

1 10 20 30 40

QUERY				
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50 60 70 80

QUERY	M K D P D D H T V C H	L L F A N Q T E K D	I L L R P E L E E L	R N E H S A R F K
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UniRef90_H3AUE0	M K D P D D S T H C S	L L F A N Q T E K D	I L R E E L E E E	V Q A R Y P E R F K
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UniRef90_K8EMU6	L R E G Q S P K K I S	L L I Y A N K S E E D	I I I L L C R D T L L D N	F E K Q P G R V K
UniRef90_UP10003D741EA	T K D T S D E T R M S	L L I Y G N Q T E E	I I I L L R K E E E V A	T T H K Q F N
UniRef90_B7K6A1	L D T G A P R D I I F	L L I H S A R S P Q D	I I I I Y R E E L E A M	D A Q H S N H L A
UniRef90_C4R6Z9	A R N P E D K T R V N	L L I Y G N Q K E E	I I I I L R E E L L E S I	S V L N P N I K I
UniRef90_A0A011UV9	L G H M G T R K M S F	L L I Y G N Q K E E	I I I I F Y A Q E F E A	L A A R H P N F R W
UniRef90_UP1000262651E	L A D R A A R D R I A M	L L I Y G N V S S R	I I I I F G D E L L A	R M E R E Q P G R L S
UniRef90_Q6BZ95	I T N P E D Q T K I S	L L I Y G N F A N E	I I I I L K K S E I D E	I A K R Y P N F D
UniRef90_D2UY67	L K H E D D K T E V	L L I Y G N L T E Q D	I I I I I L R D R L E E L	A S K H K N F T
UniRef90_F8NVT4	L G D P S C P D I R W	L L I D A N K T E E D	I I I I I L C R E E L D	L F A S H H G D R F K
UniRef90_UP1000373481E	L K R I N S N R K I S	L L I F S W Y G A R S	I I I I C F Y D D E Y D K L	A A E N D N F W H
UniRef90_B8MJW2	L D N P E D R T K M T	L L I F L V F G V N T	I I I I I L L R K E F E N Y G S K F P	D R F K
UniRef90_J9MS38	L R N P E D K T R M T	L L I F L V F G A N T	I I I I V L L K K E L D G	G F A K E F P E R F S
UniRef90_W8U0R0	L K R L H S K R I K I S	L L I F S W Y G A R S R	I I I I M F Y E E D F D Q L	V A T T H K Q F N
UniRef90_A1CPH9	M Q D Q D P T S C V	L L I F V L F G V N T	I I I I L C R S E L D Q F E A S N K E R	H S N H L A
UniRef90_Q53028	L R E Q G K G P K I	L L I F W G A R S R	I I I I I L M R G E L D K Y A K E	C T H P D Q F Q
UniRef90_A1DEE2	L A A D R A S S V T L	L L I F Y G N R R T	I I I I V M F A D E L L A D L	K D L Y P A R F F Q
UniRef90_H1VUZ3	V A A G G D E T E V	L L I F V V D A N K A E	I I I I I L L R D E L L D G F A R E S G G R	Q G R F Q
UniRef90_K2R67	N R G R G D R T E V	L L I F V D L I F A N	I I I I I L L K D D L D A L A A K D P G	F R
UniRef90_W8X926	L E R G D T R P A T	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_A0BEH5	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_Q5BJ68	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_F1NZY9	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_H9G8P3	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_H3AUE0	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_S4RM45	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_B9EL14	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_A0A016W7W5	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_UP10003735C8C	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_M5SYA1	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_S0FZJ4	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_C5FNV6	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_V9ZVIO	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_UP100036FCF9	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_UP100037EFB4B	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F
UniRef90_UP100047EE34E	C N N P N D N T K M	L L I F V Y W G G R P	I I I I Y R R D L A L A W R E R	R L P G F R F

