

1 10 20 30 40  
QUERY M L T R Q K K E L I V K E M S E I F K K T S L L L F A D F L G T V A D L T E L  
UniRef90\_UPI00036BACE0 M A I T A A K Q A T V A S E M V K E K L T S A K G A V L V N Y R R G L L T N V A A E E I T T E L  
UniRef90\_D5X9V1 M A R P E K Q A L V D E M V K E K L L Q N S Q G A V L T D Y R R G L L L N V A A E E I T T E L  
UniRef90\_E4KY56 K L Q S K Q A L V D E L R K E K L Q Q S I V L V N Y R R G L L L T N V A A E E I T T E L  
UniRef90\_I3TNZ2 M D R A S K E E L V A E D L R Q S F T S A G V V V V T H Y R R G L L L T N V A A E E I T T E L  
UniRef90\_K6Q123 M L N R S E K Q A L V A E D L A G K L T R A Q G V I L L T D F R R G L L L T N V A A A T D T T E L  
UniRef90\_UPI000368B79B R P E K A A K V S E L K D L M T G S K G V I L V D Y C G L L T T V A A E Q D T D D L  
UniRef90\_G4Q5V9 M P N I E E K A L V V A E E T K E E K F Q N S T G S V V L A N D Y R R G L L T T V A A Q Q L N Q L  
UniRef90\_UPI00030CA434 M P T P Q K A Q I V A E E T R E E I Q E G S S A V L L A N Y R R G L L T T V V E H A T N D L  
UniRef90\_U2JWA4 L Q Q K R A V V D E E I T K E K I Q K A D A V L M E Y R R G L L T T V V E H A T N D L  
UniRef90\_UPI0004799DA7 M N R E E K K E L I V A E E L S K G K L D K A Q A M V L V D Y R R G L L T N V A E E V T E K L  
UniRef90\_H6SIL4 M P N Y E E K Q K I V D E D L K E K L Q E S S G V V L A D Y R R G M T V S V Q D M G T K L  
UniRef90\_F0SXZ8 K R E D K R Q I V A E D L H A A M A E S S A G V V T H Y R R G L L T G T V S A Q D M G T K L  
UniRef90\_UPI00047783BB M A N M T D K Q A L V A E L K A D Q L T N A K G V V L T S Y R R G L L T S V A Q D M G T K L  
UniRef90\_I0GNP5 R P E K V A K V A E E I Q E E L L T N S K C T I L V D F C G L L T T V A A Q D D T T E L  
UniRef90\_E8LD87 M A K V I E L K Q P I V A S E E I S E E L K G A Q S V V L V D Y R R G L L T S V A Q D D T T E L  
UniRef90\_R5TY85 L N L E D K R A I V A S V I S N A V A S E A L S A V V L A D Y R R G L L T S V A Q D M T E L  
UniRef90\_K0CKE5 L N R Q E K A A V I E E I T G Q L A S A Q A V V V A E Y R R G L L T S V A S V T T Q L  
UniRef90\_UPI0001E2FB06 K L L T Q G K Q A L V D E E L K E K L Q G A Q S I V L M N Y H G L L N V A E E V T E L  
UniRef90\_U7UIAO M L N L T Q K Q A L V E E L R T S G L F G S F Q K A A I L I L T D Y K G L L T V V E Q V N D L  
UniRef90\_A8ZUU7 M K K N D K Q R I V D E E L H T A W S E S T V G I V A Q Y R R G L L T S E E M G T L L  
UniRef90\_Q0EVW9 L R L E D K K N V A E E L N E A A G N A L S A V L A D Y Q Q G L L D V E T E M T S L L  
UniRef90\_F3KEY1 M P T R E K E I V I V E E L T D K F S N A K S A V L T D Y C G L L D V E T E M T S L L  
UniRef90\_D9QTE0 M A D H K K E V I V E K L K E Q L S S A K G S V F T T Y K G L L T T V A Q D D T T E L  
UniRef90\_U2KJ16 A R K A E I V S N E I A D D L K D A S S L L V F E D Y R R G L L T T V A D Q M D D Q L  
UniRef90\_UPI00036E519B M A K V I E L K Q P I V Q E I E S E T I K D A Q S L V V V D Y R R G L L T V A E E D T R L L  
UniRef90\_R5UH55 M A K V I E L K Q P I V Q E I E S E T I K D A Q S L V V V D Y R R G L L T V A E E D T R L L  
UniRef90\_G5GJ30 L N R N E K Q I V I D E E I S A Q L L S E A Q S I V L A E Y R R G L L D V A S V T T V L  
UniRef90\_E8UFD6 M D R T Q K K E L V G S L H T L G E V G L V V V A Q Y K G L L T V A E S M T S L L  
UniRef90\_H8FUK0 L N R Q E K A A V I E E I T G Q L A S A Q A V V V A E Y R R G L L T S V A S V T T Q L  
UniRef90\_A6GMIO M P T Q A K A A V I D E E I T E R F Q N S S A A V L T E Y R R G L L T S A E Q D T R L L  
UniRef90\_H6RMV7 M D R T Q K E A T I A A L Q S K L Q D T G L V V V T H H L G L L T V V K E V T D Q L  
UniRef90\_G7Z359 M A K V I E L K Q P I V A E I S E L F N G A K S A V V V D Y R R G L L T V E Q D D T R L L  
UniRef90\_D4MSM2 M A K L E L K Q P I V K E I A E L D G A Q A A V V D Y R R G L L S A E Q D T R L L  
UniRef90\_I0R598 M A V T S A K Q A L V A D L K E K L S T A K G A V L T S Y S G L L T V A Q D D T R L L  
UniRef90\_UPI000360A654 M D R T E K R A F V E F L T N V F G S A S T V I V T H N K G L L T V A D V T T E L  
UniRef90\_UPI00037568A8 T R E Q K E A E V A G L V E D L K N S A S V I V D Y L G L L N V A S V T T V L  
UniRef90\_K1LJ97 L N R Q E K A A V I E E E V S A E V A K A S I I I A E Y R R G L L D V A S V T T V L  
UniRef90\_F4GXL9 M D R I E K R E F V A E L S A V F A D T S M V V V T R N D G M T T V A D V T T N L  
UniRef90\_K5XRB8 M L N I S Q K K E L V S E K L H Q L F G E V S T V V V A H Y S G L L T V S Q L T T Q L  
UniRef90\_I5B489 M N R E Q K Q E L V A E L H Q L F G E V S T V V V A H Y S G L L T V S Q L T T Q L  
UniRef90\_UPI00036B72C6 M A T P E K A A A I A E L T E K F R S S G A V L T E Y R R G L L T V S Q L T T Q L  
UniRef90\_UPI0003B7000F T K A Q K Q A M L A E M K E K Q Q S V T I L A E Y R R G L L T V A K I T D L  
UniRef90\_F6DPB2 M A K V I E L K Q P I V E E I M K E Y A S D A K A V L V D Y R R G L L T V A Q D D T T E L  
UniRef90\_UPI00047AB80A M S V R E E K V Q I V N E I V E K L Q N S K G T V V T D Y R R G L L N V A Q V T T E L  
UniRef90\_U1WQW8 M A K V I E L K Q P I V D E I A D S I Q D A S V V V D Y R R G L L T V A E D T E L  
UniRef90\_C4GDT3 M A K V I E L K Q P I V D E I R A L L D G A V S A T V V D Y R R G L L T V A S E D T Q L  
UniRef90\_U2URA0 E Q K K R L V E E I T E K L K K S Q T T V I V D Y R R G L L N V A E I T E L  
UniRef90\_UPI00037A85F1 M N K E T K Q Q Q V A E L H D K L Q R A K A V E L A D F M N V A E Q A T T E L  
UniRef90\_Q748Y4 M A K V I E L K Q P I V A E I S E K L K D A Q A V V L V D H R R G L L T V A Q D T T E L  
UniRef90\_E0RZ18 M A K P D K V I A V A E I A D R F R N S S A A V V T Q Y S G L L T V S A Q L S E L  
UniRef90\_UPI0004678AF9 M D R T Q K S E L V A E L N R T F S E S G V V V V T R N L G L L T V A Q S T A L  
UniRef90\_UPI00038204AF M S K E K K S E I V D G L A K K F Q D S V S V V V V N Y R R G V L T V A E V T E L  
UniRef90\_UPI00029A83FE M A R P E K E A V V K E L T D K F S S A K S L V V T D Y L G L L D V A E M T E L  
UniRef90\_E3DPY0 P E K A A V V A D M K E K L Q S A K G A V L V G F T G L L T V A E M T K L  
UniRef90\_D3LTX2 M D K A G K S A A L E N L A K G V F E G A G V V V V T H Y A G L L T V A E M T K L  
UniRef90\_Q0BYA5 M S V L E Q K Q Q V V S E I A A K L S E S K S T V V V D Y R R G L L N V A E V T E L  
UniRef90\_X0RSY9 M G V R E E K Q Q V V Q E I A D R L A R S K S T I V T D Y R R G L L T V A E V T E L  
UniRef90\_UPI0003FF2C33 M A R P D K A A A V A E L T E Q F R D S N A A V L T E Y R R G L L T V A Q L K E L  
UniRef90\_UPI0003796087 L N R E E K A A V I E E V S A Q V A Q A G S I V L A E Y R R G L L T V E K I T T Q L  
UniRef90\_E7RZ09 M L T K E Q K Q I V K S L T E K A K G A K S I V F V D Y R R G L L Q V K D V T E L  
UniRef90\_K2DIH4 L E A K Q A V V T E I A D K L K E A A S V V V D Y R R G L L T V A S Q V T E L  
UniRef90\_F9DUA3 M L T R A R K A E I I K D V N E K F V K S Q G V F V T S F R G F T V A E S N E I  
UniRef90\_UPI0003B3D443 E Q K Q Q I V S E L A D K F R S S K S A V M V D Y R R G L L T D V A E V T E L  
UniRef90\_UPI000428848B M A K V I E L K Q P I V D E I K G V L D G A Q G A V V D Y R R G L L T V E Q D T R L L  
UniRef90\_C0DBQ7 M D R A Q K E K M V D E L G Q I F D S S G V V V V A H Y E G L L T V A Q M Q D L  
UniRef90\_K2J9Y0 L N L E E K K A V V A E V S K Q V I E S A Q A L I L A E Y R R G V L G V A Q L L T D L  
UniRef90\_B6BV87 E Q K K Q V V D E I K T K L E S Q S T I V V D Y R R G L L D V S E I L T E L  
UniRef90\_D6XVM9 M D R S Q K T D A V A Q L N N V F N E A G V V V V T R N L G L L T V A E S T D L  
UniRef90\_UPI0001DD039F M D R T E K K A L V A S L A V F A E T S M V V V T R N K G L L T V A D V T D L  
UniRef90\_UPI00046EB757 T A K K A Q I V D T V V E K F N A V S I V V M D Y R R G L L T V A Q V T E L  
UniRef90\_Q38V10 M D R A E K K E S V A A L A E V F K K T S V V V V A H Y S G L L T V A Q M Q N L  
UniRef90\_UPI00041EE586 M P T P V K A K E I Q E R L N G V F A K A K S A V L A N Y Q G L L S A E Q D T Q L  
UniRef90\_M1YX91 M A K V I E L K Q P I V E E I A D N I K D A Q S V V I V D Y R R G L L T V A Q D T Q L  
UniRef90\_UPI0003B7A403 M N R E Q K T A A I A E I V D H I L N E A E A V L V D Y R R G L L T V T Q A S E L  
UniRef90\_B3DPX3 M K R P E K E A V V A Q L T E E F R N A D A V Y L T E Y R R G L L T V P Q I M S D L  
UniRef90\_UPI00047D356A M E R A E K R E F V T Q L N S V F R N D S G S V V V A H Y Y R G L L T V A E I M S D L  
UniRef90\_UPI00047D7F74 M D R A E K R E M V T T L N E V F A N T N V V V V A H Y S G L L T V A D M T D L  
UniRef90\_K2KV12 M N R D D K T Q F V A E M R N E V F E G A E G V I V T Q Y R R G L L T V A E I T A L  
UniRef90\_Q6UCR2 M N R E Q K E I F I S N L K N I L S E N R L V L V F H Y R R G M S M T D M T D L  
UniRef90\_B9JVM6 M E R A E K R E F V T E L N E V F K A S G S V V V A H Y A G V L T V A Q M N D F  
UniRef90\_B4WEB8 M D R A K K A E S I E T L K G V F A D A G S V V V T H N L G L L T V A E M E D L  
UniRef90\_E8RSB7 M D R A Q K A E S I E E L K S V F A E S G S V V V A Q Y S G M T F V E M A D L  
UniRef90\_UPI000299D44F L R L E D K Q A T V A E E V G E V A K Q A L S V V T A E Y R R G L L T V G Q L S Q L  
UniRef90\_W0B606 L T L A A K K A V I E E V T S V A S K A L S A V V A D Y R R G L L T V N Q M T E L  
UniRef90\_A8TWF9 M N R A K K A D V I D S L R R T F D S S E V V I T H Q T G L T V A E V E Q L  
UniRef90\_UPI00039DAE88 M G I R E E K A Q L V Q E I A Q K L R D S K S T I V T D Y R R G L L T V A E V T E L  
UniRef90\_K2FM33 M L T K N Q K T J E L V K K L T D K I K V A K S A V F V D Y R R G L L N V A E D S T D L  
UniRef90\_Q2RFN7 R E A K V A A T Q E I K D K L G T S I L S I L A D Y R R G L L N V A E M T K L  
UniRef90\_W9RNL0 I S R T K K E E T V E T V K K N L E N C Y L L A G I S Y K G F T V K Q F Q D L

QUERY R S R Q L R E E A K Y 50 60 70 80  
UniRef90\_UPI00036BACE0 R R R Q L R E E A K G D G A R F R V V K N T M T R L A A Q E E A G L I E E G L D D V Y Y L E G G  
UniRef90\_D5X9V1 R R N K L R E E A K V D E F Y K V V V K N T L T K R R A A D E E L G V I E E G L D D P Y Y L E G G  
UniRef90\_E4KY56 R T K Y R E E A N V D Y K V V I K N T M M R R A F E E L G V I E E G L D D F L L K G G  
UniRef90\_I3TNZ2 R G M R E E V G A S F K V V T K N T L A R L A L Q G T A F E E G L I P L L F N G G  
UniRef90\_K6Q123 R R R R L R E E A A Q G V V E Y R V I K N T L T R R A A A E K A G I I E E G L D D P L L L E G G  
UniRef90\_UPI000368B79B R R R K M R E E A G V V T Y M V A K N T F V R L A A K E A G I I E E G L D D S F L L E V G G  
UniRef90\_G4Q5V9 R R A Q L R E E A G G V T D Y R V I K N T M V R R A A H E V G I I E E G L D D G Y L L E G G  
UniRef90\_UPI00030CA434 R E N L R K G V E S F R V T K N R I T R L A L E G T S F E E G L F A P L F V G G  
UniRef90\_U2JWA4 R N K F R Q A N V D Y K V V Y K N T M M E F A F K D T G F E E G F A Q F L L Q G G  
UniRef90\_UPI0004799DA7 R K K F T E A G V E S Y K V V Y K N T M M R F A F K D Q G L E E G F A P H L V G G  
UniRef90\_H6SIL4 R R E M R A A G A S F R V T K N R I T R L A L E G T S F E E G L F A P L F V G G  
UniRef90\_F0SXZ8 R V E L R Q A G T E Y R V L K N T M V R R A A D E E L G L Q E G L D P Y L K G G  
UniRef90\_UPI00047783BB R R R Q L R A L V G V T S L Q V V K N T L A R R A A E G T D F E E A F A D A L H F T G G  
UniRef90\_I0GNP5 R R E L R A A G V V T Y H Y N V V K N T M L R L A A K E A G I I E E G L E P S L E K G G  
UniRef90\_E8LD87 R R K M R E E A G V V T Y R V V Y K N T M M K R A F E G T E F E E G L E G S L E G G  
UniRef90\_R5TY85 R K K L R E E A T G V E Y L K V V R N T L A K R A V E G T E Y E C L N D S L V G G  
UniRef90\_K0CKE5 R K K A R E T G V E Y A V V K N T L T K L A A N E N G L I N E L E P Y F N G G  
UniRef90\_UPI0001E2FB06 R N A L R K A S N V D Y K V V Y K N T M M R R A F N D L G L I E E G F Q D D F L K G G  
UniRef90\_U7UIAO R A Q F R E V G V E Y R V V K N T L L R R A V Q E T D M A A A E E L F T G G  
UniRef90\_A8ZUU7 R R K L R K E V G V S L Q V V K N T L A R R A A T D T G F K A A A E E L F T G G  
UniRef90\_Q0EVW9 R R Q L R E A N G V Y L R V V R N T L L K R A V E G T E Y E C K D E A L V T G G  
UniRef90\_F3KEY1 R A K Q A R E G V V D Y K V V K N T L A R L A A K K A E Y D E S L N K D V L V G G  
UniRef90\_D9QTE0 R A K L R E A G V T Y H Y N V V K N T M V R R A A D A L G L E E G L D D P H L T E G G  
UniRef90\_U2KJ16 R R E L R A A G A Q M R V I K N T Y L R R A A K E T G Y D E S L N K D V L V G G  
UniRef90\_UPI00036E519B R Q Q L R D A G V T Y K V V K N T L V N R A I E G T E F E S L L N E D V L V G G  
UniRef90\_R5UH55 R K N L R E A S G V Y L R V V K N T L V T R A I K E T N F Q N L D D K L V G G  
UniRef90\_G5GJ30 R K Q L R E A G G S Y A V V K N T L T K R A A D S I G F S D G L S A P L L T G G  
UniRef90\_E8UFD6 R K K A R E G V S F K V V T K N R L A R R S L Q G T Q F E S G L D G L L F K G G  
UniRef90\_H8FUK0 R V K M R A A G V T Y K V V K N T M I R F A A K G T E F E S A L L E P H L E G G  
UniRef90\_A6GMIO R K E A R A A G E G S S F A V V K N T L T K R A A D S I G F S D G L S A P L L T G G  
UniRef90\_H6RMV7 R R S L R A A G V S F K V V T K N R L A R R S L Q G T Q F E S G L D G L L F K G G  
UniRef90\_G7Z359 R A K V R A A G V T Y K V V K N T M I R F A A K G T E F E S A L L E P H L E G G  
UniRef90\_D4MSM2 R K Q L R E A G V T Y K V V K N T M L R L A A K G T P F E E L D S S L E G G  
UniRef90\_I0R598 R K E L R E A G V S Y N V V K N T M T R L A A K E V G L D D G L T E Y L E G G  
UniRef90\_UPI000360A654 R R K L R E A G A T Y K V A K N R L V S R A L D G T Q F D G L T E P L F K G G  
UniRef90\_UPI00037568A8 R Q R I R A A S G V Y L R V V K N T M L R R A A D E A G I E E G L D D E V F T G G  
UniRef90\_K1LJ97 R K E L R E A G V V Y L R V V K N T L V R R A A V A G T P Y E E L A Q L S G G  
UniRef90\_F4GXL9 R K T A R E S G V S F K V A K N R L A L L A L E G T R F D G I A P L L K G G  
UniRef90\_K5XRB8 R R K M R E A G A Q M A V V K N T L M R L A A K G T G S E V L D L D L F K G G  
UniRef90\_I5B489 R A K L R E A G A S F R V V K N R L T R L A L D G T K F D S I G D L L M T G G  
UniRef90\_UPI00036B72C6 R K Q M R A A A T Y A V V K N T L T K R A A A E A G I I D G L D E D Y L V G G  
UniRef90\_UPI0003B7000F R G S M R E E H G C E M K V A K N T L A G L A A K E V G I I D Q L D E D Y L K N G  
UniRef90\_F6DPB2 R T R L R K A G V E Y K V Y K N T M M L R A F E G T D F A G L D D A D L E G G  
UniRef90\_UPI00047AB80A R K E L R E A G V V Y K V Y K N T M T R R A T A E A G L S E L D D A A L E G G  
UniRef90\_U1WQW8 R K K C R E E A G V T Y K V V K N T M V R F A A K D D F A G L A D A D L E G G  
UniRef90\_C4GDT3 R K D L R E A G V Q Y K V F K N T L J K R A A E G T D F S Q L D D G F L E G G  
UniRef90\_U2URA0 R K T L R E A G V E F K V Y K N T L M R R A A E K A E L S E L N E F L T G G  
UniRef90\_UPI00037A85F1 R K Q L R E A V E Y K V V K N T L L E L A S R G T D K E S L S D L H F A G G  
UniRef90\_Q748Y4 R N E L R S A A E G V T Y K V V K N T M M N F A F K G T D F E S Q L S D L L N G G  
UniRef90\_E0RZ18 R K K L R E G N T A K Y R V A K N T L V K R A A E E A G V D G L D D D L F V G G  
UniRef90\_UPI0004678AF9 R R A L E G A S Y K V A K N R L A R R A A E G K A Y T T L S D L L K G G  
UniRef90\_UPI00038204AF R V K M R E A E G V E F R V V K N T Y L K R A A D K V G Y E G L D E T F T G G  
UniRef90\_UPI00029A83FE R S Q L R E A G V E F K V V K N T L A T I A A N D V E M E E M T E Y F S G G  
UniRef90\_E3DPY0 R R R K F L A G N V E Y K V I K N T L T R I A A T E V G Y E G L S D E F L E G G  
UniRef90\_D3LTX2 R G L L R K A D G A H F K V I K N R L L A K L A L G V G G D K A L D L L F Q G G  
UniRef90\_Q0BYA5 R K Q L R E A G T E Y K V Y K N T L T R R A T E A A E L S A L D E H L V G G  
UniRef90\_X0RSY9 R K Q L R E A G V E Y H Y N V V K N T L T R R A A A K V E G I E E Y L F T G G  
UniRef90\_UPI0003FF2C33 R R S L R E A G E N A Q Y A V V K N T L T K J A A N E A G I D Q L D D L F E G G  
UniRef90\_UPI0003796087 R K S Q A R E S G V Y L R V V K N T L V R R A V K D T P Y E K L A D D Q M V G G  
UniRef90\_E7RZ09 K K Q L R E A G V E Y V V S R K T L L D A L K D A G I I D T S V R G L E G G  
UniRef90\_K2DIH4 R K Q L R E A G V E F K V Y K N S M V R R A T E A A G L T D L D E H M T G G  
UniRef90\_F9DUA3 R K L V R E K G G E F R V I K N T L I R I A S E N T D F K P V S D Y I E G G  
UniRef90\_UPI0003B3D443 R K Q L R E A G V E F K V Y K N T M T R R A A A E V E L S G L D E V L Q G G  
UniRef90\_UPI000428848B R K Q L R E A G V I Y K V Y K N T L I K R A A E G T A F S A L D P D L E G G  
UniRef90\_C0DBQ7 R A R M R E V G G S V R V A K N K L A K I A L E G K P C A S L A D F L T G G  
UniRef90\_K2J9Y0 R S K A R E S G V Y L R V V K N T L V K R A V E G T P F A D L S D L D M T G G  
UniRef90\_B6BV87 R K Q L R E A G V D F K V Y K N S M V R R A T E A A G L T D L D E H M T G G  
UniRef90\_D6XVM9 R K Q L R E A G A T Y Q V A K N R L A K I A L K D T D Y A G I E E Y L T G G  
UniRef90\_UPI0001DD039F R R K V R A A G A N Y K V A K N R L A T L A L D G T Q F S G L A P L L T G G  
UniRef90\_UPI00046E8757 R K Q L R E A G V Q M E V V K N T Y L R R A A D K A G Y E G L D D T F T G G  
UniRef90\_Q38V10 R K Q M R A A G A T V Q V A K N R L V K I A L E G S E V A S I S G L M Q G G  
UniRef90\_UPI00041EE586 R K S H M R E R S L E F K V I K N T L A R L A A K N T P F E V L D T S W E G G  
UniRef90\_M1YX91 R K E L R E A G I T Y K V Y K N T L M N F A F K G T E F E S L T D C L E G G  
UniRef90\_N2B0G4 R G H L R D N D A S L V V A K N T L T G R A A I T E V G A E P L R D F L A G G  
UniRef90\_UPI0003B7A403 R E K L R D G R D T S Y T V A K N T L A R I A A K E G I E E G L D E I L S G G  
UniRef90\_B3DPX3 R K K M R N A G G T V K V A K N R L A R I A A L E G T A E E G I S D L F I G G  
UniRef90\_UPI00047D356A R V R M K E A G G S L K V V K N R L V K L A L K G T D A E H I S D L F Q G G  
UniRef90\_UPI00047D7F74 R A Q M R D A G A G F K V T K N R L T R L A L E G T D A E H I S D L F Q G G  
UniRef90\_K2KV12 R V Q G C N T I K V T K N R L T K L A L E G T D K F S E L A N L F D G G  
UniRef90\_Q6UCR2 R S K M R A A G G T V K V A K N R L A K I A L Q G T E S E G M T D L F K G G  
UniRef90\_B9JVM6 R G R L R K E G G A F K V V K N R L A L K A L A E E G S D Y H G L F K G G  
UniRef90\_B4WEB8 R L R L R K E G A V L R V F K N R L A Q K A L A G A A G E Q G D A L F K F G  
UniRef90\_E8RSB7 R L R L R K S G V Y L R V V R N T L A R R A L E G T D F A C L Q D T L V G G  
UniRef90\_UPI000299D44F R T E A R K A G V Y L R V V R N T L T R R A F E K T D F A C L Q D T L V G G  
UniRef90\_W0B606 R S K V R K A G A G Y K V T K N R L A R L A L Q G T R Y E N L A S F T G G  
UniRef90\_A8TWF9 R K R L R E A G T E F K V V K N T L T R R A T A E L G L T E L D A H L T G G  
UniRef90\_UPI00039DAE88 R K S L R E A A E G V E Y L V V K N T L L D I A L K N A G I E G V L K G M E G  
UniRef90\_K2FM33 R R Q L R E A G V E Y F K V V K N T L T A R A R E L G L D G L E P H L Q G G  
UniRef90\_Q2RFN7 R R S L P E N T K L I V A K N T L V F K A I E G T Q W E A L K P C M T G  
UniRef90\_W9RNL0

QUERY UniRef90\_UPI00036BACE0 UniRef90\_D5X9V1 UniRef90\_E4KY56 UniRef90\_I3TNZ2 UniRef90\_K6Q123 UniRef90\_UPI000368B79B UniRef90\_G4Q5V9 UniRef90\_L0F4V1 UniRef90\_UPI00030CA434 UniRef90\_U2JWA4 UniRef90\_UPI0004799DA7 UniRef90\_H6SIL4 UniRef90\_F0SXZ8 UniRef90\_UPI00047783BB UniRef90\_I0GNP5 UniRef90\_E8LD87 UniRef90\_R5TY85 UniRef90\_K0CKE5 UniRef90\_UPI0001E2FB06 UniRef90\_U7UIAO UniRef90\_A8ZUU7 UniRef90\_Q0EVW9 UniRef90\_F3KEY1 UniRef90\_D9QTE0 UniRef90\_U2KJ16 UniRef90\_UPI00036E519B UniRef90\_R5UH55 UniRef90\_G5GJ30 UniRef90\_E8UFD6 UniRef90\_H8FUK0 UniRef90\_A6GMIO UniRef90\_H6RMV7 UniRef90\_G7Z359 UniRef90\_D4MSM2 UniRef90\_I0R598 UniRef90\_UPI000360A654 UniRef90\_UPI00037568A8 UniRef90\_K1LJ97 UniRef90\_F4GXL9 UniRef90\_K5XRB8 UniRef90\_I5B489 UniRef90\_UPI00036B72C6 UniRef90\_UPI0003B7000F UniRef90\_F6DPB2 UniRef90\_UPI00047AB80A UniRef90\_U1WQW8 UniRef90\_C4GDT3 UniRef90\_U2URA0 UniRef90\_UPI00037A85F1 UniRef90\_Q748Y4 UniRef90\_E0RZ18 UniRef90\_UPI0004678AF9 UniRef90\_UPI00038204AF UniRef90\_UPI00029A83FE UniRef90\_E3DPY0 UniRef90\_D3LTX2 UniRef90\_Q0BYA5 UniRef90\_X0RSY9 UniRef90\_UPI0003FF2C33 UniRef90\_UPI0003796087 UniRef90\_E7RZ09 UniRef90\_K2DIH4 UniRef90\_F9DUU3 UniRef90\_UPI0003B3D443 UniRef90\_UPI000428848B UniRef90\_C0DBQ7 UniRef90\_K2J9Y0 UniRef90\_B6BV87 UniRef90\_D6XVM9 UniRef90\_UPI0001DD039F UniRef90\_UPI00046E8757 UniRef90\_Q38V10 UniRef90\_UPI00041EE586 UniRef90\_M1YX91 UniRef90\_N2B0G4 UniRef90\_UPI0003B7A403 UniRef90\_B3DPX3 UniRef90\_UPI00047D356A UniRef90\_UPI00047D7F74 UniRef90\_K2KVI2 UniRef90\_Q6UCR2 UniRef90\_B9JVM6 UniRef90\_B4WEB8 UniRef90\_E8RSB7 UniRef90\_UPI000299D44F UniRef90\_W0B606 UniRef90\_A8TWF9 UniRef90\_UPI00039DAE88 UniRef90\_K2FM33 UniRef90\_Q2RFN7 UniRef90\_W9RNL0

PTA VLYVTTE 90 DPVEAVKIIYNFYKDKKADLSRLKGGFLLEGG  
UniRef90\_UPI00036BACE0 PTA MALSSTTGD PVAAPAKIITDFVKEHKLQVLELVKAGGLLEGG  
UniRef90\_D5X9V1 PTA IAFGME DPA SAAKILSA DFEADKHEANQLLELVKAGGLLEGG  
UniRef90\_E4KY56 PTA IAFGME DPA SAAKILSA DFEADKHEANQLLELVKAGGLLEGG  
UniRef90\_I3TNZ2 PTA IAFVS SDPVA AAKATMK FFAKKTNEKQLVVLGGGGIIG  
UniRef90\_K6Q123 PTA LAFGFS DDPVA AAKELSR FFAKREYKQLKIKAGGLLEGG  
UniRef90\_UPI000368B79B TTA IAFMSA EDPVA AAKIVSEFAKDKHKALEIKAGGLLEGG  
UniRef90\_G4Q5V9 NTA LAFSA EDPVA AAKIVSEFAKDKHKALEIKAGGLLEGG  
UniRef90\_L0F4V1 PTA VAFS ADPVA AAKVLA EFLKATKVKTFALIKAGGLLEGG  
UniRef90\_UPI00030CA434 PTA VAFS HD PVA AAKVLM TQAAREFRKLEIKAGGLLEGG  
UniRef90\_U2JWA4 PNA VAFS PAG DPA SAAKIVSVDFAKEHEESLEIKAGGLLEGG  
UniRef90\_UPI0004799DA7 PNA IAFGFE DPA SAAKIVSVDFAKEHEESLEIKAGGLLEGG  
UniRef90\_H6SIL4 PTA IATSV DPA SAAKIVSVDFAKEHEESLEIKAGGLLEGG  
UniRef90\_F0SXZ8 LTA VAFSA DPA SAAKIVSVDFAKEHEESLEIKAGGLLEGG  
UniRef90\_UPI00047783BB PVA IAYGSD PVMGMAKA IISDFAKT HEAFQLKAGGLLEGG  
UniRef90\_I0GNP5 TTA FAFSTE DPA IAPAKVITCSFIFAKKNEVLETTVKGGLLEGG  
UniRef90\_E8LD87 NTA IAFVPE DPA VAAKIVCSFIFAKKNEVLETTVKGGLLEGG  
UniRef90\_R5TY85 PTA IAFVPE DPA VAAKIVCSFIFAKKNEVLETTVKGGLLEGG  
UniRef90\_K0CKE5 PTV LAFS QED P GAARLIK DFLKADHDKLEIKAGGLLEGG  
UniRef90\_UPI0001E2FB06 PTA MAVSDN DPA IAPAKILAEYSKKYE KLEIKAGGLLEGG  
UniRef90\_U7UIAO PSS IAFS MED PVP GAKIASK FFAESHEALLEIKAGGLLEGG  
UniRef90\_A8ZUU7 PTA VAFSGV DPA VAAKIVLCEFAKKTNDKLELVKAGGLLEGG  
UniRef90\_Q0EVW9 PVA IAYGSE PVMGMAKA IISDFAKA HKKALLEV RGGVLEGG  
UniRef90\_F3KEY1 PTA LAFS QED P GAAA RVIKDFAKEENDKLEIKAGGLLEGG  
UniRef90\_D9QTE0 PTA LAFS QED P VAAKIVLADFAKEHEE LEIKAGGLLEGG  
UniRef90\_U2KJ16 TTA FAFSA EDA VPA AKVICYDYIKKNDKLDKLSVKGGLLEGG  
UniRef90\_UPI00036E519B PTA VAFSGAD DSTAPARLVAKFAAKSDEAVLEIKAGGLLEGG  
UniRef90\_R5UH55 PNA FAFVST EDATAPARVLA EFAKKA PSLLEIKAGGLLEGG  
UniRef90\_G5GJ30 PTA LAFVSK TDTATA PARVLA QNFAKTAPKLEIKAGGLLEGG  
UniRef90\_E8UFD6 PTA IAFVSK DPA VAAKIVLADFAKEHEE LEIKAGGLLEGG  
UniRef90\_H8FUK0 PTA IAFVSK DPA VAAKIVLADFAKEHEE LEIKAGGLLEGG  
UniRef90\_A6GMIO PTA IAFVSK DPA VAAKIVLADFAKEHEE LEIKAGGLLEGG  
UniRef90\_H6RMV7 PTA IAFVSK DPA VAAKIVLADFAKEHEE LEIKAGGLLEGG  
UniRef90\_G7Z359 PTA IAFVSK DPA VAAKIVLADFAKEHEE LEIKAGGLLEGG  
UniRef90\_D4MSM2 PTA IAFVSK DPA VAAKIVLADFAKEHEE LEIKAGGLLEGG  
UniRef90\_I0R598 PTA IAFVSK DPA VAAKIVLADFAKEHEE LEIKAGGLLEGG  
UniRef90\_UPI000360A654 TTA LAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00037568A8 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_K1LJ97 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_F4GXL9 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_K5XRB8 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_I5B489 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00036B72C6 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI0003B7000F PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_F6DPB2 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00047AB80A PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_U1WQW8 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_C4GDT3 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_U2URA0 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00037A85F1 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_Q748Y4 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_E0RZ18 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI0004678AF9 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00038204AF PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00029A83FE PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_E3DPY0 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_D3LTX2 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_Q0BYA5 PVA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_X0RSY9 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI0003FF2C33 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI0003796087 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_E7RZ09 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_K2DIH4 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_F9DUU3 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI0003B3D443 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI000428848B PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_C0DBQ7 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_K2J9Y0 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_B6BV87 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_D6XVM9 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI0001DD039F PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00046E8757 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_Q38V10 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00041EE586 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_M1YX91 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_N2B0G4 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI0003B7A403 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_B3DPX3 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00047D356A PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00047D7F74 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_K2KVI2 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_Q6UCR2 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_B9JVM6 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_B4WEB8 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_E8RSB7 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI000299D44F PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_W0B606 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_A8TWF9 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_UPI00039DAE88 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_K2FM33 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_Q2RFN7 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG  
UniRef90\_W9RNL0 PTA IAFVSD DAVAPAKVISEF I KANQEKLEIKAGGLLEGG

QUERY UniRef90\_UPI00036BACE0 UniRef90\_D5X9V1 UniRef90\_E4KY56 UniRef90\_I3TNZ2 UniRef90\_K6Q123 UniRef90\_UPI000368B79B UniRef90\_G4Q5V9 UniRef90\_L0F4V1 UniRef90\_UPI00030CA434 UniRef90\_U2JWA4 UniRef90\_UPI0004799DA7 UniRef90\_H6SIL4 UniRef90\_F0SXZ8 UniRef90\_UPI00047783BB UniRef90\_I0GNP5 UniRef90\_E8LD87 UniRef90\_R5TY85 UniRef90\_K0CKE5 UniRef90\_UPI0001E2FB06 UniRef90\_U7UIAO UniRef90\_A8ZUU7 UniRef90\_Q0EVW9 UniRef90\_F3KEY1 UniRef90\_D9QTE0 UniRef90\_U2KJ16 UniRef90\_UPI00036E519B UniRef90\_R5UH55 UniRef90\_G5GJ30 UniRef90\_E8UFD6 UniRef90\_H8FUK0 UniRef90\_A6GMI0 UniRef90\_H6RMV7 UniRef90\_G7Z359 UniRef90\_D4MSM2 UniRef90\_I0R598 UniRef90\_UPI000360A654 UniRef90\_UPI00037568A8 UniRef90\_K1LJ97 UniRef90\_UPI000374GX19 UniRef90\_K5XRB8 UniRef90\_I5B489 UniRef90\_UPI00036B72C6 UniRef90\_UPI0003B7000F UniRef90\_F6DPB2 UniRef90\_UPI00047AB80A UniRef90\_U1WQW8 UniRef90\_C4GDT3 UniRef90\_U2JRA0 UniRef90\_UPI00037A85F1 UniRef90\_Q748Y4 UniRef90\_E0RZ18 UniRef90\_UPI0004678AF9 UniRef90\_UPI00038204AF UniRef90\_UPI00029A83FE UniRef90\_E3DPY0 UniRef90\_D3LTX2 UniRef90\_Q0BYA5 UniRef90\_X0RSY9 UniRef90\_UPI0003FF2C33 UniRef90\_UPI0003796087 UniRef90\_E7RZ09 UniRef90\_K2DIH4 UniRef90\_F9DUA3 UniRef90\_UPI0003B3D443 UniRef90\_UPI000428848B UniRef90\_C0DBQ7 UniRef90\_K2J9Y0 UniRef90\_B6BV87 UniRef90\_D6XVM9 UniRef90\_UPI0001DD039F UniRef90\_UPI00046EB757 UniRef90\_Q38V10 UniRef90\_UPI00041EE586 UniRef90\_M1YX91 UniRef90\_N2B0G4 UniRef90\_UPI0003B7A403 UniRef90\_B3DPX3 UniRef90\_UPI00047D356A UniRef90\_UPI00047D7F74 UniRef90\_K2KV12 UniRef90\_Q6UCR2 UniRef90\_B9JVM6 UniRef90\_B4WEB8 UniRef90\_E8RSB7 UniRef90\_UPI000299D44F UniRef90\_W0B606 UniRef90\_A8TWF9 UniRef90\_UPI00039DAE88 UniRef90\_K2FM33 UniRef90\_Q2RFN7 UniRef90\_W9RNL0

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

QUERY  
 UniRef90\_UPI00036BACE0  
 UniRef90\_D5X9V1  
 UniRef90\_E4KY56  
 UniRef90\_I3TNZ2  
 UniRef90\_K6Q123  
 UniRef90\_UPI000368B79B  
 UniRef90\_G4Q5V9  
 UniRef90\_L0F4V1  
 UniRef90\_UPI00030CA434  
 UniRef90\_U2JWA4  
 UniRef90\_UPI0004799DA7  
 UniRef90\_H6SIL4  
 UniRef90\_F0SXZ8  
 UniRef90\_UPI00047783BB  
 UniRef90\_I0GNP5  
 UniRef90\_E8LD87  
 UniRef90\_R5TY85  
 UniRef90\_K0CKE5  
 UniRef90\_UPI0001E2FB06  
 UniRef90\_U7UIA0  
 UniRef90\_A8ZUU7  
 UniRef90\_Q0EVW9  
 UniRef90\_F3KEY1  
 UniRef90\_D9QTE0  
 UniRef90\_U2KJ16  
 UniRef90\_UPI00036E519B  
 UniRef90\_R5UH55  
 UniRef90\_G5GJ30  
 UniRef90\_E8UFD6  
 UniRef90\_H8FUK0  
 UniRef90\_A6GMI0  
 UniRef90\_H6RMV7  
 UniRef90\_G7Z359  
 UniRef90\_D4MSM2  
 UniRef90\_I0R598  
 UniRef90\_UPI000360A654  
 UniRef90\_UPI00037568A8  
 UniRef90\_K1LJ97  
 UniRef90\_F4GXL9  
 UniRef90\_K5XRB8  
 UniRef90\_I5B489  
 UniRef90\_UPI00036B72C6  
 UniRef90\_UPI0003B7000F  
 UniRef90\_F6DPB2  
 UniRef90\_UPI00047AB80A  
 UniRef90\_U1WQW8  
 UniRef90\_C4GDT3  
 UniRef90\_U2URA0  
 UniRef90\_UPI00037A85F1  
 UniRef90\_Q748Y4  
 UniRef90\_E0RZ18  
 UniRef90\_UPI0004678AF9  
 UniRef90\_UPI00038204AF  
 UniRef90\_UPI00029A83FE  
 UniRef90\_E3DPY0  
 UniRef90\_D3LTX2  
 UniRef90\_Q0BYA5  
 UniRef90\_X0RSY9  
 UniRef90\_UPI0003FF2C33  
 UniRef90\_UPI0003796087  
 UniRef90\_E7RZ09  
 UniRef90\_K2DIH4  
 UniRef90\_F9DUA3  
 UniRef90\_UPI0003B3D443  
 UniRef90\_UPI000428848B  
 UniRef90\_C0DBQ7  
 UniRef90\_K2J9Y0  
 UniRef90\_B6BV87  
 UniRef90\_D6XVM9  
 UniRef90\_UPI0001DD039F  
 UniRef90\_UPI00046EB757  
 UniRef90\_Q38V10  
 UniRef90\_UPI00041EE586  
 UniRef90\_M1YX91  
 UniRef90\_N2B0G4  
 UniRef90\_UPI0003B7A403  
 UniRef90\_B3DPX3  
 UniRef90\_UPI00047D356A  
 UniRef90\_UPI00047D7F74  
 UniRef90\_K2KVI2  
 UniRef90\_Q6UCR2  
 UniRef90\_B9JVM6  
 UniRef90\_B4WEB8  
 UniRef90\_E8RSB7  
 UniRef90\_UPI000299D44F  
 UniRef90\_W0B606  
 UniRef90\_A8TWF9  
 UniRef90\_UPI00039DAE88  
 UniRef90\_K2FM33  
 UniRef90\_Q2RFN7  
 UniRef90\_W9RNL0

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

UniRef90\_Q18CE8  
UniRef90\_S9S9L4  
UniRef90\_UPI0003B4C9CB  
UniRef90\_C0VYZ9  
UniRef90\_A0A033UHJ9  
UniRef90\_Q2YB07  
UniRef90\_K6VRX8  
UniRef90\_K7SMH5  
UniRef90\_UPI000367BB66  
UniRef90\_E4KNL7  
UniRef90\_K9TS61  
UniRef90\_C4Z2R2  
UniRef90\_B0KCJ0  
UniRef90\_W0A543  
UniRef90\_UPI0001FFE46E  
UniRef90\_U9VVH3  
UniRef90\_F8EEP3  
UniRef90\_F8A9W1  
UniRef90\_R6QYR5  
UniRef90\_W1TXZ0  
UniRef90\_F3L4H2  
UniRef90\_M9RC90  
UniRef90\_C0ZIG7  
UniRef90\_E8SJ18  
UniRef90\_D4H379  
UniRef90\_K1LJY5  
UniRef90\_C5D3Q6  
UniRef90\_D9R3T6  
UniRef90\_A0LI12  
UniRef90\_R5L8Z3  
UniRef90\_G7LYZ0  
UniRef90\_R9MJE4  
UniRef90\_E0XR29  
UniRef90\_L7U9X0  
UniRef90\_E6VTA9  
UniRef90\_V2Q264  
UniRef90\_UPI00035F1CB9  
UniRef90\_Q9ZE22  
UniRef90\_R5BWP3  
UniRef90\_A9B5G7  
UniRef90\_A9SGM3  
UniRef90\_J7QS26  
UniRef90\_A8SM48  
UniRef90\_X0QMZ8  
UniRef90\_R5Z1Q3  
UniRef90\_R7KQB9  
UniRef90\_M1PAB4  
UniRef90\_UPI000225B857  
UniRef90\_UPI000465CD1A  
UniRef90\_J6UF31  
UniRef90\_UPI000248A445  
UniRef90\_U1PTG1  
UniRef90\_K6D3T2  
UniRef90\_D4J6Y0  
UniRef90\_M1NJD5  
UniRef90\_J0N5N9  
UniRef90\_W9AHL4  
UniRef90\_UPI0003B64426  
UniRef90\_UPI00045EAE6D  
UniRef90\_UPI00047BB450  
UniRef90\_B9QYR3  
UniRef90\_UPI000225BC6D  
UniRef90\_UPI0003795FA9  
UniRef90\_UPI00047C882F  
UniRef90\_B8DLM5  
UniRef90\_W1NKJ1  
UniRef90\_U6B9N4  
UniRef90\_U7L832  
UniRef90\_K0YQ35  
UniRef90\_U2NTR4  
UniRef90\_I2JM10  
UniRef90\_D2Z4E8  
UniRef90\_P41191  
UniRef90\_A0A023X5F4  
UniRef90\_UPI00041E500D  
UniRef90\_S9UVV5  
UniRef90\_K2ENJ8  
UniRef90\_A0A011QV17  
UniRef90\_A0A022LRG0  
UniRef90\_K9YEU7  
UniRef90\_UPI0004029CE3  
UniRef90\_Q890N3  
UniRef90\_UPI00035D8D23  
UniRef90\_UPI0002DC1F1A  
UniRef90\_W8RS61  
UniRef90\_UPI0003B60606  
UniRef90\_A9H3S7  
UniRef90\_D3FET0  
UniRef90\_Q31QK5  
UniRef90\_UPI00035EE2FB  
UniRef90\_UPI000371289B  
UniRef90\_A8F4F8

UniRef90\_Q18CE8  
UniRef90\_S9S9L4  
UniRef90\_UPI0003B4C9CB  
UniRef90\_C0VYZ9  
UniRef90\_A0A033UHJ9  
UniRef90\_Q2YB07  
UniRef90\_K6VXR8  
UniRef90\_K7SMH5  
UniRef90\_UPI000367BB66  
UniRef90\_E4KNL7  
UniRef90\_K9TS61  
UniRef90\_C4Z2R2  
UniRef90\_B0KCJ0  
UniRef90\_W0A543  
UniRef90\_UPI0001FFE46E  
UniRef90\_U9VHV3  
UniRef90\_F8EEP3  
UniRef90\_F8A9W1  
UniRef90\_R6QYR5  
UniRef90\_W1TXZ0  
UniRef90\_F3L4H2  
UniRef90\_M9RC90  
UniRef90\_COZIG7  
UniRef90\_E8SJ18  
UniRef90\_D4H379  
UniRef90\_K1LJY5  
UniRef90\_C5D3Q6  
UniRef90\_D9R3T6  
UniRef90\_A0LI12  
UniRef90\_R5L8Z3  
UniRef90\_G7LYZ0  
UniRef90\_R9MJE4  
UniRef90\_E0XR29  
UniRef90\_L7U9X0  
UniRef90\_E6VTA9  
UniRef90\_V2Q264  
UniRef90\_UPI00035F1CB9  
UniRef90\_Q9ZE22  
UniRef90\_R5BWP3  
UniRef90\_A9B5G7  
UniRef90\_A9SGM3  
UniRef90\_J7QS26  
UniRef90\_A8SM48  
UniRef90\_X0QMZ8  
UniRef90\_R5Z1Q3  
UniRef90\_R7KQB9  
UniRef90\_M1PAB4  
UniRef90\_UPI000225B857  
UniRef90\_UPI000465CD1A  
UniRef90\_J6UF31  
UniRef90\_UPI000248A445  
UniRef90\_U1PTG1  
UniRef90\_K6D3T2  
UniRef90\_D4J6Y0  
UniRef90\_M1NJD5  
UniRef90\_J0N5N9  
UniRef90\_W9AHL4  
UniRef90\_UPI0003B64426  
UniRef90\_UPI00045EAE6D  
UniRef90\_UPI00047BB450  
UniRef90\_B9QYR3  
UniRef90\_UPI000225BC6D  
UniRef90\_UPI0003795FA9  
UniRef90\_UPI00047C882F  
UniRef90\_B8DLM5  
UniRef90\_W1NKJ1  
UniRef90\_U6B9N4  
UniRef90\_U7L832  
UniRef90\_K0YQ35  
UniRef90\_U2NTR4  
UniRef90\_I2JM10  
UniRef90\_D2Z4E8  
UniRef90\_P41191  
UniRef90\_A0A023X5F4  
UniRef90\_UPI00041E500D  
UniRef90\_S9UVV5  
UniRef90\_K2ENJ8  
UniRef90\_A0A011QV17  
UniRef90\_A0A022LRG0  
UniRef90\_K9YEU7  
UniRef90\_UPI0004029CE3  
UniRef90\_Q890N3  
UniRef90\_UPI00035D8D23  
UniRef90\_UPI0002DC1F1A  
UniRef90\_W8RS61  
UniRef90\_UPI0003B60606  
UniRef90\_A9H3S7  
UniRef90\_D3FET0  
UniRef90\_Q31QK5  
UniRef90\_UPI00035EE2FB  
UniRef90\_UPI000371289B  
UniRef90\_A8F4F8

