

QUERY	1	10	20	30	40
UniRef90_D5XAE7	S V R L N D Q D	L D I L V K A L	N S A S N P A I V L G P D	V D A A N A N A D C	V
UniRef90_C0GI61	T L Y G N P N Q I	R Q Q A A Q L I	M D A K R P L I Y A G G G V V I S G A H K E	L L	
UniRef90_UPI000344B952	T Y E G H P G Q I	T R A A K A I	G R A K K P V I Y A G G G V V Y A E A H Q E	L L	
UniRef90_F8ANP1	T T V R G N P R Q I	S A A L K L I	A K A E R P L M Y V G G G A I S A D A H G Q	I K	
UniRef90_A0B5D8	T S T K V H Q Q I	R R A A E A L	M A A E R P P V I Y A G G G V R Y A N A H E E	E L F	
UniRef90_X1EG90	T L Q G H P G Q I	K K A A K L V	N E A Q R P L I T A G R G A I I S G A Y A E	L L K	
UniRef90_UPI0002D8CA75	T V V P S D E E V	Q A F V G A I	S S A K K P V I L A G G G I L S A G A E A E	L L	
UniRef90_UPI000364173D	T R G H P G Q I	K K A V N L L	A E A K R P P Y I Y V G G G A V Q G N A S A E	V T	
UniRef90_Q3AEQ6	N L K G H P Q K I	A E A V K L I	R E A K R P P Y I I A G G G V L A A N A S Q E	V L Y	
UniRef90_R5GWN6	S A D E	N T A V E L I	N A A K K P Y I Y A G G G V I S S G A S A E	L L K	
UniRef90_F4LQR8	Q	S R A A E L I	N K S R C P V I C P V I Y V G G G V I A S D S H E E	L L M A N	
UniRef90_B6ASG7	T V Q G N R W Q I	R R K A A A Q L	M S K P V I Y V G G G V I L A N A A P E E	L L	
UniRef90_G0AJ9	T K G H S G Q I	R K A V Q Q L	L T A E R P M I Y A G G G V I L A N A A P E E	L L N	
UniRef90_R7AHH9	T V K G N A R Q I	R Q A V D M M	K E A K R P V L Y I G G G I I A S N S E E E	I A K	
UniRef90_U9VX69	T T R G N P R Q I	S N A I A L L	Q S A Q K P V L L Y V G G G A V I S G A H E E	I A K	
UniRef90_V2Z762	D K E L	D K A A E M I	A K A K R P V I F I Y V G G G A I L S E A H K E	I L K	
UniRef90_W2BSN9	T V R P H N R Q V	E A A A D L I	C E S V K P V L Y V G G G V V R A R A W Q E	L L K	
UniRef90_Q8PZ24	T Y K G N T Q Q I	K R A A E E I	A N S C R P I I Y A G G G V I I S S N A S A E	L L V	
UniRef90_K8DY4	T V K G H M A Q I	N Q A A K L I	M Q A Q R P V I Y I Y V G G G V V N A N A S E E	L L V	
UniRef90_O33112	N T K P H N R Q I	R A A A K L I	A D A R K P V P Y I Y A G G G V K L S C A E K E	L L R	
UniRef90_H7ENS5	P T D D E	R R A A D I	I N K A E R P I I Y A G G G V K L S C A E K E	L L T	
UniRef90_UPI0003B3903A	N V K G N P R Q I	R H A V D A L	L E A K S P I F Y T G G G V I L S G G S E E E	L L T	
UniRef90_G5JQU9	K V E P N G L Q V	K K L L N Q L	K R A K R P L I I A G G G V N Y A G A S Q E E	L L T	
UniRef90_D9QVB9	T Y Q G H E L Q	K E A A Q E	N N A A Q K P V I Y A G G G V I I S D A S S E E	L L R	
UniRef90_UPI00035EAC2E	T V K G N P R Q I	N A A I Q L I	C S S R R P L L Y V G G G A I A S G A C Q E E	L L Q	
UniRef90_F4BW2F	S F K A H E M Q I	K K A A K A L	M E A E R P P V I Y A G G G V R Y A S A H K E	L L F	
UniRef90_W7YJC7	P N K P N Q L	D K L A N A I	N E A E R P F I I L A G G G V I Y S G A H E E	L L H	
UniRef90_UPI000374ACC9	T K P H N R Q I	Q Q A V E M I	S E A K K P V L Y I Y G G G V I I N A N A A A E E	L L H	
UniRef90_I4BZR0	T I K P Y I P S	K R A A A M L	A E A K K P V I Y A G G G V I T A E A H R E	L L T	
UniRef90_A6USG3	T T F G H P L Q	K K K A V E I I	I Q N S K R P V I I I A G G G V I Q I A N A S L E	L L I	
UniRef90_E6W5D2	T T K G H P G Q I	K K F V Q Q L V	K Q A R R P L I F Y V G G G V K A S N A A E E	L L R	
UniRef90_A2SHM2	T K G H S G Q Q	R K A V Q Q L L	L Q A K R P V I Y I Y T G G G V I I L G N A S A Q L	L L R	
UniRef90_E5ASW2	T K G H S G Q Q	R K A V A L L L	L S A K R P V I Y I Y T G G G V I I L G N A S A Q L	L L R	
UniRef90_F3ZVP8	T N Q A A R L L	S E A N S P V I	Y A G G G V I I L S R A Y E E E	L L K	
UniRef90_Q4JUN7	T S P H P R Q V	E E E A V R M I	S A A K R P T L Y V G G G V I I K A E A H A E	L L L	
UniRef90_E0I6K8	T V S P K K Q Q V	D K M L K A I	E E A E R P P V I I I A G G G V V Y S S G A H E E	L L L	
UniRef90_F4LDM3	K G H Q G Q Q	K K A V Q M L	L H A E R P P M I Y T G G G V I I L S D A A E A L	L L R	
UniRef90_UPI00036E252B	T R P H S K Q Q	R E E A A K L I	A E S R R P V L Y V G G G V H K A R A S A E E	L L L	
UniRef90_R7NQ55	N V C G H K M Q I	K K A I D L	K E A E R P P V I I V A G G G V L S S G S K L Q	L L Q	
UniRef90_F0KFZ9	T V Q G H R G Q I	K K R A L Q T I	L A A K R P V P M Y V G G G A I N S A C H E E	L L Q	
UniRef90_UPI000467F455	T K A H G K Q Q	V V A A A Q L L	V E S K K P V L Y V G G G V I I R S R A S Q E E	L L L	
UniRef90_K4L6U0	T K G N P G Q Q	S E A A R V L	A Q S S K K P V V Y A G G G V I I T S G A G K I L	L L Q	
UniRef90_U2NTB6	T K G N P G Q Q	D K A L D E V A K L I	N Q S S K K P F I Y A G G G V I I R A D A S E E E	L L M T	
UniRef90_M1RE17	I E G N P Q Q	K K R A A Q L I	N Q A R K P F I I L A G Q Q G V L I A N A E E E E	L L V	
UniRef90_W0EMF0	T V K A D E	E E A A A R L I	E A E A R P F I I L A G Q Q G V L I A N A E E E E	L L V	
UniRef90_Q6AJ12	K P H Q G Q Q	T K A C K L L	M Q A K K P V L Y V G G G V I I L S N S H K E E	L L S	
UniRef90_U7D552	G H P G Q Q	K R A A T A I	K R A K K P V L Y V G G G V I I L S G A Q K E E	L L I	
UniRef90_P42463	P H A R Q E Q A V K L I	G E A K K P V L Y V G G G V I I K A D A H E E E	L L R		
UniRef90_V8BYW9	T H I D E K E	A A A A E M I	R V S E K P F I F V G G G A V I I S E A S K E E	L L K	
UniRef90_Q5KWJ0	T T Q P N H W Q I	R R L V E A V	S Q S K R P V I L Y V G G G V I I R A E A S A E	L L R	
UniRef90_UPI0003683223	T T R P H H K Q I	K A A A E M I	R A A E R P P V I L Y V G G G V I I R A E A S A E	I R	
UniRef90_H5S9R2	T P D E R A L	R Q A A D L I	A Q S Q R P V I L Y V G G G A I H S G A A P E I	L L R	
UniRef90_V6SJPO	N K Q A V E A A A L L I	L I Q A K K P F V I L Y V G G G A I M S N A E K E L	L L R		
UniRef90_UPI00035EB1D8	T T K P S N R Q I	R K A A E L I	T K S K K P I L Y A G G G G V I I G N A S E E E	L L R	
UniRef90_A4W3W0	T I E P N G L Q V	K K I L K Q L	S Q A Q K P V I L A G G G G V I I Y S G G G V I I M G D A S A E E	L L V	
UniRef90_UPI00036B21DD	T R G H S G Q Q	K K E A V T M I	L D A K R P V I Y S G G G V I I G N A A A E E	L L T	
UniRef90_B5EHV1	N L E G H P K Q V	K K A M D M V	T Q A K R P V I Y S G G G V I I G N A A A E E	L L T	
UniRef90_E3GWW7	T I E G H P L Q	V K R A A E A I	C K S E R P I I L A G G G V I I S N A S E E E	I K	
UniRef90_A8ABH2	K P N P D A I	M K K A A K L L	V Q A E N P V I I L A G G G V W W S F A T D E E	L L N	
UniRef90_UPI00046399F8	V K G H A G Q I	R K A L A L L	M T A K R P Y I Y S G G G V I I L A D A S R E E	L L N	
UniRef90_C4LJH8	T T S P H S R K I	K K Q A V D L	M T A K R P Y I Y S G G G V I I K A N A S A G E L	L L A	
UniRef90_J8Q5U3	T F S P N K L Q	K K K V V E A V	S E A K K P P I I L A G A G G V L I H A H A A E E L	L L L	
UniRef90_X1IRL6	G H I Q Q	K T T A A Q E I	S K A K K P P I I Y A G G G V I I S S N A S S E E L	L L R	
UniRef90_D4L6Z1	N T K G H A I Q V	K K K A V E A I	N A S K R P V I V S G G G V I L S S G I K L K L Q	L L Q	
UniRef90_M7NCP5	T F K P N F L Q	Q K K A A Q A L	S E A K R P L I I L A G A G G I L A A E A T A E E L	L L R	
UniRef90_G5ICQ2	H G G Q	K K K A L E T L	N Q A K K P V F L I I G G G V I N I S H A N E E E M Q	L L R	
UniRef90_R5NW72	A E D I	D T A I K M I	E N S K K P M I L V G G G V V A A D A S K E E L L K	L L K	
UniRef90_D7UXT8	P N L L Q	V E K L A Q A I	L A A K K P M I L V G G G V V A A D A S K E E L L K	L L K	
UniRef90_C4GKW3	V Q G H V G Q I	K K A V Q L L	S A A K R P M I L V F G G G A V L G N A S K E E L L K	L L K	
UniRef90_A0M382	S Y K P Y P D E V	E E R A A E V I	N N A K K P M I V W G Q G V I I G G A E E E L L K	L L K	
UniRef90_F7YV18	E P D K H L I	E K C V E A I	E S A K K P M I C A G G G V I I W A K A S D E E L L K	L L K	
UniRef90_J9HL50	M E P K S E A I	S D A A A L I	S Q S K K P M I Y V G G G V I I K A N A A K E E L L K	L L K	
UniRef90_B8FHH8	T V T P N T K Q L	T K V I K E L	M K A K K P M I Y V G G G V I I K A N A A K E E L L K	L L K	
UniRef90_UPI000382ED7F	T L R G H K G Q I	K K R A L A A L	L G A K K P M I Y V G G G V I I K A N A A K E E L L K	L L K	
UniRef90_W9ANT0	V I Q P D T E R L	T E F A D R I	S R A K R P M I L V L G P E V D R A G A W D A G V	V T	
UniRef90_E6MG96	S P R P Q R D A L	N R A A R Y I	N R A E R P M I I Y A G G G V I L K S G A T R E E L V	L V	
UniRef90_K6VMN6	T T R P H G K Q I	R E A V R L	R E A Q R P M I I Y A G G G V I L K S G A T R E E L V	L V	
UniRef90_I0KX93	P D P Q R Q L	E M F A R V L	A D S R N P V L V F G P G V I D R S G S W P A A V	L V	
UniRef90_C0BY06	N T H V H I Q Q I	K K R A I K M L	G K A K R P V F L I I L A G G G G I N I A R A N E A F T	L V	
UniRef90_D2S1E9	G D P E S V	S E A A D L L	A E A D R P V I V P G G G C M I G E A W D E V Q	L V	
UniRef90_H6RX71	T R G H T G Q I	R K A V Q L L	L E S K R P V I Y A G G G V I I Q G N G S D L L T	L V	
UniRef90_Q988P8	T T R P H G K Q V	R E A A T L I	A G A R R P V I Y V G G G V I I K A D A T E E E L V	L V	
UniRef90_UPI0004774F30	P D P K A V	E R A V K L L	L S A E R P V I V A G G G A I S A N A S G E E L L T	L V	
UniRef90_F0SM17	D P A A I Q	E E A A A L I	R R S K R P V I L A G Q G S M I A R S E K E E L L L	L L K	
UniRef90_C6LGA5	A A P E Q V	R Q I I A A I	R R S K R P V I L Y V G G G V I I C I L S G A A E E E L L K	L L K	
UniRef90_UPI00037895C5	N T N V H M G Q I	K K S L E C	K N A K R P V F L L G G G V I N I A H A N Q E M T	L L K	
UniRef90_U5FCF3	T T H A H G K V L	Q Q A A R L I	Q N S F R P V L Y V G G G A M R S G A S E Q L R	L L K	
UniRef90_R6VBR3	N P S K I	E E A A A L I	I N S A K K P M I V W G Q G I I L G K A E E E E L L K	L L K	
UniRef90_D5BWV4	P E Q V	K K A I D L I	I R S A R R P M I Y T G G G V I I S N A A E A L T	L L T	
UniRef90_D5ULM5	T K P H A K Q I	R E A A R L L	A T S R R P V L Y V G G G I V R S R A S E L L R	L L T	

QUERY	50	60	70	80
UniRef90_D5XAE7	M A E R L K A P V W V A P S A P R C P F P T R H P C F R G L M P A G I A A I S			
UniRef90_C0GI61	E L A E L T G C P V T T T L M G I G S F P E N H P L S L G M L G M H T K Y A N			
UniRef90_UPI000344B952	T L A E K A Q I P V T T T L M G L S G F P G N H P L S V G M L G M H G M Y W N			
UniRef90_F8ANP1	K F A E L T H C P V T T T L M G K G S F P E E H P L A L G M V G M H T K A A N			
UniRef90_A0B5D8	Q L A E T R L N A P V T T T L M G M G C F P T D H P L S L G M L G M H T K Y A N			
UniRef90_X1EG90	Q L A E T A Q I P P V V T T L G I S S F P E S H V L S Y G M L G M H G M A Y N			
UniRef90_UPI0002D8CA75	A F A E K T R I P V I N T F M G L G G F P G T H E L L A L G M P G M H G S Y T N			
UniRef90_UPI000364173D	E L V K M L G V P C T N T L M G L T S F P Q D S P L F L G M L G H G T R Y A N			
UniRef90_Q3AEQ6	E F A V R A E I P V T N T L M G L G A Y P G Q D Q Q F L G M L G H G T Y E N			
UniRef90_R5GEW6	K L A E L T D A P V S C S L M G Q G A Y D E T D R R Y I L G M L G M H T V R A A			
UniRef90_F4LQR8	Q L A E K A C I P V V T T L M G I G A F P A N H P L H M G M I G M H I P A A N			
UniRef90_B6ASG7	E L V S L S Q I P V V T T L M G L G A F P P G N H S L F M G M L G M H T Y A A N			
UniRef90_G0AJ9	K L V D R L G Y P C T T T L M G L G G Y K S S S D K F V G M P G M H G T Y E A N			
UniRef90_R7AH99	S V A E A L Q I P V V T T L M A K G A F P A S N P L N L G H V G M H G S Y Y N			
UniRef90_U9VX69	K L A E H F Q I P V V T T L M G K G S F D E Q H P L A V G M L G M H G T A Y N			
UniRef90_V2ZZ62	T L V D L M D A P V V C D S L M G K G A F D G T D K R Y M G M L G M H T K T A N			
UniRef90_W2BSN9	D L A E L A G I P V V T T L P A R G V F P D D H P L C L G M P G M H T I Q A V			
UniRef90_Q8PZ24	E F A E T I K A P V V T T T L M G I S S I P T E H P L Y V G M L G M H C K Y A N			
UniRef90_K8DY4	W L A E T I D A P V V S T L M G L G A F P G D H P L F L G M L G H G N K A A N			
UniRef90_O33112	D L A E L T G I P P V V S T L M A R G A F P D S H H Q N L G M P G M H T V A A V			
UniRef90_H7ENS5	A F A E K A Q I P V V S E S L M G R D V F P A S H H P L C T W M V G M H T R A S N			
UniRef90_UPI0003B3903A	E L A R M L N Y P V V T N T L M G L G A F P A S D P L F V G M L G M H G T Y E N			
UniRef90_G5JQU9	A F A E R Y N I P V V S T L L S L G T I P V S H P L A L G M G M H S Y A S N			
UniRef90_D9QVB9	K L A E Q K A S I P V V T T T L M G L G A I D E R N E L S L G M L G M H T V E A N			
UniRef90_UPI00035EAC2E	E L A E L F H I P V V T T T L M G L G A F D E N H P L S L K M L G M H G T A Y N			
UniRef90_F4BWF2	E L A R K V N A P V V T T T L M G V G C F P E D H P L S L G M L G M H T K Y A N			
UniRef90_W7YJC7	E F V K K T G I P V V T T T L L G L G A F P S G D D L W T G M P G M H G T Y T N			
UniRef90_UPI000374ACC9	E F A Q F T Q P V V V T T L M A L G A Y P H N D P L Y M G M P G M H S V P A V			
UniRef90_I4BZR0	E L A E M M M G F P V V T M T L M G L G C F P G T H P L S L G M L G M H G T Y R N			
UniRef90_A6USG3	K L S E F V K I P V V C T T L M G K G A F P E E H P L A L G L V G M H T K A S N			
UniRef90_E6W5D2	T I A E K L H I P V V T E T L M G L G S V G G Y N K L F I G M L G M H G C Y A A N			
UniRef90_A2SHM2	Q L V D L L G Y P C V T T T L M G L G G Y R A T D R K F L G M L G M H G T Y E N			
UniRef90_E5ASW2	Q F A D L L G Y P V V T N T L M G L G G Y R A T D R K F L G M L G M H G T Y E N			
UniRef90_F3ZVP8	A F A E K L K I P V V V S S L M G L G G F P A N H P L F L G L V G M H S R Y A N			
UniRef90_Q4JUN7	E F A E A N D I P V V V T T L M A L G S F P A S H P L Y M G M P G M H S V P A V			
UniRef90_E016K8	A F A T K T N I P V V V T T L L G L G G F P S G N D L W V G M P G M H G A Y A S N			
UniRef90_F4LDM3	H L V D Q T G A P C T N T L M G L G A M P A T D H R F L G M P G M H G T Y E N			
UniRef90_UPI00036E252B	Q L A E L T N I P V V V T T L M A R G T F P D G H P Q H M G M P G M H S V A A V			
UniRef90_R7NQ55	Q F A E M T G I P V I S T L M G I G V M P S E H M R Y L G M L G M H T K Y A N			
UniRef90_FOKZF9	T L A E K L N V P V V T S S L M G L G S F P G T H G Q S V G M L G M H T F E A N			
UniRef90_UPI000467F455	E L L A E T I G A P V V V T T L M A R G A F P D S H Q Q H L G M P G M H T V P A V			
UniRef90_K4L6U0	E V L E K T N I P V V V T T L M G I G S V P S K H P N H L G M V G M H T I T A N			
UniRef90_U2NTB6	E F A E K I D S P T A T S L M C M G G F P V T H P L F T G M I G M H T K A S N			
UniRef90_M1RE17	E L A E L L M K I P V V V T T T N M G K G A F D E R H P L S L R M L G M H G T Y Y N			
UniRef90_W0EMF0	R L A E K A D I P V V G C T L L L G L S A I P T D H P L Y K G M L G M H S V A S N			
UniRef90_Q6AJ12	A L A E K L Q I P V V T M T L M G L G A F P G S H D L L S S M G M L G M H G S Y T N			
UniRef90_U7D552	H L A E T I D A P V V T T T L M G L G G F P G D H N L F V G M P G M H S K A A N			
UniRef90_P42463	E F T L M L G F P I T Q T L M G L G A Y P M T D K Q S L G M L G M H G T Y E N			
UniRef90_V8BYW9	A F A E Y T G I P V V V T T L M A L G T F P E S H E L H M G M P G M H T V S A V			
UniRef90_Q5KWJ0	E F V E K M K D A P V V V T D S L M G K G A F P G I D P R Y T G M L G M H T K A S N			
UniRef90_UPI0003683223	Q Y A E Q Q N I P V I H T L L G L G G F P A D H P L F L G M A G M H G T Y T N			
UniRef90_H5S9R2	E L V D L A Q I P L V V T T L M A R G A V P D S H E L H L G M P G M H S V P A V			
UniRef90_V6SJPO	A L A E K A R I P V V V T T T L M G L G A F P E D H P Y A L K M L G M H T V Y A N			
UniRef90_UPI00035EB1D8	Q F A E K S G I P V A S T L L G L G A F P P N N H P K Y V G F L G M H D Y A P N			
UniRef90_A4W3W0	E F T L M L G F P I T Q T L M G L G A Y P M T D K Q S L G M L G M H G T Y E N			
UniRef90_UPI00036B21DD	A F A E R Y R I P V V V T S T L L G L G A M P I E H E L S L A M G G M H G S Y A A N			
UniRef90_B5EHV1	E L A Q L N A P V V V T N T L M G L G G Y P G T D R Q F I G M L G M H G S Y E N			
UniRef90_E3GWW7	A F A K R L A I P V V V T T T L M G L G A F P E N D T L S L G L L G M H G T Y Y N			
UniRef90_A8ABH2	T L S R I I N A P V V V T T T L L G K G A I P E D D P M S I G M L G M H G R K V N			
UniRef90_UPI00046399F8	K L A E E V L M A P V V V T T L M G K N A V P A D H P L V L G N A G M H G R P E N			
UniRef90_C4LJH8	Q F A D L L G F P V T V T L M G L G G Y R A S S K Q F L G M L G M H G T Y E A N			
UniRef90_J8Q5U3	E F V E K T G I P V V V T T L M A L G S F P D S H P L H M G M P G M H G S V S A			
UniRef90_X1IRL6	Q Y V E Q Q Q I P V V V T N T L L G L G S F P G E H E L F L G M A G M H G T Y T N			
UniRef90_D4L6Z1	D L V L K T N I P V V V T T T L M G L G S F P E T H S L S L G M L G M H G T P C N			
UniRef90_M7NCP5	K F A E T T G I P V I S T M M G I G V M P S E H E L Y L G M L G M H G K A V N			
UniRef90_G5ICQ2	S F I D Q Y R I P V V T T L L G I G T V P P G G H L G M A G M H S Y A A N			
UniRef90_R5NW72	K L A E L T G V P V V V T T T M M G K G A I P T T H K L Y V G N I G I H S Y A A N			
UniRef90_D7UXT8	K F A E K I D A V V V C D T L M G K G A F P G T D D R Y T G M L G M H T K A S N			
UniRef90_C4GKW3	E F A E R Y D I P V V V T N T L L G L G S F P N H E L F L G M G M H G S Y S N			
UniRef90_A0M382	D L I R T T G V P C T G T L M G L G A Y P S D D R Q F L G M L G M H G T Y E N			
UniRef90_F7YV18	A V V E K A G I P V A A W T I L G L S A I P T D H P L N V G M V G M H G N Y P N			
UniRef90_J9HL50	T L L I E R L K I P V V V C T L M G V G A I P T N H P Y Y L L G I V G F G H N E A N			
UniRef90_B8FHH8	A L A E L T G V P V V V T T L M A R G A F P D S H K Q H L G M P G M H T V A A V			
UniRef90_UPI000382ED7F	D F A R K L Q I P V V V T T T L M G L G A F P G S D D L S L G M I G M H G T Y R N			
UniRef90_W9ANT0	E L A E K L N L P V V V T N T L M G L G A F P S G T H K Q N I G M L G M H G T Y E N			
UniRef90_E6MG96	A F A E K K L R A P V V R G S A L S D R C S F P E D H P L Y R G P L P T I A G V S			
UniRef90_K6VMN6	A F A E K T G I P V V V A N S L M G L G S I P P R D N P L S L G L V G M H G S Q E C N			
UniRef90_I0KX93	Q L V D R T G V P V V V T T L M A R G A L P D D H P L H Y G M P G M H G S V S A V			
UniRef90_C0BY06	A L A E R L Q G A P V W S A P A P E R A V F P E D H P Q F R G V L P F A I G P L A			
UniRef90_D2S1E9	E L A E K T N V P V I T T V M G R G A I P T D H P L Y V G N V G M H G Y A A N			
UniRef90_UPI0004661D2C	D L A E H L K A P V I P T F Q A K G I I P E D H E L F L V G Y A G W I S T A G N			
UniRef90_H6RX71	D L A E K R L N F P V V V T N T L M G L G A Y P G S D R Q F L G M L G M H T F E A N			
UniRef90_Q988P8	E L A R L T G A P V V V T T L M A R G A F P D S D R Q H L G M P G M H T V A A V			
UniRef90_UPI0004774F30	R L A E K L G A A V V S I T W N G K G A I S E D H A L F I G A V V G Q T G T T C N			
UniRef90_F0SM17	Q L V E M L D C P F T T T L L G K G I L P E T H P L S L G M L G M H G T A Y N			
UniRef90_C6LGA5	K F A E K T Q I P V A M T V M G L G A F P G T H E D L S L G M L G M H G T A Y N			
UniRef90_UPI00037895C5	A L V E K T G I P V P S V T T L M G K G A I P T T H P L Y V G N L G I H N Y A A N			
UniRef90_U5FCF3	A L V E A T N A P L V T T L N A R G I V P D S D P H N L G M I G M H S I A G T			
UniRef90_R6VBR3	S F V E K S G I P V A A W T I L G A S A L S S S H P L N V G M V G M H N Y A P N			
UniRef90_D5BWV4	K L A E L T Q V P V I T T I M G K G A L P T N H E L Y I V G M V G M H C Y A A N			
UniRef90_D5ULM5	E F V R L L L G Y P V V T T N T L M G L G G Y P G T D P Q F V G M L G M H G T Y E N			
	R L T D L S G A P V V I T T L M A R G A L P D S H P Q N L G M P G M H T V A A V			

