q D P C A M C F   | S L N S D V P M L F A G T S Q D P C A M C F   | S L N S D V P M L F A G T S Q D P C A M C F     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | K V S T D Q M M A F G G S Q D P C A M C F     | K V S T D Q M M A F G G S Q D P C A M C F     | K V S T D Q M M A F G G S Q D P C A M C F       |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | L V I N G G V P I S F G G T E E P S A Y G E I | L V I N G G V P I S F G G T E E P S A Y G E I | L V I N G G V P I S F G G T E E P S A Y G E I   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | A F E P E V A M T F A G T A E P V C Y V E I   | A F E P E V A M T F A G T A E P V C Y V E I   | A F E P E V A M T F A G T A E P V C Y V E I     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | G I Q P D Y S I W F Q G Q S D A P A A M I H   | G I Q P D Y S I W F Q G Q S D A P A A M I H   | G I Q P D Y S I W F Q G Q S D A P A A M I H     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 4 4 9 A 0 F   | U n i R e f 9 0 _ U P I 0 0 0 3 4 4 9 A 0 F   | U n i R e f 9 0 _ U P I 0 0 0 3 4 4 9 A 0 F     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ D 4 L E H 4                 | U n i R e f 9 0 _ D 4 L E H 4                 | U n i R e f 9 0 _ D 4 L E H 4                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 2 E 5 0 8 C 0   | U n i R e f 9 0 _ U P I 0 0 0 3 4 C E 6 7 2   | U n i R e f 9 0 _ U P I 0 0 0 3 4 C E 6 7 2     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 0 D C 5 D 6   | U n i R e f 9 0 _ K 9 T S 0 2                 | U n i R e f 9 0 _ K 9 T S 0 2                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ A 3 I N V 1                 | U n i R e f 9 0 _ C 6 T 0 6 9                 | U n i R e f 9 0 _ C 6 T 0 6 9                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ W 0 D J H 1                 | U n i R e f 9 0 _ V 0 6 1 Y 5                 | U n i R e f 9 0 _ V 0 6 1 Y 5                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ Q 6 1 6 Y 5                 | U n i R e f 9 0 _ U P I 0 0 0 3 0 D C 5 D 6   | U n i R e f 9 0 _ U P I 0 0 0 3 0 D C 5 D 6     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ K 9 T 4 R 3                 | U n i R e f 9 0 _ C 6 T 0 6 9                 | U n i R e f 9 0 _ C 6 T 0 6 9                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 2 B 4 A A A 4   | U n i R e f 9 0 _ U P I 0 0 0 3 2 8 E A 9 D   | U n i R e f 9 0 _ U P I 0 0 0 3 2 8 E A 9 D     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 2 8 E A 9 D   | U n i R e f 9 0 _ Q 2 J N V I 6               | U n i R e f 9 0 _ Q 2 J N V I 6                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ Q 6 9 8 K 0                 | U n i R e f 9 0 _ Q 6 9 8 K 0                 | U n i R e f 9 0 _ Q 6 9 8 K 0                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ B 9 I G I 2                 | U n i R e f 9 0 _ K 9 Y L R 1                 | U n i R e f 9 0 _ K 9 Y L R 1                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ K 9 Y L R 1                 | U n i R e f 9 0 _ U P I 0 0 0 2 0 0 1 1 E 9   | U n i R e f 9 0 _ U P I 0 0 0 2 0 0 1 1 E 9     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 2 0 0 1 1 E 9   | U n i R e f 9 0 _ K 4 F S D 7                 | U n i R e f 9 0 _ K 4 F S D 7                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ K 4 F S D 7                 | U n i R e f 9 0 _ U P I 0 0 0 3 4 9 F C 8 B   | U n i R e f 9 0 _ U P I 0 0 0 3 4 9 F C 8 B     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ G 9 R T 9 2                 | U n i R e f 9 0 _ U P I 0 0 0 3 4 7 9 9 1 5   | U n i R e f 9 0 _ U P I 0 0 0 3 4 7 9 9 1 5     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 4 7 9 9 1 5   | U n i R e f 9 0 _ K 9 X S Z 4                 | U n i R e f 9 0 _ K 9 X S Z 4                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ K 9 X S Z 4                 | U n i R e f 9 0 _ A 0 Z S F 9                 | U n i R e f 9 0 _ A 0 Z S F 9                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ A 0 Z S F 9                 | U n i R e f 9 0 _ B 8 H L F 8                 | U n i R e f 9 0 _ B 8 H L F 8                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ B 8 H L F 8                 | U n i R e f 9 0 _ Q 9 G U A 9                 | U n i R e f 9 0 _ Q 9 G U A 9                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ Q 9 G U A 9                 | U n i R e f 9 0 _ A 2 C A J 7                 | U n i R e f 9 0 _ A 2 C A J 7                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ A 2 C A J 7                 | U n i R e f 9 0 _ U P I 0 0 0 3 4 4 E 9 C 7   | U n i R e f 9 0 _ U P I 0 0 0 3 4 4 E 9 C 7     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 4 4 E 9 C 7   | U n i R e f 9 0 _ U P I 0 0 0 3 4 7 B 6 1 F   | U n i R e f 9 0 _ U P I 0 0 0 3 4 7 B 6 1 F     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 4 7 B 6 1 F   | U n i R e f 9 0 _ M 5 D Y S 2                 | U n i R e f 9 0 _ M 5 D Y S 2                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ M 5 D Y S 2                 | U n i R e f 9 0 _ K 8 G R P 4                 | U n i R e f 9 0 _ K 8 G R P 4                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ K 8 G R P 4                 | U n i R e f 9 0 _ B 9 H A Y 8                 | U n i R e f 9 0 _ B 9 H A Y 8                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ B 9 H A Y 8                 | U n i R e f 9 0 _ G 2 F D N 9                 | U n i R e f 9 0 _ G 2 F D N 9                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ G 2 F D N 9                 | U n i R e f 9 0 _ S 6 B V Z 7                 | U n i R e f 9 0 _ S 6 B V Z 7                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ S 6 B V Z 7                 | U n i R e f 9 0 _ Q 3 1 J Z 0                 | U n i R e f 9 0 _ Q 3 1 J Z 0                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ Q 3 1 J Z 0                 | U n i R e f 9 0 _ P 8 1 5 2 9                 | U n i R e f 9 0 _ P 8 1 5 2 9                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ P 8 1 5 2 9                 | U n i R e f 9 0 _ U P I 0 0 0 3 2 8 A 0 8 4   | U n i R e f 9 0 _ U P I 0 0 0 3 2 8 A 0 8 4     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 2 8 A 0 8 4   | U n i R e f 9 0 _ Q 2 F 5 Y 8                 | U n i R e f 9 0 _ Q 2 F 5 Y 8                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ Q 2 F 5 Y 8                 | U n i R e f 9 0 _ G 6 F R 2 0                 | U n i R e f 9 0 _ G 6 F R 2 0                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ G 6 F R 2 0                 | U n i R e f 9 0 _ U P I 0 0 0 3 8 0 5 D 6 3   | U n i R e f 9 0 _ U P I 0 0 0 3 8 0 5 D 6 3     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 8 0 5 D 6 3   | U n i R e f 9 0 _ B 4 W S L 6                 | U n i R e f 9 0 _ B 4 W S L 6                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ B 4 W S L 6                 | U n i R e f 9 0 _ F 4 X Y L 2                 | U n i R e f 9 0 _ F 4 X Y L 2                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ F 4 X Y L 2                 | U n i R e f 9 0 _ C 0 D 7 H 6                 | U n i R e f 9 0 _ C 0 D 7 H 6                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ C 0 D 7 H 6                 | U n i R e f 9 0 _ Q 1 1 4 A 4                 | U n i R e f 9 0 _ Q 1 1 4 A 4                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ Q 1 1 4 A 4                 | U n i R e f 9 0 _ E 6 U C Y 2                 | U n i R e f 9 0 _ E 6 U C Y 2                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ E 6 U C Y 2                 | U n i R e f 9 0 _ B 1 X P U 6                 | U n i R e f 9 0 _ B 1 X P U 6                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ B 1 X P U 6                 | U n i R e f 9 0 _ U P I 0 0 0 3 8 2 8 A 7 F   | U n i R e f 9 0 _ U P I 0 0 0 3 8 2 8 A 7 F     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 8 2 8 A 7 F   | U n i R e f 9 0 _ S 8 C U G 6                 | U n i R e f 9 0 _ S 8 C U G 6                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ S 8 C U G 6                 | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 3 4 3 9   | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 3 4 3 9     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 3 4 3 9   | U n i R e f 9 0 _ E 1 R 4 1 9                 | U n i R e f 9 0 _ E 1 R 4 1 9                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ E 1 R 4 1 9                 | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 2 7 C 4   | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 2 7 C 4     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 2 7 C 4   | U n i R e f 9 0 _ A 0 Y U 0 3                 | U n i R e f 9 0 _ A 0 Y U 0 3                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ A 0 Y U 0 3                 | U n i R e f 9 0 _ D 6 D E T 0                 | U n i R e f 9 0 _ D 6 D E T 0                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ D 6 D E T 0                 | U n i R e f 9 0 _ B 4 V W Y 5                 | U n i R e f 9 0 _ B 4 V W Y 5                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ B 4 V W Y 5                 | U n i R e f 9 0 _ H 2 T T T 2                 | U n i R e f 9 0 _ H 2 T T T 2                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ H 2 T T T 2                 | U n i R e f 9 0 _ R 5 T O J 1                 | U n i R e f 9 0 _ R 5 T O J 1                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ R 5 T O J 1                 | U n i R e f 9 0 _ W 6 K 8 Z 1                 | U n i R e f 9 0 _ W 6 K 8 Z 1                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ W 6 K 8 Z 1                 | U n i R e f 9 0 _ B 8 G P P 5                 | U n i R e f 9 0 _ B 8 G P P 5                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ B 8 G P P 5                 | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 B 6 3 6   | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 B 6 3 6     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ U P I 0 0 0 3 4 6 B 6 3 6   | U n i R e f 9 0 _ E 1 4 G 5 7                 | U n i R e f 9 0 _ E 1 4 G 5 7                   |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |
|       | U n i R e f 9 0 _ E 1 4 G 5 7                 | U n i R e f 9 0 _ U P I 0 0 0 4 7 9 B 8 2 E   | U n i R e f 9 0 _ U P I 0 0 0 4 7 9 B 8 2 E     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                     |                        |                 |                        |                        |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |                 |                        |                        |                  |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                        |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                 |                        |                 |                 |                 |                 |                 |                 |                        |                 |                        |                 |                        |                 |                 |                 |                 |                 |                 |                 |                        |                 |                        |

| QUERY                  |    |   |   |   |   |     |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|----|---|---|---|---|-----|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                        | 90 |   |   |   |   | 100 |   |   |   |   | 110 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| UniRef90_E1ZKH6        | T  | A | A | I | T | K   | E | C | G | I | V   | A | D | R | □ | F | V | L | Y | F | S | P | □ | H | C | G | W | N | G | T | N | F |   |
| UniRef90_Q02960        | A  | E | V | V | Q | R   | H | L | G | V | P   | A | S | R | M | Y | I | K | F | Y | D | V | I | A | D | F | G | W | N | G | T | T | F |
| UniRef90_A9SRE7        | C  | D | M | I | A | K   | H | L | H | V | S   | A | D | R | V | Y | I | N | Y | F | D | A | A | N | V | G | W | N | G | S | T | F |   |
| UniRef90_D8QR97        | S  | D | I | L | K | T   | K | L | S | V | P   | P | S | R | F | Y | I | K | F | Y | D | V | Q | R | F | G | W | N | G | S | T | F |   |
| UniRef90_D8R6J7        | A  | E | L | Q | S | K   | L | A | V | P | P   | N | R | F | Y | I | K | F | Y | D | V | S | N | F | G | W | N | G | S | T | F |   |   |
| UniRef90_F7DCF9        | C  | G | L | L | T | K   | H | L | N | I | P   | A | D | R | V | Y | I | N | Y | D | A | A | N | V | G | W | N | G | S | T | F |   |   |
| UniRef90_Q76BK2        | C  | D | I | L | T | K   | Q | L | N | I | P   | A | N | R | V | Y | I | N | Y | D | A | A | N | V | G | W | N | G | S | T | F |   |   |
| UniRef90_H9H6Q2        | C  | E | L | L | T | K   | H | L | R | I | S   | G | D | R | I | Y | I | N | Y | H | D | A | A | N | V | G | W | N | G | T | T | F |   |
| UniRef90_Q7ZZB8        | S  | E | A | M | N | T   | H | L | G | I | P   | K | D | R | M | Y | I | A | F | H | D | P | A | N | V | G | W | N | G | S | T | F |   |
| UniRef90_Q0ZBR7        | M  | G | I | L | N | K   | H | L | G | V | S   | A | D | R | □ | Y | I | N | F | M | D | P | A | N | V | G | W | N | S | T | F |   |   |
| UniRef90_A9NRK6        | A  | D | I | L | E | S   | K | L | S | V | P   | S | D | R | □ | Y | I | K | F | Y | D | V | E | Y | F | G | F | R | G | S | T | F |   |
| UniRef90_D4ZT52        | C  | Q | K | I | N | Q   | A | L | G | I | P   | S | D | R | □ | Y | I | E | F | A | D | A | P | M | W | G | W | N | G | G | T | F |   |
| UniRef90_J3S4M0        | S  | A | L | L | A | K   | R | L | R | V | P   | A | D | R | V | Y | I | N | F | Y | D | P | A | N | V | G | W | N | G | S | T | F |   |
| UniRef90_W5MIK4        | C  | G | L | L | T | K   | H | L | G | I | S   | G | D | R | □ | Y | I | V | N | F | □ | D | P | Q | N | V | G | W | N | S | T | F |   |
| UniRef90_H3AS62        | C  | D | L | L | S | K   | H | L | A | I | S   | A | D | R | I | Y | I | N | F | H | D | A | A | N | V | G | W | S | G | T | F |   |   |
| UniRef90_A8IQJ2        | C  | E | V | L | T | A   | K | L | G | V | P   | A | N | R | V | Y | I | Q | F | S | D | A | S | D | V | G | W | D | G | S | T | F |   |
| UniRef90_K9XEW0        | C  | Q | K | I | N | Q   | A | L | G | I | D   | K | N | R | V | Y | I | E | F | A | D | A | K | M | W | G | W | N | G | S | T | F |   |
| UniRef90_A2I461        | Y  | E | H | L | K | H   | L | G | I | P | G   | D | R | M | Y | I | N | F | V | D | P | S | T | V | G | Y | N | G | S | T | F |   |   |
| UniRef90_A9NTC0        | A  | T | I | L | D | T   | K | L | K | V | P   | S | D | R | R | Y | I | K | F | Y | D | V | S | D | F | G | W | N | G | T | T | F |   |
| UniRef90_E7CW70        | Y  | A | H | L | E | Q   | T | L | G | I | P   | S | D | R | M | Y | I | N | F | H | D | T | S | N | V | G | Y | K | G | T | T | F |   |
| UniRef90_F2UBZ7        | C  | K | F | L | L | T   | E | H | L | G | I   | E | A | D | R | V | Y | I | N | F | V | D | V | A | N | W | G | Y | N | G | G | T | F |
| UniRef90_B7KCM0        | C  | Q | E | I | E | G   | K | L | G | V | P   | K | N | R | T | Y | I | E | F | A | D | A | A | M | W | G | W | N | G | S | T | F |   |
| UniRef90_UPI0003FFD424 | C  | E | L | L | E | Q   | H | L | K | K | P   | V | G | R | V | Y | I | E | F | T | D | □ | S | H | W | G | W | N | G | G | T | F |   |
| UniRef90_UPI0003D0B20E | C  | D | L | L | N | K   | R | L | K | K | P   | V | D | R | Y | Y | I | C | Y | F | E | A | A | N | V | G | W | N | S | T | T | F |   |
| UniRef90_A0A022PPH1    | A  | E | I | L | Q | T   | K | L | S | I | D   | S | S | R | F | Y | I | K | F | Y | D | V | Q | R | F | G | F | N | G | S | T | F |   |
| UniRef90_UPI0003449A0F | C  | Q | Q | I | K | E   | A | L | G | V | E   | P | N | R | V | Y | I | E | F | A | D | A | S | M | W | G | W | N | S | S | T | F |   |
| UniRef90_D4LEH4        | C  | E | I | C | A | E   | R | L | R | I | P   | Q | N | R | V | Y | I | C | Y | S | E | T | A | N | W | G | W | N | S | N | F | T | F |
| UniRef90_UPI0002E508C0 | C  | A | Q | L | E | T   | A | L | G | V | P   | K | N | R | T | Y | I | E | F | A | D | A | P | M | W | G | W | N | G | G | T | F |   |
| UniRef90_UPI00034CE672 | C  | Q | E | I | E | K   | A | L | G | V | P   | A | K | R | T | Y | I | E | F | A | D | A | E | M | W | G | W | N | G | S | T | F |   |
| UniRef90_Q7U982        | C  | E | L | I | K | S   | S | L | G | V | P   | K | D | R | □ | Y | I | G | F | D | D | A | S | N | W | G | W | N | G | R | T | F |   |
| UniRef90_B0C0S3        | C  | Q | E | L | E | T   | A | L | G | V | P   | K | Q | R | Y | Y | I | E | F | A | D | A | K | M | W | G | W | N | S | T | F |   |   |
| UniRef90_Q616Y5        | Y  | K | H | L | N | E   | T | L | G | V | P   | K | N | R | M | Y | I | S | F | V | D | P | T | T | M | A | Y | N | G | S | T | F |   |
| UniRef90_K9TS02        | C  | Q | V | I | S | E   | R | L | G | V | P   | V | G | R | □ | Y | I | E | F | A | D | A | S | M | W | G | W | N | S | G | T | F |   |
| UniRef90_A3INV1        | C  | Q | V | I | H | Q   | A | I | G | V | P   | Q | N | R | I | Y | I | E | F | T | D | A | E | M | W | G | W | N | G | S | T | F |   |
| UniRef90_C6T069        | A  | S | I | L | E | N   | K | L | S | V | P   | K | S | R | F | Y | I | K | F | Y | D | T | S | N | F | G | W | N | G | S | T | F |   |
| UniRef90_W0DJH1        | C  | T | G | L | Q | E   | R | L | G | V | P   | A | N | R | V | Y | I | E | F | S | D | A | R | R | W | G | W | N | G | S | T | F |   |
| UniRef90_Q5Z858        | A  | E | I | L | E | T   | K | L | S | V | S   | R | S | R | F | Y | I | K | F | D | D | V | K | N | L | G | F | N | G | S | T | F |   |
| UniRef90_I4F9T2        | C  | Q | E | I | E | A   | Y | L | G | V | P   | K | N | R | I | Y | I | E | F | A | E | A | K | G | W | G | W | N | G | T | T | F |   |
| UniRef90_B7K4V1        | C  | Q | E | I | E | K   | D | K | L | G | V   | P | T | N | R | I | Y | I | E | F | T | D | A | Q | R | W | G | W | N | G | G | T | F |
| UniRef90_K9T4R3        | C  | Q | Q | I | Q | E   | K | L | G | V | A   | K | N | R | T | Y | I | E | F | N | N | S | E | M | W | G | W | N | G | S | T | F |   |
| UniRef90_UP10002B4AAA4 | A  | E | I | L | Q | T   | K | L | S | I | D   | G | S | R | F | Y | I | K | F | Y | D | V | S | N | F | G | Y | N | G | S | T | F |   |
| UniRef90_UP1000328EA9D | C  | G | L | L | A | E   | R | L | R | I | S   | P | D | R | □ | Y | I | N | Y | D | A | N | V | G | W | N | S | T | F |   |   |   |   |
| UniRef90_Q2JNVI6       | C  | G | T | I | E | A   | R | L | G | V | P   | S | R | F | Y | I | E | F | S | D | A | K | G | W | G | W | N | G | T | T | F |   |   |
| UniRef90_Q698K0        | C  | D | H | V | K | K   | H | L | G | V | P   | G | D | R | Y | Y | I | N | F | H | D | A | A | D | V | G | R | D | G | T | F |   |   |
| UniRef90_B9IGI2        | S  | T | I | L | L | S   | K | L | S | V | P   | K | S | R | F | F | I | K | F | Y | D | V | S | H | L | G | W | N | G | S | T | F |   |
| UniRef90_K9YLR1        | C  | D | E | I | N | Q   | Q | L | G | V | D   | S | N | R | I | Y | I | E | F | A | D | A | A | M | W | G | W | N | G | S | T | F |   |
| UniRef90_UP100020011E9 | C  | D | L | I | E | A   | R | T | G | V | P   | A | N | R | V | Y | I | E | F | E | D | A | S | S | W | G | W | N | G | S | T | F |   |
| UniRef90_K4FSD7        | F  | E | L | I | N | K   | H | L | H | I | S   | L | D | R | M | Y | I | E | F | H | D | P | A | Y | V | G | W | N | G | K | T | F |   |
| UniRef90_UP1000349FC8B | C  | Q | K | L | S | E   | G | L | G | V | P   | S | N | R | □ | Y | I | E | F | A | D | S | M | W | G | W | N | G | S | T | F |   |   |
| UniRef90_G9RT92        | C  | E | L | L | D | A   | V | L | D | D | P   | A | R | V | Y | Y | I | K | Y | A | E | T | P | N | W | G | W | N | G | N | F | T | F |
| UniRef90_UP10003479915 | C  | S | Q | I | S | Q   | K | L | D | V | P   | A | N | R | I | Y | I | E | F | A | D | A | A | M | W | G | W | N | E | S | T | F |   |
| UniRef90_K9XSZ4        | C  | Q | Q | L | Q | Q   | E | T | L | G | V   | S | A | N | R | I | Y | I | E | F | A | D | A | A | M | W | G | W | N | S | T | F |   |
| UniRef90_A0ZSF9        | F  | E | H | M | K | N   | T | L | G | V | P   | K | K | D | R | M | Y | I | N | F | F | D | V | P | D | V | G | Y | N | K | T | F |   |
| UniRef90_B8HLF8        | C  | Q | Q | L | E | Q   | G | L | G | V | S   | P | Q | R | □ | Y | I | E | F | A | D | A | A | M | W | G | W | N | R | S | T | F |   |
| UniRef90_Q9GUA9        | F  | E | H | I | E | E   | K | T | L | G | V   | P | A | D | R | T | Y | I | N | F | D | A | S | D | V | G | Y | N | K | T | F |   |   |
| UniRef90_A2CAJ7        | C  | S | H | I | E | E   | Q | N | L | G | V   | P | A | D | R | T | Y | I | E | F | C | D | A | P | G | W | G | W | D | H | T | F |   |
| UniRef90_UP1000344E9C7 | C  | Q | Y | I | I | S   | D | S | L | G | V   | P | R | N | R | □ | Y | I | E | F | A | D | A | E | M | W | G | W | N | G | T | F |   |
| UniRef90_UP1000347B61F | C  | E | Q | L | S | D   | A | L | G | V | P   | K | N | R | I | Y | I | E | F | S | D | A | P | R | W | G | N | G | T | F |   |   |   |
| UniRef90_M5DYS2        | C  | E | F | L | E | K   | E | L | R | I | P   | K | D | R | I | Y | I | E | F | K | S | D | V | P | M | W | G | D | N | G | T | F |   |
| UniRef90_K8GRP4        | C  | R | T | V | S | D   | A | I | A | V | P   | A | N | R | I | Y | I | E | F | A | D | A | K | M | W | G | W | N | G | S | T | F |   |
| UniRef90_B9HAY8        | A  | D | I | L | Q | T   | K | L | S | I | D   | S | S | R | F | Y | I | K | F | F | D | S | P | R | F | G | F | N | G | T | T | F |   |
| UniRef90_G2FDN9        | C  | H | L | I | A | D   | R | L | G | V | S   | A | E | R | □ | Y | I | E | F | A | D | A | Q | R | W | G | W |   |   |   |   |   |   |

1 M F V N T N V P R A S V T D R L L A E L M Q Q L A Q A T G K P A Q Y V A V  
 10 P T F A I Y T N L P K D K I P G N F L L D V S S F I A K R L G K P E S Y V T V  
 P L I K V Q T S A L R P A P A A E A L K S L S A S A L A Q H G K P E S Y V M T  
 P F I E L K T S V S I S K D K L L E S F A G E L T Q Q L S K A L G K P A Q V I A L  
 P F M Q L K T N V A V T E Q Q E T L L K T S F G S A I T A I P G K S E T W L M V  
 P K F T T T N T N I S K D K L L E S F A G E L T Q Q L S K A L G K P A Q V I A L  
 P L I T L R T S P A V E G S T E L L Q D L S A A L A Q Q T G K P E S Y V M T  
 P F I N V K T N V K I S R E N E V A I K T M L G E A I A I I P G K S E K S L M L  
 P F I L E V S T N L P K E K V T P E V L S G L S K M V S E M L D K S E S Y C M M  
 P Y L S I Q T N V N L G D A E K Q S L L A S A S R S V A N M L G K P E A Y V M V  
 P H F R L E T N V S K S K V T P E L K K I S A V A K T L G K P E S Y V V V  
 UniRef90\_G4WUE5  
 UniRef90\_G0A381  
 UniRef90\_Q514D2  
 UniRef90\_UPI0003B74E9A  
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 UniRef90\_R6DMW5  
 UniRef90\_H8GLH4  
 UniRef90\_K9YC99  
 UniRef90\_C3KIT6  
 UniRef90\_UPI0003799996  
 UniRef90\_UPI0001C36FF8  
 UniRef90\_UPI00036392AE  
 UniRef90\_T1J2R3  
 UniRef90\_UPI0003774686  
 UniRef90\_K4D1X7  
 UniRef90\_U6P5I3  
 UniRef90\_G8F616  
 UniRef90\_K7F792  
 UniRef90\_R7B1Y3  
 UniRef90\_P81748  
 UniRef90\_UPI000454A92D  
 UniRef90\_D8QZ21  
 UniRef90\_UPI0003508556  
 UniRef90\_A9P9R4  
 UniRef90\_UPI0003B2F371  
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 UniRef90\_V519N1  
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 UniRef90\_M2PET0  
 UniRef90\_M9WSJ5  
 UniRef90\_G7JUA0  
 UniRef90\_G5HTF2  
 UniRef90\_R7UNT5  
 UniRef90\_UPI0003F07D4B  
 UniRef90\_V6LFR2  
 UniRef90\_A7SF14  
 UniRef90\_M1VMH3  
 UniRef90\_G6CVC7  
 UniRef90\_G0NRG9  
 UniRef90\_UPI0003B40A60  
 UniRef90\_G4SZ39  
 UniRef90\_UPI000374060F  
 UniRef90\_Q30DR4  
 UniRef90\_E9G3A6  
 UniRef90\_Q603L0  
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 UniRef90\_UPI0002BC974F  
 UniRef90\_R6ISS7  
 UniRef90\_G2E511  
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 UniRef90\_R5KS40  
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 UniRef90\_UPI0004407970  
 UniRef90\_W6M9Z9  
 UniRef90\_L1K441  
 UniRef90\_E6U7U2  
 UniRef90\_Q0F015  
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 UniRef90\_I5AR26  
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 UniRef90\_J3JWI7  
 UniRef90\_UPI0003752C45  
 UniRef90\_Q46X3  
 UniRef90\_T5BMX6  
 UniRef90\_UPI00037A2BFC