50 60 70 80  
R K Q M R E A G V D Y K V Y K N T L V R R A A K E V G I E Q F N D E L L V  
R R A R A R E A E T Q G V T Y K V V A K N T L A K T A A K E G T P S E E S D F L L A S Q Q Y L L E G  
R R Q L L R E A A G N A Q Y T V V A K N T L A K T A A K E A G L P C E D F L L A E E T L L N G G  
R R A L L R E A A G T E Y K V V Y K N T L V R R A A E A A G L L E D F G L L E S E E T L T G G  
R A K A R Q S G L Y F R V V Y K N S L A R R A V S A D T A P F E S A T A F E S G K M V G  
R N S L R E G E G S T Y A V V A K N T L T R T A A N E A G V I E G L D D E K L V G G  
R R S L R E G A N A T Y S V A K N T L V K R A A A E A G V I E G L D D E Y F F A G G  
R R Q L L R E A S G A T C A V A K N T L M R R A V D G D E W Q S S L L G A D T L F K D  
R R K F R E A G V V Y K V V Y K N T L V K R V V A G T E F E P D L L A D T L F E G  
R T K M R E A G A S Y R V V S K N K L A R A A A D A D A G V G V G D M L T G  
R R D L L R E A G A D A K F R A K N T L V K R A A A D A D A G V G V G D D D L L A G  
R N R L L R E A G G T C K I A K N T L I R R A A D D E W Q P L Q S A D L L K D  
R R K L R E K C F T Q G V E Y R V F K N T L I A K A L E D T D Y T P F N D S V L K  
R K K L R E K G A R Y Q V V K N T M L R R A S S G T P A E E P L L Q S A D L L E G  
R K E L R E A R K E L R E A G V E Y K V V K N T M I R F A V K G D T E F E P L S A D L L T G  
R R K F L E H G V T H Y Q V I K N T L T A T A R D L G L G E F A S D H L T G  
R S Q A R E N G V T L R V V R N T L A K R A L E G T D Y E C V I A K H L D G G  
R A R M R E A G G S Y K V V K N K L A K T A A L E G K A C A S I A K H L D G G  
R K Q L R E A G V E F Q V L K N S L T R L A T E K E S L I T E G L D D E S Y L L T G  
R K Q L R E A N V D F K V V K N T M L R R A A E K A G I E S L D E S Y L L T G  
R S E I K E K G S D Y K V V K N T L L K T A L N N D I D S M D S Y L L V G E  
R K Q L R E A G A S M K V V K N T M L R R A A Q E A G I E V D A N L F K G G  
R K R L R E A G V E F K V V K N T L T R R A A L A E V G L E G L N D P N L E G G  
R K K L R E A G V S Y K V V K N T M I R F A A K G T A F E A L D P N L E G G  
R G A L L A A E K V E Y Q V V K N T L M R L A S K D T G A E A L V P I L K G G  
R K K M R E A G V T Y K V V K N T M I K R A V A G T E F E A L V P D L E G G  
R K N L R E A G V E Y K V V K N T L V T L A A K E L G L D G L V E Y L L E G G  
R K Q L R E A G I T Y K V C K N T M M K R A F E G T E F A A L D E H L L E G G  
R V K A R E S G V E Y L R V V R N T L A K R A V E G T E Y E C L N D A D F V T G  
R K K F R E G G V E Y K V I K N T L A R R A A Q G T D V A V I N D D D F T G  
R A K C Y E V G V D Y Q V V K N T L A R L A L K D T D H G E L S E H L K E  
R R S F K E A G N D Y R V V K N T L L K K A L N A D N I T E D I D Y T L V E  
U P I 0 0 0 3 5 F 1 C B 9 R G A L L P I 0 0 0 3 5 F 1 C B 9 G A S L K V V K N R L A K L A L D N G K G D Q I T N L F A G  
R E E L K S K E A G G V H Y K V V K N T M M N F A F K G A C K E P L C H L L E G G  
R K E L R E A G V H Y K V V K N T M M N F A F K G A C K E P L C H L L E G G  
R K K V R E K P Q E T T L M V A K N K L I G K A I E G T E W E A L K A P A L L K G G  
R K Q A R N A G A T V Q V V A K N R L A K T A L D G A D V A S A P L L K G G  
R K K Y R E A G V Q Y K V V K N T M M K L A F K E L G F E D F A N Q Y L L K G G  
R A Q L R E A A E G V D L E V I K N T Y L R R A A D K A G Y E G L D E T F T G G  
R K Q L R E A G V V Y K V V K N T M I N F A I K G T E F E G L A S D E Y L L E G G  
R A N A R K E G V Q L R V V K N T L V R R A V A G T P F E E G L D D Q F V G  
R Q L R G C D S E L R I A K N T L L K R A A A D T A C D V L S S E D F T G G  
R K Q L R D A G V E F K V V K N T M S R R A A E D A N L T E G L N D V L V G  
R R A L L G S N A T Y S I A K N T L V K R A A A D A D A D V D G L N D D L F V G  
R R Q A K Q A G A S V K V A K N R L A K T A L D G T D A A I V A P L L K G G  
R V K M R E A G G S Y R V S K N K L A R A A A E G T A Y S G L N A L L L V G G  
R R S L L G A N A E Y K V A K N T L T A A A K A G A G V E G L D D D A L L A G  
R K Q L R E A G T E F K V V K N T M M R R A T E A T N F G D L N D D K L V G  
R K A L R E A G V D Y K V V K N T L I K R A V K G T V F E A V L T D L C E G G  
R K Q L R E A L G F D V Q Y S V A K N T L I K L A A Q E K G I E A G L D D E H L T G  
R K D L R E A G D T Y R V V K N T L L S R A L K D A G I E G L D D Q V L L E G G  
R K Q L R E A G T D F K V V K N S M A R R A V E A A E L N D G L S D V L V G  
R S K L R A A N V S M R V V K N T L A K R A A V K E G G I Q G L S D V F L I G  
R R A L L S G D A T Y A V V K N T L S A T A A K Q A G V E G I D A H L A G  
R K Q F R E A G V E Y K V V K N T L M R R A A E N A G M E E L V S K E L V G  
R S S V R E A G G S Y K V A K N R L V K L A L K G T A G L E H I S A L L O G G  
R R E M R G A S A E F K V L K N T L A K T A V Q G T P L E E G L S A I L L E G G  
R R A L L G D T A K Y R V A K N T L V K R A A E E A G V D G L D D D L F V G  
R R E L R Q A G V E Y K V V K N T L L S R A A K E A G Y D A L Q Y L E G  
R V K L R E N G A E Y H V V K N T L A R T A F T D G A H D V I K D V F K E  
R S L L P E S V K L L V A K N T L V G K A L E N T Q W E A L K P C M K G  
R K Q L R E A R K Q L R E A G V E F K V V K N G L L R R A A V Q S N L E G L D D E V F T G  
R N N L G F D V D Y S V A K N T L F K T A A N E A G I E G L D D E L L T G  
R R S L T G I A T Y S V V K N T L A R I A A K N A G V E G L S D D L V G  
R K T L R E A G I E Y K V V K N T L V T L A A K E L G H E G L V P F L E G  
R K L A R E S Q G V S V R V V R N T L A K L A L K G T E F E C A E S A F K G G  
R R L V R E A S G G E V K V V K N T L V R L A L G E V G M A V P S E D I T V V G  
R K K V R E A G G G V K V A K N R L V K L A V S D T S L K G V S D I L F V G  
R R R S R E S G V E F L V A K N T L T R M A A D R A G V S E L V S E Y L V G  
R K Q L R E A G R D T S Y S V A K N T L A R A A K E A G I E S E L D E D L A G  
R K Q L R E A G E G T E F Q V L K N T L V R R A T A E A E L S E L D E V L S G  
R K Q L R D A A E G V D L S V A K K T L I N T A L K D A G I E S M D V R E L L E G  
R K A L R E G S A T Y T V A K N T L V K R A A K E A G V E G L D D D L T G  
R T R L R E T G T T C K V T K N T L M R R A V D G D E W Q P L Q D F L K E  
R R A L L G G D V T Y S V A K N T M I K L A A E Q A G I E G L T P I L N G G  
R K K M R E R G E V E Y K V F K N T L S I L A A K E L G Y E G I T D L F Q G  
R K L A E R G A E F H V V K N S S I R L A A K P D L I E D L D S H L K G G  
R Q Q L R E A G V D F R V V K N T M T R R A V E Q V G F E E L N D A F L V G  
R G R M R D A G G S V R V A K N R L A K T A A L E G T D V A D I L Q A F L T G  
R R S V R E A N A T Y A V V K N T L T E I A A K E V G I D A F D G K M S G  
R Q R V R A A G A T Y K V A K N S L A N L A L A G A G T R F E G T S P L L K G  
R S K F L R E S D T T L A V V K N S L T E R A A D K A G A D A L K A I L T G  
R N R L E A S N S V C K V T K N T L M R R A A D A D D W Q P L T E L L K G  
R K Q A R E Q D V Y L R V V K N N L A K R A A G T E D F E C M Q P E L H  
R K Q A R D G V Y L K V V R N T L A K R A V E G T E L Q C L Q E V L V G  
R R R L Y S K Y E R E A R F T V A K N T L I G R A L S K V G Y A E K D F Q L A G

UniRef90\_Q18CE8  
UniRef90\_S9S9L4  
UniRef90\_UPI0003B4C9CB  
UniRef90\_C0VYZ9  
UniRef90\_A0A033UHJ9  
UniRef90\_Q2YB07  
UniRef90\_K6VRX8  
UniRef90\_K7SMH5  
UniRef90\_UPI000367BB66  
UniRef90\_E4KNL7  
UniRef90\_K9TS61  
UniRef90\_C4Z2R2  
UniRef90\_B0KCJ0  
UniRef90\_W0A543  
UniRef90\_UPI0001FFE46E  
UniRef90\_U9VVH3  
UniRef90\_F8EEP3  
UniRef90\_F8A9W1  
UniRef90\_R6QYR5  
UniRef90\_W1TXZ0  
UniRef90\_F3L4H2  
UniRef90\_M9RC90  
UniRef90\_C0ZIG7  
UniRef90\_E8SJ18  
UniRef90\_D4H379  
UniRef90\_K1LJY5  
UniRef90\_C5D3Q6  
UniRef90\_D9R3T6  
UniRef90\_A0LI2  
UniRef90\_R5L8Z3  
UniRef90\_G7LYZ0  
UniRef90\_R9MJE4  
UniRef90\_E0XR29  
UniRef90\_L7U9X0  
UniRef90\_E6VTA9  
UniRef90\_V2Q264  
UniRef90\_UPI00035F1CB9  
UniRef90\_Q9ZE22  
UniRef90\_R5BWP3  
UniRef90\_A9B5G7  
UniRef90\_A9SGM3  
UniRef90\_J7QS26  
UniRef90\_A8SM48  
UniRef90\_X0QMZ8  
UniRef90\_R5ZIQ3  
UniRef90\_R7KQB9  
UniRef90\_M1PAB4  
UniRef90\_UPI000225B857  
UniRef90\_UPI000465CD1A  
UniRef90\_J6UF31  
UniRef90\_UPI000248A445  
UniRef90\_U1PTG1  
UniRef90\_K6D3T2  
UniRef90\_D4J6Y0  
UniRef90\_M1NJD5  
UniRef90\_J0N5N9  
UniRef90\_W9AHL4  
UniRef90\_UPI0003B64426  
UniRef90\_UPI00045EAE6D  
UniRef90\_UPI00047BB450  
UniRef90\_B9QYR3  
UniRef90\_UPI000225BC6D  
UniRef90\_UPI0003795FA9  
UniRef90\_UPI00047C882F  
UniRef90\_B8DLM5  
UniRef90\_W1NKJ1  
UniRef90\_U6B9N4  
UniRef90\_U7L832  
UniRef90\_K0YQ35  
UniRef90\_U2NTR4  
UniRef90\_I2JM10  
UniRef90\_D2Z4E8  
UniRef90\_P41191  
UniRef90\_A0A023X5F4  
UniRef90\_UPI00041E500D  
UniRef90\_S9UVW5  
UniRef90\_K2ENJ8  
UniRef90\_A0A011QV17  
UniRef90\_UPI00042029CE3  
UniRef90\_Q890N3  
UniRef90\_UPI00035D8D23  
UniRef90\_UPI0002DC1F1A  
UniRef90\_W8RS61  
UniRef90\_UPI0003B60606  
UniRef90\_A9H3S7  
UniRef90\_D3FET0  
UniRef90\_Q31QK5  
UniRef90\_UPI00035EE2FB  
UniRef90\_UPI000371289B  
UniRef90\_A8F4F8

90 100 110 120  
G T N A L A F G Y D D P V A P A R I L K G F M D S H P K M K L K M G L V E G  
M T V L T Y S E D D P V A A A K V V E D F A K D N K K L E L I G G T M G G G  
P S A L A V C K D D A T A A A R V L V K F A K T A P A L E L K G G I V D G G  
P T A I A F V N G E V D D A A A K V L R D F A K E N P A L V L K A G A M E G G  
P N A I A F S N E E V V E P A K I L A D F A K E N E A L E I K A G V I E G  
P S A L A Y G G D D P V A A A K V L H E F A S K G N D K L V I K A G A M A N  
P T A I A F I T G S D P V E A A K S L R D F A K A N P L L V I K G G Y M D G  
P T A L T F I N G D V A T A A K G L R D F A K D N P L L V I K G G Y M D G G  
P T A V A F S S E D I V A P A K I L S E F A K K A E N L S I K G G Y M D G G  
S S A F L F L K D D L N G P A I K A Y Q D F Q K V T K K S E L R G G V L E E G  
T N A L A F C K T D A T A P A R I L A N F A K T A D A L E L K A G V V E G  
G P T S V A F G Y D D P V A P A K V L V E F M K D H K G I E L K A G L V N G  
P V I G L A T S P D P V A A A K V V V D F A K T T D K F E I V I G G A M G A  
P T A L T F I Q G E A V D A A K A L K K F A K E N P G L S I K G G Y M D G G  
T T A I L L T K E D I G S V I V K E Y K K F Q K D T K K T E L R G G V L E G  
G F S G I M F H P E S G K A A A K L I K E F R K E S G N D K L K L K G A S V E Y  
P T G V A I T Y E D D P V E A A K V L V E F A K E H E S L I N R G G V L E G G  
P T A I A V S K T D A T A P A R I L A K Y A K N I E V F S L K S A V V E G  
P N A I A I S E S D A V A P A K A L K E F I D E T K S E A I T V K A G L L E G  
P S L F G F S M E D P G A A A R L F K D F A K E N S K F E V K A L A V I S G D  
M T V M T F S E D P V A A A K V T Q G Y A K D N E K L V I L G G A M G D  
P N A L A F S K D D T I A P A K V I A E F A K K N D K L E I K G G V I E G  
P T A V A F T T E D V V A P A K V I A G F A K E H E A L E I K S G I M E G  
P T A C A I V T G D V A A V A K T I K K Y A K E F D K F E I K A G Y L E D G  
P S A T V F S D D V V A P A K V I T A N F A K D N E T L E I R G G I V E E G  
P N A I A F S K E D V V A P A K I L S E F A K D H E A L E I K A G V I E G  
P T A I A V S K E T D A T A P A R I L A E F A K T A P A L E I K G G V V E G  
T C A V A I G Y G D P S I P A K I L K K F N K T N E K L A I K A G A L G I  
P T A I A I S K E D A T A P A R I L F G F A K T A D A L Q L K S G V V E G  
P V S I A F G Y E D V T V P A R V L N D F A K D H K K L E L K A G V V E G  
P S A L A I S K D D A T A P A R I L A K F A K E A K A L E I K A G V V E G  
P T L L A F S Q E D P G A A A R L L K D Y A K D L E D L E I K A L S I  
P V A L C I L G Y D D P V A A A K I L T E F T K D L E D K I K S A V I D G  
N C A I A L G Y D D P V A L A K T L A E F D R T N K K F A L R F G S L E E G  
P T A L V V V K E D F A A A K L A K K Y A K D A A M S K F F A I K G G Y F D G  
Q T V I A Y S P D P V A A A K A S A E F A K E N D K L V L I G A L M D E  
P T A I V Y S K E P V E M A R L V V N F A N S N D N L K I I G G I V D N  
T N A L A V S A D D A T A P A R I L A K Y A K Q F P K L E L V A G V V E G  
P T A L A F S Y D D I P G V A K A I D D D F F K Y A S K K D I K V K G G I V G T  
M N A W L F V H T E E I P G A L K P Y R D L Q K E L K L D S N D F T G A V F E G  
P S A V A F S G E D L T A A A R I T N E F A K S N E K L V I K A G I L E E G  
P T A I A F S Y E D V V A P A R I A K F A K D I D A L E I K G G M I E E G  
P T A I A I C K E S A T A A A R E L A K F A K D A E A L E I K A G V V E G  
P L V Y G K E S D P V A A A K V L V S F A K K N D K L V K G G A M P N  
T T A I V M G Y D D P V A P A K A I V K F V K D H S K M Q I R A A A L D G  
P T A I A F S K E D V I A P A K I L S N F A K D H E A L E I K A G V L E G  
P T A I T F V K G D P V D A A K A L K T F A K D N K S L V I K G G Y M D G  
P T V L T Y S G D P I A A P K V V S D F A K A N D K L V I L G G A M G T  
P T A L S T S V D P V A A A K V V V E F A K T N D K L E I V G G A M G D  
P T A I A F V T G E V S E A A K A I R D F A K D N P A L V V K G G V L E E G  
P T A V A F T V E D V V A P A K I N E F A K K H E D L E I K A G I I E E G  
P T A I A T S A S D A T A P A R V L Y E A A K K M P N L E L K G G V V D G G  
P T A V A F I K G E A A V D A A K V M K F A S D N E A F I V K G G Y M D G  
T T A I A Y S N D N Y V S G A K I L S A F A D K S K T F E I K A G F V D G  
P T A L A F S N D D V I A P A R L L N D F A K K H E A L E I K G G V I E G  
P T S V W P I 0 0 0 3 B 6 4 4 2 6 R Q L V E F L K K Y K K G T I K A G L V D G  
P S A I A F V T G D S P V Q A A K G L R D F A K A H P Q L V I K G G V L D G  
P N A V A F S Y D D P V A P A R I L A E N F A K D H K K L E L R V G V V E G  
P T V L V Y S D D P V A A P A K A A V D F A K A N T Q L E I L G G A L G T  
P T A L A F S S E D V I A P A K V T A K F A K N D R L K L V L G G Y L D G  
P T A I A F V E G E P V E A A K A L K N F A K D H S A L V I K G G Y M D G G  
P T A V A W G I E D P V A P A R V L Y N Y A K D H E N F K F K V G I L Q G  
N C A V A L I G E F A D P V A V A K A V T D F A K T S K I F T V R H G S L I E G  
M N A W L F V H T E E I T G A L K P Y R N F Q R E Q K L D D N D Y T G A V F E G  
P S A I A F S N E E D V I A P A K I L N D F A K T H K A L E L K G G I L E E G  
P T A I A F I K G E A V D A A K I I T K F A D D N K A L V I K G G Y M D G  
P T A I A F V S G E A V D A A K A L R D F A K E N E A L V I K N G V M D G G  
P V S I A F G Y E D V T A P A R I L S D F A K T H K K L E L K A G I V S G  
P S I L L A F S M E D P G A A A R I F K D F A K A N A K F E V K A L A V I S G  
P N A Y V I A H E N S P A V A K A M K E F A S K K E N K A M V I K G G L M G S  
Q S L I V Y S V D P I V A P K I S V S F A N D N K Q F V V L G G I L E K  
P T A I A F S E D P V A S A K L M A E F A D L V E S F D L K A G L L D G  
P T A I T F V K G D Y V E A A K T L R D F A K V N K P L V L K A G F A D G  
P T A I A F S R E D V A P A K I L N D F A K K N E A L E I K G G V V E G  
Q I A I A V S E K D E V A A K I I A K L A K V N E A L E I V G G I L G T  
P T A V A F S N E E V V A P A K I I A E F A K E A E A L E I K G G V L E E G  
P T A I A F V T G E V V D A A K A L K T F T K D N K A L I V K G G V M D G  
S S A F L F V K D D F S N A I K A Y R D F S K A T N K T E L R G G V M E G  
P T A I A F I R G E A V D A A K A M K K F G Q D N K A F V V K G G Y M D G G  
P I S I A F G Y E D P T A P A R I L N D F A K D H K K L E L K G G M V Q G  
H T A V V V I G D D A S G V A K V L S E Y F K S N E K V S V K A G A L G D  
P T A I A F C E D D A V A P A K V L G Q F A K E N A L E I K G G V I E G  
M T V L S Y S E D P V A A A K V A E A Y A K N D K F E I L G G A M D G  
P S A I A F V H G D P V I D V I A K A L R D F A K D N P E L T V K G G Y M D G  
P T A L S W S A D P V A V A K V L V E F A K T N E K L V L L G G A L G T  
P T A L A F V R G D A A A A K A L S D A Q R A T Q V L E F K G G L M D G  
T N A F V L V K D D P G S A I K A Y Q A F Q K D T K K T E L R G G L L E E G  
P L V L A F S L I E E P S S A A R L V R D F A K T N D Q L K A R M V S F G G  
P T V L A F S M E D P G S A A R V M Q E F A K E N K E L E I K A L S V S G  
P T A V L Y V L S D D P I E A I K I T H S F S K E K K L E G I F K G G F L E E G



UniRef90\_Q18CE8  
UniRef90\_S9S9L4  
UniRef90\_UPI0003B4C9CB  
UniRef90\_C0VYZ9  
UniRef90\_A0A033UHJ9  
UniRef90\_Q2YB07  
UniRef90\_K6VXR8  
UniRef90\_K7SMH5  
UniRef90\_UPI000367BB66  
UniRef90\_E4KNL7  
UniRef90\_K9TS61  
UniRef90\_C4Z2R2  
UniRef90\_B0KCJ0  
UniRef90\_W0A543  
UniRef90\_UPI0001FFE46E  
UniRef90\_U9VVH3  
UniRef90\_F8EEP3  
UniRef90\_F8A9W1  
UniRef90\_R6QYR5  
UniRef90\_W1TXZ0  
UniRef90\_F3L4H2  
UniRef90\_M9RC90  
UniRef90\_C0ZIG7  
UniRef90\_E8SJ18  
UniRef90\_D4H379  
UniRef90\_K1LJY5  
UniRef90\_C5D3Q6  
UniRef90\_D9R3T6  
UniRef90\_A0LI12  
UniRef90\_R5L8Z3  
UniRef90\_G7LYZ0  
UniRef90\_R9MJE4  
UniRef90\_E0XR29  
UniRef90\_L7U9X0  
UniRef90\_E6VTA9  
UniRef90\_V2Q264  
UniRef90\_UPI00035F1CB9  
UniRef90\_Q9ZE22  
UniRef90\_R5BWP3  
UniRef90\_A9B5G7  
UniRef90\_A9SGM3  
UniRef90\_J7QS26  
UniRef90\_A8SM48  
UniRef90\_X0QMZ8  
UniRef90\_R5Z1Q3  
UniRef90\_R7KQB9  
UniRef90\_M1PAB4  
UniRef90\_UPI000225B857  
UniRef90\_UPI000465CD1A  
UniRef90\_J6UF31  
UniRef90\_UPI000248A445  
UniRef90\_U1PTG1  
UniRef90\_K6D3T2  
UniRef90\_D4J6Y0  
UniRef90\_M1NJD5  
UniRef90\_J0N5N9  
UniRef90\_W9AHL4  
UniRef90\_UPI0003B64426  
UniRef90\_UPI00045EAE6D  
UniRef90\_UPI00047BB450  
UniRef90\_B9QYR3  
UniRef90\_UPI000225BC6D  
UniRef90\_UPI0003795FA9  
UniRef90\_UPI00047C882F  
UniRef90\_B8DLM5  
UniRef90\_W1NKJ1  
UniRef90\_U6B9N4  
UniRef90\_U7L832  
UniRef90\_K0YQ35  
UniRef90\_U2NTR4  
UniRef90\_I2JM10  
UniRef90\_D2Z4E8  
UniRef90\_P41191  
UniRef90\_A0A023X5F4  
UniRef90\_UPI00041E500D  
UniRef90\_S9UVW5  
UniRef90\_K2ENJ8  
UniRef90\_A0A011QV17  
UniRef90\_A0A022LRG0  
UniRef90\_K9YEU7  
UniRef90\_UPI0004029CE3  
UniRef90\_Q89N3  
UniRef90\_UPI00035D8D23  
UniRef90\_UPI0002DC1F1A  
UniRef90\_W8RS61  
UniRef90\_UPI0003B60606  
UniRef90\_A9H3S7  
UniRef90\_D3FET0  
UniRef90\_Q31QK5  
UniRef90\_UPI00035EE2FB  
UniRef90\_UPI000371289B  
UniRef90\_A8F4F8

130 140 150 160  
A F Y D E S K I V E M A N I P S R E E V L L A K Q L L G S L K A P V S N F A Y L I D  
A A L D R A G K V I E A V S K M P S R E E L L I S Q I V G C L K G A P A S N F A G A I G  
T A Y D A A G K V I P I A E I T P E S S K R E E L L A S K L L G S L K Q A P I T S N F A A F L V M A  
A A L S A D K D V I K K L A E D L P E S S K R E E V L L A K T A G V L K A S G L I T S N F A A F L V M A  
Q V V S A S E E E V N T K I G S L P S S K R E E D G L L V S M L L G S V L L Q A P V V R N F A Y A V L K N  
H V I S S A S E E I A S L A S L P S S R E E E L L A K L L G T G M K A P S L V A S N Q A V Y R L F A  
K S L S A E E E I N K L A D L E S S R E E V L L A K L L S G G L K A N L T K A A Q L V F S N  
R V L S A D E E V K K L A D L E S S R E E V L L A K L L S G G L K A N L T K A A Q L V F S N  
K A L S V A E V E R I A D L D S R E E V L L A K L L A G A F L K A K T A Q A A G L F E N  
K V A N V E V I R N Q V A S M P G R E E E L L A M L L A Q V L Q A P I T R N T A S V L N Q  
K A L T F E Q V K A I G D L P S S K R E E E L L M A Q I A G A L N A V V T K I A V G I K  
T F Y D A A G I A T I A T I P S S R E E E L L V A K L L G S L Q S A P I T N F A R V I K S  
K L V T V E E I K A L A E L P S S R E E E L L V A K L L G S M K A P I T N F A R V I K S  
T V L D A D G I K E A L A T M P S S L D E E L L R A K I V G L L V A P A T K L A T I T Q  
R A L S V S E E Q L A D L P E S S R E E V L L G K I A G A M K A N L L A T K A A T L F V S  
K A L T G A E A E A L A D L P S S K R E E E L L Y A K I A G A I N A L A T K V A A V G V K  
S L F G A D Q L D T L L T L K S K R E E E L L I G E I I G L L Q S A P A K N V V S A L Q  
K P L E A A D S L E A L A K V P P S R E E V L L M A Q L L G L L Q S A P P M A Q F V Q L M A  
T F Y D K D G V I A S I V P S S R R E D E L L A K F L G S I Q S A P I T N F A R V I K  
A V I G V D E V Q H I A D L P S S R E E V L L A K V V G S M Q A P I T G F V R C L Q  
Q L L G A D Q L D V A K L P S T R D Q A L S M L M S V M K A P V V T K L A Q T M N  
I D L D P A G V A V S E L P S S R E E E L L A S I V G C I A A P V A S N I A G A I G  
K V V D A E Q I K A L A S L P S N R E E G L L S M L L S V L Q A P M R N V A L A V K  
S V I T A D E V K T V G S L P S S R E E G L L S M L L S V L Q A P M R N F A Y A V K  
N V L T A N D V N V A D L P S S R D E E L L A K M L S S M N A P V M S N F V S L L A  
S Y A S K E E V I E Q V A K M P G R E E E L L S M L L S V L Q A P M R N V A S V L S  
N I A T A K E I A K L A K L P S S R E E G L L S M L L S V L Q A P I J A N F A L V A K  
N Y Y D A K G M E K I S G I P S S R E I L L G K L L G S M Q S P I J A N I A R V L K  
R L L N S D Q V A A L A E L P P S R E E E L L A K L L G T L N A L P T G L V I T V L S  
T Y Y D E K G I Q V I A T I P S S R E E E L L A K L L G S I K S P I V T S N F A R V I K S  
E I Y D V K G I K Q L A T I P S S R E E V L L A K L L G S I K S P I S S F A R V I S  
E A Y D A K G M Q A L A S I P S S R E E E L L S K L L G S L Q S A P I T N L A R V L N  
E V L P A D Q L D R V A K L P T L N E A R S L L M S V M Q A P V V K L A R T F N  
R K V D V N G V K E L A K M P S S K N E E L L S S V L G T M Q A V P R N F V C L F A  
D F L D S D G V K E L A K M P S S K N E E L L S S V L G T M Q A V P R N F V C L F A  
M A L D Q S G I E K L A D L P S S R E E L L R A K A L G S M N A P P A T K F V A G V V Q  
K V L D A D G V Q K L A K L P S S L D Q L R G K I I G L V Q A P A T K F V A G V V Q  
H L L D A Y S I K E L S K L P S S L H E L R G K I V G L L Q S A P A T K F V A G V L Q  
N Y N D K A G I E A L S N L P S S R E E L L G K L L G S L Q S A P A N F A R V I S  
S K I T G A D V E R V A K M P T R R E E S L A K I L L G G I N A P A S R I V G V L K  
K F Y S P E E F K A L E S M P T R A E L Y A K L L G S I Q A P A A G L V S T L Q  
T A L N P D S V K S L A T M P S S L D E L R A K L V G L I Q A P A T K V A Q L S T  
K I L D T N G V K A V A N I P S S R E E V L L A K L L G S L K A P A V S N F  
K V A S L E Q I D Q L S K L P S S R E E G L L S M L L S V L Q A P V V R N V A Y A V K  
V C Y D A A G I A Q I A N L P S S R E E V L L S K L L G S M Q S P I J A N F A R V I K  
N V L D V A G V E Q L A T M P S S R E E E L L A K L M A T M N E P I J A K F V R T L N  
E K I S A A D D M V A L S K L P S S K E A M L G Q F L S V L N G V P T G L V Q V L S  
K V L T V D Q I K E L A E L P S S R E E G M L S M L L S V L Q A P M R N F A Y V T F A  
A P L S V A E V K E R I A D L E S S R E E V L L A K L A G A M K A N L Y K A A G L F A  
T A L N P D G V K A L A S L P S S L D E L R A K I V G L I Q A P A T K V A Q I V V  
T V L D V D G V K A L A T L P S S L D E L R G T I I G L I S A A P A T K I A R I L K  
T V L S A G D V K A L A D L E S S R E E V L L A K A A G V L K A A L F Q A A Y V F Q  
T I A S V E E V K A L A E L P S S R E E G L L S M L L S V L Q A P I R N L A L A A K  
T F Y D E K M I Q V I A T I P S S R E E V L L G K L L G S L Q S A P I T N F A R V I K  
N A L S A D Q V K A I A E L D N R E T T L A K L A G A M K G S L A K A A G L F N  
G A V D A A V K E L A E L P S S K E V L V A K A L G G L N A P I T G F V I T V L N  
K V A T L D Q I K E L A D L P S S R E E G M V S M L L S V L Q A P V R N F A Y A A K  
V I V K D S E I E T L S K L P N K E G E L Y A K L A T L N A P I V K I A M V L N  
R A L T A A E I N K L A D L E S S R E E V L L A K L A G A M K A S L F G A A Y L F T  
A F Y N E S Q L K E L A N L P S S R E E V L V A K L L G S L K A P V S N F A Y L V K  
T N L N P E G V K S L A T M P S S L D E L R A K L V G M I Q T P G T R I A Q V V N  
Q I L D A K G V D A L A K L P S S L D E L R S K I I A V I N T P A T R I A L L A K  
Q P L S V S E I D R L A D L E S S R E E V L L S K A A G A M K A K L S E A A S L L Q  
T I I G V S D E I V N L A K L P S S K R E E L I A K A L G S M N A P I T N F I V G V L S  
K F L S G E Q V S D L A K L P S S K P E L I A R A L G T M N A V P T N F V S L F A  
R F Y G P D E F K A L E T M P T K A E I F S K L L G L V Q A P S I T S L I G T L Q  
K V I T S V E D F K A L A E L P S S R E E G L L S M L L S V L Q A P I R G L A V A T N  
D A L S A E Q V Q A I A K L D N R E T T L A K L A G A M K G S M A K A A A V F N  
A A L T V E D V K K L A D L E S S R E E V L L A K A A G V L K A P I T A K A A Q V F N  
E V Y D A E K V K Q L A A I P K E V L I A K L L G S F K A P I L S N  
Q L M G P D Q L D V L A K L P T R D Q A L S M L M S V M Q A P A T K L V R T L N  
D V L S L D Q V M A L A D L P S S R D Q M L A Q L V G T L A G F N S T R G L V T V L S  
D I L D Q D S I K R I A S L P N I D G I R S M I I S A I A G F N S T R G L V N L L N  
K V L G E D E V V A L S K L P S S R E E Q L I A Q I V G G I G S P L T S F V T V L N  
T V Y D A E G V Q K L A D L E S S R E E V L L S K M A G A L Q G T M A K A A Y M F A  
R V V D V D Q I K A L A A L P S S R E E G L L S M L L S V L Q A P M R N F A L A V K  
K E L T A D E V I N K I A K L P S S K E E L L S K L V G T L N A P V S G F V N V L A  
R V A D V D Q I N K I A K L P S S R E E G L L S M L L S V L Q A P M R N T A  
A T L S A A E L D K I A E L P S S R E E V L L A K M A G A L K G N Q A K A A G L F N  
A P L S K E Q V D A L G D L P S S K E E L M A R I A R G I N A N T K I A T G I K  
N F L T A E Q V E A I A E M D N R E T T F A K I A G A L N G S P V S N F A G L F D  
E V Y D E D K I K A L A A I P P R D V L I A K L L G S F K A P V S N F A Y L I N  
R P L T A D E I K Q L A T L P G L E Q L R A Q L L S L F N T P A S N L V I T V L S  
Q V A T V D Q L K E L S E L P S S R E E L V S M L L S V L Q A P V R N F A Y A T Q  
N V L D R A G V T A V S K L P S S R E E L I A S I A A C L G A P A S N I A G A I G  
Q P L D E D G V K K L A D L E S S R E E V L L G K L A G A F I G A Q S K A A A V F Q  
Q A L T N V D G V K A L A E L P S S L D T L R A Q L V G L I S T P A T R I A G V L Q  
K A V T P D E I R A I S K L P S S R E E V L Y G O L V G V V A P L N G L A R G L N  
R L L S S D E L K A I G D L P S S K E E V L I A Q I A G A L N G V A T K L A V G I K  
E L L G A N D L E R L A S L P T R E E A L S Q L M A T M R A P L T D K F A R T V N  
Q L L G A E Q I D V L A K L P T L D Q A R A M L M S V M I A P V T K L A R T L N  
N Y F T A D D V S K L A S L P T K E E L Y A M V V G R V Q A P L T N L V Y V L S

UniRef90\_Q18CE8 A I A K K  
 UniRef90\_S9S9L4 A P A S N I A S I L L S T I E E K  
 UniRef90\_UPI0003B4C9CB Q I A E K  
 UniRef90\_C0VYZ9 A P A S K A V R T I D A L R E K Q  
 UniRef90\_A0A033UHJ9 A V G E Q  
 UniRef90\_Q2YB07 E V P A R F V R G L A A V R D Q K  
 UniRef90\_K6VRX8 A P L S Q A A R T V D A L R A K  
 UniRef90\_K7SMH5 A L P A K A A R G F G A L Q D K  
 UniRef90\_UPI000367BB66 A P A S Q V A R L A A A L Q E K  
 UniRef90\_E4KNL7 Q P A L K M A Y A L N A V I E S K  
 UniRef90\_K9TS61 E V P S G L A R G L Q A Y A D K  
 UniRef90\_C4Z2R2 Q I A E K  
 UniRef90\_B0KCJ0 G T L R S L L Y A L N A V K E K K  
 UniRef90\_W0A543 A P A A Q L A R V L N A Y A E K  
 UniRef90\_UPI0001FFE46E Q P A S Q V A R L A Q G L A D K K  
 UniRef90\_U9VVH3 E V P S S I A R G L Q A Y V D K E  
 UniRef90\_F8EEP3 S S G G K L A G I L K T L S E R E  
 UniRef90\_F8A9W1 A V P R N F L F A L N A I K E K K  
 UniRef90\_R6QYR5 Q I A E K  
 UniRef90\_W1TXZ0 G N I T N L V Y V L E A I R K Q K  
 UniRef90\_F3L4H2 E V P G K L V R T L A A V K D Q K  
 UniRef90\_M9RC90 A P A S N I A S I L L S T I E E K  
 UniRef90\_C0ZIG7 A V A E Q  
 UniRef90\_E8SJ18 A V G E S  
 UniRef90\_D4H379 N I P R S L V N V L T A V K D K K  
 UniRef90\_K1LJY5 Q P A Q K M V Y A L K G I S E Q K  
 UniRef90\_C5D3Q6 A V A D K  
 UniRef90\_D9R3T6 Q I A  
 UniRef90\_A0LI2 G V P R A F V G V L A A I Q R K R  
 UniRef90\_R5L8Z3 Q I A E K  
 UniRef90\_G7LYZ0 A I A  
 UniRef90\_R9MJE4 Q I A E Q  
 UniRef90\_E0XR29 E V P G K L T R T V A A I R D Q K  
 UniRef90\_L7U9X0 A P G S Q L A R V I Q A H A D K  
 UniRef90\_E6VTA9 N I E R K F L Y A L T A I K E Q K  
 UniRef90\_V2Q264 N I P R G L V N V L N A L K T K K  
 UniRef90\_UPI00035F1CB9 A P A G K L A R V F S A Y A S K  
 UniRef90\_Q9ZE22 A T S S S I A R V I H A H A I K  
 UniRef90\_R5BWP3 Q I A E K  
 UniRef90\_A9B5G7 G V M R N I A Y I L L G A H A Q K  
 UniRef90\_A9SGM3 A P A R D L V F T L K A Y V K K  
 UniRef90\_J7QS26 A P A A K L A R V F G A Y A N R  
 UniRef90\_A8SM48 V Y M L D A L R K K K  
 UniRef90\_X0QMZ8 A I A  
 UniRef90\_R5Z103 Q I A E K  
 UniRef90\_R7KQB9 E V P A R M V R T V A A V R D A K  
 UniRef90\_M1PAB4 A V P R T F L Y G L Q A I K E Q K  
 UniRef90\_UPI000225B857 A V A E Q  
 UniRef90\_UPI000465CD1A A P A G Q V V R L F A A L E D Q K  
 UniRef90\_J6UF31 A P A G K L A R V V Q A H A D K  
 UniRef90\_UPI000248A445 E P G G Q I A R V L  
 UniRef90\_U1PTG1 A P V S K T V R T I D A L R A K E  
 UniRef90\_K6D3T2 A V A D Q  
 UniRef90\_D4J6Y0 Q I A E S  
 UniRef90\_M1NJD5 A P A S Q V A R L S A A L Q E K K  
 UniRef90\_J0N5N9 G T M K G L V V A L N A I A E K Q  
 UniRef90\_W9AHL4 A I A E Q  
 UniRef90\_UPI0003B64426 A V P Q K F V R L V D A L R E S K  
 UniRef90\_UPI00045EAE6D A P T A K A V R T I D A L R E K R  
 UniRef90\_UPI00047BB450 A I A E K  
 UniRef90\_B9QYR3 A P A G Q L A R V F G A Y A K K  
 UniRef90\_UPI000225BC6D E P A T R V A R V L N A Y  
 UniRef90\_UPI0003795FA9 A P A S Q V A R M A S A L E D K K  
 UniRef90\_UPI00047C882F A T L R N F V Y V L N A I K E K K  
 UniRef90\_B8DLM5 N I I R G L L Y A L K G I E E K K  
 UniRef90\_W1NKJ1 A P A R D I V G V L K A Y V K K  
 UniRef90\_U6B9N4 A I A E Q  
 UniRef90\_U7L832 A P A T K A V R T V V A L Q D K K  
 UniRef90\_K0YQ35 A P A L K T V R T I D A L R E K Q  
 UniRef90\_U2NTR4 L A Y L L N A I K E K K  
 UniRef90\_I2JM10 E V P G K L V R T L A A V R E Q K  
 UniRef90\_D2Z4E8 G P S R G L V T L S Q L A E K K  
 UniRef90\_P41191 A P Q T K I V R A I S A F V D K  
 UniRef90\_A0A023X5F4 N T I Q G L V V A L G Q I A E Q K  
 UniRef90\_UPI00041E500D A L P T K A V R T F D A L R E K Q  
 UniRef90\_S9UVW5 A V A E K  
 UniRef90\_K2ENJ8 G N M R G L V T A L K A I S D K K  
 UniRef90\_A0A011QV17 A P A S Q L A R L F A A L Q D E K  
 UniRef90\_A0A022LRG0 E V P T S L A R A L R E V S E K  
 UniRef90\_K9YEU7 A H A S Q L A R L F A A Y E E K  
 UniRef90\_UPI0004029CE3 A I K E K  
 UniRef90\_Q890N3 A P A Q G M V T V L K A K A D K  
 UniRef90\_UPI00035D8D23 A I A D Q  
 UniRef90\_UPI0002DC1F1A A P A S N I A S I L L S T I E E K  
 UniRef90\_UPI0003B60606 A P L S K T V R T V E A L R A K Q  
 UniRef90\_A9H3S7 A P A G Q L A R V F G A Y A K K  
 UniRef90\_D3FET0 A L I A G V A I Q L Q A I A D Q  
 UniRef90\_Q31QK5 E V P N S L A R G I K A V S E Q  
 UniRef90\_UPI00035EE2FB E V P G K L V R T V A A I R D Q K  
 UniRef90\_UPI000371289B E F P S K V T R A V A A V A D E K  
 UniRef90\_A8F4F8 G T I R K L L Y A L N A I H D K K

UniRef90\_A7BV64  
UniRef90\_BOCAD1  
UniRef90\_UPI000378EF67  
UniRef90\_UPI0001C36E11  
UniRef90\_UPI00039981A5  
UniRef90\_F7UY5P  
UniRef90\_UPI0004077148  
UniRef90\_F5YG19  
UniRef90\_E6U3J4  
UniRef90\_P23350  
UniRef90\_A0QS62  
UniRef90\_UPI000367A835  
UniRef90\_I9BYT4  
UniRef90\_I7K9B1  
UniRef90\_K7VWC8  
UniRef90\_UPI00030C3648  
UniRef90\_UPI0003623895  
UniRef90\_F3A107  
UniRef90\_UPI0003B360DB  
UniRef90\_K1ZM28  
UniRef90\_Q21M95  
UniRef90\_B5Y932  
UniRef90\_Q830Q7  
UniRef90\_Q47L13  
UniRef90\_W8YN98  
UniRef90\_UPI0002485C52  
UniRef90\_UPI000365218C  
UniRef90\_UPI0003463F75  
UniRef90\_F5XN08  
UniRef90\_U3PYH1  
UniRef90\_V6IU97  
UniRef90\_G4RCP4  
UniRef90\_A7HCH9  
UniRef90\_R6CCN9  
UniRef90\_I7L9W5  
UniRef90\_K9XTA0  
UniRef90\_UPI0004662805  
UniRef90\_A4BT57  
UniRef90\_B6WXP3  
UniRef90\_A1TY18  
UniRef90\_D5MK23  
UniRef90\_UPI0003B4D07C  
UniRef90\_K9EUX4  
UniRef90\_UPI0003036DED  
UniRef90\_UPI0003B5BE46  
UniRef90\_C8N6F3  
UniRef90\_UPI00036B6C61  
UniRef90\_R4VQ51  
UniRef90\_H3NDC7  
UniRef90\_UPI00036905C6  
UniRef90\_F4FRA7  
UniRef90\_R5JHM6  
UniRef90\_R5YLB3  
UniRef90\_R6W190  
UniRef90\_G7QD03  
UniRef90\_F2JT23  
UniRef90\_UPI000372B3C3  
UniRef90\_E3BBK1  
UniRef90\_UPI0003775516  
UniRef90\_UPI0004656D93  
UniRef90\_R7KY51  
UniRef90\_UPI0003468F30  
UniRef90\_F4Y025  
UniRef90\_B6JER7  
UniRef90\_UPI0003B5E507  
UniRef90\_F9UIQ7  
UniRef90\_UPI0003B4FDB8  
UniRef90\_Q28UX9  
UniRef90\_D7UVT9  
UniRef90\_A5N4N7  
UniRef90\_R7CS76  
UniRef90\_F9N503  
UniRef90\_R5FZL3  
UniRef90\_R6C7V1  
UniRef90\_UPI0003B5551F  
UniRef90\_K2ECK0  
UniRef90\_B9Y2U2  
UniRef90\_K9UVN8  
UniRef90\_W0THZ3  
UniRef90\_D5EPZ0  
UniRef90\_UPI0002193469  
UniRef90\_N9XM68  
UniRef90\_UPI000364344B  
UniRef90\_F7RYK7  
UniRef90\_A3YU99  
UniRef90\_G9X9R1  
UniRef90\_E6Y189  
UniRef90\_UPI0003687B09  
UniRef90\_C4LL73  
UniRef90\_UPI00036E3824  
UniRef90\_UPI000417FA47  
UniRef90\_K4AEV9