QUERY	90	100	110	120
UniRef90_D5XAE7	Q L E G H D	V V L V I G A P V F R Y H Q Y D P G Q Y L K P G T R L I S V T C D		
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UniRef90_UPI000344B952	M A M H E A D	L L I A I G A R F D D R V T G K L S H F A K N A K I I H I D I D		
UniRef90_F8ANP1	F A V S E C D	L L I A I G A R F D D R V T G K I A S F A P K A R I I H I D I D		
UniRef90_A0B5D8	Y C V S E S D	V L L A I G C R F S D R I T G D I K S F A P Y A K I I H I D I D		
UniRef90_X1EG90	L A V Q E A D	V L L A I G A R F D D R V T G K I A S F A P K A R I I H I D I D		
UniRef90_UPI0002D8CA75	M A V D A A D	L L I A I G M R F D D R V T G K I A S F A P K A R I I H I D I D		
UniRef90_UPI000364173D	Q A L L N A D C I	I G I G A R F D D R I T M G R T K E F G P N A K I I V H I V D I D		
UniRef90_Q3AEQ6	M A M Q Y C D	V L L I A V G A R F D D R V I S V P S H F L S Q P K K I I V H I D I D		
UniRef90_R5GWN6	L A V T E C D	G L G V R F A D R V T G E L S G F A P K A K I I H I D I D		
UniRef90_F4LQR8	K T V T E A D	D L L I A V G A R F D D R V T G D T S V F G K Q A K I I H I D I D		
UniRef90_B6ASG7	M A V H N C D	L L I A V G A R F D D R V T G K V E G F A P K A K I I H I D I D		
UniRef90_G0AJ9	M A M Q N S D	V L L I A I G A R F D D R V I G N P K N F T S V S R K I I H I D I D		
UniRef90_R7AH99	H A V Q N A D	L L I A I G S R F S D R V T G K L V D F A P D A K V I I H I V D I D		
UniRef90_U9VX69	F A V S E C D	D L L I A V G A R F D D R V A V A S N L E Q F A Q H A K V V H I D I D		
UniRef90_V2Z762	F S V T E C D	L L L V L V L G A R F S D R V T G N T K S F A K R A K I I L H I D I D		
UniRef90_W2BSN9	G A M Q R S D	D L L I A V G T R F D D R V T G A L D T F A P N A K I I H A D I D		
UniRef90_Q8PZ24	Y A I Q E S D	L L I A V G A R F D D R V T G K L E S F A P N A R V I I H I D I D		
UniRef90_K8DY4	L A V T E C D	T L G A R F D D R V T G R V A G F F A P R A K V I I H I V D I D		
UniRef90_O33112	A A L L Q R S D	D L L I A L G T R F D D R V T G K L D S F A P D A K V I I H I A D I D		
UniRef90_H7ENS5	M G I T E S D	L V L A L G S R F S D R V I G D P D K F F A S G A T V F H I D I D		
UniRef90_UPI0003B3903A	M A M H K T D	L V I A I G S R F D D R V T G N I E K F C P N A K I I H I V D I D		
UniRef90_G5JQU9	M A M T H C D	F M I N F G S R F A D R L T G N P K T F A K N A L V A H V D I D		
UniRef90_D9QVB9	M A I S N A D	V L I A I G A R F D D R A T G E M D G F A P E A K V I I H I D I D		
UniRef90_UPI00035EAC2E	F A V T N C D	L L I C V G A R F D D R V T G K L D E F A S R A K V I I H I D I D		
UniRef90_F4BW2F	Y A I Q E S D	D L L I M A I G A R F D D R V T G K I L S S F A P H A R I V V H I D I D		
UniRef90_W7YC7	M A I Q Q A D	L L I N I G A R F D D R V T G N L K G F A P H A K I V V H I D I D		
UniRef90_UPI000374ACC9	A A L L Q K S D	S D L L I T I G A R F D D R V T G K L E T F A P D A K V I I H S D I D		
UniRef90_I4BZR0	M A V S N S S D	D L L L A V G A R F D D R V T G K I E E F A P Q A K I I H I D I D		
UniRef90_A6USG3	Y S V Y E S D	V L L I A I G C R F S D R I T G D I L S S F A P H A K I I H I D I D		
UniRef90_E6W5D2	T A I S E C D	D L V I A V G A R F D D R V T G K L D E F A K D A T V I I H I D I D		
UniRef90_A2SHM2	M T M Q N C C D	V L L A V G A R F D D R V I G N P K H F A S A V E R K I V V H I V D I D		
UniRef90_E5ASW2	M A M Q H C D	D V L I A I G A R F D D R V I G D P A H F A S A P R K I I H I D I D		
UniRef90_F3ZVP8	Y T V S N S S D	V L L I A I G A R F S D R V I V S N V Q R F A P N A K I I H I D I D		
UniRef90_Q4JUN7	A A L L Q R S D	D L L I T I T I G A R F D D R V T G H V D S F A P D A K V I I H A D I D		
UniRef90_E016K8	K A I Q G S D	S D L L I N I G A R F D D R V T G M K L D G F A P P N A K I I V V H I D I D		
UniRef90_F4LDM3	M A M Q H C D	D V L L A I G A R F D D R V I V G N P R H F A Q N A R K I I H I D I D		
UniRef90_UPI00036E252B	G A L L Q K S D	D L L I G L G V R F D D R V T G Q L S T F A P Y A K I V H A D I D		
UniRef90_R7NQ55	M A L L H E S D	L L I V C G A R L G D R A V A K P D Q V S R T S K I I H I D I D		
UniRef90_F0KZF9	M A M H N T D	L L I F A V G V R F D D R V T T T N N L A K Y C P N A A A V V H I D I D		
UniRef90_UPI000467F455	L A L L Q E S D	L L I V S L G A R F D D R V T G N T S L F A P P N A K I I V V H I V D I D		
UniRef90_K4L6U0	L A V D A C D	D L L I A I G V R F D D R V T G K L H R F A T K A K I I H I D I D		
UniRef90_U2NTB6	L G A W E C C D	D L L I A I G S R F S D R V I V S S N S N L E G A K I I H I L D I D		
UniRef90_M1RE17	M A V Y H S D	D L L I A V G S R F D D R V T G K V D E F A P F A K I I H I D I D		
UniRef90_W0EMF0	I K T N E C D	D L L I A I G M R F D D R V T G D I T Q Y A R Q A R I I L Q I D I D		
UniRef90_Q6AJ12	M A V A E S D	D L L I A V G A R F D D R V T G K L E D F A S K A K I I H V D I D		
UniRef90_U7D552	Y A L L Q N S D	L L I I S V G A R F F D D R V T G D V S K F A P H A K I I H I D I D		
UniRef90_P42463	G A L L Q R S D	D L L I A I G S R F D D R V T G D V D T F A P D A K I I H A D I D		
UniRef90_V8BYW9	Y G V S E C D	D L L V V V G A R F S D R V T G N T S T F A K N A K I I L Q I D I D		
UniRef90_Q5KWJ0	M A L L C E C D	D L L I N I G A R F D D R V T G N L K Y F A P K A T V A H I D I D		
UniRef90_UPI0003683223	T A L L Q R A D	L L I A L G T R F D D R V T G Q L L S S F A P Y A K V I H A D I D		
UniRef90_H5S9R2	F A L I N F S D	D L L I A V G A R F D D R V T G K L D E F A P H A K V I I H I D I D		
UniRef90_V6SJPO	□ K T N E C D	D L L I A I G M R F D D R V T G D V S R Y A K Q A K V I I H V D I D		
UniRef90_UPI00035EB1D8	M A M H G S D	C D V V A I G S R F D D R I T G N L E K F C P T A K F I I H I D I D		
UniRef90_A4W3W0	M A M D Q A D	Y D I N I G A R F D D R L T G N P T T Y A P N A T V A H I D I D		
UniRef90_UPI00036B21DD	M A M H H A D	D L I A V G A R F D D R V T V T N G V D K F C P T A K I I H V D I D		
UniRef90_B5EHV1	M A V S N C D	D L V I A I G A R F D D R V T G K I A S F A P H A K I I V V H I D I D		
UniRef90_E3GWW7	L A V N E S D	C I I A V G C R F S D R T T G D V N K F A P N A K I I H I D I D		
UniRef90_A8ABH2	Y A L L Y N A D	V V L I A V G T R F S D R T V G N F E E F R R G K K I I H I D I D		
UniRef90_UPI00046399F8	M A M Q H C D	D V L I A I G A R F D D R V I V G N V A H F A E V V P R K I I H I D I D		
UniRef90_C4LJH8	V A L L Q K A D	D V V I A I G T R F D D R V T G D V E S F A P E A K F I I H A D I D		
UniRef90_J8Q5U3	M S I I Y E T D	D L L I N I G A R F D D R L T G N L A H F A P T A K V V H I D I D		
UniRef90_X1IRL6	Y T I I S D A D	D L L I A L G V R F D D R I T G K L D E F A L K A K I I H I D I D		
UniRef90_D4L6Z1	R A L L H E A D	L V I V C G A R L G D R A V A A P D Q M S E N T K V I I H I D I D		
UniRef90_M7NCP5	M A I I Q E C C D	V L L I N I G A R F D D R D R L T G N L E G F A P H A A I I V V H I D I D		
UniRef90_G5ICQ2	T A V V S R C D	D L V L N I G T R F N D R I T G K I G E F A P H A A I I V V H I D I D		
UniRef90_R5NW72	F G I I N Q A D	L V I V V G A R F S D R V T G N A N K F A N Q A K L L I H I D I D		
UniRef90_D7UXT8	M A L L T D C D	L L I I N F G S R F D D R V T L A S A P K E F A P N A V I A H I D I D		
UniRef90_C4GKW3	L A M Q N A D	V V A I G A R F D D R V T V V G S P A K F A E A P K K I I H I D I D		
UniRef90_A0M382	M L L T N E C D	D V L I A I G M R F D D R V T V G N L E K Y A K Q A K V I I H F E I D		
UniRef90_F7YV18	M A L L K Q A D	D L L V I V G A R F S D R T L V G V M K I S D E T R I V H I D I D		
UniRef90_J9HL50	T A L L Q K A D	D L L I T L G A R F D D R V T G K L S T F A P N A K I I H A D I D		
UniRef90_B8FHH8	M S T G D C D	V L L G V G V R F D D R V T G K T D F A P N A K I I I H V D I D		
UniRef90_UPI000382ED7F	L T M H N A D	L L I F A V G A R F D D R V T N N V E K F C P N A K V M H I D I D		
UniRef90_W9ANT0	D A L L A G Y D	L V I V G A Q V F R Y Y P Y V A G D Y L P E G T A V L Q V T A D		
UniRef90_E6MG96	□ L A V I N C D	T L I A V G A R F S D R V T V G N I N E F M R D K K I I I Q I D V D		
UniRef90_K6VMN6	T A L L Q R S D	D L I A L G A R F D D R V T V G K L S T F A P L I V V H A D I D		
UniRef90_I0KX93	E A L L R G H D	T V L V V G A P V F R Y Y P H V P G D H L P E G A R L L H V T D D		
UniRef90_C0BY06	M S V N E C D	D L L F S I G T R F N D R I T G K L H S F E A P P H A Q I V H I D I D		
UniRef90_D2S1E9	E L L A S N A D	V V L A I G C R F T D M H T S S F V S F E I P P S K L I I H V D I D		
UniRef90_UPI0004661D2C	T A M M H H S D	V I V L A I G A R F D D R V T V T N T V S K F C P N A K I I I H I D I D		
UniRef90_H6RX71	T A L L Q K S D	V I V A L G A R F D D R V T V G E L S S F A P E A R V V H A D I D		
UniRef90_Q988P8	S I T A S A D	V I M S V G C R F T D W S A S S Y A K F S I P P G K L I I H I D I D		
UniRef90_UPI0004774F30	K A M V E C D	D L L L N I G S R F F D D R I I G Q P D K F C A D A K I I I H I D I D		
UniRef90_F0SM17	M A V D E S D	D L L L A F G V R F D D R V T V G K L E E F A K H G K I I V H V D I D		
UniRef90_C6LGA5	T A I S E C D	V L I F S I G V R F N D R I T G K V S E F A R N A T I I H V D I D		
UniRef90_UPI00037895C5	G A V Q N S D	D L L I A I G A R F S D R V T G K L A E F A P R A R V I I H I D I D		
UniRef90_U5FCF3	V L T N E C D	D L L I A L G M R F D D R V T G D L S T Y A K Q A K V I I H F E I D		
UniRef90_R6VBR3	H A I S E C D	D L L I A L G T R F N D R I T G K I D E F A K N A K I I V H I D I D		
UniRef90_D5BWV4	M G M H E C D	V L V L I A I G A R F D D R V T G N L E Q F C P Y A K I I H V D I D		
UniRef90_D5ULM5	A A L L Q K A D	V V V L V V A L G A R F D D R V T G K L L S S F A P N A T V V V H A D I D		