50                  60                  70                  80

|                        |   |   |   |
|------------------------|---|---|---|
| UniRef90_UPI00033175C7 | H V L D Q L V A F G G S S E P C E L C S       | L H S M G K I G G A Q N R T Y S K L L         |   |
| UniRef90_G3LVK0        | R V H P D Q M M S H G G S T D P C G S V E     | L Y S I G A L G E K N K E H S K E I           |   |
| UniRef90_K9S3J2        | A L E P E V S M T F G G T T E P V C Y V E     | I K S I G T M A P D K T R A M S Q D F         |   |
| UniRef90_R6SOP3        | N F C D E Q R M W F K G S D E S C A I L E     | V K I I Y G G S S A K N Y D K L T A E L       |   |
| UniRef90_R5V295        | G I E P Q Y T L Y F Q G S D A P A A M V E     | V S I F G S A S D A A Y A D L T A R I         |   |
| UniRef90_UPI000194D44D | Q I S P D Q V M S F G G S T D P C A M C F     | L Y S I G K I G E Q E N K V W S K L L         |   |
| UniRef90_UPI0003748B34 | Q I E G G K A M L F A G S D Q T L A Y A E     | C K S I G L T S A Q A K A I S S S L           |   |
| UniRef90_UPI0002001995 | M L E A A V P M T F G G S S E P S A Y V E     | I K S I G S L R P P A M S A A F               |   |
| UniRef90_R6P6A5        | S M E E S R M W F R G T D E P C A M V S       | V W A L G Q A N R D G Y D K M T S K I         |   |
| UniRef90_K4JER5        | H V L P D Q L M T F G G T S E P C A V V R     | L S S I G R L G V E L N K K H A A K I         |   |
| UniRef90_UPI00035E965F | S L H T G L S M M F A G S S E P A A Y L D     | L P V E R A A E L S A A L                     |   |
| UniRef90_C4WUE5        | T I V P D Q L M H W D G D D K P C G T A T     | L M S I G S L G V E Q N K K H A A V L         |   |
| UniRef90_G0A381        | E L A G D K A M L F G G S A D P L A Y A E     | C K S I G L S K A Q A G S L S A G I           |   |
| UniRef90_Q514D2        | Q I N T D Q M M M F G G K G D P C A L C S     | L H S I G K I S R A Q N K L Y S N L L         |   |
| UniRef90_UPI0003B74E9A | A I E G D V P M Y F R G D D Q P V A F V D     | V K T F G G A P R N A Y D K M T T E L         |   |
| UniRef90_L0GXK2        | I V E D G R A M L F G G S S A P A A Y L E     | L K S I L G L P E D E T S E Y S R T L         |   |
| UniRef90_UPI000255CDAA | L F E P T V P M T F G G T D E P T A Y L E     | I K S I L G L T T Q Q V N L L T K E I I       |   |
| UniRef90_R6DMW5        | G F E D G Y D L Y F K G N R D K T A F V E     | V K I F G S A S A D V Y D Q M T G A I         |   |
| UniRef90_H8GLH4        | E L N T G K A M L F A G S A E P L A Y L E     | C K S I G L S A R Q A K S L S A A L           |   |
| UniRef90_K9YC99        | A F Q P E I A M T F S G T T D P V C Y I E     | I N V G S I I S A D K T S A M T Q D F         |   |
| UniRef90_C3KIT6        | N I N S D Q M M M F G G K G D P C A V C S     | L H S I G K I G S D Y N K Q Y S K L L         |   |
| UniRef90_UPI0003799996 | A C R H N P A M C F G G R T D P L A Y C E     | L K S I G K I L P E G L T R E L S R K L       |   |
| UniRef90_UPI0001C36FF8 | G I K S E Y D L W F K G D K S A A A M V E     | V A I F G G A S H N A F T T L T S H I L       |   |
| UniRef90_UPI00036392AE | A L G H N H A M R F G G S T E A L A Y C E     | L K S I G K I L P E G L T R E L S R K L       |   |
| UniRef90_T1J2R3        | H V I P D Q M M T M G G T S D P C G S A T     | L M S I G K L G V N E N K K H A A C L         |   |
| UniRef90_UPI0003774686 | A F E P E V P M T F G G T T D P V C Y L E     | I K S I V G S M T S G Q T K D M S A D F       |   |
| UniRef90_K4D1X7        | V L K G S V P M A F G G T E Q P A A Y G E     | L V S I I G G L N A D V N K K L S A A I       |   |
| UniRef90_U6P5I3        | H V V P D Q H M I F A G T D E P C Y G V       | H V V P D Q L M A F G G S S E P C A L C S     |   |
| UniRef90_G8F616        | H V V P D Q L M A F G G S S E P C A L C S     | L H S I G K I G G A Q N P S Y S K L L         |   |
| UniRef90_K7F792        | Q I S T D Q L M S F H G S T G P C A M C F     | L H S I G K I G G E Q E N K V Y S K L L       |   |
| UniRef90_R7B1Y3        | G F E P E Y R L Y F R G S S E P M A M V E     | V V S V Y G S E N P S A F E K L T A Q I       |   |
| UniRef90_P81748        | H I N G G Q K I T F G G T D A P A G F Q G     | L L S I L G G V G G E K N R S H S A K L       |   |
| UniRef90_UPI000454A92D | H V V P D Q L M T F S G S S D P C A L C S     | L H S I G K I G G A Q N R T Y S K L L         |   |
| UniRef90_D8QZ21        | L L N D R V P I L F G G S S R E A A A Y G E   | L V S I I G G L N P G V N K K L S A G I       |   |
| UniRef90_UPI0003508556 | V L K G S V P M A F G G T Q E P A A Y G E     | V L K G S I P I S L E G G Q T D P A A Y F G E |   |
| UniRef90_A9P9R4        | Q V V G G A D L I F G G T S D P A A Y V E     | L V S I I G G L N P E N Q T E P L S R F V     |   |
| UniRef90_UPI0003B2F371 | A I V P G V P M S F G G D A A P C A Q A V L   | M S I G C L G G D L N K R H S K A I           |   |
| UniRef90_A0A023B961    | T V V G G V V N M S W G G T S E P A A Q A T L | M S I G A L G V E E N K K H A K A L           |   |
| UniRef90_W9SWN9        | L I N G G V P I A F A G T E E P A A Y A E L   | L I S I I G G L G P S V N G K L S S T I L     |   |
| UniRef90_M2PET0        | S Y D Y N E N L T F N G S F D P A L L T I     | T S I L L G N I N P E A N E K Y S K A L       |   |
| UniRef90_M9WSJ5        | R V I P D Q L M S F G G T F D P C G S A I L   | R V I P D Q L M S F G G T F D P C G S A I L   |   |
| UniRef90_G7JUA0        | L V N G G V A I A F G G T E E P A A Y G E     | L I S I I G G L D P T V N A K L S S T I       |   |
| UniRef90_G5HTF2        | S I E D G C Q M F F G G K S R P I A M V E     | S I E D G C Q M F F G G K S R P I A M V E     |   |
| UniRef90_R7UNT5        | H V L P D Q L M T F G G T T G R C A L C T     | H V L P D Q L M T F G G T T G R C A L C T     |   |
| UniRef90_UPI0003F07D4B | G Y Q H V V S L A F G G S N Q P A A F V E     | G Y Q H V V S L A F G G S N Q P A A F V E     |   |
| UniRef90_V6LFR2        | C I E P G L R L M F G G T T E P A A I V N L   | C I E P G L R L M F G G T T E P A A I V N L   |   |
| UniRef90_A7SF14        | T Y E V P L A M T W D G N E E P A A V C M L   | T Y E V P L A M T W D G N E E P A A V C M L   |   |
| UniRef90_M1VMH3        | S I I P D V Q M C F G G S N A P C A T A S L   | S I I P D V Q M C F G G S N A P C A T A S L   |   |
| UniRef90_G6CVC7        | H V N A D Q A I S F A G T T E P A G F A V L   | H V N A D Q A I S F A G T T E P A G F A V L   |   |
| UniRef90_G0NRG9        | L F E D N V P M Y F G G S D D P V A Y V E     | L F E D N V P M Y F G G S D D P V A Y V E     |   |
| UniRef90_UPI0003B40A60 | U n i R e f 9 0 _ G 4 S Z 3 9                 | U n i R e f 9 0 _ U P I 0 0 0 3 7 4 0 6 0 F   | U n i R e f 9 0 _ Q 3 0 D R 4               |
| UniRef90_G4S29         | U n i R e f 9 0 _ U P I 0 0 0 3 7 4 0 6 0 F   | U n i R e f 9 0 _ E 9 G 3 A 6                 | U n i R e f 9 0 _ Q 6 0 3 L 0               |
| UniRef90_UPI000374060F | U n i R e f 9 0 _ Q 3 0 D R 4                 | U n i R e f 9 0 _ E 9 G 3 A 6                 | U n i R e f 9 0 _ Q 6 0 3 L 0               |
| UniRef90_A0A059A5B4    | U n i R e f 9 0 _ E 9 G 3 A 6                 | U n i R e f 9 0 _ Q 6 0 3 L 0                 | U n i R e f 9 0 _ A 0 A 0 5 9 A 5 B 4       |
| UniRef90_UPI0003C44647 | U n i R e f 9 0 _ D 1 N U J 3                 | U n i R e f 9 0 _ D 1 N U J 3                 | U n i R e f 9 0 _ D 1 N U J 3               |
| UniRef90_D1NUJ3        | U n i R e f 9 0 _ D 1 N U J 3                 | U n i R e f 9 0 _ B 5 I H U 5                 | U n i R e f 9 0 _ B 5 I H U 5               |
| UniRef90_B5IHU5        | U n i R e f 9 0 _ R 6 Y H Z 5                 | U n i R e f 9 0 _ R 6 Y H Z 5                 | U n i R e f 9 0 _ R 6 Y H Z 5               |
| UniRef90_R6YHZ5        | U n i R e f 9 0 _ R 1 B 6 E 4                 | U n i R e f 9 0 _ R 1 B 6 E 4                 | U n i R e f 9 0 _ R 1 B 6 E 4               |
| UniRef90_R1B6E4        | U n i R e f 9 0 _ U P I 0 0 0 4 6 3 A D B     | U n i R e f 9 0 _ U P I 0 0 0 2 B C 9 7 4 F   | U n i R e f 9 0 _ U P I 0 0 0 4 0 9 C 0 B C |
| UniRef90_UPI000463ADB  | U n i R e f 9 0 _ U P I 0 0 0 2 B C 9 7 4 F   | U n i R e f 9 0 _ R 6 I S S 7                 | U n i R e f 9 0 _ G 2 E 5 1 1               |
| UniRef90_R6ISS7        | U n i R e f 9 0 _ G 2 E 5 1 1                 | U n i R e f 9 0 _ F O J 1 5                   | U n i R e f 9 0 _ F O J 1 5                 |
| UniRef90_G2E511        | U n i R e f 9 0 _ F O J 1 5                   | U n i R e f 9 0 _ R 5 K S 4 0                 | U n i R e f 9 0 _ R 5 K S 4 0               |
| UniRef90_FOJ15         | U n i R e f 9 0 _ R 5 K S 4 0                 | U n i R e f 9 0 _ A 9 Q X F 1                 | U n i R e f 9 0 _ A 9 Q X F 1               |
| UniRef90_R5KS40        | U n i R e f 9 0 _ A 9 Q X F 1                 | U n i R e f 9 0 _ U P I 0 0 0 4 4 0 7 9 7 0   | U n i R e f 9 0 _ U P I 0 0 0 4 4 0 7 9 7 0 |
| UniRef90_A9QXF1        | U n i R e f 9 0 _ U P I 0 0 0 4 4 0 7 9 7 0   | U n i R e f 9 0 _ W 6 M 9 Z 9                 | U n i R e f 9 0 _ W 6 M 9 Z 9               |
| UniRef90_UPI0004407970 | U n i R e f 9 0 _ W 6 M 9 Z 9                 | U n i R e f 9 0 _ L 1 K 4 4 1                 | U n i R e f 9 0 _ L 1 K 4 4 1               |
| UniRef90_W6M9Z9        | U n i R e f 9 0 _ L 1 K 4 4 1                 | U n i R e f 9 0 _ E 6 U 7 U 2                 | U n i R e f 9 0 _ E 6 U 7 U 2               |
| UniRef90_L1K441        | U n i R e f 9 0 _ E 6 U 7 U 2                 | U n i R e f 9 0 _ Q 0 F 0 I 5                 | U n i R e f 9 0 _ Q 0 F 0 I 5               |
| UniRef90_E6U7U2        | U n i R e f 9 0 _ Q 0 F 0 I 5                 | U n i R e f 9 0 _ D 2 A 5 0 8                 | U n i R e f 9 0 _ D 2 A 5 0 8               |
| UniRef90_Q0F0I5        | U n i R e f 9 0 _ D 2 A 5 0 8                 | U n i R e f 9 0 _ V 5 C A H 3                 | U n i R e f 9 0 _ V 5 C A H 3               |
| UniRef90_D2A508        | U n i R e f 9 0 _ V 5 C A H 3                 | U n i R e f 9 0 _ U P I 0 0 0 4 0 9 C 0 B C   | U n i R e f 9 0 _ U P I 0 0 0 4 0 9 C 0 B C |
| UniRef90_V5CAH3        | U n i R e f 9 0 _ U P I 0 0 0 4 0 9 C 0 B C   | U n i R e f 9 0 _ B 8 P B L 4                 | U n i R e f 9 0 _ B 8 P B L 4               |
| UniRef90_UPI000409C0BC | U n i R e f 9 0 _ B 8 P B L 4                 | U n i R e f 9 0 _ U P I 0 0 0 1 7 5 8 3 D 8   | U n i R e f 9 0 _ U P I 0 0 0 1 7 5 8 3 D 8 |
| UniRef90_B8PBL4        | U n i R e f 9 0 _ U P I 0 0 0 1 7 5 8 3 D 8   | U n i R e f 9 0 _ R 6 N D L 9                 | U n i R e f 9 0 _ R 6 N D L 9               |
| UniRef90_UPI00017583D8 | U n i R e f 9 0 _ R 6 N D L 9                 | U n i R e f 9 0 _ H 8 Y Z 1 7                 | U n i R e f 9 0 _ H 8 Y Z 1 7               |
| UniRef90_R6NDL9        | U n i R e f 9 0 _ H 8 Y Z 1 7                 | U n i R e f 9 0 _ U P I 0 0 0 4 2 C 4 E 0 0   | U n i R e f 9 0 _ U P I 0 0 0 4 2 C 4 E 0 0 |
| UniRef90_H8YZ17        | U n i R e f 9 0 _ U P I 0 0 0 4 2 C 4 E 0 0   | U n i R e f 9 0 _ E 6 K 1 V 4                 | U n i R e f 9 0 _ E 6 K 1 V 4               |
| UniRef90_E6K1V4        | U n i R e f 9 0 _ E 6 K 1 V 4                 | U n i R e f 9 0 _ U P I 0 0 0 4 4 0 A 5 5 9   | U n i R e f 9 0 _ U P I 0 0 0 4 4 0 A 5 5 9 |
| UniRef90_UPI000440A559 | U n i R e f 9 0 _ U P I 0 0 0 4 4 0 A 5 5 9   | U n i R e f 9 0 _ I 5 A R 2 6                 | U n i R e f 9 0 _ I 5 A R 2 6               |
| UniRef90_I5AR26        | U n i R e f 9 0 _ I 5 A R 2 6                 | U n i R e f 9 0 _ U P I 0 0 0 4 1 A 5 6 2 D   | U n i R e f 9 0 _ U P I 0 0 0 4 1 A 5 6 2 D |
| UniRef90_UPI00041A562D | U n i R e f 9 0 _ U P I 0 0 0 4 1 A 5 6 2 D   | U n i R e f 9 0 _ J 3 J W I 7                 | U n i R e f 9 0 _ J 3 J W I 7               |
| UniRef90_J3JWI7        | U n i R e f 9 0 _ J 3 J W I 7                 | U n i R e f 9 0 _ U P I 0 0 0 3 7 5 2 C 4 5   | U n i R e f 9 0 _ U P I 0 0 0 3 7 5 2 C 4 5 |
| UniRef90_UPI0003752C45 | U n i R e f 9 0 _ U P I 0 0 0 3 7 5 2 C 4 5   | U n i R e f 9 0 _ Q 4 J X 3                   | U n i R e f 9 0 _ Q 4 J X 3                 |
| UniRef90_Q4JX3         | U n i R e f 9 0 _ Q 4 J X 3                   | U n i R e f 9 0 _ T 5 B M X 6                 | U n i R e f 9 0 _ T 5 B M X 6               |
| UniRef90_T5BMX6        | U n i R e f 9 0 _ T 5 B M X 6                 | U n i R e f 9 0 _ U P I 0 0 0 3 7 A 2 B F C   | U n i R e f 9 0 _ U P I 0 0 0 3 7 A 2 B F C |
| UniRef90_UPI00037A2BFC | U n i R e f 9 0 _ U P I 0 0 0 3 7 A 2 B F C   |   |   |

|                        | 90  | 100                               | 110 |
|------------------------|---|-----------------------------------|-----|
| UniRef90_UPI00033175C7 | C N L L T A H L S I S P D R L Y I                               | N Y Y D A A N V G R N G A T F     |     |
| UniRef90_G3LVK0        | A D F I E K N L G I A Q D R F Y V                               | T F V D L E N V G L N G K T F     |     |
| UniRef90_K9S3J2        | C Q A L S S A L L G V P A N R I Y I                             | E F A D A A M W G W N G S T F     |     |
| UniRef90_R6SOP3        | T E I V S D K L E I L S D R I Y I                               | K Y D E I E Y W G Y A G S N F     |     |
| UniRef90_R5V295        | C K I V A E T L H I D A S R I Y V                               | K Y A E I E H W G W N G S N F     |     |
| UniRef90_UPI000194D44D | C D L M S K Q L K I P F D R V Y I                               | N Y F D A A N V G W N G S T F     |     |
| UniRef90_UPI0003748B34 | C Q L L N D A L Q I P A D R V Y I                               | E F S N A E Y W G W N G S T F     |     |
| UniRef90_UPI0002001995 | C D L I S A R T G I P A N R I Y I                               | Q F E D V A S W G W D G R T F     |     |
| UniRef90_R6P6A5        | C T D L E E I L H I S A S R I Y I                               | K Y S E T L N W G C N G S N F     |     |
| UniRef90_K4JER5        | F A F M D K H L G I S N D R M F M                               | A F Q D S S T V G Y K G T T F     |     |
| UniRef90_UPI00035E965F | C N L M R N E L L G I D S S R V Y I                             | G F V N P S M W G W N G K T F     |     |
| UniRef90_C4WUE5        | Y P L L K K E L L G I P D D R L Y I                             | T F S D S S N V G Y S G T T F     |     |
| UniRef90_G0A381        | A A L L H Q R L A V P M D R V Y I                               | E F S N A E F W G W N G S T F     |     |
| UniRef90_Q514D2        | C G L L H K H L G I S P N R I Y I                               | N F F D A A N V G W D S N T F     |     |
| UniRef90_UPI0003B74E9A | T G I Y G D I L L G V A P D H M Y I                             | R Y F G S G D W G W N G S N F     |     |
| UniRef90_L0GXD2        | C E L V A D E L G I G A E R I Y I                               | E F A A P P R F G W N G G T F     |     |
| UniRef90_UPI000255CDAA | A D L A H A K L L G I N P E R I Y I                             | E F A D A P R W G W N R T T F     |     |
| UniRef90_R6DMW5        | C K I L F E E E L Q I P A D R I Y I                             | K Y E E V A N W G W N G N N F     |     |
| UniRef90_H8GLH4        | S R Q L E T A L A I P A N R I Y I                               | E F C P A E F W G W N G S T F     |     |
| UniRef90_K9YC99        | C Q E V E N H L G L G V P A N R T Y I                           | E F A E A S M W G W N G S T F     |     |
| UniRef90_C3KIT6        | C G I L L N K H L G I S P D R I Y I                             | V N F V D I E N V A R N S T T F   |     |
| UniRef90_UPI0003799996 | C D S L Q A E L G I E P A R V Y I                               | E F A D A P R W G T N G T T F     |     |
| UniRef90_UPI0001C36FF8 | T G I L L T D Q L L G I S S D R I Y I                           | K Y S E V E N W G W N G S N F     |     |
| UniRef90_UPI00036392AE | C D T L Q A E L G G V E P A R I Y I                             | E F A D A P R W G T N G T T F     |     |
| UniRef90_T1J2R3        | Y A H I E K Y L G I P K D R I Y I                               | T F E D M S N V G Y E G T T F     |     |
| UniRef90_UPI0003774686 | C Q E I I S S A L G V P M N R I Y I                             | E F A D A A M W G W N G S T F     |     |
| UniRef90_K4D1X7        | A D I L E T K L L S I P K S R F F L                             | K F Y D T S F F G W N G S T F     |     |
| UniRef90_U6P5I3        | F A L I K D H L G I S G N R M Y V E F I D A A D I A F N S K T F |                                   |     |
| UniRef90_G8F616        | C G I L L A E R L R I S P D R V Y I                             | N Y Y D A A N V G W N N S T F     |     |
| UniRef90_K7F792        | C D L L S K H L K I P A D R I Y I                               | I S Y F D A A N L G W N C T T F   |     |
| UniRef90_R7B1Y3        | C D I F N D V L G I A P D H I Y V                               | K Y Q A V I S N W G W N G S N F   |     |
| UniRef90_P81748        | F K H L T D G L G I P G N R M Y I                               | N F V D M S D V G Y N G S T F     |     |
| UniRef90_UPI000454A92D | C G I L L A D R L H I S P D R I Y I                             | I N Y Y D A A N V G W N G S T F   |     |
| UniRef90_D8QZ21        | A G I L L E S R L S S V P P S R F Y I                           | K F Y D V S N V G Y N G S T Y     |     |
| UniRef90_UPI0003508556 | A S I L L E S K L S S I P K S R F Y I                           | K F Y D A Q K F Y D A Q           |     |
| UniRef90_A9P9R4        | A S I L L E K K L S S V P K S R L F Y I                         | L F K F Y D S Q H F G W N G S T F |     |
| UniRef90_UPI0003B2F371 | C E F L Q A Q A L N I P P D R V Y I                             | V E L I D I P R W G W N N G T F   |     |
| UniRef90_A0A023B961    | A D F T N K T L L G V A P D R M Y I                             | Q F V D A A N V G F N G N T F     |     |
| UniRef90_V519N1        | Y E I V N K S I L G I P L D R M Y I                             | N F F D T S A V G Y N G T T F     |     |
| UniRef90_W9SWN9        | A E I L Q T K L L S I D S S R F Y I                             | D S S R F Y I K F Y D A Q         |     |
| UniRef90_M2PET0        | F E F F E K K L L S V P G D R G Y I                             | T F L D P A Y L G H K G T T F     |     |
| UniRef90_M9WSJ5        | Y A V V E K Y L G I P N D R M Y I                               | Q F I D T S E V G F K G T T F     |     |
| UniRef90_G7JUA0        | A Q I I Q T N L H I H S S R F Y I                               | K F S D P S F V G F N G S T F     |     |
| UniRef90_G5HTF2        | T R V L G G T L G V S P D N M Y I                               | K Y E A S P D W G W N G T N F     |     |
| UniRef90_R7UNT5        | M E K I N R E L L K I D V D R M Y I                             | Y Y V D R A N V G W N G T T F     |     |
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| UniRef90_V6LFR2        | S Q K F A E L L S I D G S R V Y I                               | T F T T E P S N W G F N G T T F   |     |
| UniRef90_A7SF14        | S N H I Q K T L L G V P A D R M Y I                             | I F H D K Q R V G Y N G A T F     |     |
| UniRef90_M1VMH3        | A E L L R K H C G V Q P S R Y Y I                               | E F V D P P D L G W N G R T F     |     |
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| UniRef90_G0NRG9        | F P I I E K H L G I P G N R I Y I                               | E F F N A A D I A F N G Q T F     |     |
| UniRef90_UPI0003B40A60 | M D A L Q N T L L D V P A D R T Y I                             | R Y T G T A D W G W N G G N F     |     |
| UniRef90_G4SZ39        | S R L L E K E L S I P P D R V Y I                               | E F S N A E L W G W N G S T F     |     |
| UniRef90_UPI000374060F | C D L L N E S L L G I P A E R V Y I                             | E F F A A P P R F G W N G G T F   |     |
| UniRef90_Q30DR4        | C G I L L T E R L R I N P D R I Y I                             | N F C D                           |     |
| UniRef90_E9G3A6        | G E Y V E K H L G V A P N H M Y I                               | E Y Q D V A D L G Y D K T T F     |     |
| UniRef90_Q603L0        | C S L L Q D S A G I P A P R V Y I                               | E F T D V A G W G W N G S T F     |     |
| UniRef90_A0A059A5B4    | A S I L L E A K L S I P K S R F F L                             | K F Y D T S F F G W N G S T F     |     |
| UniRef90_UPI0003C44647 | C D L L T K Q L H I P A D R V Y I                               | N Y Y D A A N V G W N G S T F     |     |
| UniRef90_D1NUJ3        | M Q G L H D V L L G I N E D R T Y I                             | R Y T A T L D W G W N G S N F     |     |
| UniRef90_B5IHU5        | C G I L I E A S L G V P P Q R T Y I                             | E F G A A E G W G W N G R T F     |     |
| UniRef90_R6YZH5        | C A L L F Q K E L L G V A P Q D M Y I                           | R Y L A T P D W G W N G G N F     |     |
| UniRef90_R1B6E4        | S E L L A A H G A V P A D R V Y I                               | L N F F D V P N C G W S G R T F   |     |
| UniRef90_UPI0004633ADB | S K I I Y R D T V G I A Q D K I Y I                             | K Y E E A E H W G W N G T N F     |     |
| UniRef90_UPI0002BC974F | A D I L E T K L S I P K S R F F L                               | K F Y D T K                       |     |
| UniRef90_R6ISS7        | C D A V S A E T G I A P A N I Y I                               | V K Y E E A E H W G W N G S N F   |     |
| UniRef90_G2E511        | C E L M S E L L A V P P G R V Y I                               | E F A S P P R F G W N S G T F     |     |
| UniRef90_F0J15         | C G F L N R E L L G I P A D R V Y I                             | A F G D I E R F G W D G G T F     |     |
| UniRef90_R5KS40        | C D I V E K E L L G I S A S R T Y I                             | V K Y S G T A Q W G W N R S N F   |     |
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| UniRef90_UPI0004407970 | T E F F E K K L L G L K N N R G Y I                             | T F V D P E F L G Y Q G A T F     |     |
| UniRef90_W6M9Z9        | C R V L L Q E Q L G I P P D R V Y I                             | G F S N V I E N W G W D S G T F   |     |
| UniRef90_L1K441        | T K I L L S S F F G I P A N R I Y I                             | I N F F D V P N Q G Y N G A T F   |     |
| UniRef90_E6U7U2        | T S I L L H R E L D I N P S Q I Y I                             | K Y E E V S H W G W N G N N F     |     |
| UniRef90_Q0F015        | S A I L L T R E L L G I D A A R I Y I                           | E F A A P P E M F G W N G G T F   |     |
| UniRef90_D2A508        | Y E V V V C K E L L G V S K D R M Y I                           | H F V N A P D V G Y N G T T F     |     |
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| UniRef90_UPI000409C0BC | T S I L Y G D I L G I A P N N M Y I                             | R Y F G S S D W G W N G S N F     |     |
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| UniRef90_R6NDL9        | C K I L F Q K E L L G V D P K D I Y I                           | R Y L A S P D W G W N N T N F     |     |
| UniRef90_H8YZ17        | T A L V G E H L G V P A G R V Y I                               | A F S A P P R F G F N G G T F     |     |
| UniRef90_UPI00042C4E00 | L Q X R L R V S P G R I Y I                                     | N D Y D A A N V G W N G S T F     |     |
| UniRef90_E6K1V4        | Q T A I L H E V L G I S E D R M Y I                             | R F T A T P D W G W N G G N F     |     |
| UniRef90_UPI000440A559 | F A F F E K Q L L G I P G D R G Y I                             | T F Y D P A Y L G H K G T T F     |     |
| UniRef90_I5AR26        | T K I I Y R E I L L G I S P D R M Y I                           | V K Y A T Q D W G W N G N N F     |     |
| UniRef90_UPI00041A562D | T K I I Y G E V L L G I A P D H M Y I                           | R Y A A T K D W G W N G S N F     |     |
| UniRef90_J3JWI7        | F A A I E Q T I G V P R S R M Y I                               | A Y N N A P D V G Y N G T T F     |     |
| UniRef90_UPI0003752C45 | C A F M H D E L L G I D S A R I Y I                             | E F T A P P E M F G W K G G T F   |     |
| UniRef90_Q46JX3        | C E L I I A S K T N I T N T R I Y I                             | E F F D A S N W G F N G S T F     |     |
| UniRef90_T5BMX6        | T E F L K A K Q G V E N S R G Y I                               | V F Y D P P N Q G Y K G T T       |     |
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1 10 20 30 40