UniRef90\_A7BV64 R Q Q A R E 50 G G V Y L R V V R N T L A R R R A V S N T S Y E C L Q E M L V 80  
UniRef90\_BOCAD1 R N K L R P A G A Q C K I T K N T L M R R R A V K G D S E W E P L S D D W L S D  
UniRef90\_UPI000378EF67 R R K S L R E A G A D T S Y S V V A K N T L L K R A A A Q E S G V E E G L S D D E L T G G  
UniRef90\_UPI0001C36E11 R K E L R R E A G G V H Y F V E K N T L L L R A F O F C G I E E G L E S L N G  
UniRef90\_UPI00039981A5 R E K V R R A A G G A V K V V A K N R L A K I A L Q G T E S E E G I A S N L F T G G  
UniRef90\_F7UY5P R S N I R R E A D A L M K M Y K N T L M H L A V E S Q M E L S E N L D S V L L E  
UniRef90\_UPI0004077148 R K Q L R R D A G I E F K V Y K N T M V R R A A D S Q G L S E N L D S N E Y L V G  
UniRef90\_F5YG19 R K L L R N K G A E F K V V K N N F A R A F E Q L S A P D L V S G Y L T G G  
UniRef90\_E6U3J4 R A E L R A A N V D Y S V A K N S L T G R A A E A A G L T S P M E D D D F L K G  
UniRef90\_P23350 R N R L R P L G G T C K I V K N T L V R R A A E A Q E W S G L P M E D F V L T G G  
UniRef90\_A0QS62 R R A L G D S A T Y T V A K N T L V K R A A S E A G I E E G L D E L F A G G  
UniRef90\_UPI000367A835 R A K L R E R A N G A D F R V V K N R F A R A A F Q G M E K D D D V S A D Y L T G G  
UniRef90\_I9BYT4 R V K A R E Q G V Y L R V V K N T L A R R A V E G T P F A E G L D S S Y L E G G  
UniRef90\_I7K9B1 R R K M R E A G V E Y K V V K N T L T L R A A K E V G F F A E G L D S S Y L E G G  
UniRef90\_K7VWC8 R R Q L R P S G A T C A V V K N T F M G I A A K D A Q E W Q P M S D G L L N G  
UniRef90\_UPI00030C3648 R R S L G G E N T Y A V V K N T L T A I A A K E A G I D A F D G L L L N G  
UniRef90\_UPI0003623895 R G Q L G G F D V E L H V A K N T L V K L A A N E Q G I E E G L D D L L V G G  
UniRef90\_F3A107 R N N M R N E G L T F K V Y K N S L V R R A M E Q T A G I E E G L D E V L L G  
UniRef90\_UPI0003B360DB R N A V K E Q G C T F N V I K N I V K K A V E G T A W E S M T E Q L K G  
UniRef90\_K1ZM28 R V K A R K N G V Y L R V V R N T L A R R A V E N T D F A C M Q D T F K G G  
UniRef90\_Q21M95 R K Q A R E S G V R L Q V V R N T L A K R A I E G T D F E C V K S D A L V G  
UniRef90\_B5Y932 R A D M K R N G L T V K V V K N T L L E L A V K E V G L N V D E S L F R G  
UniRef90\_Q830Q7 R K Q L R D A G V E M K V I K N S I L S R A A K K V G L D G L D E V L F T G  
UniRef90\_Q47L3 R R S L G Q N A R F R V A K N T L T K I A A K E A G L V T D S E V L L L K  
UniRef90\_W8YN98 R R Q L R E A G G I E F Q V L K N S L V R R A S E A E G L S G L T E V L A G  
UniRef90\_UPI0002485C52 R T A L G S D V T Y S V A K N T M I K L A A K Q A G V E I A D D L L T G  
UniRef90\_UPI000365218C R R A L G E G A T Y R V A K N T L V K R A A E D A G I E E G L D L F I G G  
UniRef90\_UPI0003463F75 R R R L R P K G D S S C T V T K N T L M R I A V E D A K W Q P M Q E L L K G  
UniRef90\_F5XN08 R R N L G D D A T Y A V S K N T L T T I A A Q Q A G V E G V E D L L V G  
UniRef90\_U3PYH1 R D A L R E A D A E Y A V V K N T L T K I A A N A A G I D A L D A D L A G  
UniRef90\_V6IU97 R K Q L R Q A N V D Y K V Y K N T F A R R A T A A G L S E L D E A L T G  
UniRef90\_G4RCP4 R V Q M K Q A G Q V K V A K N R L A K L A L K D T E T A D I S D L L T G  
UniRef90\_A7HCH9 R R K L R E A K V E Y R I V K N T L A A R A A K K G T P V E S I A E K F V G  
UniRef90\_R6CCN9 R K E L R E A G V S Y K V Y K N T M M K F A F K G T P C E E L C K H L E G  
UniRef90\_I7L9W5 R R S L G A D V Q Y S V A K N T L T K L A A N D A G I T E L D D L L T G  
UniRef90\_K9XTA0 R N R L R P A G A T C K I T K N T L M N L A I E G D E W Q P M Q Q V L S N G  
UniRef90\_UPI0004662805 R K Q L R D A R K Q L R D S V L T R A A E K A G Y A D L N D V F A G  
UniRef90\_A4BT57 R V K A R E A G V Y L K I I K N T L A K R A V A G T H F E C M A E G F E G  
UniRef90\_B6WPX3 R V N L R K A G G E F Y V V K N T L A R A I A F T G G T H D V V K D K F H  
UniRef90\_A1TY18 R A K A R A E N V R L K V V R N N L A K I A I R G T E F E C I D P A L V G  
UniRef90\_D5MK23 R K L L R Q Q G V T L Q V V K N T L A R L A T A G M E L Q N L K P Y L V G  
UniRef90\_UPI0003B4D07C R K R A R D S F Q V Y L R V V K N T L A R R A A T E G T D Y A C M S E G L V G  
UniRef90\_K9EUX4 R R S F Q G E A V Y K V A K N T L V N I A A T Q A G V E L P D E L H S G  
UniRef90\_UPI0003036DED R R S L G E N T Q Y H V T K N T L T K I A A N E A G I A E L D E H L T G  
UniRef90\_UPI0003B5E46 R G R F R A A G V E Y Q V C K N T L A R R A L D R D G L D A L D E Y F A G  
UniRef90\_C8N6F3 H A R A R E T G V Y L R V V K N T L A R R A F D G T E F A C T Q D R L V G  
UniRef90\_UPI00036B6C61 R R N L G E G A T Y R V A K N T L V R R A T E Q A G V E G I D D L I Q G G  
UniRef90\_R4VQ51 R V Q A R E A G V Y V R V V K N T L A K R A V E E T E F E C M T D D F Q K G  
UniRef90\_H3NDC7 R A Q L R E S N V E M K V V K N T L L R F A A E E A G Y E G M E D I F K G  
UniRef90\_UPI00036905C6 R A D L K K D N L L V K V I K N S L L E L A L K D R G L T V D G S L F K G  
UniRef90\_F4FRA7 R Q Q L R D E G V D K M E V I K N K V M D R A A A E A G F D D L Y K P T F N G  
UniRef90\_R5JHM6 R S Q M R E A G V D Y K V Y K N T L V R R A A K T L E G E A Y A N F N D T  
UniRef90\_R5YLB3 R K K A R E L G A E L R V T K N R I T R L A L K G T K F E G L D D L F K G  
UniRef90\_R6W190 R T N F R K A G V E Y K V Y K N R L A K I A F N E L G Y T C F D A A L E G E  
UniRef90\_G7QD03 R V K L R A A G I D Y Q V V K N T L A R L A V K G G E H D A L K D H L K E G  
UniRef90\_F2JT23 R K D L R E A G V E Y R V F K N T M V N F A I E G T E F A E I S K D L E G  
UniRef90\_UPI000372B3C3 R S D L R N A D G E Y H V V K N T L A R A A V T G G D H E V L A D T F K E  
UniRef90\_E3BBK1 R N S I R E H A T Y A V V K N T L T A R A A A E A G V T A F D Q L O G  
UniRef90\_UPI0003775516 R N N L R E V G A S C K V A K N T L M N L A A D N E H W Q P M Q E F L Q D  
UniRef90\_UPI0004656D93 R A K V R A A D G E M K V A K N T L M K I A L R E E E M P V P E D I M A G  
UniRef90\_R7KYS1 R K E L R E A G V T Y F V E K N T M L R I A L K E A G L D D L C S V L E G  
UniRef90\_UPI0003468F30 R N S L G Q N A R F R V V K N T L G K I A A K E A D L D D E K V L D L F E  
UniRef90\_F4Y025 R N R L R P T G T C K V V K N T F M R L A V E E D E W R P M T E F L L S G  
UniRef90\_B6JER7 R T Q M K Q A G A S V K V S K N R L A K I A L E G T D V A S I G S L L K G  
UniRef90\_UPI0003B5E507 R S K L R E V G V Q I E V V K N T L L N L A S K E T D T A L M S D F F K G  
UniRef90\_F9UIQ7 R V E A R K A G V Y V R V V K N T L A R R A L Q D T D F A C M S E G L K G  
UniRef90\_UPI0003B4FDB8 R A Q L R E A D V D F K V V K N T M A R R A A E D V N L D E L N E Y L V G  
UniRef90\_Q28UX9 R G R V R D A G G A V R V A K N K L A K I A L D G T D V A G I S D L M T G  
UniRef90\_D7UVT9 R K Q L R E A G T D F K V Y K N S L T R R A V A A N S L E G L D K V L T G  
UniRef90\_A5N4N7 R K E L R E S G V E Y K V Y K N T L S L R A A K E L G F D K L E I F V G  
UniRef90\_R7CS76 R R K F L A H G V E Y K V I K N T L T R I A A N D L G I T G L D D L L Q G  
UniRef90\_F9N503 R R K F L A E G V E Y K V I K N T L T R I A A N E L G Y E A F S E H L E G  
UniRef90\_R5FZL3 R N S I R E A G A I M K V H K N K L V R L A L K E L D M P E M D E V L A G  
UniRef90\_R6C7V1 R R E M R E N N V Q Y F V E K N T M L R L A F K E A G I E G L D D V L N G  
UniRef90\_UPI0003B5551F R R L C F N R G L E Y K V Y K N T F I R K A L D T L G G D E M D A A L A G  
UniRef90\_K2ECK0 K K Q L R E A A E G L E F K V Y K N S M S Q R A A E A A G F N E L T E Q L T G  
UniRef90\_B9Y2U2 R R S L R P S G A T C K V V K N T F M G I A I E Q E Q W Q P L T E G L K G  
UniRef90\_K9UVN8 R R K L R G A G V Y L R V V K N T L A K R A V E G T D F A C M Q E G F V G  
UniRef90\_W0THZ3 R K Q A R G A E F H V V K N T I F G V A A A K E L P D L L G E H L S G  
UniRef90\_D5EPZ0 R A A L A E H G S D V T Y S V A K N T M I K L A A Q E A G I E L D E S L V G  
UniRef90\_UPI0002193469 R T K L R R S L R E A G V E Y K V Y K N K L V A R A A E E L G L G D V T K Y L V G  
UniRef90\_N9XM68 R S A A I E A D V S L R V V K N T L A K R A L A E T G C E C I L P V L S G  
UniRef90\_UPI000364344B R R Q A R E Q S G V Y L K V I R N T L A K R A L E G T K F E D I E S L L T G  
UniRef90\_F7RYK7 R T R L Q A N S G I V C K V T K N T L M R R A L D N S A W S E L D S V L T G  
UniRef90\_A3YU99 R K K F R E A N V E Y K V Y K N T M V R R A A E K V G M E K F D D V N L V  
UniRef90\_G9X9R1 R K M N E A G G A K V A K N R L A K I A L Q G T E S E A M M D V F T G  
UniRef90\_UPI0003687B09 R S L G E D V Q Y S V A K N T L M K I A L K E A G V E G L D D D L F T G  
UniRef90\_C4LL73 R K E L G A E V E Y S V A K N T M I K L A A R E A G V E G L D E E L L N  
UniRef90\_UPI00036E3824 R S N L G L D V E Y S V A K N T L L K L A A A E A G L E G L D E F L Y G  
UniRef90\_UPI000417FA47 R K L C F D Q G M E Y K V Y K N T L I R K A L D T L E A D A M D A L K G  
UniRef90\_K4AEV9 R D A L P E T C S L L V A K N T L V G K A I E G T P W E A L K P C M K G

UniRef90\_A7BV64 P I T L L A F S M E D P G A A A R V I N K F V K T N K N L I V K G I A L S G 90 100 110 120

UniRef90\_BOCAD1 S S A F L L I K D D L G G A I L K A Y Q A F Q K A T K K T E L R G G V M D G G

UniRef90\_UPI000378EF67 P T A V A F V R G E A V D A A K A L K K F A E Q H K A L F V V K G G Y M D G G

UniRef90\_UPI0001C36E11 T T A I A L S N D D Q T A P A R L L G K F A E Q A G D E K F N L K A G A V I E G G

UniRef90\_UPI00039981A5 Q T V I A Y A I D P I A A P K V A V E F A K T N D K L V I L G G S M G A

UniRef90\_F7UYP5 P S A F V F A G A D P V A S A K A L K D F A K T N K N L V I K G G M M D G G

UniRef90\_UPI0004077148 P S A I A F S N E D V I M P A K I I H E F S K K H E A L E I K A G A V I E G G

UniRef90\_F5YG19 P T A V T I S P K D A N E V A K I L L D F T K E S P A L K V K G G L V I G Q

UniRef90\_E6U3J4 A T A L A T S T E D L V A P A K I L A K F A E T H P N F K I K A G V I E G G

UniRef90\_P23350 T T A I L V L K E D L G G A I K A Y K K F Q K D T K T E L R G G V L E G G

UniRef90\_A0QS62 P T A I A F V K G E A V D A A K A I K K F A K D N K A L V I K G G Y M D G G

UniRef90\_UPI000367A835 P T A V A L J A P D D S A P V V K A M V E F A K G A P L E L K G A L V A D G G

UniRef90\_I9BYT4 P L I Y G F S A D A V A S A K V L N D F A K T N D K L V I R A G S Y D G G

UniRef90\_I7K9B1 P V A L A I S Y D D P T A P A R L L A E F A E N H K A I E L K A G I V I Q G G

UniRef90\_K7VWC8 S S A F L L V K E D L S A I K A Y Q A F Q K A T K K T E L R G G V M E G G

UniRef90\_UPI00030C3648 P T A I A F I R G E G E P V D A A K L R D F A K A N P K L V I K G G Y F D G G

UniRef90\_UPI0003623895 P T A V A F I K G E A V D A A K T M K K F A K D N D A F V L K G G Y M D G G

UniRef90\_F3A107 P N A F A F S T D D A V A P A R V L N D F A K E H E N L E L K A G V I E G G

UniRef90\_UPI0003B360DB P N A F A L G F D D P A V L A K I M V I E K A K E Y G K L E I K F G S L E G G

UniRef90\_K1ZM28 P V F L A F S Q E D P G S V A R L L K D A I R D Y E K L T V C A L A L G G G

UniRef90\_Q21M95 P S I E G F S M E D P G A A A R L F K D F A K E Q S K F E L K A L S V G G G

UniRef90\_B5Y932 T T A L L F S N E D E L A R P F K L F V E Q V K K Y G V L Q A K G G I L E G G

UniRef90\_Q830Q7 P T A V A F S N D D V V A P A K I I D E F A K D A K A L E I K G G V I E G G

UniRef90\_Q47L3 G P S A I A F V K G D V V E A A K G L R D F A K E N A A L V I K G G L I D G G

UniRef90\_W8YN98 P T A I A F G A D D V V A P A K I I S D F A K K N D A L V I K G G L L E G G

UniRef90\_UPI0002485C52 P T A V A F V R G E A V D A A K A L K K F A G D H Q N L V I K G G N M D G G

UniRef90\_UPI000365218C P T A I A F V E G E P V D A A K A L R N F A K D N K A L V I K G G Y M D G G

UniRef90\_UPI0003463F75 A S A L V F V K E D I S G A I K A Y Q E F Q K A S K K S T L R G G V M E G G

UniRef90\_F5XN08 P T A I A F I D G D P V V V A K G L R D F A K A N P L L V I K G G V L E G G

UniRef90\_U3PYH1 P S A I A F V H G D P V A V A K G L R T F A K A H P L L V I K G G Y F D G G

UniRef90\_V6IU97 P T A V S F S K E D V I A P A K V L Y N F A K D H E A L E I K A G V I E G G

UniRef90\_G4RCP4 P T V L A Y S E D P I T A P R I A K K F A D T N S K F V I L G G A M G S

UniRef90\_A7HCH9 P T A I V I S Y D D V V T P A K L L A D F M K D R E N F T L R T A V I D G G

UniRef90\_R6CCN9 P N A I A I S K D D A T A P A R I L A K Y A K D V K A L K L V A G V V E D

UniRef90\_I7L9W5 P T A V A F I K G E A V D P A K V L K K F G E D N E A F V I K G G Y M D G G

UniRef90\_K9XTA0 A S A F L L A G E E V G A A V K A Y K E F Q K A T K K T E L R G G V M E G G

UniRef90\_UPI0004662805 P T A V A F S N E D P I A P A K I L K K F A D S V D A L E I K G G Y I E G G

UniRef90\_A4BT57 P L L L A F S R E D P A S A A R V V Q D F S K D Y A K L V V K M V A I G G G

UniRef90\_B6WXP3 N S A I A L G F D D P V A V A K A L S D F A K Q S K L F Q L R G G S L E G G

UniRef90\_A1TY18 P T L L A F S M E D P G A A R L L K D F A K E K E A F E I K G L A V I G G G

UniRef90\_D5MK23 P T A I I Y G K G D P T A P A K L L A T F G K T R P S F Q I K A G F A E G G

UniRef90\_UPI0003B4D07C P L L L A F S L I E P G S A A R V I R D F S K E H E D L K P K L V A V I E G G

UniRef90\_K9EUX4 P N A L A F I N G E V P N V A K A M K K F A S E H D A L Q V K G G Y M E G G

UniRef90\_UPI0003036DED S T A V A F I T G D P V I E A K G L R D F A K A N P A L V I K G G V L D G G

UniRef90\_UPI0003B5BE46 P T A I A F S D D P A K P A R V L K D F L E D E D I E R P E L K A A Y I E G G

UniRef90\_C8N6F3 P L V L A F S M E D P G A A R L W R D F F K E N D K D K M V K A L S V S G G

UniRef90\_UPI00036B6C61 P T A L T F I K G E P V I E A A K T L R D F A K D H K A L E I K G G Y M D G G

UniRef90\_R4VQ51 P L L L A F S Q E D P G S A A R V L K D F A K E H E Q L V V K M L A V I G G G

UniRef90\_H3NDC7 P T A I A F S N E E V V A P A K I I S E F A K E A E V V E I K G G V I E G G

UniRef90\_UPI00036905C6 T T A I L I S N T D E L A A F K A F A D Q A K K H E A L K P K G G I L E G G

UniRef90\_F4FRA7 P T A V V F S S E D P V A G P K I V I H N F A K T N D K K L K G G V I D G G

UniRef90\_R5JHM6 E L N A I A F G Y E D P V A P A R I L K G F M D K N P D K I S L K M G V V E G G

UniRef90\_R5YLB3 P T I M A Y S S D P I S A C K L C V I Q F A K E N E K F L V V I G G A L S S

UniRef90\_R6W190 P T A I A F A M N D S V S A A K I A A E G G K F N K L E T K C G L V D G G

UniRef90\_G7QD03 N N A V A F G Y D D P V V A A K V L V E Y A K T S K K F S V K L A S L S G G

UniRef90\_F2JT23 P T A I A I S Y A D A T A G P R I L J A K V A K D N E K L E F K S G V V E G G

UniRef90\_UPI000372B3C3 N T G I A L G F E D P V A V A K A V V D F A K K S H L V V K H A S L E G G

UniRef90\_E3BBK1 P S A I A F V T G D P V E T A K K L R D F A K A N P L L V I K G G V L D G G

UniRef90\_UPI0003775516 S S A F L L V K E D V S G A V K A Y K T F Q K N T K T E L R G G V M E G G

UniRef90\_UPI0004656D93 P N V Y T M A Y S D P V A V A K V E K D F A K D K A N K A F L L K G G V L G D G

UniRef90\_R7KYS1 T T A I A V I C D H D Q T A P A R I L G K F A E A H D D K F T L K A G Y V D G G

UniRef90\_UPI0003468F30 G P S A V A F V R G D V V E A A K G L R D F A K A N S P L V I K G G V I D G G

UniRef90\_F4Y025 T S A F L L V K D D V G S A I R A Y Q E F F K T A K K T E F R G G V M Q G G

UniRef90\_B6JER7 P T V I A T S N D P V A A P K I A V I E F A K T N E Q F V I L G G A M G T

UniRef90\_UPI0003B5E507 P T A I V T S V D D P V S P A K V L V D F A K E N E K L E I K A A T L G G G

UniRef90\_F9UIQ7 P L V L A F S Q E D P G S A A R V M E A F A K D H N K V E V R L V A L G G G

UniRef90\_UPI0003B4FDB8 P T A I A T S K E D A V A P A K V L Y N F A K D H E A L E I K T G V I E G G

UniRef90\_Q28UX9 M T V L A Y S D D P V A A A K A A D E F A K E N D N Y V I L G G A M G E G

UniRef90\_D7UVT9 P N A I A F S N E D V V A P A K I L N D F S K D H E A L E I K A G I T I E G G

UniRef90\_A5N4N7 P V I S I A F G Y D E P T T P A R I L N D F S K K Y K A L E I L K G G V V I Q G G

UniRef90\_R7CS76 T N G L A V I C K D D P V A P A A I L K E F L A E T K S E A V V V K A G L L D G G

UniRef90\_F9N503 P T A L A T S T D A V A P A R I L E N F I K A D T K T E A L T V K A G I V E G G

UniRef90\_R5FZL3 P S A F V F A E G D P V A S A K A L K D F A K A N E N L V I K G G I M D G G

UniRef90\_R6C7V1 A T A I A I S N D D E T A P A R I L G K F A D D F G D A K F E L K A G F I G T

UniRef90\_UPI0003B5551F Q S G V L F S K E S G S A P A K L I K D F Y K A N A V P K P A L K G A Y I D A

UniRef90\_K2ECK0 Q I A V S F S N N D E V A A K I I D K F S K T N E N V K M L G G V I G K

UniRef90\_B9Y2U2 P N A I A F S D D A V A P S R V L A K F A K K H D K L V L K G A I V I E G G

UniRef90\_K9UVN8 S N A F L L V K E D F S S A I K A Y Q E F Q K A T K K T K L R G G V M D G G

UniRef90\_W0THZ3 P L L L A F S Q E D P G A A A R V I N D F A K E H D A L V V R M V S I N G I

UniRef90\_D5EPZ0 P T A I V V I G G N N P S G V I A K A L G E F F K K K D K V E L K A G I L D E

UniRef90\_UPI0002193469 P T A I A F I N G E A V D T A K A I L K D F S K D H K L V I K G G Y M D G G

UniRef90\_N9XM68 P V I S I A F G Y N E D A T A P A R I L N D F S K K Y K A L E I L K A G I V D G G

UniRef90\_UPI000364344B P V I L G F S Q E D P G A A V A R V F R D F I K E N K D L V V K G L G V S G G

UniRef90\_F7RYK7 P L V Y G F S I G D P G S A A R L F K D A Q K S K H L K V T A L S I I G N

UniRef90\_A3YU99 T N A F V L I K D D V G G A V K A V Q S F Q K D T K K S D V K G G L Y E G G

UniRef90\_G9X9R1 G P N A F A F G V D D A I I P A K I A K D F A K T H P K L E L K M A Y I E G G

UniRef90\_E6Y189 Q T L T V Y S E D P I T A S R V A V D F A K T N D K F V I L G G S M G A

UniRef90\_UPI0003687B09 P T A V A F V K G E A V D A A K A M K K F G E D N K A F V I K G G F M D G G

UniRef90\_C4LL73 G P T A I A F I N G E A V D A A K A M K K F G A D H D A F V V K G G T M D G G

UniRef90\_UPI00036E3824 P T A I A F I K G E A V D A A K V I M K E F G K T N K A F I V K G G Y M D G G

UniRef90\_UPI000417FA47 Q S G L L F T A D S G S A P A R L L K R F Y K K N A T P L L K G A Y V D S

UniRef90\_K4AEV9 M N A W L F V H T E E V P T A L K P Y A F Q K E E R V E E T N D F V I G A V F E G

UniRef90\_A7BV64  
UniRef90\_BOCAD1  
UniRef90\_UPI000378EF67  
UniRef90\_UPI0001C36E11  
UniRef90\_UPI00039981A5  
UniRef90\_F7UYYP5  
UniRef90\_UPI0004077148  
UniRef90\_F5YG19  
UniRef90\_E6U3J4  
UniRef90\_P23350  
UniRef90\_A0QS62  
UniRef90\_UPI000367A835  
UniRef90\_I9BYT4  
UniRef90\_I7K9B1  
UniRef90\_K7VWC8  
UniRef90\_UPI00030C3648  
UniRef90\_UPI0003623895  
UniRef90\_F3A107  
UniRef90\_UPI0003B360DB  
UniRef90\_K1ZM28  
UniRef90\_Q21M95  
UniRef90\_B5Y932  
UniRef90\_Q830Q7  
UniRef90\_Q47L3K  
UniRef90\_W8YN98  
UniRef90\_UPI0002485C52  
UniRef90\_UPI000365218C  
UniRef90\_UPI0003463F75  
UniRef90\_F5XN08  
UniRef90\_U3PYH1  
UniRef90\_V6IU97  
UniRef90\_G4RCP4  
UniRef90\_A7HCH9  
UniRef90\_R6CCN9  
UniRef90\_I7L9W5  
UniRef90\_K9XTA0  
UniRef90\_UPI0004662805  
UniRef90\_A4BT57  
UniRef90\_B6WXP3  
UniRef90\_A1TY18  
UniRef90\_D5MK23  
UniRef90\_UPI0003B4D07C  
UniRef90\_K9EUX4  
UniRef90\_UPI0003036DED  
UniRef90\_UPI0003B5BE46  
UniRef90\_C8N6F3  
UniRef90\_UPI00036B6C61  
UniRef90\_R4VQ51  
UniRef90\_H3NDC7  
UniRef90\_UPI00036905C6  
UniRef90\_F4FRA7  
UniRef90\_R5JHM6  
UniRef90\_R5YLB3  
UniRef90\_R6W190  
UniRef90\_G7QD03  
UniRef90\_F2JT23  
UniRef90\_UPI000372B3C3  
UniRef90\_E3BBK1  
UniRef90\_UPI0003775516  
UniRef90\_UPI0004656D93  
UniRef90\_R7KYS1  
UniRef90\_UPI0003468F30  
UniRef90\_F4Y025  
UniRef90\_B6JER7  
UniRef90\_UPI0003B5E507  
UniRef90\_F9UIQ7  
UniRef90\_UPI0003B4FDB8  
UniRef90\_Q28UX9  
UniRef90\_D7UVT9  
UniRef90\_A5N4N7  
UniRef90\_R7CS76  
UniRef90\_F9N503  
UniRef90\_R5FZL3  
UniRef90\_R6C7V1  
UniRef90\_UPI0003B5551F  
UniRef90\_K2ECK0  
UniRef90\_B9Y2U2  
UniRef90\_K9UVN8  
UniRef90\_W0THZ3  
UniRef90\_D5EPZ0  
UniRef90\_UPI0002193469  
UniRef90\_N9XM68  
UniRef90\_UPI000364344B  
UniRef90\_F7RYK7  
UniRef90\_A3YU99  
UniRef90\_G9X9R1  
UniRef90\_E6Y189  
UniRef90\_UPI0003687B09  
UniRef90\_C4LL73  
UniRef90\_UPI00036E3824  
UniRef90\_UPI000417FA47  
UniRef90\_K4AEV9

130 140 150 160  
Q L L P P T E I D K A I A G D L L P T Y L E A I S M L M S V M S A P I T Q L A R T L H  
Q P L S K E D V I K A I A G D L L P T S Q E V L V A Q I L A G A F G N S V T A K V A V G L I N  
A F I D D A Q V V K A I A A E M D P N R K E D T L L A K Q L V G S L Q G S L Q G A A G L F A  
T V Y D Q A G V V K A I A S L P S S L D E L L R A K L L V G M V Q T P A T R L A A V L T S  
S F V D A A Q V V R S I A S L P S S R E D G L L S M L L S V L Q A P V R N F A Y A V L K  
U N I R E F 9 0 \_ F 7 U Y Y P 5  
S V Y D A K Q V V E A F S K L L P S G R L E L I S M L M S V M N G P A R N L A A A L N  
K A A T G V E I A I A K L L P S K E V L V A K A L G G L N A P L S G F V M V L N  
K S L T Q A D V E A I A G D L L P S K E Q L M G Q I A G G I N A L A T K I A L G L K  
K A L S V A D V E K I A D L L E S S R E V L L A K L L A G A M K G N L S K A A G L F N  
Q V V N A E Q A V A F S K L L P S R E D E L L A K L L M S V M Q A P V V S Q S N F V Y A V N  
Q V L D S N A V K A L A S K I P S S R E E L L A K L L G V M Q A P V V S G F A R G L A  
Q L F D T A K V K E L S K I P P S R E V L L A K F L G S I K S P V V A  
R V L S E A D V K A L A G D L L P S R E Q L M A Q I A G A L N G V A T K L A A V G I N  
A A L T A E D V S K L A E M D N R E T T L A K I A G A F Q G S L A K A A G L F Q  
N A L S A D D V N A I A E M D N R E T T L A K I A G A F Q G S L A K A A G L F Q  
K V A D Q A E I K A I A T P S S R E G L L S M L L S V L T A P M R S G N T A L A V K  
K L L T A D D I K A L S K L L P P P K E V L V A Q L L G T M K A P I R S G F V N V L A  
K L L S A K D L D V I A K L L P T R D Q G I A I L M S V M K A P I T K L V R T M A  
K L L E A G Q V I D A I A K L L P T L E Q A L G Q L A S V M I A P V T K L V R T F N S  
R W I S A K E V I D A I A K L L P G R E Q L L Y A Q L L V G V V S P M R G L V T V L S  
K V S S V E Q I T A L A K L L P N R E Q L L S M L L S V L Q A P V R N V A Y A V K  
K P M T P E E I T K L A D L P S S R E D G L L S K L L A G A F K A K Q S Q A A A V F Q  
Q V V D A A Q I K A L A D L P S S R E D G L L S M L L S V L Q A P V M R N F A L A V K  
T V L S A A A V E A I A E L D N R E T T L A K L A G A L Q G S L T K A A Q L F N  
R A L S V D E V N Q I A D L P S S R E V L L A K L L A G A L K A N L A Q A A A V F A  
K L L K E A D I V K A L A D L P S S K E Q L M A Q I A G A L N G V A T K L A A V G I N  
K A L S A D E V K K L A D L L E S S R E V L L A K V A G G M Q G V L Q Q A I S L V S  
N P L S A E E V D K L A D L L E S S R E V L L S K V A G M M K A S M S K A A A L F Q  
K L A S V D E I K A L A D L P S S K E A L L S M L A N V L Q A P I R N F A L G V K  
T G L D A D G V K A L A D L P S L D E L L R A K L A G L L T Q P A A Q I A R L A K  
R V Y D A K G I T A L S A K M P G L Q E L R G Q I A A M I A Q S P A T Q L A R V L G S  
A Y Y D E A G I T A L S S P S S R E E L L G K L A G A L K A S P I A N F A R V I S  
A A L S A D Q V V N A V A S L D N R E T T L A K L A G A L K A S L A K A A S L F N  
Q A L T K E E V A L G D L P S S K E E L L Y A Q I A G A L N A L A T K I A V G I K  
K I M P V D E I N V Y A T L P S S R E D L L S M L A S E L Q A P I R N V A Y A I K  
K L Y P A T E A D R L A S L P T Y D E A L L S R L M A T M Q A P I Q K L V T T L N  
K E M S A E Q V L A K L L P T S K E E L L G Q L L G T M N A V P T N F V S L F A  
E L M G A E Q I D R L A T P T L H E A L T K L A I V T Q A P V T K L A R T L N  
T V L T G K D A A A L A D L P S S R E V L L A A R L A G I M Q S P L R G F V T V L N  
N L Y G S E E L K A L A S L P T K E Q A I S M L M S V M K A P L V R K L A R T L A  
Q L L D A S E G V K A L A D L D S R E T L L G K S A G V L K A L L Y K T A Y A I D  
N A L S A E E I N T L A D L L E S S R E V L L A K L L A G N M K A S M A K A A A T F Q  
E I Y E G H E L D Q L S K L K S R E E L V G D I V G L L L S P A Q T V V F G S L T  
E V L P E G S E L E R L A K L L P T K E E A L A L L M A C M R A P L D K F A R T L N  
G P I S A D E V E R I A D L D S R E V T L G K L A G A L K A K M N Q A A V M F A  
E K Y P G S E I D R L A T L P S T Y D E A I S R L M A T M R A P V I R K N L A T T L N  
K V A S L E E I S K I A K L L P S R E G L L S M L L S V L Q A P I R G L V T V L S  
R W V P A S E I D A V A A L P S G R Q E L L Y A Q V V G A V A S P I R G L V T V L S  
E V A S L E E I T A Y A A L P S S R E E L L S T L L A N I L Q A P V V R N F A Y G V K  
E F Y D E A K I I A E A E I P S S R E E L L A K L L G S L K A P M S N F V Y L L D  
G V L S M A E I E R L A T I P S S M D E L L R A K I I G L L Q A P G A L A R V T K  
E F N D A D A L K I I A S L P S S R E V L L A K M L G S M L A P I T S K L A Y V L N  
K I I D A P G V E L S K L L P S K P E L L A K T L G T M N A V P T N F V G L F A  
T Y Y D A K G M M A I G N I A P P R E E L L G R L L G S F K S P M A S F A R V I K  
K L L T E A Q L I G E L A K L L A G K Q Q L L G M A L G T M N A V P T N F V G L F A  
K A M S A E E I N K L A D L L E S S R E T L L A K L A G G L N A A S L S Q A V Y L F A  
R A L S Q A E V E A L G D L P S S K E Q L L Y A Q I A G G L N A L A T K L A V A I N  
S I L N V A Q V E A L A D L P S S K E V L V A Q V V R T I A A P L S G L V T V L S  
V I Y D A K G V E A L S K L P S S K E T L L A Q L V G S L Q G P M Q K L A A T L K  
K A M T P D E I I K L A D L L E S S R E V L L A K M A G V L K A K Q G Q A A A T F Q  
Q A L N E E Q V K A I A D L P S S K E E L L A Q V I A G A I N S I A T K I A V G I N  
T V L N P D A V K A L A S L P S L D E L L R A K I I G L L V A P A T K I A Q L T N  
N L L D S E Q I K Q L A K M P S S K E E L L T K L V Y T L N A V P T S L V N V L S  
K L L D P S E L I G N L A S K M P S T R D Q A I S L L M A V M K A P V I R N F A A T I N  
S V V S Q E Q I K E L A S K L P S H D G L V A M L L S V M Q A P I R N K L A T A T K  
N I L D A D G V K A V A K M P S S R E E L L S S I A G C I G A P A A N I A G A I G  
K V S S L D E E I K A L A D L P S S R E G L L S M L L C N V L Q A P V V R G L A I A T K  
E I F D V D K V A T I P S S K E V L L I G K L L G S F K A P V S N F  
K V I D A K G V Q E A L A D L P S S R E Q L L G M V A A T L Q A P I A G L A R A L N  
E V L D A A K V E I A N L P S N R E E M L S M L L S V L Q A P V R N V A Y A V K  
A F V D A A V E K I A A L P S S R E E L I A K L L G S L Q A P V M R K L V R V L N  
T V Y D K A G V T A L S K I P S S K E T L L A Q L V G S L Q G P L T K L A A T L K  
S I Y G A N Q L D T L S T I K G K Q E L I G D V I G L L Q A P A K N V I S A L S  
L I M S E K D V K A L A K I P S S K E E L L A K M V I G S L Q A P I S G F V N V L S  
K V V G V D T I K E L S S L P N R E G M L S M L L S C L Q A P V R S F A C A V K  
K L L K E A D V K V L G D L P S S K E Q L M A Q I A G A L N A V T T K I A V G I N  
K L L E P S E I S V L A K M P T Y E Q A I S M L M G T M L A P V I Q K L V T L N  
K A L S K A D I E A L A K L P G L E V L L R A Q L L G L L T Q P A T G L V R V L N  
A S L T A D Q V D A I A D L D N R E T T L A K L L A G A M K G S L A K A A G L F N  
V V Y D K D M I A K I A T I P S S K E V L L I A K L L G S I K A P L S N  
E F V D A D Q L K R I A S L P T K D Q A I S M L M A L M L A P T E K L V R T L N  
G L M G P E K L D A V A S L P T R D E A L A K L L A T F K A P V T K F V R T I N  
K L L S Q N D I K A I A E L P S S K E V L I A Q I A G A I N A V A T K L A V G I N  
E F Y D A Q S L D K V A N I P S S R E V L I A K L L G S F K A P V S N F V Y M L D  
T S L S V D A M K S A S L P S S L N E L R A K I I G M V I S T P A T R I A Q T V N  
D A L N A E Q V A A I A D L D N R E V T L A K L L A G A M K G S L A K A A G L F N  
S A L T A E Q I Q Q I A D M D N R E T T L A K I A G G F N G V L A N V A S L L G  
K A L D A A Q V Q A I A E L D N R E T T L A K L L A G A M K G S L A K A A A V F N  
D V F G E D Q L D L S N I K S K E L I G E I I G L L Q S P A K N V I S A L L Q  
K F Y G P G D F K A L E T M P S S R A E V Y A Q L L G A L Q G P A T S L V T T L Q

UniRef90\_A7BV64 E P H A K L V R T I A A V G D S K  
UniRef90\_BOCAD1 E V P A S L A R A L Q A H S D  
UniRef90\_UPI000378EF67 A P A S Q V A R L S A A L Q E K K  
UniRef90\_UPI0001C36E11 A V A D K  
UniRef90\_UPI00039981A5 A P A G Q I A R V I G A H A R K  
UniRef90\_F7UY5 G P M E A F A R C V S A I A D Q K  
UniRef90\_UPI0004077148 A I  
UniRef90\_F5YG19 D I P S R L V R T V K A I A D K K  
UniRef90\_E6U3J4 A N L R G L V V A L N A I A E K Q  
UniRef90\_P23350 E V P A S V A R G L Q A H V D K E  
UniRef90\_A0QS62 A P A S Q V A R L A A A L Q E K K  
UniRef90\_UPI000367A835 G V P T K L V R T L Q A V A D Q K  
UniRef90\_I9BYT4 A L A A K  
UniRef90\_I7K9B1 K F V Y V L D A I R K Q K  
UniRef90\_K7VWC8 E V P S S L A R A L Q A V A E K E  
UniRef90\_UPI00030C3648 A P A I K A V R T V D A L R A K Q  
UniRef90\_UPI0003623895 A P A S K T A R L V A A L Q D K Q  
UniRef90\_F3A107 A V A D Q  
UniRef90\_UPI0003B360DB A N I R Q L L Y V L K A I E E K K  
UniRef90\_K1ZM28 E P Y A M L V R T V A A V R D K K  
UniRef90\_Q21M95 E V P T K V T R V V A A V R D Q K  
UniRef90\_B5Y932 G P Y R N L V Y V L Q A I K E K K  
UniRef90\_Q830Q7 A V A E K  
UniRef90\_Q47L13 A L P S K A V R L V Q A L A D K R  
UniRef90\_W8YN98 A V A E K  
UniRef90\_UPI0002485C52 A P A S Q V A R L L A A L Q E K K  
UniRef90\_UPI000365218C A P A S K M V R L A A A L E E K K  
UniRef90\_UPI0003463F75 Q V P T S I A R G L K A Y A E K E  
UniRef90\_F5XN08 A P L S Q A A R L I A A L E K  
UniRef90\_U3PYH1 A P L S K T V R T V E A L R E K  
UniRef90\_V6IU97 A V A E Q  
UniRef90\_G4RCP4 E P G A S V A R V I S A Y S E K  
UniRef90\_A7HCH9 A P G Q Q L A R V L G A R R E Q  
UniRef90\_R6CCN9 Q I A E K  
UniRef90\_I7L9W5 E P T S K V A R L S A A L Q D K K  
UniRef90\_K9XTA0 E V P A S L A R G I K A V S E K E  
UniRef90\_UPI0004662805 A V A E K  
UniRef90\_A4BT57 E V P S K L A R T L A A V R D A K  
UniRef90\_B6WXP3 N V L R G L L Y A L K A I E E K K  
UniRef90\_A1TY18 D I P G R I T R V V A A V R D Q K  
UniRef90\_D5MK23 G P L R S F M M V L E A V K Q Q K  
UniRef90\_UPI0003B4D07C E P H A K L V R T F A A V R D Q K  
UniRef90\_K9EUX4 A P A S K A V R T V E A L R Q K  
UniRef90\_UPI0003036DED A P L T E F V R T V D A L R E K  
UniRef90\_UPI0003B5BE46 G P G S T L A G A I Q S M A D  
UniRef90\_C8N6F3 E I P G K L V R T L D A I R Q S K  
UniRef90\_UPI00036B6C61 A P A S Q V A R M T E D L K S K K  
UniRef90\_R4VQ51 E V P S K L V R T V S A V K D A K  
UniRef90\_H3NDC7 A V A E K  
UniRef90\_UPI00036905C6 G P Y R N L V Y A L Q A V K E K K  
UniRef90\_F4FRA7 A I A D K  
UniRef90\_R5JHM6 A V A K K  
UniRef90\_R5YLB3 A Y S E K  
UniRef90\_R6W190 A I A E K  
UniRef90\_G7QD03 N V I R G M L Y A L S A V K E K K  
UniRef90\_F2JT23 Q V A E K  
UniRef90\_UPI000372B3C3 N I L R N F L Y A L N A I R D Q K  
UniRef90\_E3BBK1 A P L S Q A A R T V D A L R A K  
UniRef90\_UPI0003775516 E V P T S L G R A I Q A V S E K E  
UniRef90\_UPI0004656D93 G P I R G L A T C L S Q I K E K K  
UniRef90\_R7KYS1 A L A D K  
UniRef90\_UPI0003468F30 A L P T K L A R L A Q A L H E K K  
UniRef90\_F4Y025 E V P A S L G R S I N E V  
UniRef90\_B6JER7 A P A A K V A R V V Q A Y A S K  
UniRef90\_UPI0003B5E507 G V P R S F V N V L S A V K D Q K  
UniRef90\_F9UIQ7 E V P G K L V R T I A A I R D A K  
UniRef90\_UPI0003B4FDB8 A V A E Q  
UniRef90\_Q28UX9 A P A S N I A S V L S T I E E K  
UniRef90\_D7UVT9 A V A D Q  
UniRef90\_A5N4N7 V Y L L S A I E E K K  
UniRef90\_R7CS76 A N I Q K F A Y A I E A V R K Q K  
UniRef90\_F9N503 A V A E  
UniRef90\_R5FZL3 G P M E A F A R C V Q A I A D Q K  
UniRef90\_R6C7V1 A V A D K  
UniRef90\_UPI0003B5551F S G G S K L A G I L K T L S E K E  
UniRef90\_K2ECK0 G N L R G L A Q V L N A I K E Q K  
UniRef90\_B9Y2U2 A V A D K  
UniRef90\_K9YUN8 E V P A S L G R A L Q A V A D K  
UniRef90\_W0THZ3 E V P G K L V R T V A A I R D A K  
UniRef90\_D5EPZ0 A V P Q N V V N V L Q A K V R K E  
UniRef90\_UPI0002193469 A P A S Q V A R L A V A I E E K K  
UniRef90\_N9XM68 L A Y L L S A I K D K K  
UniRef90\_UPI000364344B E V P T K L T R V V A A V R D Q K  
UniRef90\_F7RYK7 E V P T K F V R V L G A I K D A K  
UniRef90\_A3YU99 E V P S G L A R A L Q Q H A D  
UniRef90\_G9X9R1 A L S K K  
UniRef90\_E6Y189 A P A G Q V A R V V G A Y A  
UniRef90\_UPI0003687B09 A P A S Q V A R L A V A L Q E K K  
UniRef90\_C4LL73 A P H S E M A R L A A A L E E K K  
UniRef90\_UPI00036E3824 A P A S K M V R L A A A L E E K K  
UniRef90\_UPI000417FA47 G G G N K L A G I L K T L S E K E  
UniRef90\_K4AEV9 A P A R D V V A V L S A Y V R K

UniRef90\_Q74L09  
UniRef90\_R5RV23  
UniRef90\_C5R8V7  
UniRef90\_E4L972  
UniRef90\_R5DP98  
UniRef90\_Q9FY50  
UniRef90\_UPI00026277BE  
UniRef90\_E1YG98  
UniRef90\_UPI000404CCCE  
UniRef90\_R6KV62  
UniRef90\_A5VIA9  
UniRef90\_A6TWJ2  
UniRef90\_W4EEV7  
UniRef90\_F8EX14  
UniRef90\_U2AQR4  
UniRef90\_Q72GS1  
UniRef90\_D9SXB0  
UniRef90\_C6VT16  
UniRef90\_D4YQE2  
UniRef90\_R7NS23  
UniRef90\_F0K716  
UniRef90\_R6RFZ6  
UniRef90\_V5PKV6  
UniRef90\_F5YI70  
UniRef90\_E9V1A9  
UniRef90\_B1GZ73  
UniRef90\_E4L4P4  
UniRef90\_UPI00040BF57B  
UniRef90\_M1E6U7  
UniRef90\_E8T507  
UniRef90\_V5T7G3  
UniRef90\_C2BIH4  
UniRef90\_Q3AUJ7  
UniRef90\_A0A024KJQ9  
UniRef90\_C7MFH1  
UniRef90\_S0G7R2  
UniRef90\_K9SF84  
UniRef90\_UPI0002491362  
UniRef90\_UPI0003B43170  
UniRef90\_F2NL07  
UniRef90\_UPI000380FB09  
UniRef90\_G5F2L7  
UniRef90\_UPI0003634235  
UniRef90\_U2E2F2  
UniRef90\_E1V5J8  
UniRef90\_A8MLD0  
UniRef90\_UPI00047DC35C  
UniRef90\_C0Q9Y1  
UniRef90\_R7I9M7  
UniRef90\_K0YMI0  
UniRef90\_Q21SF5  
UniRef90\_A1BD21  
UniRef90\_F2NKN9  
UniRef90\_V5SEM7  
UniRef90\_A2C032  
UniRef90\_UPI0003B74021  
UniRef90\_X0VWG6  
UniRef90\_E0WTT2  
UniRef90\_I4BUB5  
UniRef90\_D0LJE3  
UniRef90\_B0PFZ5  
UniRef90\_K9UPA0  
UniRef90\_R6ULK9  
UniRef90\_R6YYA6  
UniRef90\_D6Z3N1  
UniRef90\_G2ITS4  
UniRef90\_Q72UB0  
UniRef90\_F9ZM34  
UniRef90\_R5V0R4  
UniRef90\_X1FCF7  
UniRef90\_Q1G904  
UniRef90\_M7N9W8  
UniRef90\_B2V7M2  
UniRef90\_UPI00047BCE3C  
UniRef90\_H6L453  
UniRef90\_UPI0003765510  
UniRef90\_D1Y5S2  
UniRef90\_UPI0003FB07BC  
UniRef90\_UPI000425E61D  
UniRef90\_D5UIZ0  
UniRef90\_E4UDS0  
UniRef90\_D4MJK9  
UniRef90\_H1X5J1  
UniRef90\_C0QWX4  
UniRef90\_R6WL51  
UniRef90\_UPI000382691A  
UniRef90\_E0XYR8  
UniRef90\_E0NP00  
UniRef90\_UPI0004728F0B  
UniRef90\_G0IX94  
UniRef90\_UPI0002D94D72  
UniRef90\_V1CLS7