130 140 150 160

QUERY	P L E A A R A P M G D A I V A D I G A M A S A L A N L V E E S S R Q L P T A A P	P A E I I G K N R V D V P I V G D V K N V L A E I N K Q L E P Q K R P	P A E I I G K N R V D V P I V G D V K R V L C E V L K K V E P K N H E D W L A R
UniRef90_D5XAE7	P A E I I G K N R V D V P I V G D V K N V L A E I N K Q L E P Q K R P		
UniRef90_C0GI61	P A E I I G K N R V D V P I V G D V K R V L C E V L K K V E P K N H E D W L A R		
UniRef90_UPI000344B952	P A E I I G K N R V D V P I V G D V K R V L C E V L K K V E P K N H E D W L A R		
UniRef90_F8ANP1	P A E I I G K N V V E V P I V G D A K I V L K D L L	T E L L K H V Q Q R P W	
UniRef90_A0B5D8	A A E I I G K N R V D I P V V G D A K I A L	T E L L K H V Q Q R P W	
UniRef90_X1EG90	A A E I I G K N R V D I P V V G D A K I A L	T E L L K H V Q Q R P W	
UniRef90_UPI0002D8CA75	A A E I I G K N R V D I P V V G D A K I A L	T E L L K H V Q Q R P W	
UniRef90_UPI000364173D	A A E I I G K N R V D I P V V G D A K I A L	T E L L K H V Q Q R P W	
UniRef90_Q3AEQ6	P S S I I A K V K V D V P I V G D V K H V L R D M I D L L K Q T G Q Q V P Q		
UniRef90_R5GWN6	P A E I I G K N R A D V P I V G D V K N V L Q E M L K Q I E P Q N R Q		
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 460 N E E V E Q A L K L L T K A K K P Y I F V G G G A V V L S G A S G Q V V R
 470 D P K A V A E A V A L I N E A K R P P L V L V G Q G V E L G G A Q Q E L L K
 480 N D F D I N K A I K L I E D S E R P P L L Y V V G G G A I I S S G A S R L L R
 490 D A E R V E E W M K T M A E A E R P V V I I A G G G I V H A N A S E E F I
 500 D E E A A K K I A K M L V E A K N P V I H V G G G V V I L A N A S E E L L K
 510 P E V N E I N Q A V E L L Q T A K R P P L I V A G G G V V L S D A E A L L Q
 520 T Q P S A E Q I K K A V K L M K K A K P H P V I Y G G G G L I N S G A S A K L L R
 530 N T K P N P Q L Q I K K L A N V L E T A E K P V I L A G A G V I M F G S A S E E L L R
 540 N V P H P N Q V E K A C R A C L K A K R P V P L Y V G G G V I L S G G N Q E L L T
 550 K T E P S E H A I R D A L D M M A T A R R P V F Y T G G G V I I N S G A S R L L R
 560 V R G H S G Q I R K A A E M L L A A K R P P I I Y S G G G V I M G N A A E P L T
 570 E P D H G D V D I L A K M I D E S Q R P P L L I C G G G G V V V R G R A H H E E F R
 580 K I D A E A V A Q A A E L I N A A E R P F A L V Q G Q G V E L G G A H H N E L L
 590 K I D A E A V A Q A A E L I N A A E R P F I Y V G G G A V L S G A Y K E V R
 600 T Y K P N L N Q I R R A A D A F E A E R P P L L F V G G G V V M S D A S E E E L G
 610 Q T R G D L S D I K K A V E L I E R A E R P P I F Y T G G G V V I N S G A T R L L R
 620 K G D L N G I R E A A E L I I A S A K K P V F Y T G G G V V I N A G A S K L L R
 630 D H Q D I A R A A A M I N E A K R P V L Y L G G G I I S A G A A E Q A R
 640 T K G H L G Q I K K A V N L I L A A E R P P V F Y T G G G V V L G N A S K E L T
 650 T L S G H K G Q I R R G L Q A L M A A K K P V L Y V G G G A I I S G C H Q Q L L
 660 S P K P D M A K I E S A A E L I I N N A R K P P V I V F G H G V I L G K A E N Q L R
 670 T R Y T R E E L M L V A E M I H K A K P P V I Y L G G G A I I S E A S A E V V A
 680 K I L K P L P E E I E K A I D I L I N S D R P V I L V G G G V V Y W S G A W N E V I
 690 V K P D A A L V R D A V D I M A S A K R P P V F Y T G G G V V I N A G A S Q L L R
 700 K I S Q E S L E K A A R M I R A S K R P P V I Y F G G G A V I S G A A E E L L A E
 710 P S I R Q I E K F K K M L L E S K Q P P I L Y V G G G A V V M S R A Q H E I E
 720 E P K K S A V E R A V E L I R N A K K P P L I Y V G G G A I I S N V G E D E L L V
 730 E P K K S A V E R A V E L I R N A K K P P L I Y V G G G A I I S N V G E D E L L V
 740 I Q Q A A D L I N S A Q K P P L A L V G Q G V V L L G K A E Q E L L T
 750 E L Q K A A A L L N Q A Q K P P L I V G N G V G I S K A E A E V L
 760 K T D P Q T I K K D A A T I I N E A Q K P P M I V W G Q G V V I L G E A E A E F K
 770 N T E V H I G Q I K K A R M K M L N K A K K P P L F L A G G G V V K I A N A V E I F T
 780 P D L R E L D E A L T A L K A A K K P P I I I A G G G V V H Y A Q A T E Q L R
 790 T T K A H G R V I S D A A K L F A Q S Y R P P V L Y V G G G A V V R S N A S A E V A
 800 D T H A I N A A A A M I N Q A Q K P P L I Y L G G G I I S A G A H H Q Q A I
 810 P L Q S A L R R A I E L L T A E R P P L I M S G G G V V I T A N A A P E L L V
 820 T V E G H V G Q I K K A L K S L K K A K R P P V L Y F G G G V V I L D N A H A E L L
 830 N T K G H P K Q I K K A A S A I I L N A K R P P V I Y S G G G V V I L S D T S E Q L T
 840 Q V E P D M A Q V R K A V A M L K A A K R P P V I Y A G G G V V I N A G A S E E L L T
 850 L K G D R A D I E A A V D M L A S A E R P P L I Y V G G G A I I N S G A C Q L V G R
 860 A T R K Q V E K A L E M I N A A E R P P L I V A G G G I I N A D A S D L L V
 870 T L P T E P M L K S A I E L I M S S K K P P L I C C G G G V V R Y S E A A E Q L K
 880 T V K G N N Q L Q I R K V V D L V S H A H K P P L I C V G G G T I L G N G E Q V V R
 890 R A D S A K I N A A A D L I S L A K C P P I V Y S G G G C I I I G N A D Q E L L R
 900 P T P D V I D R T V Q L L K K A E R P P L I V I G K G A N Y A C A E Q E L V T S
 910 T L K G H S K Q I K K A S K V L L E A K R P P V I Y V G G G A I I A A Q A S E E L V
 920 T V A E A A E V I Q K A N R P P V I I A G G G V V I S A G A S R E L L C
 930 S T R G N D Q Q M N K V I A A I R K A E R P P L V C A G G G V V I G N A E A C C R

	50	60	70	80
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UniRef90_A1SM58	V L A E L T G I P V V I	T T L M A R G A F P D S H P Q H L G M P G M H T V A A V		
UniRef90_E7C528	A V A R K L N Y P V I	T T L M G L G S F P G T H D Q N I S M L G M H G T Y E N		
UniRef90_P57321	I F A E K I N C P V I	T T S L M G L G S F P G T H D Q N I S M L G M H G T Y E A N		
UniRef90_E0IG19	A F A E K T Q I P P V A	A T L L G L G G F P S G H P L F M G M G G M H G A Y T N		
UniRef90_UPI00039BD351	E L I E K I L N P V I	P V A L T L L G L G G F P S G H P L F M G M G G M H G T Y E N		
UniRef90_UPI00047AF070	S L A E R A Q I P P V A	L T L L G L G T F P A S H P L N L G M M G M H G E A W N		
UniRef90_C7DEL6	E L V A A T N F P I T	S T T L M G L G C Y P A S G E N W L G M L G M H G L Y E A N		
UniRef90_E1VG16	Q L V R Q L G A P I	T N T L M G L G G G F P G D D R Q F L G M P G M H G T Y E N		
UniRef90_UPI0002F5D94F	A F I L E K S G M P	A A S T L L G L G S A L P S D H P Q Y V G M L G M H G N Y P N		
UniRef90_UPI00047B1D86	A F A T K H N L P V V	T T T L M G L G S F P A D S P L S Q G M G G M H G T Y A A N		
UniRef90_Q211Y9	E L V E V T D F P I	T S T L M G L G A Y P A S G K N W L G M L G M H G T Y E N		
UniRef90_UPI0003B7723D	T L L A E R I Q A P V	C Q P V D T L M G K G A F S G H H N S L Y T G M I G M H T K T S N		
UniRef90_F9N6N0	K L A T T C Q P V	T N T L M G L G S F P G E H Q L S L G M L G M H T V Y A N		
UniRef90_A5GC69	A L A A K G G I P V T	H T L M A I G V M D P A S P L S I G M L G M Y G A W H A N		
UniRef90_G7H4C5	E L L A E L T G I P V V	T T L M A R G A F P D S H R Q H V G M P G M H G K V S A		
UniRef90_F3Z2H1	W L A R T F N V P V	T A T L M G L G A F P A A D P L W L G M L G M H T Y A A N		
UniRef90_Q9RQ61	E F F A E R L N L P V	T T S L M A L G A F P G N H P Q N L N M L G M H G T Y E N		
UniRef90_R7H743	R F F V K K I D A P V A	D S L M G K G A F D G T D P H Y T G M L G M H T K T S N		
UniRef90_H7F5W7	E F F A E R Y E P V V	N T L M G L G S F P T T H E L F L G M G G M H S Y A A N		
UniRef90_B1X5T2	Q L A E Q Y Q I P V	T T T L M G K G A F D E R H P L S V G M L G M H G T A Y N		
UniRef90_P27868	E L L S E R F Q I P V	T S T L M G K G R F D E N H P L S L L G I V G M L G M H G M Y A N		
UniRef90_S5DK68	D L A K K Y N I P V V	T T L M G R G A F P D G D E L C L G M P G M H G N Y T A		
UniRef90_Q49Z09	E F F V N R H Q P V V	S T L M G L G A P I P Y E H P L F L G M G G M H S Y A S N		
UniRef90_S0KQU1	T F V D K Y Q I P V V	E T M M A L G T V P S R H P L N L G M G G M H T Y A A N		
UniRef90_D1ABR6	V L A E L T G A P V V	T T L M A K G A L P D S H P L H V G M P G M H T V A A V		
UniRef90_UPI0003B3F4D7	R L A Q M T E I P V	V T G S M G L G A F P G S H P L W L G M L G M H T F R A N		
UniRef90_J0NDN1	G L V E K T G I P V V	S T M M G I G V V P L D S D S Y L G M V G S H G K K S A N		
UniRef90_R5CS53	D F I I E K A G I P	A A R T M L G L S A L P T G H P L N M G M L G M H N Y A P N		
UniRef90_U3GKH4	E L V R L T G C P I	T S T L M G L G A Y P M S D R Q F L G M L G M H G T Y E N		
UniRef90_UPI000478C223	A L A E A T G A P P V	V T T L M A R G A F P D S N K Q H L G M P G M H T V A A V		
UniRef90_UPI0004708EB0	R F T R S L G Y P I	T N T L M G L G A Y P G T D D Q P V G M L G M H G T Y E N		
UniRef90_R7IF73	A L A N R I D S P V A I	T V M G A G G F R G R N P L T T G M I G M H G S Q A S N		
UniRef90_A8ETZ2	E L L A K K L N I P A V E T L	M A R G V M G D E N P L F F G M L G M H G E Y S A N		
UniRef90_C6BTQ1	K F A R R N S I P V V	T T L M G L G A F P H G D S N Y L G M L G M H S R S T N		
UniRef90_UPI000367E0D3	E L L A A Y I P V V Q	V T L M G K G S F D E D S P L Y S G M T G V Q Q R Y G N		
UniRef90_B5FB96	K F V E K T D M P V	C C T A M A L L G V V P A D L P N Y T G M I G M H G T V T S N		
UniRef90_R6PNP5	E F F A T K M N L P V	V T T L V M G K G V M P D D D C P Y I G N C G M H R Y A A N		
UniRef90_E0QI78	E F F A A K M D A P V	C D T L M G K G A F D G H H P L Y T G M I G M H G T K T S		
UniRef90_N6W5S8	A F V E K K A D I P C G C	T C T L M G L S A L H S D H P L N K G M L G M H G N L G P N		
UniRef90_Q1GT39	T L A K A N Y Q I P V	V T T L M G K G A F D E K D N L S V G M L G M H G T A Y N		
UniRef90_UPI00047A603C	E L V D F Y N I P V S	R T L M G Q G A L S D K H P L M M G M T G F W T N F I N		
UniRef90_R6CEJ6	R L V D A T A N P V V	V T T L T A R G A F P D S D R R N L G M P G M H T V P A V		
UniRef90_D4IZ18	Q L V G L T G A P I	T T S T L M G L G A F P A D D P K W L G M L G M H G T Y E N		
UniRef90_F7K9B2	A L A E E L Q I P V V	T T T G M G M D T F P N D H P L F A G R M G T M D T P N		
UniRef90_R6YXL7	Q L A R T M D I P V I	S T S T M M G I S A F P S Q D P L F Y G M L G T H V K T A N N		
UniRef90_A2BQ07	E F F A T K M N L P V	V T T V M G K G V M P D D D C P Y I G N C G M H R Y A A N		
UniRef90_C6D6E3	E F F A A K M D A P V	C D T L M G K G A F D G H H P L Y T G M I G M H G T K T S		
UniRef90_UPI000413128C	A F V E K K A D I P C G C	T C T L M G L S A L H S D H P L N K G M L G M H G N L G P N		
UniRef90_G5ZWU1	T L A K N Y Q I P V	V T T L M G K G A F D E K D N L S V G M L G M H G T A Y N		
UniRef90_UPI00041BE182	E L V A L T G W P	T T L M G L G A L P A D D P H F L G M L G M H G T Y E N		
UniRef90_E8RK03	H L A R R L N I P V	T M T L M G L G G F P G T D P L S L G M L G M H S Y A A N		
UniRef90_UPI00037762E0	E L L Q A A T G F P V	T S T L M G L G A F P A S H E G W L G M V G M H G A Y E N		
UniRef90_A0A024HNY5	E V A R I L N V P V	T N T L M G L G G G Y P G S D R Q F V G M L G M H G S Y T N		
UniRef90_UPI0003B3A08D	V L A E K K L D C P V A	I T L M G G G G F P G S H P L C S G G M V G M H S H A S N		
UniRef90_D3HVV2	E F F L E K A D I P G A R T	I L G L S A L A S D H P L N M G M L G M H S Y A T N		
UniRef90_R6ZJ10	E L S K L I M D S P V	C D T L M G K G V M D G H A D Y Y T G M I G M H T K A S N		
UniRef90_A1VE43	W F A R T L R I P V A	S T L M G L G A F P G D D P L W L G M L G M H T Y A A N		
UniRef90_UPI000382A76E	E F F A R A T G F P V	T S T L M G L G A Y P A S D K Q W L G M L G M H G S Y E N		
UniRef90_U2XYL8	E F F V G L T G Y P I	T S T L M G L G A F P A S D D Q W L G M L G M H G T Y E N		
UniRef90_S3JG54	E L A E R A G L P	T T M T L M A L G T L P A R H P L S L G M L G M H G R S T N		
UniRef90_G2DD27	E L V D E L L D Y P I	T T N T L M G L G A Y P G S D R H F L G M L G M H G T Y E N		
UniRef90_UPI00046AB730	T L L A E E Q L K I P V V	N T L M G L G A F P G S H H N N L G M L G M H G N L G P N		
UniRef90_UPI0003656913	T L L V E K A G P A	A S F R R H D V I P N N H E Q Y V G H S G G T L P A I L		
UniRef90_R6E9W7	E F F A E K H S I P P V A	T T L M G L G A L P A D D P H F L G M L G M H G T Y E N		
UniRef90_UPI0003722E6B	R L A E I L N A P I V	S T F P G K N S I P N N H G L Y M G P A G M H G R E A D		
UniRef90_V5SGW0	E L L V R L T G Y P I	T S T L M G L G A Y P A S D K Q W L G M L G M H G T Y E N		
UniRef90_C4G9B3	T F F A G L V D A P V	C D S L M G K G A F D G D D P A Y S G M L G M H T K A S N		
UniRef90_O19929	E L L A S F I K I P V	T T T L M G K G S F N E Y N P L Y L G M L G M H G T A Y N		
UniRef90_R6Q9H6	T F F A E K I D A P V A	V A S S L M G L G A F P A F P Y D N P L H L G L I G M H H Y E C N		
UniRef90_F3ZQX1	E F F L E K A D I P F A S T	T L L G L S A L P S K H P L N C G M L G M H N I P P N		
UniRef90_UPI00037FB8BE	E L L V E K Q N I P T A	C T L H G L S L N F I S N H P L F T G M V G M H N Y A P N		
UniRef90_UPI000248E7B1	E L L V E K K S G I P V	P A A W T I L G V S A L P T A H E L N V G M V G M H G N Y P N		
UniRef90_R6PKM1	K I V D I T K I P V V	T T I L M G R G S I P T N H P L F I G N L G M H G Y A A N		
UniRef90_UPI000475C4BC	S F A E R H A V P V A	E T Q A G K S A L P H D H P L T M G A I G V T T S A A N		
UniRef90_E4NZG7	E L L A E V T G A P I V	T T L P A R G I V P V N S N P K A L G M L G M H T V A A T		
UniRef90_C6CJU3	E L L A E R A G L P	T T M T L M A L G M A P V D H P L S L G M L G M H A R Y T N		
UniRef90_B8G922	A L L A E Y L Q I P V	S P T L M G K G A I P E D H P L Y A G I V G I Q T Q Q R N		
UniRef90_G9ZF75	N V A R R L H L P V	T G T L M G L G G Y P G N D P Q F L G M L G M H G T Y E N		
UniRef90_U1M008	E L L V E S L N A P C T	N T L M G L G G G I S G T R H P N F I L G M L G M H G N E A N		
UniRef90_H0A133	K F V R P M A G L P C	T N T L M G L G A Y P A S D P Q F L G M L G M H G T Y E N		
UniRef90_M2U2F3	D L Q R S L N A P V	T A T L M G L G A F P A F H E A W L G M L G M H T F E A N		
UniRef90_R6W638	T F F V K K V D A P V	T D S L M G K G A F P G T D P L Y T G M L G M H T K T A N		
UniRef90_W1JSZ7	E F F A E L A N V P V V	P T L M G W G A I P D D H V L M A G M V G L Q H R Y G N		
UniRef90_E1W3W6	H F F A E T F H I P P F A E T Q A G K S A V V S E Y S F N V G G V	G E T G C L A A N		
UniRef90_D4J529	E F F A N K F H I P V V S	T T M G G I G V M P D D D L Y M G M L G T N G K P H N		
UniRef90_A5CWY9	A F T R Q L G F P I	T T Q T L M G L G A Y P A T D K Q S L G M L G M H G T Y E N		
UniRef90_M2XZM3	Q F I N N L N I P F F L A T P	M G K G C V P D S H P L S A S A A R S		
UniRef90_F4AMS5	E I A E K L N L P V	T S T L M G L G A F S G V H E Q S L G M L G M H G T E S N		
UniRef90_UPI00037F801E	L F F A E K F N L P V A	N T L M G I S A F P H D H L S L G F A G M H G L E T N		
UniRef90_R6RN55	Q F C E K N Q I P L V	T T M M G I G V L P K A H P L Y F G M L G N N K P Y A N		