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 P F I Q T K V N I K I S K Q K E E I L K S K F G K A I E L I P G K S E K W L M V  
 P C L N I S T N V S L E S V D T S A V L S E T T K A V A K I I G K P E S Y V M V  
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 F I D S K V S V K M T D D Q K T E V K K R L G A A I A V I P G K S E D W L M I  
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 P Y L K V Q T N Q K V K S T E D F I K K L S K E S S E A L S K P E D Y I M V  
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 P Y I R T T V S K S I N P G Q R D I L K S K L G N A I A I L I P G K S E A W L M L  
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 P I L S V S V N V T L L S A E K N T E L L K E L S N V V G K L L G K P E K Y M C I  
 P Y I I N S K V T V S L S E D K T N K L K E E L L G R I I C D I P G K S E N F L M V  
 P M F I L Y T N L P S A N L P S D F L T E T S K I V A T A L N K P E S F V A V  
 P F I D L E S N L P A E R F P E F V K K L C S T A A Q A L G K P E E R V N V  
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 P I F T L Y T N V C Q S A V P P S L M S D L C L L E K A M D V P A K H F V I  
 P S F L L H V S C E M G L G I R A D F M K E M S K H I A E T S K P E T Y V C V  
 P F F L D L E T S N L P A A Q L A P D L G Q K L C A A A A S I L G K P V D R V N V  
 P S L D L T T N V K I E D E K A F A L E F S K A S E S I L G K P E K Y I S V  
 P F I L L I K T N I V P L D K T M R E T V L N Q A S T V I A R T T G K P E K F I M V  
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 P F V E L E T N L P A S R I P A G L E N R L C A A T A T I L D K P E D R V S V  
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 P F I I D S K I I T V S L T P K K E E A I K T K L G E A I Q I L N K S E T Y L M V  
 P V L D L T V N I Q P D A K A K L S L E L S K V G A K I L G K P E S Y I S V  
 P F I I N I E T N L P A S K F P E D F L K R L C S T L A A A L G K P E D R M N L  
 P S L E I K T N V K L D D P K K F V E E F S T F A A E L L S K P L K Y I A V  
 P Y I I N I T T N Q E V K D E K T Q F I K K T S E T V A K A S G K P E S Y V M I  
 P F I I N S T V T V K L D K E K E S T L K V E L G K I I E L L P G K S E D W L M V  
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 P F I L Q T I V S V S L D D Q K R A N L S T A Y R M I C R E E L G K P E D F V M T  
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 P K C M I F C P V A A T P A Q Q D A L L K D A E K V A A D A L G K P L S Y V M V  
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 P F I I D S K V T V S V T E E Q K E K I K S E L G K A I T T L H K T E T Y L M V  
 P L L V L I N T N V K V A D P K T F L E F S K F S A E T L N K P E A Y I T V

50            60            70            80

|                        |   |
|------------------------|---|
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UniRef90\_M2XL2 C D L L Q K Y V L K V S P S R T Y I Q F T D P E N F G H N S S T F

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UniRef90\_UPI0003607CE9 C D F A D V H L N V E P D R T Y I E F X N P P M W G Y D R H T F

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UniRef90\_UPI00038EF04F F E F F L T K K E L A L G Q D R I V I C F Y E P W Q [□] G K K G T T F

UniRef90\_UPI000359D414 S E F F I E E Q K L G I K K D R F F I C V T D V G R C I W N G S T F

UniRef90\_UPI00032AE1BA F E F F L T K K E L G L A K D R I L I R F Y P V E R W G M N G T T F

UniRef90\_R6IQZ7 C A I I A Q Q Y V Q P V E R T Y I V R Y R E V D H W G Y N N F N F

UniRef90\_R9J696 S G I I Y E K E L K I P Q N R [Y] I K Y E E V E K W G W N G T N F

UniRef90\_K7F7A4 C D L L T K Q L H I P A D R V Y I N Y Y D A A N V G W N G S T F

UniRef90\_W6N3Z2 T N I I F S Q E L L N I K P S Q I Y I K Y E E V E H W G W N G S N F

UniRef90\_L8M8K8 C Q Q I E S E L G V V K A S R I Y I E F A D A Q R W G W N G S T F

UniRef90\_S8EMF0 F E F F H E K L G I S G D R R G Y I T F L D P A Y L G H K S T T F

UniRef90\_A9BB73 C M I I N E S L G V Q K E R I Y I N F E D A K N W G Y N A T T F

UniRef90\_R6U7Y3 C S A V S Q E L G I A Q D D K I Y I V K Y E A V V E S W G W N G S N F

UniRef90\_T2HZ45 M A L N S T L G I P E D R T Y I R Y T A T T D W G W N G G N F

UniRef90\_A5GKA8 C D L I I S A R T G I A A A N R I Y I G F E D V P A W G W N G S T F

UniRef90\_C0N837 C T L I I N E Q L G I D G G R V Y I S M T D S E N W G W N H S T F

UniRef90\_A2DXT4 T K W F T D H G F Q G D R I Y I V F N P A E D W G F N G D T F

UniRef90\_Q68F13 F N F L T T E Q L G L I A Q Q D R I L R F V E P W Q [□] G K N G T T F

UniRef90\_B1QWH7 C K I I Y E E E L G I P Q N K I Y I K Y E E V E N W G W N G K N F

UniRef90\_H0V3M5 F E V L T K T K E L A L G Q D R I V I R F Y P L E R W G K K G T T F

UniRef90\_UPI00036309C6 C N L M E A E I I N V S R D R V Y I E F A N A P R W G W N G G T F

UniRef90\_R5AAU8 C A L L F Q K E L G V D P K D M Y R Y L A T P D W G W N N G N F

UniRef90\_V9HEL1 C D L Y E E K E L N I K P K D A I Y I K Y E E V E N W G F N G F N F

UniRef90\_C0CU17 T R I L L E H N L G V A P R D L I Y I K Y E A F F P D W G W N G K N F

UniRef90\_UPI000360A727 C L F L E E H T L K I D A S R I Y I E F S A P E M F G W N K S T F

UniRef90\_UPI0003618227 C T F F L E E S A L D L P S D R V Y I A F A D R T M F G W D K R T F

UniRef90\_G3SGD1 X X X L S H P L S S P R R V Y I N Y Y D A A N V G W N N S T F

UniRef90\_N2AMU0 C R I I Y E Q Q L G I P Q D K V Y I V S Y T G V R D W G W N G R N

UniRef90\_E3MI52 F P L F K E Y L G I P S D R F Y I E F V N A A D [□] A F D G Q T F

UniRef90\_UPI000427C0AE C E L L F T R E L L G I P G E T [□] Y I K Y E E V D N W G W N G S N F

UniRef90\_V4AUH7 A E H E L E K T L G L P D R Y Y I K F T D M Q R V G F K K T T F

UniRef90\_H3AUG8 F E F F L T R E L L K L P E D R I I R F F E T W Q V G K K G T T F

UniRef90\_B7U5G7 S E F F L Q Q K L G I D P K R N Y I I K F T D M K E V G C E G T T

UniRef90\_C1C3U4 C D I L L N K K L H I P P E R [□] Y I I N F V Q V K N V G W N S I T

UniRef90\_K8F1F1 C E I I L E R D F M I P K N R V Y I E F V D R E N C G Y D G A T F

UniRef90\_UPI0003C29DFA F E V L T T K E L G L P D R I L I R F Y E A W Q I I G K N G T T F

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UniRef90\_R5Q018 T E M I I E S R L Q V P G N R I Y I I E F S S V P M W G Y N G T T F

UniRef90\_C6PTR2 C E L F E D E L S I S K K D S V Y I T F S E V K D W G W N G S M F

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UniRef90\_R7C9K4 C D I L L S E E L S S I P G N Q V Y V T Y H G V N D W G W N G S N F

UniRef90\_D8PTM3 S E F F L K E K L G L P N D R G Y M A F [□] D P A N L G Y Q G T T F

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UniRef90\_F5T010 C T L I I S E N L K V E G G R I Y I S M T D S E N W G W N H S T F

UniRef90\_F0K9Q3 S S L M E N E L S I P K D C Y I Y I T V D E V S N W A W N G S L F

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UniRef90\_A4I971 S A A I T K E C G I P A E R [□] Y V F Y Y S T K H C G W N G A N F

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UniRef90\_W0E6T2 C A L L C E T L L G V P E R R V Y I I D F R S P P R F G W N G G T F

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UniRef90\_R6MSR9 C E I I Y E Q E L G I P S S N A [Y] V T Y H P I A D W G W N G H N F

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10                    20                    30                    40  
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 P H | F | V K T N V A K D K | L P K S | I | L Q D L | T K L V S S | I | P N K P E K Y | V C V  
 P A I | V L T T N V K P K D E A H E | K E L | F S A E T | L N K P E K Y | I S V  
 P L L | Q V | T S N L Q | L T D S E R S N | C | L L T | L S K A I | E A L | L | G K K E S Y | V M T  
 P S L | I | T T N V D L | G S K K L | D | L | K A L | S K A M A E | H T | G K P E E Y | I A V  
 P Y L | S I | E T N V S L | T E R E Q K E L | L V E A A S R F I V E | K M N K | P Q A Y | T M V  
 P F | I | D L | E S N | L P A S K F S E D F | L | K K | L | C S M T A A A | L | G K P E D R | M M L  
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 P F | V E | L D T N | L P S D R V | P A | G L E K R | L | C A A T A A | L | G K P E D R | V N V  
 P S | I | V L T S N | V | K | L | A A D T | L | G K P E K Y | I S V  
 P L | Q Y | I | A I V  
 P Y | L | T V S T N A E | I | S | P | G A E K Q | F | L | K | E | A | S | L | A | V | A | V | G | T | G | K | P | E | Q | Y | V | M V  
 P Y | I | D S K | I | T | L | T | L | S | E | E | K | E | T | L | K | T | A | L | G | Q | L | I | S | T | L | P | G | K | S | E | N | F | L | M V  
 P L | I | K | V | Q | T | S | L | A | A | P | K | G | D | V | E | S | M | L | L | S | L | S | S | S | K | L | A | S | H | L | G | K | P | E | S | Y | V | M T  
 P F | I | D S K | V | T | V | S | L | S | A | E | K | E | N | I | K | Q | K | L | G | H | A | I | G | T | L | G | K | T | E | S | F | L | M V  
 P F | I | L | D | T | N | L | P | A | N | R | V | P | A | G | L | E | K | R | L | C | A | A | A | S | I | L | G | K | P | A | D | R | V | N V  
 P A | L | E | I | R | T | N | I | S | V | A | D | P | K | A | F | V | K | D | F | S | E | F | S | A | T | T | G | K | P | L | A | Y | I | A | V  
 P C | C | E | L | I | T | N | I | S | I | P | D | D | K | A | Q | N | A | L | S | E | I | E | D | A | I | S | N | V | L | G | K | P | V | A | Y | I | M S  
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 P F | I | D S K | V | T | V | S | L | S | E | N | Q | K | E | N | I | K | D | E | L | G | K | L | I | D | E | L | P | G | K | S | Q | K | F | L | M L  
 P F | I | D S K | V | T | V | K | M | S | D | D | Q | K | E | T | L | K | S | S | L | G | Q | A | I | T | T | M | N | K | T | E | S | Y | L | M V  
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 P Y | I | N | S | R | I | L | T | V | K | L | S | Y | E | Q | K | K | R | I | K | D | E | M | G | K | I | I | S | E | I | P | G | K | S | E | E | W | L | M V  
 P F | I | N | S | K | I | T | K | K | I | T | R | E | E | V | V | I | V | K | E | K | L | G | K | A | I | E | L | V | P | G | K | S | E | A | W | L | M L  
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 V | A | V  
 P V | F | T | L | S | T | N | V | P | S | S | K | I | S | D | A | F | I | S | E | L | L | S | S | K | L | A | D | L | L | H | K | P | E | S | Y | V | A V  
 P F | I | N | V | S | T | S | A | K | V | D | E | K | D | K | L | L | E | E | I | S | L | S | S | K | L | A | S | S | I | L | T | N | K | S | R | F | V | A I  
 P F | V | E | L | D | N | T | N | L | P | G | S | S | F | N | E | D | F | L | K | K | L | C | S | C | V | A | S | T | L | S | K | P | E | E | R | M | N | V  
 P P | R | L | S | L | D | T | N | L | P | A | S | K | I | P | E | D | F | L | I | S | T | C | T | S | L | S | S | K | L | G | K | R | Q | S | Y | C | V | S  
 P F | V | H | V | T | S | N | V | P | K | T | D | V | D | V | P | K | A | L | R | A | L | S | N | A | L | S | D | A | L | G | K | P | E | A | Y | V | M V  
 P Y | I | N | A | T | V | S | T | K | L | S | S | E | E | K | R | E | T | I | K | A | K | L | G | E | I | I | C | K | I | P | G | K | S | E | Q | W | L | M I  
 P C | C | I | Q | L | S | T | N | Q | I | L | S | S | D | D | S | Q | T | I | L | K | K | N | F | G | K | A | I | E | I | I | P | G | K | S | E | K | W | L | M C  
 P C | C | Y | I | S | T | N | V | N | L | A | G | V | D | V | S | A | P | I | F | S | A | T | T | V | A | V | S | I | I | G | K | P | E | N | Y | V | M V  
 P A | L | E | L | K | T | N | V | A | V | A | D | P | K | A | F | S | L | E | F | S | K | F | A | A | K | T | L | E | K | P | E | G | Y | V | S | V  
 P F | I | D | V | K | T | N | V | T | F | S | K | E | K | A | D | E | L | M | K | E | L | L | S | G | S | L | K | A | I | G | K | S | E | A | Y | V | M C  
 P C | C | Y | I | V | M | Y | T | N | V | E | V | P | K | E | K | A | E | E | L | K | K | A | L | V | V | S | S | W | E | K | L | P | G | K | S | E | R | W | L | M T  
 P F | I | D | V | R | V | A | G | K | L | S | D | S | Q | K | E | N | L | K | S | A | L | G | K | A | V | S | I | I | H | K | P | E | S | Y | L | M V  
 P P | N | V | Q | V | S | S | N | V | S | S | A | G | V | D | V | K | V | M | A | A | I | S | K | A | L | A | T | A | L | D | K | S | E | Q | V | V | M V  
 P L | V | D | L | A | T | N | V | S | V | P | D | V | K | A | L | S | E | L | S | S | K | A | A | S | Q | I | L | G | K | P | E | A | F | V | G V  
 P F | I | M | S | R | T | N | V | K | L | P | K | N | K | E | L | A | L | K | K | R | L | G | L | A | I | A | N | V | P | G | K | S | E | D | V | L | M V  
 P Y | I | N | V | S | T | S | A | K | L | E | D | K | K | K | L | E | E | I | S | L | S | V | L | V | S | S | T | L | N | K | S | R | F | V | M A  
 P S | V | V | V | Q | A | A | V | A | P | K | S | G | A | G | F | C | K | L | L | S | S | S | T | V | A | G | T | L | G | K | P | E | S | Y | V | L | T  
 P S | F | V | V | N | T | N | V | A | R | A | D | V | P | A | A | L | S | E | A | H | Q | R | A | G | N | R | S | C | E | K | P | A | Q | Y | I | A | V  
 P V | F | L | T | I | H | T | N | V | L | L | D | G | S | L | M | S | V | V | S | K | L | S | H | E | V | A | K | T | T | G | K | P | E | S | Y | V | M V  
 P V | F | L | T | I | L | S | T | N | V | S | V | P | D | V | K | A | L | S | E | L | S | S | K | A | A | S | Q | I | L | G | K | P | E | P | F | V | M V  
 P C | F | E | N | L | S | T | N | V | N | L | D | G | V | D | T | S | D | F | F | S | E | A | T | K | A | V | S | S | I | L | G | K | P | E | N | F | V | M V  
 P Y | I | N | L | T | L | T | V | K | L | T | E | D | S | E | E | T | I | K | S | K | L | G | E | I | I | A | D | F | P | G | K | S | E | Q | Q | L | M V  
 P C | F | V | L | H | T | N | V | S | A | S | Q | I | P | E | F | C | E | S | L | T | K | L | L | C | E | I | T | G | K | P | E | A | E | F | S | V  
 P P | L | I | T | L | S | T | N | V | Q | L | G | V | V | E | T | K | S | F | V | L | D | F | D | S | K | F | C | S | E | T | I | G | K | P | E | A | F | R | I | M I  
 P T | L | S | I | T | T | N | L | P | K | Y | K | I | P | S | T | F | L | A | D | A | S | K | L | V | S | Q | V | L | Q | T | P | E | L | Y | I | A | V  
 P C | C | E | V | I | T | N | V | N | L | P | D | D | N | V | Q | S | T | L | S | Q | I | E | N | A | I | S | D | V | M | G | K | P | L | G | Y | I | M S  
 P F | V | F | E | L | D | T | S | L | P | A | E | R | L | P | P | G | L | A | T | L | C | A | A | A | D | L | G | K | P | A | E | R | V | N | V  
 P M | V | R | V | A | T | T | V | D | K | T | K | I | A | D | D | F | E | V | K | L | T | D | I | L | A | E | S | M | G | K | P | R | E | R | I | M I  
 P C | C | L | N | V | S | T | N | V | N | L | L | D | D | V | D | T | S | A | I | L | A | E | S | K | S | V | A | N | I | G | K | P | E | A | Y | V | M V  
 P C | C | L | Y | I | S | T | N | V | N | L | L | D | D | V | D | K | D | P | I | F | S | E | A | T | K | A | V | A | I | G | R | P | E | H | L | V | M V

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 UniRef90\_R5A687  
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 UniRef90\_M5BJ32  
 UniRef90\_D5EHU4  
 UniRef90\_B7GBD1  
 UniRef90\_B3E0U3  
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 UniRef90\_K7UAE4  
 UniRef90\_B9HD81