1 10 20 30 40

A K K E K L V D D F A A E L K K E A K A L L V I D Y L G L L T V E E V T N L L  
K S A L V E E V A A K L K G A Q S A V V V E Y R G L L S T V A E E S M T E N L L  
T I A V K A Q Q V A E D E V A A D K F K S N A T S A V V V A D V R G L L T D V K E S A M A L L  
P E K V A Q I V D E V M K E K L S S E G V I L L S F N K L L T D V K E S A M A L L  
M A T K A F K S E K I V D A V T K A K A E K A Q V A I L L T E Y K G Y T T V V E E F T N L L  
S R N K K E E T V E A V K R E H L E N A H L L A A I N Y R G L L T T E V K N K I F Q D L L  
M D R S Q K A T V V D E I L R E L F N N A A A G V L V D Y R G L L T T E V K N K I F Q D L L  
U N I R E F 9 0 \_ U P I 0 0 0 2 6 2 7 7 B E  
M K L S E K K N I A E N F H E K L S R A K V V I I T D Y K G L L N E V A E I V S D L L  
U N I R E F 9 0 \_ E 1 Y G 9 8  
M T K E E K A V I L G E L I S E K F A A T P Y F Y I T D T A G G L L T V A E E D T N A F L L  
U N I R E F 9 0 \_ U P I 0 0 0 4 0 4 C C C E  
N R Q I K E A K V L E L I K E K L E A K A Q G V V L L A D Y R G L L T V A E E D T N A F L L  
U N I R E F 9 0 \_ R 6 K V 6 2  
A K K A E T V K Q T T D M L N A A Q S A I V V V D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ A 5 V I A 9  
E M K E K V V A E I T T E K F E K S V A V V V D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ A 6 T W J 2  
Q A K Q D A V D V V T G K L Q N S V S T V V V A D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ W 4 E E V 7  
K V S A I D E L T Q S F G V A P D F I F T D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ F 8 E X 1 4  
L S E K K A T V A E L T E K L K T A S S G V L V D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ U 2 A Q R 4  
M P N K R N V E L L A T L K E N L E R A Q S F F L V N Y Q G L L T V A E E V T D L L  
U N I R E F 9 0 \_ Q 7 2 G S 1  
N R I A K Q E K V A E I K E K L V N S K G L V L A Q Y Q G N T A E A D T A L L  
U N I R E F 9 0 \_ D 9 S X B 0  
M T R E E K A V I I D E L S Q K F A N T P Y F Y I T N A A G L M S V V A E E V T D L L  
U N I R E F 9 0 \_ C 6 V T 1 6  
M A R P D K A A A V L E I K L F A N S A A V L T E Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ D 4 Y Q E 2  
L E A K K A L V A E I A E R L K A S V S G I V V N Y E G L I T V A E E V T D L L  
U N I R E F 9 0 \_ R 7 N S 2 3  
N R Q L K E K Q V A E I K E K M G K T E A M I M V K Y Q G L L N V E E D D T K L L  
U N I R E F 9 0 \_ F 0 K 7 1 6  
L N L E R K K Q M V A D L S E R I K L E A K A G V V V D Y K G I L N V E E D D T K L L  
U N I R E F 9 0 \_ R 6 R F Z 6  
L N L D D K K A V V A E V S A Q V A G A S T I V V A E Y R G I T V G D L T K L L  
U N I R E F 9 0 \_ V 5 P K V 6  
K T T A I A E L K E D F S A A P D F I F T D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ F 5 Y I 7 0  
M A R A D K Q T A V A E I A D E F S A S S G V V L T E Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ E 9 V 1 A 9  
M P N V K N Q E T V K S L T E K F K D M E G L I L T E Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ B 1 G Z 7 3  
N I A K K A R A V D I L A E K M F D S A N A S L V V V D S R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ E 4 L 4 P 4  
M A V N D S K R A A V A E L V K E K F D S A N A T V L T D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ U P I 0 0 0 4 0 B F 5 7 B  
T R K N K E N T V S K I L E E L N N S S A V F L V D L K G M N V K E S V I E L L  
U N I R E F 9 0 \_ M 1 E 6 U 7  
M K T R K H K E Q Q I A Q E L K E K F Q K A P L V I L T N F Q G M T V A E E V T D L L  
U N I R E F 9 0 \_ E 8 T 5 0 7  
K Q A Q V D D I A D K M S R A E S V I I V D Y L G L L T V A E E V T D L L  
U N I R E F 9 0 \_ V 5 T 7 G 3  
A A K Q L V V D E I K A K I E G S Q S V T L V G F N G M D V K E I T E L L  
U N I R E F 9 0 \_ C 2 B I H 4  
T L E N K Q Q I V G E L K G L A E T E L A L V L Q N S G L T V A E E V T D L L  
U N I R E F 9 0 \_ Q 3 A U J 7  
M E R A E K R V V V E S L Q A A F A G A G S I V V A Q N S G L T V A E E V T D L L  
U N I R E F 9 0 \_ A 0 A 0 2 4 K J Q 9  
M A N P E K V E A V A E I V D L F R A S D A A V I T E Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ C 7 M F H 1  
M L K L S Q K K D L V A R L A T Q L T E A Q I T L I D Y K G L L D V A E I T D L L  
U N I R E F 9 0 \_ S 0 G 7 R 2  
E D K Q Q L V S Q L E S Q L T E T Q M V M V I D Y G G L L T V A E E V T D L L  
U N I R E F 9 0 \_ K 9 S F 8 4  
K K Q A E V D A V V E S L K S A K S V V V I D Y L G L L T V A E E V T D L L  
U N I R E F 9 0 \_ U P I 0 0 0 2 4 9 1 3 6 2  
N I A K K Q E I A S A V A K R M E E A G S L L V V D Y L G L L T V A E E V T D L L  
U N I R E F 9 0 \_ U P I 0 0 0 3 B 4 3 1 7 0  
M P S K R N V E L L A R V L K E T L Q A A A G S F F L V N Y Q G L L T V A E E V T D L L  
U N I R E F 9 0 \_ F 2 N L 0 7  
M N R N Q K T D L V N S L H N T F D A A S V I I V N C I G L L T V A E E V T D L L  
U N I R E F 9 0 \_ U P I 0 0 0 3 8 0 F B 0 9  
M P A Q S K I N M L E K V N K S I E A S K G V F E L I D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ G 5 F 2 L 7  
R T D K A N A V A E E L T E N F Q S S A T V L T E Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ U P I 0 0 0 3 6 3 4 2 3 5  
M S F Q A K Q A M V A E E V S D V A N R A H S A V L A E Y R G L L T A G Q M D A L L  
U N I R E F 9 0 \_ U 2 E 2 F 2  
L A L E G K K A L V A E V S E A A K D A L S V V V A D S R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ E 1 V 5 J 8  
L R L E D K K E I V A A V N E A A S T A Y S A V V A D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ A 8 M L D 0  
L R L E D K K E I V A A V N E A A S T A Y S A V V A D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ U P I 0 0 0 4 7 D C 3 5 C  
L N L S N K K E F V A D F A V C L K E T Q I S I L V D Y K G L L N V E E S M T Q L L  
U N I R E F 9 0 \_ C 0 Q 9 Y 1  
K P E K V A A D A D I V E K L K N A Q S V V I C S Y S G L T V E Q V T E I L L  
U N I R E F 9 0 \_ R 7 I 9 M 7  
M P N K H N V E N V A K I A E E L Q D I T A M W V I D Y R G L L T V K E V E T L L  
U N I R E F 9 0 \_ K 0 Y M I 0  
L N R S E K E A V I S D V T G L A A K A Q T L V M A E Y R G L L T V A D M T K L L  
U N I R E F 9 0 \_ Q 2 1 S F 5  
M K R D K K E Q I V Q D V A E K I D R S Q G I Y L T E F Q G L S V A K M A E L L  
U N I R E F 9 0 \_ A 1 B D 2 1  
M Q K A K K S E I I E E L Q Q K L E R A S F N V L A D F K G M K V A E F T Q L L  
U N I R E F 9 0 \_ F 2 N C N 9  
M D R A K K E A L V T S L H D V L K D T G V V V V A H N Y T A S K S A E L L  
U N I R E F 9 0 \_ V 5 S E M 7  
T L E S K K Q I V T S L E D L D N S E M A L V L D Y K G L L S T A S K S A E L L  
U N I R E F 9 0 \_ A 2 C 0 3 2  
L R L E G K K E I V E A V N Q A A S T A F A A V V A D Y R G L L T V G Q L T Q L L  
U N I R E F 9 0 \_ U P I 0 0 0 3 B 7 4 0 2 1  
M P T Q T K D E V A H L K E K L E N A I S L V L A D Y R G L L T A N E M V E L L  
U N I R E F 9 0 \_ X 0 V W G 6  
L N L E D K K A I V A E I N E V A K N A L S A V V A D S R G V L T V E Q I G E V L L  
U N I R E F 9 0 \_ E 0 W T T 2  
M P S Q A N V Q E L Q E L V K V L E G A Q A V F F C E Y K G L T V E Q I G E V L L  
U N I R E F 9 0 \_ I 4 B U B 5  
M D R L A K E Q V V N E M K G T M S N V M S V V V A D Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ D 0 L J E 3  
L Q R K K D E V V A L T E K L K A A T A G V V L D Y R G I L N V E E D D T K L L  
U N I R E F 9 0 \_ B 0 P F Z 5  
T L V N K Q A T V A T L K Q E L S E A T M V A V I N Y Q G L T V A E E I T D L L  
U N I R E F 9 0 \_ K 9 U P A 0  
L E Q K K A L V A E L T E R L Q S A A G L V V K Y E G L T V A E E D D T K L L  
U N I R E F 9 0 \_ R 6 U L K 9  
M P Q Q Y K D K V A E I E R V E A S A G L Y V M S Y N G L T V K Q A Q E L L  
U N I R E F 9 0 \_ R 6 Y Y A 6  
M K R E E K A E V V Q E L S A S F A K A K L A V L T D Y R G L L T V S S M Q Q L L  
U N I R E F 9 0 \_ D 6 Z 3 N 1  
M D R N E K T E V V S A L H A S L K E M G V V V V T R N L G M S V A Q S T Q L L  
U N I R E F 9 0 \_ G 2 I T S 4  
M A N Q E K I E A V A L L K G K L E T R N N F I L A C Y S G L T V A E E I T G L L  
U N I R E F 9 0 \_ Q 7 2 U B 0  
V V A E Y R G L L T V A E E V T D L L  
U N I R E F 9 0 \_ F 9 Z M 3 4  
L S K D S K K K I V A E D L T E K L Q N S V S F V L V D Y K G L L T V A E E V T D L L  
U N I R E F 9 0 \_ R 5 V 0 R 4  
L S K D S K K K I V A E D L T E K L Q N S V S F V L V D Y K G L L T V A E E V T D L L  
U N I R E F 9 0 \_ X 1 F C F 7  
M T R E E K A Q I L E D L K Q K F R S N T H F Y I T D A T G M T V A E E V N A L L  
U N I R E F 9 0 \_ Q 1 G 9 0 4  
Q K K S Q L V A D L K Q K I E S A P V V I L L D F K G V D A N S V A D F L L  
U N I R E F 9 0 \_ M 7 N 9 W 8  
R K L K E T K V S E I K E K L Q K A Q A V I M V K Y Q G L T V G E D T D L L  
U N I R E F 9 0 \_ B 2 V 7 M 2  
M T R E Q K T A V I E E L A S Q F Q D S K Y F Y I T D T S E L T V A E K T N Q D L L  
U N I R E F 9 0 \_ U P I 0 0 0 4 7 B C E 3 C  
M D R A K K E K V V E E L G Q I F E G S G V V V V S H Y A G L T V A E D M Q D L L  
U N I R E F 9 0 \_ H 6 L 4 5 3  
M P A Q Y K V D Q V A E L K E L F E N G A E A V F V A E Y R G L L T V A Q A S A L L  
U N I R E F 9 0 \_ U P I 0 0 0 3 7 6 5 5 1 0  
E A K Q R E V E A I A T K L R E S A S S V V A D Y R G L L N V A Q V N T E L L  
U N I R E F 9 0 \_ D 1 Y 5 S 2  
M T R D E K K V I D S L T E K L R E S A S S V V A D Y R G L L T V A Q V N T E L L  
U N I R E F 9 0 \_ U P I 0 0 0 4 2 5 E 6 1 D  
M A R P D K A A A V A E L A E R F R G S N A A V L T E Y R G L L T V A Q L R S L L  
U N I R E F 9 0 \_ D 5 U I Z 0  
M N N Q E K S V E I S E L S D I F S S S S I V V A D Y K G L L N V A Q M K D V L L  
U N I R E F 9 0 \_ E 4 U D S 0  
L Q V K Q N Y V A E L A E K L K K S A C G V L V D Y S G I T V A D D T K L L  
U N I R E F 9 0 \_ D 4 M J K 9  
T I A L K A Q Q V E E V A D K F K S A A S A V V V D V R G L L T V A Q A N N L L  
U N I R E F 9 0 \_ H 1 X 5 J 1  
M P N K K N I E T V S L L K E T M G G C A G L V F F D Y R G V T V A Q L T E L L  
U N I R E F 9 0 \_ C 0 Q W X 4  
L E Q K K K I V E D I V S K I K N S C A G V L V N Y Q G I T V A E D D T K L L  
U N I R E F 9 0 \_ R 6 W L 5 1  
A E L T D A F R N S N A A V L T E Y R G L L T V A Q L K A L L  
U N I R E F 9 0 \_ U P I 0 0 0 3 8 2 6 9 1 A  
L R I E D K Q R V V Q E L N A T A N S S I A G A A D Y S G L L N V T E I T Q L L  
U N I R E F 9 0 \_ E 0 X Y R 8  
V L M A Y S H G L N V T E I T Q L L  
U N I R E F 9 0 \_ E 0 N P 0 0  
L R L D G K K A I V A E V N E S A K A A L S V V V A D S R G V T V A E A M T D L L  
U N I R E F 9 0 \_ U P I 0 0 0 4 7 2 8 F 0 B  
M T R E N K K S L I D E L T E K L K S T P H F Y I S D A S G F S V A Q L V N G F L L  
U N I R E F 9 0 \_ G 0 I X 9 4  
P D K D A V A E E M T D K F R N S S A T V V T A Y T G L S V A Q L Q E L L  
U N I R E F 9 0 \_ U P I 0 0 0 2 D 9 4 D 7 2  
Q A K Q V I I D E I T E K K L S R A K S A V V I D Y I G I N V E Q A D K M



UniRef90\_Q74L09  
UniRef90\_R5RV23  
UniRef90\_C5R8V7  
UniRef90\_E4L972  
UniRef90\_R5DP98  
UniRef90\_Q9FY50  
UniRef90\_UPI00026277BE  
UniRef90\_E1YG98  
UniRef90\_UPI000404CCCE  
UniRef90\_R6KV62  
UniRef90\_A5VIA9  
UniRef90\_A6TWJ2  
UniRef90\_W4EEV7  
UniRef90\_F8EX14  
UniRef90\_U2AQR4  
UniRef90\_Q7ZG51  
UniRef90\_D9SXB0  
UniRef90\_C6VT16  
UniRef90\_D4YQE2  
UniRef90\_R7NS23  
UniRef90\_F0K716  
UniRef90\_R6RFZ6  
UniRef90\_V5PKV6  
UniRef90\_F5YI70  
UniRef90\_E9V1A9  
UniRef90\_B1GZ73  
UniRef90\_E4L4P4  
UniRef90\_UPI00040BF57B  
UniRef90\_M1E6U7  
UniRef90\_E8T507  
UniRef90\_V5T7G3  
UniRef90\_C2BIH4  
UniRef90\_Q3AUJ7  
UniRef90\_A0A024KJQ9  
UniRef90\_C7MFH1  
UniRef90\_S0G7R2  
UniRef90\_K9SF84  
UniRef90\_UPI0002491362  
UniRef90\_UPI0003B43170  
UniRef90\_F2NL07  
UniRef90\_UPI000380FB09  
UniRef90\_G5F2L7  
UniRef90\_UPI0003634235  
UniRef90\_U2E2F2  
UniRef90\_E1V5J8  
UniRef90\_A8MLD0  
UniRef90\_UPI00047DC35C  
UniRef90\_C0Q9Y1  
UniRef90\_R7I9M7  
UniRef90\_K0YMI0  
UniRef90\_Q21SF5  
UniRef90\_A1BD21  
UniRef90\_F2NCN9  
UniRef90\_V5SEM7  
UniRef90\_A2C032  
UniRef90\_UPI0003B74021  
UniRef90\_X0VWG6  
UniRef90\_E0WTT2  
UniRef90\_I4BUB5  
UniRef90\_D0LJE3  
UniRef90\_B0PFE5  
UniRef90\_K9UPA0  
UniRef90\_R6ULK9  
UniRef90\_R6YYA6  
UniRef90\_D6Z3N1  
UniRef90\_G2ITS4  
UniRef90\_Q72UB0  
UniRef90\_F9ZM34  
UniRef90\_R5V0R4  
UniRef90\_X1FCF7  
UniRef90\_Q1G904  
UniRef90\_M7N9W8  
UniRef90\_B2V7M2  
UniRef90\_UPI00047BCE3C  
UniRef90\_H6L453  
UniRef90\_UPI0003765510  
UniRef90\_D1Y5S2  
UniRef90\_UPI0003FB07BC  
UniRef90\_UPI000425E61D  
UniRef90\_D5UIZ0  
UniRef90\_E4UDS0  
UniRef90\_D4MJK9  
UniRef90\_H1X5J1  
UniRef90\_C0QWX4  
UniRef90\_R6WL51  
UniRef90\_UPI000382691A  
UniRef90\_E0XYR8  
UniRef90\_E0NP00  
UniRef90\_UPI0004728F0B  
UniRef90\_G0IX94  
UniRef90\_UPI0002D94D72  
UniRef90\_V1CLS7

```
50 60 70 80
R K D L R D A N V K M K V T K N S Y L K R A A E K A G L E G L E D T F V G
UniRef90_Q74L09 R N N L R R A E D V E L K R V Y K N K S Y L Q R R A A T V A T E Y E E G L E N D A E L T G
UniRef90_R5RV23 R A E L R R G E G V E L R V V I K N K L V L T R A A A N A A D L S E T E L N D D L L F A G G
UniRef90_C5R8V7 R R K F F E H D G G D Y M V T K N T L A K I A L K G T D F E V L A K D S L T G
UniRef90_E4L972 R R N I Q K D G G K L I V A K N T L A V F K A L E G T D F E V L A K D S L T G
UniRef90_R5DP98 R R T L P D T T N S A S T M K V L K N T L A R J A S E G T K W E A L K E P C M K G
UniRef90_Q9FY50 R Q Q L R U P I 0 0 0 2 6 2 7 7 B E P F I G V L E G T O T G W E G V L E K D F V D
UniRef90_E1YG98 R A K L R E F Q R G V E Y R V V K N T L L E R A S E N T E A F T V I K D K F K G
UniRef90_UPI000404CCCE R R L C F Q R G L E Y R I V V K N T L I A K A L E T T G Y T P F N D T V L E G
UniRef90_R6KV62 R K S L R R E A G I Q M S V I K N K L L D R A V E G T D Y E E D L R S T F V G
UniRef90_A5VIA9 R K Q L R R E A G V E Y K V V K N T M M R R A A R A N A G M E E M V A D L V G
UniRef90_A6TWJ2 R A K F R E A G V E F Q V L K N T L L R R A T A A A E L T D L D A V L T G
UniRef90_W4EEV7 R K Q L R R A K D A T F K V V K N N F A R I A F E Q L S A P N V E S Y L T G
UniRef90_F8EX14 R A E C R K N E L D N G A R L F V A K N T L V R F A I N N V G L E E M D S V L N G
UniRef90_U2AQR4 R Q A L K Q R G V E Y K I Y K N T L I V A L A K E A G L E S A F N A D N L K K G
UniRef90_Q7ZG51 R K A C R E A F E R N G V E Y R V V K N T L I K K A L E D T D Y E S A F N A D N L K K G
UniRef90_D9SXB0 R R L C F E R G G V E Y K V V K N T L L T A I A A K E A G L E S A F N A D N L K K G
UniRef90_C6VT16 R V A L R E A C D V K Y T V V K N T M L G R A C E E A G L E A G L E D V L E G
UniRef90_D4YQE2 R K E L R E A C G V E Y R V V K N S L A V R A I N E L G Y E A G I A Q Y L E G
UniRef90_R7NS23 R K A L R R E A G V E Y T V V K N S L A V R A I N E L G Y E A G I A Q Y L E G
UniRef90_F0K716 R K E L R R E A G V E Y T V V K N S L A V R A I N E L G Y E A G I A Q Y L E G
UniRef90_R6RFZ6 R A N A R Q Q G V Y L R V V K N T L A R R A V E N T P F A D L A E Q M T G
UniRef90_V5PKV6 R K L L R A K D A K Y A V V K N N F A R I A F E Q L S A P G E V S A Y L T
UniRef90_F5YI70 R R S L R A K G E S A N Y A V V K N T L A K I A A S Q S G I E G F D D L L T G
UniRef90_E9V1A9 R K L K L R P F S G V E F K V I K N S L S R A A V K A G L E G M E D E V F V G
UniRef90_B1GZ73 R R S L R E S G D A Q Y S V A K N T M I K L A A A E A G V E G L D E H L N G
UniRef90_E4L4P4 R R T L R E A S S K L R I V K N T L L G I A L D Q I G K K S L V K D L L F
UniRef90_UPI00040BF57B R R K L R R E A D A E Y K V V K N T L M R Y A Y P G T P V E Q I K D A F V G
UniRef90_M1E6U7 R R Q L H D A G I E M K V V K N S L L Q R A A K K A G Y D E L D N T F A G
UniRef90_E8T507 R N K F R E K V T D A E Y K V V K N T M M R F A F Q E L G Y D E L I E D L K G
UniRef90_V5T7G3 R D R L R D V T N G S V C K V V K N T L M R R A I D D S S W A N L D S L L T G
UniRef90_C2BIH4 R K Q V R D V V G S K V V A K N R L L A K I A L K E T D T A D I S S L L F T G
UniRef90_Q3AUJ7 R R S L R D G S E T T V K A V V K N T L T E I A A R E A G I D V F D G T L S G
UniRef90_A0A024KJQ9 R Y E L R Q A S G A S M E V V K N T L N L A S Q N T D A A L M T D F Y K G
UniRef90_C7MFH1 R R R L R R D S E T T C M V V K N T L M R I A I A R H E W Q P M G E Y L K G
UniRef90_S0G7R2 R S E L R R E Q G A S M Q V I K N T I L R R A A D A A G I E G L E D L F V G
UniRef90_K9SF84 R K Q L R R E A G I E M S V I K N T I L R R A A K E A G V E G L D E S F A G
UniRef90_UPI0002491362 R K A L K E K G A R L L V A K N T L I R R I A L Q E L G L P E L D G A L A G
UniRef90_UPI0003B43170 R T R M R N E K C S F K V T K N R I A R I A L K D T K Y Q H M D P M F T G
UniRef90_F2NL07 R R A L R E A G A T M K V A K N T I V N I A L K E A G L P D V S D E K L V G
UniRef90_UPI000380FB09 R R S M G G A Y L K V V K N N L A K L A L K G T D Y E C M T D A F V G
UniRef90_G5F2L7 R V N A R E N G V Q L R V V R N T L A R R A L E G T Q W E C L N E S F V G
UniRef90_UPI0003634235 R K Q C A R E K G V E Y K V V K N T L T R R A A E N A G M K E L N V G E L V G
UniRef90_U2E2F2 R V E A R N A G V Y L R V V R N T L A K R A F E G T Q F D V L N E T L T G
UniRef90_U2E2F2 R S E L R R K E G V Q L A V V K N T L L G M A S E G T D T A L M K D F F K G
UniRef90_E1V5J8 R K Q C A R E K N D A A Y C V L K N R L V L R A L N E V G I T G L D D D L N G
UniRef90_A8MLD0 R V E A R N A D A K M G V Y K N T L M R L A L E N A E L P E L G D I L S G
UniRef90_UPI00047DC35C R S E L R R K S N G V E S L S V V K N T L A R R A V T G S G F E V V S D L M T G
UniRef90_C0Q9Y1 R K Q C A R E K R N E F R K A G G E L I V A K N T L L K L A A G N T E A A A L E S F L V G
UniRef90_R7I9M7 R R A V R E A G G S V K V A K N K L V K L A L K D T P A E G I A D L F T G
UniRef90_K0YMI0 R S T A R S D G V C R K V T K N T L M R Q A I K K N S W T G L D S L L T G
UniRef90_Q21SF5 R N E F R K A G G E L I V A K N T L L K L A A G N T E A A A L E S F L V G
UniRef90_A1BD21 R R E L K N A G G S V K V A K N K L V K L A L K D T P A E G I A D L F T G
UniRef90_F2NCN9 R K R V K D A S D G V C R K V T K N T L M R Q A I K K N S W T G L D S L L T G
UniRef90_V5SEM7 R S R L Q Q S V Y L R V V R N T L L R R A L A G T P F N V L D D S L V G
UniRef90_A2C032 R S Q A R E K Q R E K F T K Q G L E Y R V V K D T L A R R A A D E A G I E G L A D S L F A G
UniRef90_UPI0003B74021 R E K S A R E T G V Y M R V V R N T L M R R V V E D T E F E C L K D S F V G
UniRef90_X0VWG6 R N K I R E A K G N M R V A K N T L F K L A L K E H G L P V P E E V F S G
UniRef90_E0WTT2 R E E F R K A G C G E Y R V V K N T L L K I A V K G S D V E P L S S L S G
UniRef90_I4BUB5 R K E L R K A G V E Y S V K N T M L R F A A K Q V G Y E A L D S V L E G
UniRef90_D0LJE3 R R R I R P K G G L C T V T K N T L M G K A I E D A N W Q A L E P L L T G
UniRef90_B0PFE5 R K E L R E A G V E K Y T V V K N T L L S R A A D N A G L A E M K E V L E G
UniRef90_K9UPA0 R H A L R E A G A E M K T V Y K N N L V R A L K N Q E Q P E I D D I L A G
UniRef90_R6ULK9 L R R E L R D I V A E L K V A K N T L L N R A I Q G T P F E P L S G H L K G
UniRef90_R6YYA6 R Q K M R E V G A T Y K V T K N R L A K I A I Q D T D Y A A L S D M L V G
UniRef90_D6Z3N1 R A Q L R R K F E G S E M K V T K N N L F L R A L K E S G A H K D K N F G S E
UniRef90_G2ITS4 R A A G R K Q G V L T I Q V V K N S L L R R A L K D S P F L V M D P L L K G
UniRef90_Q72UB0 R K E L R E A G V S Y T V E K N S M L R F A L K E M G I V D S F E D V L H
UniRef90_F9ZM34 R D E L K E K K V I F K V V K N S L I E R V S E E L D I K D L I K D L V G
UniRef90_R5V0R4 R A E L R E K S N A K M K V V K N T Y L R R A A A Q A G L D D L A P V F V G
UniRef90_X1FCF7 R R L C F Q S G L E Y R V I K N T F I A K A L E D A D F S G L N E K V L K
UniRef90_Q1G904 R K T L R K S E N A E L K V V K N T L L Y R A C N G T Q L Y D K I D I F K E
UniRef90_M7N9W8 R K Q L R E S G V E Y K V V K N S L V T R A A N E L G L E G L V E F L E G
UniRef90_B2V7M2 R R R K C F E S D L E M K V V K N T L I R K A L E R A A D A N E E D Y T E
UniRef90_UPI00047BCE3C R R A R A A A D A S V R V V K N R L A K I A L E G K P C E S M A D L L S G
UniRef90_H6L453 R K A I R A A G G Q A K V A R N R L A E I A L D E V G L A K D V K M M K
UniRef90_UPI0003765510 R K A L R E A G V E F Q V V K N S L V S R A A A S I E L S E L D S V L T G
UniRef90_D1Y5S2 R R T C Y E K G V E Y K V V K N T L I A K A L E N A D Y S Q L A N G A L K
UniRef90_UPI0003FB07BC R K A L R E A G G N A N Y A V V K N T L T A I A A K E A G L E G L D D A L A G
UniRef90_UPI000425E61D R A R L R E A G G G V R I A K N T L V K I A R D L G F V V D F A D L V
UniRef90_D5UIZ0 R K E L R E A G I D Y V R V V K N T L L K R A A E M A G V E G I E D V L E G
UniRef90_E4UDS0 R S E L R R S E G V E L K V I K N K I L T R A A E A A E L T D L N D L F V G
UniRef90_D4MJK9 R R E L A K T S S S N G M K I C K N S L V D I A L K E L G R E V K D E M F V N
UniRef90_H1X5J1 R A E L R R K N G V E Y A V I K N T Y L S K A F D Q T G L E G K D G L F G
UniRef90_C0QWX4 R R S L R K S G N A E Y H V V K N T L T K I A A K E A G L E G D A F E S L L A G
UniRef90_R6WL51 R T K A R E S G Q V Y L K V V K N T L S K R A F S D T S F E C L T E N L K G
UniRef90_UPI000382691A R D K F R E A E Q V D Y K V V K N T L M K R A F T E L G Y E G L T E L L K G
UniRef90_E0XYR8 R K Q A R E N G V E L R V V R N T L A R R A F E G T P Y E A L N D T F V G
UniRef90_E0NP00 R K L C F D K G L E Y K V V K N T L I K K A L E N A D Y S E F A D N A L K
UniRef90_UPI0004728F0B R S S L R E A G D N T Q Y R V V K N T L T K I A A N E A G I T E L D E F F V G
UniRef90_G0IX94 R K E L R E A D V D Y T V V K N T L F K R A I E G T E F E P L G E V L E G
UniRef90_UPI0002D94D72 R K E L R E A D V D Y T V V K N T L F K R A I E G T E F E P L G E V L E G
UniRef90_V1CLS7 R K E L R E A D V D Y T V V K N T L F K R A I E G T E F E P L G E V L E G
```

UniRef90\_Q74L09  
UniRef90\_R5RV23  
UniRef90\_C5R8V7  
UniRef90\_E4L972  
UniRef90\_R5DP98  
UniRef90\_Q9FY50  
UniRef90\_UPI00026277BE  
UniRef90\_E1YG98  
UniRef90\_UPI000404CCCE  
UniRef90\_R6KV62  
UniRef90\_A5VIA9  
UniRef90\_A6TWJ2  
UniRef90\_W4EEV7  
UniRef90\_F8EX14  
UniRef90\_U2AQR4  
UniRef90\_Q72GS1  
UniRef90\_D9SXB0  
UniRef90\_C6VT16  
UniRef90\_D4YQE2  
UniRef90\_R7NS23  
UniRef90\_F0K716  
UniRef90\_R6RFZ6  
UniRef90\_V5PKV6  
UniRef90\_F5YI70  
UniRef90\_E9V1A9  
UniRef90\_B1GZ73  
UniRef90\_E4L4P4  
UniRef90\_UPI00040BF57B  
UniRef90\_M1E6U7  
UniRef90\_E8T507  
UniRef90\_V5T7G3  
UniRef90\_C2BIH4  
UniRef90\_Q3AUJ7  
UniRef90\_A0A024KJQ9  
UniRef90\_C7MFH1  
UniRef90\_S0G7R2  
UniRef90\_K9SF84  
UniRef90\_UPI0002491362  
UniRef90\_UPI0003B43170  
UniRef90\_F2NL07  
UniRef90\_UPI000380FB09  
UniRef90\_G5F2L7  
UniRef90\_UPI0003634235  
UniRef90\_U2E2F2  
UniRef90\_E1V5J8  
UniRef90\_A8MLD0  
UniRef90\_UPI00047DC35C  
UniRef90\_C0Q9Y1  
UniRef90\_R719M7  
UniRef90\_K0YM10  
UniRef90\_Q21SF5  
UniRef90\_A1BD21  
UniRef90\_F2NCN9  
UniRef90\_V5SEM7  
UniRef90\_A2C032  
UniRef90\_UPI0003B74021  
UniRef90\_X0VWG6  
UniRef90\_E0WTT2  
UniRef90\_I4BUB5  
UniRef90\_D0LJE3  
UniRef90\_B0PFZ5  
UniRef90\_K9UPA0  
UniRef90\_R6ULK9  
UniRef90\_R6YYA6  
UniRef90\_D6Z3N1  
UniRef90\_G2ITS4  
UniRef90\_Q72UB0  
UniRef90\_F9ZM34  
UniRef90\_R5V0R4  
UniRef90\_X1FCF7  
UniRef90\_Q1G904  
UniRef90\_M7N9W8  
UniRef90\_B2V7M2  
UniRef90\_UPI00047BCE3C  
UniRef90\_H6L453  
UniRef90\_UPI0003765510  
UniRef90\_D1Y5S2  
UniRef90\_UPI0003FB07BC  
UniRef90\_UPI000425E61D  
UniRef90\_D5UIZ0  
UniRef90\_E4UDS0  
UniRef90\_D4MJK9  
UniRef90\_H1X5J1  
UniRef90\_C0QWX4  
UniRef90\_R6WL51  
UniRef90\_UPI000382691A  
UniRef90\_E0XYR8  
UniRef90\_E0NP00  
UniRef90\_UPI0004728F0B  
UniRef90\_G0IX94  
UniRef90\_UPI0002D94D72  
UniRef90\_V1CLS7

90 100 110 120  
P T A V V Y T A D E D L I T E P A R I V S K Y E D D I D A L S I K G G M L E G  
P N A I A L I G A D N S D A V A P A R V I A K F A K D H E A L V I K A G A V V E G  
P S A V I A F S A D D A I A P A R V L K K Y A D D I D A L E I K I K A G G L I D D G  
P N G I A Y S S K E D G V A P A A A I K E F L K E T K S E A I J I K I K A G G I D D G  
P V A L A F G F E D Q V S P A K A V A K F I K D T K K G A L L K A G G A L D D G  
M N A W L F V Q T D E I P S A K T P Y R S F Q K F A K R K L E N N D F A G A V F E S D  
T C A L V Y S P S D D P V I G S Q A K I L T E F A K T N Q L V I K A G V L F S D  
P T A V A I S Y S D D P V I T P A K I L I K F S E T N K N L T I K A G M L N G E  
G M S G V I F S P E N E K T A P A K L I K D F K F A G K D K I R F K A G A S I E V D G  
P V S I A F S G Y E D P T A P A K I L K K F A K D H K K L E L K K G G I V D G  
P T A V A F S D E D P I A P A K I L K K F A D D H D A L E I L K G G F I E K  
P N A V A F S Y E D P V A P A R I L N D F A K N H K A L L E L K K V G V F E G  
P T A I A F S E T D A V V A A K I L N D F A K K N D A L N D F A K K N D A L N D  
P T A I A I S P K D A N E V A K I L I E F A K E V P A L K V K G G L V G K  
T T S L A L S H G D P I A P M R V I N K F A K Q F N G E K F T I K A G G F M D G  
Q Q G P S A V V F Y E D P V A A A K T V I Q F A K S N P K G I P Q V K K A G L V E G  
P I A T A F G Y E E A T A P A R I L N D F A K E H K S F E L K K A G V L V E G  
F S G V M F H P E S G K V P A Q L I K E F K F K K S G S D K L K F K G A S V E D T  
G P T A I A F I S G D V A D A K A L R D F A K A N P Q L V I K A G H L E R  
T T A I A T S E T S D Y T G A A R V L S K Y A K D I D T F A I K S G F L D G G  
P I A I A M S Y D D P T A P A R I L N D F A K T H K A L L E L V A G Y L Q D G  
T T A I A T A A D D Y V A S A R I L Q K F A D S H D N F S L K S G Y L D D G  
P L I Y G I S T D P V A A A K V L N D F S K G N D K L I L K A G S Y D D G  
G P T A V A I A P K D A N E V A K I L I D F V K D A P A L N V I K G G L V G A  
P T A I A F I K G D V V E A A K G L R D F A K A N P N L V I K G G Y L D D G  
G S T A L V I E S G D I V S P A K V V V E F A K T H A K L K I K S G F L E G G  
P S A V A F S N E D V I A P A K I L N D F A K T A D A L E I K G G T I E G  
P T A V A F I S G E S V D V A K K L K F A K D N Q N L V I K G G H V D G  
G P T A V L F V I Q G D I S A A A K V L K T S L K E F E K G T I K G G F I E N  
P T G I V F A F D D I V A A A L K D Y M A G D G K E E P K L K F K A A I V E G  
P T A V A F S Y E D P I V A A A K I I A K F A E T A D V L E I K K G M I V E G  
A N A L V F S K H D I V D G P I A V D Y R K E K E A N E E K L V I K S G I V E G  
T N A F V L V K G D V G A G V K A V R S F Q N E F K K S E T K G A L F E G  
P T I V A Y A E D P M A A P K I A A R K F A E K N Q K F A E T I L G G A M G A  
P T A I A F I K G E P V E P A K A L R D F A K T H E S L V V K S G Y F E G  
P T A V V T S A T D P V A P S K I L V D F A K D N E K L E I K A A A F G G  
A T A C L F V T S K G D M A S A V K A Y Q A F K K D T K K T E L R K G V F D G  
P T A T A Y S E E D P V A P A K V A A K Y A K D V E S V E I K G G M I E G  
P S A V V E G G E D V V A P A K L L V D F A K A N A E A L E I K A G V I E G  
P T A V V V F E D P V A A A K A L L D F A E K N E K K I P E A K A G L I Q G  
P T A I G F S D D P V M A A K I L V D Y A K N N E K L V I I G G G L E D  
T C A Y V F Y E N D P V D A A K V I K K E A E A L K K I E W I G A I A D G  
P T A L T F V S G D V V E A A K G L R D F A K A N P Q L V I K G G V F E G  
P V I L F G S L E D P G S A A R V V S D F R K D H D A L K V T A T S F N G  
P T L L A F S T D H P G A A A R L F K E F G K T E K F E V K A L A Y E G  
P N A I V F S Y D D P V A A A K V A S E F A K T H K N L E L K A G L V E G  
P T I I G L I S T S E D D M G A A R L F Q D F A K D N A K F E V K S A A F D G  
P N A L A T C K D D P V A P A R V L V K F A E D N D K L E I K A G T M N G  
P N A F V F S M K D A V S G P K I I N D Y I E K N K L E I K I T G G V L G T  
P S A F V F A T G D P V A S A K A I K D F A K K N E N L V I K G G M M D G  
P L I Y G F S E D A V A A A R V V A D F A K T N V K L V I R G G A Y G G  
S T T A V A F S G Y D D P L A P A K I I R K F S K T N E A L K F K M A S I D G  
P T A I A L I G Y Q N P V E I A K I L A K Y A K D K P D N F F L K A G R L N A  
P T V L A Y S K D P I A A A R I A V A K Y A K E N D K L V I L G G A M G A  
T N A F V L I K G D V G S A V K A V A Q F Q K E T Q K S E T K G G L F E G  
P T I I A L I S E N D M G A A A R I F Q D F Q K D N P K A P L A V K A L S I D G  
P V S I A F S Y E E P A V A F K L S E E C R K T Y A P R Y T L K G G V F E G  
P T L I A F S S E H P G A A A R L F K E F A Q A N A K F E V K V A A F Q G  
P N A F T I A Y G D P V E V A K A L T N Y V K A S K S E A L K L K A G L L G R  
P T A V M W S N E S P S A P A K L A L Q F A K E K K A F N I R G G Y F E G  
P T A L A V I S K D D P V A A A K I L T K Y A E D H K D K F T V K A G F V D G  
S S A F L L L K D D I G G S I K A Y H D F Q K A S K K T E L H G G V M E G  
T T A L A T S D E D Y V A A A R I L C K F A D S H D N F E V K T G Y M D S  
P L A Y I F Y K E P V S S A K V I L K D F A L K A K G V I E V K G G I S E G  
N T A L T L I S E V D P V A P A K V L T K F A K D N P K L V I K T A V L D G  
P V I G L A T S S D P V A A A K A A I D F A K T N D K L E I V I G G A M G T  
Y Q G P L A A I F A K D N L P A I A K V C K D F A K N N L I V K A G Y M D G  
P L V F A A S A D P V A M A K L I F T D F A K R N D K L I I T G G A L G S  
G T T A I A F S N D D Q T A A A R I L G K F A E S K P E T F N L K A G Y V D G  
C T A V A F S D E D G V A P A K L L K E Y S K K N K V E I K I K S G L V E G  
P S A V I Y T D D E D N T A P A R I A A D Y A K K F D V V E I K G G A L E G  
G F S G V L F S K E N A N A P A K L I Q D F Q K K H S K K L T F K G A S I D S D  
Q T A V I F S G Y E D V A P A K L L K E F L K G K E D A K V K G G L V E G  
P I A I A L I G Y E D P T A P A R I L N D F A K T H K A L E L K A G L V Q G  
Y S A L A V M F T E T G N V A P A K I L K E F R K E N D K P L L K A A F L I D S  
M T V L T Y S E D P V A A A K V I S E E F A K E Y E S F E I L G A G A M G E  
G P N L Y V V A A A N S P A V A K A I K D F S E V K E N A A F V I K G G V M G K  
P T A V A F S K N D A V A A A K I L S D F A K K N E A T R K L K G V V E G  
G F S G I I F S K E T S N L P A K V F R K K Q G K K E T R P V F K G A G I D S D  
P S A T A F V T G D P V I E A A K G L R D F A K A N P A L V I K G G V V D G  
G Q S L I V Y S V D P V I A S K I S V G F A N D N S Q F E I L G G I L E K  
T T A L A L A E E D I V T A P K I L Y K Q E E A S N G S F S I K K G F V D G  
P S A V A F S N E D A I A P S R I L K K F A D N I E A L E I K G G V V D G  
P T A V V F A K E D V P A A A K V I S E A S K N D K I K L K K G G Y M D G  
M T A F A T C E K D E V A A A K V I L E K Y A A D H E D F V L K G G Y V E G  
P S A T A F V N G D A V E V A K G L R D F A K A N P L L V I K G G V L D G  
P T I I A L I S K D D L A S P A R L I K T F S K D Y E Q L K T I S L V I D G  
P S S I A F S M A D V A P A A K I A S E F A K D H E A L E I K S G I L D G  
P T L I A F S N E H P G A G A R L F K F A K K Q D N F D V K A L A Y E G  
G F S G I L F S P E V G S L P A K V I L D Y R K A T N D K P L E K G A S T E G  
S S A V A F V T G D P V I E A A K G L R D F A K N P A L V I K G G I V D G  
P S A F A L I S Y E D V T A P A R V L N K S I K E F S K M E F K A A V V E G

UniRef90\_Q74L09  
UniRef90\_R5RV23  
UniRef90\_C5R8V7  
UniRef90\_E4L972  
UniRef90\_R5DP98  
UniRef90\_Q9FY50  
UniRef90\_UPI00026277BE  
UniRef90\_E1YG98  
UniRef90\_UPI000404CCCE  
UniRef90\_R6KV62  
UniRef90\_A5VIA9  
UniRef90\_A6TWJ2  
UniRef90\_W4EEV7  
UniRef90\_F8EX14  
UniRef90\_U2AQR4  
UniRef90\_Q72GS1  
UniRef90\_D9SXB0  
UniRef90\_C6VT16  
UniRef90\_D4YQE2  
UniRef90\_R7NS23  
UniRef90\_F0K716  
UniRef90\_R6RFZ6  
UniRef90\_V5PKV6  
UniRef90\_F5YI70  
UniRef90\_E9V1A9  
UniRef90\_B1GZ73  
UniRef90\_E4L4P4  
UniRef90\_UPI00040BF57B  
UniRef90\_M1E6U7  
UniRef90\_E8T507  
UniRef90\_V5T7G3  
UniRef90\_C2BIH4  
UniRef90\_Q3AUJ7  
UniRef90\_A0A024KJQ9  
UniRef90\_C7MFH1  
UniRef90\_S0G7R2  
UniRef90\_K9SF84  
UniRef90\_UPI0002491362  
UniRef90\_UPI0003B43170  
UniRef90\_F2NL07  
UniRef90\_UPI000380FB09  
UniRef90\_G5F2L7  
UniRef90\_UPI0003634235  
UniRef90\_U2E2F2  
UniRef90\_E1V5J8  
UniRef90\_A8MLD0  
UniRef90\_UPI00047DC35C  
UniRef90\_C0Q9Y1  
UniRef90\_R719M7  
UniRef90\_K0YMI0  
UniRef90\_Q21SF5  
UniRef90\_A1BD21  
UniRef90\_F2NCN9  
UniRef90\_V5SEM7  
UniRef90\_A2C032  
UniRef90\_UPI0003B74021  
UniRef90\_X0VWG6  
UniRef90\_E0WTT2  
UniRef90\_I4BUB5  
UniRef90\_D0LJE3  
UniRef90\_B0PFZ5  
UniRef90\_K9UPA0  
UniRef90\_R6ULK9  
UniRef90\_R6YYA6  
UniRef90\_D6Z3N1  
UniRef90\_G2ITS4  
UniRef90\_Q72UB0  
UniRef90\_F9ZM34  
UniRef90\_R5V0R4  
UniRef90\_X1FCF7  
UniRef90\_Q1G904  
UniRef90\_M7N9W8  
UniRef90\_B2V7M2  
UniRef90\_UPI00047BCE3C  
UniRef90\_H6L453  
UniRef90\_UPI0003765510  
UniRef90\_D1Y5S2  
UniRef90\_UPI0003FB07BC  
UniRef90\_UPI000425E61D  
UniRef90\_D5UIZ0  
UniRef90\_E4UDS0  
UniRef90\_D4MJK9  
UniRef90\_H1XJ1  
UniRef90\_C0QWX4  
UniRef90\_R6WL51  
UniRef90\_UPI000382691A  
UniRef90\_E0XYR8  
UniRef90\_E0NP00  
UniRef90\_UPI0004728F0B  
UniRef90\_G0IX94  
UniRef90\_UPI0002D94D72  
UniRef90\_V1CLS7

130 140 150 160  
K V A S Q E E I K K L A A L P G R E G L L S M L V S V L Q A P V R N F A Y A V K  
K L L T I V D E I V K K L A S K L L P N R D E G M Y S M L L G M L Q Q A P V V S R N F A Y A V V K  
N I V S I D E I V K K Y A S K L L P D R D E G M Y S M L L G M L Q Q A P V V S R N F A Y A V V K  
K V I S G V E A I K A K A S D L P S D R E D G L L G L L A G T L A A P P I T R G N F A Y A V L K N  
N L L S A K E A F E A L A K M P S S K E E E L L A K L L G S I N S P A S G L I V A R S I N  
K F Y A P D E K V L E T M P T S R A E E V L Y A K M L G A L Q A P A T I Q N L V T T L Q N  
S L L N A N G E V E A L A K L P S S R E E V L L S M L L S A M N G V P V S Q F V R T L N  
K A L D F N A I K A L A S T M P S S R E E V L L S M L L S A M N G V P V S Q F V R T L N  
G L F G E D Q V L A A L E N T I P S S K E E V L L G D I I G L L Q A P P A K N N F V S A L Q N  
I V Y D K T G V I E K L A T I P S S K E E V L L A K L L G S F K A P L A K N F A Y A V L N  
S V K T L D E I N E Y A N M P S G R E E L L S M L L A S A L Q D P M R K I A R A V K  
S F Y D E E K L K E L A S V P S R D E G L L A K L L S S F N A P M A N F A L I K  
K V I D A D Q L K A L A E L P S S R D E G L L S M L L S V L Q A P M A R N F A L A V K  
T V Y D A A Q I E A F S K L L P S G R E E L L A M L M S V M N A P A R N M V S A L N K  
K V L S L D E I K A L A E L P S S R D E G L L A Q V L G T M L A P I T M S E L A I V I K  
Q I L T A K D V I E A L A E L P S T M D E L L R A E L V G V L Q A P M A T S E L V G V L G  
T V Y D T E T I K K L A N I P S S R E E V L L A K L L G S F K A P I S N F  
A V F G E S Q L D V L I S L K S K E E V L L G E V I G L L Q K S P A K N V I G A L T  
A A L S A S E E V T K L A D L P S S R E E V L L A K A A G A L K G S P L Y K N F A Y A V L I  
E V I D M D K I V N A L A K L P S T R E E V L L A N V L G A F Q A P I A S F A R G V Q  
E V F D V N K V K M A L A S V P A K E E V L L A K L L G S F N A P I A S F A R G V Q  
E V I S M D K V K M A L A K L P S S R D E L L A K L L G V M Q A P V S G F A R V L A  
K V M D K A G V Q A L A S I P S S R D E L L A K L L G V M Q A P V S G F A R V L A  
S V Y D A K Q V E A F S D L P S G K L E L L S M L M S V M N G P A R N Q L A A A L N  
K A I D A A E V G K L A D L P S S R E E V L L A K L L G A F T A T M S Q A L Y A F N  
K F V N V A V I E Q L S A L P S S K E E V L L A R M L G S M N A T V T G F V N V L A  
A V S S K E D I M A L A T L P N R E E G M L S M L L S V L Q A P V L R N V A Y A V K  
V A I D A A Q F D A L A E M D N R E T T L A K L L A G A F N G V L A R N V A Y A V L D  
K A L S A I E V I E A L A D L P S P K E E V L L S K V L Y L L Q S P L S R F A G V L G E  
K V A D F N M I K K L A E L P S S R E E L L G Q L A F T L K Y S P V N A M A W S L  
K V Q T L D K I N E Y A H M P S H D E L L A T L A S M L Q A P V P V R K F A Y A V K  
N Y Q N G Q Q M M A I A T L P A T E E V L H S M L A N V L Q A P I R T L A G D L N  
K L L S Q D E T K A I A D L P S L D E Q L R A T L A G A I N A Q A P T K V I A S V V Q  
T A L D V E N V K A L A T M P S L D E Q L R A T L A G A M L Q A P G T R I A S V V Q  
K L L S Q E D V Q K L A D L P S S R E E V L L A K A A G A M K A S M S K A A A V F A  
K C L E P E E I K A L A K M P S S R E E L L A G K L V Y T L N A S A T S R V A I G L N  
R A L D A D A L E A V S K L P S S R E E L L A Q I A G V L N A V T S R V A I G L N  
K V A S L E E I Q N L A T L P S S R D E G L L S M L V S V L Q A P V R D F A L T V K  
R A T S L E E I D A I A K L P S S R E E G L L S M L S V L Q A P P R N T A L A V K  
Q L L S P E D I K A L A K L P T L D E L R R A E L V G T L Q A P M A E M V G V L G  
K P L S K S D V E A L A K L P S L N D L R G K L L G L L Q A P A S K L I R L N L  
K A L D A D E A K A Y S E D L A S R E E L M A K L V A Y V V A S N L S K I A A A L F Q  
K P L S A A E E S A L L E S R E E V L L A K L L A G A M K A N L S K I A A A L F Q  
Q L L P G E Q L D R L A K L P T T R D E A L S Q L M R V M K A P I D K L A R T R E  
E F I P A S D L D R L A T L P S T H D E A I A K L M S V M K  
V L Y K D A D Q L E E F A S I P S T R E V L I A K L L G S F K A P I S N F A Y L I K  
K L Y G A A E I G T I A N L P N L H T A L T M L A S V L Q A P V S K F G R L L T  
K V L S V D D I K A L A K M P S S R E E V L L A Q L L S A M N G V P T G L V R V L S  
E T L D V A A V K H L A T L P S S R E E V L L A K L L G C M T N T V A S F  
V A Y G A A E V E A I A A L P S S R E E L I A K L L G T I S N P M V K M V R V C N  
K A L D V N G V L K Q L A S L P S S K E E V L L A Q L L G L M Q S P I S R T A R V L A  
V V Y D A D S L P A L S E M L S K T E N I G R A A G L I N G V V S S V P A M V N  
S V L A K Q D I I D I S K L P D R E V L L A K L L G A L Q G V P T S L V S V L S  
N V L D A N G V K A L A D L P S L D E L R A T L I G L L N A P A T K I A R T I K  
K L L S Q D E I K A I A K L P S S K E E L L A M G Q I A G A L N S I T S K I A I G I N  
K L Y G A K E I D V V A K L P N R E E Q A L T M F A S V L Q A P I S K F A R L M T  
V L V L E D E V A R Y A T L P S S R E E L L A K L A M L L S S P M R A M A F M L Q  
E L I P G V Q I D R L A T L P T Y N E A I A R L M A T M K S  
R F I D A N G V I E R L A T L P A R D V L L A Q V L G T M E A P I R G L V T V L S  
Q V I D M D G V E R L S K M P G K Q E L Q A T L L M T F L Q A A P Q Q N F V R Q I I  
G V I D A A K V A E I G K L P N R E T L L S M L C S A L O G N I R G L A V A I I  
K I L T G A D V K A I G D L P S K E E Q L L M A Q V A G A L N S I T A S F A R A V  
D I L D M D K L Q S L A K L P T T R D V L L A N V L G A F Q A P A S F A R A V  
K A I T A E D A K A M A D L P T K D Q L L G Q I A G L I N G F A R D I A V C V N  
K E L T P D D L T A L S K L P G I N E L R A Q F L G L L Q A V P T G F V R V L N  
T L L N A E G V K A L A S M P S L D E Q M R A T L I G L L N A P A T K I A V S V I K  
S V L D A N G V K A I A G L P S S R E E Q L L A Q I A G G I N G A P A R T I A S V I N  
Q L M D A Q A L A Q L S K M P S S R E E L L A K L L M G T M Q A P I S T F V R T L N  
V A Y D T A G V M A L S K I P S S K D V L L A Q L V G S L Q K S P L Y R K L A A T L Q  
R F L N P E K I M E I A S L P S S K D V L L A Q M V A G V P P L Y S L V F V L Q  
Q V A T K E Q V E E L A A I P G R E E G L L S M L L S V L Q A P V V R N F A Y V V K  
L F I G A D Q L D T L S K L K S K E E L I G E I I G L L N A S P V I Q N N V L G A L N  
V F A D A K I D Y L A S L P S S K E E L V A Q L L A V L Q A P I T N L V R V L N  
E I Y N E A K I K E L A S V P S S K E E L I A K L L G S F Q A P I S K F A Y L I S  
S V Y D G D Q V E A L T Q K M S S R E E L I G E I I G L L E G A P A K N V M G A I Q  
N S L D R A G V T A V S K P S S R E E L I S S I V G C L G S P A A N V A G A I G  
N L L G L D N V K A L A S M P S S R E E L V A K A V G S I A S P L R G L V T V L S  
R F V D S A Q V K A L A E L P S S R E E G L L S M L L S V L Q A P I R N L A L A V K  
V F L G E N N L E V L S N L K S S K E E L L G D L I G L L Q A P A K N L V S A L Q  
R P V T A A D I T K L A D L E S R E E V L L A K A A G A M K A K L Y Q A A Y L F T  
D M L T Q D S I K K L A S L P N I I E E I R S G I L S A I Q S T A T R L V M L L S  
K G I S K D E V V A Y A S L P T K E T L L A Q L V F M L Q S P I Q K L A I A V S  
Q V A S V E D I N K Y A A L P D R D E G L L S M L L S T L Q A P V I R N F A Y A V K  
D L L N P A D V Q V V A N I P P R E E V L L S H L V T A L E S S I S L A N S L Q  
E V L D K N A L N E L A K T P S S K E E L V R M M S S M Q S L Y K L C Y G L Q  
K A L S A A D V T K L A D L E S S R E E V L L A K L A G A M V A S L S Q A A L F Q  
N T F P A S D L D R I A K L P T Q Q E A Y S I I A C L L Q A P I E K V V R T L K  
K V I S T D M I E S L A K L P S S R E E V L I A Q V L G G L N A P I Q G L A N V L S  
E L I P A E Q I D R L A S L P T L E E A L A K L L S V M K  
Q F L G E S H L E T L S K L K S S R E E L L G E V I S L L Q A P A T N V V S A L Q  
A Q Y S A D D L E T L A D V E S S R E E V L S K L A G G M K A S M A K A A T F E  
T F Y D A K G V Q A L A N I P G R D E L I A K F M G S I Q S P V S K A V R T F A