	90	100	110	120
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UniRef90_A1SM58	A G L Q R S D L L I S L G A R F D D R I V T G K L D S F A P G A R V I H A D I D			
UniRef90_E7C528	M S M H N A D V I L A A G A R L D R I V T N D A K K F C P N A G A K I I H I D I D			
UniRef90_P57321	M T M H H A D V I F A I G V R F D D R I T T N N L N K Y C P N A I V L H V D I D			
UniRef90_E0IG19	T A I Q N A D L L I S I G A R F D D R I T T R V A G F A P K A R V I A H L D D I D			
UniRef90_UPI00039BD351	M T M H H S D V I F A V G V R F D D R I T T R V A G F A P K A R V I A H L D D I D			
UniRef90_UPI00047AF070	H A I Q E A D L L I A C G M R F D D R I T V I G T P S T Y A L K A K K I H I E V			
UniRef90_C7DEL6	M A M H D C D M I N I G A R F D D R I T G L V D K F S P D S K K V H I D I D			
UniRef90_E1VG16	M A M H H S D V I V A V G A R F D D R I T G L V D K F S P D S K K V H I D I D			
UniRef90_UPI0002F5D94F	I K N R E C D D L L I V A V G M R F D D R I T G S P A H F G E N A K V I H L E I D			
UniRef90_UPI00047B1D86	M A L Y E S D L L I N F G A R F D D R I T G N L K H F A P N A K V A H I D I D			
UniRef90_Q211Y9	M T M H D C D V M I C G A R F D D R I T G R T D A F S P N S K K I H I D I D			
UniRef90_UPI0003B7723D	F G V S E C D D L L I T L G A R F S D R I V I G N A K T F A K K A K I L Q H I D I D			
UniRef90_F9N6N0	Y A T N E A D V I L A L G I R F D D R I T A G V P K E F C P Q A T I V H V D I D			
UniRef90_A5GC69	R A V H D C D C G A R F D D R I T G R L D G F A P R A D I I H L D I D			
UniRef90_G7H4C5	V A L Q R S D L L I T L G A R F D D R I T G Q L D S F A P G A K V I H A D I D			
UniRef90_F3Z2H1	M A V N N A D L L L I A I G A R F D D R I T G K V S T F A P P N A T I V H V D I D			
UniRef90_Q9RQ61	M A M H N S D L L I L A I G V R F D D R I T T N N V D K Y C P N A T I I H I D I D			
UniRef90_R7H743	F G V S E C D D L L I T L G A R F S D R I V T G N A N K F A K N A K I L H F D I D			
UniRef90_H7F5W7	M A L T D C D D L L I N F G S R F D D R I T G K L D S F A P E A K V V H A D I D			
UniRef90_B1X5T2	F A V T E C D D L L I A A G A R F D D R I T G K L D T F A P R A R I I H L E I D			
UniRef90_P27868	F A V M E L D F V I A V G V R F D D R I V A G T G D Q F A H S A K V I H A D I D			
UniRef90_S5DK68	T T I Q N S D L L I A I G V R F D D R I T V T A N P K F F F A Q N A K V I H A D I D			
UniRef90_Q49Z09	M A L T D C D D L L I N F G S R F D D R I T A S D P E S F A P P N A K I V H V D I D			
UniRef90_S0KQU1	M A L L S T C D Y L I N I G S R F A D R I L A T S P K S F A P N A K I A H I D I D			
UniRef90_D1ABR6	G A L Q R A D D L L V A L G A R F D D R I V T G K L D S F A P E A K V V H A D I D			
UniRef90_UPI0003B3F4D7	M S I G T C D D L I A A G V R F D D R I V T G N E K F A P H A K I A Q I D I D			
UniRef90_J0NDN1	Q A L L S A D V V I L C G A R F V G D R A I I A P E M L G S K S Q I I H I D I D			
UniRef90_R5CS53	M K E Q E C D V L I A I G M R F S D R I V I C N P A T Y A K Q A K I I Q L D I D			
UniRef90_U3GKH4	M A M H E C D T L I A I G A R F D D R I V T G K I E Q F C P H A K V V H V D I D			
UniRef90_UPI000478C223	L A L Q Q D A D L I I S L G A R F D D R I V T G S V A G F A P H A K I V H V D I D			
UniRef90_UPI0004708EB0	M A M H H C D D L I A I G A R F D D R I V T G V G N V S K F C P E A H I V H V D I D			
UniRef90_R7IF73	M A V D A C C D D L L I A V G C R F S D R I V A L K P A T F A Q N A K I V Q I D I D			
UniRef90_A8ETZ2	M A A H E T D D L L I S L G A R F D D R I V T G R L D E F A S S K A K V I H V D I D			
UniRef90_C6BTQ1	M V M E E A D L I I A L G V R F D D R I V A G K A C E F C K H A D I L H I D I D			
UniRef90_UPI000367E0D3	A S F L E S D D L V L A V G V G A R F D D R I V T G Q L D V Y R G E R K F I Q I D I D			
UniRef90_B5FB96	M A M H N A D L I F G V G V R F D D R I V T G R L D A F S P D S K K I H I D I D			
UniRef90_R6PNP5	K L A N E C D D L F I A L G A R F S D R I V A T N F K T F A P P N A K V L H I D I D			
UniRef90_E0QI78	E K T S N A D V V M G L G T R F A E A D S S S W Y K F N P E K T R F I Q I D I D			
UniRef90_N6W5S8	G A L Q R A D D L V I A V G A R F D D R I V T G R L D A F S T G A K V V H I D I D			
UniRef90_Q1GT39	M A M N R A D L I V A V G A R F D D R I V T G R L D A F S P D S K K I H I D I D			
UniRef90_UPI00047A603C	K T I V E A D L V I N L A G R F A D R S T G N V G V F T Q N G K K I I H V N L D I D			
UniRef90_R6CEJ6	R A V N D C C D T L F L I G A R V G D R A V K T P L A L E R S T K I I H I D I D			
UniRef90_D4I2Z8	K A V T E C C D D V L F S I G T R F N D R I T G E L D E F A P K A Q I V H V D I D			
UniRef90_F7K9B2	N L V S E C C D D L L I A L G A R F S D R I V V G N V K K F A S N A K I L H I D I D			
UniRef90_R6YXL7	V K T N E C C D D V L I A V G M R F D D R I V T G K L E T Y A K Q A K V I H L D I D			
UniRef90_A2BQ07	F A V T E C C D D L L I A V G G A R F D D R I V T G K L D T F A P P N A K V I H I D I D			
UniRef90_C6D6E3	M A L Q Q A D D L I I S L G S R F D D R I T M K V V G G F A P Q A R K I V H I D I D			
UniRef90_UPI000413128C	D T A R Q A D V V L A I G T R F S E I T T Q S Y S L F S E Q M T L L H I D I D			
UniRef90_G5ZWU1	M A M H Q C D F M L N L G A R F D D R I V T G R L N A F S P G S V K I H A D I D			
UniRef90_UPI00041BE182	R A L Y E C C D D L L I N I G A R F D D R I L T G N L Q H F A P S A T V A H I D I D			
UniRef90_E8RK03	M S V A K S D D L L I A V G A R F D D R I V T G R L D A F A P Q A K I I H I D I D			
UniRef90_UPI00037762E0	N A M H D C D D L M I C G V G A R F D D R I V T G K L S A F S P G S R K I H V D I D			
UniRef90_A0A024HNY5	L A M H H A D V I F A V G A R F D D R I V V I N G T A A K F C P N A K I I H V D I D			
UniRef90_UPI0003B3A08D	K A V H D C C D D L L I A V G C R F S D R I V V A L N P K T F A Q N A K I V H I D I D			
UniRef90_D3HVV2	M K T Q E C C D D V L I A V G M R F S D R I V T G L P S T Y A K Q A K V L H I D I D			
UniRef90_R6ZJ10	L G V S E C C D D L L V A L G A R F S D R I V V V G N A A K F A E G A K V L H I D I D			
UniRef90_A1VE43	K A V N N A D L I V A V G A R F D D R I V T G R L S A F A S K A R I I H I D I D			
UniRef90_UPI000382A76E	L A M H G C C D D V M I N I G A R F D D R I T G R L D A F S P G S K K I H I D I D			
UniRef90_U2XYL8	M A M H D C C D D V M I N I G A R F D D R I T G R L D A F S P N S K K I H V D I D			
UniRef90_S3JG54	F I L L H E A D D V L I V L G A R F A D R I G K T E E F C P N A K I I H V D I D			
UniRef90_G2DD27	M A M H E T D V L I A V G A R F D D R I V T G H V Q Q F C P N A T I I H I D I D			
UniRef90_UPI00046AB730	M A M H H S D D L I F G I G V R F D D R I T T N N V V A K Y F C P D A T I L H F E I D			
UniRef90_UPI0003656913	V L T N E C C D D V L I A I G M R F D D R I V T G N L D T Y A K Q A K V I H F E I D			
UniRef90_R6E9W7	N L V S E C C D D L L V A L G A R F S D R I V T G N P K K F A E N A R I I Q L D I D			
UniRef90_UPI0003722E6B	A A L V N A D V V L A L G T R F S D R I T V G R F S E M N Q K K V I H I D I D			
UniRef90_V5SGW0	L A M H D C C D D V M I N I G A R F D D R I T G R I D A F S P G S R K I H V D I D			
UniRef90_C4G9B3	F G V S R C C D D L L I A I G T R F S D R I V V I G N P K A F A R D A K I I H I D I D			
UniRef90_O19929	F A V S E C C D D L L I A I G A R F D D R I V T G K L D E F A C P N A Q V I H V D I D			
UniRef90_R6Q9H6	K A A H D C C D D V L I T C G A R F S D R I V V A G N R K K F A P P N A E I I L H F E I D			
UniRef90_F3ZQX1	M K T N E C C D D V L I A I G M R F D D R I V T G D L A S Y A K Q A K V I H F D I D			
UniRef90_UPI00037FB8BE	K L T N E S D V I L A I G M R F D D R I V T G N I N T Y A K Q A K I I H F E I D			
UniRef90_UPI000248E7B1	K L T N E C C D D V L I A I G M R F D D R I V T G D L S T Y A K Q A K V I H F E I D			
UniRef90_R6PKM1	M A V S E C C D D L L F S I G T R F N D R I T G K I H E F A P P N A Q I V H I D I D			
UniRef90_UPI000475C4BC	A L A A Q E A D D L I L A V G T R L Q D F T T G S W S L F Q N P D R K F V G I N Q I D Q			
UniRef90_E4NZG7	A A A Q R C C D D L L V A I G A R F D D R I V T G K L D A F P G A R V I H I D I D			
UniRef90_C6CJU3	L I L Q Q S D D L L I V L G A R F A D R I G K A E E F C P D A R V V H I D I D			
UniRef90_B8G922	A I F L E S D C I L A I G A R F A D R I H T G Q L D I Y R G N R T F H I D I D			
UniRef90_G9ZF75	M A M H H A D V L F A V G A R F D D R I V T G D V N K F C P H A E I I H V D I D			
UniRef90_U1M008	K A M A N A D V I L A L G A R F D D R I V T G N N V K K F C P N A T I V Q V D I D			
UniRef90_H0A133	L A M H G C C D D M F N I G A R F D D R I V T G R L N A F A P N S L K I H A D I D			
UniRef90_M2U2F3	M A M N Q C C D D M F C G A R F D D R I V T G R D A F S P N S K K I H I D I D			
UniRef90_R6W638	Y G V S E C C D D L L I V L G A R F S D R I V T G N A A K K F A K N A K I L Q F D I D			
UniRef90_W1JSZ7	A T T L E S D F V L G I G N R W A N R H T G S V E T Y T K G R K F V H V D I D			
UniRef90_E1W3W6	L L A K E A D D L I I G I G T R Y T D F T T S S K W I F Q N P E V K F L N I N I A D			
UniRef90_D4J529	Y A V H E C C D D V L V I G A R V A D R A V V K P Y K L E R R N T T I V H I D I D			
UniRef90_A5CWY9	M A M H D A D C V I A A G V R F D D R I V T A N D D K F C P N A K I I H I D I D			
UniRef90_M2XZM3	L V L K E A D D V V F L V G A R L N W I L H Y G K P P R W S D N C K F Q L D I D C			
UniRef90_F4AMS5	K A M H N A D C I L A L G A R F D D R I V T G N R D K Y T R N T H F I H V D I D			
UniRef90_UPI00037F801E	N A I A E A D D L I I A V G S R G D R Q T G N R D K Y T R N T H F I H V D I D			
UniRef90_R6RN55	R A V S A S D L L I I V G A R I A D R A V P R P Q H L E K Q V N I I H I D I D			

		130	140	150	160
UniRef90_L1PP15	A A S I	S K N K [V] D I	P I V A D A K [L] A I	E A L L E Y I	E P H D
UniRef90_UPI0003F65B2C	P A E E V	D K N V T D V A V L G D V K E S L	A E I L L P L L	D E N K H	
UniRef90_A1SM58	P A E I	G K N R V D P V P I V G D C R E V I	S D L V V A L K A	E A D A	
UniRef90_E7C528	P A S I	S K N V A H I	E E M L T M I	D E H D	
UniRef90_P57321	P T S I	S K T V A N I P I V G D A K H V L	Q K M I E L L K K E K K		
UniRef90_E0IG19	P A E I	G K N V T D I G C V G D I R T L	L A L A L A S G S I	K P S R S A A W	
UniRef90_UPI00039BD351	P T S I	S K T V A D V P I V G D A R Q V L	E Q M L E L L A Q E K A T Q P		
UniRef90_UPI00047AF070	P S S I	N K N K V D I A L V G D L L A D V L	E Q L L P R I P G R D		
UniRef90_C7DEL6	A S S I	N K V H V D V P I L G D V G H V L	E D L L K I W K S R G R K T N A S A		
UniRef90_E1VG16	P A S I	S K N P V D I P P I V G P C E Q V L	A E M L D I V V K K		
UniRef90_UPI0002F5D94F	P A E I	D K I H A D V P V V G D A R Q T L	P M L T E R I R R G D H S A		
UniRef90_UPI00047B1D86	P A E I	G K N P T Q I V S D T K E A L	S E L L		
UniRef90_Q211Y9	P S S I	N K N R V D V P I I G D V A H V L	A D L L		
UniRef90_UPI0003B7723D	A A E I	N K N L R T D S V G D L K E V L	R K I L N D K L T Q Q N H A		
UniRef90_F9N6N0	P A E I	E K N K I D V P P I V G D L K H V L	N E M N H E L I P Q T H E D		
UniRef90_A5GC69	P S S I	R K V N R A L V P I V G D A K E A M A L L A G L L E V R D R S A W Q A R			
UniRef90_G7H4C5	P A E I	G K N H A D V P V V G D C Q A V I	A D L L E A L K A		
UniRef90_F3Z2H1	P T S I	R K N V V H V P V V A D C K T A L	S E L R Q E M E A K P E E		
UniRef90_Q9RQ61	P T S I	S K T I A H H P I I G N A K N I L	Q Q M L Q L I N D S		
UniRef90_R7H743	A A E I	N K N I H S D A V G D A L E I L	K R V N A K L E Q Q D R H		
UniRef90_H7F5W7	P A E I	G K I P T Q I P I V V A D I N E T L	Q H I L K I L P E K E D		
UniRef90_B1X5T2	P A E E L	G K N R P D V A V L G D V A E S L	N L M V Q A		
UniRef90_P27868	P A E E V	G K N R T D V P V V G D V R Q V L	G D M L Q R		
UniRef90_S5DK68	P A E E I	G K V V R A E V P V V G D A K S V I	K G I I E K L G D V E		
UniRef90_Q49Z09	A S E I	N K I K V D L G I V A D C K A T L	E A L L D		
UniRef90_S0KQU1	P A E I	G K V R T D I P V V A D A K D A L	K K M L E L		
UniRef90_D1ABR6	P A E I	S K N H A D V P V V G D A R E V I	A D L I V A V V Q A		
UniRef90_UPI0003B3F4D7	P T S I	H K N V V Q C P I V A D C K T A L	E G I L Q L L E K E D P K		
UniRef90_J0NDN1	P A E I	G K N I A H I P I V G D I R L V L	N S L A D K V S N A A P Q E W		
UniRef90_R5CS53	G A E I	D K N V T D V A V V A D C K E S L	P A I T K L L R P N S H K		
UniRef90_U3GKH4	P S S I	S K N R V D I P P I V G Q V A N V L	K D M V R L I R E S G R		
UniRef90_UPI000478C223	P A E I	S K R H A D V P V V G D A K D V I	A D L T A A F E H		
UniRef90_UPI0004708EB0	P A S I	S K V K V H V P V V G S V G K V L	H E I N A M L D K S N R R P D S E A		
UniRef90_R7IF73	R S E I	N K N V Q T D H I G D A R R V L	E L L L E R V P S M K H		
UniRef90_A8ETZ2	P T S I	A K L V V P D P V V G D L K V T V	K A M I E A V E E		
UniRef90_C6BTQ1	R S E I	G K I K S S L S I V G D V G H V L	H E L V E K V E		
UniRef90_UPI000367E0D3	P T Q I	G K V F P D L G V V S D A K R F L	G A L L E A A K R R E A R R P G A W		
UniRef90_B5FB96	P S S I	S K N R V D V P I V G S A E I V L	D S M L K L L V E Q G G T N D E A A		
UniRef90_R6PNP5	P A E I	N K N I V T G S V I G D V N E V V	V R L L N N M L D K E E R P		
UniRef90_E0QI78	P T E I	G R N P I E V G A V A D L K L A L	Q E I L K E I K		
UniRef90_N6W5S8	A A E I	S K N Y A D V P V V G D L A E A I	P A L I T E I T A L K K K R K P A		
UniRef90_Q1GT39	R S S I	N K V P V D L A I V G D A G R A L	A A L I A A W Q D R G H K A		
UniRef90_UPI00047A603C	N K E I	G K V P T T L G I V S D V K T F M	V K L T E A		
UniRef90_R6CEJ6	P A E I	G K N I V D Y P V V G D A K L V L	R Q L L E L A E P I R H P		
UniRef90_D4IZ18	S A S I	S R N V V D V P V T A D A K I A L	E R L V V E Y A E P M D		
UniRef90_F7K9B2	A A E I	N K N H A D A S L V G D L K D I L	N T I N S R L P Q L S H E		
UniRef90_R6YXL7	P S E E I	S K N V A D V A I L G N C K R T L	A L L T E L I Q S H K H		
UniRef90_A2BQ07	P A E V	N K N R V D V A I V S D V S K A I	L K I N E Q		
UniRef90_C6D6E3	P A E I	D K I K A D I S V G D L K G I L A			
UniRef90_UPI000413128C	P D T L	G K Y P P D V G V T A D A A K A L	T A L L E		
UniRef90_G5ZWU1	P S S I	N K V V V D V P G I V G D A T A V L	D A L I I A E L K A		
UniRef90_UPI00041BE182	P A E I	G K N V T T I P V V S D S K A A L	Q A L S		
UniRef90_E8RK03	P T S I	S K N V V D I P V V A D C K L A L	A A M N G W L D K S S		
UniRef90_UPI00037762E0	P S S I	N K I R V D V P V I A D C K C A A L	Q A L L D G W K A R R L P A P		
UniRef90_A0A024HNY5	P A S I	S K V K A D I P V V G P V D S V L	T E M V A I L K E		
UniRef90_UPI0003B3A08D	R A E I	D K N V T D H I V G N A K R V L	S L L N Q Q V G Q Y H H E A		
UniRef90_D3HVV2	P S E E I	N K N K S D V V A V V G D C K M S L	P A I T R L L K K N E H K		
UniRef90_R6ZJ10	A A E I	N K N I R T A A V V G D L K E I L	T K I N G M L P Q M E H K		
UniRef90_A1VE43	P T S I	R K N V V G I P V V G D C R Q S L	E I L V P R L E E K D W G A A H A R		
UniRef90_UPI000382A76E	P S S I	N K V R A D V G I V G D C A V A L	E D M L R I I W K		
UniRef90_U2XYL8	P S S I	N K V H V D V P V V G D V A H V L	E D M I R I I W K E T A		
UniRef90_S3JG54	R A E L	G K I K A H V A I R G D V G E V L	R Q L T P Q T K A L P R		
UniRef90_G2DD27	P A S I	S K N R V D V P I V G P V Q Q V L	K D M L K V L K H N K R P D S E A L		
UniRef90_UPI00046AB730	P S S I	S K T K V D I P V V G S A D K V L	N E M L Q L L D E		
UniRef90_UPI0003656913	P A E I	D K N V A D I A L G N A Q E S L	D L L L P L I K E N K H		
UniRef90_R6E9W7	S S E I	N K N R V D A S L V G D L K K T L	T E L N A C L S K Q E H P		
UniRef90_UPI0003722E6B	A A E I	N K N V K T V G I V S D V K V A L	N E I I K R L P		
UniRef90_V5SGW0	P S S I	N K N R V D L P I I G D C A Y V L	E E M L R I V W K A K A P Q		
UniRef90_C4G9B3	P A E I	N K N I V V N A V I G D V R E V L	M A L N R L L E P C E H		
UniRef90_O19929	P A E I	G K N R I P L A I S I D S I K I V L	K E L L L S S M K E G T		
UniRef90_R6Q9H6	S A E M D K N I V S Y H L R G D L A E V L	P I L T R E I E Q L D H			
UniRef90_F3ZQX1	S A E I	E K N V V T V P I L G D V K E T L	P L V T A R L S T H T H T A		
UniRef90_UPI00037FB8BE	P S E E	V N K V V A E V V L L G D A K K V V	Q E L L P L L I N K S N P		
UniRef90_UPI000248E7B1	P A E V	V N K V N V A D V A V M G S V K T T L	A D I L P L L D E K K H E A		
UniRef90_R6PKM1	T A S I	S R N H V D I P I V V A D A K T A T E	K I L E		
UniRef90_UPI000475C4BC	A F D A T	K H R S L P V V G D A A V T L	E L L L D Q K L A D W S A P S D W		
UniRef90_E4NZG7	P A E I	I G K N R A D V P V V G D V S T V L	N D L D I I P E I K R S Q		
UniRef90_C6CJU3	P A E I	G K I R Q P V A L H A D V A Q A L	D Q L L P L V E R Q P R		
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UniRef90_I4YSS8	A F A E E A D	V V I A V G T R L Q D F T T G S	W A L F K N P E R R I V	G L N V Q
UniRef90_D4KNL7	N L V S E C D	D L L I A V G V R F S D R V L G	N A K K F A S Q A K I L	Q F D V
UniRef90_Y5P9G2	M A I L T E C C	D L L I N L G S R F D D R L A S N P	N E F A P P N A K V	V V H I D D
UniRef90_F3Z474	T I L H E C C	D L L I A V G M R F D D R A T G V A S R F	C P E A E I I	H I D D
UniRef90_M7N026	V L T N E C D	D V L I A I G M R F D D R V T G R L	D K Y A K Q A Q V	I H L D D
UniRef90_J3LXA0	Y A V D N A D	L L L A F G V R F D D R V T G K I E A F A S R A K I	V V H I D D	
UniRef90_D8MY89	L L L A K E A D	L V I G V G T R Y T D F T T A S K W	I F H N P D V S Y I	N I N V S
UniRef90_J0R0L0	D M I Q E C D	T L L L G T D F A Y T Q F Y P	D K A T L I Q V	V D I D D
UniRef90_F3WXL0	M A M N Q A D	V V A L G S R F D D R V T G R L D A F	S P N S R K V	H V D D
UniRef90_UPI000378C165	H A V L E C D	T L L L G C D F A W R Q Y Y P S H A R I	I I Q I D D	
UniRef90_W9DNP0	A A M Q R A D	L L I A L G T R F D D R V T G K L	S S F A P D A T V V	H A D D
UniRef90_I3ZK7	H A I Q N A D	L L I A F G M R F D D R V T G N L A H Y A P N A K K	I I H I E D	
UniRef90_H0JFM8	L L L A R D A D	D L I I G V G T R Y T D F T T S S K W L Y Q H P E V E F L	N L N V A	
UniRef90_B6JE30	T V L K E S D	V V L V G A R L N W L L S H G K G K A W P Y S K K F	I I Q I D D	
UniRef90_F2J2D7	M A M H D C D	M V C I G A R F D D R I T G R I D A F S P N S R K	I I H I D D	
UniRef90_A6WW35	A N L L A S D	V V I G I G N R W A N R H T G N V D T Y K K D R K F	I I H I D D	
UniRef90_G5SIP2	F I L L Q E A D	V V I L V G A R F D D R I A I G K T E Q F C P N A K I	I I V D D	
UniRef90_U1NRG1	M A I T H T D C	D L I I G V G T R F D D R I T L T G G I D T F A P E A E	V V H I D D	
UniRef90_M7ZW05	Y A V D K A D	L L L A F G V R F D D R V T G K I E A F A S R S K I	V V H I D D	
UniRef90_UPI00042669BA	F A V Q N O A D	L V L V I G S R L S R Q V G Y T W K T W A R A A R V	V V M V D D	
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UniRef90_B9NQ12	M A M H D C D	M I N I G I G N R F D D R I T G R I D A F S P N S R K	I I H V D D	
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UniRef90_Q1LM48	N A V L E C D	T L L L G A D F A W R Q F Y P D G A K I V	Q I D D	
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UniRef90_K6UNW1	T T L A R E A D	V V L V I G V G T R Y S D F T T A S H T V F A D P D V R F	V N L N V G	
UniRef90_A0A024Q8H7	Y T L Q K A D	V V L V A I G T R L F G T L P C Y D I D Y F P K A A K I	I I Q I D D	
UniRef90_UPI00047014E4	M A M H D C D	V M L C V G A R F D D R I T G R I N A F S P N S R K	I I H I D D	
UniRef90_I1XMK2	T G F A N A D	V I I G Y D M V E Y H P Y L W H P S R D R T L I	H I D T T	
UniRef90_A0A017HUK0	E L I R E A D	V V L V A I L G T R L N P F S T G Y G D Y W P K D A A I	Q I V D M N	
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UniRef90_I0DQF2	E K L K G Y D	V A I V I G A P I F R Y Y P Y V E G E Y I P E G L K	I I T D D	
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UniRef90_J1FA64	I A M S E A D	L L L I S F G P R F D D R V T G K L S E F A K H A K I	I I H V D D	
UniRef90_B4ST57	H T L M E C D	T L L L G A D F A W R Q F Y P D G A T I I Q V D R	D D	
UniRef90_U2TUG2	R A M N E C C D	C L I A I L G A R F F N D R S T G D R R T F A P S G K V V	H V D D	
UniRef90_A0A016XEJ1	A T M L A S D F	V L G I G N R W A N R H T G S V E T Y T K G R K F	V D I E	
UniRef90_B2XT40	F A V N E C C D	D L L I A V G A R F D D R V T G K L D E F A A G A K I	I I H I D D	
UniRef90_S6GUD4	I G L E E C C D	D L L I I G A G V R F D D R A T G K L S E F C P Q A S V	I I H I D D	
UniRef90_D4JPQ6	E A I K N C C	D L L I I G T R F S D R V I G N P Q T F A P D A K V L	H I D D	
UniRef90_A3QXX4	A T L L A S D M	V F G I G N R F A N R H T G S V E K Y N E G R K I	V I H I D D	
UniRef90_UPI000248DBE8	R L L A K E A D	V L V I S L G T R L A D F P T A S K S A F Q H P D V S F	L N N V E	
UniRef90_S3B3I7	A T F L E S D F	V L G I G N R W A N R H T G A L S T Y T A G R T F V	V D I V	
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UniRef90_U5EKE4	L A L Q K A D	V I I L L G A R L N W I L H F G R E P R F N P G V K V	I I Q V D I C	
UniRef90_F2J2N6	Q A G R H A D	V I I L V A V G A R F D D R S A S S W M P W N F P H T R L V	H V D D	
UniRef90_E1R5W6	Y A V Q N A D	L I I A L G V V R F S D R I V G D G A G F A P K A K L	V H V D D	
UniRef90_N4WKT5	E A V V M E T D	L L I I G T T F P Y R D Y L P D H V H A I Q I E I K	H V D D	
UniRef90_Q9I3L0	A T L L E S D F	L L V I G I G N R W A N R H T G S V E V Y T E G R R F	I I H V D D	
UniRef90_B6YRP6	L K T N E C D	D V L I A I G M R F D D R V T G D L N T Y A K Q A Q I	I I H F D D	
UniRef90_J7IT10	M A T T E C C D	D L L I I G V R F D D R V T G L L S E F A A K A K I	I I H F D D	
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UniRef90_A1B2M8	A A C A R A D	D L L I I G V G T R Q D F T T G S W T A F A N P A R R L	V S I N L T	
UniRef90_A1Z0Z0	Y A V D K A D	D L L L A F G V V R F D D R V T G K L E A F A S R A K I	V H I D D	
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UniRef90_K8CHK4	E R L A E H D	L I I M V I G A P V F R Y H Q Y E A G D Y L P D G T N L	I H T C D D	
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UniRef90_U1LCV7	L A V Q V Q C D	V L V C I G A R F D D R V T G N L A K F A A G A K V	I H I D D	
UniRef90_A0A031LTD3	S M V G E S D	V M L I V G G R L S D R T F T S Y D E M I E T G K K F	I M I N I D	
UniRef90_A7H9A1	E A I L A Q A D	V V V V V G T P L D F R V G Y G T E P T F A P G A R	V V Q V D	
UniRef90_B9V2Y20	R V L R E S D	L V I V I G S K L G A Q D T A N G R L P L P D R R	I R I D D	
UniRef90_V5G957	F T L G Q A D	V V V L L I G A R L N W M L S S G E A P L F N E D A K F	V V Q V D I D	
UniRef90_UPI000372C3AB	A L A R E A D	V V I G I G T R Y S D F T T A S H T V F A D P D V E F	V N L N V A	
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UniRef90_UPI000463FD18	H F L D E S D	V I V I F G I G C S F T Q T A F G V G M P V G K R V I H S T L	D D	
UniRef90_B2SAV5	N A V A E A D	V V I G V G T R F Q D F T T G S W A L F R H P G R R	L L S L N V Q Q	
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130 140 150 160