90 100 110 120

QUERY				
UniRef90_Q5BJ68	L W Y T [V D R A P E A W D Y S Q G F	V N E E M I R D H L P P P P E E P L V L M C		
UniRef90_F1NZY9	L W Y T L D R P P Q G W K Y G A G F	V T A D M I K E H L P P P P S E D V V V L M C		
UniRef90_H9G8P3	C W Y T L D K A P E N W D Y S Q G F	V N Q D M I R D H L P P P Q S D V L I L M C		
UniRef90_H3AUE0	L W Y T L D K A P D G W D F S Q G F	V T A D M I K E H L P P P G D D T L I L M C		
UniRef90_S4RM45	L W F T L D T A T E D W D F G K G F	V S A D M I K D H F P A P A S D C L I L M C		
UniRef90_B9EL14	L S Y T L D K P P Q D W K Y S S G F	V T A E M I R D H L P P P A D D V L I L M C		
UniRef90_A0A016W7W5	V W Y T V G K P P A N W L F S S G R	V D E Q M I K K H F A P S D N S A V L L M C		
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UniRef90_UP10002C2DF62	L W F T L D H P P E D W A Y S K G F	V S A D M I Q E H L P A P G E D V L L L M C		
UniRef90_F1QJ75	L W F T V D R A P A D W E Y S Q G F	V I S A E M I Q D H L P P P S D D S M I L M C		
UniRef90_T1JT43	L W Y T L L S K P E E G W K F S [L] G R	V D E N M I K D Y F P P A D D T I M M C		
UniRef90_UP100033306BB	L W Y T L D R P P [I] G W K Y S S G F	I T A D M I K E H L P P P E K S T I L V C		
UniRef90_F0WGH4	W F T I D R D A S P N W K Y S [V] G F	V S E D M I R D H P S P A H D A Q I F M C		
UniRef90_G6CE4	L W Y T L D R A E K D W K Y S T G F	I N E H M I K D N L F S P A D D V M T L M C		
UniRef90_K8Z5N2	L Y Y T L D R P P T K W K Q G [I] G F	V T S D M I K N N P P P S S S F Y L V M C		
UniRef90_C4WS55	V W Y T V D R P T D G W K Y S [V] G F	I S F D M I S E H Y P P A Q D T L V L M C		
UniRef90_A0A022T4H8	R W Y T I D S S S D D W K Y S T G Y I	I N A E M I K T H M Y P P A D D T I V L V C		
UniRef90_A5AB91	I W Y M L D H P P N D W Q Y G K G Y	V T P D V M R E R L P G P G P D T R I M L C		
UniRef90_W4KNM9	V F Y V L W N N P P A G W T G G [V] G F	V S K S D Q I S T H L P T D H D I K I L L C		
UniRef90_L1JWN9	I Y Y T L D N N P P K N W K G F T G F	V N E A M L A E T M P A A S G K S V I L M C		
UniRef90_A9SBU4	V Y Y V L N Q P P T E W N G G [V] G F	V T K D M I E K H C P P P A A D V Q I L R C		
UniRef90_P39865	W Y V L Q A N [R] E G W E Y S [V] G F	I T E S I L R E H V P L A S P D T L A L T C		
UniRef90_Q86ZC6	V Y Y M L D E P P S D W E Y G S G Y	V T Q E L L M K D K M P A P S M D S K V F L C		
UniRef90_UP10004623C80	V Y Y V L W N N P P P S W D G G [V] G F	V T K E Q I E K H L P P T D K D I K I L M C		
UniRef90_H1VL01	A F Y V L D K P P K E W V G N K G Y	I T K D L L K Q V L P E P S E N I K V F V C		
UniRef90_F9X9C0	V Y Y T V D K P S E N W K G G K G H	V T K E L L S E W M P D P S E G S K V L L C		
UniRef90_B8NNN6	V Q Y V L W S H P G E T W Q G Y Q G F	V N G D L I A K H P A A A L E N K V L L C		
UniRef90_W9WZE8	C F Y T L D N N P P E S W P Y G K G F	V T K E L L K E V P D P S E N I K I F V C		
UniRef90_G1X4J3	V H Y V L W N N A P E G W N G A [V] G F	V T A D M I K A W C P A P A P D V K I L I C		
UniRef90_M2UFW6	A F Y V L D N N P P E S W Q G G K G Y	I T K E L L K T V L P E P K E G E K I F V C		
UniRef90_S5DFH9	W Y V V G K T V R E A W R Y S [V] G A	I T E S I L R E H P P G P S D E T L A L A C		
UniRef90_P11832	I W Y V V E I A K E G W S Y S T G F	I T E A V L R E H P P G E G L E G S L L A L A C		
UniRef90_D0NC7	V I H V L S N P S A E W K G [I] T G F	V S K E M I E K Y M P E P S D D N L V C V C		
UniRef90_A5DQE4	I T Y F V D K A S A N W K G E T G H	I D K E E F L Q S N L P G P S K D S K V F V C		
UniRef90_I2FW31	V H Y F L W N E A P E G W K G G [V] G F	V S K E A I Q E K L P R P A S D I K I L F C		
UniRef90_V7AMZ8	V Y H V L W N K N A P P E W N G G [V] G F	V S K E I I K S H C P Q P A Q N I Q I L R C		
UniRef90_G3XTN4	V H Y V L S R P D D S W T G Y R G F	V S A E L I Q K H L P V A G P D N K M L L C		
UniRef90_G5B7C7	I W Y T L D Y F I S G W N Y G S G F	V T A H M I K E H P P P G E A I L I L V C		
UniRef90_I1HCH9	V F Y T V D K P S S D W R G G A G Y I	V S K D M V L K G L P P G P G E D S L I L V C		
UniRef90_F7W9R6	V Q Y V L S Q G D E N W N K G L K G F	V T A D M I K O H P P A A A D S T K M L L C		
UniRef90_S2JBJ2	V V Y V A V D K A P E N W S G V T G Y Y	V T K E V V E A N L P S P K E D S I I F V C		
UniRef90_P11035	V W Y V V E S E A K E G W A Y S T G F	V S E A I M R E H P D G D G A L A M A C		
UniRef90_A7TNL7	I H Y L L D K P S E N W K G G S G Y	V T P E L M K E K L P A P A D G V Q L L V C		
UniRef90_I0YXX2	V Y H V L W N Q A P P G W T Q G V G F	V T A D L I K Q H D P P A E D V M V L R C		
UniRef90_A7THS1	I T Y F I T T P D K G Y K G E S G F	V S K E F I A S N A D K P S P K S H V F V C		
UniRef90_Q5PY87	V Y Y V L W N Q P P E G W D G G I [G] F	V S K E M I Q N H C P P L A P D V Q I L R C		
UniRef90_A9S9K7	R Y T L T G T A S E G W R F S K G R I	V S E A M V K E H P E G G E E S L A L L C		
UniRef90_G8RI13	H T L A T P X N S E V W K G G [V] G F	V T E D M V M Q N F P S P S K D T L V L C		
UniRef90_R9AK70	V L Y C L N S P P A S W D G G I [G] F	V N K Q M I E E R F P S A D K E G K V V L L C		
UniRef90_C5DBN0	V H Y L D K P A R D T W T G G V	V T P D V M K S Y L P A P G P G A Q L L V C		
UniRef90_F6F400	V A A M Q R A P G T V W M G P E G P	V T R E M I L A A V P E I A S R R I H M C		
UniRef90_L8GJL0	L H Y T L D L D K G F T A D M V V A E H C P A P A D D V M I L M C			
UniRef90_UP10004411499	A Y Y V L W N N P P A G W D G G I [G] F	V T K D H I K D K M P T T S S H D K I L L C		
UniRef90_M3K4N8	V H Y F V D K V D G K W D H Q V G Y	V T K D F L E K N L E K P P S S D F K V F V C		
UniRef90_D5SW91	P E M D D W M V P D G W R R G E G R I	V T N S W L R E C L H D W P Q R Q V Y L C		
UniRef90_G8YBZ4	V H Y T L T Y P P E N W S G V S G Y	V S K E M I E K Y L P P P S S D G L L I L A C		
UniRef90_M2RA66	I H H T L S H A P P G W R Y S F G R I	V T A D V M K E Y L P A P G H G V Q L L V C		
UniRef90_G8BRA1	V Y Y V V D N P S E D W T G G [V] G Y	I T A D V M K E Y L P A P G H G V Q L L V C		
UniRef90_A8N1Y9	I F Y V V L W N N P P V G W K G G A G F	V T K E H K E L P N P A E N S K I L I I C		
UniRef90_K8EMU6	V W Y T V D S K K E W K Y D V G F	V T K E M I E K H P T P A D R F Q I L V C		
UniRef90_UP10003741EA	L W Y T L D R P P S D W K Y S S G F	V S A D M I K E H P P P G E D T L I L V C		
UniRef90_B7K6A1	F S I T R S S V G E P W W G F T G R L	V T D I L V Q A I A P D Y K E R L I F V C		
UniRef90_C4R6Z9	F Q T L D A P P A N W E G G [V] G F	V T E E M M R T V L S E A N D S N K L L C		
UniRef90_A0A011UV9	V P L S Q P A R G D D W H G A A G F	I H D V V F R D Y H P E P E N C E Y Y L C		
UniRef90_UP1000262651E	V T H V L S R R D G R L D G D R V R	H W V T E H A P A Q G A H Y Y L C		
UniRef90_Q6BZ95	V H Y T L T H A P T G W E G S T G F	V T K E M V Q K H M P S P D A Q N K L F I C		
UniRef90_D2UY67	L F N V L N E P P A G W T Q G [V] G F	V T Q E L I E K Y L P A K G D K M N I L M C		
UniRef90_F8NVT4	L H Y V L G K A P A T W N H S T G R I	V N D T L L S E H L P S P S K D G L L V L I C		
UniRef90_UP1000373481E	L A L S D P Q P E D N W N G L T G F	H N V L F E Q Y L R D A P E D C E F Y M C		
UniRef90_B8MJW2	V V Y T V S E P E E G S P F R K G H	V T K E L L K E V L P A R T D K V F V C		
UniRef90_J9MS38	V K Y T V S V R P K E G S A M R E G R	V D R E L L E E V V P K G T E K V F V C		
UniRef90_W8U0R0	V A L S D P Q P E D N W T G Y T G F	H N V L L E N Y L K P A P E D C E F Y M C		
UniRef90_A1CPH9	I H H T L T K A P E T W A G N R G R I	I A E A L L R E Y A S P D E E S M V L I C		
UniRef90_A1DDE2	I T Y V L S H P A D D W K G E K G H	V N E E I L H K H A F E P G E K S V A L L C		
UniRef90_H1VUZ3	I T H V L S H P S D E W K G L K G H	V D E K V L K E S L F P P S G D S A V F L C		
UniRef90_K2R67	V H Y V L W N N P P D G W T G V G F	V T A D M I K S K L P A P A K D V K I L V C		
UniRef90_W8X926	V P V S E A A P G D W T G R T G W	H N R A V M D D L P D L S G H Q V Y A C		
UniRef90_A0BEH5	V H F T V D K F D E N W K G L K G H	V N F E M M A S T F P K P T E T T L G V L C		
UniRef90_Q53028	I P V L S E S S S P A D W H G E T G M	V T D A L L R W R A E L A H D V Y L C		
UniRef90_G2G904	L A H V L S R E P R E A E V L S G R I	D A E R L T A L L V D V P T A D H W W L C		
UniRef90_F2G4N4	L V S M T Q A E G T S W M G P Q G R F	V N F E V P D I L A S K T A H C		
UniRef90_M7XKB8	V T H Q L S K P S A S W T G P K G R L N	H T V L S K Y L D K N A E A T H F F L C		
UniRef90_U2YQD5	V A I L S E P R P G D D W E G P V G F	V H A V L R E R F L H P E P D A C D Y Y C		
UniRef90_UP10003735C8C	L I L L P S R I D G S A W P G P S G R L	Q S S H L V E L A P Q A R L P V Y L C		
UniRef90_M5SYA1	I A L S E P A P E D N W E G Y V G F	I H Q V L L D N Y L K P D P T E I E Y Y C		
UniRef90_S0FZJ4	V A L S S P E K E D N W T G P T G F	H V J H L I D S Y L K D D P T E I E Y Y C		
UniRef90_C5FNV6	I V H V L S N P S S D W K G L R G H	I N A D I K E H S F E P G K R N V A L C		
UniRef90_V9ZVIO	V W Y R T P A E Q D L Q G K D Y D F S G T	M A L E E Q V T D L P A K A H Y Y F C C		
UniRef90_UP1000366CF9	F M I E E R S S R E S W F G H M G R I	D A V R L P L L A P D F R D R E I F C C		
UniRef90_UP100037EFB4B	H A L S D P Q P S E D N W T G L T G F	H N V L Q N E Y L N P A P E D C E Y Y M C C		
UniRef90_UP100047EE34E	I A L S E P L P E D N W T G Y T G F	H N V L F E N Y L K E A P E D V E Y Y I C		