UniRef90\_Q74L09 A V A  
 UniRef90\_R5RV23 A V A E  
 UniRef90\_C5R8V7 A V  
 UniRef90\_E4L972 G N I Q N L A Y A L E A V R K Q K  
 UniRef90\_R5DP98 A V M A Q L T R A M A A V R D Q K  
 UniRef90\_Q9FY50 A P A R E V I M V L M A Y I K K  
 UniRef90\_UPI00026277BE E V P A K F V R T L T A V A E  
 UniRef90\_E1YG98 E I P K K L L Y V L Q A I K E Q K  
 UniRef90\_UPI000404CCCE S S G G K L A G I L K T L S E R E  
 UniRef90\_R6KV62 A I K D K  
 UniRef90\_A5VIA9 A I A D K  
 UniRef90\_A6TWJ2 A I A D K  
 UniRef90\_W4EEV7 A V A E K  
 UniRef90\_F8EX14 D I N A R L V R T I K A V G D K K  
 UniRef90\_U2AQR4 A I C E Q  
 UniRef90\_Q72GS1 G V A R E L V G I L E A Y A E K K  
 UniRef90\_D9SXB0 A Y L L K A I E E K K  
 UniRef90\_C6VT16 S G G Q N L A G I L K T L S E K E  
 UniRef90\_D4YQE2 A P L V K T V R T V D A L R A K Q  
 UniRef90\_R7NS23 A I V D K  
 UniRef90\_F0K7I6 A I K D K  
 UniRef90\_R6RFZ6 A I V D K  
 UniRef90\_V5PKV6 A V A E K  
 UniRef90\_F5YI70 D V N A R L V R T I K A V G D K K  
 UniRef90\_E9V1A9 A L P S K  
 UniRef90\_B1GZ73 A N I R G L V T V L D A V A K K Q  
 UniRef90\_E4L4P4 A V A E N  
 UniRef90\_UPI00040BF57B A P T A S V A R L A A A L E E K K  
 UniRef90\_M1E6U7 A V P R D F M Y A L Q A L R D K K  
 UniRef90\_E8T507 N L F T K L V T V L E N V K A E K  
 UniRef90\_V5T7G3 A I A E K  
 UniRef90\_C2BIH4 N T I S K L A I A L N E V A N K K  
 UniRef90\_Q3AUJ7 E V P T G M A R A L K Q H A E  
 UniRef90\_A0A024KJQ9 A P G G Q I A R V L A A Y A D K  
 UniRef90\_C7MFH1 A P L S K T A R T V D A L R A K Q  
 UniRef90\_S0G7R2 G V P R G L V N V L N G L K D Q K  
 UniRef90\_K9SF84 Q V P T S L A R A L N  
 UniRef90\_UPI0002491362 A I A D K  
 UniRef90\_UPI0003B43170 A V A E  
 UniRef90\_F2NL07 G A A R E F V G I L D A Y V K K Q  
 UniRef90\_UPI000380FB09 E P A S Q V L R L I S Q K S K  
 UniRef90\_G5F2L7 G P A R G L A T A L Q A V V D Q K  
 UniRef90\_UPI0003634235 A P L A Q A V R T V A A L E D K R  
 UniRef90\_U2E2F2 E P V A K L S R T V A A V R D E K  
 UniRef90\_E1V5J8 A S A G K L V R T L A A L R D Q K  
 UniRef90\_A8MLD0 A I A D K  
 UniRef90\_UPI00047DC35C A L K E K  
 UniRef90\_C0Q9Y1 G V P R A F M T V L S A I S D Q K  
 UniRef90\_R7I9M7 V R V V D A I R K Q K  
 UniRef90\_K0YMI0 G P M E Y F A R A V S A I A D Q K  
 UniRef90\_Q21SF5 A I A E K  
 UniRef90\_A1BD21 A V A R N L V S V L D Q I A K Q K  
 UniRef90\_F2NCN9 G I I R Q F L Y T L Q A I A D K Q  
 UniRef90\_V5SEM7 E P G A Q L A R V V H A K A  
 UniRef90\_A2C032 E V P S G L A R S L K Q H S E  
 UniRef90\_UPI0003B74021 S V K E Q  
 UniRef90\_X0VVG6 A K I R E L A C V I S E V R K Q R  
 UniRef90\_E0WTT2 A S A G K L V R T L A A L R D Q R  
 UniRef90\_I4BUB5 G T V R G L V T C L D Q I A K E K  
 UniRef90\_D0LJE3 A A P Q N F A Y L I D A R K  
 UniRef90\_B0PFZ5 A I A E K  
 UniRef90\_K9UPA0 E V P A S I A R S L Q A H V D K E  
 UniRef90\_R6ULK9 A I V D K  
 UniRef90\_R6YYA6 G V S S G L A R T V Q Q I S E Q K  
 UniRef90\_D6Z3N1 G V P Q K A V Y L L Q A I K E Q K  
 UniRef90\_G2ITS4 E P A A Q L A R V F N A Y A T K  
 UniRef90\_Q72UB0 Q I I A S L A R A I Q A T A E K  
 UniRef90\_F9ZM34 E V P G R F V R T L A A V R D Q K  
 UniRef90\_R5V0R4 A L A D K  
 UniRef90\_X1FCF7 G P L K G L I Y T L E A I K K Q K  
 UniRef90\_Q1G904 A V A E S  
 UniRef90\_M7N9W8 S G K H I I A G V V K T L S E K E  
 UniRef90\_B2V7M2 A L P Q K T V L V L D A I R Q E K  
 UniRef90\_UPI00047BCE3C A I  
 UniRef90\_H6L453 S G G N T I T G L L K A L E E R E  
 UniRef90\_UPI0003765510 A P A S N I A S I L S T V E E R  
 UniRef90\_D1Y5S2 G L P R G L V T A L S A I A D K K  
 UniRef90\_UPI0003FB07BC A V A E K  
 UniRef90\_UPI000425E61D S G Q N N L T G V L K T L A E R E  
 UniRef90\_D5UIZ0 A P A S Q A V R T V E A L R A K Q  
 UniRef90\_E4UDS0 T P Q N H I V R V L S A F E E K  
 UniRef90\_D4MJK9 E I E K K  
 UniRef90\_H1X5J1 A V  
 UniRef90\_C0QWX4 S V I S E L A Y V L D S V E E E K  
 UniRef90\_R6VL51 A I I D K  
 UniRef90\_UPI000382691A A P L S K T A R T V E A L R A Q  
 UniRef90\_E0XYR8 E I P T K F T R M T V A V K D N K  
 UniRef90\_E0NP00 G T I R G L A V V L N A I A E K K  
 UniRef90\_UPI0004728F0B A A G G K L A K T L A A L R D Q K  
 UniRef90\_G0IX94 S G K N I L A G L V K T L A E K E  
 UniRef90\_UPI0002D94D72 A P L T K F V R T A D A L R S K  
 UniRef90\_V1CLS7 A I

UniRef90\_F21J4 1 MNREKQKSSSYVSSSLKLESLN 20 NNEAMMIYHYH 30 GLN 40  
UniRef90\_R5Z869 A L K Q K E E L V K A L E R M K S A K V I L L T D Y R R G G L N S V A D Q L V T D K L  
UniRef90\_D3Q059 A D K V J A A V T E D E V L R S E K F R A D S Q M A T V L L T E Y R R G L L T T V P Q L V D K L  
UniRef90\_Q2JTQ3 P L A K K A E M V A E E L A E L L F R T S T A A V L L T E Y R R G L L T T V A E L L K E L L  
UniRef90\_UPI000255F379 A E E L A E L L F R T S T A A V L L T E Y R R G L L T T V A E L L K E L L  
UniRef90\_D2B9R6 M A K A E K S A E I A A A L T A A F D R E S S A A V L L T E Y R R G L L T T V E A Q L M K T L L  
UniRef90\_X4QY52 M K R T D K S A T A E I A A A L T A A F D R E S S A A V L L T E Y R R G L L T T V E A Q L M K T L L  
UniRef90\_A1S209 L R L E D K K A T V A E A L V N E A A K G A L S A V V A D S R G V L T T V G A M T T L L  
UniRef90\_R5VUI6 L R L E D K K A T V A E A L V N E A A K G A L S A V V A D S R G V L T T V G A M T T L L  
UniRef90\_UPI000237CC1D M K K T D K S A L I V A E E L V S E D K I N E Y S H F Y V T D T L G L L N A G A Q T S N L L  
UniRef90\_C0QQL4 V M R R S K K Q Q L V E E I K E K I D K A K L M V L F D F T G I L D N A N A M A D F  
UniRef90\_Q4FQH1 L T L E Q K Q Q V V A E E V S E V A A N A Y S A V A A E Y H G L G V A N A K L T K L L  
UniRef90\_D5T3R9 A V K A Q K V A E E V A D Q F K N S A S A V V V D A R G L L T V A Q S T D L L  
UniRef90\_BOJTA6 S R E S K G V I L E E L K T S L S E A Q L T M V I D Y Q G L L T V A E I I S N D L L  
UniRef90\_L8LRB9 S R E S K G V E I V K E L K E R L S Q T Q M A I V I D Y Q G L L T V A E I I M D K L L  
UniRef90\_L8MZR3 T L D Q K K V L V G E M T K E F E G T Q M V M V I D Y S T L T V A E I I T R L L  
UniRef90\_A0A011Q3S5 L N L D E K K V V V A E E V S A R M A S A Q T V V L A E Y S G L L P V A H L T R L L  
UniRef90\_UPI00037AE16B M T R Q E K S Q V I E E L T V E L A A N N G N L Y L T D I S G L N A A T T S D L L  
UniRef90\_UPI0003B40895 I R L E D K K A L V A E E V N E A A Q A A A L S A V V V D A R G V L T V A E I I M D K L L  
UniRef90\_S5ZK46 L N L N Q K K E V V A E L A E V A A S A H S L V A A E Y M G L L T V G E D D T A L L  
UniRef90\_UPI0004658B22 L N L N Q K K E V V A E L A E V A A S A H S L V A A E Y M G L L T V G E D D T A L L  
UniRef90\_R7FTT1 L E Q K K K I V S D L T E R M K N A V A G V I V S Y A G I L T V E Q D T A L L  
UniRef90\_K2CJ46 N R Q K K E Q I V A E L V E K I D S S N G L V F A D Y Q G L L T H K Q L E N L L  
UniRef90\_Q26FU7 M T R E E K A N V I Q D L T A T L G N S S T L Y L A D I S G L N A S D T S N L L  
UniRef90\_R6U522 L E Q K K A D T E A L V E K F R S A V S G V L V S Y A G I L T V E Q D T A L L  
UniRef90\_C7NC78 M P A Q A K L E A V K G L V E K L K E A K A V V F V D Y K G L T S V N E D T E L L  
UniRef90\_W2BYC7 A K Q K Q I I I D E I L K A K L D G E N S A V L I D Y M G F T T V A E A D I A F  
UniRef90\_I5C9W6 M T R D E K K I Q I E S L T A E K F Q E N P Y F Y I T N A G G F T T V A E Q V N A F  
UniRef90\_B1XSP1 L N V Q D K K A T V A D V G A Q L A G A Q T V V L A E Y R G L T P V A E Q L T K L L  
UniRef90\_D3ENE2 T K E N K A M V I S N L K E L L D E A E L S F V I D Y Q G L T V A S E I M N D L L  
UniRef90\_UPI0003722B67 M P T S K K E Q Q V T D I K D K L Q R C T L A I A T G Y A G M S A S H M N D L L  
UniRef90\_R6T5B1 T I A K K H E E V Q V I R E K I S K A G S T L F V D Y L G L T V A E V T E L L  
UniRef90\_Q7NQE4 L N I Q D K K A V A E E V S A Q V L A E A Q T L V I A E A R G V I E V S M T E L L  
UniRef90\_R8ALY8 L N L Q D K K A L V A E E V N E V L A G A G L S A V I A D A R G V I S V A K M T E L L  
UniRef90\_K2BJN4 M P T P Q K E Q K V K L I K E K L G Q A Q G F I L T D F K G V L T V K D I S Q L L  
UniRef90\_UPI0004037F35 M A T P T K V S A V E E L T E N F R S S N A A V L T E Y R G L L S V S E M N S L L  
UniRef90\_I4CE51 M D R A A K R E L I D H L H G E L K S T G V V V V A H N T G M V A A Q S A E F  
UniRef90\_NOB3X2 L N L D Q K K E V V A D A S A A V A G A Q V I V I A E N K G L T E V R Q V T R L L  
UniRef90\_F5RD89 M T K T E K T Q I I E T L T A E F K A S S A I A V C D Y R G I A V E D M T Q L L  
UniRef90\_Q7MA58 M T K T E K T Q I I E T L T A E F K A S S A I A V C D Y R G I A V E D M T Q L L  
UniRef90\_Q3SLQ8 M T K E E K S K A I E E L T A K Q L S A G S N V V Y V A D I S G L N A T V T S D L L  
UniRef90\_UPI00036B4168 M N K E A K K Q Q V E E D I L A K Q L S A G S N V V Y V A D I S G L N A T V T S D L L  
UniRef90\_R7BW52 M N K E A K K Q Q V E E D I L A K Q L S A G S N V V Y V A D I S G L N A T V T S D L L  
UniRef90\_A0A017T2R6 M E K A Q K E V L I G A V L R E K F D R M T S V V F V D F K G L L D V E A V T K L L  
UniRef90\_I3YWV8 M T R E E K S Q V I E T L T A Q L S D N T N L Y L A D I S G L N A G A T T N L L  
UniRef90\_K2F3M0 M K K A E K V F F V D N L K A E L K D A K S A V L V N Y A G L T V A Q Q G E L L  
UniRef90\_D1A3A8 E L N T E E F K S S S G A V L T E Y R R G L L T V A Q L G E L L  
UniRef90\_E8RDU8 M N R D Q K T D V I S E L N E T F S K A K F A V V A D Y R R G L L K V D T E L L  
UniRef90\_M1RBW5 T L Q K K I E T V I S E G Y K K K L A K S N F V L F F N R N G L P A D V A T S L L  
UniRef90\_F4GL90 Q A K E E A V K A L K E E F S S Y N S F I F T D Y R R G M S V I E Q L F N I L L  
UniRef90\_R7F8A3 E K K Q S E V S A L L A E K M K G S K L V L L T D Y R R G T L N A G S T V S G L L  
UniRef90\_A3U4C9 M T R E Q K Q Q V I K D L T A Q L N D N S L I Y L A D I S T L N A G S T V S D L L  
UniRef90\_D3UGF8 M T K Q D K K L L V E S L S A D F R A S N S L I V C D Y K G L L S V A K L E A L L  
UniRef90\_C6Y276 M N R E E K H E L V S A L Q V K M Q E F G N F Y I A D T S S L S V A K V N S I L L  
UniRef90\_V8FS80 L N I E T K K A T V E E I S E L A K A N A Q T M V V A E Y R G I T V D K I T E L L  
UniRef90\_F7XY79 L N L Q D K K T I V A E E V S E L A K A Y A P S V V V A D S S G I T V D K I T E L L  
UniRef90\_UPI00046F40B0 L N L Q D K K A L V A E E V N E A A S G A L S A V V A D S R G V L N V D A M T S L  
UniRef90\_D1CD62 M P N P Q K E A A V A E L Q E L L S K S S A V I L A D Y R G L N V A Q M N L  
UniRef90\_Q2LQ89 M D R R T K E Q V A V I E L H E K V K S F K L A V L A N F S G M G V A K M T T L L  
UniRef90\_UPI00046F1848 L N R N E K Q T V V T D V A A Q Q A A R S Q T L A L A E Y R G L T V A H L T D V L L  
UniRef90\_G2J8U7 L S K A D K Q A V V A E E V S S V L A Q A Q T M V L A E Y R G V L T V A D E L T Q L L  
UniRef90\_U4KLR4 Q R K A A A V E Q L T E K F N N A K T V V V F D Y P G L L T V A S A F T Q L L  
UniRef90\_UPI000463311C M A R P D K A A A V A E L T T E D F R T A N A T V L T E Y R R G L L T V T S M K E L L  
UniRef90\_C5EZ42 M T K A E K S A L I E K L T T E F K A S K A I A V C D Y K G L T V K E L E A L L  
UniRef90\_G8NSN6 L T K A K K N A K V K Q L A T E L E T S T S A I I G T F K G L T A S K D F E L L  
UniRef90\_K4IFL5 M T R E E K S T V I K D L T T N K L A D S S N V Y L A D I S G L N A T L T S D L L  
UniRef90\_C8PSV2 P A K T A A I E N I T N E L K A A S S F I F T E Y R G L S V E Q I T S Q L L  
UniRef90\_G2S0E4 A K K A E T V S E I V S K I K N A Q G V A I A E Y K H L S V A D M T E L L  
UniRef90\_R7K802 E E K K Q I V E G I K E K I S S A Q G I V L V N Y V G L T V E Q D T A M  
UniRef90\_R7F0J0 M R K E D K A L I I D N I K D T L G Q Y A C F Y L T S T Q G L D A R T S E L L  
UniRef90\_K7ZCC6 M N R T K K S E L I K S I H S T F K C A D V L V I T H H A H L T V K E I E D L L  
UniRef90\_B8GPV7 L N L E D K K A L V S E V A A V A A S A H S A V A A E Y R G L L T V T E M T E L L  
UniRef90\_A4FPQ7 M A K P D K V D A V T E I A E R F N T S T A A V T E Y R R G L S M A K L V Q L L  
UniRef90\_A0A014NQJ5 R Q K K A E T I T E I R D L L A K S S S L A I A E Y R G L S V A E L L E S L L  
UniRef90\_R5EUS2 L N I E D K K A L V A E E V A E V A K K A V S A V T A D S C G L P V A K L T A L L  
UniRef90\_I0IMS8 M A T K S A K V F S I A Q F K A S K A S K L V T V I A E Y K G L S V K L L T A L L  
UniRef90\_I2F3F0 M L T R E R K E E I V E S L T K A Y K D S S L I L F A D Y K G M K K V E N I T T F  
UniRef90\_UPI000479ABFF R K I Q E E T L A E K F K N S A K T I V A F E Y K G L S V S D F T K L L  
UniRef90\_K2CGM2 M P N K Q N I S A V A E E L E T K L S A Q A V Y L A D Y A G L T V S K E Q V K L L  
UniRef90\_N9SIV3 R K K K V I E T V A E E L E G F L K N S S S L A I A E Y R G L T V E E L Q N L L  
UniRef90\_F2NTZ3 P S K A Q A I E E A K K V L S E Y K D F I F V E Y R G L T V E Q I S K L L  
UniRef90\_UPI00037E346D M A K A E K A T A I A E L K N D F E S S N G A V L T E Y R G L S V A E L L E S L L  
UniRef90\_U2MEK5 P A K T A A I E A A K K T F A D Y N D F I F A D Y R G M T V E Q I T Q L L  
UniRef90\_A2U0K6 M T R E E K S Q V I Q D L T A V L A D T N T L Y L A D I S G L N A Q T T S N L L  
UniRef90\_UPI00037A84F5 M T K E Q K N E A I E V L K E K F N Q Y N N F Y V T N T E A L N A Q V N K L L  
UniRef90\_UPI0003B4E483 L A Q K E A N V N A L A D K M K D A S S I V L V E Y R G L T V A E I N E L L  
UniRef90\_J3Z371 L N L Q D K K A T I A A V E T A K G A L S A V V A D S R G V L T V D K M T E L L  
UniRef90\_Q98QS1 N R Q I K K D V I E I T K K I N A S Q S L F L A E Y R G L T V A K L L N L L  
UniRef90\_M7P1Q5 L N L E G K K A V V A E E V A E V A Q V A H S A V A A E Y R G L T V A K M T E L L  
UniRef90\_R6SNE2 L E Q K K A I V S A L A E E L K N A A S G V I V S Y Q G L T V Q A D T A M  
UniRef90\_B3ETZ2 M N R K E K T A I I Q Q L T E S F K S H D C F Y I V D S T K G L T S V Q A T N Q F  
UniRef90\_A7GJ84 M A T P T K V S A V E E L T E N F R S S N A A V L T E Y R G L L S V S E M N S L L  
V F V K Y Q G L T V E E D T M L

UniRef90\_F21J4 R N Q M R E A 50 G A L L K V T K N N R I T K A L K D T Q H E E A I S L F S 80  
UniRef90\_R5Z869 R A D L R R Q A L G E G A S Y R M V A K N T L A K R R A A L D M N G E S S A L D D L L T G G  
UniRef90\_D3Q059 R K A L L R R K A L G E G A S Y R M V A K N T L A K R R A A L D M N G E S S A L D D L L T G G  
UniRef90\_Q2JTQ3 R A E L L R R K A L G E G A S Y R M V A K N T L A K R R A A L D M N G E S S A L D D L L T G G  
UniRef90\_UPI000255F379 R R A L L G E N A T Y A V V V K N T L S E T A A K Q A G I D A F E G K M S G G  
UniRef90\_D2B9R6 R V S L G E N A K F A V V V K N T L T K I A A K N E A G I S E G L D D D L L A G G  
UniRef90\_X4QY52 R R A L L G E N A D V R Y H V A K N T L V R I A A K A N D A G V E S Q L G L D D L T G G  
UniRef90\_A1S209 R K T A R A N G V Y V R V V R N T L A R R A V E G T A F E E L N E A V F T G G  
UniRef90\_R5VUI6 R S E F R K N G V D K Y R V L K N T L V K K A L N E L G Y T E F D E A L N G F  
UniRef90\_UPI000237CC1D R R E R E K C F K K D I K M M M V K N T L F K L A L E Q S D K K V E G L D D D A F  
UniRef90\_C0QQL4 R K E L K K N N A E T K V I K N T L L Y R A C N G T E L Y D K I D I F K G G  
UniRef90\_Q4FQH1 R E Q A R E K E G V V L K V V K N T L A K R A F E G T K F E S M S D R M T G G  
UniRef90\_D5T3R9 R H Q L R R Q P T G T I C K V T K N T L M G L A A E D S G W E A P M K S L S G G  
UniRef90\_BOJTA6 R R K L L R P T G T I C C K V T K N T L M S L A V I E T P Q W K S L E D F L V G G  
UniRef90\_L8LRB9 R D R L L R P T G T I C C K V T K N T L M S L A V I E T P Q W K S L E D F L V G G  
UniRef90\_L8MZR3 R R S L L R P T G T I C C K V T K N T L M S L A V I E T P Q W K S L E D F L V G G  
UniRef90\_A0A011Q3S5 R A Q A R A S G V Y L R V L K N T L V R R A V Q G T V F A S L A E Q M T G G  
UniRef90\_UPI00037AE16B R R A A F K A G V V K L S V V K N T L L A K A M E A S D R E F G D L P T V L  
UniRef90\_UPI0003B40895 R K E A R E A G V Y L R V V R N T L L R R A V A G T Q Y E V L S D V F T G G  
UniRef90\_S5ZK46 R K K L R E N D C T F K V I R N N F A R I A F E D A N I K D V D A D V L T G G  
UniRef90\_UPI0004658B22 R K K A R E S G V Y L K V V A K N T L V S R A V A D T D Y A V I A D E L T G G  
UniRef90\_R7FTT1 R A E L R K S G V E Y S V I K N T L T K R A C E A V G F D V K L T D T L E G G  
UniRef90\_K2CJ46 K K E L K K L D S T I V V T K N S L I K L S L N F A D F K D N A G L D R G  
UniRef90\_Q26FU7 R R A C F K A N G V S L S V V K N T L L E K A M E A S D F G E L P L K G G  
UniRef90\_R6U522 R K A L R E A G V D Y R V V Y K N T M T E R A C V E A G Y P A L K D H L G G  
UniRef90\_C7NC78 R K N A R E A G V E Y F V A K N R L F K I A L K E A G F D T N V D D L L E G  
UniRef90\_W2BYC7 R R K L R E A E F E K G V E Y S V Y K N T I I K K A L E N A D Y S E L V D K S L K  
UniRef90\_I5C9W6 R K A R D Q G V Y I L R V L K N T L A R R A A Q G T Q F E P L A D S M V G  
UniRef90\_B1XSP1 R N R L R S S G A I C K V T K N T F M E K A V I G S E W K P I T S F L N G G  
UniRef90\_D3ENE2 R S E M R N L D V E Y I V V K N T T L R A A S E L G K G G P I V G V L D G G  
UniRef90\_UPI0003722B67 R V K L H T E N C E M K V V K N N I L R R A T K E E G F D G V E E H L V G G  
UniRef90\_R6T5B1 R A Q A R E N G V Y L R V L K N T L V R R A V E G T P F A G L A D D Q M V G  
UniRef90\_Q7NQE4 R K T S R E A A E K V E Y R I F K N N L A R I A V S E F G Y A A I E K H M T G G  
UniRef90\_R8ALY8 R R K L R A E K V E Y R I F K N N L A R I A V S E F G Y A A I E K H M T G G  
UniRef90\_K2BJN4 R R S L R G E D A N Y S V V K N T L T A A A K E A G V E I S A F D D Q L V G G  
UniRef90\_UPI0004037F35 R S E L R S K G G I K F K V L K N T L T R R A Y Q D T E I S A V G P D L A G G  
UniRef90\_I4CE51 R R R V K D A G G S V K V A K N K L A Q L A L K D T D A E Q L S G L M K G G  
UniRef90\_N0B3X2 R A Q A R E Q G V Y L R V L K N T L A R R A V A G T P F E G L S G L M K G G  
UniRef90\_F5RD89 R R A A R D N G A K V Q V V K N T L A G L A L E N A D A K G L E L K E  
UniRef90\_Q7MA58 R V K A R K E G V Y L R V L K N T L V R R A V A D T P F A G I A D Q L V G G  
UniRef90\_Q3SLQ8 R R A R C F K A G I K L E V V K N T L L A K A M E N N N Y G E L P T I L K G G  
UniRef90\_UPI00036B4168 R K E L R A N G V D Y A V L K N R L V K I A F N E N G Y T Q F D E A L N G G  
UniRef90\_R7BW52 R R Q E F M K S G V E Y K V V K N T L V H Q A V K G Q A W K K L D Q T L R G  
UniRef90\_A0A017T2R6 R A C F K A G I Q L A V V K N T L L K K A M E S S D K D F G D L T G I L  
UniRef90\_I3YWV8 K L R L S E V G G K M L V V K N T L L S R A A E S A G F K D L G V L V G  
UniRef90\_K2F3M0 R R N L G D N A K F A V V K N T L T R I A A N N A G V D E E F T K L L A  
UniRef90\_D1A3A8 E K L R K E L R Q N D A Q Q V A K N T L L K L A V K G T A Y E G L S D F F S G G  
UniRef90\_E8RDUU R R E L K S A D S E M L V A G R T T L F F R A F E N T I M H D H R E V F V G G  
UniRef90\_M1RBW5 R R Q L L K N D A A Y R V V K N R Y A K I A F G E L K T S G V D E E H L V G G  
UniRef90\_F4GL90 R S N L I D A E Y K V I K N N I T R R A L A E A E I E G L S E D L L V G G  
UniRef90\_R7F8A3 R R A C F K A N D V K L N V V K N T L L A K A M E N T E F G G L S E V L K G G  
UniRef90\_A3U4C9 R K A A R D A D A K V Q V I K N T L A K I A L K D A G Y P D F F E L K D  
UniRef90\_D3UGF8 R R R K C F E S G T E M Q V A K N T L T R K A I E G L E G D A S S D H V A L  
UniRef90\_C6Y276 R V N A R K E G V Y L R V L K N T L A R R A V E G T P F A G L S D D F M V G  
UniRef90\_V8FS80 R K A G R A A G V Y M R V V R N T L M C R I V K D T L Y E G L K D D T F I G G  
UniRef90\_F7XY79 R K Q A R E A E N F M K V V R N T L A R R A V E G T D Y E G L K D D T F V G G  
UniRef90\_UPI00046F40B0 E L R R K M R E A N A E F H V A K N T L T R I A S K A A G I E G L D P Y L E G G  
UniRef90\_D1CD62 R N D L R K S N A E L K V V K N T L L R I A S R D T S L E A L Q D D F K G G  
UniRef90\_Q2LQ89 R K Q A R D K G V Y L H R V L K N T L A R R A V A G T P F F A V A S E S M V G  
UniRef90\_UPI00046F1848 R N K A R A Q H V A L R V L K N T L A R R A V E N T P F A P L A S E Q M V G  
UniRef90\_G2J8U7 R T Q L R E L G G D V K V Y K N N I A R R A S I A A G F D G L V D T L V G  
UniRef90\_U4KLR4 R R A L G S N T K Y S V V K N T L T K I A A K D A G V D I D P S L L A G G  
UniRef90\_UPI000463311C R A D I R S Q N A K V Q V I K N T L A S I A L K N S N I E G L E L A R E  
UniRef90\_C5EZ42 R K V I R A A G N Y H V V K N K L A A K S A E G T K V E A A L Q G L K G  
UniRef90\_G8NSN6 R R A C Y R A N D V K L M V V K N T L L A K A M E S S D K E F G E L T G I L  
UniRef90\_K4IFL5 R A K L R E N N C T Y K V R N N F A R I A F D A V N L D E F G D Y L V G  
UniRef90\_C8PSV2 R I E A L K Q N T E V K V F K D S L V R R A A Q E L L S E L E P F L T Q  
UniRef90\_G2S0E4 R S E L R K N G I E Y C V L K N T L V Q R A F N D L G F T D F D A Y L N G G  
UniRef90\_R7K802 R R A C F K A D I K M L C V K N T L L R K A M E Q C D Y S E L Y E L L K G G  
UniRef90\_R7F0J0 R A K I R A V I G G C Y K V V K N R L A R L A L L D T R Y A N H L L T G  
UniRef90\_K7ZCC6 R A K A R Q S N G T Y L R V V K N S L A R R A V E G T D F A C M Q E G L V G  
UniRef90\_B8GV67 R R A L G E G T Y R V V K N T L V K R A A E Q S G V E G L D E L F V G  
UniRef90\_U4FPQ7 R Q E L K K S G V F T R I Y K N R L F K I A A D E L G F S N L K S E L V G  
UniRef90\_A0A014NQJ5 R K E A R E N N V Y L H V V R N T L A R A L E G T E F E I K D S C K G  
UniRef90\_R5EUS2 R R E L K N S G A E F S I Y K N T M A R I A S E G T E S N L A K D F K G  
UniRef90\_I0IMS8 R D K L Y E N Y K E R A Q F T I K K N T L V R L A L N K A G F E E S E W K I S G  
UniRef90\_I2F3F0 R N T L R K E N V Y L V K V Y K N T I T R R A A Q V V G F D D L V G G L V G  
UniRef90\_UPI000479ABFF R Q A V Q A A G G Y L T V A K N S L L K I A M T N Q G L D T T K L S E S D L  
UniRef90\_K2CGM2 R R Q A V Q E F K S A G V L S K I Y K N R L F K I A A E N N G Y S D L K S D L V G  
UniRef90\_N9SIV3 R H S L R E K N S Q F K V I K N T F A R V A F D E M K N D A V A Q Y L S G  
UniRef90\_F2NTZ3 R T N L G E N A K F A V V K N T T K I A A N D A G L D E Q F R D L L V  
UniRef90\_UPI00037E346D R R K L R E Q S A V L K V V K N N F A R I A F A D M K I D N V A D Y L K G  
UniRef90\_U2MEK5 R R A C F K A G V Q L S V V K N T L L A K A M E A S D K D F G D L P T T L  
UniRef90\_A2U0K6 R K I C F D K N V E M K V A K N T L I K K A L E N A K Y S G V F D S L N G  
UniRef90\_UPI00037A84F5 R R D L R K E E V D F K V Y K N A I A R R A S E K L G Y D D F A K D L I G  
UniRef90\_UPI0003B4E483 R K A A R E A G V H M C V V R N T L T R V V E N T P F Q S D L Q K T F V G  
UniRef90\_J3Z371 R K E A K K H N V E I K V Y K N R L V K L A T Q K L G H S D L K F L V G  
UniRef90\_Q98QS1 R V A A R N Q N V Y L R V V R N T L A R R A V E G T D F A C M Q E G M T G  
UniRef90\_M7P1Q5 R K A L R E A G V T Y E V V K N T L T A R A C A L A G Y E T I D T C L K G  
UniRef90\_R6SNE3 R R D C H Q A G V T Y K V A K N T L I L K A L D E V P Y T S L R D E V L K  
UniRef90\_B3ETZ2 R K E L R E A G V E Y K V Y K N T L S T I A A K N L G Y E G C V N L L E G  
UniRef90\_A7GJ84

UniRef90\_F21J4  
UniRef90\_R5Z869  
UniRef90\_D3Q059  
UniRef90\_Q2JTQ3  
UniRef90\_UPI000255F379  
UniRef90\_D2B9R6  
UniRef90\_X4QY52  
UniRef90\_A1S209  
UniRef90\_R5VUI6  
UniRef90\_UPI000237CC1D  
UniRef90\_C0QQL4  
UniRef90\_Q4FQH1  
UniRef90\_D5T3R9  
UniRef90\_BOJTA6  
UniRef90\_L8LRB9  
UniRef90\_L8MZR3  
UniRef90\_A0A011Q3S5  
UniRef90\_UPI00037AE16B  
UniRef90\_UPI0003B40895  
UniRef90\_S5ZK46  
UniRef90\_UPI0004658B22  
UniRef90\_R7FTT1  
UniRef90\_K2CJ46  
UniRef90\_Q26FU7  
UniRef90\_R6U522  
UniRef90\_C7NC78  
UniRef90\_W2BYC7  
UniRef90\_I5C9W6  
UniRef90\_B1XSP1  
UniRef90\_D3ENE2  
UniRef90\_UPI0003722B67  
UniRef90\_R6T5B1  
UniRef90\_Q7NQE4  
UniRef90\_R8ALY8  
UniRef90\_K2BJN4  
UniRef90\_UPI0004037F35  
UniRef90\_I4CE51  
UniRef90\_NOB3X2  
UniRef90\_F5RD89  
UniRef90\_Q7MA58  
UniRef90\_Q3SLQ8  
UniRef90\_UPI00036B4168  
UniRef90\_R7BW52  
UniRef90\_A0A017T2R6  
UniRef90\_I3YWV8  
UniRef90\_K2F3M0  
UniRef90\_D1A3A8  
UniRef90\_E8RDU8  
UniRef90\_M1RBW5  
UniRef90\_F4GL90  
UniRef90\_R7F8A3  
UniRef90\_A3U4C9  
UniRef90\_D3UGF8  
UniRef90\_C6Y276  
UniRef90\_V8FS80  
UniRef90\_F7XY79  
UniRef90\_UPI00046F40B0  
UniRef90\_D1CD62  
UniRef90\_Q2LQ89  
UniRef90\_UPI00046F1848  
UniRef90\_G2J8U7  
UniRef90\_U4KLR4  
UniRef90\_UPI000463311C  
UniRef90\_C5EZ42  
UniRef90\_G8NSN6  
UniRef90\_K4IFL5  
UniRef90\_C8PSV2  
UniRef90\_G2S0E4  
UniRef90\_R7K802  
UniRef90\_R7F0J0  
UniRef90\_K7ZCC6  
UniRef90\_B8GV67  
UniRef90\_A4FPQ7  
UniRef90\_A0A014NQJ5  
UniRef90\_R5EUS2  
UniRef90\_I0IMS8  
UniRef90\_I2F3F0  
UniRef90\_UPI000479ABFF  
UniRef90\_K2CGM2  
UniRef90\_N9SIV3  
UniRef90\_F2NTZ3  
UniRef90\_UPI00037E346D  
UniRef90\_U2MEK5  
UniRef90\_A2U0K6  
UniRef90\_UPI00037A84F5  
UniRef90\_UPI0003B4E483  
UniRef90\_J3Z371  
UniRef90\_Q98QS1  
UniRef90\_M7P1Q5  
UniRef90\_R6SNE3  
UniRef90\_B3ETZ2  
UniRef90\_A7GJ84

90 100 110 120  
Q T G V A L S K D P L T L A K T L V N F Q K K N D M L K I V G G V M D S  
P T A V L M G D E D Y L E S K V L Y N F A K D N D F Y K I K G G I T D G  
P T A L T F M V T G E V V D A A K A L R D F A K Q D N E A L V I K G G V M D G  
P T A F I M I R G D I P A A L K A Y Q D F A K Q T K K T E F R G A A A E G  
P S A I A F V S G D P V D A A K A M R D F A K N H D A L T V K G G Y M E G  
P S A I A F V N G D V V E A A K S L R D F A K A N P L L V I K G G V V D G  
P T A L A F V T N T D A V A P A K L I K N D F A K E N D K L V L K S G V M E G  
P T L I A F S N E H P G A A A R L L K D F A K E Q A K F E V K G A A F E G  
P S A F A F G T T D A V A P A K I A A E G I K K Y K A M E I K C G M F D K  
K G T S A V L F C N T G N V P A K L I K E F Q K K T E L P V F K G A F V E  
P S A V V F A Y E D V V A A A K A L K E F L K E N E A A K V K A G L V E G  
P L L L A F S M E D L G S A A R V V F D F S K D N K A L E T K L V S V G G  
P S A V A F S T E D A I A P S R I L K K F A D A N E K L E I K G G V V D G  
T S A F L L V K E D I G G A F K A Y Q E F K K E S K K T E L R G G V L K G  
T S A F L L V R D D L G G A I K A Y Q K F Q K E D T K K T E F R G G V M Q G  
P S A C L F V K E D I G G A V K A Y Q A F Q K E S K K T E L R G G V L E G  
P L I Y S V I S E D P V A A A K V L N D F A K T N D K L T V R G G S F A G  
K G N T S V M Y S E T G N V P A K L I K T F R K K S D K P L L K G A F I E E  
P T L I A F S N D H P G A A A R I F K E F A K Q D K F E I K A A A F E G  
P T A L A M V G E D A N V A A K T L F E Y A K E A P A L V I K G A V V D G  
P L L Y A F S K E D P G A A G R L I K D F A K T A D K L K P R L V S V G G  
M T A V A T S D S D P V A A A K I L K K Y A D K V E T F E I K A G F V D G  
P T A A L L L R G D T V E P L K K L Q K A I K E F G L P K I K F G I L E G  
N T S I M I S E V A N A P A K V I Q T F R K K S D K P L L K G A Y I E E  
M T A L A L S K E D A V A P A K I L K E Y A E K I A T F E V R A G F V D G  
G T T S F A L G Y E D G V A P S K L I F D F G K K L K D K L T I K A G L L E S  
P S A L A I S K E T D A T A P A R V L K E A I D E F K K M E L K A G V V D G  
G F S G I V F S K E I G N L P A K V I L D F R K K K E T R P V F K G A S I D S  
P L I Y G T S A D P I A S A K V L Q N F A K T Q D K L V I T A G L Y N G  
S S A F I L V K E D L G G A I K A Y Q A F K K E T K K T A F R G G V M Q G  
T G L A F G Y G D V T V A K G V N E F I T S S R L P L E I H G A I M D N  
P S A I V V G N D E V T A A K V V Y D F A K D H E K L S V K V G I V D N  
P L V Y A V S A D P V A A A K V L H Q F A K A D D K I L V K A G S Y D G  
P T L V A F S N E H P G A A A R L F K A F A K A N A N F E V K G A A F E G  
T V A I A I A Y G D P I A P L K V L H E F E K V K K I P L K A G V I N G  
P T A L A F I K G D A V K A A K G L T D F A K A N P Q L V I K S G Y F E G  
P R A A A W T N T E D A V A P A M A K V L F D F A K T H Q N L Q L V R G V L K G  
P T L L A F S K D P I A A A K A A V I T Y A K A N D K L V I L G G A M G K  
P L L Y G M S A D P V S A A K V I Q D F A K G N D K L V I R G G A L A N  
T N V F V W S D D Q I A L S K T I M K F A E T S N E K F K V K F G Y E G  
P L A Y G I S K D P V A A A K V M H E F S K T N D K F V V K A G A M P N  
N T S I L L S D N G N A P A K I L K E F R R R S D K P V L K G A Y I H E  
P T A V A F S N T S D A V A P A K Y V V K N I K A F N K M K T K C G M V E G  
M T G V A W S F E D P S A A A K V V K A F R K D N Q K L Q I K A G L I E G  
K G N T S L M F S E T G N A P A K V I K E F R K K S A K P V L K G A Y I Q E  
Q T A L I J A T D D A V A P I Q V L G K F A K E F E I P K F K V G M V D G  
G P S A I A F V K G D V V E A A K G L R D F A K E N P L L V I K G G V I D G  
T T A V A V V F T E P V V G S K A L T A F A A E F N A F S I R S A V L E G N  
P T A V V F S Y K D P A K T A K I V F D T C K I D K D D P L R F I K A G M L  
P T A I A L A N G D E A S S V A K V I F D M R G T G A S I A V K A G A V I D G  
P T A V V L S S E D Y L E P L K A V Y E Y A K N N E T Y K I K G G V I D G  
N T S I M I S E T G N A P A K V I Q E F R K K T K G E K P L L K G A F I E  
T N I F I W S N E Q I S L S K F V I K F A D E H K D F F R A K V G C F D G  
K G Q S A L L F S T V G N G P A K L I K A L R K G S D K P V L K A A Y I D S  
P L V Y A V S E D A V A A A K V L H Q F A K Q E D K L V L K A G S Y N G  
P T L I A F S N T H P G A A A R L F K N F A T A N P N F K I K A A A F A G  
P T L I A F S N E H P G A A A R L F K D F A K E N N E F E V K S A A F E G  
P T A I A V S F G D P T V V A K V I N D F A R S T R L S V K A G V L E H  
P L A L I L G Y G D P V E P S K I L S D F A K K N A E L E L K I G M L S D  
P L I Y G F S E D A V A A A K V I S D F A K G N D K L V I K A G A Y A G  
P L I Y S I S E D P V A A A K V V N D F A K S N D K F V I R T G M N E G  
A K A I A I S Y D D V A A P A K A V Y E F S K D N K A V K I V S G V I E G  
P S A V A F I K G D P I D A A K S L K N F S K E N P L V I K G G I L F E G  
N N I F L W G E D Q I S L S K A V C K F S N S V G G K L I I K A G Y E G  
V S S V A Y T S G D P V A L A K A L S T W V K D N A E F T F K L G I V D G  
K G S T S I M L S E T G N A P A K V I K T F R K K T E K P V L K G A V V A E  
P T A V A M M N E D A N A A K T L F E F A K E T P A L V V K A G A V V D G  
Q N V F I F S N D D A I S A A K L V A K F A K R N E K L K L K A G I Y E G  
P T A V A F C K D D C V T P C K L M T Q S A E K Y P K M E I K C G M I D G  
E T T L L S N T G N A P A R L I K D F R Q K K E T L P A L K G A Y V E E  
P T S L T I S K N P I P A I K V I V E F A N K N E K I T I I G G G L E G  
P L V L A F S Q D D P G A A A R L V K D F A K E H K K L E V K L V S V G G  
P T A I A F I E G E P V D A A K A L K E F A K A D N K A L V I K G G Y M D G  
P N L F A F G L Q D P I A P A K I T T K V A K D Q P L L I L K G G I Y E K  
P T I L G L S L N D H P G A A A R I E K N F A K S C D T F K V K A L A F E G  
A V G V L F V E S N P I G A L K T I V N Y S K E N L L L I K A G V F E G  
T A V L T V E D V D P I A A L K I I T D F N K N N K T L P L I K A G Y L E G  
P I A I A I S Y D D V A A P A K H V F E F A K E N K T V V I K S G V I E G  
T G N I T L F A L T E A V A P L K A M V E F A G S N E K E L P K L K S G I L G K  
P N L F A F G T T D P I A P A K I A K K A K E Q P L L T L K G G I Y E K  
P T A L A M I K E A N E S A K V L F D F A K E T P A L V V K G A W V E D  
G P S A I A F V T G D V V E A A K G L R D F S K A N P L L V I K G G V V D G  
P T V V A M V K E D S N E V A K T L F D F T K D A P T L N V K G G F L G K  
K G N T S M M I A E A N A P A K L I K E F R K K S K K P I L K G A F A E E  
V T A L L F S E N A K E P A M I I S S F R T D S K G D P V L K A A F I D T  
P N A L A F S K D P V A P A R V L A K F A K T H E A L V L K T G I V D G  
P T L I A F S N E H P G T A A R L E K A F A K D N A N F E V K A A A F E N  
P N L F V S N E L G M D G A K V L A E F A K K N K L V L K A G I F D G  
P L V Y G F S M E D P G A V A R V M A D F A K E N K Q L E I K L V S L G G  
M T A L A I S A N D A I A P A K I L K E Y A D Q V E S F S I L A G F V D G  
G F S G I L F F N E T A S V P A K I L V K E F R Y Q K N L D R P L I K G A Y I D G  
P V S V A F G Y D D V T A P A R V L N D F A K K N K N L E I L K G G I I D G

UniRef90\_F21J4 UniRef90\_R5Z869 UniRef90\_D3Q059 UniRef90\_Q2JTQ3 UniRef90\_UPI000255F379 UniRef90\_D2B9R6 UniRef90\_X4QY52 UniRef90\_A1S209 UniRef90\_R5VUI6 UniRef90\_UPI000237CC1D UniRef90\_C0QQL4 UniRef90\_Q4FQH1 UniRef90\_D5T3R9 UniRef90\_BOJTA6 UniRef90\_L8LRB9 UniRef90\_L8MZR3 UniRef90\_A0A011Q3S5 UniRef90\_UPI00037AE16B UniRef90\_UPI0003B40895 UniRef90\_S5ZK46 UniRef90\_UPI0004658B22 UniRef90\_R7FTT1 UniRef90\_K2CJ46 UniRef90\_Q26FU7 UniRef90\_R6U522 UniRef90\_C7NC78 UniRef90\_W2BYC7 UniRef90\_I5C9W6 UniRef90\_B1XSP1 UniRef90\_D3ENE2 UniRef90\_UPI0003722B67 UniRef90\_R6T5B1 UniRef90\_Q7NQE4 UniRef90\_R8ALY8 UniRef90\_K2BJN4 UniRef90\_UPI0004037F35 UniRef90\_I4CE51 UniRef90\_NOB3X2 UniRef90\_F5RD89 UniRef90\_Q7MA58 UniRef90\_Q3SLQ8 UniRef90\_UPI00036B4168 UniRef90\_R7BW52 UniRef90\_A0A017T2R6 UniRef90\_I3YWV8 UniRef90\_K2F3M0 UniRef90\_D1A3A8 UniRef90\_E8RDU8 UniRef90\_M1RBW5 UniRef90\_F4GL90 UniRef90\_R7F8A3 UniRef90\_A3U4C9 UniRef90\_D3UGF8 UniRef90\_C6Y276 UniRef90\_V8FS80 UniRef90\_F7XY79 UniRef90\_UPI00046F40B0 UniRef90\_D1CD62 UniRef90\_Q2LQ89 UniRef90\_UPI00046F1848 UniRef90\_G2J8U7 UniRef90\_U4KLR4 UniRef90\_UPI000463311C UniRef90\_C5EZ42 UniRef90\_G8NSN6 UniRef90\_K4IFL5 UniRef90\_C8PSV2 UniRef90\_G2S0E4 UniRef90\_R7K802 UniRef90\_R7F0J0 UniRef90\_K7ZCC6 UniRef90\_B8GV67 UniRef90\_A4FPQ7 UniRef90\_A0A014NQJ5 UniRef90\_R5EUS2 UniRef90\_I0IMS8 UniRef90\_I2F3F0 UniRef90\_UPI000479ABFF UniRef90\_K2CGM2 UniRef90\_N9SIV3 UniRef90\_F2NTZ3 UniRef90\_UPI00037E346D UniRef90\_U2MEK5 UniRef90\_A2U0K6 UniRef90\_UPI00037A84F5 UniRef90\_UPI0003B4E483 UniRef90\_J3Z371 UniRef90\_Q98QS1 UniRef90\_M7P1Q5 UniRef90\_R6SNE3 UniRef90\_B3ETZ2 UniRef90\_A7GJ84