50            60            70            80

|                        | 90                | 100   | 110                             |
|------------------------|-------------------|---|---------------------------------|
| UniRef90_R7S4Q5        | F D H F Q K T     | L G T P G N R G Y                                       | V V F N D P G R M G H K G T T   |
| UniRef90_UPI000344445E | C G L L A D R L   | R V S P D R I Y I                                       | N Y D A A N V G W N G S T F     |
| UniRef90_UPI00047BE0C1 | C D I Y E E Q L   | G I P A K N V Y   | T Y Q G F S D W G W N G S N F   |
| UniRef90_UPI0001CB96BC | M E W L N T R     | L G I D A T R M Y                                       | I S F I S P E N I G Y N Y T T F |
| UniRef90_W4Y6E9        | T A E M T K       | I G V K A D R M Y                                       | V T F R D R Q D V G W N N T T F |
| UniRef90_T1KBJ0        | S A F L V K E     | L G L P E D K F Y I                                     | M F H N L E N V G W K G T T F   |
| UniRef90_UPI0004624979 | A T Y F K E K     | L G V E D T R G Y I                                     | T F S D P D Y L G Y N S T T F   |
| UniRef90_UPI00047E700E | T G I C G D V     | L G V A P D H M Y I                                     | S Y F G S D D W G W N G S N F   |
| UniRef90_R7BFJ2        | C K T S E K Y     | L G V P S N R T Y                                       | V K Y N E I D K W G Y D N F N F |
| UniRef90_W0TL52        | C D L V A D T     | L E V S P D R I Y I                                     | E F F N P P M W G W N R S T F   |
| UniRef90_D4J3M6        | C R L F E E K     | L G I P G N A V Y                                       | V T Y H P V N D W G W N G S N F |
| UniRef90_A5PK65        | F E F L T T K E   | L D L A E D R I M I                                     | R F F P L E R W G K K G T T F   |
| UniRef90_R5A687        | C A L L E K E L   | L S L N P K D I Y                                       | V R Y L A L P D W G C N G S N F |
| UniRef90_H2Y3S3        | L G E L Y K L     | L G V A Q D R M Y L                                     | E F H E A T R M G Y N G T T F   |
| UniRef90_M5B32         | F D Y F K Q K     | L N I P G D R G Y I                                     | T F Y D P G N L G H E G T T F   |
| UniRef90_D5EHU4        | C E R V R L T     | T D I Q A D R I Y I                                     | N Y Q D P T H W G W N G K T F   |
| UniRef90_B7GBD1        | S D L L E E Y     | G V D A A R I Y I                                       | N F F D M P N V G W S K R T F   |
| UniRef90_B3E0U3        | C S L L E K H C   | G I K A E R V F I                                       | N F S D V S A W G Y N R T T F   |
| UniRef90_C1BL90        | F Q F L T G E     | L G L G E D R V V I                                     | R F Y E P H Q V G K K G T       |
| UniRef90_R6NNC5        | C T L L E N E L   | G L I P G D R F Q V                                     | K F T P T E D W G W N D S N F   |
| UniRef90_H0XW69        | F E F L T T K E   | L S L G Q D R C V G F V A Y                             | P T E D W G W N D S N F         |
| UniRef90_UPI0004416195 | F A F F F N E K   | L G V P G D R G Y I S F V D P A N I G Y Q G T T F       |                                 |
| UniRef90_F6QC39        | C D Y L T T K Q   | M N I P A N R V Y I N F H D P A N V G W N G S T F       |                                 |
| UniRef90_B4CXD9        | C T L V A N H L   | H V P S G R I F T V F H D A P M W G Q G G G M F         |                                 |
| UniRef90_F2JN6         | C A L L E K E L   | G I P Q N A I V Y K Y E F V N H W G W N G H N F         |                                 |
| UniRef90_K9PYL2        | C T E I S Q T L   | D D V P K D R I Y I E F A D A S M W G W N S R T F       |                                 |
| UniRef90_R6M9X6        | C Q I F A D E L   | L D I P G Q N V Y V T Y Q G A D W G W N G N N F         |                                 |
| UniRef90_B5MC82        | F E F L T T K E   | L A L G Q D R F Q V K F T                               |                                 |
| UniRef90_UPI0004414053 | F G Y F K E K L   | G I P D D N R G Y I L F I D P A N I G H T S T T F       |                                 |
| UniRef90_Q1HEA2        | T K I L S N H     | L G V K P R R V Y I E F R D A Q N F A F S G S L F       |                                 |
| UniRef90_R7H892        | T G I L L D V L   | S S I S T D R T Y V S Y A L T E H W G W N G S N F       |                                 |
| UniRef90_S9V2M9        | T A L I T K F C   | S S V P S G R I Y V S F F G T E Q W G W S G R N F       |                                 |
| UniRef90_UPI000404FB34 | C D L L Y K E A   | L N I P P K S I Y V K F E E V D N W G W N G A N F       |                                 |
| UniRef90_D5HIC1        | C D I F A D V     | L G I P G N A V Y Y V T Y H G V H D W G W N G G N F     |                                 |
| UniRef90_UPI00037B6552 | T E T L S S L K   | L K I S P D R I Y I E F Q E S A R W G W N G K T F       |                                 |
| UniRef90_UPI0003289675 | C G L L A E G L   | R L S P D D R I Y I N Y C D V A N V G W N S S A F       |                                 |
| UniRef90_C1C3Q4        | F E F L T T K E   | L L G L T P D R I L R F H E P W Q I G K D G T T F       |                                 |
| UniRef90_H9GEC5        | F E F L Q R E L   | L G L A P E R I L I R F Y E P W Q I G K D G T T F       |                                 |
| UniRef90_A0A015KJD8    | F E G W L E K E   | L L K A S N D R G Y I F Y Y D P A N V G Y K G S         |                                 |
| UniRef90_UPI0003B7A36D | M G A F K A E T   | N I P P N D R T Y I R Y T A T K D W G W N G S N F       |                                 |
| UniRef90_R7QTZ2        | C R I I F K E R   | L N I P G N A V Y Y T Y Q G I N D W G W D G K N F       |                                 |
| UniRef90_I0JVE0        | C A L I E K H C   | R I I K P D R I F I N F S N V P A W G Y N K T T F       |                                 |
| UniRef90_A5K093        | T K I L L A S T   | L L N V K S E R V F I E F K D A Q N F A F N G S L F     |                                 |
| UniRef90_E4X404        | Q G F L E E E L   | G I T K E R N Y I R F D D A P E V V G W S G S T F       |                                 |
| UniRef90_I3KP21        | F E F L T T K E   | L L N Q D R I V I M F N E P H Q V G K K G T             |                                 |
| UniRef90_UPI00027F913E | C G I L L A E R   | R R N S P D R V Y I N Y                                 |                                 |
| UniRef90_D8GSM1        | C S F Y Q S E F   | D I P K D S I Y V I F S E S D W G F N G N L F           |                                 |
| UniRef90_V2XJ09        | T N I F N E V L   | G I I E P E R I Y V K Y E T T T N W G W N G R N F       |                                 |
| UniRef90_A4S5V7        | C A L L G E T     | F G I A G T R V Y V T F E D V E N M G Y D S A T F       |                                 |
| UniRef90_K0R230        | A D A L S G       | F A V P E D R I Y I N F F D M P R V G W K R A T F       |                                 |
| UniRef90_A0A016W030    | T Q F F C E D T   | L K L P K D R V I I T Y F D P T H V G F N G T T         |                                 |
| UniRef90_UPI0003BCDBED | C G I L L N K H   | L G I I S P E R M Y I N F M D A A N V A W N S T T F     |                                 |
| UniRef90_R5N4R4        | C D I L L S E E   | A S V P S D R S Y V K F K F S D K W G Y D G Y M F       |                                 |
| UniRef90_J0LHZ8        | F A F F K E K L   | G I I S G E R G F I E F V D P A Y I G Y D G T T F       |                                 |
| UniRef90_W5L488        | F P F L T T Q E   | L L G L S E D R V V I R F S E A W Q V G K K G T T F     |                                 |
| UniRef90_Q18785        | T E F F C G K E   | L L G L P K D K V V I T F H D P A T V G F N G T T       |                                 |
| UniRef90_M3ZW31        | F G F L T T K E   | L L S L A E D R I V I Q F L E P H Q V G K K G T         |                                 |
| UniRef90_K1Y669        | S T L L F E D K   | L N I N G K R I Y F E F T D P S M W G W D Q N T F       |                                 |
| UniRef90_C7LNS4        | T E M M H T E     | L G I I E S Q R V Y I A F T D V D M W A W D G R T F     |                                 |
| UniRef90_I2CSA6        | T A L L V E K H   | M G I I P A N R V F I Q F S D A A N F A W Q G N T F     |                                 |
| UniRef90_UPI000287BAF3 | C K I L L K D E   | L S I I D G E S I Y V I F H E I D D W G Y N G S L F     |                                 |
| UniRef90_L11S64        | C N L L Q E E F   | G I I R S N R V Y I E F R D V P N M G Y D G S T F       |                                 |
| UniRef90_H3E0F2        | H P L I E K N L   | G I I Q K D R L Y I I F V N A S A V S H R N G Q T F     |                                 |
| UniRef90_UPI0004736412 | C D F V Y E K M   | G I I P I D R I Y I S F E D V V P A W A W N G R T F     |                                 |
| UniRef90_H2M5M8        | F E F L T T K E   | L S M T E D R I V I K F D E P H Q V G K K G T           |                                 |
| UniRef90_J9K033        | T D Y M H Q T L   | G I I P K E R L L I N L Q A N I G Y L G T T F           |                                 |
| UniRef90_D0NTD4        | T A T A A K A L   | K L P S D R V F L N L D D A T N W G M A G               |                                 |
| UniRef90_A0A037Z8B7    | S N V F E G E L   | G I I L K D N I Y L T F E E I Q D W A W N G A L F       |                                 |
| UniRef90_R9MKB2        | T Q I V S Q E L   | D I E L E N I Y V K Y S M T P Y W G W N G K N           |                                 |
| UniRef90_UPI0002B46B78 | U N I F O R M     | L S V P P A R F F L K V H D T T                         |                                 |
| UniRef90_UPI00046239A8 | A A F L K E K     | L A V E D T R G Y I A F S D P D F L G F S S T T         |                                 |
| UniRef90_R6N9H1        | C N I M Q T N G   | I A G K R C Y V K Y D E V I E H W G M D S F M F         |                                 |
| UniRef90_G9YM34        | L T D V S Q V L   | G I I Q K E R I F V A H D E C P S W G W                 |                                 |
| UniRef90_UPI00036F9815 | T R I I L T G D Y | G I I G V N G G A L Y I T Y T P V S D W G W N G S N F   |                                 |
| UniRef90_V9E319        | T E T V S Q E L   | N I I S K D R I F M N I D D V S N W A K G G             |                                 |
| UniRef90_D8PTM2        | S E W L T E K     | L L G L P N D R G L I A F I D P N N L G F K G T T F     |                                 |
| UniRef90_C7XWG8        | T Q A F Y D V L   | G I I P Q D H L Y I K Y D D I S S W G V Q G             |                                 |
| UniRef90_Q7V0T6        | C N F I Y E E K   | I K V P L D K I Y I C F E D A E M W G W N G R T F       |                                 |
| UniRef90_F0YH06        | A E V L E A E L   | G I I L G V P K G R Y Y I N F F D S E N M G Y N G G T F |                                 |
| UniRef90_Q4S3M3        | C G I L L H K H   | L G I I S P N R M                                       |                                 |
| UniRef90_D8SI87        | A R V L L E E E   | L K V P P S R C Y I K F Y                               |                                 |
| UniRef90_C6SWU3        | A C V L L E T K   | L L V P K S R F F L K F Y N T E N C A L N G S           |                                 |
| UniRef90_K4d3W9        | G G I I C Q N R   | F S I P R T R F F L K V Y D T T M                       |                                 |
| UniRef90_UPI00047CEB25 | C S L L D K E     | L S I I T K D N V Y I V F D E I K D W G A N G R         |                                 |
| UniRef90_Q86BT2        | F Q I V K I Q L   | A I L P D R M Y I T F Q N P Q N V S Y N E R P F         |                                 |
| UniRef90_F8P5B5        | F K F F A K L     | G I I G V P P N R G H M A F T D P A Y I G Y N G T T     |                                 |
| UniRef90_J9JR4         | Y D F I E K Q L   | G I I P Q D K F Y I L S F V E P S N I G V R G T T       |                                 |
| UniRef90_Q8I5C5        | T K I L L V S N   | L N V K S R R I Y V E F R D A Q N F A F S G S L F       |                                 |
| UniRef90_U3JXP7        | F D V L T A Q     | L L G L P K D K I I L E F Y D P H Q V G F N G T T       |                                 |
| UniRef90_H3G3T4        | T D F I I N R L   | W G I I P K D K I I L E F Y D P H Q V G F N G T T       |                                 |
| UniRef90_K7UAE4        | S E C L           | G I I L E A K L S I P R A R F F L K V Y D T T A A G     |                                 |

1                    10                    20                    30                    40

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|------------------------|---|---|--|--|--|
| UniRef90_F1LTZ6        | N T N V L H A S E P E E F H S E L T Q Q L A Q G T G K P A R F I A V                 |   |  |  |  |
| UniRef90_T2JZ30        | P L I Q V K T S V I S Q P S N V V D S L L T T L S A K L A Q H L G K P E S Y V M T   |   |  |  |  |
| UniRef90_A0A059DCU0    | P C V Y I S T N V C L D G D L D P I F A D A T K A V A A L I G R P E N F V M V       |   |  |  |  |
| UniRef90_I3VVD3        | P I I N S I T K E K L S D D L K N T L K T E F A S M M M D V A G K S E N W L M V     |   |  |  |  |
| UniRef90_B8PN6         | P A L V L T S N V V L P D S K A F I T Q F S A F A A K T L L K K S E D M V S V       |   |  |  |  |
| UniRef90_UP10004415008 | P Y L S L V S N V K P A D L L G F V K D L S E L A S K T L E K K P E K F M A I       |   |  |  |  |
| UniRef90_A0A022RSU0    | P C L D I S T N V S L D G V D T D S L F S E L T K A V S Q I V G K P E N F V M I     |   |  |  |  |
| UniRef90_B8PBM2        | P S L V L K T N L A A K T L N K P E V Y I S V                                       |   |  |  |  |
| UniRef90_UP100034F66B5 | P F I E L D T N L P A S R V P A G L E K R L C E V A A T I L G K P V E H M N V       |   |  |  |  |
| UniRef90_A0A059A5N0    | P C L Y I S T N V C L D G V D T N P L V A E A T N A C A S I I G K P E N Y I M V     |   |  |  |  |
| UniRef90_K2A1C1        | P L L K L S T N A N I K D E Q K N E L L K S L S S L L A S A T G K P E Q Y V M V     |   |  |  |  |
| UniRef90_H3H1F8        | P Y A S V T S N V A R C S V D Y S A A S T A I A E T L E E S L G F P A Q F M M V     |   |  |  |  |
| UniRef90_A1XXB5        | P L C Q I V C N V D F D K A T A N A F L S D V E K G L S K I L L G K P V Q Y I N V   |   |  |  |  |
| UniRef90_I1C246        | P I L L E I T S N Q S P K D L T S F T K R V S A L F A E L I G K P E S Y C L V       |   |  |  |  |
| UniRef90_U6NXZ0        | P M V R V A T N L P D K D V P A N F E E R L T D D L L A E S M N K P R A R I A V     |   |  |  |  |
| UniRef90_D3ZQU2        | P M F I V N T N V P D A S L P E G F L L K L T Q Q L V Q A T G N L A Q Y I A V       |   |  |  |  |
| UniRef90_UP10003780B5D | P F L F L K T N V A I S P A Q E I E L K T A F G K A I A L V P N K S E A V L M M     |   |  |  |  |
| UniRef90_I1GWM4        |   | A Q Y V M V   |  |  |  |
| UniRef90_R5ZSQ2        | P F I R I T T N K S L S L K D K T D L K T G L G Q L I T T L H K T E D W L M I       |   |  |  |  |
| UniRef90_T1FG34        | P S F T L N T N L P R D K I P P N F P A E I S K L L S K L T G K P E S Y I T V       |   |  |  |  |
| UniRef90_G7KTA5        | P C I Y I S T N L N L D G V D T D P F S E V T T A I S T I I G K P E K F V M V       |   |  |  |  |
| UniRef90_K9IA36        | P Y L V L N T N V K V A D P K A F A A E F S K F A A E T I N I P E A Y I N F         |   |  |  |  |
| UniRef90_H0VYJ8        | P M F I L N I N M P R S V S E R F L S K L T K Q L E Q A T G K P T Q Y I T V         |   |  |  |  |
| UniRef90_M5W4M5        | P C I L Y I S T N V N L D G F D T D S I F S E A T K A I S S I T G K P E D Y V M V   |   |  |  |  |
| UniRef90_D8PTP5        | P V L L D L K T N V K V P A D E K A F V L A F S K A A A E A L D R P E E W V Q V     |   |  |  |  |
| UniRef90_R5Q7C1        | P Y I I S F K T N H K L T L R Q E N T I K S K S G E L I S L I P G K T E K A L M I   |   |  |  |  |
| UniRef90_UP100032B0FD9 | P M F V V N T N V P R A S V P D G L L S E L T T Q Q L A Q A T G K P A Q Y I A V     |   |  |  |  |
| UniRef90_Q00XR3        | P S L V K R A F L L A A S R S I A E T L K K P E S Y V A V                           |   |  |  |  |
| UniRef90_F8PB1         | P L I T L T T N V K F D S E E A K P V F S E F S K F C A T T I D K P E K A F S V     |   |  |  |  |
| UniRef90_UP10004402FEB | I F L V N A N V P R A S V P D G L L S E L T T Q Q L A Q A T G E P A P Y I A G       |   |  |  |  |
| UniRef90_A1Z1S6        | P L V T L A S N V P D Q K F P S D F N Q Q L T E V L A K V T G K P A A R I S S L     |   |  |  |  |
| UniRef90_UP100047C373B | P L V T S I T P K A L D E S T K D A L K S G I G E I L M N R V A G K S E S W L M V   |   |  |  |  |
| UniRef90_U6M728        | P L C Q I V S N V N F E K A T A D A F L S A V E V G S L S K I L L G K P T Q Y I N V |   |  |  |  |
| UniRef90_C3XV55        | P L V H I K T N L S P D Q S D D F M K E T S K M I A E L L K K E E W R V T V         |   |  |  |  |
| UniRef90_G2MW99        | P I V N L I T K E K I A S E K K E L L K K E F A D M M Y E V A V K S E N W L M V     |   |  |  |  |
| UniRef90_H2Y234        | P E I T I Q T N V S S D K I A S D L Q E I V V E L V S Q S H L N K P K A N I C V     |   |  |  |  |
| UniRef90_UP10004418524 | P L I T L A S N V P A S R F P S D F N V Q F T E L M A K M L G K P T S R I L L       |   |  |  |  |
| UniRef90_A0A024MN90    |   | Y V V V   |  |  |  |
| UniRef90_A0A023FW06    | P F I H V S S N V P K T G V D T T K A L S T F S K S M T L A Y G V P E A V V M A     |   |  |  |  |
| UniRef90_K3WCS6        | P F I S F T T N Q K F S L R Q E N E I V K R T G A L I T I L P G K K E E N L M L     |   |  |  |  |
| UniRef90_B1C0C4        | P A V V L T T T N V P R D E A H E K E L V L D L S K F S A Q T L G K P E K Y I S V   |   |  |  |  |
| UniRef90_L8X5D0        | P L R T N V I I N D E F S F I T D F S Y Q L S V R Y Q R P V S S I V V               |   |  |  |  |
| UniRef90_E3QCA6        | P Y L K I Q T N T F T G D E N G F L R R A S F R A A A I L E K P E E A M C V         |   |  |  |  |
| UniRef90_C8X003        | P V I E L R T N V I I K D E F T L V T D L S F N L A A R Y A R P N S S I M I         |   |  |  |  |
| UniRef90_M2MF5         | P H V V L S T N V Q F E D E K V L V Q K L G Q A S A Q I L G K D I T A F L V         |   |  |  |  |
| UniRef90_H8ZQD0        | P L V T L Y H N R K F S D D Q I K T F V S E L S K V C A T I G K D E S L F N V       |   |  |  |  |
| UniRef90_F9X4V7        | P F V E L D T S L A A A R L P P D L A S R L C A A A A A I L A K P E D R V N V       |   |  |  |  |
| UniRef90_U2D7L6        | P T I I E L D T N L P T G H L P A G L E K Q L C Q A A A T I L N K P E N Y I N V     |   |  |  |  |
| UniRef90_UP100032EDAD  | P M F V L N T V F T N A S R A L V T E A F A T E L G K S V G T H L N R P E E Y V T V |   |  |  |  |
| UniRef90_A0A016V1D1    | P Y V V V T S N V A A S G V S A T P A M A A I S R A L A A A L S K P E T V V M V     |   |  |  |  |
| UniRef90_B2AVX5        | P I V E L R T N V I I S D E F T L I T E L S Y H L S T R Y Q R P V S S I V V         |   |  |  |  |
| UniRef90_UP10003F117D9 | P M F L V N T N V P L I S E L T Q Q L A P A T G K P A Q Y I A V                     |   |  |  |  |
| UniRef90_V4AZ68        | P M V T V F T N A S R A L V T E A F A T E L G K S V G T H L N R P E E Y V T V       |   |  |  |  |
| UniRef90_K3WC71        | P Y V V V T S N V A A S G V S A T P A M A A I S R A L A A A L S K P E T V V M V     |   |  |  |  |
| UniRef90_R0FJ25        | P I V E L R T N V I I K D E F T L V T D L S F N L A A R Y A R P N S S I M I         |   |  |  |  |
| UniRef90_M5GBM5        | P H V V L S T N V Q F E D E K V L V Q K L G Q A S A Q I L G K D I T A F L V         |   |  |  |  |
| UniRef90_UP100045DD80  | P L V T L Y H N R K F S D D Q I K T F V S E L S K V C A T I G K D E S L F N V       |   |  |  |  |
| UniRef90_F7EH19        | P F V E L D T S L A A A R L P P D L A S R L C A A A A A I L A K P E D R V N V       |   |  |  |  |
| UniRef90_U1HG19        | P T I I E L D T N L P T G H L P A G L E K Q L C Q A A A T I L N K P E N Y I N V     |   |  |  |  |
| UniRef90_UP100032B0C5F | P M F V L N T V F T N A S R A L V T E A F A T E L G K S V G T H L N R P E E Y V T V |   |  |  |  |
| UniRef90_C4WSW0        | P I L R I D T N V S H R D I D D A F L V E S T E A L A K T L K K P K S E I L V       |   |  |  |  |
| UniRef90_K2QRJ3        | P I V E L R T N V I I K D E F T L V T D L S Y Q M S Q R F Q R P E H C V M V         |   |  |  |  |
| UniRef90_C5MK35        | P L C Y I Y T N K K E S E L K D G I E S R I A N V V A E V L G K P L E R M I V       |   |  |  |  |
| UniRef90_A0A016PXH8    | E I K T N V I I E D E F T F I T E L S E Y L S I R Y N R P A S C I V T               |   |  |  |  |
| UniRef90_C1MY68        | P S L V L H T N V N M G D R K T E F M K A A S R A I A E S L S K P E S F V A V       |   |  |  |  |
| UniRef90_UP100032A94DB | P C L Y I S T N V N L D G V N L D P I F S Q A T T A I S T I I G K P E K F V M V     |   |  |  |  |
| UniRef90_S3ED13        | P I V E L R T N V I I Q D E Y S F I T D L S Y S L S T R Y Q R P E S S I I V         |   |  |  |  |
| UniRef90_R0JW90        | P I V E L R T N V I I K D E Y T L V T D L S H H L S T R Y Q R P E A S I I M I       |   |  |  |  |
| UniRef90_S7VEI3        | P C L K I E T N V E L D A A K A R T L A L K L A N E A A T A I G K P V E R I I L T   |   |  |  |  |
| UniRef90_F5YFT3        | P F I S V T I I G Q K L N S A E K E K L K A E L G R I L I T I P G K T E P D L I V   |   |  |  |  |
| UniRef90_B3RPN6        | P T V I I I K T N V D R T V C N Q G F Q K K I S R L I S E I Y E N P I M Y I T V     |   |  |  |  |
| UniRef90_F0XF94        | P E L R T N V M I I G D E F T V I T E L S A S L A V R Y R R P L S S V V V V         |   |  |  |  |
| UniRef90_D5GJ5         | P E L R T N V I I L E N E F D F A K S L S E L V A K R Y G K T E D A V C V           |   |  |  |  |
| UniRef90_M4G258        | P E V K T N V I I L E N E F D F A K S L S E L V A K R Y G K T E D A V C V           |   |  |  |  |
| UniRef90_R8W1V6        | P Y I C V N L T K K L S D Q Q K D A I K S G L G E K I S L I P G K S E K A L M V     |   |  |  |  |
| UniRef90_J0YP97        | P I L N I T T N V P D D D V V T N S D T L K L L S K A V T D G V G K P E Q Y V L V   |   |  |  |  |
| UniRef90_UP10001CBA5B4 | P Y C V M R S N L P S E K L S D E F M K E M S A F L A K L L E K D E K R V I V       |   |  |  |  |
| UniRef90_C2END6        | P F I T V R A N Q K I T K E Q E I E I K K E L G K A I A V P G K S E Q S L M V       |   |  |  |  |
| UniRef90_D4AD38        | P M F I L N T N V S H A C V P E E F F E I T Q H L V Q A T G K P A Q Y I T V         |   |  |  |  |
| UniRef90_E9H786        | P I I T V E T N L S Y T Q F P E N F G P E L S K F T S E T L D K P E E R I I T V     |   |  |  |  |
| UniRef90_T1EJW8        | P V C V I N T N L T K D K I P E S F G K D V T K L I A N V L S K P E N F I T V       |   |  |  |  |
| UniRef90_V2X5U3        | P I L R L E T N V K L A A D T L G V P E S L F A V                                   |   |  |  |  |
| UniRef90_H3GQD1        | P N V N I S S N V S G A D M D A S A A I A A I T K T V S V A L G H P A P H V V V     |   |  |  |  |
| UniRef90_C7YZ05        | P E V K T N V I V N D E Y T F V S E L S E H L A L R Y H R P V S S I I V V           |   |  |  |  |
| UniRef90_V2YC37        | P I I T F E T N V K I H N P D A F A M S L S E T F T P F L G F P E Q Y V Q I         |   |  |  |  |
| UniRef90_S2JLR3        | P I L E I S S A Q A P K D I N A F T K K M N G L F A E L I G K P E S Y C L V         |   |  |  |  |
| UniRef90_UP10003C83404 | P F V E L D T N L P D P K L P G A P A R V N V                                       |   |  |  |  |
| UniRef90_G3VBX9        | P M F I V N T N V P R A S V P D G F L S E L T T Q Q L A Q A T G K P P Q Y I A V     |   |  |  |  |
| UniRef90_UP100020E4930 |   | M I E V T T S E R I N K E A D K I K K G L G G N I S I F P G K P E S R V M V |  |  |  |
| UniRef90_G7JKL0        | P L C Q I V C N T Q V E S G A E E A F L A A V E S G L S K I L G K P T Q Y I T V     |   |  |  |  |
| UniRef90_R5ZK62        |   |   |  |  |  |
| UniRef90_A1XXB4        |   |   |  |  |  |