130 140

QUERY	G P P P M I Q Y A C L P N L E R V G H P K E R C F A F
UniRef90_Q5BJ68	G P P P M I Q F A C Q D N L T K L G Y P E A G R F A Y
UniRef90_F1NZY9	G P P P M I Q Y A C I P N L D K L G Y A K D M R F A F
UniRef90_H9G8P3	G P P P M I Q F A C Q P N L E K L G Y A K E S T F A Y
UniRef90_H3AUE0	G P P P M I Q F A C N P N L D K L G Y Q Q D M R F A Y
UniRef90_S4RM45	G P P P M I Q F A C Y P S L D K L E Y T Q A M R F S Y
UniRef90_B9EL14	G P P P M I Q H A C L P N L S T L G Y K T E N T F T Y
UniRef90_A0A016W7W5	G P P P M I N C A C I P S L D K L G Y D S E N I F L F
UniRef90_C1C153	G P P P M I K F A C I V N L E K L G H T E D Q M F S F
UniRef90_UPI0002C2DF62	G P P A M V Q L A C H P N L D K L G Y S Q R M R F T Y
UniRef90_F1QJ75	G P P P M I Q F A C N P N L D K L G Y R Q S Q R F A Y
UniRef90_T1JT43	G P P A M I R E T C Q P L L D K L G Y N E S K R H V F
UniRef90_UPI00033306BB	G P P A L I Q S A A H P N L E L L G Y T K D M I F T Y
UniRef90_F0WGH4	G P P P M I T Y A V Q P A L E R L G F E K S M L F A F
UniRef90_G6CZE4	G P P P M I N F A C Y P N L E K L G Y S E N L R F A Y
UniRef90_K8Z5N2	G P P A M L K L A V I P A F E K E G I A E N Q Y Y T Y
UniRef90_C4WS55	G P P P M I N F A C L P N L D K L G Y D A
UniRef90_A0A022T4H8	G P P A M I N F A C T P N L D K L G Y D
UniRef90_A5AB91	G P P P G M V N A A K K G L A G L G F Q A D Q I F S F
UniRef90_W4KNM9	G P P P G M M A A M K K Y L D E L K Y A A D Q V F L F
UniRef90_L1JWN9	G P P P M I D F A V R P N L D K L G F S K S Q M L A F
UniRef90_A9SBU4	G P P P M N R A I A G H C E A L G Y T K E M Q F Q F
UniRef90_P39865	G P P P M I Q F A V Q P N L E K L G Y D
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UniRef90_B8NNN6	G P P P M V A A M K K T L Q G M G W A G D Q V F L F
UniRef90_W9WZE8	G P P G M Y K A I L T G I L K E L G Y A K D Q V F F K F
UniRef90_G1X4J3	G P P P M V S A M K N H C K A L G Y E P A Q V F C F
UniRef90_M2UFW6	G P P G M Y K A I S G G Y L K E L G Y S K D Q V Y K F
UniRef90_S5DFH9	G P P P M I Q F A V Q P S L V K I G Y D
UniRef90_P11832	G P P P M I Q F A L Q P N L E K M G Y
UniRef90_D0NJ7	G P P P M M Q G E L L Q G L L K D M N Y T S T Q V F K F
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UniRef90_V7AMZ8	G P P G M N I A M A T H L D E L G Y T S N M Q F Q F
UniRef90_G3XTN4	G P P P M V A G M K K V L L D L G W T M D Q V F L F
UniRef90_G5B7C7	G P P P L I Q T A A H P S L E Q L A Y T K D M I F T Y
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UniRef90_Q5PY87	G P P P M N K A M A A H L D A L G Y T S Q M Q F Q F
UniRef90_A9S9K7	G P P Q E L I Q E A C I P C L K H K Y E K S A C L E F
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90 100 110 120