130 140 150 160

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



UniRef90\_F21J4 A P G A K I A N L A H A K S L K K  
UniRef90\_R5Z869 Q V K A Q  
UniRef90\_D3Q059 A P A S Q V A R M A A A L R D K K  
UniRef90\_Q2JTQ3 A V P T Q V A R G I Q E I  
UniRef90\_UPI000255F379 A P L S Q A V R T V D A L R A K  
UniRef90\_D2B9R6 A L P T N M A Q L A E A L R A K R  
UniRef90\_X4QY52 A P A T K T V R T V D A L R A K Q  
UniRef90\_A1S209 A S A G K F V R T L A A L R D Q K  
UniRef90\_R5VUI6 A L A E K  
UniRef90\_UPI000237CC1D S G G T K I H G I L Q T L S E K E  
UniRef90\_C0QQL4 A V P Q K A V M V L N A I K E E K  
UniRef90\_Q4FQH1 A V P G K L V R T V A A I K D A K  
UniRef90\_D5T3R9 A V Q E K L  
UniRef90\_BOJTA6 E V P A S L A R A V D A V A R Q E  
UniRef90\_L8LRB9 E V P S S L R G I N E V  
UniRef90\_L8MZR3 E V P Q S L G R A I K A V S E K E  
UniRef90\_A0A011Q3S5 A L A K Q  
UniRef90\_UPI00037AE16B S S G G T L A G I I K T L S E K E  
UniRef90\_UPI0003B40895 G A T S K L A R T L A A V R D Q K  
UniRef90\_S5ZK46 A V V D K  
UniRef90\_UPI0004658B22 E P A A S A A R V I N A V G Q A K  
UniRef90\_R7FTT1 L A Y V L Q A Y V D K Q  
UniRef90\_K2CJ46 G T I Q K F V M T L N A I A  
UniRef90\_Q26FU7 S G G S T I A G L I K T L S E R  
UniRef90\_R6U522 A I I D K  
UniRef90\_C7NC78 N V A E Q  
UniRef90\_W2BYC7 A L A  
UniRef90\_I5C9W6 S G A N N L T G V L K T L S E K E  
UniRef90\_B1XSP1  
UniRef90\_D3ENE2 Q V P T S L G R G V N E I  
UniRef90\_UPI0003722B67 S P T K N L A V V L Q R R L E Q  
UniRef90\_R6T5B1 A V S E K  
UniRef90\_Q7NQE4 A L A E K  
UniRef90\_R8ALY8 A S A G K L V R T I A A I R D A K  
UniRef90\_K2BJN4 A G T R G L V Q V F A Q R A K K  
UniRef90\_UPI0004037F35 A L R E K L  
UniRef90\_I4CE51 A V P R S F L N V L K A I E E Q K  
UniRef90\_NOB3X2 E P G A Q L A R V I Q  
UniRef90\_F5RD89 E V P G K F V R T V A A L R D E R  
UniRef90\_Q7MA58  
UniRef90\_Q3SLQ8 E V P T K F V R G L A A V R D K Q  
UniRef90\_UPI00036B4168 S G G G K I A G I L K T L S E K  
UniRef90\_R7BW52 K I A E  
UniRef90\_A0A017T2R6 A P L Q N F A Y L L K A K E E  
UniRef90\_I3YVW8 S G G N T I A G L V K T L S E R E  
UniRef90\_K2F3M0 G N L Q K L V Y V L D Q A S K K  
UniRef90\_D1A3A8 A L P T Q V A Q L A E A L R A K R  
UniRef90\_E8RDU8 A V P Q K L L Y A I S A I K D Q K  
UniRef90\_M1RBW5 A V P Q K L V L T L K A I E T K  
UniRef90\_F4GL90 A  
UniRef90\_R7F8A3 G N I S K L A V A L D Q V R V Q K  
UniRef90\_A3U4C9 S S G G K L A G I L K T L S E K E  
UniRef90\_D3UGF8  
UniRef90\_C6Y276 S G G S K I A G I V K T L Q E R E  
UniRef90\_V8FS80 A L A E K K A G  
UniRef90\_F7XY79 A S A G E L V R T L A S L D Q K  
UniRef90\_UPI00046F40B0 A S A G K L V R T I A A V R D Q K  
UniRef90\_D1CD62 A A V A S I A Y V L Q A R I D Q  
UniRef90\_Q2LQ89 A V P R G L V Q V L D G Y R A K K  
UniRef90\_UPI00046F1848 A L A E K  
UniRef90\_G2J8U7 A L S A Q  
UniRef90\_U4KLR4  
UniRef90\_UPI000463311C A  
UniRef90\_C5EZ42 N L R K Q  
UniRef90\_G8NSN6 A T G R N L A V V V N M A A E Q  
UniRef90\_K4IFL5 S S G G K L A G I L K T L S E K E  
UniRef90\_C8PSV2 A T T A K F V R T L Q A I V D K E  
UniRef90\_G2S0E4 A V A E T  
UniRef90\_R7K802 K I A E K  
UniRef90\_R7F0J0 S G G N K L H G I L E T L S K K E  
UniRef90\_K7ZCC6 A P A S K I T R V L  
UniRef90\_B8GV67 E V P G K L V R T V A A I R D Q K  
UniRef90\_A4FPQ7  
UniRef90\_A0A014NQJ5  
UniRef90\_R5EUS2 A A A G K L V R T L A A L G D K  
UniRef90\_I0IMS8 Q V I Q K L A Y G L N E Y S K T K  
UniRef90\_I2F3F0 G V L T K F L Y A L N A I K D K K  
UniRef90\_UPI000479ABFF M L T E K  
UniRef90\_K2CGM2 A P M R N F V Y A L S A I N H K K  
UniRef90\_N9SIV3 L L I D K  
UniRef90\_F2NTZ3 A Y V E K L  
UniRef90\_UPI00037E346D A L P T Q A A Q L A E A L R A K R  
UniRef90\_U2MEK5 A Y V D K  
UniRef90\_A2U0K6 S G G Q T L S G I I K T L S E K E  
UniRef90\_UPI00037A84F5 A G G K L A S L I K A L E D R Q  
UniRef90\_UPI0003B4E483 A V A E  
UniRef90\_J3Z371 A S A G K L V R T L V S V R D Q K  
UniRef90\_Q98QS1  
UniRef90\_M7P1Q5 A P T S K M V R T F A A V R D A K  
UniRef90\_R6SNE3 A I V D K  
UniRef90\_B3ETZ2 S G K N Q L S G I I K T L G D R  
UniRef90\_A7GJ84 A I K D K

UniRef90\_I0WGY0  
UniRef90\_R9GMA0  
UniRef90\_UPI000464C527  
UniRef90\_E8X1S5  
UniRef90\_V5RSV5  
UniRef90\_A5EX72  
UniRef90\_UPI00046FE338  
UniRef90\_H4GIP2  
UniRef90\_S5LYX4  
UniRef90\_I0LGKD3  
UniRef90\_H2J5F9  
UniRef90\_R6ALW2  
UniRef90\_A0A011TYX0  
UniRef90\_H1Y0H3  
UniRef90\_R7JT85  
UniRef90\_R4YJF9  
UniRef90\_W0GSG6  
UniRef90\_A6P0R8  
UniRef90\_U5N6X7  
UniRef90\_F6D958  
UniRef90\_A0A031GNM2  
UniRef90\_E3GZR5  
UniRef90\_UPI0004286339  
UniRef90\_G9RTG0  
UniRef90\_UPI000347532C  
UniRef90\_B2UQY4  
UniRef90\_UPI0003743CE3  
UniRef90\_P36263  
UniRef90\_C0BJ94  
UniRef90\_UPI00046583A6  
UniRef90\_R5WD72  
UniRef90\_R6R8B0  
UniRef90\_U2KQ69  
UniRef90\_R7KEC6  
UniRef90\_E6X714  
UniRef90\_UPI0003608C05  
UniRef90\_R5KY10  
UniRef90\_Q7VJ80  
UniRef90\_R7J0R0  
UniRef90\_S4NBD3  
UniRef90\_Q6MDM3  
UniRef90\_K2E629  
UniRef90\_B1Y7H5  
UniRef90\_UPI000425A97A  
UniRef90\_R5FVP1  
UniRef90\_D6TRG0  
UniRef90\_T0JQX6  
UniRef90\_R6GXH7  
UniRef90\_T1CZ73  
UniRef90\_K2BKW1  
UniRef90\_U5Q6F3  
UniRef90\_R6GKT6  
UniRef90\_S8FKS4  
UniRef90\_R7JNV0  
UniRef90\_D1AZC1  
UniRef90\_UPI000466A423  
UniRef90\_E1X0N2  
UniRef90\_J5XDE1  
UniRef90\_F9ZXM5  
UniRef90\_UPI00037DE66D  
UniRef90\_N9TU16  
UniRef90\_UPI0004027F82  
UniRef90\_X5K6R1  
UniRef90\_R5YQD8  
UniRef90\_F8KRU1  
UniRef90\_E8R5G3  
UniRef90\_A9BDG5  
UniRef90\_UPI0004684BC2  
UniRef90\_UPI0003B601AC  
UniRef90\_U4KSQ0  
UniRef90\_R7FIZ7  
UniRef90\_UPI0004665208  
UniRef90\_UPI000377BE77  
UniRef90\_M4VCC5  
UniRef90\_R5ECZ2  
UniRef90\_R7MH78  
UniRef90\_E1GWS3  
UniRef90\_H7FR89  
UniRef90\_W2C0V9  
UniRef90\_R5I4X1  
UniRef90\_K9SSK2  
UniRef90\_H2M9Z7  
UniRef90\_Q8EVJ0  
UniRef90\_UPI00036FD812  
UniRef90\_B2T761  
UniRef90\_S2JJW5  
UniRef90\_R7FKG0  
UniRef90\_A9WNU8  
UniRef90\_I1FU08  
UniRef90\_A6CA58  
UniRef90\_F5XBW0  
UniRef90\_A4W1B7

1 10 20 30 40

MTREEEKS LVI QDLT LAQLA ENN IYLA DLT GMDAESSSN 40  
MRKEEKQE I V QALLETAEQ IKEYGNFYITDT ANGLS VAKV NKT I  
UniRef90\_UPI000464C527  
UniRef90\_E8X1S5  
UniRef90\_V5RSV5  
UniRef90\_A5EX72  
UniRef90\_UPI00046FE338  
UniRef90\_H4GIP2  
UniRef90\_S5LYX4  
UniRef90\_I0LGKD3  
UniRef90\_H2J5F9  
UniRef90\_R6ALW2  
UniRef90\_A0A011TYX0  
UniRef90\_H1Y0H3  
UniRef90\_R7JT85  
UniRef90\_R4YJF9  
UniRef90\_W0GSG6  
UniRef90\_A6P0R8  
UniRef90\_U5N6X7  
UniRef90\_F6D958  
UniRef90\_A0A031GNM2  
UniRef90\_E3GZR5  
UniRef90\_UPI0004286339  
UniRef90\_G9RTG0  
UniRef90\_UPI000347532C  
UniRef90\_B2UQY4  
UniRef90\_UPI0003743CE3  
UniRef90\_P36263  
UniRef90\_C0BJ94  
UniRef90\_UPI00046583A6  
UniRef90\_R5WD72  
UniRef90\_R6R8B0  
UniRef90\_U2KQ69  
UniRef90\_R7KEC6  
UniRef90\_E6X714  
UniRef90\_UPI0003608C05  
UniRef90\_R5KY10  
UniRef90\_Q7VJ80  
UniRef90\_R7J0R0  
UniRef90\_S4NBD3  
UniRef90\_Q6MDM3  
UniRef90\_K2E629  
UniRef90\_B1Y7H5  
UniRef90\_UPI000425A97A  
UniRef90\_R5FVP1  
UniRef90\_D6TRG0  
UniRef90\_T0JQX6  
UniRef90\_R6GXH7  
UniRef90\_T1CZ73  
UniRef90\_K2BKW1  
UniRef90\_U5Q6F3  
UniRef90\_R6GKT6  
UniRef90\_S8FKS4  
UniRef90\_R7JNV0  
UniRef90\_D1AZC1  
UniRef90\_UPI000466A423  
UniRef90\_E1X0N2  
UniRef90\_J5XDE1  
UniRef90\_F9ZXM5  
UniRef90\_UPI00037DE66D  
UniRef90\_N9TU16  
UniRef90\_UPI0004027F82  
UniRef90\_X5K6R1  
UniRef90\_R5YQD8  
UniRef90\_F8KRU1  
UniRef90\_E8R5G3  
UniRef90\_A9BDG5  
UniRef90\_UPI0004684BC2  
UniRef90\_UPI0003B601AC  
UniRef90\_U4KSQ0  
UniRef90\_R7FIZ7  
UniRef90\_UPI0004665208  
UniRef90\_UPI000377BE77  
UniRef90\_M4VCC5  
UniRef90\_R5ECZ2  
UniRef90\_R7MH78  
UniRef90\_E1GWS3  
UniRef90\_H7FR89  
UniRef90\_W2C0V9  
UniRef90\_R5I4X1  
UniRef90\_K9SSK2  
UniRef90\_H2M9Z7  
UniRef90\_Q8EVJ0  
UniRef90\_UPI00036FD812  
UniRef90\_B2T761  
UniRef90\_S2JJW5  
UniRef90\_R7FKG0  
UniRef90\_A9WNU8  
UniRef90\_I1FU08  
UniRef90\_A6CA58  
UniRef90\_F5XBW0  
UniRef90\_A4W1B7

UniRef90\_I0WGY0 R R A C F K A N I K L A V V K N T L L A K A M E A S D K E F G E L P S V L 80  
UniRef90\_R9GMA0 R R R K F F E N G I T Q V V A K N T L L I L K A T E A A A G V L D P T E F S A V L  
UniRef90\_UPI000464C527 R R K I D A K A N N T K S V Y V I K N K L L V T K A K A S Q Q E A A S D L G D A L D Q N L K G L  
UniRef90\_E8X1S5 R R K A I R A A G E N S E M L V I K N T L L K V A L E E E K I D E D L K K D L E G G  
UniRef90\_V5RSV5 R A K L K G E N S E M L V I K N T L L K V A L E E E K I D E D L K K D L E G G  
UniRef90\_A5EX72 H A R A R E M C H K R E V V K L R V V K N T L L R R K A L E A D T S E K E T A E S E K L D V G  
UniRef90\_UPI00046FE338 R R K T L R E Q S G V K M Q V I K N K L L Q R A V E E G T D Y E G L N D V F V G  
UniRef90\_H4GIP2 R N K A R E Q S G I F Y R V V K N D L L V T R A V E E L S K I T D V P Q N I F I G  
UniRef90\_S5LYX4 R K D F K L S G I Y R V V K N D L L R T A C K E L S V D V P Q N I F I G  
UniRef90\_I0GKD3 R T D L F K K F E D K V V F R V V R N A L L K T A T K N A S G L E D Y E E F L N G  
UniRef90\_H2J5F9 R R N S I R Q K A F G A G L K M V V V K N T L L H K A F E A S D V I T A L D E D L K G  
UniRef90\_R6ALW2 R R S I R Q K F E S D T K M Q V T K N T L L I R K A M E A V D G S D F T Q T Y D V L  
UniRef90\_UPI000466A11TYX0 R R R K F E S D V K L V V V K N T L L K K A L E N G V E F E C L Y T A L K G  
UniRef90\_H1Y0H3 R R K E A R D A G V W I K V V K N T L L A R R A V E G T D F E P L T D T F V G  
UniRef90\_R7JT85 R R T L T E K S V S L K V V K N T L L V S L A A K E A G F G E A L D Q F L T G  
UniRef90\_U5N6X7 R A E L R K N D V D Y A V V K N T L L V R F A I N N G C G M E A L D S D V L N G  
UniRef90\_F6D958 R A N A R S A N G V A L S V V K N T L L A R K A V O G S V F E P L D S S L M K G  
UniRef90\_UPI0004286339 R S Q A R D N G V V R V V K N T L L A K R A F A G T P Y E D M S A S L V G  
UniRef90\_G9RTG0 R A K A R A Q G E Y L R V V K N T L L A A R S V E G T A F A S L A D A M T G  
UniRef90\_UPI000347532C R R A L G A E T E Y A V V K N T L L A A I A A K E V G I N S F E G Q L Q G  
UniRef90\_B2UQY4 R N A A R S A N V D I R V V K N T L L A R L A L K D T Q F E D A I P S L V G  
UniRef90\_UPI0003743CE3 R A E L R A A G V E Y A V V K N T M L R L A L K D S D F A G M T D A L T G  
UniRef90\_UPI000347532C R R L C F Q R D V Q L Q V V K N T L L R K A M E R V E Y G E L S T V L V G  
UniRef90\_P36263 R S A L A A C G A Q C H V A K N N F M R T A L T D A G L P D I G E H L V G  
UniRef90\_C0BJ94 R R E L L K K N E A D Y K V A K K S I L T Q R A L K E K N Y D A D I L K G M E G  
UniRef90\_UPI00046583A6 R K K L F N K G S T K I V K N T L L R R A L K T S N F E G V D E S I V I K  
UniRef90\_R5WD72 R R K E A R E C F K E N G V W I K V V R N T L L A R R A L A G S D Y E C L T E S F V G  
UniRef90\_R6R8B0 R R R L L N E K S A K L K V I K N T Y A R V V F D E M K I D N V A G Y L T G  
UniRef90\_U2KQ69 R C A L R N A D A N Y K V I K N T L M A R A F N D L N I D L S S S L E G  
UniRef90\_R7KEC6 R R A C F K A N I K L A V V K N T L L A K A M D A S D K D F G E L P D V L  
UniRef90\_E6X714 R R A F R E K G A Q M I V A K N T L I E R A L A E L N L P K L D G L K G P  
UniRef90\_UPI0003608C05 R Q T I R N D G N D Y A V V K N S I I T H A I A Q A G I E K G P E T L E  
UniRef90\_R5KY10 R C T S R S A N T K V Q V I K N T L A N I A I K N A Q C P N L I E L K D T N  
UniRef90\_Q7VJ80 R R R A C F K G E V K L V V K N T L L H K A L E S L E G E D Y S E L Y G A L  
UniRef90\_R7J0R0 R R S C F K G E V K L M V V K N T L L R R A A L H N K G F E Q F D P L I K G  
UniRef90\_S4NBD3 R R Q L G K I G G D V E V V R K R V L L K A A K D A G L E L D V S S L N G  
UniRef90\_Q6MDM3 K L D L K A L G S D M T V V K N T L L K L A G K D A G L S E E L L T D E V  
UniRef90\_K2E629 R R T A R E Q T G V Y L R V V K N T L A R R A V A G T A F E S A A E S M S G  
UniRef90\_B1Y7H5 R K K A R E T G V Y L R V V K N T L A S R A V E G T D F A C V Q D A L V G  
UniRef90\_UPI000425A97A R N N L Y K A G A D L K V I K N T I L R R A A D K L G Y D G I Q E T F A G  
UniRef90\_R5FVP1 R K K M R A A N V E F Q I A K N T L L R I A S E R N N M N E L D T S I F N  
UniRef90\_D6TRG0 R I A A R A K E A K V Q V V K N T L A T I A L K N A Q L S G V E L K D  
UniRef90\_T0JQX6 R K Q F R D A S V D Y S V V K N T L T R F A A N K A G Y S Q F D E L L N G  
UniRef90\_R6GXH7 R N S A R K F D A K V Q V I K N T L A R I A K E S H Y P D L D I  
UniRef90\_T1CZ73 K K R L K E S S S S M L I V K N T L F K L A A N E A K L P R E T L T D S V  
UniRef90\_K2BKW1 R R A C F E K E I K L V V V K N T L L R K A L E N E A Q L N E A Q L F P L  
UniRef90\_U5Q6F3 R A S L R K E G I D Y K V L K N R L A L R A F K N A G Y E N G F D K V F E G  
UniRef90\_R6GKT6 R R R C F E V G V K L V V V K N S L F H R A L E D V D Y S P L F D S L K G  
UniRef90\_S8FKS4 R R R C F E S D I K L V V V K N T L A K A L E R V E K A D A D L V K V L  
UniRef90\_R7JNV0 R N A S R P D A I K V K V I K N T L A S I A M T N A G I E G L E  
UniRef90\_UPI000466A423 R I A L R A A E G K A K V V K N T L A K L A F A N N G V E V D F  
UniRef90\_E1X0N2 R K E L R E A N G K L V V T R N T L F G L A S K G T E A E E M L S N L K G  
UniRef90\_J5XDE1 R R R A C F K A N I K L S V V K N T F L A K A M E A S D F G E L P S V L K G  
UniRef90\_F9ZXM5 R K T A R E T G V Y L R V V K N T L A K R A V V G T E F E C M Q E G L V G  
UniRef90\_UPI00037DE66D R A N A R K E G V Y L H V L K N T L V R R A V E G T S F A A L A D Q M V G  
UniRef90\_N9TU16 R V I E A K K V G I E L V V F K N R I V R Y A L E G T G Y E A A L A D H L V G  
UniRef90\_UPI0004027F82 R K S I R E S K A Q Y R V V G K N T L L R L A V K D T T F A P L G G H F K G  
UniRef90\_X5K6R1 R R Q A F K N N V G L R V V K N T L L Q K A M E Q E G V D Y S E M F E T F  
UniRef90\_R5YQD8 R V K L K E S G S D Y K V V K N T L L R L A F N D L N V S M D Y L E G  
UniRef90\_F8KRU1 R N A A R V Q G T S V Q V I K N T L A S L A L Q E A G L S P L I E L  
UniRef90\_E8R5G3 R K D L R Q K D I K I R V V R N T L A R L V F E K K G M S S L D P F L T G  
UniRef90\_A9BDG5 R T R L G P S G I C K V T K N T L M R K A I D D T S W S G L E S L L N G  
UniRef90\_UPI0004684BC2 R R R K C F K N N T K L V V V K N T L L H K A L L N S E T D F S P L F D S L  
UniRef90\_UPI0003B601AC R N E L R K N G V A Y N V V K N T M V R R A L D E S G L S E L D G V L H G  
UniRef90\_U4KSQ0 R N E L R K E G C D V A V F K N N I A R R A V T D L G M E S L A E A L V G  
UniRef90\_R7FIZ7 R A E L R K T N A E Y T V I K N N I T K R A L A E A G I E G L E D K L V G  
UniRef90\_UPI0004665208 R N K I E D E K G A L R V V K N T I M K R V L K D K N I E G L D S Y L L G  
UniRef90\_UPI000377BE77 R K L C R E N Q V Y A R V V R N T L L K R A V E G T E F T N M D D L F A G  
UniRef90\_M4VCC5 R K K L H A V E S E M K V V R N T L A K R A F K H P K V E G A F D S T M V  
UniRef90\_R5ECZ2 R K Q F R E A G V D Y A V V K N T L T N F A A K N A G Y D F S E V L N  
UniRef90\_R7MH78 R Q S L K N A G S D L K V V K N T L A S I A F K D N G I K L D D Y M T G  
UniRef90\_E1GWS3 R R R K C F K S E T K M V V V K N T L L H K A L E D V D F E P L Y S S L V G  
UniRef90\_H7FR89 R R R A C C F K A N I K L E V V K N T L L V K A M E V S E N E Y G D L P T V L  
UniRef90\_W2C0V9 R R R C C F K E N V K L V V K N T L L F K R A L E N M D Y S A L Y S T L K G  
UniRef90\_R5I4X1 R R R A C F E K E V K L M V V K N T L F I K A L E K M E G E A V E A M K P V  
UniRef90\_K9SSK2 R R Q M R P S G T V C K V T K N T L M K K A I E K S E W Q P L E T F L K G  
UniRef90\_H2M9Z7 R H R L H K H G I S V K V F P N Q V M H F L G D S I Y G S M A P L F I G  
UniRef90\_Q8EVJ0 R K D L F K T G S K L V L K N N I L R R A L E K A N I K E F G D L V G  
UniRef90\_UPI00036FD812 R L R N R L D E T K A E L H V V K N T I F N I A A K E A G F A E D L V G D L K  
UniRef90\_B2T761 R A K A R E Q Q V Y L R V V K N T L A R R A V E G T P F A P L A E Q M T G  
UniRef90\_S2JJW5 R Q Q L G E L P G G S A K L T V L K S G V F S A A L R E T K F A N L E P L V T G  
UniRef90\_R7FKG0 R K G L K S V I G A T M Q V H K N T L M K R A L D A D A G F N A L D S L L K G  
UniRef90\_A9WNU8 R V S L G A E T K F S V V K N T L T A I A A K E A G V D A F E G Q L A G  
UniRef90\_I1FU08 R Y Q L D S K D V K V K L F P V R I A R K A L E D T S Y T N I R S L F H G  
UniRef90\_A6CA58 R L K L Q E K G I A S L T V K N S L A R A L A N I G V E G L D D V L K G  
UniRef90\_F5XBW0 R R N C N K N G V K L V M V K N T L L R A A L A A S D V D F S L Y S C L  
UniRef90\_A4W1B7 R R N L R G A E V E Y K V I K N S I L R R A A E Q A G L E G L A E L F V G

UniRef90\_I0WGY0  
UniRef90\_R9GMA0  
UniRef90\_UPI000464C527  
UniRef90\_E8X1S5  
UniRef90\_V5RSV5  
UniRef90\_A5EX72  
UniRef90\_UPI00046FE338  
UniRef90\_H4GIP2  
UniRef90\_S5LYX4  
UniRef90\_I0GKD3  
UniRef90\_H2J5F9  
UniRef90\_R6ALW2  
UniRef90\_A0A011TYX0  
UniRef90\_H1Y0H3  
UniRef90\_R7JT85  
UniRef90\_R4YJF9  
UniRef90\_W0GSG6  
UniRef90\_A6P0R8  
UniRef90\_U5N6X7  
UniRef90\_F6D958  
UniRef90\_A0A031GNM2  
UniRef90\_E3GZR5  
UniRef90\_UPI0004286339  
UniRef90\_G9RTG0  
UniRef90\_UPI000347532C  
UniRef90\_B2UQY4  
UniRef90\_UPI0003743CE3  
UniRef90\_P36263  
UniRef90\_C0BJ94  
UniRef90\_UPI00046583A6  
UniRef90\_R5WD72  
UniRef90\_R6R8B0  
UniRef90\_U2KQ69  
UniRef90\_R7KEC6  
UniRef90\_E6X714  
UniRef90\_UPI0003608C05  
UniRef90\_R5KY10  
UniRef90\_Q7VJ80  
UniRef90\_R7J0R0  
UniRef90\_S4NBD3  
UniRef90\_Q6MDM3  
UniRef90\_K2E629  
UniRef90\_B1Y7H5  
UniRef90\_UPI000425A97A  
UniRef90\_R5FVP1  
UniRef90\_D6TRG0  
UniRef90\_T0JQX6  
UniRef90\_R6GXH7  
UniRef90\_T1CZ73  
UniRef90\_K2BKW1  
UniRef90\_U5Q6F3  
UniRef90\_R6GKT6  
UniRef90\_S8FKS4  
UniRef90\_R7JNV0  
UniRef90\_D1AZC1  
UniRef90\_UPI000466A423  
UniRef90\_E1X0N2  
UniRef90\_J5XDE1  
UniRef90\_F9ZXM5  
UniRef90\_UPI00037DE66D  
UniRef90\_N9TU16  
UniRef90\_UPI0004027F82  
UniRef90\_X5K6R1  
UniRef90\_R5YQD8  
UniRef90\_F8KRU1  
UniRef90\_E8R5G3  
UniRef90\_A9BDG5  
UniRef90\_UPI0004684BC2  
UniRef90\_UPI0003B601AC  
UniRef90\_U4KSQ0  
UniRef90\_R7FIZ7  
UniRef90\_UPI0004665208  
UniRef90\_UPI000377BE77  
UniRef90\_M4VCC5  
UniRef90\_R5ECZ2  
UniRef90\_R7MH78  
UniRef90\_E1GWS3  
UniRef90\_H7FR89  
UniRef90\_W2C0V9  
UniRef90\_R5I4X1  
UniRef90\_K9SSK2  
UniRef90\_U5N6Z7  
UniRef90\_H2M9Z7  
UniRef90\_Q8EVJ0  
UniRef90\_UPI00036FD812  
UniRef90\_B2T761  
UniRef90\_S2JJW5  
UniRef90\_R7FKG0  
UniRef90\_A9WNU8  
UniRef90\_I1FU08  
UniRef90\_A6CA58  
UniRef90\_F5XBW0  
UniRef90\_A4W1B7

90 100 110 120  
K G N T S L L F A E T G N A P A K L I K D F R K K S T P M L K G A Y I E I  
K G A S S I S F S E T V A N A P A K L I K E L R K T G E K P L L K G A Y I E S  
S G T N I Y L W S E D Q I S A C K V A D K F A T T T K D K F S L K G S G I I E G  
V S A N I A Y T S G D P V V L J A K A L S T W V K D N S E F T F K V G I V D G  
P T M A V F S F E D P I A S I K T I S F F A K K L E L P K I K S A L I S E G  
K L V L A F S M E Y P G A A P A R L W R D F F K E N D K L S T D I K F V S I S E  
K G N T S L F S N P T G N V P A K L I K E F S S K A N K K P V L K G A Y V E E  
P T A I V S S D E D A I A P A K I L K K F A D E H E A L E V K G G F I E K  
Q N V Y I F S D E A L Y P A K L V A E F A K T N P D L V L K A G I Y E G  
N V A L V V I S S M D P T E L A K K F V I E A K D A D E K P F F E M K G G F V D G  
N T A L L Y T K E A D P I E T L K V L V I E F K K K L K K D T P A I K A G I L E G  
K G T T A V I F C D T A N V P A K L I K E T G K E G V P T L K G A Y A E G  
P S A V A F V H G D F V A T A K A L R D F A K A N P L L V I K G G I F E G  
K G S S S I M F S K S G T A P A K L I K E L R K R G D K P V L K A A Y I D T E  
N T A V I M F S Q V A N A P A R L I K E F T K D T K G E G K P Q L K A A Y V Q E  
P T L I A F S N E H P G A A A R I L S K F A K A N S F E L K A A A F E G  
P N A F A F G T G E M A A K T L A K F A K K H P A L K L K A G I Y E G  
T T S L A I S H G D P I A P M R V V N K F A K Q F N G Q A K F T I V K A G F M D G  
P L L Y G F S S D A V A A A K V V T E F A K Q Q P K F I V K G G A Y O G  
P V V L V F S Q K E L S G A A R V V K A F K K E N D A M V V K A V S I G S  
P L I Y S I S A D A V A A A K V I A D F A K T N D K L V I K A G N Y A G  
P S A L A F I K G D L V D A A K G L R D F A K A N P Q L I V K T G Y Y E G  
P T I M A F S M S E E D P V A A R V I H N F L K E K A N E K L V V K A I A H D G  
S T A L A I S K E D P I A A A R I L N K F A E G S K K G F A L K A G Y M E G  
N T G L M I S E V G N A P A K L I K D F R K K V A V P L L K G A Y I Q E  
Q T A F V T G A S D V A G A A K A I N T F A K A S K A E Y K V A I L D G  
G I G V I F G Y K D E V I S A E K T A Y N F A R L N E S F K I L G I L G S  
K G I A V A V G I N E L L E T L K V V D S V V K E K E L M K F V C G H F D N  
K G N T S L M F S E T G N A P A K V I K N F R K K L T K P M L K G A F I E E  
P T L I A F S N E H P G A G A R L K E F A K S N D Q L Q I K L A A F E G  
S G A T S I M F S S V N K A P A Q V I K E F R K K N P Q G K P V L K A A Y V E D  
P N A F I Y A E D P I A G P K E A A K F A K T H P N F V I K G G I V E G  
P T A I A J A S D T N E V A P I L F D F A K D S P A L Q V L K G A V V E N  
P S A F A Y S K D Q V A P I K V L S D F A K D H E A L V L K V G V V D G  
K G S T S L M F A E T G N G P A K L I K A F R A K T K D K P L L K G A F V E E  
S A V V L F S D P V A A A K A J A E F A K T N D K G L P A A K G G V L S G G  
G P T A V V I G Y E D Y I T P A K A V N D Y S K K N E A Y A I K A G I M D G  
I F L W A D D Q T A L S K V V C K F A D S Y N E H F S L K V G L F D K  
K G S T S L M C C N T G N V P A K L L K D F V K K G D T P L P A L K A A Y V E E  
S S A L M L C H T A N A A R I L K D L T S D P K K K Q T K P A L K A G A Y E G  
H I G L V F L G E D P I E A T K T V F K F S Q E R E K T I Q V L G R F D G  
L S G Q T A L I M T E G D A I A P I Q V L G K F V K E N Q V P Q F K V G I D G  
P L I Y G F S E D A I A A A K V V V D F A K T N D K L V L K G G A Y A G  
P L L Y A F S L J E E P G A A G R L I K D A S K S N D K L K A K V S V E G  
P S A V V F S K D A G S A A K V V F D F L K A N N K F E V K A G L I D G  
G Q T A I A F G F D D E V A A K A V I D Y T G N S K I V V L K S G L L G G  
T N I L V W G A D S V A T S K V V S D F A K K N D K F I I K S A Y V D R  
T T A M A C T T G D P I A P A R I V C E F A K K N K N V L S I K G G L V E G  
Q D T N I F I W G S D Q I A L S K V V K F A E T N E N T F A I K V G S F D N  
L T G Q T A I V I T S S H D S V T P I Q V L G K F S K E F D Q L R F K V G V V D G  
L E G S A V M F T E N V I S S P A K L I K E F G K Q Y G K P V L K G A F V Q E  
P T S V A F S Y E D A T A P A R I L S E S M K K L N K L V V K G G I V E G  
N T G V M F A E V A N V P A K L L K E Y K D T N P T L K G A Y A E G  
E G S T S V M F A H T G K T P A V L I K E F R K T S D K P V L K A A Y V E G  
K D T N I F V W G D D Q L L V T K V V A D F A K T N Q N F V I K S G F C A  
E E N N I F I W G E D Q I T L A K L T K H A K N Y K D T F K I K G A V T E G  
P Q A V A F A F E D A P G V A K A J K E A G K K H E M V E L R G G L L D G E  
N T S L M F A E V G N A P A K L I Q A F K K S D K L L K G A Y I E G  
P L I L A F S M E D P G C A A R L V S E F S K T H K N L I A K V V A I E G  
P L I Y S A S E D A V A A A K V L H K F S K K D D K I V V K A G V Y N G  
P N I F A F S N E D E L A A A K V L H K F A K T N K L L V L K A G I F E G  
A S A V A T T K D D V A L A K A V N G F L K D N P A A T F K A G I M D G  
K G N S A L M I A D T A N A P A K L I Q G F R K N A E K P A L K S A Y L Q E  
P T A I V F S S D D I A A V K I L S D V A K N E A L E L K A G I T J E G  
K E T N I F V W G G D Q I A L S K L V M G F A K E H K D H F H I K T G L Y E K  
P S V L V W G G S G I A E L A K E I S D Q V K A L K K P V I K G G C V D G  
T N A F V L V K G D V G G A L K A V Q A F Q K E T K K S K T K G G L F E G  
K G T T S V M F T E V A N A P A K L I K E F K D G K P G L K A A Y A E E G  
N T S L A T G T E D P I A P K V L T D F A K K M G D D K F H I K A A F M E G  
G K A L A F G Y T D V I A P A R V V Y T F A K D N P K V K M S V G I T E G  
P T A V I M S N E D Y L E P S K A I Y E F T K N N D Y Y K I K G G V I E G  
P T A V V T A V D E A N V J A K I F Y E F V K T S T L K V K G G F V L G  
P T L I A F S N E H P G A A R L I F K E F A K K N D K F Q I K G A S F E G  
G T N A I V F A F N E V V G V A K T L A D F A K D V E A L K I K T G I M D G  
G T T A M A S T T G D P I A P A R I V C E F A K K N K L K T L A I K G G V V E G  
P N A Y I F S K D I E P A K I V S E V A K K N E N L T I K A G Y I N G  
N T A V M F S T T A N V P A K L I K E Y S K E G I P A L K A A Y A E E  
T G N S A I F I S E I A N A P G K I L K D F R K K S T K P L L K G A Y I N S  
N T A V M F S N V V N T P A R L I K D F T K G T K G E G K P Q L K A A Y V Q E  
M G S S A I M F T T T P N T P A K L I K E Y G E K M G K P V L K G A Y V Q D  
T S V C L V I K E D V G A A F K A Y Q G F L K E T K K T E L R G G V F D G  
P T V L F V S K T P K L R E M L S D R V S P Q M T L L G A C I D N  
P N A I V W G T E D E I A P L K E V F N L T K D N E C I K I K G S Y V E G  
G Q L A V V I T G E A E I S A T A K I V K N F E S F S K P G I R F A Y M G D  
P L I Y I G E S E D A I A A K V V N D F G K T N D K L I K A G S Y E G  
P T C V L S T N V A D A E H P D I L K K S V I E L L A K N K M L L G G K L D N  
P N A L I T A A D P T A A L P L N K F A K N K A L V I K G A I I D G  
P T A I A F I K G D A V A A K S M T D F A K T N K E L V I K T A I F E G  
A T A I A Y S N T D E A L P E L L K V T R K E P K L L L L G G V L D N  
P S T L V W G G E D I V A L S K E M T K W A S D I S T L E I K G G V T E G  
K G N T A V M F C E V A N S P A K V I K Q F T K W S D G E G K P W L K A A Y V Q E  
P S A V A F S N D A V A P A K T I Y D F A K T A D A L E I L K G A V E G

UniRef90\_I0WGY0 A V F I G D Q I D A L V S L K S K E E E V V G D I I G L L Q S S P A K N V V V S A L Q  
UniRef90\_R9GMA0 A I F I G D Q I D A L V T L K S S K E E E L V V G D V I G L L Q S S P A K N N V I S G L L  
UniRef90\_UPI000464C527 Q I A D V A R E I N E A F A K L P S K R E E E L L F S G M L L A S V W M G S P V A Q R N F T I G L D  
UniRef90\_E8X1S5 Q V L N V Q R E I T A F A S M P G S K E E E L L F S G M L L F L I Q S S P A Q R R L A T V I N  
UniRef90\_V5RSV5 V Y A D S A R E V E I A K N I P T S K E E V L L S Q V V G N L K S P L S G F V G V L G  
UniRef90\_A5EX72 E V L A G S F E D R V A K L P T K E E E G I S M L M S C M L A P V A  
UniRef90\_UPI00046FE338 T Y I L G A D Q L F E D A L V N I K S K E E E L L A D V I A L L Q S S P A K N I I S A L Q  
UniRef90\_H4GIP2 S I K T L D E I T E N E Y A T M P G R E D E L L S M L A S A L S D P M R K I A R A V K  
UniRef90\_S5LYX4 N V M D T A A E I T E I A S L P P S K D E L L Y S M F A S S L I Y P I Q R Q L M L T V K S  
UniRef90\_I0GKD3 K Y L T G P E L V E L S K L P P K P V I I G K L L Y L G L M N S P L I Q R Q L V T V L S  
UniRef90\_H2J5F9 K L F T P E E A E E L A K L P S K E E Q L L A M L V G G L N A P I S G L V G A L S S  
UniRef90\_R6ALW2 F Y V G A D D Q L E I N K Y A S L K S K E E V L A E V A L L Q S S P A K N V I S A L S  
UniRef90\_A0A011TYX0 N A L S A D E I L E T A L A S L E S R E V L L A K A A G M M K A T M G K N A A A T I D  
UniRef90\_H1Y0H3 A V F V G D Q L D A L V N I K S S R E Q L I G E I V G L L Q S S P A K N V I S A L Q  
UniRef90\_R7JT85 S F Y D A S S I E A K L V N I K S S K N E L I A D V I A L L E S P A K N V I S A L Q  
UniRef90\_R4YJF9 Q V T D S I A K A L A T L P T Y E E A I S M L M G T I K  
UniRef90\_W0GSG6 K V L D T K A I T E I A L L P T K D E L L S M F A S S L L Y P L R M F A I A V K  
UniRef90\_A6P0R8 K V L S L D E I S Q A L A E L P S S R E V L L Q A Q V L  
UniRef90\_U5N6X7 T L L N V E G V I S Q A L A N I P S R E V L L G Q L L G L M Q S P I S G L A R V L S  
UniRef90\_F6D958 G T L D A N Q L D M V A S L P T Y D E A I A K L M Y V M K A P V E K L A R T L A  
UniRef90\_A0A031GNM2 K P L D T A A V V L A S I E S R E V L L S Q L L G V M L A P V I S G F A R G L A  
UniRef90\_E3GZR5 E T L T E D D V K R Y A D L E S R E V L L S K V A G G A K A A I A R V A Q A V D  
UniRef90\_UPI0004286339 E V H E G S A L K A I A S L P T K E E A I S M F L A V L K A P V Q K L A A T L A  
UniRef90\_G9RTG0 Q V M D V D A V S A I A S L P D R E G M L S M F A G A L T S T L S G L A V A M Q  
UniRef90\_UPI000347532C S V Y V G D D N L D A L V A L K S K D E L I G E I I G L L Q S S P A K N V I S G L K  
UniRef90\_B2UQY4 A I L S A D E I R A I G E L P P R D Q L L A K L L G  
UniRef90\_UPI0003743CE3 R I L S K E D T Q A I A K L P S Y E V M L A K T V C T V A A P L S G L V L V L Q  
UniRef90\_P3263 R I F N S D D L Q A I A K L P G R N E E L Y G M F L S V L Q A P L R K F L Y A L Q  
UniRef90\_C0BJ94 A L Y I G D D L D A L V A I K S K E E L V G E I T I L L Q S S P S K N V I S A L Q  
UniRef90\_UPI00046583A6 E Q V D F S M L A T L P T Y E E A L A K L L S V M K  
UniRef90\_R5WD72 C I Y V G D Q L F S D M L V A I K S R E E L I G D I I G L L Q S S P A K N V I S A L A  
UniRef90\_R6R8B0 K N V S A E E V K E T A K L P G R E G L I S M L C S V L Q A P V R N F A C A V K  
UniRef90\_U2KQ69 E I Y D A E A K I E A F S K I P G K K Q L I A M I A S T I N A P V Q K L A A T L L  
UniRef90\_U2KQ69 E I A D T E K L K E Y A T I P S R D G L L T M L A G G M I G L V R D L S I C L N  
UniRef90\_E6X714 A V Y I G D Q L E A L V N I K S S K E E V I G D I I S L L Q S S P A K N V I S G L K  
UniRef90\_UPI0003608C05 N V I G A D D V K A L A S L P S Q T E L R A E L V G V L Q S S A M S E L V G V L G D  
UniRef90\_R5KY10 K S V D V A E V K K L A N L P S K E T E L Y S M L A S A L L G N I R N L A V V L D  
UniRef90\_Q7VJ80 Q V V D I K H I V S V S K L P S K E E L I G M L L S V W T A P A R Y F V T G L D  
UniRef90\_R7J0R0 T V Y G A D Q L E A L C A I K S K N E L I A D V I A L L Q S S P A K N V V S A L Q  
UniRef90\_S4NBD3 F Y I G A E H L D T L V S I K S R E E L A E V I S L L E S P A K N V V S S L Q  
UniRef90\_Q6MDM3 Q I Y S G D D V L E K L S K L P S K D E M R A Q F L S T L E A P M A Q T L A V V E  
UniRef90\_K2E629 A F Q G K E A L L K I S T L P T K E T L Y S Q V V G S L M S P M Y G L V G T L N A  
UniRef90\_B1Y7H5 K A L D V N G I K A L A S I P S K E V L L A Q V L G L L Q S S P I S R T A R V L A  
UniRef90\_UPI000425A97A K L L P A A H V D V L A S L P T R E Q A L A M L  
UniRef90\_R5FVP1 V F T T K E D K A I A G L P N K E G M L S M L L S V M Q A P I R N L G L I K S  
UniRef90\_D6TRG0 R T L S S E Q V E G I G K G G K K Q T K A E V V G T I Q G A P I R N V Y G L V I S  
UniRef90\_T0JQX6 E V S D A A R V E A F A K L P G R E E L L G M L A A T W M A P L T N L G F G L N  
UniRef90\_R6GXH7 S V L T A E Q L N S F G E L P S K D  
UniRef90\_T1CZ73 E K V D K Q H I S I S K L P S K E E L I G M L L S V W T A P A R Y F V T G L D  
UniRef90\_K2BKW1 E F Q D N T S L V K I S T L P G I D I L L A Q V L G C L A S P S F S L V G V L K  
UniRef90\_U5Q6F3 C A Y G E N Q L D A L S I K S R E E L I G D I I G L L Q S S P A M R N V I S A L Q  
UniRef90\_R6GKT6 Q A M D A N G I S K V A S I P S K Q V L L G Q L V G L L T S P M R S L A I A L S  
UniRef90\_S8FKS4 I Y V G A D Q L N T L A N I K S K S E V I A D I V A L L Q S S P I K N V V S T L Q  
UniRef90\_R7JNV0 C V Y V G D Q L D T L C A I K S R E E L I G D I I A L L Q S S P A K N V I S A L Q  
UniRef90\_D1AZC1 E V V D A T K I E A L S K M P S R N E E L I G M L L S T W M A P I T N F T I G L D  
UniRef90\_UPI000466A423 E V K D A A Y V E E V S K L P T K D E L L G M V A F M M K A P I A K F A W G L N  
UniRef90\_E1X0N2 K V L S I Q E V Q D L A D L P S L D E M L G T L L A T F N A P L S A  
UniRef90\_J5XDE1 A V F V G D Q L D T L V A I P S R E E L I G D I I G L L Q S S P A K N V I S A L K  
UniRef90\_F9ZXM5 Q A F D G S E L E R L A K L P T R D Q G I S M L M S V M K A P V V  
UniRef90\_UPI00037DE66D D L L D A A Q V A E L A T L P S Y E E L L A K L L G V M Q A P V S G F  
UniRef90\_N9TU16 K V I D A K G V A E V A T L P N Y E E A L G I L A R S L I A P  
UniRef90\_UPI0004027F82 K Q I D A K Q L Q V L A E L P S R D V L I A K L L Y L M T Y P I S G L A V A L E  
UniRef90\_X5K6R1 T F Y I G D Q L S E T L A N I K S R E E M L G E I I G L L Q S S P I Q R V V S A L Q  
UniRef90\_R5YQD8 N V I Q D K A K L L E F A R I P S R E G L Y T M L A G G M I G I V K D L S I A L N  
UniRef90\_F8KRU1 Q A V D R A H V E A I S K L P S K E E L I G M L L S V W M A P A R Y F V T G L  
UniRef90\_E8R5G3 V A V G P D M V E S L T K L P S R E T L I A Q V L A L L M S P T R Q V L A G L N  
UniRef90\_A9BDG5 K L L S Q D E I K A I A N I P T K E V L M A Q I A G A L N S I A T K M A V I G I N  
UniRef90\_UPI0004684BC2 F Y V G A E Q L D A L A N I K S K N E V I A D L V A L L Q S S P A K N V I S A L Q  
UniRef90\_UPI0003B601AC K V L S A G E I A Q L A T L P  
UniRef90\_U4KSQ0 K A A T A E E I T A L A T L P S Y E T L L T Q L A A G L L M P L R E L A I G L N  
UniRef90\_R7FIZ7 K V M T T E E I T L A K L P S K E T L L S M L A G A L L A N I Q K F A V A L D  
UniRef90\_UPI0004665208 E V Y D E A K L N A Y S K L P T K L E A I S L F M S V L K A P M S K L V R T L K  
UniRef90\_UPI000377BE77 Q L I S A E N I D V L A T L P T Y E E A I A H L M A T L K  
UniRef90\_M4VCC5 E A L D Q N K I K F L A T L P G K D Q L R A Q F L C L L K E P S A R L A R V L N  
UniRef90\_R5ECZ2 S V L S A D Q I N G F G E L P S K N  
UniRef90\_R7MH78 E F V D T K V I P S Y E G L L T M F A G G L I E H V R N L S I A L N  
UniRef90\_E1GWS3 S I F G A D K L A E L A A L K S K N E L I A D V V A L L Q S S P A K N V M S S L Q  
UniRef90\_H7FR89 E V Y I G D Q L D A L A T I K S K E E L I G E I I G L L Q S S P A Q R V I S A L Q  
UniRef90\_W2C0V9 S F Y G V E H L D T L A S L K S R E E M L G D V I G L L Q S S P A K N L I S A L Q  
UniRef90\_R5I4X1 C A Y G A E N L E V L V N I K S R E E L I G D I I G L L Q S S P A R N V I S A L Q  
UniRef90\_K9SSK2 R A L N P E Q V K A L A D L P S K E V L L G Q I A G A I N G V A T K L A F G I K  
UniRef90\_H2M9Z7 T L L S V Q G V L H Y S K L P S M T V V Q G E L V S G L T M L T S H T V S V L K  
UniRef90\_Q8EVJ0 T F L D A Q K T M S I A S L P N R E G L Y S M L L S C L T G P I R G V L Y A L K  
UniRef90\_UPI00036FD812 S R L D E S Q V K I L A D L P S L D E L R A K L V G V V Q A P A Q K L A T L V N A  
UniRef90\_B2T761 K V M D K A G V Q A L A N I P S R E E L L S K L L V V M Q A P V I S G F A R A L A  
UniRef90\_S2JJW5 V L L T Q A D V L K V V E L P S L E E Q L R A Q V V G V I E A P A R K L L G T L E  
UniRef90\_R7FKG0 T F C D T A K I Q T L G A L G S K E D V I A M L L S V L E A P V I Q R F A A T V K  
UniRef90\_A9WNU8 K A L N A S E V A A L A A L E S R E L Q L T K V A S I L K A P I A A A A R S I D  
UniRef90\_I1FU08 E L L T P F S L K D V A G L P D V T V L H Q Q L L G I L L Q S S A V S L S C V I G  
UniRef90\_A6CA58 T P L S S E D V L T K L S K S P G R M E L I G E I V S R V L G P G A Q L A G A I K  
UniRef90\_F5XBW0 S F Y G R E N D A L V S I K S K N E L I A D V V A L L Q S S P A K N V I S A L Q  
UniRef90\_A4W1B7 K V S S K E E I E A L A T L P N R E G M L S M L S V L Q A P V R N V A Y A V K