50            60            70            80

|                        |   |   |
|------------------------|---|---|
| UniRef90_F1LTZ6        | H V V P D Q L T T F S D M N D P C T L C S L H S I S K I G G T Q N R N Y S K L L   |   |
| UniRef90_T2JZ30        | S F D A D V K M T F A G S F D P C Y L E I K S V G S M S S Q Q T K S M S E D F     |   |
| UniRef90_A0A059DCU0    | I L K G S L A I S F G G N K E P A A Y T E I V A M G G I N T P V K R K L I A T L   |   |
| UniRef90_I3VV3D        | R F A E G D D I Y F H G E P D K G A I V E I Q L I G K L T R G Q K E K I S A R I   |   |
| UniRef90_B8PN6         | S Y T H N G T L A F G G T F D P T F V L E I I S I G N L D E V Q N N E Y S K A F   |   |
| UniRef90_UP10004415008 | D Y R Y N E H L S F A G T F E P A F I L S G S L I N V N P E T N D Q F S G I F     |   |
| UniRef90_A0A022RSU0    | M V K E S V A L T F G G N K E P A A L A E I V S M D G I K T E V K R K L I V T I   |   |
| UniRef90_B8PBM2        | S Y D Y S E N L T F N G S F D P T F L L T V T S L D N I T P E L N E G Y S K V L   |   |
| UniRef90_UP100034F66B5 | T V R P G L T M V L S G S T E P C T Q L L I S S V G V V D T A E K N R H S A S F   |   |
| UniRef90_A0A059A5N0    | I L K G S L D I T L A G N K E P A A Y S E I V S I G G I N S Q V K K R L I D S V   |   |
| UniRef90_K2A1C1        | V I E R D I L M S G G G G S A F V E V K S L G A L E P F T V K K L S K K I         |   |
| UniRef90_H3H1F8        | E L N L D V P M I L G L N D E P T A Y A Q V R C I G R I D A E R N P K T I A A L   |   |
| UniRef90_A1XXB5        | S L T R G E M R H G G S N E P A A S V C V N S I G N I T T E T N N K I C V E L     |   |
| UniRef90_I1C246        | T F S K V D S Y F F A G S D A P G F C K V G S I G H I D N E R N S K L T A T I     |   |
| UniRef90_U6NXZ0        | E M M A G Q R I M H G G V R N P V V L I K V E S I G A L D P D S T I R H T Q R V   |   |
| UniRef90_D3ZQZ2        | T V V P D Q L T T F S G T N D P C A L C S L H S I G K I G G A Q N R N Y S K V L   |   |
| UniRef90_UP10003780B5D | E L Q D N A R M W L R G G Q P P M A F I K L S L F A N P Q H L G Y P E L T A M L   |   |
| UniRef90_I1GWM4        | S I N G C V P T S F A G S E E P A A Y G E I M S I G G L G P G V N G K L S A A L   |   |
| UniRef90_R5ZSQ2        | A F D E S D S M Y F K G S N E Y S A V E I S V Y G T I S K N D F D P M T R K T     |   |
| UniRef90_T1FG34        | A I N S D Q L R V F N G T P A P C A S S T E I L S G G S V D S K K V T K E         |   |
| UniRef90_G7KTA5        | L L K G S S V P I S F E G N G S F D P C F N L S I A N N L Q P E M N E G Y S K K I |   |
| UniRef90_K9IA36        | H V L P D Q L M T F T G S W K P C L F C S P H S L G K N C S Y S K L L             |   |
| UniRef90_H0VYJ8        | L L K G S V P I S F G R S T E P A A Y G E I L V A M G G I N K P V K R Q L I A T L |   |
| UniRef90_M5W4M5        | S V I Y N Q N L A Y G G T F E P S A Q V H V A A Q R Q R L S V T R N P E I G D K L |   |
| UniRef90_D8PTP5        | H E D D D Q I M Y F K G E E T P C M M I E I N L Y K S A E F D D K K K L T E A M   |   |
| UniRef90_R5Q7C1        | H V V P D Q L M A F M S G S S E P C A L C S L H S I G K I G A Q N R T Y M P F K   |   |
| UniRef90_UP100032B0FD9 | C A M D E L D V I W G G T S D P C A L C R V T S L G S I N L E N N R E L S E D L   |   |
| UniRef90_Q00XR3        | N F I Y N P H L T F A G T F D P A I M L N V M S L Y N T N P T S V Q K W S K A F   |   |
| UniRef90_F8PB51        | H V V P D Q L P A F G G C S P R A L S S L H S I G K V G G A Q V T A R Q           |   |
| UniRef90_UP10004402FEB | H V V P D Q L T H G G S D E P T C L I N M R A G A F S D E L N V K Y A S A I       |   |
| UniRef90_A1Z1S6        | H V V P D Q L M T F T G S W K P C L F C S P H S L G K N C S Y S K L L             |   |
| UniRef90_UP100047C373B | R F S E D D T Y F R G E K Q D G A L V D I K L G S L S P D Q K K A L V K E I       |   |
| UniRef90_U6M728        | S I T H G Q M R H G G S A D P A A S V C I S S I G G I S T R T N N M I C V E V     |   |
| UniRef90_C3XV55        | H V D A G Q R M L R A G S F D P H Q F E I A A I K S F D D E A K E K Y S K A F     |   |
| UniRef90_G2MW99        | R F T E G E D I F F R G K P D D G A I M E I Q L V G K L Q N S Q K E E I S K R V   |   |
| UniRef90_H2Y234        | T V L T D L W m S F G E S E P C A C C T V T S I V T D F N A E T C E K L A A L L   |   |
| UniRef90_UP10004418524 | S Y N Y D K N L S F G G T F D P A F V L N I T D L N N I N P E L N E K Y S K I I   |   |
| UniRef90_A0A024MN90    | L V M P N A Q L S H G T T E N P S C F T V V K S I G S F S A D K N I E Y S S S I   |   |
| UniRef90_A0A023FW06    | H I S P D Q M L S F G G T D E P C A I A N L Y S I G C L S P R E T K K H S T V L   |   |
| UniRef90_K3WCS6        | K L T L D E M V V F G G S D A P S A Y V E V R T I G K V D K E H N T I N V Q A L   |   |
| UniRef90_B1C0C4        | H I E D N Q I L Y F R G T D P C G M L E V K L Y K N I E F E A K K F T E E L       |   |
| UniRef90_L8X5D0        | A F N Y V G T L S F H G T F D P C A C C T V T S I V T D F N A E T C E K L A A L L |   |
| UniRef90_E3QCA6        | N L Q H G A C M L F G G T F E P A Y T M S I H A L P E V G I A K N K R N S A L L   |   |
| UniRef90_C8X003        | A L E P S V P M L L G G T D P A P A V F A K L K G L N F P E E R T A E I A S Q L   |   |
| UniRef90_M2MF5         | K V D H S A C L A L G G T F D P C Y I L T A L P S M G P T H N K R N A G L I       |   |
| UniRef90_H8ZQD0        | H V N P G Q V M S F G G S Q E P C A M V Y L D S Q G K V G G E K N K Q L A H S V   |   |
| UniRef90_F9X4V7        | Q V Q H S A C L S F G G T F D P C Y I L T L Q A V S S M G P T T N K R N A A L I   |   |
| UniRef90_U2D7L6        | V M E D K Q Q M F F S G R D T P A A F V N F K I H G D I G P K N C E M L S E E F   |   |
| UniRef90_UP100032EDAD  | T V R P G L A M A V G G S T E P C V Q L L V S S I G V G V G A E Q N C H S A R F   |   |
| UniRef90_A0A016V1D1    | H V V P D Q L M T F T G S W K P C L F C S P H S L G K N C S Y S K L L             |   |
| UniRef90_B2AVX5        | T L Q H G A C M L F G G T F D P A Y V M S Y A L P S L L P T T N K R N A A L I     |   |
| UniRef90_UP10003F117D9 | H V V P D Q L R A F G D Q P R R A H C S L H S K I G S A Q N R T Y S K V L         |   |
| UniRef90_V4AZ68        | R V V P E Q L M T F G K P T P F A H V D V I S L S G L G P D K N R E M P D I       |   |
| UniRef90_K3WC71        | Q L C L D T P M L F A S A D P C A I M Q L R S I G G L N D V N K K L S A A V       |   |
| UniRef90_R0FJ25        | V L K G S V P M A F G G T E D P A A Y G E L V S I G G L N A D V N K K L S A A V   |   |
| UniRef90_M5GBM5        | Q Y Y R D P N L A F A G T F D P A W M L Q V G S L G V V N A E A N E R Y T A E Y   |   |
| UniRef90_UP100045DD80  | N V I Y N P Y I I F G G T D E P A F M L N L S I G S V P N A D T P K W T A D I     |   |
| UniRef90_F7EH19        | T V R P G L G M V L S G S A E P C A Q L L V S S I G V V G A E Q N R G H S A R F   |   |
| UniRef90_U1HG19        | S V C T S Q A M L F G G S S E P A Y Y L T I T A L A S I A P T K N K R S T A L V   |   |
| UniRef90_UP100032B0C5F | I V R P S L T M L H L S S E E P C V Q L C I R A L G V V G A E Q N R S H S A R F   |   |
| UniRef90_C4WSW0        | F V N G Q P I L I A G S D E P A I V S L L S V G G I N E I D N K L H S A A L       |   |
| UniRef90_K2QRJ3        | N L D H S A C L L G G S F D P A Y L T I T A L S S L Q P V T N K R N A A L M L     |   |
| UniRef90_C5MK35        | T V V P N V R M F R R G N T E P T C T L E I S A V G V F D A E R N S T Y S P T I   |   |
| UniRef90_A0A016PXH8    | T L Q H G L C I H F G G S C D P S Y T M N I E A L D R M Q P A A N K R N I A L F   |   |
| UniRef90_C1MY68        | C V L D N Q S L I W G G E T N C A L A N V A S L G S I N K A N T A L S G A L F     |   |
| UniRef90_UP100032A94DB | UniRef90_S3ED13   | T V V P N V R M F R R G N T E P T C T L E I S A V G V F D A E R N S T Y S P T I   |
| UniRef90_R0JW90        | T V N H S A C L L G G S F E P T Y I L T I N A L P V V Q P M T N K R N A A L I     |   |
| UniRef90_S7VE13        | T V E P G L A L T Y R G T D A P A A W V E V K S G L T A D E C P A L A A W L       |   |
| UniRef90_F5YFT3        | UniRef90_B3RPN6   | H V Q D S G A V Y M G G T E T P S V Y I D R V Y T K T K E D A K K T F T K K L     |
| UniRef90_B3RPN6        | UniRef90_F0XF94   | T I H H N P K L I F A G T Q D P A A F M E I K T V N G T G K K E N K A A S K A I   |
| UniRef90_F0XF94        | UniRef90_D5GJ5  | T L Q H H N S C M C F G G S F D P A Y V L S I F A L P A L Q P T T N K R N A A L I |
| UniRef90_M4G258        | UniRef90_R8W1V6   | S I E H S A C M V M G G T Y D G S F L T I T S L N M I S P T C N K R N A A L I     |
| UniRef90_R8W1V6        | UniRef90_10YP97   | D F S E G H T Y M F A G E K R D L A F V D V R C Y K T A E F E N K K A F T E A V   |
| UniRef90_10YP97        | UniRef90_UP10001CBA5B4  | T L N A G K S V M F G G T E A P A A Y G E L L S I G A L G G E K N K S F H D       |
| UniRef90_UP10001CBA5B4 | UniRef90_C2END6   | A I H S C Q R I M A G S L D P A I M D L D A I D R F G P E K N Q K Y S D E I       |
| UniRef90_C2END6        | UniRef90_D4AD38   | M F E P N T S M Y L R G E D Q K M A F L D V A V F G N E S H K G Y P E F S L Y M   |
| UniRef90_D4AD38        | UniRef90_E9H786   | C M V P D Q L L N F M G L S D L C A C T L H S I G K I G A R T S P T A S C C A     |
| UniRef90_E9H786        | UniRef90_T1EJW8   | S L V T D R R M W R N G S D L P MI Q I H V S A I G A V S G Q Q N S I H A K K F    |
| UniRef90_T1EJW8        | UniRef90_V2X5U3   | S L K T D K Q M W K N G S S S P L A S V D I W S I G V F N K E N N D I Y T P K F   |
| UniRef90_V2X5U3        | UniRef90_H3GQD1   | T I Y Q Q Q P L S F A G T F D P A F V L T V T A L G A G N P G V N K R C C V Q A F |
| UniRef90_H3GQD1        | UniRef90_C7YZ05   | Q L Q L D L L M S F Q E S Q A P T A V H V R S I G S L D D E R N P T R V A A L     |
| UniRef90_C7YZ05        | UniRef90_V2YC37   | T L Q H G A C L F G G S C D P A Y I M T V E A L A C A Q T A T N K R N N A L       |
| UniRef90_V2YC37        | UniRef90_S2JLR3   | T I N E G K A M T F G R S T D P I C V C S I V T T I K A G E G D H N E R V I G A L |
| UniRef90_S2JLR3        | UniRef90_UP10003C83404  | F T T K V D S F Y L G G T F D P G F V L T V T A L G A G N P G V N K R C C V Q A F |
| UniRef90_UP10003C83404 | UniRef90_G3VBX9   | A V R P G L A M V V N G S A E P C A Q L L V S S I G V V G A E H N R S H S A R L   |
| UniRef90_G3VBX9        | UniRef90_UP100020E4930  | T V R P D L H M V L S G S G D P C A Q L I V S S I G V V G A E E N R D H S A R F   |
| UniRef90_UP100020E4930 | UniRef90_G7JKL0   | H V V P D Q L M A F G G S S E P C A L C S L H S I G G I G A R T S P T A S C C A   |
| UniRef90_G7JKL0        | UniRef90_R5ZK62   | V L K G S V P I S F G G T E Q E A Y G E L V S I G G L N P D V N K K L S A A I     |
| UniRef90_R5ZK62        | UniRef90_A1XXB4   | S I K D Q A Y M Y F G G I E G P T A L I S V A L Y L D Q P E E T Y T E Y S K V A   |
| UniRef90_A1XXB4        | UniRef90_TLTTRG   | T L T R G S V R H S G S C D P A A S V S V H S I G G I S S R T N N M I C A E V     |

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|                        |   |
|------------------------|---|
| UniRef90_F1LTZ6        | C G L L S D R L H I S L D P V Y I N M N A A N L G W N S S T         |
| UniRef90_T2JZ30        | C Q V V E D T L G   |
| UniRef90_A0A059DCU0    | G D I L H K R L S I P P A R F F L K V F D T T                       |
| UniRef90_I3VVD3        | C D I F E S N L K Y P K D N V Y I V I Q E G E N W G Y N G S T F     |
| UniRef90_B8PN6         | F A F L L S E N L G V P H E R G Y M T F A D P G N M G W K S A T     |
| UniRef90_UP10004415008 | F A F L L K E K L G V P G N R G F I A F S D P A Y L G H D G T T     |
| UniRef90_A0A022RSU0    | G S I L E N T L S I P P R T R F I L K V F G A T M                   |
| UniRef90_B8PBM2        | Y N F L L E S K L G I P G D R G Y I L T F L D P A Y M G Y Q G T T F |
| UniRef90_UP100034F66B5 | F E F L L T K E L G L G Q D R F V G E V Q G P D N C A S R G S       |
| UniRef90_A0A059A5N0    | A S I L L Q T N L S I P P R T R F F L K V Y D T T                   |
| UniRef90_K2A1C1        | C D L L S A S L D I S P V R V Y I N F T D V P A W A W N G K P F     |
| UniRef90_H3H1F8        | T K T L S E H L K V P A E R V Y V V L E S V K N W G A N G T T       |
| UniRef90_A1XXB5        | V T F C Q N H L K K I P V D R V F C F M D A A N V G I G S R V F     |
| UniRef90_I1C246        | T T E L E K E L G V A D N R G Y F L F T D A S N V G F Q K T T F     |
| UniRef90_U6NXZ0        | T Q L L C T E V L H V P K D K V I I S Y F D P T N V G F A G T T     |
| UniRef90_D3ZQU2        | C S L H I S P D R V D T N C Y N A A N V G W N S S                   |
| UniRef90_UP10003780B5D | T Q Q V A E I L P P E N V Y L Q F D D T Q A W G V N G               |
| UniRef90_I1GWM4        | A E I L E T K L S I S S S R F Y V K F D D V Q N L G F N G S T F     |
| UniRef90_R5ZSQ2        | T D L L S R T I K I D L D R I Y I N Y R E V D H W G L G G S N F     |
| UniRef90_T1FG34        | N G L I H E K L G I D F D R L F L F F Y N G S Q V G H G Q S T F     |
| UniRef90_G7KTA5        | G T I L L Q S K L L S I P P R T R F F L K V F D T T A F             |
| UniRef90_K9IA36        | F E W L L D A K L L G V K H D R G Y I L F T D P G Q I G Y           |
| UniRef90_H0VYJ8        | C G L L H I S R N R V Y I N H C D M K N V G W N S S T F             |
| UniRef90_M5W4M5        | G T I M E A K L S I P K T R F F L K V V D D S                       |
| UniRef90_D8PTP5        | K A F F E K E L G V P K G R C N I I Y Y D P Q                       |
| UniRef90_R5Q7C1        | I Q M I H E T T K I E A D N I Y V I F H E F D H W G L N Q T         |
| UniRef90_UP100032B0FD9 | W Q A M H R A L   |
| UniRef90_Q00XR3        | C E L L G E F G I D G K R V Y I T F E D I P N M G Y D S A T F       |
| UniRef90_F8P5B1        | A D Y F E E K L G V T S D R G Y M A F Q D P A F I G T R G S T       |
| UniRef90_UP10004402FEB | Q A A V S L R R V S P G R I Y I N Y Y D A A N V G W D G S T F       |
| UniRef90_A1Z1S6        | A E F M Q K T V G I K P E K C L I E F A D S Q N V S C S G T T       |
| UniRef90_UP100047C373B | C D L Y S E K A S F K G E N I Y I E E Y Q G S N W G W N G S T F     |
| UniRef90_U6M728        | A T H C Q K H L G I P V E R V F C F N D V A N V G I G T S V F       |
| UniRef90_C3XV55        | F D Y L L S E K L L P V K Y D R I V V V I F H A S E D V G I K G T   |
| UniRef90_G2MW99        | C D V L N K V L N Y R K D N I Y I V I Q E I E N W G Y N G S T F     |
| UniRef90_H2Y234        | M P P L Q K A L G V S G T R F Y L Q F H E I T A M G F Q G T T       |
| UniRef90_UP10004418524 | F E H F Q K T L G I P G N R G Y V V F N D P A F I G F Q G T T       |
| UniRef90_A0A024MN90    | S E F M K K T L D I D P A H C I I H F L D P E N V G C N G T T       |
| UniRef90_A0A023FW06    | F E H I E N T L L G I K G N R M Y I N Y F N A T D V G Y N G K T F   |
| UniRef90_K3WCS6        | T A R V T E V L G V S A E R V F I V I D D V P N W G V N A V T       |
| UniRef90_B1C0C4        | V T M I N N I T A I E A K D I Y V S F D E Y P N W G K Q G T         |
| UniRef90_L8X5D0        | F E H F K E K L N I P G D R G Y M Y A P C F D G Y Q G               |
| UniRef90_E3QCA6        | Q K H L Q E A L L G V P P A R G Y V K F V E V P A M A I N G K T     |
| UniRef90_C8X003        | S A F I A E E L E V P T E R I Y C I F E N V S M W A W K G T T F     |
| UniRef90_M2MF5         | Q S F F M A D I L S P V A D R G I I K F Q P V E N Y A T N G T T     |
| UniRef90_H8ZQD0        | G T H I E N C L G I K Q D R F Y I K I C D I P R C G F K G T T F     |
| UniRef90_F9X4V7        | Q A F M A D T M N V P A E R G I I K F Q P I E N L A Q G G T T       |
| UniRef90_U2D7L6        | M N D L S Q V L G I Q K E R I F V A H D V C P S W G W               |
| UniRef90_UP100032EDAD  | F E F L T K E L L   |
| UniRef90_A0A016V1D1    | F A L I K D H L G I E G S R R M Y I E F V D A S D I A H N G R T F   |
| UniRef90_B2AVX5        | Q K H M E E A I I G V V P A R G F L R F V P T E H L A C N G K T     |
| UniRef90_UP10003F117D9 | C G L Q A K R L R V S P D R I H I N Y Y D A A M L G W G S S         |
| UniRef90_V4AZ68        | T K I V E E H L K I P K I L L T F D D P T D C G I D G K T F         |
| UniRef90_K3WC71        | T D V V V S Q V L S I V P A D R I F M N L D D E R T N W             |
| UniRef90_R0FJ25        | S A I L E T K L L S V P K S R F F L K F Y D T S F F G W N G G T     |
| UniRef90_M5GBM5        | W E F A Q S L A L P K D R G Y I T Y F D P E N W G A R G A T         |
| UniRef90_UP100045DD80  | S K F L E E K L G I G S D R G Y I S F R D P D Y I G F G G D T       |
| UniRef90_F7EHI9        | F D F L T K E L L G I S P P D R                                     |
| UniRef90_U1HG19        | Q G F M Q E T L D I A P R R G I I C F D S V E N L A T N G M T       |
| UniRef90_UP100032B0C5F | F E F L L C K E L L A L G Q D R G                                   |
| UniRef90_C4WSW0        | F S L I T K Y L K I N E N R I T I A F S E P H A M G H N G K         |
| UniRef90_K2QRJ3        | Q S F L R E I L L G V P A A R G I V K F Q D E A N L A T D G R T     |
| UniRef90_C5MK35        | K K L L Q D E L D L P A E R C V I V Y T D                           |
| UniRef90_A0A016PXH8    | Q R H M E Q A L G I P A S R G Y I L R F V P V P E A G W K S N T     |
| UniRef90_C1MY68        | A A L L L S D F D V P S D R V Y V N F W D I E N C G Y N G V T F     |
| UniRef90_UP100032A94DB | G R I L Q S N L L S I V P T T R F F L K V F D T T A I P K K N S     |
| UniRef90_S3ED13        | S K A M E E G L G V P P N R G I I K F I A I E D F A T D G K T       |
| UniRef90_R0JW90        | Q T F M A E S I I G V P A D R G I V K F I P I E N L A T N G M T     |
| UniRef90_S7VEI3        | G E F V E R E L G V S A N R A L I E F L S A E L T G V N K G T       |
| UniRef90_F5YFT3        | F D F I T A E Y G I K P D R Q Y I L T I S E Y E N W G Y D G         |
| UniRef90_B3RPN6        | S E L L K A E L L G V L P E R F Y I Y F N T I Q D V G V L G G T     |
| UniRef90_FOXF94        | Q R H M E E A L L G V P P A R G G L R R F A P V A N L A Y G G K T   |
| UniRef90_D5GJ5         | G D W V S N V N L N V E V A R G Y I R F V D P A N Y A M G G F T     |
| UniRef90_M4G258        | Q S H M E E V L G V A P A R G G L R R F V P M P N V A V N G K T     |
| UniRef90_R8W1V6        | F E L L M E K E T G L T A D D V Y I L S W G E Y D T W G T K G S     |
| UniRef90_I0YP97        | M A R S D V G W K G S T F   |
| UniRef90_UP10001CBA5B4 | F K F L L A E K T G L G F D R I K L K F Y D A Y D V G               |
| UniRef90_C2END6        | S K S I N E I L N V K P E N I F I D Y R D I P V F G A S G Y A F     |
| UniRef90_D4AD38        | C S I L L S D H L H I S P G R I Y I N Y M N T A N S G               |
| UniRef90_E9H786        | T E F L L M E K T S L P I E R I F L V F T E S W Q I G K N G T       |
| UniRef90_T1EJW8        | F K F F F S E K L L G L P E D R                                     |
| UniRef90_V2X5U3        | T K Y L E E T L G V S N D R G Y I I L T N P S Y I G Y K G D T       |
| UniRef90_H3GQD1        | T V T V A E Q L R V P P S R I Y L E D I S A K H W A N N G           |
| UniRef90_C7YZ05        | Q R H M E Q A L G I S A M R G F L R F V P V A E S G W K G K T       |
| UniRef90_V2YC37        | T E F A E R K L L G I C S D R Q A I V F I N P K N I G F Q G Q T     |
| UniRef90_S2JLR3        | T A E L V K E L G V E D G R G Y F I F T D V P N I G Y K S D T F     |
| UniRef90_UP10003C83404 | F E F L T K T Q L D L A Q D R I L I R F L E P W Q I G K N G T T F   |
| UniRef90_G3VBX9        | F E F L T K E L S L S E D R I N I R F Y E P W Q I G K K G T T F     |
| UniRef90_UP100020E4930 | A A I L E T K L L S V P K T R F F L K F Y D T S N F G W N G T T F   |
| UniRef90_G7JKL0        | V N T I I D A L Q I P K D R I Y V K Y Q T L K N W G K               |
| UniRef90_R5ZK62        | A A L C C Q Q H L K V P V D R V F F H F A D A A N I G I G S R V F   |
| UniRef90_A1XXB4        |   |