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V H Y V L D K A P E G W T G G V G Y V	T A D M I T K W L P E A A P D V K L L L C
L A L Y I E D K P G F A T E R L V Q A	G R M R L A E W P F N A A L N A E Y Y L C
V N Y V V N R P S S N W K G L R G Y V	T K E M M Q R C L P S P S V D H R L L I C
I P V S E A L P E D G W T G R T G F V	H Q A V L E D F A D L S G H Q V Y A C
L P A L S E P G D E D W D G E T G F V	T D V L K R A G P D L R G A D A Y V C
I N F V L D N P P K G W S D L K G Y L	T A S L L K S K L P S P G S D T K I F V C
T T F Y S E P □ A R D R A G E T H D V	D G F V T V D W L K A P □ A D A D F Y L C
V I H W L E S D H G L P T D T G L R N L	V T P S P D S D A Y L C
P V L S D P A P R D A W Q G R T G F V	H Q A V V M A D Y P D L S S M Q V Y A C
A Y W S P D □ K P G K D F Q H V G H I	S K D L L Q A I □ L P □ D E Y D C Y L C
R T Y V V S K T T P E N E G T Y Q Y I	T K A I L S Q V M P L N E R N V K V L V S
V V Y V L D N P P E G W K G A S G R I	K D D L L K T H L P D P S R N I K I F V C
V I H I L D D A P M W N Q W G H S G L L	N H D M L E R I P N W G P D N T T Y L M C
I L Y L F S Q E S □ D S P □ L N G R I	D G E R L N K S L L D F T T F D Q A F I C
V P V I S N E A Q D A W T G R T G F V	H Q A V L Q D F P D L S G H Q V Y A C
V H Y T I D K Q E P N W T G D V G Y V	V S K D M I E K L L D D A N D T A V L M C
A V F Y E E V S K K D K Q G F K G R A D	E K D Q V V L P D A D Y Y I C
P V L S E P G M D C D W T G R T G W V	H Q A V V D D F P D L S G Y E V Y A C
F T V Y E V E D A Q A D A T G R L I	D L S Q I P T A L L P K D A D Y Y L C
F C Y E A P T E K D R □ D G K F D Y I	E D L A W L K E I L P S N E A D F Y F C
I F Y T K A P G A R A W A Y G K S R L	N F A M V Q N I I G S D A D H I G M C
V R T S V D Q A P E G Y A G R I	G T T A Y L C
V H H V L H E A S D D D I R E G K R L	D K E M L A E □ L P K P S P D V A A F H C
I P V L S H A A D D Q A W E Q R G F V	H E V V H A H L V G G G D D A D V Y A C
V F H S L T T S P P W Y R W G Y R G H I	T T K V I E E T M P S P N D K A I L L V S
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V I Y L D K T D R D D W E G E I	G I G Y V T L D L M E K Y M P S P E E G V Q M I L C
L I T M S R P S G T D W K G A R G R I	T K E W L T Q M V P D L A S R R C H C
V H Y V L D R P P E G W T G G V G Y V	V T A D M L Q K L L P K P A D D V K I L L C
W V E A R D K Y Q P W T G Y Q G H F N Q L M L	G L M A P D Y L E R E V F C C
I V H T L T R P S G D W K G L K G R I	G E G L L R Q Y A A P A A G D S L A L I C
W Y R E P L N A E G I □ I N N S S T G L M D L A Q I K D S L P T N F G	H F Y T C
L A L S D P Q P E D H W T G L T G F I	I A N V L Y E Q Y L R D N P E D V E Y Y M C
L V H V L S R E P R D A E L F S G R L	D R D R L H R L L A P A E V F D H V W L C
V T L C D N V S N N S Y Q G L T G R L	D A Q V L L Q K N I P D F T E R E V F V C
Y K I A V W K P D N S W K G H V G F I	T D L V K Q D Y P D A S Q C S A Y L C
I A L S D P L P E D N W D S Y T G F I	H K V V L D N Y L K E A P E E I E Y Y L C
Y F L T Q D T M R Q R D K V V Y I S R L	S R E L L R R E L P E N L N Q T R V V V C
V Y V T I D R P E E G W D G H V G F V	P A Y L E E L N P N P Q N K V T I T C
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U n i R e f 9 0 _ U P I 0 0 0 3 4 5 5 A 0 6	T T V D P G G E T P D W K G Q V G F V
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UniRef90_L8WU70	G P [L] V K R P W K N N E F E E V V L I I A G G G S G I T P M Y Q L L T H A	
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UniRef90_UPI00036211E2	P A G D F M L D T A K P T P V V L V S V G G V G Q T P I L S M L E H L	
UniRef90_UPI000443FE56	G T F S I L R P I R D V T H L Y L L A G G T G F T P M V R L I S L A	
UniRef90_J3BTW3	P A G A F T I I D A A E T R P A V V L L A A G I G I T P L L A M I R H V	
UniRef90_M2PT65	P S G G F A I P L V H S R P I V L L A A G I G I T P F L S Y L E T L	
UniRef90_N0B1Z1	G P Y G D F T I H K T Q A T P A A F L I I G G I G I T P V R S M I A Q S	
UniRef90_M4X3V7	A I G P [L] G D F S Y V T K P A E K Y L F I S A G G S G I T P M M S M T R D	
UniRef90_UPI0003A452A4	G P F G D F H L T A L P C E R P L L S A G G S G I T P M W A M L R D E	
UniRef90_W0A0V5	G P F G E F K I K A S D T E A E M L F I I G G G A G M A P L R S I I F D Q	
UniRef90_E4TFY9	L G P F G E F K I K A S D T E A E M L F I I G G G A G M A P L R S I I F D Q	
UniRef90_UPI0003813722	G S F H I T P A A H H D V A S P R H V A L F S A G G C I T P M V A M S H W L	
UniRef90_A1BBH3	A M P P M G K F F T P I D P G K Q Y L G F A A G G S G I T P V L S I I K T V	
UniRef90_B8K422	D P D G R F F L H I G N K Q G P M L L S A G G S G I T P M M S M L R Y	
UniRef90_Q8ZCR0	P R G D F F L D V S P D T P V A L I S A G G S G I T P M L S M L N T L	
UniRef90_C6B4R5	G P [L] G H F V R P E T S G R K L L L S G G G S G I T P V M S I L R E I	
UniRef90_W8HZS2	A F G P [L] G D F S F V R H P G E K Y L F I S A G G S G I T P M M S M T R W M	