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UniRef90_UPI00046584CF	P S S I N K N R V D V P I I G D V A N V L E D I V R Q F R A S E K K
UniRef90_A6ENV7	P A E I D K N V T E V A V I G N A K E S L K E L T K L I T E N K H
UniRef90_A8TLJ7	T Y E I G K N P P A E L G V G D A R A S L E I M T E Q A K A R L T S T P E
UniRef90_UPI00047B8DBD	P A E M E K H H V D V K H H A D A K E F L E K L L
UniRef90_UPI000377D865	P S S I S K N H A H L P I V G D V G V V L K Q L L E E I A R K
UniRef90_B7GJG6	Y D V I G V T Y P H I G V V S D A K E A L S R L L
UniRef90_L0F594	A A E L N N Q D V V G I H G D A K E V L K Q L N A G V E S A S R P
UniRef90_B6BQS5	P S S I N K I K V D L A I V G D V S S V L N R I N K T I
UniRef90_Q5BMB4	P F D A G K H N G L A V I C D A R A G L N R M S G R L
UniRef90_E8RRS8	P A E F H K N R A D V A I L G D L K L A L P A L R P S M P D I S D
UniRef90_U4PVB6	P S S I L N K V K V D V P I I G D V S H V L E D M V R A L P K K P E K A Q T A
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UniRef90_UPI0004776D43	P S S I L N K V K V E V P I I G D V A D I L E D D L N R L L
UniRef90_UPI00046EE850	P S S E S G R A P V G D S S L L G D A V L S L Q A L E K L V Q G R S A P A P V
UniRef90_B9EBF5	Q S E L N K V Q A D L A I H G D V R S V L T Q L L D L L
UniRef90_I4YSS8	T F D A A K H N A V P L V A D A R V G L E E L S R A L G T W K A P E A W
UniRef90_D4KNL7	A A E I N K N Q V D A S V I G D L K E I L I R V N E K L D A Q S H P
UniRef90_Y5P9G2	E S E I N K V P T T L G I V A D C K K V L E T L V
UniRef90_F3Z474	A S E I G K I K A S V G L A T D A A Q A Q A L E A L L G M T R Q R P R
UniRef90_M7N026	P S S E I D K N V T T V P V W G D C K E T L P M I T A L L E A R T H E
UniRef90_J3LXA0	P A E L G K N K Q P V S I C A D V K L A L Q G M N A M L E H A S T R
UniRef90_D8MY89	N F D A Y K L D A V Q V V A D A R E A R A L T A L D E R L A A Q
UniRef90_J0R0L0	G T H L G R H P V D L G V I G D V K D T V K A L L K V V E E K T D
UniRef90_F3WXL0	R S S V N K N R V D L A I I A D V G H A L E D A V R I W K S R Q H P K P
UniRef90_UPI000378C165	P A H L G R H P V E L G V V G D I A D T L R A L A P R I Q P R G D
UniRef90_W9DNP0	P A E I S K N R A D V P L V G D C R E I I A E L L I A A M R
UniRef90_I3ZK7	P S S I N K N V V D V P V W G D C K E T L P M I T A L L E A R T H E
UniRef90_H0JFM8	A F D A G K L D G L A V V A D A R E A R A L Q A L T A L E G I D S K W P K A P S D W
UniRef90_B6JE30	P R E M D S N V E I V P L V G D I G S C I S A L L E G I D S K W P K A P S D W
UniRef90_F2J2D7	P S S I N K V K V D V P I I G D V G H V L E D L V R I W R T S S M K A D P A A
UniRef90_A6WW35	P T Q I G R V F A P D G I V S D A G K A L K L L D V A T E L V I P H I E A Q P R E A
UniRef90_G5SIP2	R A E L G K I K Q P V A I Q A D V D D V L A Q L I P H I E A Q P R E A
UniRef90_U1NRG1	P A E I S K N H A D Y P C I G D A G T V L D Q L T E E M N H A P D A R
UniRef90_M7ZW05	P A E L G K N K Q P V S I C A D V K L A L Q G L N A L L L
UniRef90_UPI00042669BA	U R A E M D K H H V D T R I W A D A R D F C Q V M A K E I P D
UniRef90_S3XV25	P A E I S K N R V D V P V G D P I I G D V A H V L E D I L K V W K S R G S K T D A A
UniRef90_B9NQ12	P S S I N K V R V D I P I I G D V A H V L E D I L K V W K S R G S K T D A A
UniRef90_D7GFU0	S F D A A K E S A E M V V A D A R E T L L A L I D R L A D
UniRef90_B9KGF5	P S S I S K I I A H F P V I V G D I K S V I L D T L E E L K K
UniRef90_UPI0003B570DD	A A E I N K N R V D A S V I G D V K G I L K L N P K L T K A N H K
UniRef90_UPI00047DB859	P A E I I N K I I V D L P I I V S D A K E F L C E L K G R L D
UniRef90_UPI00040C3970	P A E V V N K N V V E V A V M G D C R E S L S L L N E A V E G K K H
UniRef90_UPI000306704D	P T Q I G R V F P D L G I V S D A K S A L T L F L E V A K E M K A A
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UniRef90_Q1LM48	P T H L G R H P I T L G A V G D I Q T T L Q A L P H L D Q H E D A
UniRef90_A0A037Z4L5	E A E V C K N I K A N S I I G N V C D V L K E L S S K L E K R E
UniRef90_K6UNW1	S F D A A K H S A Q M L L A D A R A G L D A L R E A L D G Q S D P A W T A
UniRef90_A0A024Q8H7	P R H I A R H P V E I G I G D A K A T S D A I Y H Q L S Q K A Q D R P
UniRef90_UPI00047014E4	P S S I N K V R V D V K I V G D S A S V L E D M L R V W R A N A R T A
UniRef90_I1XMK2	H A E V D G Y Y V V L G V V G N I T H S L N R I A A L T S P H E G K A
UniRef90_A0A017HUK0	P S R I G L T K V S V G I V G D A G L V A E G L L Q R L P E R E P
UniRef90_UPI0003B4D1EB	A L D A Y K H G T V L P V V A D A R K A L V A L R E A L L
UniRef90_I0DQF2	P N E S G R A P V G D S S L L S S P V L A L E A L L N L V P K R S I T P P
UniRef90_H1ZQV9	A A E I G K N K Q P L S I C G D I K I A L Q E I N K I M D R
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UniRef90_D8HVA8	P T Q L G K V F P D G I V S D T R E F
UniRef90_J1FA64	P S S V D K V E V D Y P I I G D L H S V L K D I L P L L T E I K P E
UniRef90_B4ST57	G S H L G R H P V N L G V V G D I A P T L D A L L P M L P P R E D
UniRef90_U2TUG2	S S E F S K T L D D M A V H G D V K S A L Q R L V G L V S P N T H E
UniRef90_A0A016XEJ1	P T Q I G R V F S P D G I A S D A K A A K K
UniRef90_B2XT40	P A E I A K N C I P V A I I G D V K I I Q E L I E
UniRef90_S6GUD4	K S E I I G K L K T P T A V N A D I G A T T R A L L Q M
UniRef90_D4JQP6	P A E I I N K N K V Y H Q V I G D S T D V M K K L I K L I P Q Q S H
UniRef90_A3QXX4	P T Q I G R V F P D L G I V S D A K A M T L L V E V A Q E M M Q K A
UniRef90_UPI000248DBE8	S F D A M K L N A L M A V V A D A K E A L T A L Q D A L G Q A
UniRef90_S3B3I7	P T Q I G K I F A P D G I V S D A R A A L E L F V Q V A E E R K A A
UniRef90_F6DSQ6	P K H I A R H P I E V G I I G D A K E A S S E I I L K R L E
UniRef90_U5EKE4	P E E M H N S R H S V A V Q S D I V P F T E Q L I D A L T K E K Y R
UniRef90_F2J2N6	H A E I I G R N P P D L G I L A D A Q A F L R Q V L A E L D R R S
UniRef90_E1R5W6	P A E I I G K S K A D L P I V G T I Q S V L G D L N K A
UniRef90_N4WKT5	Q D H L G K Y P I T A G L C G D S K E V V L P I L T K A V K
UniRef90_Q9I3L0	P T Q I G R V F M D L G I V S D A G A A L D A F L E V A R E
UniRef90_B6YRP6	P S E I I G K N V V V N V A V L G N I K E T L P A V N K L L K K T Q H T A
UniRef90_J7IT10	P A E I I N K N V I A L R V V G D M R W S L P A L N Q E V R N V S D E L
UniRef90_UPI0002626EA1	S F D A H H R A L S S V V G D A K V S L E D L S S A L
UniRef90_UPI0004221410	P A E I I G K N V P T I P L V G D I K R I F G Q I T E
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UniRef90_A1Z0Z0	S A E I I G K N K Q P V S I C G D I K V A L Q G L N K I L E S R K
UniRef90_A4G219	P T Q I I G R V F P D L G I T S D A G A A L K L M I E V A K E
UniRef90_K8CHK4	S A E A A R A P A G N Y I A D I K P A L L Q L A E S I Q V R E G D K P
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A S D A Q V T R L I D L I A S A E R P V I L A G G G V I Q S D G S D A L V
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L K V S E D T V N E I I S R I A G A K R P V F Y A G N G I R L S G G F E A F Q
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S N D T I L Q I Q S L I E E A K R P L I M A G H G I R L A N S A E E F R
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P T K E A L Q E A V E L I I Q R K K K P L I I C G G G V V R Y S E A A Q V L E
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D K L T E A K E L L K N A K K P L V L Y V G G G V V G M A K A A P A L C
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R V S D V E L D A L I K R L G Q A R R P V I L A G T G V V R A A H A N E E F A
E Q D I T Q C A C L L A K A Q K P V I Y V G G G V V G M A N A V P A L R
P T E S D I K E A V A V L I K E K K P I V C G G G V V R Y S E A A E A L K
P E K L K K A A E L V N A E K P I I L V G T V T W S N A T T E V L
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A A S V I S K A K N P I I L V G N G A I R A H A S E A L T
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K P D E T A I E K A V E M I H A A K N P L L L I G A G A N R K I T C D A L R
P E P G A A E E A L D A I L S A A K K P L I I C G G G V V I I A G A M E E L S
D T S V L E Q I H Q L L E G A E R P V V I S G A G V V W S E T S H L I R
V A P D P T R I A E F A H A S H A E N P V V V Y V G A D I A R G D G W A Q A V
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U n i R e f 9 0 _ U P I 0 0 0 4 7 6 A 7 8 4
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U n i R e f 9 0 _ J 9 I Y V 8
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U n i R e f 9 0 _ U P I 0 0 0 3 7 A A 0 3 C
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50 60 70 80

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UniRef90_I2BE95	U	I	V	E	A	M	G	V	P	V	V	T	T	W	N	A	M	D	L	P	Y	E	H	P	L	Y	V	G	R	P	V	V	A	R	P	N				
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UniRef90_G5HRR0	E	F	A	T	R	L	N	I	P	V	V	T	T	W	M	G	K	G	V	I	D	E	H	P	L	Y	V	G	P	M	Y	Y	G	R	A	E	S			
UniRef90_K1M2F8	D	F	V	D	G	T	G	I	P	V	V	Y	F	N	T	Q	M	G	K	G	V	I	D	E	H	P	L	Y	G	T	A	L	S	N	D	F	V			
UniRef90_A4EX06	R	F	A	T	R	L	D	I	P	V	A	T	S	I	S	G	Q	G	S	L	A	E	T	N	S	Q	C	L	G	V	T	W	D	Q	T	W				
UniRef90_UPI00046A2063	N	I	V	E	A	M	G	V	P	V	V	T	T	W	N	A	M	D	L	P	Y	E	H	P	L	Y	V	G	R	P	V	V	A	R	P	N				
UniRef90_L7KGS5	A	L	A	E	R	V	G	A	P	V	V	Y	A	P	S	E	R	A	P	F	P	E	D	H	P	L	Y	G	A	L	S	F	G	M	H	T	K	A	A	N
UniRef90_UPI00047090AE	Q	F	V	E	K	T	G	I	P	V	V	Y	S	L	M	G	L	D	A	I	S	H	D	N	P	L	Y	G	S	I	N	R	F	S	N					
UniRef90_W5XGF9	E	L	A	E	K	A	D	V	P	V	V	T	T	L	K	G	L	G	T	I	P	R	D	D	P	R	S	M	G	M	M	H	G	E	A	S	A			
UniRef90_UPI00037C87FF	R	F	A	E	M	V	K	V	P	V	V	A	S	F	R	F	N	V	L	S	N	D	H	P	N	Y	A	G	W	L	G	F	G	S	D	E	I			
UniRef90_A0A029IFN9	E	F	V	E	L	T	G	V	P	V	V	Q	T	L	R	G	W	G	A	L	P	M	I	R	P	Y	Q	G	N	M	H	T	G	Y	R	G	N	Y	G	N
UniRef90_A0A031GHE4	A	F	A	D	K	H	Q	P	V	V	E	T	I	A	G	R	A	N	L	L	A	T	H	P	L	M	I	R	G	M	C	Q	H	R	Y	G	N			
UniRef90_W3AFD6	A	F	A	E	K	K	I	A	P	V	V	Y	S	L	M	G	K	G	V	I	P	E	D	H	P	L	Y	G	Q	S	K	A	A	M						
UniRef90_UPI0003B5AA39	E	L	Q	T	L	G	A	P	V	V	T	G	V	P	V	T	G	L	G	T	I	P	R	D	P	R	S	N	D	A	M	H	T	K	A	A	N			
UniRef90_I9W8N1	A	L	A	E	R	R	L	G	A	P	V	V	T	G	V	P	V	T	G	L	G	A	P	S	H	P	L	W	A	G	P	L	G	M	H	T	K	A	A	N
UniRef90_B9R3G8	A	F	A	D	K	H	Q	P	V	V	E	T	I	A	G	R	A	N	L	L	A	T	H	P	L	M	I	R	G	M	C	Q	H	R	Y	G	N			
UniRef90_UPI00047D1058	E	L	Y	E	L	L	N	V	P	V	M	T	S	W	N	G	V	D	L	I	E	D	T	H	S	L	F	C	G	R	P	G	A	V	H	R	H	N		
UniRef90_UPI00021A79E9	S	M	V	L	T	G	P	F	L	P	M	P	M	G	K	G	V	V	P	D	T	N	E	R	C	V	S	S	A	R	T									
UniRef90_E0P266	E	L	L	T	G	M	P	A	V	S	T	L	M	G	L	G	F	G	V	G	P	A	D	T	P	G	Y	T	G	M	H	G	T	Y	A	S	N			
UniRef90_E0VZ99	N	L	I	E	N	Y	N	F	P	F	P	L	T	P	M	G	K	G	V	S	D	N	D	K	R	C	V	S	A	A	R	T								
UniRef90_G9AI17	A	L	Q	Q	D	A	C	P	V	F	V	T	T	N	M	G																								