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|------------------------|---|
| UniRef90_W7TSH6        | P F V N I R T S A Q L D A S G V K A V T D A A H N A I R D V L N K P D Q Y I A V   |
| UniRef90_W5PVY6        | P M V R V A T N L P D K D V P A N F E E R L T D L L A E S M N K P R N R I A I     |
| UniRef90_AOA016VZB7    | F V E L H T N L P A G R V P A G P E K R L C A A T A A T L G K P E D R V N L       |
| UniRef90_UPI0002C319BB | E V K T N V R D E F T F I T E L L A Y H L S T R Y Q R P V S S V V V               |
| UniRef90_Q2HA01        | P L C R I I T S A N F E K A A A D A L L L D V E T A L S K V L G K P A Q Y I N V   |
| UniRef90_U6LFI9        | P V I K V Q T N V K K V S D G F E V R L A H M A K V M K R P E S Q I F V           |
| UniRef90_P90835        | E V K T N V I L S D E F T F I T E L S Y N L S L R Y Q R P V S S I V V             |
| UniRef90_G4MP31        | P C L Y I T T N V N F D G V N T D P F Y S E V T K A V A S I V G R P Q N L V M V   |
| UniRef90_Q9SCU2        | P F V L A K F S T P V S Q A Q E I A L K S G F G Q A I G L I P Y K S E S V L L     |
| UniRef90_W0R269        | P C V D I S T N V N L E G V D A D P I F S D V T K A V A S I I G K P E N Y V M V   |
| UniRef90_A5ATL9        | T V E L K T N V I V N D E Q T V N E L S W H L S N R Y Q R P P S L I M I           |
| UniRef90_R7YKU6        | Q R I N V   |
| UniRef90_UPI0003C4AA85 | P H L K I T T N I S K S S V P S D F L D E T S A L L S K M L D K P E N C S I V     |
| UniRef90_E9G3A7        | P L V T L A S N V A D E K F P V D F N Q Q F T N F L S N L I E K P A A R I S L     |
| UniRef90_F1LFD6        | P K F W I K T N V T G N K I A T D L H E I V A S L I S E H M K K P R E S I N V     |
| UniRef90_H2ZC71        | P Y A R I I N S N V A K D S V D T A A A S I A V A K T L N E A W G V P T Q F M M V |
| UniRef90_V9EIF9        | P F I M C Y T N L T K D K L P D E F A K W I S E L V S E V L T K P M E K I T T     |
| UniRef90_E3SFN5        | P C I K I E T N V S L D P A K A K A L A L K L A Q D L A A P I G K P V D R I L A   |
| UniRef90_S7T2X3        | P I C K I I L T N L P A K A I P K D L S L R T N L L A E V L N K P L E R I T V     |
| UniRef90_R7TNA4        | V R T N V I V H D E Y S F I T D L S Y L S N R Y Q R P E N S I V V                 |
| UniRef90_K1WRM9        | P Y I Q I S L S K K L T D E E K R T L A A G V A A L V P M L P G K P G D R A I V   |
| UniRef90_E3GIW6        | P L C T F I T N V K I E D T R K F A V E L T F I S Q Q V E K P V A F I S M         |
| UniRef90_UPI000455EC5B | E L R T N V I I Q D E F T F I T D L S Y H L S N R Y Q R S M S S I V I             |
| UniRef90_W3WQ93        | P C L K I F T N L T N S F I P N D F V N K I I P V L S K A V Q K S P E K F I C L   |
| UniRef90_H9IXV4        | P E I N L T T N I K V E D P K A L V L G L S K L G S E L L G Y S E A H F Q A       |
| UniRef90_UPI0004407769 | P L C Q I I C N K D F D K S T A D A F L V E V E K A L S K I I L G K P V Q Y I N V |
| UniRef90_U6H1V0        | V V E I I K T N L Q A E D G V R I V S D M T F S F A Q I F Q R P E S S M M I       |
| UniRef90_C4JQ4         | V I E V K T N T I L Q D D F Q S L S E L S F N L A Q I F Q R P E T S I I L L       |
| UniRef90_C0SEJ1        | P V I Q V Q T N H K N V P D G L E V R L A L E M A K V M K R P E S Q I F V         |
| UniRef90_H2VPX8        | P L C T I K T N L L A S R I I P N G F N V K F A Q Y V A S L L K K D I E K V T V   |
| UniRef90_L7LVS6        | P L L K I Q T N Q P I E P D Q R K S S L R K A S A E V A A L L G K P E R F V M V   |
| UniRef90_G2DD25        | P F I V V S K V N V P I T P E H E F R L K T G L R G A T E C I P G K T E A S P M L |
| UniRef90_UPI000471D57A | I V E M K T N T R V T A D E F Q L L S D I S S L F M Q V Y Q R P E N S I L V       |
| UniRef90_V5FSS6        | M I   |
| UniRef90_W1NJB9        | P F I C T I K T N L L A S R I I P N G F N V K F A Q Y V A S L L K K D I E K V T V |
| UniRef90_F7VYI7        | S D E F T F I T E L S Y H L S S R Y Q R P V S S I V V                             |
| UniRef90_W9YCT4        | E I K L N C C L E S E K E F L I D L S F R L S E I Y Q R P A S C I M A             |
| UniRef90_W2SCP2        | E V K L N C C L D S E Q E F L I D L S F R L S E I Y Q R P E S C I I A             |
| UniRef90_UPI0002C3F662 | P I A L I K L N S S I S T E V Q K E I V E E A M K I L S D T V G K P I I Y C S T   |
| UniRef90_S0EC34        | L V E I I K T N V I A S I E D E F T F I T E L S Y F S L R Y N R P A S S I V I     |
| UniRef90_B0XNW6        | P Y V A F N I S E K L S E T Q K E K I K I S E V G R L I T V I P G K T E A D T I V |
| UniRef90_UPI00025556E4 | P F L E I L D T N L P A N Q V P A G L E K W L C A T A S I L G K P K D H V N M     |
| UniRef90_UPI0000E1FBD1 | I K T N V I I H D E H T F I T D L S Y A L S T R Y Q R P Q N S I L V               |
| UniRef90_N1JKE0        | P F L R I E T N H E F N Q D V I Q N V I T Q V T D Q V H I N K G D P K E M I L V   |
| UniRef90_K9UDU2        | R V S V   |
| UniRef90_I3N5Z7        | P V C H I Y T N L K D S D L K D G V E G R I A N V V A E T L G K P I E R V T V     |
| UniRef90_C5P8E1        | V V D M K T N L Q V E A P H Q T L S D M T F H F A Q I F Q R P E S S M M V         |
| UniRef90_UPI0003595945 | P F V E L D T S L P A E R L P P V L A H T L C A A T A D I L G K P V D V S G       |
| UniRef90_A9XP32        | P Y I A V N T V Q K L S P A I K E K L K A E L G R L I A I I P T K D E K G L M V   |
| UniRef90_UPI0002B43294 | P F V E L D T S L P A E R L P P V L A H T L C A A T A D I L G K P V D V S G       |
| UniRef90_F5YDN3        | P Y I A V N T V Q K L S P A I K E K L K A E L G R L I A I I P T K D E K G L M V   |
| UniRef90_W6QPT3        | P V E L I K T N T K P K D N I S K L L S D F A H L L A Q V Y Q R P E T S M L V     |
| UniRef90_W4ZL72        | P L L Q I F T N V K E T D L P A G F F A D L S S V F Q K A I G K P Q K Y I C I     |
| UniRef90_B8PP51        | A K T L N R P E V Y I S V   |
| UniRef90_H9H306        | P F I L E I L D R N L P N N R V P A G L E K R L C A A T S I L G K P A D R G K V   |
| UniRef90_UPI000455E9FA | P L V T L I H N V K V E D T R Q L A V D F T N F I S E T V S K P V T A I S L       |
| UniRef90_C5MK34        | P I I T I Q T N V S A C Q A G A S F H K D I T E I A S E F L Q K S Q K I I W V     |
| UniRef90_R5QMZ0        | P F I L T V Y T N A T K I N Q K N F V E E I S D L V A G E L H K P V S Y V V V     |
| UniRef90_F9UNB3        | P F I M A K V N Q K I T A Q Q K Y Q L K S G L G Q A I G F V P G K S E E V L M V   |
| UniRef90_H3FBE7        | M A V A L N K P R E T I L V   |
| UniRef90_UPI0002B48DC0 | P C L R I E T N V S K E S F N Q E K M A N E L L E A I A K S M G K P I E Y C M V   |
| UniRef90_R5BMQ7        | P F V M A K V N T P V S R E Q E T V I K S R M G K A I E R V P G L N E N Y L T F   |
| UniRef90_B7PXU7        | P I C F L K T N L L A T K I P A G F H V K F V Q L I A S V L K K D I E K I T L     |
| UniRef90_V6LVF4        | P Y I I Q L E S N I Q P K D Q K A F V D K I T N A V S K A T D V A V E R Y M T     |
| UniRef90_E3NJ98        | P V I K M Q T T H K N V P D E F V R F A V H M A K V M K R P E S Q I F V           |
| UniRef90_R7GN64        | P Y I L A L R T N K T L T L S Q E V E L K T T V G K L I T M F P G E S V D T F M I |
| UniRef90_K1WFZ0        | P L I K V K T S I S Q P K S Q V E S L L K D L S A S L A K H L S K P E S Y V M T   |
| UniRef90_A0A024S411    | Y A E L K T N I D N E Q H L L T T L T N H L A A R Y N R Q P S S T V I             |
| UniRef90_UPI0002C3D196 | P H A L I T L G A D V S K E V Q K A I A E G A M K I L S E V I K K P I S Y C S S   |
| UniRef90_X5JWJ3        | P L I K V Q T S V P N P K S N I E T M L K S L S E K L A H T G K P E S Y V M T     |
| UniRef90_UPI0003611127 | T I D T N L A A S Q V P D G F L S D T S D F L C A L F D R P K K V I M G           |
| UniRef90_C4WX22        | P Y I E V K L A K Q A S R K Q E R I L T E K L G E A I T T V P G K T A A G L M V   |
| UniRef90_R5G7K6        | R V S V   |
| UniRef90_V2WMV3        | Q R M N V   |
| UniRef90_G3UYJ7        | P F I R T T T N V N L A V D Q E K R L R T G T A E L V R D I L N K D P I R M M T   |
| UniRef90_UPI0003EC0DFA | P I V H I K T N L T Q D Q I S D D F I K D T V K M V S G Q V G K A E S R V V V     |
| UniRef90_D4J466        | P I C V V H T S V K D E D I P E E G F E K G M A E K V A E V L L K P L T N V T V   |
| UniRef90_M7BJB4        | P F V R I E T N H H F N K Q V I E D V M T Q I T E E I H I K K G D P V K M I S V   |
| UniRef90_C3XVB8        | P E L S T N C K P Q G N F Q L V C D L V S H I A Q I F R R P E S A I Q V           |
| UniRef90_V3Z835        | P H A L I T L S A D I T E E K K E L A H E S M K I L S E V I G K P I S Y C A T     |
| UniRef90_UPI0002EB88E6 | V E V K T N V V I T N E Y L F M N E L T H H L S I R Y S R P I S S S I A I         |
| UniRef90_S8ATM1        | E Q S V V E A L L K Q L S A Q L A Q H L G K P E S Y V M T                         |
| UniRef90_C4LV00        | Y A E I K T N I E S E H F L T T F S H Q L A A R Y N R Y P S S T V I               |
| UniRef90_E9EU72        | M M   |
| UniRef90_UPI000248424B | P V E I K T N T K V R E E V E S L V S N I S S H M A R I F Q K S E T L M M T       |
| UniRef90_G9N7Z4        | P I E F V T N V P V E Q F P E G F V A R A A T K V S E V L G K P L P A I S V       |
| UniRef90_N1QR97        | M C   |
| UniRef90_A4HLN5        | Q E K A L K E S A G K F I S I L P N K K E E Q L M I                               |
| UniRef90_G3XQM2        |   |
| UniRef90_UPI0000E4A245 |   |
| UniRef90_U9U2F6        |   |
| UniRef90_E7G754        |   |

50                  60                  70                  80

|                        |   |   |
|------------------------|---|---|
| UniRef90_W7TSH6        | D V T V S P N L Q F G G T K A P A A M I S V H S I G G A A K A K N E L L K A L       |   |
| UniRef90_W5PVY6        | T V R S G L A M V V N G S A E P G A Q L L V V S I G V V G A E E N R G H S A R F     |   |
| UniRef90_A0A016VZB7    | E V L A G Q R I T H G A S R N P V A V K V E S I G A L S A D D N I R H T Q K I       |   |
| UniRef90_UPI0002C319BB | T V R S G L A S A V N D L A D P G A Q L L V V S I G V G I G T X R L                 |   |
| UniRef90_Q2HA01        | T L R H G A C M F W G G S F D P A Y V M S V V A L P S L Q P T T N R R N A A L I     |   |
| UniRef90_U6LF19        | S L T R G E M R H A G G S S D P A A S V C I S S I G S I S S R T N S T C V E I       |   |
| UniRef90_P90835        | S L D M M N S R M T R G Q L T D P L A V L D V T S S T V L T P I L T E Y T V A L     |   |
| UniRef90_G4MP31        | S V Q H G A C M M Y G G T F E P A Y S M T I F A L P S M R P T T N K R N A V M I     |   |
| UniRef90_Q9SCU2        | V L K G G S V E I V F G G N K E A A A Y A E I V S M G G I T K Q V K R E L I A T V   |   |
| UniRef90_W0R269        | E I E Q D A H L W L A G D N Q P S T Y I Q V S I F A N E H H L G Y A E L T Q E I     |   |
| UniRef90_A5ATL9        | L L K G G S V A I S F E G N K E P P A A F E I I S M G G I N S E V K R K L I A T I   |   |
| UniRef90_R7YKU6        | F V Q H S A L L C L G G T F D P A Y L L T I S A L P V V Q S V T N K R N A A M I     |   |
| UniRef90_UPI0003C4AA85 | T V K S D L P M V V S G S T A P C A Q L L I S S I A V V G A E Q N R G H S A K F     |   |
| UniRef90_E9G3A7        | T V V P E R L M L W G G E K G P C A I A R L R G V G K L G D S D N A N L K V Q L     |   |
| UniRef90_F1LFD6        | L V M T G A R L T H G G S N D P T C V I T V K A I G A F N D E L N V K Y S A K I     |   |
| UniRef90_H2ZC71        | T V L P G L W M S M G G T E P C A V C N L T S I Y D F T E D T C A R L S A L L       |   |
| UniRef90_V9EIF9        | E M N L G V P M V L N F N D P A A Y V H A R T G N V A E K N P K T I A M L           |   |
| UniRef90_E3SFN5        | T V S T D L D M M R M G G S S G P T M M V Q I H S I G V F D A E R N N P G Y T E K F |   |
| UniRef90_S7T2X3        | V I E P G M A L S Y R G T S D P A A F V E L K S I G L G T A D D C P A L A V F I     |   |
| UniRef90_R7TNA4        | N V Q S D Q V M M K N G T T E S A A V A E I Y A L N V F N E D K C P D Y G K Q I     |   |
| UniRef90_K1WRM9        | S L I H S H C M L F G G N F D P A Y N L T A L C Q L Q P V T N K R N A A L L         |   |
| UniRef90_E3GIW6        | Q I D D G R S L Y R G G E P A A C A F M E T R L Y G K T P E P Y L R A Y T E K L     |   |
| UniRef90_UPI000455EC5B | H I K Y D P D F Y F A G S D E P A C R L H V D N L W N N T P E A A I K W S A A Y     |   |
| UniRef90_W3WQ93        | N L Q H G C L M F G G S F D P A Y T L S I F A L P D M Q P T M M K R N A A L I       |   |
| UniRef90_H9IXV4        | I S S P D C A L S I G G S S T P G A V A T L E S I G N L G P S Q N K V I A K E I     |   |
| UniRef90_UPI0004407769 | R Y T Y N E F Q L F A G S F D P A F S L E I K H I A V T P E T S E K Y T K A F       |   |
| UniRef90_U6H1V0        | S L V R G E M R H A G S N D P A A S V C V S S I G N I T T R T N N L I C V E I       |   |
| UniRef90_C4JQ4         | V L D D R A Y L G F G A S E P A Y L M T V S A L P H M K P T M M R H T A L I         |   |
| UniRef90_C0SEJ1        | Y V E H N C C L M L G S N Y E P A Y L A T V S A L S V A P I M N L R H T V L I       |   |
| UniRef90_H2VPX8        | S L N T N S R M T R G Q L T D P L A V L N V T S S I L T A Q L T E Y T V A L         |   |
| UniRef90_L7LVS6        | I V E P G V D I S R A G T T D P N C L C S I H S I S V F S P E K N K E Y G S Q L     |   |
| UniRef90_G2DD25        | S L E Q N P E M L F A G S D A P L A Y L E L K S I G L P G E R T Q E S               |   |
| UniRef90_UPI000471D57A | E F E A E C S L Y L R G G N S P A P A Y L L T V A V F A N P D Q R G Y A Q L S P M I |   |
| UniRef90_V5FSS6        | T V E Q N A C L R F G G S P A P A Y L L T V S A L P S I A P V T N L R N T I L I     |   |
| UniRef90_W1NJ99        | V L K G S V P M S F G G T E Q P A A Y G E L V S I G G L N P D V N K K L S A A I     |   |
| UniRef90_F7VYL7        | T L H H G A C M L F G G T F D P A Y V I S V S A L P S L Q P T T N K R N A A L I     |   |
| UniRef90_W9YCT4        | M A S T E V T M L L G G N S P A P A Y H L T I T A L S S I A A T K N K R S A H L I   |   |
| UniRef90_W2SCP2        | M V A T D I P M I M G G G S F E P A Y S I I I A A L T P I A A T K N K R S A H L I   |   |
| UniRef90_UPI0002C3F662 | Q L V W M S I G G F G G S A K D S A F L D I R S I G G L K G K Q E P L S A R F       |   |
| UniRef90_S0EC34        | T V Q H G C Q I F G G G S D A C Y T M T I E A L A R V Q T T T N K R N I A L F       |   |
| UniRef90_B0XNW6        | T I Q Q D A C Q I Y F G N S A P A Y L M K V F A L P Y I A P T N L R N T I L I       |   |
| UniRef90_UPI00025556E4 | D I C D G H S S Y K G G K A I P I A Y V D I R V Y T K A D P N G K K Q F I S N L     |   |
| UniRef90_UPI0000E1FBD1 | M G V A G L T M V L S R S T E P W V Q L F I S S T S M M D T E E N C S H S T H F     |   |
| UniRef90_N1JK0         | T M S H S C C V L F G G N F E P A Y I M N I T A L P S V L P V T N K R N A V L L     |   |
| UniRef90_K9UDU2        | V V N T K V N V A F G G D D K P A A V V Q L L S L K M S A E V T K K L T E C I       |   |
| UniRef90_I3N5Z7        | T V R P G L T M A M G G T T E P C V Q L V V S S I G V G A E D N R G H S A Q F       |   |
| UniRef90_C5P8E1        | V L D D S A F L R F G T T A E P A Y L V T V S A L S H I A P T M N L R H T A L I     |   |
| UniRef90_UPI0003595945 | I I I P G V R I Q R L E S T A P C T F N V S S F E V F D K E R N P K Y S P A I       |   |
| UniRef90_A9XP32        | V L K G S V P I A F G G T E Q P A Y G E L V S I G G L D V N K K L S A A I           |   |
| UniRef90_UPI0002B43294 | A G R S E Q L M E L S G S D E H X Q L L S F I E V V G A E Q N K G H S A X I         |   |
| UniRef90_F5YDN3        | D F S D S H T I Y K A G K E V D G A F I D L R L Y N K S E L E F K K K F T Q E V     |   |
| UniRef90_W6QPT3        | T T D Q N A D L L F G T T S G S A Y L L K V T A L S H I A P T M N L R H T A L I     |   |
| UniRef90_W4ZL72        | H L A P N Q M M S F E G T T A P T A V A N V V S I G Q L G V Q E N K V I T Q I       |   |
| UniRef90_B8PP51        | S Y N Y N E N L T F N G S F D P A F L L T I T I L G D M K P E L N E G Y S K A F     |   |
| UniRef90_H9H306        | T V R T G L T M A L S G S T K P C A Q P S V S S I C V V E D N R S H S A H           |   |
| UniRef90_UPI000455E9FA | S I V H N P D F A F A T F E P A C R L H I I N L W N N S P E N A V K W S A A F       |   |
| UniRef90_C5MK34        | M L E T D K Q L T M G A T K P T A I V S E C I G R L K P K L N Q F G T K L           |   |
| UniRef90_R5QMZ0        | N L Q V S Q A M A F G G T E Q P A Y G E L V S I G G L D V N K K L A E A L           |   |
| UniRef90_F9UNB3        | G I E D Q Y D L Y H G D D R N L A Y I S V A I Y G I P H H E G Y V N L N L A I       |   |
| UniRef90_H3FBF7        | Q V T A Y A R M I H A A T P G P C A H V W L K S M G H L D G H S N N I Y A E K I     |   |
| UniRef90_UPI0002B48DC0 | V I V P D T L I F G V D K P S V N A S L M S I G C L G K E N K K L V A V L           |   |
| UniRef90_R5BMQ7        | G L E A N Q S L Y L R G D Q K Q I A Y E A S L F G N E A H V G F S D F G A E M       |   |
| UniRef90_B7PXU7        | V V E P G L D S R G G S M P N C L C T H S I N V F S P E K N K E Y G S Q I           |   |
| UniRef90_V6LVF4        | S F K I A E M S L S G S A A P C A G I I L N A S S S I S P E K N K L T M G V I       |   |
| UniRef90_E3NJ98        | A I D T N C R M T R G R L T D P H A V L E V T T S P L T P V L T E E Y T V A I       |   |
| UniRef90_R7GN64        | H E I D N Q L I Y F K G Q E A N C M M I T L Y L K G H Y T D E Q K E Q F V A E L     |   |
| UniRef90_K1WFZ0        | A F E P D V P M T F G G T T D P V C Y M E A F T V                                   |   |
| UniRef90_A0A024S411    | S L H H S Q S L L F S G S P S P A Y M L T V T A L A C V H P A T N K R N A A V L     |   |
| UniRef90_UPI0002C3D196 | Q V V L S S V G G F G K V V N S A F V D I K S I G G L K G K Q E A L S D S F         |   |
| UniRef90_X5JWJ3        | A F E S E V P M T F A G N T V P V C D L E I K S V G T M S E Q T Q S I S             |   |
| UniRef90_UPI0003611127 | Q L R S G Q E F D F S G S T D N C V V M N L T R G S L R P N T T E R Y V A A I       |   |
| UniRef90_C4WX22        | S I S S D E H Y Y K G G F E Y G Y V H V V F K T G V T T D C E K F N E A I           |   |
| UniRef90_R5G7K6        | T I R P G M T L L M N K S T E P C A H I L V S S I G V V G A E Q N R T H S A S F     |   |
| UniRef90_V2WMV3        | UniRef90_G3UYJ7   | V V T P G L P M L M A G S A S P C V I L S V S A I G V T D A E K N K E H S A K I |
| UniRef90_UPI0003EC0DFA | UniRef90_D4J466   | A Y E G N I H L C R G G D D R P T A F V E C K F F G G G Y E V F E A F D K A M   |
| UniRef90_M7BJB4        | UniRef90_C3XVB8   | M C F L Y S I G K I G D Q E N K D Y S K L L                                     |
| UniRef90_V3Z835        | UniRef90_W5PVY6   | H V D A G Q R M Y L A G F D P F L F L E S D I G T L E Q E A D E K Y T K A F     |
| UniRef90_UPI0002EB88E6 | UniRef90_A0A016VZB7   | I V H G G C R L Y R K E T T P S C V V Q L Y S I G V F D A A R N P T Y T P P L   |
| UniRef90_S8ATM1        | UniRef90_Q2HA01   | V V H T D S N V S F G S D S P A A I V Q V L N A S M P A H I T S Q L T Q G I     |
| UniRef90_C4LV00        | UniRef90_U6LF19   | V I H Q N V S I C F G G S T L P S Y L L K I W T V P S I G P F T N V R N T W L   |
| UniRef90_E9EU72        | UniRef90_R7GN64   | Q V T S V G G F G G K I V K S A F L D I K S I S G L K G K Q E G L S D R Y       |
| UniRef90_UPI000248424B | UniRef90_G3UYJ7   | S L Q H G M C L L F G G S F E P A Y I M T I T A L A Q V K A D T N R R N A A L F |
| UniRef90_G9N7Z4        | UniRef90_UPI0002C3D196  | A F E A E T P M T F A G T T E P V C Y V E I K S V G T M S                       |
| UniRef90_N1QR97        | UniRef90_Q2HA01   | S L H H S Q C L F F G G S L D P A Y T L T I T A L S V Q P A T N K R N A A V L   |
| UniRef90_A4HLN5        | UniRef90_UPI0003EC0DFA  | T F H G N T P M H F L G S T D P V A Y V R V E V L G G C C P L E P K V T S L I   |
| UniRef90_G3XQM2        | UniRef90_D4J466   | T I Q E D A O Q F G R V N P A Y L M K V F A L P Y I A P I T N R R S T I L       |
| UniRef90_UPI0000E4A245 | UniRef90_UPI0002EB88E6  | S L R H E A M F R M G S D A P C L M I F A A S V D N L D Q E D N R R K Y S K E L |
| UniRef90_U9U2F6        | UniRef90_UPI0003EC0DFA  | S L Q D N L S M L F N D S D E P T Y I A G V T S L G D L S A T K T K M S K E L   |
| UniRef90_E7G754        | UniRef90_UPI0002C3D196  | H E D N Q V Y F K G K E M D C M K I E C Q L F H H I E I S Y K Q E F V K A M     |