UniRef90_A8HRE6	A V G P M G D F T C A Q H E A P K Y L F I S A G G S G I T P V M S M A R A	
UniRef90_I2JQ82	G P A G N F W L R D G R G P I I C V G G G S G I L A P I V S I L E Q A	
UniRef90_UPI0004108E85	V L A P S G T F V P K S L D S D F I L L A A G G S G I T P P M M A I C K S A	
UniRef90_Q2BY81	P S G D F F H L G V H T D K L L L L S G G G S G V T P P M M S M L R Y	
UniRef90_H5UI19	F T G P H G S F F L R E A D R P V V L L A G G T G L A P I L S M L R K M	
UniRef90_A0A017SVL6	V L G P S G S F T V T V A L E P A R R L V L L G G G S G I T P L L S I I A K S V	
UniRef90_UPI00037B2934	G P F G R F F V V R A S D P Q P V I L I A G G G S G I S S P R S M I L L D L	
UniRef90_A0A028V689	P L G S F T L N S D T H R P L V L V G A G G V G I T P P L L S M L R E Q	
UniRef90_Q39ON9	G P Y G R F F V V R R S A A L P M I F M A G G G S G I L S S P R S M I A D L	
UniRef90_UPI000469244E	I R G P Q G S F Y V L R A V S R P L L F L A G G T G L A P F L S M L E Q L	
UniRef90_Q1QYU6	G P V G D F N V I D Y P A D K V L M L S G G G V G V T P L L M S M T R W F	
UniRef90_A0L029	P A G D F T L A V Q A E T P V V L I S A G G V G Q T P M K S M L N Q L	
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UniRef90_L0LVX9	A M P P M G A F N T A L E P A K H Y L G F A G G S G I T P V L S I I K T V	
UniRef90_E4TQX8	G P Y G E F F I N E S D A E M I Y I I G G G A G M A P L R S H I F H L	
UniRef90_J9E3G9	G S F A V V K S T K K A E P K S H V Y K N I G M I A G G G S G I T P M L Q I I S A I	
UniRef90_B9CEL6	A F G P S G V F T P A S G P A E K V L Y L S A G G S G V T P L L M S M T R A A	
UniRef90_N8RZF9	P T G N F Y L I D S S K R N V F I S A G G V G L T P M I A M L N Q L	
UniRef90_C3AAJ1	P A G D F V L N M D S N L P V V L I S G G G V G I T P M M S M L N T L	
UniRef90_UPI00046F6DCE	P A G V F T L N M E E D A P I A L I S G G G V G I T P M M T M L E S L	
UniRef90_I3VT84	F I R G P Y G H G F P V E D K D K N V V I A A G G T G L A P V K S I I N R Y	
UniRef90_A3QBU3	G P A G A F N L I D I P A N R Y L F L S A G G S G I T P M Y S M S R W L	
UniRef90_A1ZKH9	G P Y G E F H I N P T D R E M I Y I I G G G A G M A P L R S H I F H L	
UniRef90_K8PSM3	P Y G E F S L N E E S D C P A I L I A T G T G F A P I K S I I E S N	
UniRef90_M5DUJ8	G P Y G D F Y L R N S D K P L I L I A G G G S G I L A P I L A I I L E D A	
UniRef90_L8MDH4	G P Y G Q F F V R T S Q P G D L V F V A G G G S G I L S S P Q S M I L D L	
UniRef90_L0E461	G P L G S F I L L D E Q S E R P R L F V V G G G T G F A P L K G M L D H L	
UniRef90_B1Y2W0	G P Y G R F F V V R R S A G K P M L F M A G G G S G I S S P R S M I V D L	
UniRef90_UPI00047CB039	P L G T F V I P R E D S E R P M V F M A G G G T G F A P V K A I V E H F	
UniRef90_UPI000345C66D	V M H P L G G F P L T P D Q A R H V A V A A G G S G I T P V L S I I T T T	
UniRef90_UPI00047DF184	F L L D R T E S P V V L L I S A G G V G A T P V L A M L E A L	
UniRef90_UPI0003B3BA7E	Y P P A G D F F F V D R N A P V V L V S A G G V G I T P M Q A M L E E T L	
UniRef90_M4S4N5	G P L G S F Y L R E P R R P M L M L A G G T G I T P M I A M L K Q Y	
UniRef90_D5H6Z5	K P S G N L H E L R D L D R D V V F L S T G T G I T P M I A M L K Q Y	
UniRef90_O85675	P L G S F Y L R E V E R P V F I A G G T G L S A F I L G M L D N I	
UniRef90_W9GY55	G P Y G T C L R R E N R T G P L V L V G G G S G M S P L W S I I L Q D Q	
UniRef90_S5YAY32	A M P P M G K F F L D P E A Q K T Y L G F A G G G S G I T P V L S I I K T V	
UniRef90_A0A024IMJ4	L T I S A P R N N F A L H E S A G H S V F V A G G G I G I T P I L C M L E R L	
UniRef90_W4LIM4	P S H Y K T Y Y L F G A G G S G V T P L M S I I L R T V	
UniRef90_UPI00030B49B5	G P S G A F G L V E E S G P T L M I A G G T G L A P M L S M L E N L	
UniRef90_FOLYA5	F L Y A P A G D F F Y V E R E R P V V L I S A G G V G A T P V Q A M L Q T L	
UniRef90_N6USP9	G P L G H F I R P S A Q K Y L F L S G G G S G I T P V M S M I L R E L	
UniRef90_A5FYA9	G P Y G T C F R R E G R T G P L I L V G A G G S G M S P I W S I I L N D H	
UniRef90_D8NVH5	G P L G T A Y L L R R K N A D P V I C I A G G T G L A P I L S I I L R G M	
UniRef90_V9ZJU6	R L T L S G P M G S F Y L R H G E R P L L M L A G G T G L A P L L S M L H T L	
UniRef90_E4RQ48	A L A P A G N F F L K R S Y G R N L L L I G A G G S G I T P L F S M I L K T V	
UniRef90_M4K3U5	G P V G L F N A I D F P S P K V V L Y L S G G G V G I T P V M S M A R W F	
UniRef90_W4Q2J8	P A G D F V L D S E N S R P V V L I S G G G V G Q T P M L T M I L K A V	
UniRef90_H2FYU6	G V F Y L R P V A R P V V L M L A G G T G L A P F L A M L E E L	
UniRef90_L0MG52	L H G P Q G S F Y L R N V T R P L L F L A G G T G L A P F L S M L E Q L	
UniRef90_B1JTP6	P D G R F F T H L N H G K Q Y V A F S G G G S G I T P V L A I V K T T	
UniRef90_U7GH67	F L V P Q P A K P V F I A G G S G I T P V L S Q L E T M	
UniRef90_G9Z7D0	G L F G Y Q P E A G H C G N Y L A I A A G G S G I T P M L A I V E S T	