	90	100	110	120
UniRef90_G7V5X8	M A L T E S D L I L A I G T R F S D R T T	G D R R A F A P K A K V I	H I D I D O	
UniRef90_Q9Y7M1	A A L R N A D V V L L A G A R L N W I F Q Y G L P P K W S P N A K F I	Q I D T N		
UniRef90_K9PYW3	C A F E Q S D L V I A V G Y D L I E Y S P K R W N P D G S T P I I	H V G E A		
UniRef90_D0WMR6	A T L L S S D D L V V G I G N R W A N R M T G D L S V F R E G R K F V	H V D V E		
UniRef90_Q11NN4	E A V Q N A D L I V A W G I R F D D R I T G K L A D F A P K A K V I	H V D I D		
UniRef90_S9VTG9	T A L K N A D L V L L V G A R L N W I L H F G F S P R W S K N A K F I	Q I D S T		
UniRef90_UPI0003637263	A L A R D A D V V I G V G T R W T D F T T A S R T A F Q D A G V R F V	N I N I A		
UniRef90_R5L5V5	F A V Q N S D L V F S V G S R S I R Q V G Y N W K T W A R E A Y V I	M E D I D		
UniRef90_UPI0004794EFD	R A L H E A D L I V A V G A R F D D R V T G R L D A F A P R A R V V	H V D A D		
UniRef90_A9RWH6	Y A I D N S D M L L A F G V R F D D R V T G K L E S F A S R A S I V	H I D I D		
UniRef90_V5GV7	L A L Q R A D V I I L L G A R L N W I L H F G R P Q R F S P D V I K	V I Q I D I C		
UniRef90_L9X309	H F M R E T D V L F G V G C S F T E A Y G V T V P D G P T V I	H S T L D		
UniRef90_A0A028V5V3	F A L L Q N C D L L I V L G S R L D M A I T A Y N H A H F A P Y A K K V	V V V D I D		
UniRef90_UPI000248D9C5	F A V Q N C D L L I S I G C R L D N I I T A Y N P R G F A R D A K K I	V V D V D		
UniRef90_UPI0004771C31	R A L E G H D L I V V I G A Q V F R Y Y P V P G P Y L P D G A E L V	L L T R D		
UniRef90_K5BGZ3	K A I K E A D T L M L G T D F P Y Q Q F Y P D D A K I I Q V D I R			
UniRef90_A8TWC2	I L A R D A D V I L A V G V T R L Q D F T T G S R A L L P G E A Q L I Q L N V A			
UniRef90_K0AZN8	L A V H N S D L V L V A I G A R F S D R V I G K A D S F A K N A K I I H I D I D			
UniRef90_B2JM67	F V L A E S D V V V V L I G A R L N W L L A H G K G K T W G K P K Q F V	Q I D I S		
UniRef90_M5T570	M A I N E A D L V V A I G V R F D D R V T G K V D E F I K H G K I I V	H I D I D		
UniRef90_I3T110	D V I E T A D V I L A I G C K L G E I A T K R Y S V P A G K T L I H L D I L			
UniRef90_UPI00037B6FF0	Y A V Q E C D L L I V A G A R F D D R V T G K L D T F A P H A K V I H M D I D			
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UniRef90_UPI00047AD28C	K A A R Q A D L V I G I G T R Y T D F A T S S K T A F D F E N E A K F L N I N V S			
UniRef90_H1LLB3	F A V Q V E S D D L L V C G A R F D D R V T G K L D T F A P H A K V I H C D I D			
UniRef90_UPI0003706C21	A N F L E S D F V L G V G N R W A N R H T G G L D L Y R Q G R T F V H V D I E			
UniRef90_V4I6D2	D L A R T A D L V L A V G T R L T D F T T A S G T L F A A D G V R F A H L N I D			
UniRef90_T5KBJ3	R A M E A A D L V L G S D F P Y E Q F Y P D N A T T I Q V D I R			
UniRef90_W6X9P5	Y A V E D C D F L I A V G A R F D D R A G G R P E A F A P R A R Y V A H I D I D			
UniRef90_U3GK64	M A I T H T D C L I A V G T R F D D R L T G G D T F A P E A E V I H V D I D			
UniRef90_A0A011RB14	F T V Q N A D L L L I I L G S R L N I R Q V S Y N W P G F A A R A F K I Q V D I D			
UniRef90_C6DH4	L I V Q E C D L L I I A V G A R F D D R V T G K L N A F A P H A S V I H M D I D			
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UniRef90_F4BA50	L A A L E S D V M L I I G A R L S D R T F T S Y D E M I E T K K K F I M I N L D			
UniRef90_I2BE95	L A V Q S C D L L I I A A G A R F D D R V T G K L E T F A P H A R V I H M D I D			
UniRef90_UPI00037533EB	C A F E Q A D L V I S V G Y D L I E Y S P K K W N P E G N T P I I H I G A T			
UniRef90_G5HRR0	F A I Q N S D L V L S I G S R L S I R Q V G Y N Y K T W A R E A Y V I A N D I D			
UniRef90_K1M2F8	H A I D A A D L I I N V G H D V I E K P P F F M E K G G K K V I H V N F S			
UniRef90_A4EX06	E M M E A A D L V V F M G C R A G S T T T S R W E A P A P G T R I V H F D N D			
UniRef90_UPI00046A2063	F A I Q N A D D L L I S I G C R L D N I T A Y N P R D F A R A A R K V V V D V D			
UniRef90_L7KGS5	T T L L A G H D V I V G A P V F R Y Y P W V P G D Y I P E G S R R L L H I T S D			
UniRef90_UPI00047090AE	L I L A N C D L L L I I L G S R L D S R Q T G T R P D T F G R G A Q K I H V D I D			
UniRef90_W5XGF9	T A V Q N A D L V I G I G N R F D D R V T G K T A G F A P K A K I V H F D I D			
UniRef90_UPI00037C87FF	K Y I D A A D L V F A I G T R F S Q V T T Q D Y T L L N E K T E L I Q V D I S E			
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UniRef90_A0A031GHE4	K L I A K A D V V V A L G S R L F G T L P Q H G M D Y W P K N A K I Q I D A D			
UniRef90_W3AFD6	E A M K E T D L V I L A G T A F P Y R S Y L P D K A P A I Q I D I E			
UniRef90_UPI0003B5AA39	M A M N R A D L V V C I G A R F D D R V T G R L D A F S P D S R K H I D I D			
UniRef90_I9W8N1	K L I A Q A D V V I A L G S R M F G T L P Q H G M D Y W P K E A K I I Q V E A D			
UniRef90_B9R3G8	N L A E Q A D V I L A V V G T R L L Q D F T T G S W T A F S H E A R F I S I V N A A D			
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UniRef90_UPI00021A79E9	F A L L Q Q S D V I L L L G A R L N W M L H F G K P P R F Q P D V K V I Q V D L C			
UniRef90_E0P266	M A I Q D C D L L L A V G T R F S D R V T G R L N T F A P N A K I V H F D I D			
UniRef90_E0VZ99	A A L L N A D V V V V L L L G A R L N W I L H F G L P P R Y Q P D V K F I H V D L V			
UniRef90_G9AI17	A L V E A A D L V L V L I G T R T N Q N G T D N W R Q I P P G A T V V H I D V D			
UniRef90_D4YFN5	M A L M E T D C L L N I G S R F D D R V A S N P D N F A P D A K I I H V D I D			
UniRef90_UPI000365E390	Q L V E E A D V V V A V G S R L Q D F T T G S W A L F K N D D L K I I G L N V Q			
UniRef90_C7PHQ3	G V F K D H D V A F L I G F G Q A Q Y K Y S D G P L F P P E L T Q V T N N			
UniRef90_U5WR06	L A I A R A D T V V L V G A R L N W L L H F G E S P Q W A A D A K F I Q V D I A			
UniRef90_UPI0004299824	R L T N E C D V L V I A I G M R F D D R V T G R L D K Y A T Q A K I I H L D I D			
UniRef90_S2ZG07	R A F E G H D L V V L V G A P V F R Y H E Y L P G R Y L P E G T R L I Q V T E D			
UniRef90_J5H2F7	F T V Q N S D L L L S V G S R S L R Q V G F N Y Q G W A R E F A T I V V N D I D			
UniRef90_UPI0002C339FE	L A I G K C D V A I V G A R L N W L L H F G D P P K W S K D V K F I L V D V C			
UniRef90_Q4KD16	L L A R E A D L I I I G V G T R F S D T T S S K W L F Q H P Q M Q F L N L N I D			
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UniRef90_W2RQC1	T A M K T A D V V V L V L G A R L N W I L T F G L P P K W K S G V K I I Q V D D I S S			
UniRef90_H0ELK1	T A L K G A D V V V I L G A R L N W I L H F G D E P K W N S A V E I C Q V D I S			
UniRef90_Q898E8	S I A K D A D L I I I G V G T R F T D F T T C S K F L L F Q N D D V E F L T I I N I S			
UniRef90_UPI00047EC64C	S M V S E A D V V V F L V G N R T N Q N G T D S W S L Y P P D A T Y I H L D I Q F			
UniRef90_UPI000476A784	F G F D N A D V D V L V I C V G Y E L Q E F D P V K I N P Q G D K K I I L H L H			
UniRef90_K2CFY5	L L A K Q A D V I L A I G S R L S D F T T A S K S A F Q H P D M K F L H L N V S			
UniRef90_J9IYV8	S I A K D A D L I I I G V G T R F T D F T T C S K F L L F Q N D D V E F L T I I N I S			
UniRef90_J2GSD2	F V L Q N A D V I I F L V G A R L N W I L H F G E A P R F N K N V K I I Q L D N D			
UniRef90_R9VPE1	D A M M G C D T L L M L G T D F P Y R Q F Y P T K A K V A Q I D L R			
UniRef90_UPI000225F806	F A V Q E C D D L L I A V G A R F D D R V T G K L N T F A P N A K I V H M D I D			
UniRef90_R5XMB2	E T I I A R A D V V V L A L G T R L L N P F S T G Y G I D Y W P K G A R V I Q V D I N			
UniRef90_11MEG7	L A I S N S D L V I S I G A R F S D R V I G N K D E F A K N A K V I Q I D I D			
UniRef90_UPI00037AA03C	Y A V D K D A D I L L A F G V R F D D R V T G K L E A F A S R A K I V H I D I D			
UniRef90_X7SY16	L L T N K C D V I L V I A I G M R F D D R V T G D L K R Y A K Q A K V V H L E			
UniRef90_W8X3H8	H W L E D H D L L V V V G A A V F D F D M G G M G P V L P E D S D L L L F T D D			
UniRef90_U3K3S4	G L L S G H D F I L A G A A A F A Y H I E G E G P H L P P G S E L A Q I V D D			
UniRef90_L9XLE1	T A I L Q H A D V I I L L G A R L N W I L H F G L P P R Y R Q D V K V I Q I D I C			
UniRef90_UPI000262CD1D	R A I E R A D C V I A G Y D I A E H D P E G W N P D C E K P I V H V D Y E			
UniRef90_K6WHJ9	N A M A E A D V V I C V G T R L Q D F T T G S W S C F S K G A Q L V S I N P G			
UniRef90_K8GRMZ8	R A I E K C D T L L M L G T D F P Y Q Q F Y P S K A T I I Q V D I D			
UniRef90_UPI00022CA860	C G F D R S D L I I I C V G Y D L I E Y S P K K W N P N G S P I V H I G M T			
UniRef90_I9NVJ3	L A V Q E S D L L I A I G V R F D D R V T G N L N E F A K H A K V I H I D I D			
UniRef90_G5GG85	N A I A D A D V V I L A I G T E L G E T D L L Y T C R S Y R I N G T L I R I D I D			
UniRef90_K9TR16	F A I S R A D L I I A V G T R F S D R G T G R C S A F A A S A K I I H I E V D			
UniRef90_B0UIN7	C A F E Q T D L V I A V G Y D L I E Y S P K K W N P D G K T P I I H I N A T			
UniRef90_I3TT11	L V L K D A D V V V L L G A R L N W L L S H G K G K T W P G S K K F I Q V D I E			
UniRef90_B7J8K2	D C L R G H D L A I V V G A P V F R Y Y P Y V A G H Y L P E G T S L L Q I T D D			

130 140 150 160

UniRef90_G7V5X8	A A E L G K N K A H L P I R C H A E L A L K T L F E S M G D K K S E A
UniRef90_Q9Y7M1	A E T L G N N A A D L A I W A D V G L T I D C L F K L V Q
UniRef90_K9PYW3	A A E I D S S Y I P L A V V G D I G D S L S E I M K R A D R E G K P L P S
UniRef90_D0WMR6	P S Q L G R V F A D L G I V S D A K A K L V K L A D K A R E
UniRef90_Q11NN4	R S E S S K N P T N V F I N G D L K T V I D R M P D T R T E N N I R D R A A W
UniRef90_S9VTG9	A E E L G N N D V S L G I W S D I N L A L D Q L I S S L Q A
UniRef90_UPI0003637263	G F D A G K H A G L P V V A D A R E A L T A L T A A L E S L D R A I G D S
UniRef90_R5L5V5	E N E L K K P H V D M P L H V D A K A K L A G I A D A L R
UniRef90_UPI0004794EFD	A S E I G K N V A A V P V V G D A K A A L A G I A D A L R
UniRef90_A9RWH6	P A E I G K N K Q P I S I C A D V Q L A L A G L N K L I K E G P A T R P S
UniRef90_V5GVD7	A E E L H N V K S E V A I Q S D M K P A V A Q I L E G L Q R N K
UniRef90_L9X309	S T D I D K D V E S D S V G D A K L T L D A L V D S V D A Q
UniRef90_A0A028V5V3	P A E I A K M P I E V S V V S D V K P F I E A L A L Q S S R G R L P S
UniRef90_UPI000248D9C5	P N E L D K L D M D I A I T S D A G E F I K S V V E
UniRef90_UPI0004771C31	A D E A A R A P V G D A V V A D L A T A Q A L A E H F P D G E S A L P P H R P
UniRef90_K5BGZ3	G R H G R T P V D V G L V G T V A D T L A A L E P L L A P K T D R T
UniRef90_A8TWC2	A F D A G K H H S S A P V G D A R R T L Q D L S D V L G D H T A P L A W
UniRef90_K0AZN8	E S E V C K N I V D N Y A V G D I G I L L Q K L I E C V D K K D R K
UniRef90_B2JM67	A Q E M D S N V A A A P V G D I G S C V A S L L D Q V G D D F P Q P P K E W
UniRef90_M5T570	R R E L L N K N P V T L P V C A D L K H A M A Q L K H A M A Q L L E
UniRef90_I3T110	A E E F D R Y P A T V R L W G D A R E G I T E A L T E K L
UniRef90_UPI00037B6FF0	I A E L G K R R R V N V G L D G S L K K N L A A L N P
UniRef90_UPI000469F615	E F H A G K L D A V K V V A D A K A S L E Q L T V E L Q K I K Y R
UniRef90_UPI00047AD28C	R Q A Y K L D A F Q V V A D A K T T L E Q L A P L L D
UniRef90_H1LLB3	A A E I H K R R A D V A L Q G D L I Q S L N A L K Q E L D I E P W R
UniRef90_UPI0003706C21	P T Q I G R V F A P D S V V S D A G L F L D A I L E V A R E R Q A A
UniRef90_V4I6D2	P A D A H K L A A H A V V V G D A R E G L T A L T G L L E G H R L P A A
UniRef90_T5KBJ3	G A Q L G K H P D L G L V G D V R A T A D A L L P R L A R K D D R T
UniRef90_W6X9P5	E A E I G K V K R A H T H V G D A K D A L L S L M G Y G R D V Q A P S E W
UniRef90_U3GK64	P A E I S K N H A D Y P L I G D A G A V I E Q L S A A V E S P P A A A
UniRef90_A0A011RB14	A A E L E K V R P D L A I C C D L R D F L V A L N A Q L A E R P L P R
UniRef90_C6DH4	P A E L S K R H A N V A L Q G D L K T I L P A L Q Q P L N V S A W R
UniRef90_UP10002D3C4B2	E Y H A Y K L D A T K V V G D A K L A L Q K L E E E L V
UniRef90_F4BA50	P T D T E R A F V D V A M Y G D A K I L T R E L L N A V
UniRef90_I2BE95	P A E M S K R H A H V S L C G D L N Q L F P A L A Q P L
UniRef90_UPI00037533EB	P S E I D S S Y I P V E V V G D I A D A L I E I M K R C D R T G K P Q P A A
UniRef90_G5HRR0	Q E E L K K V H V D M P V H A D A G D L L E Q L N R V L D A L L A E E G S A L P
UniRef90_K1M2F8	P A E V D Q V Y F P L N V V G D I T N A I K Q L T A R I K K Q S H
UniRef90_A4EX06	P M V I G A N Y R T V G V V G D L R L A E V N V V L D K R
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 A D A T A V L D L V N A A E R P | I | L A G H G I R | L A E A A E D F G
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 E S S L D Q L A A L N S E S R V T M L C | G S G C | Q G A H E Q | V
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50 60 70 80