UniRef90\_I0WGY0 S S G G K L A G I I K T L S E K  
UniRef90\_R9GMA0 S G G A K L A G L V K T L Q E R  
UniRef90\_UPI000464C527 A L R R K  
UniRef90\_E8X1S5 A T G R D L A V V I N Q G V E K E  
UniRef90\_V5RSV5 G V H R K F V Y A M D A I A K K K  
UniRef90\_A5EX72 K L A R T L D A V R Q S K  
UniRef90\_UPI00046FE338 S G G S T I S G V L K T L E E R  
UniRef90\_H4GIP2 A V A D K  
UniRef90\_S5LYX4 E I A N T  
UniRef90\_I0GKD3 K P E R D L V T V L N Q I K D K K  
UniRef90\_H2J5F9 G I L R K F V Y A L N A I K E E K  
UniRef90\_R6ALW2 G A G Q T I H G V L K T L G E R  
UniRef90\_A0A011TYX0 A L R E K L  
UniRef90\_H1Y0H3 S G G N I L A G V V K T L Q E R  
UniRef90\_R7JT85 S S G Q T I H G L L K T L E E R K  
UniRef90\_R4YJF9 A A A G K L V R T I A A I R D Q K  
UniRef90\_W0GSSG6 E I A  
UniRef90\_A6P0R8 A V A E S  
UniRef90\_U5N6X7 A  
UniRef90\_F6D958 A L A A K  
UniRef90\_A0A031GNM2 A L R V K L  
UniRef90\_E3GZR5 S V R D K  
UniRef90\_UPI0004286339 A Y V D K  
UniRef90\_G9RTG0 S G G G T L A G I V K T L Q E R E  
UniRef90\_B2UQY4 A A G S A L A R V I Q A Y V D K E  
UniRef90\_UPI0003743CE3 G N I R G L V N V L N A V K S K K  
UniRef90\_P36263 A V  
UniRef90\_C0BJ94 S G G G K L S G I L K T L S E R  
UniRef90\_UPI00046583A6 A S A G K L V R T I A A V R D A K  
UniRef90\_R5WD72 A A G Q K V A G I V K A L E E R  
UniRef90\_R6R8B0 A V A E K  
UniRef90\_U2KQ69 A Y V E K  
UniRef90\_R7KEC6  
UniRef90\_E6X714 S G G G K I A G I L K T L S E R  
UniRef90\_UPI0003608C05 A K A Q E F V G I L D A F V A K Q  
UniRef90\_R5KY10 Q T R Q K  
UniRef90\_Q7VJ80 N L R K Q  
UniRef90\_R7J0R0 S G G N K L H G I L E T L S N K E  
UniRef90\_S4NBD3 S A G S T I H G V L K T L E E R  
UniRef90\_Q6MDM3 A L L A S V A Y L D N K S K Q  
UniRef90\_K2E629 G N M Q K L L Y I L K E V S  
UniRef90\_B1Y7H5 A L A E K  
UniRef90\_UPI000425A97A E P A S M F A R A V K A V A D Q Q  
UniRef90\_R5FVP1 A I G E K  
UniRef90\_D6TRG0 A P M R E L C Y V L Q G R A D Q  
UniRef90\_T0JQX6 A L K E K  
UniRef90\_R6GXH7  
UniRef90\_T1CZ73 N L R K Q  
UniRef90\_K2BKW1 A N M Q K L I Y I L S E Y T K N K  
UniRef90\_U5Q6F3 S N A G K I A G I V K T L S E K E  
UniRef90\_R6GKT6 E V A K K  
UniRef90\_S8FKS4 S G A N T I H G V L E T L S K R  
UniRef90\_R7JNV0 S N A Q K I A G I V K T L E E R  
UniRef90\_D1AZC1 A L R A K  
UniRef90\_UPI000466A423 K L I E K  
UniRef90\_E1X0N2 L A R V L F A I Q E Q K  
UniRef90\_J5XDE1 S G G G K I A G I V K T L S E R Q  
UniRef90\_F9ZXM5 E K L A R T L A A V R D E K  
UniRef90\_UPI00037DE66D  
UniRef90\_N9TU16  
UniRef90\_UPI0004027F82 G I R K Q K A G  
UniRef90\_X5K6R1 N K P  
UniRef90\_R5YQD8 L L A E Q  
UniRef90\_F8KRU1  
UniRef90\_E8R5G3 A P I S G V M S Q V K T L A E R E  
UniRef90\_A9BDG5 E V P S G L A R S L K Q H A D  
UniRef90\_UPI0004684BC2 S G G N T I H G V L K T L G E R  
UniRef90\_UPI0003B601AC  
UniRef90\_U4KSQ0 M I S S  
UniRef90\_R7FIZ7 Q V  
UniRef90\_UPI0004665208 A  
UniRef90\_UPI000377BE77 A A A G K L V R T L A A L G D K  
UniRef90\_M4VCC5 E Y A T K  
UniRef90\_R5ECZ2  
UniRef90\_R7MH78 L Y A E K L  
UniRef90\_E1GWS3 S G A N T I H G V L K T L G E R  
UniRef90\_H7FR89 N Q F A K  
UniRef90\_W2C0V9 S S S G H I H G V L Q T L E K R  
UniRef90\_R5I4X1 A S A G K I A G L V K T L S E K E  
UniRef90\_K9SSK2 E V P Q S L A R A I K A I H E  
UniRef90\_H2M9Z7 R H P G Q L S A L L Q Q Y I K Q Q  
UniRef90\_Q8EVJ0 A V S E T  
UniRef90\_UPI00036FD812 T P G T Q L A Q V L K A K S E K  
UniRef90\_B2T761 A L A E K  
UniRef90\_S2JJW5 Q P A N Q L H S V L D  
UniRef90\_R7FKG0 A V A E  
UniRef90\_A9WNU8 A L R I K L A  
UniRef90\_I1FU08 A P A G K L S F L L N S H V T E Q  
UniRef90\_A6CA58 G P G G T L A G Q I K T I S E  
UniRef90\_F5XBW0 S A G Q T I H G V L K T L E E K  
UniRef90\_A4W1B7 A V A E K

UniRef90\_M5RK23  
UniRef90\_A1AX77  
UniRef90\_Q7PMH1  
UniRef90\_A5FIJ1  
UniRef90\_UPI0004195DBC  
UniRef90\_F8NA48  
UniRef90\_D5EUX0  
UniRef90\_W4YAG6  
UniRef90\_E1VY80  
UniRef90\_L0DZ77  
UniRef90\_A3V377  
UniRef90\_Q5K272  
UniRef90\_J9Z298  
UniRef90\_UPI000364C216  
UniRef90\_H1ZCP2  
UniRef90\_B3E161  
UniRef90\_B4MTV3  
UniRef90\_J0L3U5  
UniRef90\_A7S299  
UniRef90\_F9Z836  
UniRef90\_F6WCY2  
UniRef90\_W0EXT9  
UniRef90\_Q83HB1  
UniRef90\_R1EH59  
UniRef90\_UPI00030E1ED8  
UniRef90\_H1Q3P8  
UniRef90\_R7F329  
UniRef90\_D9PNL9  
UniRef90\_R5PS01  
UniRef90\_UPI00036AA25B  
UniRef90\_A9NEL4  
UniRef90\_Q7NBW4  
UniRef90\_T0RCN4  
UniRef90\_R5LQA8  
UniRef90\_E8U5Y9  
UniRef90\_F8L114  
UniRef90\_M0SBL7  
UniRef90\_D2R5P1  
UniRef90\_W01YT4  
UniRef90\_G1WKR2  
UniRef90\_A3J4W1  
UniRef90\_UPI000362BF59  
UniRef90\_Q6KHB1  
UniRef90\_K2G3K5  
UniRef90\_Q0SNB6  
UniRef90\_G3VLK8  
UniRef90\_C9RQN7  
UniRef90\_UPI0003B9619  
UniRef90\_W0POQ4  
UniRef90\_J4VRF2  
UniRef90\_R5NBP0  
UniRef90\_T0RI83  
UniRef90\_F8WWW86  
UniRef90\_UPI0004169AF4  
UniRef90\_F0SII4  
UniRef90\_UPI0001CBAED  
UniRef90\_K4RHF3  
UniRef90\_N6UJA4  
UniRef90\_Q11QA3  
UniRef90\_T0XQ52  
UniRef90\_A0A016QNJ2  
UniRef90\_W5KTB4  
UniRef90\_F0P0F3  
UniRef90\_W5X0R4  
UniRef90\_Q16VU4  
UniRef90\_N9T96  
UniRef90\_B1VAM8  
UniRef90\_UPI00047BAEFB  
UniRef90\_P36521  
UniRef90\_R7L4F6  
UniRef90\_X5DXQ1  
UniRef90\_R7GH72  
UniRef90\_T2MB21  
UniRef90\_K2FWK7  
UniRef90\_K0P5P0  
UniRef90\_B6U897  
UniRef90\_UPI0003158688  
UniRef90\_R5G927  
UniRef90\_Q9VPL3  
UniRef90\_E0U56  
UniRef90\_F4X0Q4  
UniRef90\_D8TID0  
UniRef90\_F0RMI5  
UniRef90\_Q4N8Z7  
UniRef90\_K2FV64  
UniRef90\_L8X1L4  
UniRef90\_Q492B7  
UniRef90\_UPI000441AEAF  
UniRef90\_UPI0003D022B2  
UniRef90\_X8DBG7  
UniRef90\_M1UQN2  
UniRef90\_B3CQ11

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

UniRef90\_M5RK23  
UniRef90\_A1AX77  
UniRef90\_Q7PMH1  
UniRef90\_A5FIJ1  
UniRef90\_UPI0004195DBC  
UniRef90\_F8NA48  
UniRef90\_D5EUX0  
UniRef90\_W4YAG6  
UniRef90\_E1VY80  
UniRef90\_L0D7Z7  
UniRef90\_A3V377  
UniRef90\_Q5K272  
UniRef90\_J9Z298  
UniRef90\_UPI000364C216  
UniRef90\_H1ZCP2  
UniRef90\_B3E161  
UniRef90\_B4MTV3  
UniRef90\_J0L3U5  
UniRef90\_A7S299  
UniRef90\_F9Z836  
UniRef90\_F6WCY2  
UniRef90\_W0EXT9  
UniRef90\_Q83HB1  
UniRef90\_R1EH59  
UniRef90\_UPI00030E1ED8  
UniRef90\_H1Q3P8  
UniRef90\_R7F329  
UniRef90\_D9PNL9  
UniRef90\_R5PS01  
UniRef90\_UPI00036AA25B  
UniRef90\_A9NEL4  
UniRef90\_Q7NBW4  
UniRef90\_T0RCN4  
UniRef90\_R5LQA8  
UniRef90\_E8U5Y9  
UniRef90\_F8L114  
UniRef90\_M0SBL7  
UniRef90\_D2R5P1  
UniRef90\_W01YT4  
UniRef90\_G1WKR2  
UniRef90\_A3J4W1  
UniRef90\_UPI000362BF59  
UniRef90\_Q6KHB1  
UniRef90\_K2G3K5  
UniRef90\_Q0SNB6  
UniRef90\_G3VLK8  
UniRef90\_C9RQN7  
UniRef90\_UPI0003B69619  
UniRef90\_W0POQ4  
UniRef90\_J4VRF2  
UniRef90\_R5NBP0  
UniRef90\_T0R183  
UniRef90\_F8WWW86  
UniRef90\_UPI0004169AF4  
UniRef90\_F0SII4  
UniRef90\_UPI0001CBAEAD  
UniRef90\_K4RHF3  
UniRef90\_N6UJA4  
UniRef90\_Q11QA3  
UniRef90\_T0XQ52  
UniRef90\_A0A016QNJ2  
UniRef90\_W5KTB4  
UniRef90\_F0P0F3  
UniRef90\_W5X0R4  
UniRef90\_Q16VU4  
UniRef90\_N9TT96  
UniRef90\_B1VAM8  
UniRef90\_UPI00047BAEFB  
UniRef90\_P36521  
UniRef90\_R7L4F6  
UniRef90\_X5DXQ1  
UniRef90\_R7GH72  
UniRef90\_T2MB21  
UniRef90\_K2FWK7  
UniRef90\_K0P5P0  
UniRef90\_B6U897  
UniRef90\_UPI0003158688  
UniRef90\_R5G927  
UniRef90\_Q9VPL3  
UniRef90\_E0U56  
UniRef90\_F4X0Q4  
UniRef90\_D8TID0  
UniRef90\_F0RMI5  
UniRef90\_Q4N8Z7  
UniRef90\_K2FV64  
UniRef90\_L8X1L4  
UniRef90\_Q492B7  
UniRef90\_UPI000441AEAF  
UniRef90\_UPI0003D022B2  
UniRef90\_X8DBG7  
UniRef90\_M1UQN2  
UniRef90\_B3CQ11

50 60 70 80  
R G E L D A K D I R M L V V K N S L A R R A T E G S S L A P A F E G T R G  
R S S A D A N V T L R V V K N S L A K R A L V K T E F E A V F L V L S G  
Q V A L H R H A I D A N V T L R V V K N S L I M R K A V A D T R F E A L P L F E A  
R R A R A C C F K A G I K L M V V K N T L L Q K A L E A D T D F T E L I P T V L F S G  
R R A R K C C F K S E I K L M V V K N T L L H Q A F E A S E I D F T S E L Y G T L  
R E K C C F K N N I K L L V V K N T L L L Q K A F E A S E I D F T P L Y E C L  
K R R L R K N N L S L K V V G N S I V Q E A I T G T E L E S L R P L F V V G  
R R S L G Q E T K Y A V V K N T L T A T A A K N A G M I D A F D D Q L F S G  
R R D L R K K S G G A V R V A K N K L A K I A L E G K P C E S I A T Y L M G  
R A R M R D A G G A V R V A K N K L A K I A L E G K P C E S I A T Y L M G  
R W S L P E D S K A S C I K N R L L K R A A A G T E W E V V K D A A K G  
R T E I R N N E G V T K I S K N N I V K I F I D K S E K K G L N D F L S Q  
R R R A C S K Q G I K L V V V K N T L L Q K A F E S L E Y S E L Y P I L K G  
R R A C N K A G I K V V V K N T L L A K A M E S S E Y E A D L A S V L K G  
R K R L K A V N C R C L V S K N T L I R M A L N E I K P E A I M P L F H S  
R V Q L F K Q N M H L K S Y G R K I I G Q A V A G T P Y E A I M P L F H S  
Y A L S K A H E N V K V K I F P N R V T H K A L E D T I Y D G L I P L F A C  
R R L R K C F K A G I K L I Q V V K N T L L R V A L D G L E A D Y N E I Y S A L  
R H Q L R K H T I W V K V A P N E V L K P F L A S E S K F R M L L P L L V G  
R R A C F N K N V E M K V A K N T L L K K A L E S L D Y S G V Y D S L H K  
R L L R G D A S Y L L A K N T L A R I A A Q Q V G F N D F A E F L R G  
R M K L P E G V R L R Q C V K N T L V N R A A K D F E Q E G L D G L H Y  
R M Y L R Q V K N T L V R R A V A G S P F E A L S S Q M T G  
R R K C F N S E I K M V V K N N L L L K A F E A S D V D Y E P L Y G S L  
R R K L K K T G S D Y K V V K N T L M D R A F K D N V D L E E G L T G  
R K S L K K V D A E L M I T K N R L M A K A M G E K D K V A G D L N G  
R R R E C F K N E I T M V V V K N S L L H K A F E A S D V D F E P L Y G T L  
R Q R L S A V I G A R C R V A K V Q A L T R I L R Q A R G L P V I E W L K G  
R S E L H K E N I D L K V V K N N I T R R A A I N A R Q D A L E P S L T G  
R R K V K T S A N Q M F V L K N N I L K R A I K E A G I D G F D D D I K N  
R K N V R D A E G S D S D Y K V V K N T L M A R A F N E G L D L N D S L N G  
R I K L R E S D S D Y K V V K N T L M A R A F N E G L D L N D S L N G  
R K Q L V E K G G R L I V A K N T L I N I A L Q D G G R D F A D A L H  
R R P R V S T L G G N L E M K K R V L V Q A A D C V G I K L D L E A L P G  
R G A L P P A A K L L V V A K N T L L E K A I A G T R W E P L R P C A K G  
R K E L R S K N I R L V V K S S L A L R A T E G Q P I A K A F E G G E G  
R A S L K A E K A E H V V K N S S L R V A A K A L G L P D V D E A L T G  
E L R H Q L R E I G A E M K V V K N N L V R I A L E N K E Q P N V D D I L V G  
R R A C F K A G I K L E V V K N T L L E K A M E A S D S D F G D L S T V L  
R R Q C F Q H G V K M M V V K N T L L H R A F A N E Q Y E P F H P L Y L K G  
R N D L K N H L A N T M V F K N R F V K L A I D K A G F K E L D S Y L F G  
R R D L R K V D A K F M L A K K T L I R I A F K N V N V D I S E D I M P G  
R N K I E G E H G A L K V V K N N I M K M V L K E K N I D V V D S C L V G  
K Q L R K H E N I F V K V F P N S I L R P F L T E S K Y Q N D V L P L V G  
R K A L A A K G V K Y H A V K N T L L K R V L E A L K V E G L N D S L T G  
R K D L R E K G G Q L I V A K N T L I N L A L Q D G G K D F T G E L K G  
R K S G R E I G V K M S I V Q N T L L S L A I K N T V F E C L K K K I K G  
R R A C N K G G L R L V V A K N T L L R R A L S E S E T D F A A I Y S A L  
R R E L K A N N A D L K V Y K N T L T K R A I D S L K L D L G E H L N G  
R K S I R D V K A N K L V V T R N T L F A K A A G T P A E N L L S N L K G  
R R R E C A K Q E I K L M V V K N T L L Q K A L D T L E G D Y S E L H S V L  
R Q A L A E K G V F L K V V K N R L V K H A T K A L G F E A I N K T L L E  
R L A M E A K G V H L L T V K N T L A R K A L G D V G E S L R P L L E G  
W R K L R K Q G I E L V R F P N L V M C E T V E N S E F Q N M Q P L F V G  
R N A A R V Q G L S Y Q V I K N T L A S L A L K G A N L P A L L E L K E  
R V S F H K L K M Y F K Q Y G K K T L E L A V K G T P Y E V L L D F Y V S  
R K L C F S K G V I E Y K V V K N S L I K K A L Q Q L N I D H T A N G A A L  
R R S L Q T H G G Q F T V Y K N T L A R I G T E T T S A T P L V P D M K G  
R Q D I R E K G G Q L I V A K N T L I N I A L Q E G G R D F G D T L K  
R H R L H K H D T A I K F F P N Q V M R S Y L P S S Q Y R N M L P L F I G  
R R A C F K S D V S L R V V K N T L L K K A M E R I E F E E L Y G S L K G  
N L R K Q L N A A E S E M K V V R N T L A K R A F K H P A I D S A L S N S M T  
Q V A L H R H Q M N V K V V G K S V I R Q A V E G T K F E T I Q P L F D V  
R R R E L A K F G V L I K V V K N R L F K Q A L M S T E Q Q S L N D L L V G  
R R Q L K K I D C E V K V Y P K N I M Q R A F M N T N Y Q D L V S L L K G  
R R N L R N E G C D V T V H K N N I A R R A A I A A G Y E G L A E A F V G  
R F K L K Q T G G K L T K V R N N L F E V I A R N S H L H P L L L K G  
A F R A L A A V I G A Q Y H V I K N S I L E I A A K E L N L P D I S S A L A G  
R R L C F S Q D V K L V V K N T L L R K A L E N S N K E A E E I F D A L  
L R T E L R N A K A E Y K V I K N N I T R R A L A E G I E G L E E Q L T G  
R Y D M G K E H I S V K V F P N E I S R V Y L K D S P Y K N I A P L F F T  
R R E L I K V I D A K L M L A K K T L V K I A F K N V N V E L N D E V L P W  
R K S C A E Q N A I Y Q V A K N T L R K A A L A G E R S E H V I A A F S S V L K  
R A S L P D A A R L V V A K N S D M A A A V A G T R W E A L R P C A R G  
R A K A R D Q G V Y L R V L K N T L A R R A V E G S A F A D L A S E M T G  
R R L C F E K D N L K L M M V K N T L L R I A L S Q K D F A P L F P Y L K G  
R V Q L H K Q D V H L K S Y G S K I I E Q A V K N T R Y E A I V P L F H S  
R K A A R A K D T S V Q V V K N T L A T I A L N N A E M S G V E I  
A V P L K K L P N M Y Y K R Y S N T I M K L A L T D S P Y T A T M P L Y S S  
R K G L P N C S Y V Y T K N T L M K V A I S Q T G W E T L E K G C Q G  
R Q D I R D K G G Q L I V A K N T L I H L A L Q S N D Q D F S D I L A G  
N H R L R S Y I K E N L K M Q L I A K A R I M L R A V E G T E F E P L S S L E K  
R T Q L R K D G G T L K I A K A R L F K R A V G D L G D S A L T P Y L K  
R K D L A K A D Q R P A K L S V I R H A I F G A A V K A A Q P Q P L I S N V I Q G  
R K E A R D I G V Q V H V I R N T L M R K V I E N T P L A C L R E I L T G  
R H Q L R K Y N I Q V K F F P S K V I T P F L E S K Y K N L P L F V E  
R K E M K L J A D A K F N V V R K R I F L K A V E E A G L E K I D L A L L Q  
R R A L P T S A T Y S V A K N T L V K R A A S E A G I E G L D E L F V G  
K S S L P A T V H C Y S V A K N S Y F Q K A A N G V T W A L A K P L L K  
R N S L K S V M G G M L V V K N T L A C L A L I E R T G F S Y L S G K F S G



UniRef90\_M5RK23  
UniRef90\_A1AX77  
UniRef90\_Q7PMH1  
UniRef90\_A5FIJ1  
UniRef90\_UPI0004195DBC  
UniRef90\_F8NA48  
UniRef90\_D5EUX0  
UniRef90\_W4YAG6  
UniRef90\_E1VY80  
UniRef90\_L0D7Z7  
UniRef90\_A3V377  
UniRef90\_Q5KC22  
UniRef90\_J9Z298  
UniRef90\_UPI000364C216  
UniRef90\_H1ZCP2  
UniRef90\_B3E161  
UniRef90\_B4MTV3  
UniRef90\_J0L3U5  
UniRef90\_A7S299  
UniRef90\_F9Z836  
UniRef90\_F6WCY2  
UniRef90\_W0EXT9  
UniRef90\_Q83HB1  
UniRef90\_R1EH59  
UniRef90\_UPI00030E1ED8  
UniRef90\_H1Q3P8  
UniRef90\_R7F329  
UniRef90\_D9PNL9  
UniRef90\_R5PS01  
UniRef90\_UPI00036AA25B  
UniRef90\_A9NEL4  
UniRef90\_Q7NBW4  
UniRef90\_T0RCN4  
UniRef90\_R5LQA8  
UniRef90\_E8U5Y9  
UniRef90\_F8L114  
UniRef90\_M0SBL7  
UniRef90\_D2R5P1  
UniRef90\_W01YT4  
UniRef90\_G1WKR2  
UniRef90\_A3J4W1  
UniRef90\_UPI000362BF59  
UniRef90\_Q6KHB1  
UniRef90\_K2G3K5  
UniRef90\_Q0SNB6  
UniRef90\_G3VLK8  
UniRef90\_C9RQN7  
UniRef90\_UPI0003B9619  
UniRef90\_W0PQ04  
UniRef90\_J4VRF2  
UniRef90\_R5NBP0  
UniRef90\_T0RI83  
UniRef90\_F8WWW86  
UniRef90\_UPI0004169AF4  
UniRef90\_F0SI14  
UniRef90\_UPI0001CBAEAD  
UniRef90\_K4RHF3  
UniRef90\_N6UJA4  
UniRef90\_Q11QA3  
UniRef90\_T0XQ52  
UniRef90\_A0A016QNJ2  
UniRef90\_W5KTB4  
UniRef90\_F0P0F3  
UniRef90\_W5X0R4  
UniRef90\_Q16VU4  
UniRef90\_N9TT96  
UniRef90\_B1VAM8  
UniRef90\_UPI00047BAEFB  
UniRef90\_P36521  
UniRef90\_R7L4F6  
UniRef90\_X5DXQ1  
UniRef90\_R7GH72  
UniRef90\_T2MB21  
UniRef90\_K2FWK7  
UniRef90\_K0P5P0  
UniRef90\_B6U897  
UniRef90\_UPI0003158688  
UniRef90\_R5G927  
UniRef90\_Q9VPL3  
UniRef90\_E0UU56  
UniRef90\_F4X0Q4  
UniRef90\_D8TID0  
UniRef90\_F0RMI5  
UniRef90\_Q4N8Z7  
UniRef90\_K2FV64  
UniRef90\_L8X1L4  
UniRef90\_Q492B7  
UniRef90\_UPI000441AEAF  
UniRef90\_UPI0003D022B2  
UniRef90\_X8DBG7  
UniRef90\_M1UQN2  
UniRef90\_B3CQ11

90 100 110 120  
Q[V]A[V]C[W]G A S D F[V]S L[V]K E I[V]R L D K D S S K Y E K F T A A G G[V]M D G  
P I I L G F S Q E D P G A V A R V F K N F I K E N K N L V V K G L G V S G G  
K T A I I F S P E V Q K I I K Q V L S V L K K T P Q L V L M G G L V I N E S  
N S A I F I S D V A N A P G K I I K D F R K K S D K P V L K G A Y I N E S  
N T A L M F T N T A N A P A K L L D K Y S K E G I P A L K A A Y V I Q E E  
K G S T A V L F A Q T A N T P A K L L K D K E K A A G V P S L K A A Y A E E E  
K G N T A V M F F A Q T A N V P A K L L K E Y K K E G I P A L K G A Y A E E E  
S C I T A L S E E L T V K E L L K A T R R I P K I H L L G G R V I G D  
P T A L A F I K G D A V A A A K S L T E F A K T N D K L V I K T G W F E G G  
P S V A V W G D G V A E L A K E I S T Q V K A L K K P E I K G G A V D G  
M T V I A Y S E D P V A A A K V I D A Y A K T N E K L V V L I G G A M G D  
S D N L W V I V G S D T K G T I K A F K A W A K K E K A G A K A G V L E G G  
Q K L L I F T N N P V G T A K V I C K A K F E K D L K L S A E A A F F D N  
N T A I M F S N V A N T P A K L I D K Y K A D K V P A L L K G A Y V Q E S  
N S A I F I S D V A N G P A K I I K D F R K K S D K P S L K G A Y I N E N  
P T A V L T S E E K D A T A V A K I I L K N F I A E F Q L P K I K S A I I E N  
N H C I V F S P D Q K R V L S T L L R L I T R K V P Q M V L I G G I V E I Q  
K D N N L F I W G E D L V T L A K V I V T K Y D E K G P D T F S I K A G H F E G  
T T C V I Y S E E P A V K P I L D K V I K R Q P K L E L L G A K I D N  
T G S S A V M L S E T G N A P A K L I K E F R K N H D K P V L K A A F V I E E  
H N M L L V I S P E P A K A K E M L R I L K T V P F L P L L G G C I D N  
V T A L M F S E N P K A E P A V I L S S F R S E A K A E K P E L K L A F I N G  
P T A I V A V D G D I V S V A K S L R K F A E T D G L L K I K G C F V D G  
S N Y W F F A T E A G M R D S I K V W K T F T E E S R K E S G E I V I G I F D A  
P L M Y A V S Q D P V S A A K V L A S F A K T N D K L V I A G G A L P N  
K G N T A V M F C Q T A N T V A K L L K E Y T K E G I P A L K A A Y A E E  
P S A L A F G E D E V A P I K V L S D F A K D H Q A L V L K V G V I D G  
E T A I V F S Y T D E V S G A K E L F V L K F F K V T N L G R A K G M L G N  
K G S T A V M F A Q T A N V P A K L L K K Y A D A G V P S L K G A Y A E E  
Q V L A I A H G D M I A A S K S I L K N F T A E F T R N P K L V I G G L I D D  
P L A V A I S Y D D V V A P A K I I N E F A K N K T V V I T S G V I E A  
Q I A V V I G L E D A F L P I K A V H E Y V T A N E K V K Y V C G Y L E N  
T Q A V A F A F D G I A P I K V L S D F A K S H P A L V L K V G I V D G  
P S A F A F G T D Q I A P I K V L S D F A K S H P A L V L K V G I V D G  
G P S A V V V A Q D D P A G V A K V L A D A S K G N D K G I P A V K A G F V I E G  
H I G L V F A G Q D D P I E T A K V V F K F K D E N K T I N V M G R F D G  
M N A W L F V H S D E I P A L K P C R D F Q R D F K L A L N D F T G A V F E G  
S L A T V W G S D D F V S L C K E M V I E I H K K P E F E K C V I P K G V M D G  
P T A V V V I G E N V A G V A K V L K K F F E T K Q K L E I I K I G V M E K  
P L A Y V V G E N E P V E A A K A L K E F A K K S K G V L E I K G G I S E G  
K G N T S M F I A D T A N G P A K I I K E F R K K G E K P L F K G A Y I N Q  
T S A L M L S E S A N A P A R V L K D F H K E L K S A G A D I E R P A Y I Y E D T  
P N I F V F F D E E H K N A T I K K I A E I E K K N K F V K L K A G I V E  
Q V A V L I S K W D K I A G L T V V N K Y A F E L R K E E K I K F V I G A Y F D G  
P T V V V T A L E E A N V I A K I F Y D F V K T T L K V K G G F V L G  
H N M L L V S E P K A K E M L R V I R S M P V L P L L G G C I D D  
A T S V M V G F E E D P L L L P A R E I E A F H K A N P D F L V A K S I Y L D G  
P S A L V L A Q E D P A G V A K A L S D A A K G N D K G L P A V K G G F V I E G  
S T F L A Y S M I H P G S G A R L J F K E F S K K Y T Q F K I T G A A F E G  
K G N T A I M F T T V A N A P A K I I K D F K D K K E E S K L R L K A A Y A E T  
P K A I A F G A D E V T P V K L L S E F A K K C P A L E I I K V G I I E G  
P K A V A F A F G E A P A V A K C L K N A G K E Q E A V E T L D G G L I D G E  
K G N T A V M F S N S A N A P A K L I A K Y K K E G I P S L K A A Y V I Q E  
P N I Y A F A K E D D L S A I K A L V A F Q K D F P A L K I V S G I Y E N  
Q S T I V W G S E D V V A L S K E V T K A V K G N D K I T I K G G A V E G  
R N L Y A V C K E P K V K E L L K T V K N T P K I I L L I G G K V I E N  
S N V F I W G A D Q L A L S K L V M G F A K E H K E H F I V K M G I Y E K  
H N M T I F S P E P E I K K L L Q V L K K F P Q L L L A G I Y E N  
K G A S G L M F S D T A N V P A K L L K Q F H K G G V A K P E F K G A S V F A D  
Q V I G V F S E N N P L G V I K T L I D Y S K E N P L F K I K S G V F D G  
G N S A L V L A H A D P A G V A K A L S D A S K G N D R G I P A M K G G F V I E G  
Q T V M F V S K E P K V K E M L R V L R S S P Q M T L I G G C I E N  
N T A L M V A E K E N A P A K V I E A F R K K S E K P L I K G A V I D N  
G T N A I V F S Y G E V N A T A K A L A D F A K D V E V L Q I K S G V M D G  
K T A L I F C P D E S K I R Q L L N V L K K T P Q F V L L A G I I H G  
Q N L F I F A K E D D L T L K A L V K F K E F P A L Q L V A G I Y E N  
I K A L I I S Q Q E L L E P I K V I Y N F A K Q N K V V K I V S G V I E Q  
P K A L I I G F D D V V A P A K I I A D F A K D N K V V V I D G G I I E G  
P T A T I T Y E D T N P Q Q V A K L K V L Q S A Q D K L M V I K G A K V I E N  
P T G V I S G N S D A A V A K A V S E F A K T R E N S E I K L G I F D E  
K G N T T V M F S S S G N T P A K L I K D F A K K H K K P V L K A A F V I E E  
P T A V I M S N E D Y L E P A K A I Y K F S K D N D F Y K I K G G V I E G  
Q T A V A F G N Q V N I K S V L K L F N R N P R I H L L G A V I E N  
Q V A V L T S K W D K I A W I S I V N K Y A N E F R K E E K I K F V W A Y F D G  
G F S G I L F S R D S G R A P G K L L K A F L E A E K L N P V L K A A S I Y G  
M N A W L F V R S D E I P P A K L P Y R D F O K E W K L N Q L N D F T G A V Y E G  
P L I Y S I S E D A V A A A K V I S D F A K T N D K L V V K A G N Y A G  
N T A V M F A E T A N A P A R A K E N K P A D A D K A A K P E L K A A Y V I Q E S  
N H C I V F S P D P E K T A A L L R I V R R V P Q M V L L G I V E E  
K D T N I F I W S D D V I N A A K I A A D F A K D H D K F V I K A G Y L D K  
Q F C I V F G S D T N V A G F E K I K K F P Q V I L L A G I L M G  
E N A W V F V N E E I A D A V K H Y K K Q A K N Q E V K P P T E C V V M S G  
P S A L V L A S E D P A G V A K A L S D I A K T N E A G I P T F K G G F V I E G  
T N L Y F F I Y D D T I P K F M S V V N G M R K I V K W R E F P H F G C F D H  
Q Q I G V V F A S H E A P A V A K I L S S F S K N N A A L Q L V V G K L D G  
P A A T L A F P R V I E R A V P K P R A G D P A G E V K P T I H V I G A Y A E G  
Q N I V A F S M N Q P R D S A R I E V K F T K N H E H F K I K G A V F E G  
R N L L L V S M E T R A Q E T L R I L K R V P Q I N M L G A C I D N  
G A T V A I F A K E E D F A P L K I I K G F E K A G E K S S F D F L I G G W S E K  
P T A L A F V T G E P V D A A K A I K T F A K E H K A L V I K G G Y M D G  
L A N F W F L A E N L D D L P A A I R A Y E A V I K L E Q T N K I R G G V L E G  
S V A I I Y S S A T V E A A K L I V D F I N A N K E K M S V I C A A H I N

UniRef90\_M5RK23  
UniRef90\_A1AX77  
UniRef90\_Q7PMH1  
UniRef90\_A5FIJ1  
UniRef90\_UPI0004195DBC  
UniRef90\_F8NA48  
UniRef90\_D5EUX0  
UniRef90\_W4YAG6  
UniRef90\_E1VY80  
UniRef90\_L0D7Z7  
UniRef90\_A3V377  
UniRef90\_Q5K272  
UniRef90\_J9Z298  
UniRef90\_UPI000364C216  
UniRef90\_H1ZCP2  
UniRef90\_B3E161  
UniRef90\_B4MTV3  
UniRef90\_J0L3U5  
UniRef90\_A7S299  
UniRef90\_F9Z836  
UniRef90\_F6WCY2  
UniRef90\_W0EXT9  
UniRef90\_Q83HB1  
UniRef90\_R1EH59  
UniRef90\_UPI00030E1ED8  
UniRef90\_H1Q3P8  
UniRef90\_R7F329  
UniRef90\_D9PNL9  
UniRef90\_R5PS01  
UniRef90\_UPI00036AA25B  
UniRef90\_A9NEL4  
UniRef90\_Q7NBW4  
UniRef90\_T0RCN4  
UniRef90\_R5LQA8  
UniRef90\_E8U5Y9  
UniRef90\_F8L114  
UniRef90\_M0SBL7  
UniRef90\_D2R5P1  
UniRef90\_W0IYT4  
UniRef90\_G1WKR2  
UniRef90\_A3J4W1  
UniRef90\_UPI000362BF59  
UniRef90\_Q6KHB1  
UniRef90\_K2G3K5  
UniRef90\_Q0SNB6  
UniRef90\_G3VLK8  
UniRef90\_C9RQN7  
UniRef90\_UPI0003B9619  
UniRef90\_W0POQ4  
UniRef90\_J4VRF2  
UniRef90\_R5NBP0  
UniRef90\_T0R183  
UniRef90\_F8WWW86  
UniRef90\_UPI0004169AF4  
UniRef90\_F0SII4  
UniRef90\_UPI0001CBAEAD  
UniRef90\_K4RHF3  
UniRef90\_N6UJA4  
UniRef90\_Q11QA3  
UniRef90\_T0XQ52  
UniRef90\_A0A016QNJ2  
UniRef90\_W5KTB4  
UniRef90\_F0P0F3  
UniRef90\_W5X0R4  
UniRef90\_Q16VU4  
UniRef90\_N9T96  
UniRef90\_B1VAM8  
UniRef90\_UPI00047BAEFB  
UniRef90\_P36521  
UniRef90\_R7L4F6  
UniRef90\_X5DXQ1  
UniRef90\_R7GH72  
UniRef90\_T2MB21  
UniRef90\_K2FWK7  
UniRef90\_K0P5P0  
UniRef90\_B6U897  
UniRef90\_UPI0003158688  
UniRef90\_R5G927  
UniRef90\_Q9VPL3  
UniRef90\_E0U56  
UniRef90\_F4X0Q4  
UniRef90\_D8TID0  
UniRef90\_F0RMI5  
UniRef90\_Q4N8Z7  
UniRef90\_K2FV64  
UniRef90\_L8X1L4  
UniRef90\_Q492B7  
UniRef90\_UPI000441AEAF  
UniRef90\_UPI0003D022B2  
UniRef90\_X8DBG7  
UniRef90\_M1UQN2  
UniRef90\_B3CQ11

130 140 150 160  
E K L D A D R L K E V S K W P S R E E Q I S M L S G Q I L G P G S Q L S A A L L  
E F V K S N Q L Q M A Y A T M P D I T T V R A Q I G I T M T L M L A S V G E K L V R T L L  
R L L S K N E F L D A L A T I K S K E E E L L G D V I G L L L Q S S P A K N V V S A L L Q Q  
V Y I G L G D A L V A N I K S K E E E L L G D V I G L L L Q S S P A K N V V S A L L Q Q  
S F Y G K D N L K E A L A N I K S K E E E L L G D V I G L L L Q S S P A K N V V S A L L Q Q  
F Y V G A D K L D E E L S A I K S K N E E L L A E V V A L L Q S S P A K N V V S A L L Q Q  
S F F G A D K L D E E L S A I K S K N E E L L A E V V A L L Q S S P A K N V V S A L L Q Q  
Q L M S P K G M D D Y S K L P L E T L Q G Q F A G L L T S S L S R P Y S L L Q  
K A L D Q P S G V E A D I A A A L L E S R E E L I A R V I A A V L L Q S  
V V I G P S Q V T E A D I A T K L P S R E E L I A R V I A A M A M S P A Q R V V S L A N  
T A L D P A G V V K A I V A G M P S R E E L I A S I V G C I A A P A A N I A G A I G  
R I Y D E K G V D A I G D L P S S K D E L Y A Q I A G C V I N A V P T Q M A T A V K  
T L Y T K D D I A K V A T L P S L D E I R G K I V G L L I K A P A S K L V R L L Q Q  
F F I G G N T L Q D L V N I K S K T E E L I G D V I T L L Q S S P A K N V V S A L L Q Q  
E I Y I G D D L D A L V A I K S K E E E L L G D V I G L L L Q S S P A K N V V S A L L Q Q  
A V L Y E T D F L K L A D L P G L E E V L R S Q V L V Q T L N Q A A G Q L V Q H L L Q  
T L L S R N E L V A Y A Q M P S L Q V V A Q A Q L V Q T L N Q A A G Q L V Q H L L Q  
G A V D P S K I E A Y S K L A S R E E F L G M L L S T W T A P L R N Q I M Y V W S  
R L M S Q R N V I Q D F A K L P S L T E L H V T L V Q L L Q A H Q S N Q L G S L L Q Q  
C A Y G E N Q L D A L V S I K S K E E E L L G D I V L L L Q S P M Q K L T S A L L E  
T I L S Y Q G F V K Y S K L P L S G F Q G G L V G G L G F P A S Q T H A L L Q Q  
D V Y V G D Q L A S L V K I K T K N E L I G D V I G L L L S P I Q R V I G A L L Q Q  
Q V F G S E H V K R L A E L E S R E E V I L A K L A S V T K G A L S S A L G L V S  
Q V L D G K G V A V S K L P T K N E E L M G K T A L L L K A L P T K L A R S L N N  
N V L D V E G V K A L A T M P S R E E L L A K L M G T M Q A P V T Q F V R T L N Q  
S I F G G D K L E E L V A L K S K N E E L I A D V V A L L Q S P V V K N V S S A L Q  
K V S D K A A L A E L A T I P S R E E G L L T M L A T G M M  
R F M T E K D V T S L S Q I P S S K E I L L G R L V G Q L I A P V S G L H H A L R  
C V Y G A D K L S E L V A L K S K N E E V I A E L V A L L Q S P A K N V I S A L Q  
R P L S A A E A A I A E L P G R E E L L A K M L G L L Q A P A T R L L G M A  
K V A D Q V A I M A L A N L P S R E T L L T Q L A A G L L M P V K E I A I G L N  
E K L S A A E L S E I A V L P S S R D E L Y S M F L S V L Q A P V V R K F M Y A L K  
K V L S V A D V K A L A D L P S S R D E M L G T L L A T F N A P I S A  
E K A D Q A K L A E Y A T I P S R E G L L T M L A G G M M  
T R V D V K V V E R L A S L G S K Q S L Q G E L V G V L S  
R M Y N S E D V E K L S K L P S M D E M R A Y L L S V F E A P L S Q T L L S V M E  
R L Y G P D N F Q A L E T M P S T R M E S Y A Y L L G C L Q T P A V S L L S L L Q Q  
E R L S P E K V E E V S K W P N R T Q Q I S M L V G Q I L S P G A K L L L S L L N  
K L I S A K D L N A I A D L P P F D A L R A Q F L S L L T S N A A S F V R L L D  
K A V T A E E V N A I A D L P T K D Q L G Q I A G L I N G S A R D I A V C V N  
E I Y I G D N L D S L V A I K S K E E E V I G E I I G L L L Q S P A Q R V I A A L K S  
F Y L G A G E L D T L A A L K S K E E E L I G D I I S M L E S P I M Q D V I S Q V S  
K V V S D A E V R V I A T L P T Y E E A L T L L A R S M L A P L Q S A L A R F L D  
E V I D A A W A K L A N L P S R E V L L S K L L G S M K A P L S A L A R F L D  
E F Y D E A K V Q A Y S K L P S T K K E S I S L F A S V L K A P V T A K L V R T L K  
T I L S Y Q G F L N Y S K L P S Q S L M Q G E L V G G L S F L T A Q H S L L Q Q  
K A M P G S E V V N L S K I P D R K G M I A M I V S I A L G P G S T I A G Q L K  
N K V D V K V V E R L A S L G S K Q K L Q A E L V G V L S  
K L L S T L E I N Q L A D M P T Y K Q A I I K L L L V L K M  
G F Y G A D Q L A E L V A I T K S K E E E L I A D V V A L L Q S P I R N V I S A L  
K P A D L E V L N K Y A S I P S R E V L L T Q V A S G L I G T V R N L S I A L D  
K E L S V K E V V A L A D L P S R D E M L G T L L A T F N A P I S A  
S F Y G A E N L S L E N I K S K N E E L I G D V I M L L L Q S P A K N V I S A L Q  
K V V D A N S L I E I S K L P S Y E E A L M M L G G S L L N P L K N L A V G L N  
Q V L D P S G V D E I S K S A G R Q E L L S Q I A G L I L S P G A Q L G G A L L Q  
K L M S V N H M V D Y S K L S S L A V L Q G Q L V S I L L S T P A M K V S S L L Q  
Q A V D S R H T E A V S K L P S R E E L I G M L S V W S A P A R Y E V T G L  
R L L S K E D L V A S K I P S N I Q A A Q S E L V H T L N T A G S Q L V S S L N  
F Y V G K D K L D A L A S I K S K E E E L I G D I I A L L Q A P A Q R V I G G L T Q  
Q K V S Y Q E L I E L S K V P D R K V L G Q L L G L L Q S P L S N F V G G L Q E  
N R V D V K V I E R L A S L G S K Q S L Q G E F V G V L S A H L S N F V G L L E  
T L L S R E G I L N Y S R L P S I T T V Q G E L V G G L T L M T S Q T V S M L Q  
T Y V G D D K L V T L A N F K S R E E L I A D L I A L L Q A P I Q T V L S Q L N  
E A L D D A K I K T L A T L P G K D Q L R A M F L G V L Q A P G S K L V C L N  
Q F L N K N E F I N F A S L P D L T T A R A Q L A A V L E S A G A K I V S D L E  
K V V D A K N I D E I T S K L P S Y E E S L M I L G N S L L A P I K N L A I G L N  
K I V S P Q E I N S L A T L P S K E Q M L A L L S V A M L S P I R N Q L A F A L K  
K V V T N K E I V M D L A N L P S R E T L L T Q L A A G L L M P V R E I A I G L N  
E V L N V E K I N T F K T L P T K P E M Q S Q L V S V L Q M L S G G L V R T L E  
K V I S K E E V I H L G S L P S L P E M R A K L V S L I N T P A S Q L V R V L V  
S V Y G A D Q L E A L T A V K S K N E E L I A D V V A L L Q S P M K T V L G Q L Q  
K V M T A E E I T L A K L P S R E T L L S M L A G A L L  
T I M N K D N I A S A N L P S L K D M H S E L L S M L S Q P S Q E L S R L L E  
Q V L D A A A T G K I A N L P S R E V L L A K L L G S M M S P L S A L A R  
D L F G A E H L D R L T N L K S K E E E L I G D I I T L L Q A P L V N V L A A M Q  
R L Y G P D D F A Q L E N M P T R A Q S Y Q Y L L G C L Q M P A V N V L A A V L R  
K S L D K A A V V A L A N I P S R E V L L A Q L L G M M Q V I V A G F T R G  
L Y L G A D K L E E L V N V K S K E E E L I G D V V S L L E G S L Q G V L S A L D  
T M L S R N Q L V A Y A Q M P G L H A V Q A Q L V Q T L S Q A P G H L I Q Q L Q  
E P A N V A K I E A F A K L P G R D E  
Q V L D K K D F L K Y G K M D L T S A R V H L V Q V L Q S A G N K L N Q Q L T  
K Y L T P A E L K K C E N L P T K A Q L Y A T I A R L A K Q P A Q N K L A T G I K  
N R V D T K V I T K L A T L G S K Q S L Q A E M V G V L S T H L A T F I G T L E  
T L V D G N R L R C L S A L P E K K E L C S R I P H L R M P L Y K L I N S V N  
S V L N Q Q G I V R I A T L P S K D V L R A Q L C G T L Q A P L Y R L V F G L N  
R V F Q A A G I Q A L S A L P T L D T L R A Q L V G L L S A P A A Q L A G V L Q  
K F I P A S K L I N L S D L P N H K E A I F R L I T I M K  
V I L S K Q G F V N Y A K L P S I V T A Q G E T A G V L S L M T S H T S R L L Q  
Q W K D G A Y V A E L A N L P S K E E E L L S K F M Y L L K Y P V I Q S F A C V L D  
Q L Y D G D S M A R V G K I P T K Q E L Y R D I A I V M R M V P T R L A R A L K  
E L L T V E D V N K L A K L P S L D E L R V K I M R L I S Y D I A R L A L S I N