50 60 70 80

UniRef90_V2JFH4	I A A G L T N P I H L Y F G I R S P R D A Y G L D W L N E L A Q R H P R L R
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UniRef90_X1L3I1	I D T R D R Y K N I D I Y G A R S P T D L C F K Y D L D A W D K D K T V N
UniRef90_M3CN21	L L N P S D S T K C L V L D G N R L E E D I L C K P E L L D G L A A G N D H R C K
UniRef90_U1I2Z0	M Q N P N D Q T K C I I L N G N R Q F E D I L C K P E L L D G L A A G N D H R C K
UniRef90_R4T229	L E H G T G K V V L L Y A N R D E S S V I F A R E L A D L A A R Y S D R L V
UniRef90_R8AMA7	A A R G H Q Q P V H W L H A A E N G A Q L A F K D E S R A L C H A H G F S H H V
UniRef90_R1DYL8	I A E E G G S V P K M V F L H G A R N G S E Y A F G E H L R A L S A V V P S L K S
UniRef90_UPI0003A95FCB	R R Q P G R K P P I L L S F G C A T P E Q L F C L D D L E L R R Q W L P N L T
UniRef90_L8GGN4	F E E N E N R P K I I L I A A N R R E E D I I L F R D E L A S L Q T R F P S H Q
UniRef90_UPI00027FC15F	M K D P D D H T V C H L L F A N Q T E K D I I L L R P E L E E L R N E H S S R F K
UniRef90_N8ZGC6	L E Q G D T R T I Y L F Q G A R D V S E L Y N R D K F E Q L V K D Y P N F R Y
UniRef90_TOEZU6	R D L A D R A P E S R L F Y A N L N S R T H A F R D R I E T L L K Q R L P T L D
UniRef90_D6Z5A4	L K G R Q S K R K I S F W Y G G R C L R E V F Y L N D F E Q L A R E F P N F F H
UniRef90_C1DBM5	V H V G N S R P M V L Y W G A R Q R N D L Y M Y E L A E Q W A R E L P W F S F
UniRef90_UPI00035FBDFC	A A L G K P F A L H Y C A R D A A R A A F L D E A G A L L F P A Q L Q
UniRef90_UPI000474A2D0	A S Q H H A A P V T W L H A S E N G Q Q H A F A A E V T Q A G K N L A H F S Q
UniRef90_UPI0002F0ECC6	Q H E N R P C E H Y F T T E P D T P F R G E L K A S L Q
UniRef90_J3UBN6	I A K G I T R P V T L Y W G G R R P Q D L Y M D D I L A Q Q W A R D L P F F T Y
UniRef90_G0UVX1	L S K P D N V E S I R I I Y A A E E Y D T L T Y R S I L E R F T Q Q Y P D K F A
UniRef90_K4MDM4	T D L K L D T D V V L L I C S D R T E E D M M V F W K E L S E M I R Q N P R L T
UniRef90_G3XZI0	L L T D G D K T K I R V I D A N K T T S D I I L L R D Q L D K F V K D S A S Q L E
UniRef90_L8WU70	L A Q P E D K T K F K L L F G N V T P A D V L L K E E F D Q L K A K H G D R F D
UniRef90_W0MFV4	A Q D H A D F E L H Y C V R S A E R G A F I Q R L Q Q S A F A D R I T L H
UniRef90_UPI00036211E2	I S T N S P R E V V V W V H G S R T P Q V H A F R E P V A E L A A R H E Q V Q Q
UniRef90_UPI000443FE56	L R E V D T I R T T K L L F F N K Q E E D I L W R C Q L D D L A A N D E R F Q
UniRef90_J3BTW3	V Y E G R R I R P T W L I Y S A R N K S E R A F D T E L Q A L A E A S G G V V K
UniRef90_M2PT65	A E L P T T A P E V V L H Y G N R D S A N H A F R E R L Q A L T A V L P T V R V
UniRef90_N0B1Z1	L H D R T A H E I T L L H A C T R F E D F P K A E F E Q L A S K H R R I T Y
UniRef90_M4X3V7	A R Q G A E F E L H Y C A R S A A Q A A F V A H L A Q C E F A
UniRef90_UPI0003A452A4	L G D R D P D T D I A F I H C A R S R P N D I F R W E L E Y K A R Y M P F F L G
UniRef90_W0A0V5	L A K R P D A D I R F I H S A R S P Q D V I F A G E L A A L A E A H A G L R H A
UniRef90_E4TFY9	L I R L N S K R K I T Y W Y G A R S L R E F Y S E D F E L L Q N K F D N F K W
UniRef90_UPI0003813722	L A H R P D V E I H F I H S A R D E N N I L I L H A E V H Q L V A R H P G F H
UniRef90_A1BBH3	L A R E P P S R F T L V Y A N R Q I N T I M F R E E L L E D L K N L H L G R F S
UniRef90_B8K422	U S D H D Q V N D V V F Y H Q C R S V E D I P Y K E E L L D E L K R K H Q G L T
UniRef90_Q8ZCR0	Y S Q Q H A A P V H W L H A A E N G R V H A F A D E V S A I A A K M P N L S R
UniRef90_C6B4R5	A D S C E P A D V V F M H A G R T P Q D L I F R D E L L A C I A R R L K G R L H
UniRef90_W8HZS2	A D C V P E T D V T F I S C A R R P D D L L L F R S E L L E V L A R Q M S G N L G
UniRef90_A8HRE6	H A D L A T G A D I A F L H S A R T P A D I I F R E E L L M A R T T P F R F A
UniRef90_I2JQ82	A K Q P H G R P C V M F F G A R S Q A D I Y C L D R I L Q K I G E A W D G A F Q
UniRef90_UPI0004108E85	L S Q G S G K V V L V Y A N R D E R S V I F G A A L L R E L L V D K Y P D R L T
UniRef90_Q2BY81	L S D H D L V R D V V F Y H Q C R T E A D I P Y L E E L R A I E E K H P S L D
UniRef90_H5UI19	H S D N S R R K V H L I Y G V S T D T D L V A V D E I D W F V G K L P G F T
UniRef90_A0A017SVL6	L A R E P P S R V R L V F G N R S W D E V I F R D A L E L V A A Y P G R F A Y
UniRef90_UPI00037B2934	L E Q G D T R P I T L V Y G A R D R A E L Y Y H D E F T D D L A E R H A N F T Y
UniRef90_A0A028V689	V A L G Q G R R I H F F Q G A R T T L A D L P F Q A E L R E L L M Q G A D G L L Q
UniRef90_Q39ON9	L D G G I T A P I T L V Y G Q R N A K E L Y Y H D E F R A L A E R Y P N F T Y
UniRef90_UPI000469244E	V Q N G S S Q P V H L I Y G V T H D H D L V K L E Q L E H Y R E R L A N F S Y
UniRef90_Q1QYU6	F D T N A N V D L Q F V H H A S A T P R D I F H R E L E H I F S R L P D F H L
UniRef90_A0L029	L K L R H P S T V T V L H A C E H G G V H G F K S A I K N K L L G Q H A N L A S H
UniRef90_H7C0R7	L K V P E D P T Q C F L L F A N Q T E K D I L R E D L E E L Q A R Y P N R F K
UniRef90_L0LVX9	L A R E P R S V F T L V Y A N R Q I S I M F R E E L D D L K N L Y L G R L S
UniRef90_E4TQX8	F H T Q G T D R K V S Y W Y G G R S K R E L F Y V D H F R D I L E K K N P N F F H
UniRef90_J9E3G9	M K D P D D C T K V S L I F A N K D E S D I L L R D E L D R L A A E H S E K F R
UniRef90_B9CEL6	I D L G L N R D I V F I V H S A R T P A D I V F R D E L E R S G E A D R L K V I
UniRef90_N8RFZ9	V T L L D M P Q P A S F I H A C R S S Q V H A M K Q H I Q E O K T K F P R L S T
UniRef90_C3AAJ1	I E Q A S N R K V Y F I H A A L N S N V H A M K E Y V Q Q V A S D Y E Q V E A
UniRef90_UPI00046F6DCE	V N V D S K R D V T F I H S A R N E E Y H A F K E E Q M K L C S Q L E N G H Y
UniRef90_I3VT84	Y R N P K E I K N L N I L M G F K S P K D I L F E D E I K K W K E K F D V L L T
UniRef90_A3QBU3	T D T Q L G S D I A F V H S A K A K E D L I F H E A L L K M A Q R H P N M A L
UniRef90_A12KH9	F H E K T K H R K V S Y W Y G G R S K R E L F Y T D H F R K I E E Y P N F Y N
UniRef90_K8PSM3	I R Q G S T R P L H Y W G A N T E A D L Y L L D L A R S W A E T H A W F S E
UniRef90_M5DUJ8	L Q F K N P R D V T F F L F G A R T Q N D L Y C L D Q I I I R I Q D N W A G K F E
UniRef90_L8MDH4	L E R G D T R H M T L F Q G A R T R A E L Y N R E L F E G L A E T H G N F T Y
UniRef90_L0E461	A E Q G Q L D H P L H F W G A R D A Q G I Y A A D W L R E R I J A Q H G D R F R Y
UniRef90_B1Y2W0	L E G G C T L P I T L V Y G Q R S R D E L Y Y D A E F R A L A E Q H P N F S Y
UniRef90_UPI00047CB039	L A L G T R R P I E V Y W G A R N A A D L Y L L E L A R G W E R S A H A L R F H
UniRef90_UPI000345C66D	L A A E P S S T F T L V Y G N R T A R D V M F L E E L Q D V K D R Y P Q R F Q
UniRef90_UPI00047DF184	A E A H S E R E I W W L H G A R N G R E H V F F A A E A R A L T A T L P N V R S
UniRef90_UPI0003B3BA7E	S A A D Y N H P I H Y V H A C E N V A Q L S F A E R L Q E I I Q Q E R P F R Q H
UniRef90_M4S4N5	A A K G A N G H A V R L L Y G A H D A A D L L V E V E R I E A L A A R I P G F T F
UniRef90_D5H6Z5	L S E G S G R A A F L Y G E R T Q E D I M Y R E T L D H L S A G R D N
UniRef90_O85675	A E Q P N Q P S V H Y G V N T E A D I L C E Q K R L T T Y A E R I K N F S
UniRef90_W9GY55	I G C G E P S R P I R F F Y G A R Q A R D L F Y L D R F A E L L M D R L P D F R F
UniRef90_S5YAJ32	L A R E P N A T F T L V Y A N R Q I N T I M F R E D L E D L K N T Y L G R F S
UniRef90_A0A024IMJ4	S A S G R S A D I L Y C A R S R A D A A F V E R L N E
UniRef90_W4LIM4	L A T E P H S H V F F Y G N R H E D R I I F R P E L Q D L D R E Y G D R L Q
UniRef90_UPI00030B49B5	Q T A R E D T P I R L V F G C T R E A D I L F H L D E L R A R Q S F M R T L D
UniRef90_FOLYA5	A Q G D K P S V T Y L H A C N S P A Q H S F V D E T A T L I A A Q K W Q Q H
UniRef90_N6USP9	A D T F E P A D V V F L H A A R T P K D L V F R D E L T C H A N R I K D R L Q
UniRef90_A5FYA9	F A S G E S R P V Y F F Y G A R T R A E L D F H L D R I A Q L A D R H P E E F I
UniRef90_D8NVH5	A D A G M A N P V H V F G V R S P A D V Y G T H W L D A L R E R L P N L H
UniRef90_V9ZJU6	Q T Q G S Q R P V M L L Y G V T R D C D L V K T D A L D T F Q Q L T G Y R W
UniRef90_E4RQ48	L T Q E A R S Q V A L I Y V N S S R E E T I F L E P L T H L A Y Q Y S S R F K
UniRef90_M4K3U5	Y D T R A N V D M T F V H S A R S P K D I Y H R E L E H M A S R I D N F L H
UniRef90_W4Q2J8	A N H Q P N R K V T Y I H A A I N S K Y H A F N E E V T N L A N Q S E N I S Y F
UniRef90_H2FYU6	K V K G C D Q P V H L I Y G V T N D D D L V G I E A L E R F A A E I E H F S F
UniRef90_L0MGS2	A Q D G V Q R P V R L L Y G V T H D C D L V K L D Q L D D Y R S R L L G D F S Y
UniRef90_B1JTP6	L E L E P R S T F T L I Y V N R S V D A I M F A E E L L D L K N R Y M N R F V
UniRef90_U7GH67	A A S H Y P A P V T L L Y F V R T G N D I G R E K L E A I A A R Y P G L T
UniRef90_G9Z7D0	L A T E T E S L F T V I Y G N R S S Q S M M F R Q T L A D L K D R Y P T R L Q