90                    100                    110

|                        |   |
|------------------------|---|
| UniRef90_W7TS6         | G T A M K A A G D   V P G D R   L F V S F E D   V D F W G F N G Q   L   F   |
| UniRef90_W5PVY6        | F E F   L T K E   L D L   A E D R I M I   R F F   P   L   E R W G K K G T T   F   |
| UniRef90_A0A016VZB7    | T Q F C Q D T L K K L   P K D K V   C Y S F F   V P   T R   |
| UniRef90_UPI0002C319BB | F E F   L T K E   L E L   A Q D W   I R F   L E   P   W Q   G K K G T T   F   |
| UniRef90_Q2HA01        | Q R H M E E T L G V   R P A R G   V L R F V   P   V A E E G W G G R T   |
| UniRef90_U6LF19        | A T I C E K R L G I   P   V   D   R   V   F   F   S   F   A   A   A N   I   G   |
| UniRef90_P90835        | C E F F S Q E   A L   D S D A V L   I N Y   L S   P   E   L   I   G   F   N G   |
| UniRef90_G4MP31        | Q M H M D E V   L G V   P S S R   G   V R F   V   P   M P N V A   V   S   G   R   T   |
| UniRef90_Q9SCU2        | G S I   L   H   T   H   F   S   I   H   P   T   R   F   I   F   K   V   F   D   I   |
| UniRef90_W0R269        | T R L   I   H   K   T   L   S   I   A   P   E   R   I   F   I   K   F   D   D   I   T   A   W   G   V   A   G                     |
| UniRef90_A5ATL9        | G T I   L   Q   T   K   L   S   I   P   R   T   R   F   F   L   K   V   Y   D   T   T   M   |
| UniRef90_R7YKU6        | Q S F M S D   L   L   N   V   T   S   D   R   G   V   I   R   F   E   A   P   N   L   A   I   N   G   K   T                       |
| UniRef90_UPI0003C4AA85 | F E F   L   T   K   E   L   G   L   D   A   D   R   I   V   I   R   F   Y   E   P   W   Q   G   K   K   G   T   F                 |
| UniRef90_E9G3A7        | G E H   I   E   K   F   L   G   V   P   P   C   R   M   L   I   H   |
| UniRef90_F1LF6         | A E F   I   H   Q   S   L   A   I   A   P   E   K   C   L   I   E   F   V   E   P   Q   N   V   S   N   S   G   T   T             |
| UniRef90_H2ZC71        | M   P   V   C   K   A   L   S   L   S   E   D   R   M   F   L   N   F   N   A   V   T   T   M   G   F   K   G   T   T             |
| UniRef90_V9EIF9        | T   K   T   V   S   E   Q   L   G   V   A   A   E   R   V   Y   V   V   L   E   D   V   G   N   W   G   A   A   G   T             |
| UniRef90_E3SFN5        | K   A   I   H   E   K   K   L   E   V   V   P   P   N   R   V   V   L   Q   Y   L   P   V   D   K   V                             |
| UniRef90_S7T2X3        | G   E   F   L   E   R   E   L   G   V   P   A   S   M   G   L   I   E   F   L   D   P   G   F   T   G   V   N   K   G   T         |
| UniRef90_R7TNA4        | L   P   F   L   E   Q   N   L   G   I   G   K   K   R   I   N   L   I   F   H   P   L   Q   K   W                                 |
| UniRef90_K1WRM9        | A   A   H   M   E   E   S   L   G   V   G   P   R   R   G   V   I   K   F   V   A   V   E   N   L   A   N   D   G   K   T         |
| UniRef90_E3GIW6        | F   E   L   F   E   E   Q   L   G   Y   A   G   N   Q   I   Y   L   N   I   L   E   L   D   H   W   G   S   K   G   S             |
| UniRef90_UPI000455EC5B | A   S   F   F   Q   T   K   L   G   I   A   Q   D   R   Y   H   V   A   F   E   D   P   D   Y   I   G   A   F   G   S   T         |
| UniRef90_W3WQ93        | Q   K   Q   I   Q   E   S   L   G   V   A   P   A   R   G   H   V   R   F   V   A   T   P   D   V   A   N   G   G   K   T         |
| UniRef90_H9IXV4        | S   D   F   V   E   K   E   L   G   I   S   K   D   R   F   F   L   T   F   Y   D   L   K   N   F                                 |
| UniRef90_UPI0004407769 | S   E   F   L   T   S   K   L   G   V   R   N   D   R   G   F   V   Q   L   I   E   K   E   N   V   G   F   M   G   T   T         |
| UniRef90_U6H1V0        | A   T   F   C   N   K   F   L   G   I   D   V   E   R   V   |
| UniRef90_C4JQ4         | Q   S   A   M   E   I   L   G   I   S   K   D   R   G   V   V   K   F   M   N   E   E   S   F   A   T   N   G   S   T             |
| UniRef90_C0SEJ1        | Q   T   A   I   N   D   T   L   G   I   P   S   S   R   G   V   I   K   F   E   P   M   E   N   F   A   T   N   G   S   T         |
| UniRef90_H2VPX8        | C   E   F   F   Q   N   E   L   S   L   D   S   D   A   V   I   I   N   Y   I   S   P   E   L   I   G   F   N   G                 |
| UniRef90_L7LVS6        | R   Q   F   I   S   E   N   L   A   V   P   P   K   R   I   V   I   T   L   S   D   |
| UniRef90_G2DD25        |   |
| UniRef90_UPI000471D57A | A   K   L   F   H   E   T   L   G   I   D   P   T   S   V   F   I   K   Y   E   D   I   S   C   W                                 |
| UniRef90_V5FSS6        | Q   Q   G   L   K   G   I   L   R   I   P   P   N   R   G   V   I   R   F   T   P   V   P   N   F   A   T   N   G   A   T         |
| UniRef90_W1NJB9        | A   T   I   L   E   T   K   L   S   V   P   K   S   R   F   F   L   K   F   V   D   T   K   |
| UniRef90_F7VYL7        | Q   K   H   L   E   E   A   I   G   V   P   P   S   R   G   L   L   K   F   V   P   V   P   |
| UniRef90_W9YCT4        | Q   Q   F   V   L   D   T   L   Q   I   P   P   K   R   G   V   V   H   F   E   A   V   E   N   L   A   T   N   G   M   T         |
| UniRef90_W2SCP2        | Q   Q   F   M   H   E   T   L   S   I   N   P   K   R   G   L   V   R   Y   E   A   V   A   N   L   A   T   N   G   M   T         |
| UniRef90_UPI0002C3F662 | C   K   M   L   E   E   K   A   G   I   K   G   D   N   I   Y   L   N   F   T   E   T   T   N   N   W   G   F   N   H   E   T   F |
| UniRef90_S0EC34        | Q   R   H   M   E   Q   A   L   R   I   P   P   S   K   G   F   L   R   F   V   P   A   E   D   C   G   W   K   G   N   T         |
| UniRef90_B0XNW6        | Q   A   A   L   Q   D   L   L   H   V   A   P   S   R   G   I   V   L   Y   I   P   I   E   N   F   A   T   N   G   V   T         |
| UniRef90_UPI00025556E4 | F   I   L   L   E   K   E   L   G   I   N   K   D   N   V   Y   M   S   F   I   L   E   F   D   Q   W   G                         |
| UniRef90_UPI0000E1FBD1 | F   E   F   L   T   E   E   L   A   L   G   Q   D   Q   I   I   F   H   F   S   E   P   W   Q   T   G   K   K   G   M   T   F     |
| UniRef90_N1JKE0        | G   R   L   M   E   E   S   L   G   V   S   A   E   R   G   V   I   K   F   T   A   I   E   N   L   A   N   H   G   R   T         |
| UniRef90_K9UDU2        | S   D   I   L   L   E   R   F   N   V   P   A   N   R   M   Y   I   F   F   Q   E   F   T   Q   V   G   W   N   R   K   I   F     |
| UniRef90_I3N5Z7        | F   E   F   L   T   K   E   L   A   L   D   Q   D   R   I   I   I   R   F   I   E   P   W   Q   I   G   K   K   G   T             |
| UniRef90_C5P8E1        | Q   S   A   I   R   E   I   L   D   I   P   Q   Q   G   R   G   V   I   K   F   E   S   M   P   N   F   A   T   N   G   S   T     |
| UniRef90_UPI0003595945 | Y   K   V   L   Q   E   E   L   D   L   P   K   E   R   C   V   V   L   F   H   D   |
| UniRef90_A9XP32        | A   A   I   L   E   T   K   L   S   V   P   |
| UniRef90_UPI0002B43294 | L   D   V   K   T   V   Q   G   G   V   G   S   D   R   I   L   I   R   F   Y   E   P   W   Q   G   K   N   R   T   T   F         |
| UniRef90_F5YDN3        | F   K   L   L   Q   N   E   L   G   I   K   P   E   A   V   Y   L   N   I   A   E   L   E   T   W   G   G   G                     |
| UniRef90_W6QPT3        | Q   S   I   I   Q   E   M   F   G   I   A   P   D   K   G   V   V   I   Y   M   P   A   S   N   I   A   T   N   G   T   T         |
| UniRef90_W4ZL72        | T   A   E   L   L   A   K   I   G   V   K   A   D   |
| UniRef90_B8PP51        | F   S   F   F   E   S   K   L   G   I   P   G   D   R   G   Y   M   |
| UniRef90_H9H306        | F   E   F   L   T   K   E   L   A   L   G   Q   D   W   F   |
| UniRef90_UPI000455E9FA | A   S   F   F   E   L   K   L   G   V   P   K   N   R   Y   H   I   A   F   E   D   P   E   Y   V   G   A   L   G   S   T         |
| UniRef90_C5MK34        | E   E   Y   L   L   Q   N   L   G   I   P   K   N   R   V   V   I   K   |
| UniRef90_R5QMZ0        | T   K   Y   V   T   D   V   T   D   V   E   R   S   F   V   V   N   V   Q   F   V   D   A   A   D   V   A   L   G   G   R   T   F |
| UniRef90_F9UNB3        | T   K   L   F   Y   E   V   L   K   I   H   P   E   N   I   F   I   D   Y   A   D   I   R   A   W   G   N   S   G                 |
| UniRef90_H3FBF7        | T   T   L   I   N   E   M   T   G   V   P   K   N   K   T   V   I   E   F   Y   D   G   D   N   I   G   F   N   G   A   T         |
| UniRef90_UPI0002B48DC0 | Y   P   I   I   Q   K   Y   L   G   V   N   E   G   L   C   Y   I   Q   F   |
| UniRef90_R5BMQ7        | T   A   A   F   Q   D   V   L   D   I   P   T   E   N   I   Y   I   K   F   Y   D   I   K   A   W   S   V   G   G                 |
| UniRef90_B7PXU7        | R   D   F   I   A   E   N   I   A   L   P   Q   Q   R   I   V   I   A   L   H   D   |
| UniRef90_V6LVF4        | C   S   V   F   D   A   E   M   G   I   G   K   D   R   I   Y   V   V   F   N   E   I   S   N   W   G   L   R   G   T   T         |
| UniRef90_E3NJ98        | U   S   F   L   H   E   E   L   S   F   G   A   D   S   V   L   I   N   Y   L   S   P   E   L   I   G   F   N   G                 |
| UniRef90_R7GN64        | T   K   A   L   V   K   I   T   K   I   P   A   S   N   Q   Y   V   T   I   S   E   F   E   K   W   G   H   G   G                 |
| UniRef90_K1WFZ0        |   |
| UniRef90_A0A024S411    | Q   K   H   L   E   D   A   L   R   V   P   P   E   R   G   M   V   R   F   V   P   V   A   E   L   A   W   G   G   K   T   T     |
| UniRef90_UPI0002C3D196 | C   T   L   L   T   E   K   A   G   I   S   G   E   N   I   Y   L   N   F   T   E   M   S   N   W   G   H   N   H   S   T   F     |
| UniRef90_X5JWJ3        |   |
| UniRef90_UPI0003611127 | C   I   L   I   H   A   H   L   N   V   P   E   D   R   I   F   I   N   F   D   I   E   N   W   G   W   N   G   K   T   F         |
| UniRef90_C4WX22        | S   E   Y   L   L   Q   N   A   L   G   V   P   K   S   R   I   M   I   F   Y   D   M   A   L   I   G   N   N   G   R   T         |
| UniRef90_R5G7K6        | F   A   I   M   E   E   D   L   K   V   P   K   E   N   V   Y   T   T   F   Q   Y   C   D   D   F   G   V   Q   G   R   T         |
| UniRef90_V2WMV3        | S   E   H   F   E   K   T   L   G   V   S   N   E   R   G   Y   I   T   F   I   D   P   K   H   L   G   Y   K   G   T   T   F     |
| UniRef90_G3UYJ7        | F   K   F   L   T   T   E   E   L   S   L   D   Q   D   R   I   V   I   V   I   F   N   E   P   H   Q   V   G   K   K   G   T     |
| UniRef90_UPI0003EC0DFA | F   E   F   L   T   K   E   L   D   L   S   Q   D   R   I   V   I   V   I   F   N   E   P   H   Q   V   G   K   K   G   T         |
| UniRef90_D4J466        | H   E   L   Y   R   N   V   L   S   I   Q   P   Q   D   L   Y   I   K   Y   E   V   Y   G   W   G                                 |
| UniRef90_M7BJB4        | C   D   L   L   N   K   H   L   K   I   P   A   D   R   I   Y   I   S   Y   F   D   A   A   N   V   G   W   N   C   T   T   F     |
| UniRef90_C3XVB8        | F   D   F   V   S   Q   K   L   P   V   K   Y   E   R   I   E   V   V   F   H   P   A   N   E   V   G   Q   K   G   T             |
| UniRef90_V3Z835        | I   E   F   I   R   S   Q   L   K   L   A   E   N   R   V   V   I   H   Y   R   E   A   E   |
| UniRef90_UPI0002EB88E6 | S   N   I   L   L   N   K   F   Q   P   V   P   A   N   R   M   Y   I   F   F   Q   E   F   T   T   V   G   W   N   G   K   T   F |
| UniRef90_S8ATM1        | Q   Q   T   L   H   E   S   L   A   I   P   P   E   R   G   V   I   L   F   L   S   V   E   N   L   G   L   N   G   S   T         |
| UniRef90_C4LV00        | C   K   L   L   E   Q   K   A   G   I   E   G   G   N   I   Y   L   N   F   T   E   M   T   N   W   G   Y   D   H   S   T   F     |
| UniRef90_E9EU72        | Q   S   H   L   Q   Q   A   L   R   V   T   P   T   R   G   L   V   F   V   P   I   |
| UniRef90_UPI000248424B | Q   K   H   M   E   A   V   L   R   I   P   P   A   R   G   M   V   R   F   I   P   V   T   E   L   A   W   G   S   K   T         |
| UniRef90_G9N7Z4        | A   S   I   L   E   S   K   L   S   I   P   K   S   R   F   Y   L   K   F   H   D   S   K   |
| UniRef90_N1QR97        | T   A   A   D   T   K   E   C   G   I   L   A   D   S   I   F   V   L   Y   F   S   P   L   H   C   G   W   N   G   T   S   F     |
| UniRef90_A4HLN5        | Q   A   A   L   Q   E   I   L   H   V   A   P   N   R   M   Y   I   F   P   I   P   N   F   A   T   N   G   V   T                 |
| UniRef90_G3XQM2        | I   D   F   A   A   A   E   F   N   V   Q   I   E   R   I   N   L   I   M   Q   T   L   S   R   W                                 |
| UniRef90_UPI0000E4A245 | G   E   W   L   E   K   E   L   K   A   S   N   D   R   G   Y   I   F   Y   Y   D   P   A   N   V   G   Y   K   G   S             |
| UniRef90_U9U2F6        | M   N   E   I   E   M   I   T   K   I   P   V   S   H   Q   Y   M   T   I   D   E   Y   D   N   W   G   K   N   G                 |
| UniRef90_E7G754        |   |

UniRef90\_Q2JQC8  
 UniRef90\_G6DIL6  
 UniRef90\_U4L192  
 UniRef90\_B5TWC5  
 UniRef90\_I1MSL1  
 UniRef90\_R5XR09  
 UniRef90\_R6JVI3  
 UniRef90\_UP10004743387  
 UniRef90\_R7A7B5  
 UniRef90\_C9SUY2  
 UniRef90\_G4YZW8  
 UniRef90\_UP100046F022  
 UniRef90\_G5E0C0  
 UniRef90\_G0S5C5  
 UniRef90\_C5KLC7  
 UniRef90\_A2FSL9  
 UniRef90\_E5SFT8  
 UniRef90\_L9KF60  
 UniRef90\_W4YQ23  
 UniRef90\_G4TWR9  
 UniRef90\_R7MM54  
 UniRef90\_D3ASE3  
 UniRef90\_K5WH08  
 UniRef90\_UP100036F2F6B  
 UniRef90\_W4Y8L2  
 UniRef90\_C5KHU2  
 UniRef90\_UP1000265361F  
 UniRef90\_UP1000392F59F  
 UniRef90\_G2YR95  
 UniRef90\_B3RPN5  
 UniRef90\_M8CF35  
 UniRef90\_W7USW1  
 UniRef90\_K1PCG9  
 UniRef90\_UP10003871070  
 UniRef90\_J9Q5L0  
 UniRef90\_E6UAK6  
 UniRef90\_Q0CMD4  
 UniRef90\_UP1000265729D  
 UniRef90\_UP10001BF6679  
 UniRef90\_B9IGJ8  
 UniRef90\_UP100035A2038  
 UniRef90\_UP100035A0F4D  
 UniRef90\_K3WCS7  
 UniRef90\_E8KG36  
 UniRef90\_R6I6C0  
 UniRef90\_B6GVY0  
 UniRef90\_UP10003592FDC  
 UniRef90\_H2W879  
 UniRef90\_UP100046BDAEA  
 UniRef90\_G4Z9Q2  
 UniRef90\_Q2BG75  
 UniRef90\_T1EHF5  
 UniRef90\_A8WZY2  
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 UniRef90\_G0NW43  
 UniRef90\_C8UVF9  
 UniRef90\_UP10003676929  
 UniRef90\_W9P9S8  
 UniRef90\_C3YDL1  
 UniRef90\_A0A016XKK4  
 UniRef90\_A2QA96  
 UniRef90\_UP1000369A2E1  
 UniRef90\_UP10003C1164A  
 UniRef90\_K5XIF7  
 UniRef90\_W7W7L2  
 UniRef90\_K0CAT4  
 UniRef90\_UP1000359D24C  
 UniRef90\_J9BK35  
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 UniRef90\_UP10002653502  
 UniRef90\_Q21G56  
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 UniRef90\_U3HSD4  
 UniRef90\_A0A022U661  
 UniRef90\_G2HSM1  
 UniRef90\_W6T8X0  
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 UniRef90\_Q89DY8

1 10 20 30 40  
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 P C L N I F T N I A K S Q I P Q N L V S K I I P V L V K G V K K P P E K F I C V  
 V E F Q T N I N L H N T P T L L T S L T A Y L A H R Y K V P P L T I L L  
 P Y V R L F S N L P E T S F T D A F C T E F T D L L A E K L G K D K S R I V M  
 P T L N L F T N I P V D I V V A S D I L R Y S T K A V A K I I G K P E S V N A V  
 P Y L T V Y V T N V E F K N G A A L A E E A S E L T A R V L G K P V G Y V V A  
 P F I T I D T N A E A K A T K T E L S E L V E L V S A E L N K P K D Y I A A  
 P I C Q L K T N Y P M D A A A R E A L L L D T A T T A A E L L N K P L A A V M A  
 P Y A R I T S K V S K S S V D T V A A S T A V A K T L N E Q W G V P A A F M M V  
 P I A Q M K T N F K I A P A A K T A F L D E A A T E L A D I L K K P L P A I M V  
 P Q D L G E K L C S A A A S I L G E P R E R V N V  
 E V K T N V I I S D E F T F I T E L S Y H L S T R Y R R P V S S I A V  
 P F V A V T T N V Q L A D P N K A A I V F T D V V A N A L G K P K N F I T V  
 M I  
 L F S E L T Q Q L A Q T T G K P A Q Y I T M  
 Y I C I M S V  
 P I C K I A T N Y P L N D D E K N K F A D E A A I L L S E L L E K P L K A I M V  
 P F I N S R V N V P L T D G E K E T L K G K L G Q A I S L I P G K S E S W L M V  
 P S L E I R A N V K L D D P K K F I E E F S T F A A E T L T R P L H C I V V  
 F N I Q T N H L S A N E Q Q A L I A D E L G C V P N Q S T Q S I I I  
 P L A V F V T N V D M S S T M E E F A T G I S H I L S D R L H R E E E K I T V  
 P F V S V T T N V Q A I L A D P N K A A V A F T D V V V S H A L G K P K N Y I T V  
 P I E L I S N V S S D S L P D G L M E R T A N F T A E K G T P S K A V V V  
 E Q S A I H  
 L C E L V T N V I M R E E H T L L T S L S N L L S T R Y Q R P E S S I F V  
 Y L N L E T N L P S S V V T Q E F R K N L Y Q L I A K N L P D S N R L I M  
 P I A Q M K T N Y Q F S S A D R T S F L D A A A K E L S D I L K K P L P A V M V  
 I K T N V P R Q S I K K D F L S K L T E H L C Q I Y N T E A K R V I V  
 P C L A V Y T N L P K D K V P G D F L Q Q A S V F L G N Q L A K P E H Y V T V  
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 P L C T L R T N L P A S K F S T D F E F E F A L Q I A K V L Q K P I E K V I I  
 S E V L V M V  
 P L V T I Q T N V P K D Q S R V F E F F K E L F I T P N L G Q V I W V  
 M A  
 F L F L K T N V T I S L E Q E A K L K T A F G K A I A L V P N K S E A V L M M  
 P F I T I D T N A R T E V T A E M L D E L S E I A V R V L N K P K N Y V T V  
 N S P K D R V T H E S V V V I E L K T N T K R P E T S M L V  
 P I V T V R S N L P S A S P D F Q G K F F E F L K D L L K T P R V I I  
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 P C M V I S S N V A S D R V G R P A P H V L V  
 P Y I S V Q L S S P T D P I T A D N L A K G I T H I L S N D L G K K E E L T A V  
 P I C T L E T N L G K E K I P K D F H V K L A N V L A A T L K K D L E R I S V  
 V R I Q T N I R A A D V P E K L E Q D V S Y G L S V V M E M P S D K F V V  
 P L C I F H T N M S A D R V S D E V H S K L L S K I I S E M T G S N E T S I T V  
 I L R I Q T N I R S A D P E K F E Q D V S Y S L S V A M D L P A D K F V V  
 M A Q I Y Q R S E S F M F V  
 K E Q L D P I K A K L L S D V I H E V L G M P E D K R A H  
 L T R K R S D F F E E A F G S K H A Q D P G R N E S P V L V  
 P Y I L V R S N F D V P Q E F D A K L S K L M S E L T K M H E G Y I L S  
 P T L H L Q L S R S P S E D Q R S A L A R R L T A L T A E V L G K R A V V T A V  
 I K T N T K K S E T L M M T  
 R E K L N P I K T E L S D V I H N V L G M P E D K R A H  
 P Y L N L N L P T A P S A D V A A K A A E V L T R L T A E L L G K K P E L T A V  
 K E R L N R I K S Q L S D V I Q S V L G M P E D K R A V  
 P L V T I K T N V K T V S D D F H Q K S Y E F F N D L F Q T N K N V V  
 P L I T I L A S N V P A S R F P S D F N V Q F T E L M A K I L G K P T S R I L L  
 P Y I R V Q L G K P V S P T E T L R L A D G I T D V M T T I L H K K Q S L V S V  
 P L I T V K T T N V K T V S D D F M Q K S H D F F K D L L V T E K I I I  
 P E H P S T S L L T N G S I V V V E I K I S T R T S M M V  
 P T L Q L K V S P L Q N P S R Y R A L A E A M T R I T A E E L G K R A E V T A V  
 P F V E L Q T N L P A S R L P S D L T K L C L C S E V A S I L A K P V E R V N I  
 C V V H V N T P A C K L S D S F R T Q L A T M V A K R Y D L Q T E N I I V  
 K E N L N P I K A K L L S D V I Q N V L G M P E D K R A H  
 M V  
 C A V L K T N V H E K S I Q K D F L S K F S D F L V T L T G A D L K N I T L  
 P I T L K A N K I F S E N I R D S L A E G L S L I T E K T L R K N K Q V I V I  
 S A Q S I L I  
 P F A L V R T N F D V Q E E F D G K L S K L M C D L F K V D Q K D V C V  
 P T V R A F T N V S K S A L P K D F M V N F I D A L G K S L N R E S K N V T L  
 R E R L D P I K A R L L S D V I Q A V L G M P E D K R A H  
 L V E I R T S L P F L S I A V D N P M D T I S K L V E E L D G H P V M V  
 P H L Q F E L N K K V S N E T K E E F V K E I R N S F A Q I M D T K T D H I A I  
 P Y L N V R L T T P E S T V T A Q K V A H L L T N L V V N V L G K Q R E V A A V  
 D Q F R D Q L S Q A I H Q A L V E S L S Y P A I  
 Y A H I T L S H E F P A V E M E D F V K C T T Q A I C D A T G K P E A Y I L V  
 P Y L S F H V S A D T S Q K Q S D Q V A S V L T E L T A T V L G K K R E L T A V  
 K E N L N P I K A E L S N V I Q S V L G M P E D K R A V  
 P C I E M Y T N L S A D K V P A N F F E V L T E F F C G L L D K N P R G V V L  
 P L L H I S M R A G K P D A Y R Q A I L D G L Y R A M R E A L N V P E D E F M T