UniRef90\_M5RK23 G P G K K L N S Q I K K I A E  
UniRef90\_A1AX77 E F P T K V T R V V S A V C D  
UniRef90\_Q7PMH1 C H Q S Q L V N L L D A Y A K  
UniRef90\_A5FIJ1  
UniRef90\_UPI0004195DBC S G G N T I H G V L E T L S N R  
UniRef90\_F8NA48 S G A N T I H G V L K T L G E R  
UniRef90\_D5EUX0 A G G K V H G L L D A I A E R  
UniRef90\_W4YAG6 A N Q Q R L T M N L D Q L V K Q  
UniRef90\_E1VY80  
UniRef90\_L0D7Z7 A P A S G L L S Q L K T L S E  
UniRef90\_A3V377 A P A S N I A S I L S T L E E K  
UniRef90\_Q5K272 E V P T K T A R A I K  
UniRef90\_J9Z298 R P D Q D I I S I L Q N K K D  
UniRef90\_UPI000364C216 S G G N T I H G V L K T L S E R  
UniRef90\_H1ZCP2  
UniRef90\_B3E161 E P A S A L A R L I E K Y S K K E  
UniRef90\_B4MTV3 A H Q G N L V R V L D V H A Q Q  
UniRef90\_J0L3U5 A N A R E F V T V L D A I K Q Q K  
UniRef90\_A7S299 Q N Q S Q L S S N L D Q L V K Q  
UniRef90\_F9Z836 S G K N T I G G V L K T L E D R  
UniRef90\_F6WCY2 H Q P R W L A T L L D Q Y L R Q Q  
UniRef90\_W0EXT9 N R P E  
UniRef90\_Q83HB1 A P L S S A A R V F V A M K  
UniRef90\_R1EH59 A G A V R I A R G L E Q A R G Q K  
UniRef90\_UPI00030E1ED8 E V P T K F V R G L A A V R D Q K  
UniRef90\_H1Q3P8 S S A N K I H G L L K T L G E R  
UniRef90\_R7F329 A I P R D L A I G L D L Y A K Q K  
UniRef90\_D9PNL9 W N I N K L V W A L S S I K D K K  
UniRef90\_R5PS01 S G G N T I H G V L K T L G E R  
UniRef90\_UPI00036AA25B E P S R A L A R T L A A Y E R Q R  
UniRef90\_A9NEL4  
UniRef90\_Q7NBW4 A V A  
UniRef90\_T0RCN4 G I A R D L A R V L F A I S E K K  
UniRef90\_R5LQA8 G I A R D L S I C L D L Y S Q Q K  
UniRef90\_E8U5Y9 A H L S N F V G I L E A Y R E K  
UniRef90\_F8L114 A I V T S V V Y C L D N K C K Q E  
UniRef90\_M0SBL7 A P  
UniRef90\_D2R5P1 S P G G K L L S Q I K K K  
UniRef90\_W01YT4 A K V K K  
UniRef90\_G1WKR2 G V S S G L A R C V Q Q I S E Q K  
UniRef90\_A3J4W1 N Q P N K  
UniRef90\_UPI000362BF59 S A G N T I H G V L E T L E K R  
UniRef90\_Q6KHB1  
UniRef90\_K2G3K5 A A K T D L  
UniRef90\_Q0SNB6 A L A  
UniRef90\_G3V LK8 R Q P L Q L S A L L E Q Y L R Q Q  
UniRef90\_C9RQN7 T L Q E K L  
UniRef90\_UPI0003B9619 A H L S N F V G I L E A Y K D K  
UniRef90\_W0P0Q4 S V A G K L I Y T L S A I K K K K  
UniRef90\_J4VRF2  
UniRef90\_R5NBP0 L L A K Q  
UniRef90\_T0R183 S G G N T I H G V L N V I R E E K  
UniRef90\_F8WWW86 S G G N T I H G V L E T L S K R  
UniRef90\_UPI0004169AF4  
UniRef90\_F0S114 G P G G K L A G C V K A I A D K E  
UniRef90\_UPI0001CBAEED A N Q Q Q L T A N L Q Q Y A K Q Q  
UniRef90\_K4RHF3  
UniRef90\_N6UJA4 R H Q T T L V S R L E Q R A S Q  
UniRef90\_Q11QA3 N E S R V F A  
UniRef90\_T0XQ52 Q I L R K S L Y A L E E R K K Q  
UniRef90\_A0A016QNJ2 A Y Q A K L  
UniRef90\_W5KTB4 R H P A H L S A L L Q Q Y I K Q  
UniRef90\_F0P0F3  
UniRef90\_W5X0R4 E Y A K K L G G G E E A T A E  
UniRef90\_Q16VU4 C H Q N Q L V N V L E S Y  
UniRef90\_N9TT96 E L V K Q  
UniRef90\_B1VAM8 L L S E K  
UniRef90\_UPI00047BAEFB M I S E Q  
UniRef90\_P36521 N S S N A L Y L T L K S H N D N Q  
UniRef90\_R7L4F6  
UniRef90\_X5DXQ1 S G G N I I H G V L D T L K E K E  
UniRef90\_R7GH72 G N I S K L A V A L D Q V K V Q K  
UniRef90\_T2MB21 T N S S N L S I S L E Q F L K Q  
UniRef90\_K2FWK7  
UniRef90\_K0P5P0 S G E K R L M G V M E T  
UniRef90\_B6U897 A X Q E A L S A E A D K  
UniRef90\_UPI0003158688  
UniRef90\_R5G927 S A G G T I H G L L Q T L E E R  
UniRef90\_Q9VPL3 A H Q N S F V Q V L D V H A K N Q  
UniRef90\_E0UU56  
UniRef90\_F4X0Q4 H H Q S T L V A R L K Q I  
UniRef90\_D8TID0 M V P T K L A I A L K K V S E  
UniRef90\_F0RMI5 A Y Q S K L  
UniRef90\_Q4N8Z7 V G Q S L V N S L D Q L Q S K  
UniRef90\_K2FV64 M Q I M Q L L L V L K Q V A E K K  
UniRef90\_L8X1L4 A R G G R L S R T L E G L K  
UniRef90\_Q492B7  
UniRef90\_UPI000441AEAF R G P A H L S S L L D Q Y V Q Q E  
UniRef90\_UPI0003D022B2 Q V A K K  
UniRef90\_X8DBG7  
UniRef90\_M1UQN2 I L P T N V A R A V  
UniRef90\_B3CQ11 S S S M R L M R V L D Y Y S S K K

1 10 20 30 40

UniRef90\_A0A058ZA82  
UniRef90\_G0WBM9  
UniRef90\_H9L015  
UniRef90\_WD1H1E8  
UniRef90\_G5BY25  
UniRef90\_C4R611  
UniRef90\_E8Q6H0  
UniRef90\_B6YPZ9  
UniRef90\_X7ZLW7  
UniRef90\_J7S218  
UniRef90\_A0A024J8R6  
UniRef90\_UPI00045D855E  
UniRef90\_A9V9G8  
UniRef90\_R6ASW8  
UniRef90\_Q74ZK7  
UniRef90\_X5H4H4  
UniRef90\_X1B6C4  
UniRef90\_A1QZH9  
UniRef90\_M4Q9E3  
UniRef90\_X2MYX8  
UniRef90\_Q5A693  
UniRef90\_R7N194  
UniRef90\_W0QHZ7  
UniRef90\_UPI00036687BF  
UniRef90\_G8BRH7  
UniRef90\_Q7RS21  
UniRef90\_R7HHD0  
UniRef90\_W5DWF9  
UniRef90\_S6EZC4  
UniRef90\_M4QAI9  
UniRef90\_W6MW67  
UniRef90\_R5ZT88  
UniRef90\_E6QZ81  
UniRef90\_G8ZNX2  
UniRef90\_C4WVB5  
UniRef90\_E9C715  
UniRef90\_F7CNU2  
UniRef90\_Q5L511  
UniRef90\_F0QR32  
UniRef90\_L0PE71  
UniRef90\_D4G8J5  
UniRef90\_T1FRQ2  
UniRef90\_Q8KTQ0  
UniRef90\_L0AZE3  
UniRef90\_I2G1H8  
UniRef90\_R6HT43  
UniRef90\_I4YG55  
UniRef90\_W1QC18  
UniRef90\_A5E7T5  
UniRef90\_UPI00036FA095  
UniRef90\_UPI000370C5BE  
UniRef90\_X1E7U3  
UniRef90\_A0A023FVU8  
UniRef90\_A0A009VTP8  
UniRef90\_D8SS19  
UniRef90\_A4YH89  
UniRef90\_B8P1L0  
UniRef90\_K7IUW8  
UniRef90\_C6V5G6  
UniRef90\_M5E8M3  
UniRef90\_UPI000473A4E9  
UniRef90\_C5DI82  
UniRef90\_D7EAE1  
UniRef90\_I2H7J3  
UniRef90\_F7XVW1  
UniRef90\_U4LUU2  
UniRef90\_C5DNK6  
UniRef90\_W8PND3  
UniRef90\_F4B472  
UniRef90\_B2WCC3  
UniRef90\_U4LVS9  
UniRef90\_S5TEI5  
UniRef90\_K5W2Y3  
UniRef90\_E3LGN6  
UniRef90\_I3XT13  
UniRef90\_V9IM56  
UniRef90\_A8TBM5  
UniRef90\_Q9C3Z6  
UniRef90\_B6QNT0  
UniRef90\_C5A428  
UniRef90\_A3DN12  
UniRef90\_D5U263  
UniRef90\_S8BAH7  
UniRef90\_F8AEG0  
UniRef90\_K1TJ31  
UniRef90\_C4Y7B6  
UniRef90\_B6H919  
UniRef90\_M7NX35  
UniRef90\_H2WH70  
UniRef90\_E8RAA4  
UniRef90\_W3XKR0  
UniRef90\_UPI00036CF452

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

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

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

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

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

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

L R N E L H E A K L I C F M Q E N S I L M E D R R K I

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

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

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

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

UniRef90\_A0A058ZA82 R Q E L S K K 50 G L S A T A V P S 60 F R R A V D R P K L H R I A N F F H K G  
UniRef90\_G0WBM9 R A Q V L K K T G G T L T K I R N N I L F Q V Y L K N S K R E D L L L P I F F K G  
UniRef90\_H9L015 R H Y L R K K H N T I E V K F V L N E I L V R P V L S Q T R Y E K N L L P L F F V S  
UniRef90\_W1H1E8 R K A G R E A G V I Y M R V V R N T L L R R V V V E S G T Q F E C L K D T F V G  
UniRef90\_G5BY25 R H Q L R K K H K I L V K I F P N Q V L K P F L E D S K Y K S L L P L F V G  
UniRef90\_C4R61 R H S L Q E S G G Y L T F I R N N S L L F K V F L R A E S H H P L L E A L L F K G  
UniRef90\_E8Q6H0 R K E S R D L G V V Y I K V V P N S L L K K A V V D T S F E C L K S V F V G  
UniRef90\_B6YPZ9 R R E C N K Q G L K L V V V K N T L L K R A W E R M E F S I L D A A L K G  
UniRef90\_X7ZLW7 R D Q I A Q L G G Q L T M A K N T L V K R A A S E A G I E G L D E L F V G  
UniRef90\_J7S218 R G Q I K K A G G T L T V T R S N L F K V A F R G K D H A D F N S L F S G  
UniRef90\_A0A024J8R6 X H Q L R K R K I L M K V E P N Q V P K P F L E D S K C Q N L L P L F V G  
UniRef90\_UPI00045D855E R V Q V K K S G A N M T I L P N G V M R R Q L A L L G A S E E T V A I F K  
UniRef90\_A9V9G8 R L R K N L K D A D G E I T K V Y K N T L V K R A A D E L N L D L D T Y L E G  
UniRef90\_R6ASW8 R G E I Q K L G G R L T V V R N S L F Q V I L S N S R R Q H P L L P L F K G  
UniRef90\_Q74ZK7 R E K L W D L G G N I N V K N S L A R I A I S N S G V S L S E Y L A G  
UniRef90\_X5H4H4 R E K L W D L G G N I N V K N S L A R I A I S N S G V S L S E Y L A G  
UniRef90\_X1B6C4 E L R N R V E N E K G E L K V V K N T I M K R V L K D K H M E G L D S Y L L G  
UniRef90\_A1QZH9 L N E L E K Q N I S G V S V K V V K N T L V R E A I K N T I Y K N A S N L F T G  
UniRef90\_M4Q9E3 R Q E L F K S G A N L V I K S S M F K L A K N K D K V I H D L D L P L F A G  
UniRef90\_X2MYX8 L R K K L R E A Q G E L R V Y K N T L L R R V V E G T Q F E C L K D T F V G  
UniRef90\_Q5A693 R Q E L F K S G A N L V I K S S M F K L A K N K D K V I H D L D L P L F A G  
UniRef90\_R7NI94 L R K K L R E A Q G E L R V Y K N T L L R R A L D D L S I D L N G F L E G  
UniRef90\_W0QHZ7 R Q L R R N L R A G V I E L K V A K N T L M R L A L G Q A G E S G E D H L L R G  
UniRef90\_UPI00036687BF R F Q V R A N G G T L K K L R N G V F G A Y L R A S H L E D L P L L K G  
UniRef90\_G8BRH7 L I N M P R P H I R M H M V K N T L M K L S V K N T P F E A I T P Y L T G  
UniRef90\_Q7RS21 L R N Q L K E V N S E V R V Y K N T M L K L A C D S L D I N I D E F L E G  
UniRef90\_R7HHD0 L R N Q L K E V N S E V R V Y K N T M L K L A C D S L D I N I D E F L E G  
UniRef90\_W5DWF9 R S Q I K K A G G T L T V L R N N L F S V Y L K N S A H H P L L P L F K G  
UniRef90\_S6EZC4 L E T V C V K E K P S G V D L K V V K N K L L M Q S S L K R A Q D Q E A L E L S T L F S G  
UniRef90\_M4QAI9 R N A I K N A S G G N L R M V R N K L L R V Y L K R A Q D Q E A L E L S T L F S G  
UniRef90\_W6MW67 R I K L R E C K V D D A G V E V R K N T L V R R A L E A E N D T E L E K L L T G  
UniRef90\_R5ZT88 R R Q L E R A E I E Q A Q L M V R N S G V L S A A S K A C S S P I T P H L L S G  
UniRef90\_E6QZ81 R R L V K Q E G G R L T M L R N S L F S V Y L K N S K A S D L L P L L K G  
UniRef90\_G8ZNX2 R K T F K M A D M D H V I V Y G K S T L K L A L A E T N Y A A V L N L F Q S  
UniRef90\_C4WVB5 R M K L K A A G L N M V R L F N Q S T L R R A V S R T D F R S M K L L F H G  
UniRef90\_E9C715 H L R H R L L K H D I L H M K H F P L Q V V R K T L A D S H L L S M P L F I G  
UniRef90\_F7CNU2 R N S L S G V S A E F E V L K K R I F F K A M Q S A G F D I D S S D T S G  
UniRef90\_Q5L511 R K E V G K K G G E V K M V S N N V L R R A L K S F S N S E I D L E S K G  
UniRef90\_F0QR32 R K Q L H T V N A K I K V I R N H L F I R A L K I N A L E V L E T L F S G  
UniRef90\_L0PE71 R L L C K K E K I F L Q V R K N T L L K I S V R N T Q Y S A L E K S F V G  
UniRef90\_D4G8J5 N N L F L D N S L H L V V F P E N I M R K C L M E T K Y K N L S D L M T L  
UniRef90\_T1FRQ2 R K H C S S G V T L R V M R N K L L I T A L N R T V L A R L P C T L L R  
UniRef90\_Q8KTQ0 N N A L A K F I K G S I K V Q M A K N T L M E K A L E G T E F V E L T P S L K G  
UniRef90\_L0AZE3 R S K L P A S Q S S P A T L T V V R A G V I K A A A R Q A V M E R L T Q F A L S G  
UniRef90\_I2G1H8 L R R E L K K V D S E V K V Y K N T L V N I A L N G M G V N L T E F L E G  
UniRef90\_R6HT43 R S R L G E L D S N L T V I R S G V F R G L T E D I K L K N L L N G  
UniRef90\_I4YG55 K L Q I E E A G A G M R K L K V A S K A A Y R Q V K K H K L R H P L L P L K G  
UniRef90\_W1QC18 R E E L K K H I V A G S K F I L K N S I Y S L Y L K S S H Q H P L L L V G  
UniRef90\_A5E7T5 L R K K L K A A N E L K V A K K T L F N L A F K E K G L E M K T K E L Q G  
UniRef90\_UPI00036FA095 M V K N T L T A L A A K E V G I D A F E G K L N G  
UniRef90\_UPI000370C5BE C V K N T L E K D A F K D I L E E V L N K G  
UniRef90\_X1E7U3 H N M L F K K N F F L K A Y N N E T V R L A I T G T K F E S A L P L T R S  
UniRef90\_A0A023FVU8 R R S L P E K T K L M V A K N T L V G K A I E G T K W E A L K C L K G  
UniRef90\_A0A009VTP8 R K K L R G K A E I K V T K N T L F L T A A K R A G I D V S K I E N Y I  
UniRef90\_D8SS19 R R Q I T A T A A K H A T L T L R T S I L G V A L D R Q A A T N I A Q L V E G  
UniRef90\_A4YH89 A V P L K R A N M Y F K G Y Q P S I L N L A L K D N S Y E A V L K L C L P  
UniRef90\_B8P1L0 R E R L W D F G G N F N F V K N S L A R I A V E N S S L S F L S E Y L S K  
UniRef90\_K7IUW8 R Q A L R G E A T V L M G K N T M V R R A L E R P E F E R L M P F V R G  
UniRef90\_C6V5G6 R S R L Q T T N G L C K V T K N S L M R K A I N D S N W N D L E S L T G  
UniRef90\_M5E8M3 R S Q I K E L G G Q M T V L R N Q L F Q V Y L R N A H L H P L L P L F K G  
UniRef90\_UPI000473A4E9 R R E L K D I A V L K V S R N T L V T R A L E K A G G T A K D L E D Y V  
UniRef90\_C5DI82 K D H L V R G K H N G K F T V I R N L F K L A L A R P I D P I T P L L K G  
UniRef90\_D7EAE1 R K A L R G R G V V L M G K N T M V R R A A E F P E Y E R L L P H I K G  
UniRef90\_I2H7J3 R K D L R G R G V V L M G K N T M V R R A A E F P E Y E R L L P H I K G  
UniRef90\_F7XVW1 K R A L R A H S A V V R V Y R N A S V R L A L A P S Y P G A F S A F R G Q  
UniRef90\_U4LUU2 R K K F R D T M E I K V S K N K L F E R A A K E S G I D V T E Q Y L T G  
UniRef90\_C5DNK6 R Q S L R G E G V V L M G K N T M V R R A L K S P E Y E R L L P H V K G  
UniRef90\_W8PND3 R K A L R G R G V V L M G K N T M V R R A V R M T E F P E Y E R L L P H  
UniRef90\_F4B472 R K K C Y E K D I K L K F I K N T L F K K A I Q N S A N Y K E L T T V I K G  
UniRef90\_B2WCC3 R V A L R G K G V V V M G K N T M V R R A L R S A E Y P Q F E K L L P H  
UniRef90\_U4LVS9 K N Q L R S K N I E F R S Y G N K I L K K V F E K T P M S S L N N V L V G  
UniRef90\_S5TE15 R K K L Y G K A E L R V V K P R L L E L A L K K A G L P E L F K E Y L S  
UniRef90\_K5W2Y3 K V A L F K E N M H Y K R Y G P H I I H N M I K N S P Y E S L V K I L S N  
UniRef90\_E3LGN6 R Q A L R D Q G V V L M G K N T M V R R A L K T P E Y E R L L P F V K G  
UniRef90\_I3XT13 R L S L R G E G V V L M G K N T M V R R A L E N P E Y E R L L P F V K G  
UniRef90\_V9IM56 R D K L R G K A L L R V S R N T A I K R A A Q E L N K P D L E K L A D Y  
UniRef90\_A8TBM5 R K K L S K K V L F R V S K N K L L L R A L E R N A G I D K F E E L L T G  
UniRef90\_Q9C3Z6 R K K L A K T A E V R V V K P K L F A I A L E R V G I E A F K D L L T G  
UniRef90\_B6QNT0 R V A L R G E G V V L M G K N T M V R R V I D N P E Y E R L L P F V R G  
UniRef90\_C5A428 R R L I R E N K G L L R V S K N T A I K K A A Q E L G K P E L E K L I N Y  
UniRef90\_A3DN12 R L S L R G E A V V L M G K N T M V R R A L E N P E W E R L L P H V L N G  
UniRef90\_D5U263 R Q E L R G S G V I F C G K N T M I R R A M D L P Y L E T L L P V V H G  
UniRef90\_S8BAH7 K N Q L R S K N I E F R S Y G N K I M K K V F E N T P M S S L D T V F V G  
UniRef90\_F8AEG0 R K K L H G K A V L K A V K P R L L G I A L E K A G E I P E L F K E H L T  
UniRef90\_K1TJ31 R Q S L R G E A V V L M G K N T M V R R A L D T P E Y E R L L P H V K G  
UniRef90\_C4Y7B6 R K K R Q S L R F Y N T L K L K V I K N S L L K V A L K K V Y A E K L K P Y L K N  
UniRef90\_B6H919 R Q E L R G S G V I F C G K N T M I R R A M D L P Y L E T L L P V V H G  
UniRef90\_M7NX35 K N Q L R S K N I E F R S Y G N K I M K K V F E N T P M S S L D T V F V G  
UniRef90\_H2WH70 R K K L H G K A V L K A V K P R L L G I A L E K A G E I P E L F K E H L T  
UniRef90\_E8RAA4 R Q S L R G E A V V L M G K N T M V R R A L D T P E Y E R L L P H V K G  
UniRef90\_W3XKR0 R K K R Q S L R F Y N T L K L K V I K N S L L K V A L K K V Y A E K L K P Y L K N  
UniRef90\_UPI00036CF452 R K K R Q S L R F Y N T L K L K V I K N S L L K V A L K K V Y A E K L K P Y L K N

UniRef90\_A0A058ZA82 P T M V I Y S P M A H L P K P A Q L K D I L S V V Q S Y G R L V N L G G S F E G  
UniRef90\_G0WBM9 P T A A I T F K E S I P V N I L K L S K V L E K A K S Q D K L F I I G A Q I D G  
UniRef90\_H9L015 R N I L L V S P E T K A K E M L R V L K G V P Q V N L L G A C I D D  
UniRef90\_W1H1E8 P T L I A Y S M E H P G A A A  
UniRef90\_G5BY25 H N M L L V I S E E P K V K E M V R I L K M M P F L P L L G G C I D D  
UniRef90\_C4R611 P T A I V T I K D C R P D V V K K V I K I L L K A A N E K L F I V G A K L D N  
UniRef90\_E8Q6H0 S N V V A F S T K H P R D A G H I L V K F F K E R E C F K L A G A A F E G  
UniRef90\_B6YPZ9 N T A I M F S N S A N R P A R L I K T F S E G M G V L K L K A A Y V Q E E  
UniRef90\_X7ZLW7 P T A L A F V T G E P V D A A K A L K T F A K E H K A L V I K G G Y M D G  
UniRef90\_J7S218 P T A M I T F D A A A A P Q S V A K L L R L F A A S G H K L F V V G A R L D G  
UniRef90\_A0A024J8R6 P T A V I T F P E L D P K K V S S V L K I V D K S N N N L T L L G S F I D N  
UniRef90\_UPI00045D855E H N V L L V I S E E P R V K E M V W I L R T V P F L P L L G S C I S D  
UniRef90\_A9V9G8 G P I A L V H S D E L S F K L L K R V E L N D H P K L E M V A A L V D D  
UniRef90\_R6ASW8 P N A I L F G E K L L E P I K V L S N F G K D H K N V N I I S G V I D G  
UniRef90\_Q74ZK7 P T A V V T F P E T D P Q A V S K L L K L L E R A Q D K M F V V G A K A E S  
UniRef90\_X5H4H4 S V A F A H C N Q N V P E F L R C V F K F S T D Y G Q E R F A V L G G K Y D T  
UniRef90\_X1B6C4 P I G V A I G Y D D P V L A F K L T E K C R V A Y S P R Y T P K G G V F E G  
UniRef90\_A1QZH9 P T A V V T A V D E A N V I A K I F Y E F V K T S S L K V K G G F V L G  
UniRef90\_M4Q9E3 P T L L L Y S N N A S P K L C D V L L N W K Q Y S M L H L L G C V Y N  
UniRef90\_X2MYX8 P T L I A Y S M E H P G A A A R L F K E F A K A N A K F E V K A A A F E G  
UniRef90\_Q5A693 P T A I T I P K S D P Q V V T S V M K V L K S A N E R L L L G A K I T E N  
UniRef90\_R7N194 P N A I M F G V E L L E P I K V I A E F A K K H D K M K I R V G I T I N G  
UniRef90\_W0QHZ7 P T L I A F S N E H P G A A A R L F T E F A K T N K E F E V K G A A F E G  
UniRef90\_UPI00036687BF Q N A F V E S Y R D V V Q V A K A L A D F A R K F Q L E V R G G F L G M  
UniRef90\_G8BRH7 S T A A I V F D E T D S V A V S K I L K I L Q R H F Q D K L F V I G A K V E N  
UniRef90\_Q7RS21 S N A Y F F I M N E D Y I S F S L Y C N K M F Y K E Y K T N N F I K M G V Y E N  
UniRef90\_R7HHD0 P N A L L F G A D L L E P I K I L S K Y A K D H N K L D I R V G V I S G  
UniRef90\_W5DWF9 M N A W L F V H T E E V P V A L K P Y A F Q K E E R V E E T N D F I G A V F E G  
UniRef90\_S6EZC4 P T A A I T F R E T N P Q D V A S I T K L L E K A Q D K L F L V G A K V I E A  
UniRef90\_M4QAI9 P T I L L Y L T I A S P V I C E K L L E W K N D D N F I L G G K Y E D  
UniRef90\_W6MW67 P T A M I L I K E S D P E I V K K I L K V L K P A R E Q L F V I G A L V I G K  
UniRef90\_R5ZT88 S N A L I T C D D P L A A L S I V V T E F A S K N K K N T K I K G L V I E H  
UniRef90\_E6QZ81 Q R A V L T C S T S P T Y L N K I I K R E N S T I Q P T L N L V A G L V E G G  
UniRef90\_G8ZNX2 P T A A I T F A E T N P V S V A K I L K M L E R A Q D K L F V V G A K V I E T  
UniRef90\_C4WVB5 H S S T V F S S T S Q V P K L K I T K K M P H L L L L A S I V D G  
UniRef90\_E9C715 N T C V I Y S Y E K E L G A L P A V M A G D A R F E L L G V K V E R  
UniRef90\_F7CNU2 H T F L I V S H E V K V K E M L Q C V R S L P Q V Q L L A P G A C V E N  
UniRef90\_Q5L511 H L G V V F A Y D D A V S A A K Q V L D F N K Q Y N D S L V F L A G R I D S  
UniRef90\_F0QR32 Q H F V L L T N S E K L E L L K L L A E L A K K Y E P L Q V G I V Y C D K  
UniRef90\_L0PE71 P T A I L T L A D R A E P S S L K Y L I D L I N K S N N Q L Q L L G L G F E N  
UniRef90\_D4G8J5 P T I I A F S K N F V P T L V I K I F K E F M K D N P S F S I H S G M V I G K  
UniRef90\_T1FRQ2 H T A L I V I S T E D N V P K M I R T F K K L P D V H L L G G A V I G E  
UniRef90\_Q8KTQ0 Q L L Y A A F G P S I E R I A C A L S S A N A K G L E P V Y G M E L P G  
UniRef90\_L0AZE3 T N I Y I F V Y D D K V P E V I G I I N R K G D K S V R R H F K Y S A A I Y A H  
UniRef90\_I2G1H8 P I A L L T C H H V A P R A P A G G V K F P E V A V A N P R L V P L A A L L E G  
UniRef90\_R6HT43 Q N A I V F G K D L L E P I K A J I D A F A K A H D N V K I I T G M V N G  
UniRef90\_I4YG55 N I C L I S F N E L N P A N I K K V L T Q V D T I K V N P K L T L L G G H I N N  
UniRef90\_W1QC18 P T A A I L I K D L N P K V V K N V V K A L K A H N E R L F I V V G G R I G N  
UniRef90\_A5E7T5 P T G C I T I K E C E P N A I K Q V Y K V L K K F S D K L F V V G A K V E K  
UniRef90\_UPI00036FA095 E I A L V F G Y E D Y M S P A K M V Y Q F S K D N P N I K I L G G F I E N  
UniRef90\_UPI000370C5BE P S A I A F I S G D P M V E A A K S L R D F A K D N P E L I V K G G Y L D G  
UniRef90\_X1E7U3 P T S I V V S G K D M V E S T A K V I E D F S K D L D T L K V K V G I L E N  
UniRef90\_A0A023FVU8 R N A L I L S P E P D V Q G F F K L A R K M P Q F V L A G I V H G  
UniRef90\_A0A009VTP8 P T I L G F S T S E E D M G A A A R L F E E F A K T N K A F E L K A A A F D G  
UniRef90\_D8SS19 M N A W L F V H T E E P A A L K P Y R A F Q K E L K L D S D F T G A V F E G  
UniRef90\_A4YH89 T G S N A F I F S N D N P F A I S I F  
UniRef90\_B8P1L0 G L A V L A F P S F D P N Q M Q A I L R A L S R A V P P R K L R V V G A L V E G  
UniRef90\_K7IUW8 T M P V S Y F V F S P E T N V P K L V Q I T K R T P Q L I L M A G I L D G  
UniRef90\_C6V5G6 S V A F V H C G K N V P E F L R C I F K F S A E Y G K D R L E I L G G K Y D K  
UniRef90\_M5E8M3 N V G F V E T S S D L K V G V R T K I  
UniRef90\_UPI000473A4E9 T N C F V L T K E D V G G A V K A I Q S F Q K D T K K S E T K G A L F E G  
UniRef90\_C5DI82 P T A A I T F P E T E P A K V A K L L K L L E K S S E K L F V V G A K V D G  
UniRef90\_D7EAE1 D A Q I G L I T F T N E N P F K I Y K I L E K S K S P S P I K P G A I A P K  
UniRef90\_I2H7J3 P T G V V A I P L A D P K A T R S V L R N E P E S L E I L G G M V D G  
UniRef90\_F7XVW1 P V S V V C A S E P T T A A K A L M K F C K D G G R L E V I G G V I G Q  
UniRef90\_U4LUU2 N V I G F V F T N  
UniRef90\_C5DNK6 V K G N V G F V F T N D S L K D I K E V I T S N V V A A P A R A G G I A P E  
UniRef90\_W8PND3 H I F L I T E D R V S E V C K L V A Q F I A L N N T H L H A F V C A G  
UniRef90\_F4B472 T N A F I F S N K N P F E I S L M L S K F  
UniRef90\_B2WCC3 N V I G F V F T N A D L K E T R N K I L S N R V A A P A R A G A V A P G D V Y  
UniRef90\_U4LVS9 V K G N I G F V F T N D D  
UniRef90\_S5TE15 Q T A L M A S N T D L A N P A I I I N N L K K F Y S L N K E S L K A A Y I E N  
UniRef90\_K5W2Y3 V R G N I G F V F T S H D  
UniRef90\_E3LGN6 S N A L L I S K D I S A I K S I L L Q E T D K L N W I E P L V M M A D G  
UniRef90\_I3XT13 G Q I L V V I F T N M N A F E L A M L M D S H V T K S Y  
UniRef90\_V9IM56 Y T A F V F S S E I K V P T V H K I I K K S K K M Y I L G G V L E G  
UniRef90\_A8TBM5 P T L I A F S N E H P G A A A R L F K D F A K E N K D F E I K A A A F E G  
UniRef90\_Q9C3Z6 N V I G F V F T N G D L K E I R D K I  
UniRef90\_B6QNT0 N V I G F I F T N A D L K G V R T K I  
UniRef90\_C5A428 I E G G A A I L A T E M N P F K L Y K L L E E S K T P A P A K P G A V V P K  
UniRef90\_A3DN12 Q N I L L F T H M N A F E L S L L L D K Y K A K T Y Y K  
UniRef90\_D5U263 Q N I V F F T N E N P F D V A L K I H N I V T M D Y Y K  
UniRef90\_S8BAH7 N V I G F V F T N S D L K E T R D K I  
UniRef90\_F8AEG0 I E G G A G I L V T E M N P F K L Y K F L Q Q N R Q P A P A K P G A V A P K  
UniRef90\_K1TJ31 T T A L A L A E E D I V T A P K I L Y K Q E E A S N G S F S I K K G F V D G  
UniRef90\_C4Y7B6 P T A V I T I P K C E P S V V E Q V M K I L K Q A G E K L I L I G A R I E T  
UniRef90\_B6H919 N V I G F I F T N G D L K G T K E K I  
UniRef90\_M7NX35 N I A F V F T N D L K S S R S K I M K N  
UniRef90\_H2WH70 S N A I L L A K D V S A I K T I L Q E T D K L N W L E P L A L M V K D  
UniRef90\_E8RAA4 G Q V V A V F T D M N P F E L A M L M D K Y V T K T Y  
UniRef90\_W3XKR0 N I G F V F T N G D L K D I R D K I  
UniRef90\_UPI00036CF452 Q N I Y I F S N I N P Y

UniRef90\_A0A058ZA82 S P L S L E D M V S L S K V S S R L D I Y G Q L L S L L N N P A Q S L T Q S L N  
UniRef90\_G0WBM9 Q T F T L K D T K D Y Q M L P S K E Q L N V Q L V Q I L L Q S S G V S L V Q L L Q  
UniRef90\_H9L015 T L L S R Q G V E N F A K L P S L E T S R G Q T L G T L A L L P S Q T C S M L Q  
UniRef90\_W1H1E8  
UniRef90\_G5BY25 T I L S S Q G F L N Y A K L P S Q A L L Q G E L L G G L S F L L A Q T H T L L Q  
UniRef90\_C4R61 N L I Y N S M E Q L N Q F K D L P T K E E M Q G Q L V G I L T M L G A G L V R T L E  
UniRef90\_E8Q6H0 N F I G S E Q I D L L S N L P D H  
UniRef90\_B6YPZ9 F Y L G S E N L D L L V S V K S K D E L V G D V I T L L Q S S A K K I V L T L D  
UniRef90\_X7ZLW7 H P L T V A E V E R I A D L E S R E V L L A K L A G A M K G N L A K A A G L F N  
UniRef90\_J7S218 T V L D S A G V A Q F S T L P S R E Q L H A Q L V Q V L Q L S G V G L V Q T L Q  
UniRef90\_A0A024J8R6 Q V L T L D G V N K F K T L P T L P E I R S Q L V G V L S I L G A G L V Q T L E  
UniRef90\_UPI00045D855E T I L S R Q G I I N Y S N L P G L P L A R G E L V V G L I C L T A Q T Q S L L Q  
UniRef90\_A9V9G8 Q L V D H G K I E Q Y A S I P D K D T L L A Q L V A T L Q Q P A G A L A Q V L S  
UniRef90\_R6ASW8 K V V E P S V I N E Y A S I P S M E G L L T M L A G G M I E H V K N L S I A L N  
UniRef90\_Q74ZK7 E V F D V A R L N D F K Q L P S S K T T L Q S Q L L G V L H L S G A G L V R T L E  
UniRef90\_X5H4H4 T S F T L P L M K D F S A L P D E S C I Y A A L V N A I N S V P A A L V D A L N  
UniRef90\_X1B6C4 V V I S Q D E T K R Y G A L P S R V I E L L A K L A M L L N S P M R S L A M M L K  
UniRef90\_A1QZH9 E V Y D E A K L N A Y S K L P T K K E S I S L F M N V L K A P I S K L A R T L K  
UniRef90\_M4Q9E3 S F I T S R Q G I I N Y S N L P N N K G D V V Q M L G I L Q S P V I E L T S L L S  
UniRef90\_X2MYX8 E L I P A S S Q I D R L A T L P T Y E E A I A R L M A T M K  
UniRef90\_Q5A693 N V M N L D E I N Q F K T L P T K E S L Q G Q L V G L L M A G G A G L V R T L E  
UniRef90\_R7N194 D V A E L S V I N E Y A S I P S Y E G L L T Q L A A G M M E H V R N L A I G L N  
UniRef90\_W0QHZ7 K T Q D V A F L A T L P T Y E E A I A R L M G T M K  
UniRef90\_UPI00036687BF R L L T A Q D V Q R K L A E L P S R E E L L A R V V G G V A A P L V G L V L G V L Q  
UniRef90\_G8BRH7 S V F D I E K L N R K F K D L P S S K A Q L H S Q L V G L H A S G V G L L V N T L E  
UniRef90\_Q7RS21 T I L N K K E T E D L I N L K S Y N V Y F S H L A N K I N Q I T T S I P T S I M  
UniRef90\_R7HHD0 K V A D K N V T K E Y A S L P S R E G L T M L A S G M I A Y V K D L S I A L N Q  
UniRef90\_W5DWF9 K Y Y A P A E F K S L E T M P S R A E V Y S K L L G A L N G P A T S L V T L E  
UniRef90\_S6EZC4 D V Y D I G Q L A H F Q T L P S K T A Q L L G L L H V L S G A G L V R T L E  
UniRef90\_M4QAI9 D L I S V N D L I E T K L K T I E E G I V K K M T L L N N P M M E L I N L L S  
UniRef90\_W6MW67 D V L D V T Q I D K F K D L P T K S Q L Q S Q L V G L L M A G G A G V T K T L Q  
UniRef90\_R5ZT88 V F L N E E K M A E L G K V G S R N G L Y S Q L L S V L E A G M R N L A L D I K  
UniRef90\_E6QZ81 K V M S E K E L E E L G K V P E L D T L R A Q L V G L L E G Q G R S L V G V L N  
UniRef90\_G8ZNX2 E V Y D V T Q L N Q F K T L P S K P T L Q A Q L G L L N V L G G A G L V R T L E  
UniRef90\_C4WVB5 K L L S K N Q T V E Y G N L V N I E N A R S R L I G V I G Q V N N R C L Q T I G  
UniRef90\_E9C715 A L L S K E D V P S Y L A M R P V L R D Y Q A E I V G L M S S P A A R V T S M I  
UniRef90\_F7CNU2 R L L S R Q G V V N Y S R L P S L E V L R G Q V V A G L A L M A S L T P S L L T  
UniRef90\_Q5L511 A N L S G K E V E A V A K L P S M K E L R Q Q  
UniRef90\_F0QR32 K F L D K E Q I A Y L P A W G E K E V A I G K L A Y L L T F P L L S L I V L K  
UniRef90\_L0PE71 E L A D T E M L S I K A L P E K R S I L H T Q L I C S L I A G S N K L L Q I L Q  
UniRef90\_D4G8J5 D M V V K E E I N K L A L V H F H E E A I L N F L L V I K E S T L K F L R L L R  
UniRef90\_T1FRQ2 T L L T K Q G M I N Y A N L P S S E H L L G T L I S N I N S P I R T T C S L L S  
UniRef90\_Q8KTQ0 R I V S Q C E I A A M M N L P P I L D A L W A R V T H L V A Y P I T Q L T N T L R  
UniRef90\_L0AZE3 T M I P M Q Q V Q N L E F L G S R E A L V A R F A S L L Q G S I Q G L A A A V N  
UniRef90\_I2G1H8 R L L H V A Q A R D V G R L G G L E Q L R V Q I V G L L S T C A Q Q L A G V L Q  
UniRef90\_R6HT43 E V V S L D V I N D Y A S I P S M E G L L T M F A S G L M E H V K N L S I A L N  
UniRef90\_I4YG55 Q T V D I F T I R Q L A N L P T L E Q I H A Q I Y S L I T T P S S R I H S H I Q  
UniRef90\_W1QC18 D V V D I A D I N Q F K E M P T M D E L R S Q L V G M L T L S G A G L V R T L E  
UniRef90\_A5E7T5 D A F T T K Q L D Q F K E M P N R D G L R G Q L V G L M A G G A N L V R T L E  
UniRef90\_UPI00036FA095 E Y K E A E E I I T L A Q L P S Q E V L L A Q L V G S L S A P V S N F I N V L Q  
UniRef90\_UPI000370C5BE V A M D E A E I K K L A D L E S R E V L L A K V A G A A K A S L S K A A A L F Q  
UniRef90\_X1E7U3 R L L S P E E V E K F A S L P G K E V L L T N L V I S I K A S I T K V N V L S  
UniRef90\_A0A023FVU8 R F L S R D E M Q W L G T V P N I E Y L Q G Q T C A I L S S V A S R T L Q I T S  
UniRef90\_A0A009VTP8 K V Y Q G A D V S V I A N L P N Q E K A L T M L A S V L Q A P I S K L G R L I T  
UniRef90\_D8SS19 K F Y A P F N Q L E T M P S S Q G A V G  
UniRef90\_A4YH89  
UniRef90\_B8P1L0 R V F G P A G V G E V T Q L P T L E T L R A Q L V G L L S A P A M Q L A M V L E  
UniRef90\_K7IUW8 K F L R L N D F I K Y G S L P D L V T A Q A G L V Q L R A A G G N L N O Q L T  
UniRef90\_C6V5G6 V L F D R R L M D E F S K L P D E M H V Y L S L I N A I N A V P I A L V N S L D  
UniRef90\_M5E8M3  
UniRef90\_UPI000473A4E9 R L L S D S E I K E I A S L P S K E V  
UniRef90\_C5DI82 G I L D V P Q L H Q F K T L S S K P E  
UniRef90\_D7EAE1 D I V V E E G A T G F P P G P L I G D L Q S  
UniRef90\_I2H7J3 Q F F N V Q Q L E T F Q T L P T H A Q L H G Q L L Y I L L Q Q S S S L V S L I Q  
UniRef90\_F7XVW1 E K V S V E H I N M L A T L P S L D E L R A K L L S L V Q E P A R R I A R V I A  
UniRef90\_U4LUU2  
UniRef90\_C5DNK6 D I  
UniRef90\_W8PND3 S L Y N T E C V N L I A R L G T E A A L R A N V L A A L R R V L S R F A T A L S  
UniRef90\_F4B472  
UniRef90\_B2WCC3  
UniRef90\_U4LVS9  
UniRef90\_S5TEI5 N L Y L G D K L N D L I N I K S K N D L L I E L L  
UniRef90\_K5W2Y3  
UniRef90\_E3LGN6 R I V D M V Q A R D L S K L S S L E D L R A H T V Q I L L G Q Q V A Q I T I S L D  
UniRef90\_I3XT13  
UniRef90\_V9IM56 Q V F K Y D D F L K F G E M N I T M A Q S N L V Q I L L Q A G G V N L T R Q L T  
UniRef90\_A8TBM5 A L T D A E V L A T L P T Y D E A I A R L M M C M K  
UniRef90\_Q9C3Z6  
UniRef90\_B6QNT0  
UniRef90\_C5A428 D V V I P A G P T S L A P G P L V G E M Q A L I P A R I K V T I Q K D Y T V L K  
UniRef90\_A3DN12  
UniRef90\_D5U263  
UniRef90\_S8BAH7  
UniRef90\_F8AEG0 D I V I P A G P T P L S P G P L V G Q M Q A M  
UniRef90\_K1TJ31 K G I S K D E V V A Y A K L P T K E T L L A Q L V F M L Q S P I Q K L A I A V S  
UniRef90\_C4Y7B6 S I Y N I D D L D K F K S L P N K E Q M Q S Q L A G L L T V L G A G L V R T L E  
UniRef90\_B6H919  
UniRef90\_M7NX35  
UniRef90\_H2WH70 R I I D M P E A R Q L A K L T S L E D L R A H T V Q I L L G Q Q V A Q V S I S L D  
UniRef90\_E8RAA4  
UniRef90\_W3XKR0  
UniRef90\_UPI00036CF452

UniRef90\_A0A058ZA82 Q H P S S L A F A L Q Q Y L D R E  
UniRef90\_G0WBM9 S A P V G L V S N L E S H V N N K  
UniRef90\_H9L0I5  
UniRef90\_W1H1E8  
UniRef90\_G5BY25 R Q P M Q L T A L L D Q H I R Q Q  
UniRef90\_C4R6I1 A S P H H L Y F T L G A Y L D  
UniRef90\_E8Q6H0  
UniRef90\_B6YPZ9 F G R Q T I H R I L K T F L K K K  
UniRef90\_X7ZLW7 A P A S Q V A R L  
UniRef90\_J7S2I8 Q P S S A L Y M T L R A H E  
UniRef90\_A0A024J8R6 A S S K V L Y L T M D E R R K Q  
UniRef90\_UPI00045D855E H Q P L Q L T T L L N Q Y I R Q Q  
UniRef90\_A9V9G8 R N Q T A L V Q A L Q Q L  
UniRef90\_R6ASW8  
UniRef90\_Q74ZK7 S G S Q T L Y M T L K G H E K Q  
UniRef90\_X5H4H4 G P A N L L V R Y F D S Y V K  
UniRef90\_X1B6C4 A K I R E F A A V L N E T R I K R  
UniRef90\_A1QZH9 A  
UniRef90\_M4Q9E3 I N Q N V L C N T L A M Q E E  
UniRef90\_X2MYX8 A S A G K L V R T L A A V R D A K  
UniRef90\_Q5A693 T P G K V L Y L N L D Q R K K  
UniRef90\_R7NI94 M Y A E N L  
UniRef90\_W0QHZ7 A A A G K L V R T L A A L R D Q  
UniRef90\_UPI00036687BF G V L R N F V W V L K A I E E K K  
UniRef90\_G8BRH7 N A S K T L Y M T L Q S H N D  
UniRef90\_Q7RS2I H I P S S I A R G L Y L H N K K K  
UniRef90\_R7HHD0 L Y A E K M  
UniRef90\_W5DWF9 A P A R D V V A V L S A Y V R K  
UniRef90\_S6EZC4 A S S Q T L Y L T L K S H Q D N Q  
UniRef90\_M4QAI9 Q N Q L Q T L N T L Q M I K K E E  
UniRef90\_W6MW67 A A S Q T L F L N L K E H E K  
UniRef90\_R5ZT88 S I A E K  
UniRef90\_E6QZ8I A A G G S L V R T L Q G L E  
UniRef90\_G8ZNX2 A G S Q T L Y L T L S S H Q D N Q  
UniRef90\_C4WVB5 Q T Q L T M V R Y L E Q Y  
UniRef90\_E9C7I5 Q A P Q L L V H V L N T H A K  
UniRef90\_F7CNU2 Q H S V K L G A L L D Q H I K Q K  
UniRef90\_Q5L5I1  
UniRef90\_F0QR32 A I E S K  
UniRef90\_L0PE7I Y P S K T L A L T L D T  
UniRef90\_D4G8J5 A I  
UniRef90\_T1FRQ2 S H Q R R L S N L F  
UniRef90\_Q8KTQ0 A I A S R  
UniRef90\_L0AZE3  
UniRef90\_I2G1H8 A A G Q Q L A L T L E  
UniRef90\_R6HT43 L Y A E K L  
UniRef90\_I4YG55 H P S Q H L S L L L K S H S N H Q  
UniRef90\_W1QC18 S A A N T L Y L T M D T H R E K K  
UniRef90\_A5E7T5 T P G H L L Y L T M D T R A  
UniRef90\_UPI00036FA095 G N I K G L I N V L A  
UniRef90\_UPI000370C5BE A P L S K T V R T A E A L R A K  
UniRef90\_X1E7U3 A L T R D L V L I L D A  
UniRef90\_A0A023FVU8 H H Q N R L S L L L T S H A  
UniRef90\_A0A009VTP8 A L K E K  
UniRef90\_D8SS19  
UniRef90\_A4YH89  
UniRef90\_B8P1L0 A G G A R L A R T L E G L K K  
UniRef90\_K7IUW8 H H Q S T L V T R L K Q I C T K E  
UniRef90\_C6V5G6 G P A R L L A G Y F D S Y V K  
UniRef90\_M5E8M3  
UniRef90\_UPI000473A4E9  
UniRef90\_C5DI82  
UniRef90\_D7EAE1  
UniRef90\_I2H7J3 K P V G L L S N V L D A  
UniRef90\_F7XVW1 L H S E K  
UniRef90\_U4LUU2  
UniRef90\_C5DNK6  
UniRef90\_W8PND3 L P L T N F A G L L T Q  
UniRef90\_F4B472  
UniRef90\_B2WCC3  
UniRef90\_U4LVS9  
UniRef90\_S5TEI5  
UniRef90\_K5W2Y3  
UniRef90\_E3LGN6 T A T R H L P S L L D A Y A S S K  
UniRef90\_I3XT13  
UniRef90\_V9IM56 H H Q S T L L T R L K Q I  
UniRef90\_A8TBM5 A S A G K L V R T I A A I R D Q K  
UniRef90\_Q9C3Z6  
UniRef90\_B6QNT0  
UniRef90\_C5A428 A I T E Q L A R I L N A L  
UniRef90\_A3DNI2  
UniRef90\_D5U263  
UniRef90\_S8BAH7  
UniRef90\_F8AEG0  
UniRef90\_K1TJ3I E I E K K  
UniRef90\_C4Y7B6 S N G T M L Y L T L E Q R R K D Q  
UniRef90\_B6H9I9  
UniRef90\_M7NX35  
UniRef90\_H2WH70 T A T R H L P S L L D T Y A D Q Q  
UniRef90\_E8RAA4  
UniRef90\_W3XKR0  
UniRef90\_UPI00036CF452

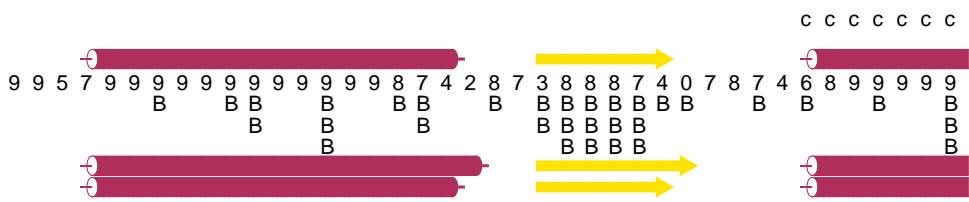


UniRef90\_R4XBQ8  
 UniRef90\_M7PGE3  
 UniRef90\_U3JJA2  
 UniRef90\_R9NXW9  
 UniRef90\_G4VF29

```

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

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









170

UniRef90\_R4XBQ8  
UniRef90\_M7PGE3  
UniRef90\_U3JJA2  
UniRef90\_R9NXW9  
UniRef90\_G4VF29

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

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

4 7 9 9 9 9 9 9 9 9 8 7 4 4 9  
B B B B B B B B B B  
B B  
B B  
B B