90 100 110 120

UniRef90_V2JFH4	I D V V S T L P G S D R D L R T G L V I T E A V E Q D Y G D L T G W R A Y L C		
UniRef90_K9VA87	V T V T R K K P G Q T W L G Y S G R L N Q A I L Q L M V P D L G S R T A Y I C		
UniRef90_X1L3I1	M V T T V D K G D E T W T G R E G F V P T V L E Q V A P S A R D T V A I V C		
UniRef90_M3CN21	L V Y T L T Q A G E G W E G R R G R I S R E L L G E F V G R D G E A M V L I C		
UniRef90_U1I2Z0	L I Y T L T K A P D D W C G L R G R I D A N V V D Q H C V K S Q D A L V L V C		
UniRef90_R4T229	V V H W L E S L Q G L P T E A H L R A L V A P Y T A H E A F L C		
UniRef90_R8AMA7	W L R E P L A S D R P A E D Y Q H Q G L M D L Q P L R A T L D Q A Q M H Y Y F C		
UniRef90_R1DYL8	H I A F S E P E L S K D Y D S A G Y I D T A V F K K Y L P E D L D A D V Y M C		
UniRef90_UPI0003A95FCB	T R V S V D H H A S G E L L A G N P V D A I S E G D I A H E S A V A Y L C		
UniRef90_L8GGN4	V H H L L S Q P S E E W A G H R G R I S Q E L L A A S L P P P G E V S A V L L C		
UniRef90_UPI00027FC15F	L W Y I P A L N A P K A E D Q W Q G F T G F V H E A V A D Y F E N K C S G H K A Y L C		
UniRef90_N8ZGC6	V V I N C Y N Q P G D E I P G R D F Q L H G Y L S A D V V A D L R R A R F Y L C		
UniRef90_T0EZU6	L S L S R P R P E D N W T G P V G H I H K T L Y Q N Y L K D A P E D I Q Y Y A C		
UniRef90_D6Z5A4	V P V S E P A A A D N W T G R S G L V H Q A V L L D D F A D L S A H E V Y A C		
UniRef90_C1DBM5	R H F D A A P E T R L D L D Q A L A N P S S R R H L Y V C		
UniRef90_UPI00035FBDFC	H I W Y R T P E I N D S G R F D Q Q G L M D L S Q V S A A I A G E N Q Q F Y L C		
UniRef90_UPI000474A2D0	V P V I S D T P E D A W T G R I G F V H K A V I Q D Y P D L S G H Q V Y A C		
UniRef90_UPI0002F0ECC6	C D F V L L N N P P E G W T G G V G F V D K K S L Q V L Q P P S S E P L I A I C		
UniRef90_J3UBN6	V F Q T L T R A S E N W H G L S G H V N E S I L R K H M F E P S D E N V A I L C		
UniRef90_G0UVX1	I T H V I S K P D E N W H G L S G H V N E S I L R K H M F E P S D E N V A I L C		
UniRef90_K4MDM4	V I Y T V D K G D K N W T G S T G F I T K D F L K K E I A P A S D K V I M V F V C		
UniRef90_G3XZI0	L D E Q P E T A L N A P Q V L A P E P D T H L Y V C		
UniRef90_L8WU70	UniRef90_W0MFV4	UniRef90_UPI00036211E2	H I F Y D K P A A S P G Q E Q G H Y Q G I V D L N T L N G G L P A G A D Y Y I C
UniRef90_G0UVX1	V E Y I L S E P S A S W T G R K G R V D E T L L N D L L R P H G S K C Y V C V C		
UniRef90_J3BTW3	L V I R L L S D T S D T V I A G E G Y R V D M I L L N R V L P F N D Y D F Y L C		
UniRef90_M2PT65	V D H Y S R P A P E D R Y D A R G R I S A E S V D A A L I R K R A R F Y L C		
UniRef90_N0B1Z1	V P V A S E S A P D D W H G E R G R V D E A A M V M K Y V P D L N R P I Y Y L A		
UniRef90_M4X3V7	T R V Q C H F D D G D P A R R L D M A A L L A P Q A S D A Q L Y T C		
UniRef90_UPI0003A452A4	F I V T E L L E R T Q L W S G L K G F I D R A K I A L L V I P D F L E R R V F C		
UniRef90_W0A0V5	L I L E E A P A A H P W V G R L N P G M L K E L A P D L L G R H V Y L C		
UniRef90_E4TFY9	Y I L S E P L P E D N W H G Y V G F I H Q V V F E H Y L K P E P E S V E Y Y L C		
UniRef90_UPI0003813722	L H H F L T R P Q T D R P C H V G R I D A A R I R E I L P A T P I E A Y L C		
UniRef90_A1BBH3	V I H V L L E Q E G Q E I D L F T G R I D M A A M F Q H W L D A E A V D T A F I C		
UniRef90_B8K422	V F F I S L T Q A P I D W F G L K G R L S L S H L K Q I K N P D Q R Q V F V C		
UniRef90_Q8ZCR0	H V W Y R E P D L Q D K H G E D Y H S Q M D L L S S Y Q W L A D D P K R H Y Y F C		
UniRef90_C6B4R5	F L P E T V A G E P S W P G L T G R I S K D Y M R L A V P D I A E R T V M C C		
UniRef90_W8HZS2	F V V E G H E S R H G W H G L R G R I D G A K L P L L A P D F M E R T V F F C		
UniRef90_A8HRE6	A I C E A D A P F E P W H G L R G R L S L A H L E A A V P D F R A R E V F V C		
UniRef90_I2JQ82	F V P V D E P E D S D W Q G L R G F V N T A L E P V A G Q Y L S A D T Q V Y L C		
UniRef90_UPI0004108E85	V V H W L E S V Q G L P S R A A L A Q L A A P Y T D R Q V F V C		
UniRef90_Q2BY81	L R I V L T Q P K R D W Q G E S G R L S I G H L A M M S D L D K R Q V F V C		
UniRef90_H5UI19	W E H C V S D P A S S A P N K G Y V M S L I E P A H L N D G D V A I Y L C		
UniRef90_A0A017SVL6	V R H V L E V A P K G W T G G V G R L D V E G C G A E L D A L A D E A E V F L C		
UniRef90_UPI00037B2934	V P A L S N E A D G S A W E G F R G F V H D A A K A H F G G D F R G H K A Y L C		
UniRef90_A0A028V689	V H R A L S A P E Q D A V L G R D Y E Q R G R I Q I K A A L S F D D Y D F Y L C		
UniRef90_Q39ON9	V P A L S E G A A D A G G G I A Q G F V H D V A N A H F D G D F S G H Q A Y L C		
UniRef90_UPI000469244E	L T C V A S E V S Q S P P H G Y V T Q H L D A S R L N D G D L D V Y L C		
UniRef90_Q1QYU6	V C E R G D E S G E P W A G F R G Y V L A Q A M L E L M V P D Y L E R E I F C		
UniRef90_A0L029	V W Y R E P T K A D M L G Q D Y D F E G T M N L T S V A D K I V A N A H Y Y F C		
UniRef90_H7C0R7	L W F		
UniRef90_L0LVX9	V L H I L E S E A Q E I D L F T G R I D A E K C K A L F K D V K S V A T A F I C		
UniRef90_E4TQX8	V A I L S E P L L E E D N W D G Y T G F I H N A L Y D N Y L K H H P E E V E F Y L C		
UniRef90_J9E3G9	V W Y T I D Q A K P G W I Y S T G F V N A E M I Q K H L P G P G S G T V I L M C		
UniRef90_B9CEL6	F I C E A P G S E P D W R G P T G R L S L E L L R Q H V P D Y R D R E V F T C		
UniRef90_N8RZF9	F T A Y E F P H S G D V I G E D Y D V A G R L D A T V D T A P A H A D Y Y L C		
UniRef90_C3AAJ1	Y T C Y S S P T Q E Q D L Q M K N F F I D L D W L Q S S I I P T S E A E F Y F C		
UniRef90_UPI00046F6DCE	Y F G Y E K P L D P N G D Y Y T G Y L N K E F L E K V I D S N T I C Y V C		
UniRef90_I3VT84	V D N G D E T W T G N T G L I T K F I P E L K I E N P N D T I V I V V C		
UniRef90_A3QBU3	L Y L E A R A S C E G F S C F D G R F N E M L V K A V P D Y L D R T V F V C		
UniRef90_A1ZKH9	I A L S E P M E E D N W D Y Q G Q F I H Q V L Y D N Y L Q D H P E E I E F Y F C		
UniRef90_K8PSM3	F T P V V S N P S T Q W G G R T G P V H R A V Q T D H P D M S G L E V Y A C		
UniRef90_M5DUJ8	F I P V A E P E E S D W Q G E R G F I T E S L K R F A G P N K Q A Y L C		
UniRef90_L8MDH4	V P L S Q A A E D S E W T G F R G Y V H D A A K Q H F D N R F A G H K A Y L C		
UniRef90_L0E461	F T P V L S E A T D P E V A G F P A R S G W L H D A V C A P D L S D F D V Y M A		
UniRef90_B1Y2W0	V P L S N E A E G S G W T G A R G Y V H D A A K A H F G G S F Q G Q Q A Y L C		
UniRef90_UPI00047CB039	P V L S D P E Q A A A S G L R M G L V H E A V L E D L P D L S G H D V Y M S		
UniRef90_UPI000345C66D	L I N V L S R E V G E S P V S S G R I D A D L L F T H L I A P D E V D H F Y L C		
UniRef90_UPI00047DF184	H V F Y S L P G P E D R A G R D F D H T G R L S A S S L A E P P R D A E A Y L C		
UniRef90_UPI0003B3BA7E	I F L R E T A N N G A A Q A V E H H L N L A A I Q E Q L P L S T G D Y Y L C		
UniRef90_M4S4N5	A T T C S G G A G S D H P L T G H V T D H F G A A D L N G G D A D I Y L C		
UniRef90_D5H6Z5	L E V L Y L S S D E D W D G P T H V Q T H L G D V V D E R F E D P H Y Y Y I C		
UniRef90_O85675	Y H P I I S K A S E Q W Q G K S G F I H E H L D K N Q L S E Q S F D M Y L C		
UniRef90_W9GY55	V P A L S D A A P E D G W T G E T T G F I H E V V R R H L G E D A S A I D V Y S C		
UniRef90_S5YAJ32	V I H I L D S E A Q D I D L F T G R I D A A K M A A L F K N W D P T T I F I C		
UniRef90_A0A024IMJ4	L A S A P T L R V H W H F D D E A G G P P D L R E R L T P F A K D S H L Y A C		
UniRef90_W4LIM4	I V H F W R W G E V A W E V R K G R I D A P A V Q W F L R P V A Q D V Q Y F I C		
UniRef90_UPI00030B49B5	V R V V S D E P T S I D G V L T G N P V S V L T A D D V R D P R T T A Y L C		
UniRef90_FOLYA5	V W Y L D G Q Q G E S R R G A M D L N V V D L P L A E A D F Y L C		
UniRef90_N6USP9	F L P E T V A G E T H W P G L T G R I S V E Y V R L A V P D L A E R I V M C C		
UniRef90_A5FYA9	P V L S H A S G D A G W G E R G F V H E C V D A R L K A L G D G E G D V Y A C		
UniRef90_D8NVH5	T H I V S H A T S N A D A R L R S G V V T E A V A S D W P A L Q G W R A Y L A		
UniRef90_V9ZJU6	L P V V A D E N S T C P Q R G F V T D H L D D A M L N N G D V D I Y L C		
UniRef90_E4RQ48	I R H Y W S D G R K G F W S K F H R L N P E R L K E I L R E V G P E T A F Y L C		
UniRef90_M4K3U5	L I C E K H G L E P W A G Y R G Y L N H K M L E L M V P D F L E R E V F F C		
UniRef90_W4Q2J8	L A Y E S P T E Q D K E T K N Y Q Y V D L A W L Q S I L E N N D A E F Y F C		
UniRef90_H2FYU6	K T V V A S P D S A H P R K G Y V T N H M E D A P L Q H G E V D V Y L C		
UniRef90_L0MG52	L T C V A S D A S Q A A R K G Y V T Q H L D D A L L H D G D V D V Y L C		
UniRef90_B1JTP6	L Y H V L S D L Q D V E L F N G V L D Q A K C A E F L A P A D A I D E A F I C		
UniRef90_U7GH67	L N I A T H E G K E P R F L C D T D L E A I D G L K E R E V Y L C		
UniRef90_G9Z7D0	L V C L F S Q E S L D G D L E G R I D A E A L S Q R L I N F T Q F D A A F I C		