|                        | 50  | 60 |  |
|------------------------|---|----|--|
| UniRef90_Q2JQC8        | A F E G G I P M T F A G S G D P C C Y V E I K I                                     |    |  |
| UniRef90_G6DIL6        | V N A D C F L N M K D S E T P G I V A T L E S I G H L G P E E N D I L I V K E L     |    |  |
| UniRef90_U4L192        | D I S H S S H L S L G G T S E G C Y T L T V S A V H S I S P T V N K R Q A I M L     |    |  |
| UniRef90_B5TWC5        | L V Q P H T I M S S G G V P Q P S I W L E I N N V G Q L S P R Q T Q E L S R D L     |    |  |
| UniRef90_I1MSL1        | A G G L G P S G N E K L S S T I L   |    |  |
| UniRef90_R5XK09        | N F I Y N P N M A F G G S A A K G A L A E L K S I G L G G K D A F I G E L           |    |  |
| UniRef90_R6JVI3        | K I N T G K L M S C G A N P E T V A L I E M K S I G Y N G K I G Q L A K A L         |    |  |
| UniRef90_UP10004743387 | D N L E M Y F D D E R P C C F L E I K S I L G S L N P S E M A K Q I                 |    |  |
| UniRef90_R7A7B5        | M L D S C D M R M N G T G D T V F F A E F R Y C S K E K Q A F L D R F A D R M       |    |  |
| UniRef90_C9SYU2        | T L L Q H G A C M L F G G S F D S A Y T M S I S G L P E F A P T K N R R I A A L L   |    |  |
| UniRef90_G4YZW8        | Q L E L E A P M L L Q L N D E P A A Y V H A R T I G L T S D Q K P K T L A A L       |    |  |
| UniRef90_UP1000462F022 | M L D D C S M Y M N K S E D T V F F A E F R Y I L P Q E Y A D N K E L A D R M       |    |  |
| UniRef90_G5E0C0        | T V R T G V T M L G G S S E P C A Q M L I S S I G V V G A E Q N K E H S A K F       |    |  |
| UniRef90_G0S5C5        | T V V H H G V C M F F A G S F D P A Y I L T I S A Y C S N N L V E H R R N A T Q V   |    |  |
| UniRef90_C5KLC7        | Q V V V S A A G F V V G G H V A D G V S V E I Y S I G G G L K G K M C D A I         |    |  |
| UniRef90_A2FSL9        | V F E D D V S I L R F A G S E D N A A F V K I N A V G G V V N N E N N K K V A K A I |    |  |
| UniRef90_E5SFT8        | M E F G G A D D P C L I G V V R A V G R I S A E E N A Q Y A E R E L                 |    |  |
| UniRef90_L9KF60        | Q V V L T S S W P S G P P L V R A L C T L H S I H K I G G M Q N H T Y S K L L       |    |  |
| UniRef90_W4YQ23        | H L A P N Q M M S L D G T T T P A T V A N V F D I G N L G V E K N K D I T Q L I     |    |  |
| UniRef90_G4TWR9        | S Y T H N K T L I F A G T S D P C F Q V R L I S I G G L T E E N C P S V S A A L     |    |  |
| UniRef90_R7MM54        | M I N T N Y M R M N Q S N D T V C F G E F R Y V K S Y A D E A K Q L L S D K M       |    |  |
| UniRef90_D3ASE3        | G F E D N Y S L Y F K G K N D K L A Y V E V K I S A V L R M K L T I S L             |    |  |
| UniRef90_K5WH08        | S Y T Y N E H M A W D G K F D P C F L L D V L L I D S I P E D V N E Q Y S K A F     |    |  |
| UniRef90_UP100036F2F6B | A F E H K P M W Y R G N R P A A W V V F R V F A N E N H I G Y G E L T A Q I         |    |  |
| UniRef90_W4Y8L2        | S I Q P N Q F M F R G G S T D P A G Y V S C T S R G F G D V E H R R D T S Q K V     |    |  |
| UniRef90_C5KHU2        | Q V V P A T G F V V G G E V A N G V S V E I Y S I G G G L K G E L C D A V           |    |  |
| UniRef90_UP1000265361F | M I K H A V M F R F S S D E P C M L I K L E C Y D A F D Q E K N R K Y S K E F       |    |  |
| UniRef90_UP1000392F59F | M V N H Q E R R T M H I K N P C A Q L L V S S I G V V G A E Q N Q R H S A R F       |    |  |
| UniRef90_G2YR95        | T L K H S A C F I V A G T F E P A Y I M T I L P S M Q P T T N K R N T S L L         |    |  |
| UniRef90_B3RPN5        | N V I T D S P I H G L S D K P Y T L Y H L T S T N G L G V Q E N K V H S K N I       |    |  |
| UniRef90_M8CF35        | M L D D C A M Y M N S S E D T V F F A E F R Y I L P Q E Y A G D K E L A D R M       |    |  |
| UniRef90_W7USW1        | E I H P D T P M M R G G L T A P M M M N I E F F Y H T D V I T Q A T K H K H A T G M |    |  |
| UniRef90_K1PCG9        | P C A E V S V A S I G V V G A E Q N Q R H S A R F                                   |    |  |
| UniRef90_UP10003871070 | R L H P D Q M M M H G G S S D L C G F V E L   |    |  |
| UniRef90_J9Q5L0        | M L D N C Y M D M N R S E D T V F F S E F R Y F D G D K S G F M K K F A D T M       |    |  |
| UniRef90_E6UAK6        | N I Q H S A C L I H F G N P K Q P S Y L I K V F A L Y M I A P I T N L R S T V L I   |    |  |
| UniRef90_Q0CMD4        | U H D H E C N I R R G G D K D P V L W L N I Q T I D R F D K D S N H K Y G P P I     |    |  |
| UniRef90_UP1000265729D | T L H H G A C M L F G G T F D P A Y V I S V S A L P S L Q P T T N K R N A A L I     |    |  |
| UniRef90_UP10001BF6679 | I L K G T L G S F N G N K E P A A Y A E I V S M G G I T K Q V K R N L I A T L       |    |  |
| UniRef90_B9IGJ8        | T I E T G K D M T F G G S S D P T V T I S I L A V A R F H P D T N P R L H K A I     |    |  |
| UniRef90_UP100035A2038 | E L E A G R N L T Q G G G T S D P V A T V S V E C I G R L K P S L N L A M G R R I   |    |  |
| UniRef90_UP100035A0F4D | K L S L D Q T T L F G G S S D T A S A Y V Q I R C I G Q I S K E H H N T K S V Q V L |    |  |
| UniRef90_K3WCS7        | E L Q D N A R M W L R G G Q P P M A F I K I S L S L F A N P Q H                     |    |  |
| UniRef90_E8KG36        | K I N S G A A I L F G D T T E N G A L V E F K S I G F G D K K A E L A R Q I         |    |  |
| UniRef90_R6I6C0        | T I D Q N A D L I F G N T S G S A Y L L K I T A L S S I G P L T N L R N T S L I     |    |  |
| UniRef90_B6GVY0        | T L E F G K D M T N G G S T N P T I L L S I L A A V N R L H R D T M P R L H K A I   |    |  |
| UniRef90_UP10003592FDC | I I E P A I R M M G N G R E T P L A V V T L Q T T R P S S Q T E N D V Y A K K I     |    |  |
| UniRef90_H2W879        | H I N P D Q E I Y W Y G L D G P C V L G T K L V G K I S P E Q N I I H A E K I       |    |  |
| UniRef90_UP100046BDAEA | Q L Q L G L L M S V Q K S Q A P M A L V H R S L I G R L E D E R N P K T V A A L     |    |  |
| UniRef90_G4ZQ92        | N I T Y S S S W Y I L G N R S E Q S A Y V D I K S E G T N S K A E I K T A I A K I   |    |  |
| UniRef90_Q2BG75        | T I S P G L M M T R G G S T D P T A T I L H I W S I                                 |    |  |
| UniRef90_T1EHF5        | I V E P A V R I R F E A K E T T V A V V Q F Q T T R P S P R T E N D I Y A K K I     |    |  |
| UniRef90_A8WZY2        | E L R T G K K M C R A A N P D D W G F F E L H A I G S E D P D L N R R A G K I       |    |  |
| UniRef90_UP10002653501 | I V E P A V R M R F A S K E T T V A V V N F Q T T R P S S R T E N D T Y A K K I     |    |  |
| UniRef90_G0NW43        | S M Q V I P S L R F G N S T V P A Y S M K V F A L P Y I A P I T N L R S T I L I     |    |  |
| UniRef90_C8VFU9        | R F E K D N Y F Y P G G R S D A Y T V I E I N M M A G R K P E T Q K N L I K T L     |    |  |
| UniRef90_UP10003676929 | A I Q H G L C Q F G S G S D P C Y T M T I E A L A R V Q T T T N K R N I A L F       |    |  |
| UniRef90_W9P9S8        | Q V R V N K R M L L G G S A D K C V Y S D V R L A D V L N E K D K E R Y Y R E I     |    |  |
| UniRef90_C3YDL1        | L V D D G L A I E A N A S T P G T A R L S I D I Q G T N T P A Q K E A F V Q A A     |    |  |
| UniRef90_A0A016XKK4    | T I Q E D A C I Q F G R V N L P A Y L M K V F A L P Y I A P I T N L R S T I L I     |    |  |
| UniRef90_A2QA96        | R F I P M Y P G G R S D S Y T V I E I N M M A G R Q A E T Q K K L I K A L           |    |  |
| UniRef90_UP1000369A2E1 | I S S I G V V G A E E N R G H S A R F   |    |  |
| UniRef90_UP10003C1164A | M F Q S L A S I D N L Q P E M N E G Y S K K I                                       |    |  |
| UniRef90_K5XIF7        | A I T A T A P W Y V G G R A I P A G L S S F Y T E G T N T K N E K A R Y V E A V     |    |  |
| UniRef90_W7W7L2        | P L E R D D F Y Y P G G R S D A Y T V I E I N M M A G R K P E T K K A L I K A I     |    |  |
| UniRef90_K0CAT4        | D I L N L G R P M T A F N S S E P A V I L T V I A V A R F H P D T S P R L H K V I   |    |  |
| UniRef90_UP1000359D24C | L V M P N A Q L S H G T T E N P S C L T V V S L I                                   |    |  |
| UniRef90_J9BK35        | S V E T P A S Q W F I Q G Q T E T T A F V S A K I T G T N T V E E K A Q A I A A I   |    |  |
| UniRef90_I3BTU2        | D L D L G R Q M T A F N S S E P T V T V M G I A V G R F H S D T N P R L H K A I     |    |  |
| UniRef90_UP1000359FF8D | V I Q Q D V R L H F G N S A I P A Y L M K I F A H P Y I A P I T N L R N T I F I     |    |  |
| UniRef90_A0A017SRE7    | V I D P A A R W H V G G T D R P T A M L E I S I Q G T N T A A Q K A A F I E R A     |    |  |
| UniRef90_C9YEV1        | U N S E G D L P M W F P G A L C Y A G C V F L G S G G I C G A E Q G A Q C K V L     |    |  |
| UniRef90_Q5EI02        | L I R E G L R L M R A G T K D A C G Y I E L F F G C D A I D A E K N R E D T T A L   |    |  |
| UniRef90_UP10002653502 | R F M P K A D F Y Y G G R T D A Y T V I E I N M M A G R K P E T Q K A L I K A I     |    |  |
| UniRef90_Q21G56        | I I I Q Q G V C I R F G I S K D P A Y L L K V Y A L P C L I A S T N L R C T T M I   |    |  |
| UniRef90_I8U863        | E L Y T D V T M M R A G T T A P M L N I D F H N S P Q I D Q T S K Y E Y A N K I     |    |  |
| UniRef90_V4A7X7        | H F E T A D Q L Y V G G N H D E A I F S I L I T Q G T N T D A E K A E W I A Q T     |    |  |
| UniRef90_K9Q8E7        | S F E Q K T M W Y Q D D S S V A L V Q F R A I G N A T H T G Y P E L T A Q I         |    |  |
| UniRef90_W0Q622        | E V L V N K R M L R N G T N E P Y V Y V C D L R R V S V M T L D N K V T W A K V L   |    |  |
| UniRef90_C3Z452        | E H F L C D Q M L C R G P N D D P M C Y V E F N T C G H G E S E E I R Q K V I G I   |    |  |
| UniRef90_W4YKB4        | R F V P M Y P G G R S E A Y T V I E I N L M A G R K P E T Q K A L I K M L           |    |  |
| UniRef90_U3HSD4        | S V D D E V K I L S Q F G D E P A Y I V T V T A L G L M T P R C S Y R F T S I       |    |  |
| UniRef90_A0A022U661    | S L R Y S L T I G R A N V T D D I C L M N L D I R E G R T I E K R R E L A L K F     |    |  |
| UniRef90_G2HSM1        | D V Q F P E H W F I Q G E T A P T F F L E V K V T G T N T R D E K A A F I K Q A     |    |  |
| UniRef90_W6T8X0        | U N I A T S P M S L A G Q Q E L V P F Y L D I K V T G T N T K N E K S Q Y V R Q V   |    |  |
| UniRef90_N9TAK0        | U N I E Q D D F I Y P D D R S D Y S I I E I S M F E G R S I E T K K R F V Q A I     |    |  |
| UniRef90_Q1N6A6        | R I V P L E R E D F G G R S D A Y T V I E I N M M A G R K P E T Q K D L I K A I     |    |  |
| UniRef90_A8B4T3        | T A S R E N L I V G G L L P Q S Q V F V Q L T I I G I D D P F R S E Q I S K F I     |    |  |
| UniRef90_UP100036739C4 | E I N A T S P M S L A G Q Q E L V P F Y L D I K V T G T N T K N E K S Q Y V R Q V   |    |  |
| UniRef90_H2FVW6        | P L D K D F Y Y P G G R S D A Y T V I E I N M M A G R K P E T Q R E L I K T L       |    |  |
| UniRef90_W4XCP7        | N L Y T D Q R I H T G T D L N K T M L M I Q I Y N A L D R D A N R D A I K L V       |    |  |
| UniRef90_Q89DY8        | I S E H D P A N F R C G N S E D A V L I Q I T V F A S R T P E Q K K A L Y R R I     |    |  |

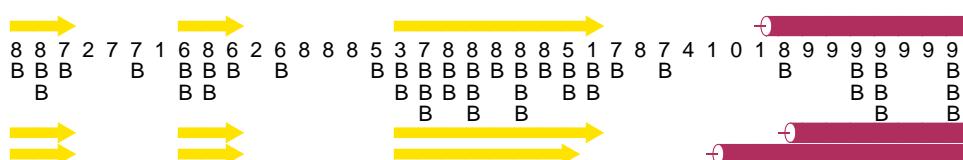
90                    100                    110

|                        |   |
|------------------------|---|
| UniRef90_Q2JQC8        | A K F F E T E L G V Q P S R F F L T L Y D L E N V A I N A S T     |
| UniRef90_G6DIL6        | Q Q W I W E N L G L A A N R G I I R F V E C A N W A T G G D T     |
| UniRef90_U4L192        | T H F V M E K T T I P R E S I S I L Y F D P D M V A R G G U T     |
| UniRef90_B5TWC5        | A E I L Q T K L Y I D S S R F Y I I N Y T                         |
| UniRef90_I1MSL1        | T A F L A A H L E I A E E R I N I A L V D A A Q T A C N G K A F   |
| UniRef90_R5XR09        | T D F C V R K F G C E A A E A V N I H F V D A T N V A K G G H T F |
| UniRef90_R6JVI3        | S N S V Y E K L G I P I D K I Y I S F E D V P A W A W N G R T F   |
| UniRef90_UP10004743387 | L A L F R Q H T G V D P H R I Y M Q F T E M A R W K Y T G K       |
| UniRef90_R7A7B5        | Q K Y M E E S L G V L P R R G Y L R F V P P N V A W D G K T       |
| UniRef90_C9SUY2        | T E T V S E Q L K V P A E R V I                                   |
| UniRef90_G4YZW8        | L S L I Q K H T Q V D P Y R I Y M Q F T E M T R E G W K           |
| UniRef90_UP1000462F022 | F Q F L   |
| UniRef90_G5E0C0        | M R H M E E S L G V G C A R G L V R                               |
| UniRef90_G0S5C5        | Y E T L H T E F G V E A A Q A V V R F H D P A E Y A M N G K T F   |
| UniRef90_C5KLC7        | T E W F V S H G I A A N R L Y L V F S D P E N W S T N G           |
| UniRef90_A2FSL9        | S E F L H Q Q L G I L P Q R M Y I R Y M D G F Y V G W S G         |
| UniRef90_E5SFT8        | C G L L A D R L C V R P D R I Y I N Y                             |
| UniRef90_L9KF60        | T T E L A K L G V K A D R M Y V V F K D M P D V G Y N N T T F     |
| UniRef90_W4YQ23        | A E V L K E K A G L D S S R G Y M Q L T D P A R T G Y R G T T F   |
| UniRef90_G4TWR9        | F A L I Q K Y T K A E P H R V Y M Q F T                           |
| UniRef90_R7MM54        |   |
| UniRef90_D3ASE3        |   |
| UniRef90_K5WH08        |   |
| UniRef90_UP100036F2F6B | S R I I L H R T L N I E L A R I F V E F A D A A F G I G G R       |
| UniRef90_W4Y8L2        | L D F I K E Q L K L D S S R V Y M H T M S A D D G I D G           |
| UniRef90_C5KHU2        | Y E T L Q K E F G V E A G Q A V V R F Q D P A E Y A M N G R T F   |
| UniRef90_UP1000265361F | I D Y A A A E F S I P A Q R I                                     |
| UniRef90_UP1000392F59F | F D V L T A Q L G L G P E R I V I R F Y E P W Q G K N R T T F     |
| UniRef90_G2YR95        | Q N Y M T T E L Y V E P E R G I I K F V P L E N F A T N G K T     |
| UniRef90_B3RPN5        | T D L T Q A E L G V T L H R K T L F H                             |
| UniRef90_M8CF35        | A D I L E A K L L S V S A S R F Y V K F D D V Q N V G F N G T T F |
| UniRef90_W7USW1        | L R L I Q H H T K V N P Y R I Y M Q F T E M T R E G               |
| UniRef90_K1PCG9        | A K F M A D E L R I P V I D R                                     |
| UniRef90_UP10003871070 | F D V L T A Q L G L G P E R I V I R F Y E P W Q G K N R T T F     |
| UniRef90_J9Q5L0        |   |
| UniRef90_E6UAK6        | L A V I Q K H T K V D P Y R I Y M Q F T E M D R                   |
| UniRef90_Q0CMD4        | Q T A L Q Q I L R I P P D R G I V L Y S P I E N L A T S G T T     |
| UniRef90_UP1000265729D | K T F L A N A A L S L D E K Y I T I S L Q D                       |
| UniRef90_UP10001BF6679 | Q K H L E E A I I G V N P S R G L L K F V P V P                   |
| UniRef90_B9IGJ8        | G T I L E A K L S I P P A R R F L K V Y D T T A A G               |
| UniRef90_UP100035A2038 | A E F F S T T L N I P V E K T V V V L T A P V N V S F N           |
| UniRef90_UP100035A0F4D | E D V I I E K L G V N R D R I V V R F F S V Q Y C T Y N G         |
| UniRef90_K3WCS7        | T T K V T E L L G V P A E R V F V I F E D I P N W G               |
| UniRef90_E8KG36        |   |
| UniRef90_R6I6C0        | K D F A V R R F G A E G L F V G I H F A D A A N V S H D G K       |
| UniRef90_B6GVY0        | Q S T I Q E M F G I A P D K G V V I Y N P A S N L A T N G T T     |
| UniRef90_UP10003592FDC | A E F L S T T L N V S I E S I L I V F S K P A                     |
| UniRef90_H2W879        | T A V L R E H L K L L D P A H I L I S F D D A K N F A V Q G K T   |
| UniRef90_UP100046BDAEA | V K H I S D N L N L   |
| UniRef90_G4ZQ92        | T E T V A E Q L Q V P P A R I Y L E D I S V K S W A S N G         |
| UniRef90_Q2BG75        | Y E L L N D Q L G N L S E V S Y I T I D E V T N W G Y G G K T     |
| UniRef90_T1EHF5        |   |
| UniRef90_A8WZY2        | T S I L C D Q L K L D S S R I F I S F D D A K S F A T Q G K T     |
| UniRef90_UP10002653501 | L T F A E T E I G L P Q T R I                                     |
| UniRef90_G0NW43        | T L V L C E Q L K L D P A H I F I S F D D A K S F A T Q G K T     |
| UniRef90_C8UV9         | Q A A L H D I L H I Q P S R G I I L Y I P V E N M A T N N T T     |
| UniRef90_UP10003676929 | F Q K I E E Q L S I S P V E I T I K E Q A P Y Q W G F R G M T     |
| UniRef90_W9P9S8        | Q R H M K Q A L R I P P S K G F L R F V P A E D C G W K G N T     |
| UniRef90_C3YDL1        | H N F L V G E L G V E P A R                                       |
| UniRef90_A0A016XKK4    | W A L L N E L L G P E A S Y I I V R E L P A E D W G Y G G R T     |
| UniRef90_A2QA96        | Q A A L Q E I L H V A P N R G V I L Y I P P N F A T N G V T       |
| UniRef90_UP1000369A2E1 | F Q E I E N K L S I S P V D I T I K E Q A P H Q W G F R G M T     |
| UniRef90_UP10003C1164A | F E F L T K E L D L A E D R I M I R F F P L E R W G K K G T T F   |
| UniRef90_K5XIF7        | F E F W L D V K L G V K H D R G Y I I F T D P G Q I G Y M S T T   |
| UniRef90_W7W7L2        | F K A M T E L L G A P A S Y V V I H E V H A D A W G Y S G Q T     |
| UniRef90_K0CAT4        | F R E L E E S Q L G L P P V D E I T L K E P Y Q W G F R G M T     |
| UniRef90_UP1000359D24C | A E F I N T A L S V P L E R I I V                                 |
| UniRef90_J9BK35        |   |
| UniRef90_I3BTU2        | Y T L L G E V L G T L A E A S Y I V L D P A T D W G Y G G R T     |
| UniRef90_UP1000359FF8D | A E F I S T A L S V P L E R T I V                                 |
| UniRef90_A0A017SRE7    | Q K I L H E F L D I A P N R G V I I Y A S V P N L A T D G V T     |
| UniRef90_C9YEV1        | F A E L E A Q L G E P A S Y V I V R E V P A S D W G Y G G Q T     |
| UniRef90_Q5EI02        | C   |
| UniRef90_UP10002653502 | I Q L L Q K E S G I P L A R I F V L M R P S T N W G K I G         |
| UniRef90_Q21G56        | F T N I E D Q L G M A P V D I V I K E Q A P Y Q W G F R G M T     |
| UniRef90_I8U863        | Q S A L R D L L Q I E P N R G V V L Y L P V P N F A T N G V T Y   |
| UniRef90_V4ATX7        | T Q F I C I H L H I P E D R                                       |
| UniRef90_K9Q8E7        | W Q L L T A N L G N T P N Y I S I Q E I D G K S W G Y N G         |
| UniRef90_W0Q622        | S H I L H R T L G I A S G R V F V E F C N I T A F G               |
| UniRef90_C3Z452        | S D F F M K E L R V E P L R C T L S F Q P                         |
| UniRef90_W4YKB4        | S D F L K T A L K I I E A V R I L F H V I P P H H V G             |
| UniRef90_U3HSD4        | F S E E L R Q L H L A P V D V E I T I T E P Y Q W G F R G M T     |
| UniRef90_A0A022U661    | Q Q E I Q S V M H I P P T H G I V R L M D T Y R F G I N G T T Y   |
| UniRef90_G2HSM1        | M D V I K D N F G I N P K N Q Y I T F T E                         |
| UniRef90_W6T8X0        | F A G M R D L L G I S P S Y I V L Q D V A P D D W G F G G R T     |
| UniRef90_N9TAK0        | F A N I Q Q C G I S A Q D I E I T I F E T P N W G I R G K N       |
| UniRef90_Q1N6A6        | F S E V E S K L G L S S V D I T K E Q Q P Y Q W G F R G M T       |
| UniRef90_A8B4T3        | C R L Y K R E L A S S Q V N I V I N Y                             |
| UniRef90_UP100036739C4 | F E A V T E I F G A P A S Y V V I H E V H A D A W G Y E G R T     |
| UniRef90_H2FVW6        | F R E I E S Q I G L S P V D I T I K E Q Q P Y Q W G F R G M T     |
| UniRef90_W4XCP7        | T D K V S G I L G I S P D R V L I P V P S H Q V G T P G G N       |
| UniRef90_Q89DY8        | A E L L G E N P G I R P E D V F V N V L D A P G E N W             |

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf  
sol25  
sol5  
sol0  
jhmm  
incsm

|   |   |
|---|---|
| UniRef90_L8FS32<br>UniRef90_R4K2U7<br>UniRef90_F5RHM8<br>UniRef90_J3I2C2<br>UniRef90_UP10002629038<br>UniRef90_J3CGR5<br>UniRef90_D4H1Q0<br>UniRef90_E6VM91<br>UniRef90_UP1000379682B<br>UniRef90_A9F6T6<br>UniRef90_UP10004109A08<br>UniRef90_B1G6L6<br>UniRef90_F7Q3Q2<br>UniRef90_C5BKG7<br>UniRef90_UP1000368E0AB | 50                    60                    70                    80<br>S <b>L</b> F Y T A Y <b>L L</b> H D H T <b>L</b> D P S Y I L T I   S A P P A <b>L</b> C Q A D N D <b>C</b> N A V A M<br>R F F <b>P</b> K E N F Y F K G R T D K Y T I   E I S I F E G R S V E A K K K L I R L L<br>A V G <b>H</b> V E H W S <b>V</b> G G E A <b>L</b> T A F <b>H</b> L E V R V T G T N T K P E K A N Y I A A V<br>T I S E H E P A N F R N R S E D A V L I Q I T V F A S R T P E Q K K A L Y <b>C</b> R I<br>F V V <b>P</b> H R P <b>L</b> S E G G S G L A Y F T A V V L T G R P A D Q R E R L L A G F<br>S I E P N S H W F I H G E L Q H V A H L Q I N I T G T N T D A E K A Q M I Q A A<br>S I E H D T Y N <b>L</b> F I G N K E G V A L V N A D I R E G R E <b>L</b> I Q R R S L A L G F<br>T L T E H A P A N F R A R S A D L V Y I Q I T V F D T R T P E Q K K A L Y R R I<br>R F V P <b>L</b> D K T N F G G R S E K Y T V I E I S M I S G R T E E T K K K L I K Q I<br>R F E R E D M <b>L</b> A P G G R T D A Y T I I E I S M I S G R S V E T K K K L V R L L<br>P L D K S D F Y Y P E G R T D A Y T V I E I N M M E G R K A E T K K A L I K A L<br>A V R E G V W R M I D G R P Q P V A V L M <b>C</b> D I R R G R S A E L R L E V A K S L<br>G F R T G G S L W R E G E P E P G V V M M <b>C</b> D I R R G R P T E W R E E L A I A L<br>H L A E E D F Y Y P G G R S S A Y T V I E I N M M A G R T V D T Q K T L I K T L<br>A M G <b>H</b> V E H W S <b>V</b> G A E A V G G A L T A F <b>H</b> L D V R I T A G T N T K Y V S A V |
|---|---|

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf  
sol25  
sol5  
sol0  
jhmm  
jpssm



Sequence alignment showing conservation across UniRef90 entries L8FS32, R4K2U7, F5RHM8, J3I2C2, UPI0002629038, I3CGR5, D4H1Q0, E6VM91, UPI000379682B, A9F6T6, UPI0004109A08, B1G6L6, F7Q3Q2, C5BK7G, and UPI000368E0AB. The alignment highlights a conserved motif at position 90.

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf  
sol25  
sol5  
sol0  
jhmm  
jpssm