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UniRef90_UPI00036CE1EC	T V A D R L G A A A T T Q M G I G T V P T D H P A Y I G H G G I I G G A A L V
UniRef90_UPI00047598A8	E F A E L V G V P V V P T L M G W G A I P D D H R L M A G M V G L Q H P Y G N
UniRef90_I5BSV3	I L A E M L D I P V A T T M T G R G A I Q D A H P L A V G P L G S T T G G R N N
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UniRef90_UPI0003A5561A	A L A N A T G I P C E T F G G K S A V Q N P G D W F M Q G I G L E G S P A A N
UniRef90_UPI00046440A8	A F V E T F D L P V V V A G F R R Q D L F D N R H P N Y I G H A G L G P S A T V
UniRef90_I4A617	E A A E L L H I P V V S T L M G K D A F P N D H P L Y G G L M G T M C Q T P N
UniRef90_A6EV46	T F F A E S A S L P A V V T L K G I G N P G K H N P Y N L G M L G M H G S R A A N
UniRef90_E6WB58	K L A E T L K A P V V H A M R G K E H I E Y D N P Y D V G M T G L I G F S S G F
UniRef90_U1FQG4	Q L I E T H N I P M A E T Q A G K S T I E A S H P L N L G G L G V T G N L A A N
UniRef90_C1E166	E F I I E S T G I P I T N T L M G L G C Y P A S D E L C L D M L G M H G A V Y A N
UniRef90_D3LTB5	Q F A E K L K I P V I N T T M M A K G A I P F D N P Y S L W T T G I P M A D Y Q T
UniRef90_KOYSG4	S L A D K L Q A P I V H T M R G K E W V A Y D N P F D V G M T G L L G F T S G Y
UniRef90_S9SLQ4	D F V M A T M G I P V V E T I A G K G G L T H D H P V H A G P I G I V G S T S A N Y
UniRef90_FQJ727	E F F A A K H G I P V V E T I A G K G G L T H D H P V H A G P I G I V G S T S A N Y
UniRef90_A0A010PFW6	A I A E R L Q A P I V H A L R G K E H V E W D N P Y D V G M T G L L G F T S G Y
UniRef90_W4HVZ8	T L Y E T L G I P V V T T W N A T D L I P S N H R L S V G K P G T V A R P P N
UniRef90_U1IFD9	D L A E T L G C P A W Q S S T P Y G S H F I S E P S F M G A I A R L Q K V A R
UniRef90_R7HXC3	E L L K N T D I P V V T T F N G D L I P T D H K N F C G R G T V Q R A G N
UniRef90_UPI00036DD59E	E L L A E H L D I P V A H S I M A K G A L P D D H P L V L G M T G F W G L E I N
UniRef90_W6N742	N F A E K F N I P F G E T Q A G K S A I V W D H K L N L G G I G E T G S A S N
UniRef90_A3TND7	A F A S V T G V P V A E T Q A G K G S L I H G P Q L V G A I G S T T T A A N
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UniRef90_A0A024TB69	E L L A I T M N I P V T T S F Q G M G A F D E T H P L S L H M L G M H G S A Y N
UniRef90_W9S901	K L V E R T G I P F L P T P M G K G L L P D T H E L A A T A A R S
UniRef90_W6WBM7	Q L A E L L A I P V V S T S L E G K S A F P E T H P L S V G A G G A I S K T L R
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UniRef90_D0GVV5	E F F L R L N P M P S V S T L K G L G T I E R D H P D P H Y L G M L G M H G T K A A N
UniRef90_W0LCN0	Q F A E Q F H I P F A E T Q A G K G A V P S D H P P Y N V G G I G E T G C L A A N
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UniRef90_A0A059N8M2	Q F A E T F N I P F S E T Q A G K G S G I E S T H P L N V G G L G V T G N S S A N
UniRef90_F7GJA3	K L V E Q Y K I L P F L P T P M G K G V V P D N H P N C V G A A A R S
UniRef90_W2EHC3	A F A E R Y G V P V G E T Q A G K G A L P H D H P L A V G A V G H T T A A A D
UniRef90_UPI0003779E3F	E L A D V L G A P V Y Q Q T V P H G A H F F S E H P A F M G A L T R I Q S Q V R
UniRef90_F7RVP8	E L L A E H L G A P V C T T L Q G L S V F P G N H P L H T G M G F G E Y P A S E
UniRef90_UPI0003468B1D	C L V N R Y R I P F V T S P M G R G F L P D D H P I C Y T S V R A
UniRef90_UPI00016A9724	Q L A E R H R A R V F V A P M S G R C S F P E D H P L F A G F L P A I R E R I V
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UniRef90_R4XND5	E L V R A S G A P C T L T L M G L G A F P A S D P Q F V G M L G M H T V E A N
UniRef90_UPI00042743BA	K V I E K L N V P V V T C F D G I D V L E E D H P L Y V G R A G D V N R Y G N
UniRef90_W4LNW2	G L I E R I D A P V F L N A M G R G S I H S G H P N L G S L G R R
UniRef90_N2A8J1	E V A E K K L Y I P V V T G W N S I D L I A D E H P L Y A G R A G I M G D R P G N
UniRef90_UPI00035DCFDA	E L V E T T G I P V V G T S Q A G G G T L D W D H P Q S L G G V G A T G T L A A N S
UniRef90_K9SQ33	E F F A T Q L N I P V V N T F M G K G V I P Y T H P L S L W T M G L Q Q R D F S
UniRef90_UPI00047A9F0E	A F A E K H R I P V S V T Q A G K G S S I D E T H P L A L G A V G V T G T S A N
UniRef90_D7WY19	R I S E K C H I P L V E T Q A G K S T I A A N F A N N L G G L G V T G T L A A N S
UniRef90_W5JZJ4	E L V E L S S G L P F L P T P M G K G V L P D D H P N C V S A A R S
UniRef90_X5UWU3	A L A E Q Q L G I P V V T T N T G K G I L P E T H P L S L G S S L P F P P M H
UniRef90_UPI00037FB14D	E F I Q T T Q I P V V S T L M G L G A V D C T Y K N Y L G L T G M H H K A A N
UniRef90_S9TU29	R L A E Q L K A P I V H A L G G K E G V E Y D N P F S V G M T G L I G V S S G H
UniRef90_R0CWM3	A L A E R L K A P I V H A L G G K E H V E G D N P Y D V G M T G L I G F A S G Y
UniRef90_UPI00035FAC07	R V A E M T G A G V A K A L L G K D V L S D D L P Y V T G S I G L L G T R P S Y
UniRef90_J7JTUT2	Q F V E A T G I P F L P M S M A K G L L P D S H P Q S A A A A R S
UniRef90_W0VD88	E L V R A S G A P C T L T L G L G A F P A S D P Q F V G M L G M H G T E A N
UniRef90_UPI00036D85D0	Q P F A E K H G I P V V G E T Q A G K S V L P W D H A L L S G S I G V T S T A S N
UniRef90_B1XTF2	R L S E L T G I G V L I S E A M P T R Q S F D S R H P H Y L G T L P M N G P A I R
UniRef90_K2D5B3	T F F A E S H Q I P V A N T F M A K G V L P C R H P L A L G T I G Q A R D Y I A
UniRef90_V5PRB9	Q W V A Q T N I P V V S T F M G K G A V S D R E P E S L L S V G L G A H P G I V
UniRef90_G0PEF5	A L A E A L D C Y P V A L T M M G L G A L P D D H R L L L G P L G M H G A Y V N
UniRef90_C0ZVG4	Q F L T K S K I L P W I A T P G G K G V A S D L H P R F I G Q A R S
UniRef90_UP100037C3B83	Q L A E Q S G A L V A T S A V S R G M F N D D P W S I D V S G G F S S P L T A
UniRef90_F6D8U6	R L S E L T G I G V L I S E A M P T R Q S F D S R H P H Y L G T L P M N G P A I R
UniRef90_K7ITE9	T F F A E S H Q I P V A N T F M A K G V L P C R H P L A L G T I G Q A R D Y I A
UniRef90_UPI00036AEA34	E L V R S T D L P F L P T P M G K G V V P D T D A H C V S S A R S
UniRef90_G4MMK2	A L A E R L Q A P V V T T L H G L G A F D E L D E K A L H M L G M H G S A Y N
UniRef90_E4L3N4	A L A K Q L K A P I V L S S A P K G I P D N F D L Y M G S A G R V A T K P G V
UniRef90_A4T2M6	A L A S T T G I P V C E S Q A G K G S S L L H D D P C S V G A V G S T G T T A A N
UniRef90_R6DBH4	K L A E Y T Q I P V I T I M G K G S I P T T H D L Y L G N I G I H S Y A A N
UniRef90_A0A017SR23	K L A D K A S I P V V T T T L H G L G A F D E L D E K S L H M L G M H G S A Y N
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UniRef90_K6X9X8	E L A E L L Q I P V I P T L M G W G I L P D N H P L H A G M V G L Q H R Y G N
UniRef90_V2X9T0	E L L S E K G K N I P V V T T T L Q G L G A F D E T N E R S L H M L G M H G S A Y N
UniRef90_E2ATX6	E L I S S T N V P F L P T P M G K G V V P D T D E H C V S S A R T
UniRef90_M1AZW4	R F V Q L T G I P V A S T L M G L G A F P T G D E L S L Q M L G M H T V Y S N
UniRef90_S9QMJO	A F A E T H Q I P V V E T I A G R A N M L A T H D L N I G P L G V T G S D S A
UniRef90_UP10004679378	A L A E R I K A P I V H P L K G K E H V Q W E N P Y D V G M T G L L G F S S G Y
UniRef90_D5BNP8	A A G R K L G I P V F N I P Y H Q K I L L G E E C E A Y M G L A D I H Q Y H P S K
UniRef90_UP1000373F15F	Q L I E R L L G V P V I S S W T S S D L V S S S H E L S I G R S G I F D R A G N
UniRef90_B2JLV4	K L A D T L G A P V V H A L R G K Q F I E Y D N P F D V G M T G L I G F S S G Y
UniRef90_C7MG11	E L A E R V K A P I V H P A F G G K E F V Q Y D N P Y D V G M S G L L G Y G A C Y
UniRef90_B1ZN80	A L A H R L S A P V V V S T L M A L G A M P P D D P L F M G M L G M H A A K G T N
UniRef90_K4MEX8	R F V E F T G L P V V T T F M G K G A V P S S D N E H Y L G S M G I K D R D H V
UniRef90_A3K8Y3	A L A E R L D A P V V C V G Y Q H N D A F P G S H P L F A G P G Y N S K A G M
UniRef90_K0DBV0	Q L V N Q Y H I P V V S T L L G L G A M T S D N P F F L G M A G M H G S V L A N
UniRef90_D6Y642	E L A E R L L G C P V W Q E A F G A R A G F P Q D H P Q F A G V L P A D R G G Q R

130 140 150 160

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UniRef90_UPI00047598A8	P T Q I G R V L A P E S I V S D A R A A L E V F V E V A K E		
UniRef90_I5BSV3	P A E V G R N F A T V P L V G D V R D T L R D I I A I C E E K S R T N P K A		
UniRef90_B7DUT9	R M Q A Y K L D G V Q M V A D A K V A L D E L I K R L A		
UniRef90_UPI0003A5561A	E L D A F K Q G A A P I L G D A K I S M T A L L K A L		
UniRef90_UPI00046440A8	P N E L L G R V Y A D L P I N A G M P E F A A A L A Q L R P D A		
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UniRef90_A6EV46	A A E I I N K R P T E L A I I R G D L N G I L E A L T N A L Q D K P		
UniRef90_E6WB58	P A S L G A H H V D M A L V G D I K A T L A A L Q P Q L T S K S D R		
UniRef90_U1FQG4	R V D A Y K L D A T Q V V G D A K V S V L K L K D A L		
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UniRef90_D3LTB5	P A D I N K T Y Q P V E V V G N I P D S L T R I M E H A A R L Q E P T		
UniRef90_KOYSG4	G E H I G R T K V D V P L V G T V K D T A P E L E K L I K P		
UniRef90_S9SLQ4	A Y D A M K H G A E P L C C D A A A G L E A L R H A L Q G H R A R Y T S E A		
UniRef90_FQJ727	R F D A V K H R A L S V V G D A R E T M T E M D T A L G D		
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UniRef90_R7HXC3	E E A L N K P T I D L K V C V D L L K D F L P Q L V K L F P K		
UniRef90_UPI00036DD59E	P A E I I G R N P V E M G V V A D A S L A V T A I R D A V R E P A G K R P		
UniRef90_W6N742	G F D A Y K L D G V R V V A D A K A A L E D L T N E L S K T		
UniRef90_A3TND7	S F D A G K Q A G L S V V G D A R E S L F A L A E A L E		
UniRef90_Q2LXP1	P T S I G K N V V A F P F V G E I R E T I S A L V K L V E R K E R		
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UniRef90_A0A024TB69	G K Q V G K V P T N V G V V G D A A Y N L A Q L L P Q L E A K A R P E W H A		
UniRef90_W9S901	E E E I I L R K P E L G I V G D A K R V L E L I N R E I K D		
UniRef90_W6WBW7	P D H V N K D E A K V A L V G D A A L T L D A V L A E L E T R K		
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UniRef90_UPI0003B73565	A A E I I D K L R V E L A M T D D L K Q I L P L L		
UniRef90_D0GVV5	A A E F N K N R H A H A A L R G D I N L I L P Q L		
UniRef90_W0LCN0	A F D A G K L D G V Q V L A D A R E A L D S L S K L L E Q A G Y R		
UniRef90_UPI000225E029	A A E E L G K R F A H A A V C G N L K A S L A A I		
UniRef90_UPI00036E8054	A A D A H K M A G T T V V C D A R A G L T A L T A A L A H R V D A A H E A A		
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UniRef90_F7GJA3	A E E L G N N V P T V T L L G D V S A V		
UniRef90_W2EHC3	A F D A Y K H A A V P V V A D A R A A I E A L E E A L R G R W R A D		
UniRef90_UPI0003779E3F	D W E M G K N Y P E I A L R S D V K E T L Q K L I P Q L R Q		
UniRef90_F7RVP8	P E V F S A N P A K I A I T G D S A R S V P L L E Y L Q T Q S K P R D S A A		
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UniRef90_W4LNW2	P N K I G L N R V D A G I V G D T K A V L S Q L M E		
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UniRef90_UPI00047A9F0E	S Y D T T K H N A A P L V A D A K V G L E L L S Q G L G D W K V P R		
UniRef90_D7WY19	R F Q A Y K L D A F Q V V A D V R A T L E L L E A E L		
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UniRef90_UPI00037FB14D	N S E L L D K N I A D I G V L G S L Q E S L P L L L K L V		
UniRef90_S9TU29	V E N L L G R R P I D L G V G D V G A T I E A V T P K L T E K T D R		
UniRef90_R0CWM3	P E S L G R T R L D L A M V G D V V K A T I R A L L P L L E P K P D R		
UniRef90_UPI00035FAC07	G G M I G R Y P T E V N L V G E A K A T L R A L L P L L E P K P D R		
UniRef90_J7JTUT2	A S E F D S N R I D A P L A G D V G S V M S A L R D G V V I A H P I T A P P E W		
UniRef90_W0VD88	P A S I N K V V A D V A L R G D C G Q I L V A L Q A M T A P A D L A P		
UniRef90_UPI00036D85D0	P F D S V K W R A Q P L L A D A G L G L T A L S D W L G H W Q A S P A W		
UniRef90_B1XTF2	E L E L K K V K A D M P I H A N L L K D L L P I L A E W S K E R M R R F P T V L P		
UniRef90_K2D5B3	Q A E V Y E Q Y I P V E L V G D I S D T L E Q L S R Q V T A P V D F P E A R		
UniRef90_V5PRB9	A S E I I G K N P V T L G V H A D L R D A F A G L L A H A K R R		
UniRef90_G0PEF5	P E E F H Q N V T E V P P L L G D I G E T L A E L T P R L G E		
UniRef90_C0ZVG4	P A A I G M H R V T L G L W G G V A E T A R A T S A W L E A H G R		
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UniRef90_A0A031GGJ8	A F A E R H G P V A E T Q A G K S A L P W D H P L Q G A I G V T S P A A N
UniRef90_D4IJG2	R L A A M L K A P V A Y T F K A K M E V Q Y D N P Y E I G M T G L L G L P S A Y
UniRef90_N6V1L7	Q F A E R F N L P V G C S F R R Q M L F D H L H P S Y A G D V G I I N P A L A
UniRef90UPI000363C21E	R F A E D N R L P V S C A F R R Q D S F D N H E L Y I G E V G I S P N P K L
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UniRef90UPI0003FF9435	A L A D R L A A P M V I T L K A K E G F E D D N P F Q V G Q T G L I G N P A A A
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UniRef90_U1ENV3	E F I E A A K V P T I I T L P A K G I L A D A H P Y N I G N L G K I T K T S Y
UniRef90_F5SKU4	T F A R K L K A P I V L T L P G K G T I P D D H P Y C L G G L G L L G T K P A Y
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UniRef90_Q2W979	Y A V Q N A D D I I A L G A R L D E R V V S D P R S F A P N R G G I V Y F N I D	Y A V Q N A D D I I A L G A R L D E R V V S D P R S F A P N R G G I V Y F N I D	
UniRef90_B6HG78	E L I A S A D L L V L A F G A S L N M W T T R H G K L I N P G A T V V Q V D H E	E L I A S A D L L V L A F G A S L N M W T T R H G K L I N P G A T V V Q V D H E	
UniRef90_D1CJ2	K A L G Q Q A D D I I A I G T R M G D T Q G Y K L P R A P R P D Q P F I H V W P D	K A L G Q Q A D D I I A I G T R M G D T Q G Y K L P R A P R P D Q P F I H V W P D	
UniRef90_UP10004657241	E M M R D C D T L V I V G S N F P Y S Q F L P E F G Q A R A V Q I D V D	E M M R D C D T L V I V G S N F P Y S Q F L P E F G Q A R A V Q I D V D	
UniRef90_W7IL98	D A M S A A E D I I V L L G T D F P Y D T F L P Q E R T V Q V D H D	D A M S A A E D I I V L L G T D F P Y D T F L P Q E R T V Q V D H D	
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UniRef90_K2LQY6	E G I E D A D D L L I I L G T D F P Y D Q F L P D T R T A Q V D R A	E G I E D A D D L L I I L G T D F P Y D Q F L P D T R T A Q V D R A	
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UniRef90_Q5ENV6	E E I G R V D C M L V V G A A L S S F T T D N T A L L A G K F V I Q I D D R	E E I G R V D C M L V V G A A L S S F T T D N T A L L A G K F V I Q I D D R	
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UniRef90_C5AZ13	A A M E A C E T L L M L G T D F P Y R Q F Y P E H A K I A Q V D L R	A A M E A C E T L L M L G T D F P Y R Q F Y P E H A K I A Q V D L R	
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UniRef90_A4EXT0	T L I E G A D D L V L V A L G T E I I G Q T D F D M Y A T G T M A R R M P L I V R V D L C	T L I E G A D D L V L V A L G T E I I G Q T D F D M Y A T G T M A R R M P L I V R V D L C	
UniRef90_E3HX53	UniRef90_UP1000472EAF9	V A A F D A D D L I I A L G T R L G D I T T Y A F P G Y P K P S Q T L V H C H A D	V A A F D A D D L I I A L G T R L G D I T T Y A F P G Y P K P S Q T L V H C H A D
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UniRef90_H3ESP0	F A L R N A D D L V F L I G A R L N W M L H F G L P P R F N K E C K I I Q V D L V	F A L R N A D D L V F L I G A R L N W M L H F G L P P R F N K E C K I I Q V D L V	
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UniRef90_A7IJ42	V A I R A A D D L I V V A I G P R L G E T T Y T L L F E L P R P A Q R F V H V A D	V A I R A A D D L I V V A I G P R L G E T T Y T L L F E L P R P A Q R F V H V A D	
UniRef90_B0PCZ7	E A V G Q S D D L L M I L G A R A D N R A M G R P G C L G A D K T V I H I D I D	E A V G Q S D D L L M I L G A R A D N R A M G R P G C L G A D K T V I H I D I D	
UniRef90_R5IMX9	N S M H E A Q I I L L L G T D F P Y T P F M P E D N I I V Q V D I K	N S M H E A Q I I L L L G T D F P Y T P F M P E D N I I V Q V D I K	
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UniRef90_M3US89	E L I S A A D D L V V V G W G G C A L N M W T M R H G R L I G E D A V V A Q V D V E	E L I S A A D D L V V V G W G G C A L N M W T M R H G R L I G E D A V V A Q V D V E	
UniRef90_W4V0Y0	Y A L H E A D V I I N V G L N I D Y Q M G L A K L P F F R A G Q K F I N I C R D	Y A L H E A D V I I N V G L N I D Y Q M G L A K L P F F R A G Q K F I N I C R D	
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UniRef90_W7D1W1	F L L N Q A D D L V I I T I G Y D P I E Y D P I I W N P D N N R T I I V H L D T V	F L L N Q A D D L V I I T I G Y D P I E Y D P I I W N P D N N R T I I V H L D T V	
UniRef90_K9Q098	W F M N E S D D L L V V F G A S F S N H T G I S A K K P I I Q V D F D	W F M N E S D D L L V V F G A S F S N H T G I S A K K P I I Q V D F D	
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130 140 150 160

UniRef90_UPI00046F0334	A E Q L G R A K D L G V V G D V N A T L Q A L L P K L D V K K D
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UniRef90_Q3ALE4	V D N I A K N H V D I S Y V A E P H S V V T G L L P I L K S L S S S W H N A A
UniRef90_R7DEK3	A N R I G K A K V N M G V V G D V K D T L K I L N P L I E P K K D
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UniRef90_Q0TZB0	A E E T G R N S A E H S L L G D V G V V A T Q L L T W L G D
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UniRef90_C8NMW2	P A Q M G R Y P I E V G L V G Q A A P T L Q A L L E K L P E
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 V K P S V E I L K Q F E A Q L Q T S K R P L I I L G G S N W S D G C K A I A
 Q S A V A S V V D A V R N A K Q P R L H G L G A A K A T P L V V
 T V P S G D D L A Q A Q S W L A E A Q R P I A L I G L D A L E Q N C E A A L K
 D L E A L S A M L A R A K K P M L M V G G P S W S E A C A D K A L
 P V V I A G G G V H S S G A V A A L G
 P E S R T E L A E L I A S A E R P V F I A G R G A R G A R S E L E
 L A Q A H D W L R E A A R P L A V I G L D A L L P G G P E A V A
 P T S R D M S E L A Q R L E A A E R P L L V V G G P G W S A D V G R A I G
 E A A V E T A A E F L L N K A V K P V I V G G P K L R A V K A Q K A F L
 V E P D P D E V S R A A T L I A G A Q R P V I I G S D V Y A G D A V A A L R
 E V V D R V L R L I E H A N N P V I L V D A C A N R H D V R E E T A
 R L I R S A R R P V V L A G M R S G E P E T S H A L R

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

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UniRef90_T0VGU5	E A L A E A D D L I I V F	G S D F P F G R	R F F N P K A N F V Q V D I	D
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UniRef90_G0WBA1	L A V Q N S D L L I I V A	G T R F D D R V T G N I S K F A P E A R R I	I I H F E I S	
UniRef90_D7B0F2	N A L A E A D A V L V V G	G C R M S E T T T Q G Y R L P E R G G R R	V A Q I D I	
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UniRef90_N2BF0D	F I L Q N A D D L L V V L G	G N S L S T K Q T G F Q Q E T F A C G A K I	V I V M V D A E	
UniRef90_L9WX93	M L M D S D T L A F V G	G C S T N T T L T R H E E A L V D P E T T C I	H V G P D	
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UniRef90UPI000050F94A	E R I H E A D V A V V F G A S L N Q F	T M R F G E L F H P S T T V W Q I	D T D	
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UniRef90D3F9M8	W A V D E A D D L L I C V G A R F D D R V T G A L D H F A P R A K V I H L D V D	H A Q W S A D A T F I Q I D I E		
UniRef90X7ZWL0	D H A G R C P V E L A A G P R	R A A Q W S A D A T F I Q I D I E		
UniRef90Q6FJV6	Q A L K S A D D L L V F G A R L N W I L H Y A S P K V W N S N A K F V H P D	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90W3AIM4	S T L M D A N T L L V V G S S L G E T A T N N Y N A N N M A Q D R F L V Q L D F D S	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90A1AZQ1	Q A L S Q A D C V L S L G S R L G D T L T R G Y E D P V R P H A R V I H V H P S	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90A8EWPO	C A I E R A D D L I I N V G H D V I E K P P F F M E N K P D S T K V M V N F	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90W4HFQ5	C A I V F G E A D D L L I A V G A Q L T Q H N M D K G K L F P K A R I L Q I D A A	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90UPI000263170C	Q R I K T A D D L L V V G A R L G E A T T Y S L I T P E H P G Q T L V H V H P D	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90H8GQU7	E M M T D C D T L L M V G S S F P Y S E F L P E E D Q A R G V Q I D I N	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90S9RTJ6	K R I Q Q A D D L L V I V G A R V G D I L T N G Y E D P A D L G K V L I H A H P S	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90UPI00028806AE	E L A R E A D D V I L A V G T E L G E T T D D V F P D D G F E L R G R L I R D L D	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90N1QAX7	A G K E H P D F V L L L A A R T G F F L L G G R G G A I I P N D A T I A Q V D L D	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90A1U649	C A I D R A D D L V I N V G H D V V E K P P F F M T P G G K K V I H V N F S	L N W I L H Y A S P K V W N S N A K F V H P D		
UniRef90Q2PYB8	H L V D E A D D L V I C V G Y D P I E M R P G W Q D V W D P M V T N V I D I T A A	L N W I L H Y A S P K V W N S N A K F V H P D		
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UniRef90F9UD44	Y A L R D A D D L I L S L G G R F D D R V A V K G F A T G G K R I I A H V D I L	L N W I L H Y A S P K V W N S N A K F V H P D		
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UniRef90T0BMQ7	Y L R S G T D L M I A V G T K I S D M S L S G L T V K E Y P Q Q I V H F D Y D	L N W I L H Y A S P K V W N S N A K F V H P D		
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A S D E A I S E C G H L S E G P A I W V G F G A R F A A A E I R
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UniRef90_UPI0003491232	A L A D R L G A G V A T S L L G K P V L D E R L P F H T G V L G E V G T T A A A			
UniRef90_W7VJC2	E A L E E L L Q I P C F L G G M A R G M L G K N S P L H I R Q N R R			
UniRef90_UPI000441A101	A A A A L D A P T A L T I N A K G L L P A D H P L L L G S N Q S C V P V R			
UniRef90_G4LT16	R V A D A T G A V T A T T A L G R G T F P R S E F D L G V T G G F G A D G A M			
UniRef90_S3BDV1	Q A F E A M G I P C F L G G M S R G L L G R K S N I Q C R Q K R R			
UniRef90_V4A0X9	A L G E R I V G A L F A T S A V A K G H F H G S P W D L D V I G G F A S P L A A			
UniRef90_W2EY97	R V V E V L G A G V T A S L V G K P V L S E D A P W H T G V M G H L G T T A S A			
UniRef90_W7IQS6	T F L L D R L G A V Y L D T G E S R G V I P D D H P A V V G A M R			
UniRef90_UPI00045E9814	T A A H A L Q A P I V H T L R G K E F V E Y D N P F D V G M T G L L G F R S G Y			
UniRef90_I6Z740	C Y A E R R A W P I V T T P M G R G L M S A D H P L Y R G V F G T A G H E S A			
UniRef90_Q2SM62	A L L D R L G A V Y L D T G E S R G V I P D D H P S I V A A M R			
UniRef90_UPI0003FAB399	R L L A M G V G V V T S T Q G R G I V P E D D A R S L G A F N L N K P V E			
UniRef90_T2E479	A L G F G V V T S V Q G R G V L P E D H P A S L G A Y N V H A A V E			
UniRef90_E1TJM3	R L S E K L G C P V L L C Q P D G R W L S E H P Q Y W C T F W P G L L N P E G E			
UniRef90_UPI0001F2A7FA	A V A E R L L G A G V A K A L L G K A A I L P D A L P Y V T G A I G I L L G T Q P S W			
UniRef90_A0A058XP06	D Y C E R N G I A L A A A H R R M H L V D N S S P A Y A G T F E F G R S V L E			
UniRef90_UPI0002F28F50	R F V E A T G F P I A T L S M G K G V F N E H P Q F I G V Y S T S P D Y L R			
UniRef90_UPI000255B67	E L A E A L R L P V L M N G M A R G T V P A D H A L A F S R A R S			
UniRef90_L0IW45	A F A E A G G Y A V A G M Q L T S R S A F P S A H P C W A G V L K P D F A A I R			
UniRef90_Q21A32	Q L M E L T R F P S Y V T P M G K S I D E Q N P R F G G V Y V G T S P E V K			
UniRef90_S9Q477	S L L T K F P I P T V E T F Q A A G A V S R E L A H L F Y G R V G F H N Q A G D			
UniRef90_W2RPI2	T L A D T F K G L R V L D T G G S D M C F P G D H P A S L G A F L R Y G V H			
UniRef90_B0XTF9	E L L V D A S G Y A T A V M P S A K G L V P E H H S H F I G T Y W G A V I S T C A			
UniRef90_Q5QJY9	S L L A T T G Y P Y A T M T M G K G L L E E T H P Q F I G I Y N I S D D Y V R			
UniRef90_UPI0003629BEE	K L I D I T Q F P S F V T P M G K G S I D E Q N P R F G G V Y V G T S P E V K			
UniRef90_G8ZVV7	A F V A K L G I P Y F T Q M G K G V L D E E G P L W L G N A A L S D H D F V H			
UniRef90_A0A021W5B0	R L A D K L K K P I F S S G M G K G I V D E T H E C F V G I Y S G K V C A P G			
UniRef90_R7YNH7	A L A A R I E A P V A T T K A Q G L F H G E R F N I G I C G G L S H P V A S			
UniRef90_S9S164				

90 100 110 120

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UniRef90_V4RTK4	Q R V K D A D L L I L L G A R M V P S S S Y T L I D L P T P Q Q T L V H I F P D	
UniRef90_A0A038B3Z2	F A F K D A D V I V A I G Y E F S E F K A Q K I N P N K D K L I I I N I N	
UniRef90_U7K0M7	E L L C E A D L V V E L G A V L T D V P T D G Y T L R Q N L D A K N I V I T T D	
UniRef90_B2J553	R Y M Q E H R P L L V L G T R L G E F T S F W N P A M I P L R G F L H V D I N	
UniRef90_UPI0004696DC5	C A I D R A D L V I N F G H D V V E K P P F F M E D G G K K V I H V N Y K	
UniRef90_UPI0004678C75	Y A V N A C D T L F L V G A R V G	
UniRef90_UPI00047E2123	Y A M D D C E V L F L V G T D F P Y R D W Y P T G K T V I Q L D A R	
UniRef90_J3NSY4	R L L A R A D D L V V L A I G Y D E A E Y D S S Q W N P T P G R F D I I H M D Y Q	
UniRef90_UPI0004000DAE8E0	E A M E S C E L L L M L G T D F P Y R Q F Y P K G K T I I Q I D T L	
UniRef90_B3GZT8	Y A V Q E C C D L L I A C G A R F D D R V T G K L D T F A P H A K V I H I D I D	
UniRef90_U5ECS4	M Q L R G Y D T I F L I G N S H A Q I S I F R K W D K G P I I P A D L V Q V H N D	
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UniRef90_Q1R1A1	E L L A Q S D D L L I V A G S K L R S N E T K T F L P L P R P L V Q I D I D	
UniRef90_UPI00035F9BA3	L T Y M Q E R H P L R T G T R L G E R T S V W N P I M I P R R G F V H I D I D	
UniRef90_X5E046	K V I Y S Q A D L V I G I G Y D P V E F N Y E D W M P E E V P L I H I D Q Q	
UniRef90_B2W5L6	A I K S A D V I L V L D C D V P W V N T Q C H P K D S A K I F H V D V D	
UniRef90_K9ZC70	K Y L Q E S R P V L V L G T R L G E F T S F W N P A M V P P R G F V H V D I D	
UniRef90_D9PW67	E A V R K A D D L L I V I G S S F S D L T Q L P P G R I L Q I D I D	
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UniRef90_D7GIQ5	D V G K T A D L V L F A G S N Y E F G G H M F S P T A T F I D V N L E	
UniRef90_Q12629	E A V E S A D D L V L S V G A L L S D F N T G S F S Y S Y K T K N I V E F H S D	
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UniRef90_A8IFE2	E V V E S S D I V L C V G G V W T D Y S T A G Y S S L L K P E K M L R V D N N	
UniRef90_G8YTU5	E L L V D S A D D L V L S I G A L L S D F N T G S F S Y S Y K T K N V V E F H S D	
UniRef90_U5E5L4	E L L M R D C D V L L I V G S N F P Y A Q F L P E P G R A R A I Q I D V D	
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UniRef90_F0XQC8	D A I R T A D D V I L V L D C D V P W I P T Q C S P P T D A R V F H I D C	
UniRef90_W4LUF0	A L L M A Q S D D L I V T I G L D T I E L F E P G N W P Y H Q Q L I V N I D T V	
UniRef90_UPI0003654677	E L L L E D A D D L V A L G T E L L S D F E F L F T G S P E P R L A D I V R V D I D	
UniRef90_W6K3Q5	E L L I E D A D D C L L T I G S H L R A N E T N F E P L P S T H I Q I D V D	
UniRef90_UPI0002197702	D I L L K E S D D L I I A G Y D P V E Y E A R N W N V G R T G E I I N L D A	
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UniRef90_UPI00046F4AE5	T L L I R D A D D L I I A I N N R F G E N S T E G Y T L L P E P G Q T L V H V H A S	
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UniRef90_E1W0N1	A T F L E S D V V L V G L G N R W A N R H T G D L A T Y R A G R K F I H V D I E	
UniRef90_C3CG64	M A L Y E C D D L L I I N I G A R F D D R L T G N L A F F A K G A T V A H I D I D	
UniRef90_D4LHZ6	I L A N A K S D D L L I I C F G I S L C T R Q I G T K V H E F A K N A E L I R V D I D	
UniRef90_UPI000366B97F	E M M S N C D T L L M I G S G F P Y S E F L P E E G Q A R G V Q I D	
UniRef90_Q70I04	T V I A E S D C V I A F G A S L N M W T V L N G E L L R G K R V V H V D T D	
UniRef90_UPI000380F69A	Q P D L I V C I G M R H G G G K P G D F G A F S E A K Q V I A I G P D	
UniRef90_K4P2V1	Y A V Q N A D D L V I V L G S R L D V R Q T G A D T Q D F A R N A K I V Q I D	
UniRef90_UPI00036AF15E	R R I L E G A D D L V V L L G S T R P D A L S P L K G G S G S A E G P A V V H V Y P E	
UniRef90_W2F9Q7	A L V A E A D D V V L V A I G T E L A E T D D V T F A G G F N I P G A L L R I D	
UniRef90_B1X298	K Y V E E S D C V I A F G A S L N M W T V L N G E L L R G K R V V H V D T D	
UniRef90_UPI00047A650C	Y A V Q N A D D L V I V L G S R L D V R Q T G A D T Q D F A R N A K I V Q I D	
UniRef90_Y1D6E8	S I N A Y A D A V F I I G G R S L T I L Y S E G E A I P A T C A V Y Q L S A D	
UniRef90_H8IMV5	K A I L G E A D D V A L I V G V P M D F R L G F G A V F G Q Q T Q L V V V D V Q	
UniRef90_M4EZ01	E I V E S A D A Y I F V G P F N D Y A S V G Y S L L V K K E K A I I I Q P D	
UniRef90_UPI0004695483	I Q N P N A T A L V I I G S S L G E T A T S N W N P E L T K D R F V V Q I D M D	
UniRef90_M7ATS0	E V L K E A D D L V I I L A G M V C D F R L S Y G R A L S K C S K I I A V N R D	
UniRef90_U7L7E9	E L L S E A D D V L L E V G A L L T D V P S D G Y T L R Q D P H A E N I V V N I D	
UniRef90_N1QCE6	R I L L A K S D D L I I C L G Y D P T E Y D A S S W N P D S K L S I V H V D Y Q	
UniRef90_B2AFW3	E A I Q T A D T I I V L D C D V P W I P T Q C K P R S D A K I F H I D V D	
UniRef90_E8RLG4	Q R V K D A D D L L I I G A R M A E V P S N G Y T L I G Q Q T L V H V F P E	
UniRef90_H2AVA6	K A V E S S D D L I I S V G A L L S D F N T G S F S Y S Y K T K N V V E F H S D	
UniRef90_UPI0003491232	M Q E Q C P Q R I I L V L G T R L G E P T S F W H P A M V P A G G F I H V D I D	
UniRef90_W7VJC2	Q L M G G C D T L L M I G T N D P W T D W F P M P G Q V R T I Q I D	
UniRef90_UPI000441A101	E A L K E A D D V V I A L G A T V C D F R L S Y G R A L S K C S K I I A V N R D	
UniRef90_G4LT16	E L L A A E A D D V V L V A I G T E L G E T D D V V F D G G F A L D G E L I R I D	
UniRef90_S3BDV1	E L I I S T A D D V A V I V F G A G L N Q F T M R F G D L F A P G T R V V Q V D I S	
UniRef90_V4AOX9	D A L R E A D D L V I I L A G S V C D F R L N Y G R V L S R K S K I I I A V N R D	
UniRef90_W2EY97	E L V R G A D D L V V G W G G C S F T M W T T R H G A L I G P D A T V V Q V D L D	
UniRef90_W7IQS6	E L M S G C D T L L I I V G S N D P W T E F Y P G P G Q A R A V Q I D	
UniRef90_UPI00045E9814	A A M G D A D D V V L T V G R K L D F Q L Q G F G S P A V F G G A A Q F V R I S D A	
UniRef90_I6Z740	D A L E D T E V L L M I G T D F P Y R Q F Y P P K A T V I Q V D I R	
UniRef90_Q2SM62	R T A E E A D D I I M V V C A N D E H A T C G W D G S T I L S R R L V H I N N N	
UniRef90_UPI0003FAB399	A V I M G D A D D V V V T V G R R L D F Q L A F G S P A I F R D A R F V R I G D T	
UniRef90_T2E479	R F Y Q S C D A M L V V G S R L R G N E T L K Y E L K L P R P L Y R A D A D	
UniRef90_E1TJM3	S F Y K T C D A L V V V G S R L R G N E T Y K Y K L A L P Q P L Y R I D A D	
UniRef90_UPI0001F2A7FA	K L V L D S D D L W L A I G V S W S D H T H S I D P K E E N H R L I A L Q H D	
UniRef90_A0A058XP06	E M M N E C D T L L M I V G T A F P Y S E F L P E R E G Q A R A V Q I D R D D	
UniRef90_UPI0002F28F50	N N A D E A D D V I I F F I G S R P D P W E N Y R G G A A N G Q A A S V I H V Y P D	
UniRef90_UPI000255B67	N R I D H A D C I I S I G V K F T D S I T S G F S Q G F K E E S V I H I A	
UniRef90_L0IW45	K A L G E A D D V A L V V G V P M D F R L G F G G V F G V Q T K L I V A D V E	
UniRef90_Q21A32	E R I E E A D C V I A L V V G G R A F V A Y P Y R D V R P I P D G V K L L H V A D N	
UniRef90_S9Q477	E R I E S T D L L L S F G A L K S D F N T G S F S Y H L S Q Q N S I E F H S D	
UniRef90_W2RPI2	K L L A R S D C V I A L G D P V E Y D A N V W N P D G K L P V V H V D Y T	
UniRef90_B0XTF9	D A I K T A D F I L V A D C D V P W I P T Q C K P S D S A K I I H I D V D	
UniRef90_Q5QJY9	E I V E S A D A Y I F A G P F N D Y S S V G Y S L L L K E K K A I L V Q P D	
UniRef90_UPI0003629BEE	R R I E E A D C V I S I G V L M T D F N T G K F S A Q L D P G R T I E V H G Q	
UniRef90_G8ZVV7	E A V E S A D D L I I S V G A L L S D F N T G S F S Y S Y K T K N I V E F H S D	
UniRef90_A0A021W5B0	R A I D A A D C I I N I G H D V I E K P P F F M R E G R R T V I H V N Y A	
UniRef90_R7YNH7	E A I E G G S D D L V V L L G D I P A D T N A A F S R K L R P E T T I K I N P D	
UniRef90_S9S164	E V I M Q S D C I L A F G V S L S K H T T E E R A Y T K G K R V I Q V L P D	

130 140 150 160

UniRef90_K0EY20	L E H I G R T A V D V A M V G H A G P A L R E L L P K L D A K K
UniRef90_B4V106	E E H L G R V P V D V G L A G D V G A T L R A L L P L L K E P E A P D R A H
UniRef90_V4RTK4	A G E I G K V Y Q P L G N V C A P D A F A Q S L A D L K P P V T K P W
UniRef90_A0A038B3Z2	T F D N E Y Y P T T V S M N C N I A Q A V N A L D D A L
UniRef90_U7K0M7	T T L L L G N A A V S H H I L A S P Q A F A E E L A K R I G S E E R
UniRef90_B2J553	P D V P G T A Y P T I A I Q S D V K M F V K A L L K R F P K R Q N R A
UniRef90UPI0004696DC5	S A Q V D S V Y F P V E V V G D L A A S V R K L Q A A V G D K
UniRef90UPI0004678C75	G E H V G R T P V Q H A L V G D A A A T L D Q L V P L L A R R T D R A
UniRef90UPI00047E2123	P A N V G P N Y P A V E L V G S L V E N L R S L T A R L A D A G V A V A R P
UniRef90_J3NSY4	P E H L G K
UniRef90UPI0000DAE8E0	I A E I I N K R K V E V A L R G D L V E A V N T L A Q P L D
UniRef90_B3GZT8	P W Q I G K N Y F T V G I L G D I K K T L P L I I S G I A A R A D
UniRef90_U5ECS4	A G E L Y D N R R G E A I L A D T S A A L D A L S V R L E G R K G N L D E E W
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UniRef90_A0A023X779	P A A C H R T Y V D E F L E G D C T E V L E A L A E H F E A T
UniRef90_Q1R1A1	P Q V P G T A Y P T F A I Q S E I I G V F V K K L L N Y F P K S T D
UniRef90UPI00035F9BA3	E A D V G K I P E V F N V L G A L D L A L N E L Q K L
UniRef90_X5E046	P L K Q M P V A T Q R Y R A D S Y T S L T Q L N E Y L E S A
UniRef90_B2W5L6	P E V P G T A Y P T I A I Q S E V G I F V K A L L K H F P K Q E T S P P L P R P
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UniRef90_M0CI67	T S V I G R H A A A L G V R A D A P T F L R Q L L E L A R Q Q G D A R
UniRef90_D7GIQ5	Y T K I R S A T P P G V Q M K F A L K Q L L T K V A D A A K Y K P V P V P
UniRef90_Q12629	T A E I D T Y F Q P E E L I G N I A E T I D L L P A I
UniRef90_G5JQM8	R V T L G N G P T F G C I V M T D F L E A L A K R V A P N D
UniRef90_A8IFE2	C I K I K Q G P Y P G I Q M N E T L R I V I D R V H E V T R D Y P A R
UniRef90_G8YTU5	G S R I G R Y P T E V N L I G D
UniRef90_U5E5L4	P S Q L T T H M E P S G V A G D L S L V F W G L
UniRef90_D2AZ24	P L K R M M P V A E Q R I L A D S L A S I E Q I S A Y L E K S G P K V D A E A
UniRef90_F0XQC8	P H T D G L F Y P T H E L I G
UniRef90_W4LUF0	P T H P D Q T R P T L P M V A D A R T A L A G L E E
UniRef90UPI0003654677	E Q A I G R N P V A V G V R A E A S R A V P A L L A A L G D V E T D A
UniRef90_W6K3Q5	P E I T N D Y Q P D L I V Q A D I A K T L D E I S E Q L P E
UniRef90UPI0002197702	A Y E I I S K L R A D V A V P G D V A T S L K A L S A A
UniRef90_R5RAB6	D N E L E E Y H R
UniRef90_A9D0Q8	A A K L V H A K P A L I Q A D L G A F L A S M L
UniRef90_D8H962	P S E F H K N V V E H P I V G D V K K A L H M L L H M
UniRef90UPI00031386B1	A E A L L G R Y P T G H P L H G H A A D V L G A L N A R L S T T G S A T E T E W P
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UniRef90_Q12Y30	P E K M H Q I K I E R A F I G D A P T A I R D L L M S Y A K K Q
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This figure displays a multiple sequence alignment of UniRef90 proteins, focusing on specific domains and motifs. The sequences are color-coded by domain: purple for N-terminal, blue for C-terminal, and yellow for central regions. Conserved residues are highlighted in yellow, while semi-conserved or variable residues are shown in blue. The alignment highlights several key structural and functional elements, including the N-terminal domain (purple), C-terminal domain (blue), and various internal motifs (yellow). The alignment spans from position 1 to 40, with major structural features labeled at positions 1, 10, 20, and 30.

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
inssm

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
inssm

lupas_21
lupas_14
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jnet
conf
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sol0
jhmm
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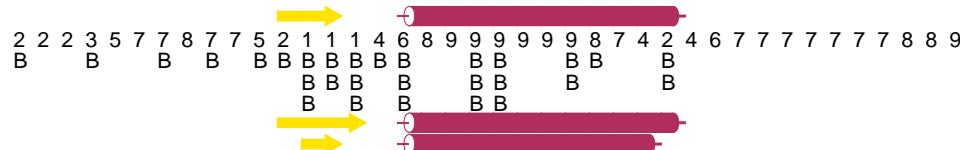
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130 140 150 160

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  A K V S G K T Y P D V R L K D [V] L Q L L A R C L D P T K
  R A E I G K [L] R T D V A L H G D K A [V] L R K M L D L V A T D K L P
  V T V G G K T Y D N A P I E G Q L N N R V T A H P A A I G R Y P A T V G I V A D A R T A L R G I L D A L D G T V R R D E W A A
  P K Q M M P V F Y L D A V Q A D S L T A V E Q I T A Y L K S N E
  D D Q [L] S R H E A A C R L T G D L N E I L P V L A E Q S P G K S N A R G S E R
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  A A E I G K
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 lupas_14
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 sol25
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 solo0
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