130 140

UniRef90_V2JFH4	G A P P M V E A A T E [L] R D R G I R P D H I Y A
UniRef90_K9VA87	G A D G F M A T [V] K T Q L Q N L G L P M Q N Y Y
UniRef90_X1L3I1	G P P I M I R F T S P V L E K L G F A P E Q M L T
UniRef90_M3CN21	G P E A L E K S C H T A L R E L G W R D E E L M F F
UniRef90_U1I2Z0	G P E A L E K T M H K V F L D K G W S D D Q L L F F
UniRef90_R4T229	G P G P F M D A A R A V L K E L G P R K R I H
UniRef90_R8AMA7	G P L G F M Q H V A A Q L Q Q W G V P E E R M H
UniRef90_R1DYL8	G P P G F M D A N Y A A L R D L G V A K E R I
UniRef90UPI0003A95FCB	G P P R M I E A A T T K L V N L G L R P E N I Y A
UniRef90_L8GGN4	G P T G F E V F V E S S L L S L G Y P V Q Q L F K F
UniRef90UPI00027FC15F	
UniRef90_N8ZGC6	G P P P M I D A A I S T L M Q S R L F E R D I H T
UniRef90_TOEZU6	G P E P M M E A I T A G L I A R G V P P F D I F K
UniRef90_D6Z5A4	G P P A M T A S L I E M L Q E L G V E R D H I F
UniRef90_C1DBM5	G A P V M V E A A H R A F T G E R G L P G E A F H S
UniRef90UPI00035FBDFC	G P R G F M D F V V A G A R A R G W T E A Q I H Q
UniRef90UPI000474A2D0	G P L G F M Q F V A G Q L R D A G V A A E R I H
UniRef90UPI0002F0ECC6	G P A P F M S A I R A L A S S L G W P E D S V H
UniRef90_I3UBN6	G A P I V V N S A R N E Y T G L C G L P E D E F F A
UniRef90_G0UVX1	G P P P M Q R D V T N E L L G M G Y N K E L V H T
UniRef90_K4MDM4	G P P P S M T E S M T E M L H S M G I P D V R V
UniRef90_G3XZI0	G P P T M I E K A V L P A L D
UniRef90_L8WU70	G P P P G M K Q G P L G G A L K E L G Y T S E Q V F K F
UniRef90_W0MVF4	G P S G F M Q H I L D T A R T A G W P E D H L H
UniRef90UPI00036211E2	G P A P F I L R K Q V Q D L A A L G V P R E A L I
UniRef90UPI000443FE56	G P S A F T E Q T L G L L K Q L C F S E E E C H A F
UniRef90_J3BTW3	G P T G F M Q S V Y D G L R G L N I A D G R I H A
UniRef90_M2PT65	G P E T M L E E A T A G L V A R G V P R F D I F S
UniRef90_N0B1Z1	G P E G M V K A M R E L L I R L N V N E D N I H
UniRef90_M4X3V7	G P A G F M A H V L D S A R A L G W E E S R L H
UniRef90UPI0003A452A4	G P D P F M A T V R D S L E S S F D M E N
UniRef90_W0A0V5	G P A P Y M A A V S T M L A E L G L P A A Q L H Q
UniRef90_E4TFY9	G P P P M L K A V L I E M L D N L G V E R G N I H
UniRef90UPI0003813722	G P Q P Y M D L I A D T L R A M G I A D H A I H S
UniRef90_A1BBH3	G P E P M M L T V A A S L R E H G L R D E Q I
UniRef90_B8K422	G P D G F M Q K A K N M L L R Q G L P E S C Y H Q
UniRef90_Q8ZCR0	G P L P F M Q F I G R Q L L A Q G I A P E Q I H
UniRef90_C6B4R5	G P A P F M A A A R G I A A E L G V A A S N Y
UniRef90_W8HZS2	G P E P F M R G V R E L L K A A G F D M S R Y H
UniRef90_A8HRE6	G P A P Y M A A V R E M L R A A G F D M A R H H
UniRef90_I2JQ82	G P P P M I D A V T A T V L E L D I V E K N I H A
UniRef90UPI0004108E85	G P G P F M Q A A R E A L D A C K V P A E Q V H
UniRef90_Q2BY81	G P D E F M S S A K K L L N N M G M A P S R Y H Q
UniRef90_H5UI19	G P P P M V E A V R Q H V A Q A G I E P
UniRef90_A0A017SVL6	G P E G M M A A A R E A L T A R R R V P L S R V
UniRef90UPI00037B2934	G P P V M I E A S I R A L M Q G Q L F E R D I Y T
UniRef90_A0A028V689	G P A A F T Q A I Y D G L R D L N V A D A R I H A
UniRef90_Q39ON9	G P P P A M I D A C I T A L M K G R L F E R D I Y H
UniRef90UPI000469244E	G P P P M V E A V L S D F Q R R A F T P A S F H
UniRef90_Q1QYU6	G P T P Y M K A V K Q V L K S N G F D M S H Y H
UniRef90_A0L029	G P I G F M A S I K Q Q L L A F G V P S E Q M H
UniRef90_H7C0R7	
UniRef90_L0LVX9	G P E P M M L A I A A A L R D H G M R D D Q I
UniRef90_E4TQX8	G P P P M M N A A V L K M L D D M G V P P E N I
UniRef90_J9E3G9	G P P P M I K F A C T P N L D K L G Y P E S D R L I F
UniRef90_B9CEL6	G P S G Y M D A A R A L L A Q G G H D P A R Y H Q
UniRef90_N8RZF9	G P I P F M Q Q Q H Q A L V A R G I K P E Q I H S
UniRef90_C3AAJ1	G P V P F M K H I N A A L V I E W G V S P E H I H
UniRef90UPI00046F6DCE	G P V P F L K G V V T S L A A L G I P E E N I
UniRef90_I3VT84	G P P P M M M K F T C L E F L K R N I P D E N I W V
UniRef90_A3QBU3	G P E P Y M Q A V K A M L Q D A G F D M S R Y H Q
UniRef90_A12KH9	G P P P M M N A A V I K M L D D M G I P D E N I
UniRef90_K8PSM3	G A P I M I E S A Q R D F R T E A G L K D D A F F S
UniRef90_M5DUJ8	G P P P M L D A A A E A V L N D A G I S I N D V F S
UniRef90_L8MDH4	G P P P P M I D A A V T A L M Q G R L F E R D
UniRef90_L0E461	G P P P P M I Q A A A K P C F F A A G L P E D R L F
UniRef90_B1Y2W0	G P P P P M V E A C I G T L M Q G R L F E R D I Y T
UniRef90UPI00047CB039	G P P A M I D A G R K I L F L D A G L P E E R L Y
UniRef90UPI000345C66D	G P S G L V R L V R D D L R A R G V R G D H V H
UniRef90UPI00047DF184	G P S P F M D E I L S A G L V V L G I D A S R I H S
UniRef90UPI0003B3BA7E	G P V A F M Q F A K Q Q L L E L G V N N E R I H
UniRef90_M4S4N5	G P P E M V I E A V R A H V A S C G V T V A N L Y
UniRef90_D5H6Z5	G I P P M V V D S E E M L Q E E G V D D G R I F T
UniRef90_O85675	G P P P M I E A V K T W L D E Q A I I A D C H I Y S
UniRef90_W9GY55	G P P P M I D A L L P V L Q I A G V E P E H T H
UniRef90_S5YJA32	G P E P M M L A I A Q S L R D H G L K D E Q I
UniRef90_A0A024IMJ4	G P G P M L D A F L S A C E A L G L P N A H I E R F
UniRef90_W4LIM4	G P E G M I D T I S A T L Q Q L G L P A E R I H V
UniRef90UPI00030B49B5	G P L A F M E S I V K Q L M S L G V S G E R I H
UniRef90_FOLY45	G P A P F M A A A R N I T A E L L G V P P S N Y
UniRef90_N6USP9	G P P P M I D A L Q P V L F M N G F E N E R V F
UniRef90_A5FYA9	G P A P V M V D A A S L L L R Q R G V L A E H I Y A
UniRef90_D8NVH5	G P P P M V N A V A T A L R D R G I T P A
UniRef90_V9ZJU6	G P Q G L M K M A S S T I A G L G F S K D K I H Q
UniRef90_E4RQ48	G P T P Y M S A V K R L L E A A G F D M T R Y H
UniRef90_M4K3U5	G P V P F M K A I N K A L Q D W N V P Q E R T H
UniRef90_W4Q2J8	G P P P M V D A V L G Y F R E Q G I Q P T S F H
UniRef90_H2FYU6	G P P P M V E A V L H D F R R R A F T P A S F H
UniRef90_L0MGS2	G P A P M M D A A E A A L K A A G V P Q E K V H V
UniRef90_B1JTP6	G P K G L M D L A A E L L Q Q R G L A E S Q M H S
UniRef90_U7GH67	G P T V M M D E A E A A L L A L G V P K K S V H
UniRef90_G9Z7D0	

1 10 20 30 40

UniRef90_A3K7C0	P Q G R F F T R P D S T K T Y L G F A G G S G I T P V L S I K T T
UniRef90_D713E2	V F P P S G N F T L S D H T R P L L L I S G G G V G I T P T L A M A E Q A
UniRef90_UPI0001E2884B	P P S G E F V L I D S A R P L V L I S G G G V G I T P T L A M A E T A
UniRef90_UPI0004630555	G D F A L K P G G R E K V F I G G G A G M A P L R A M I R A L
UniRef90_F8JBL9	A F G P S G E F S C T L H A A P K Y L F L S G G G S G V T P L M S M S R A L
UniRef90_Q5LT33	N L F P L D L R G R K H V F L A G G G I G I T P F L A M I A H L
UniRef90_UPI00046E5735	P Q G R F F T D L D P T K N Y L C V A A G G S G I T P I L S I V K S I
UniRef90_B5WS21	A Y G P S G T F T S T V S A A P K S L Y L S A G G S G V T P L M S M T R A S
UniRef90_M9WCY0	T I G T P R N L F A L E M D A S H S L I G G G I G I T P M L A M A D T L
UniRef90_A1CN79	P Y G D F F L S S E A A H P I V L L S A G V G V T P L M S I L N T L
UniRef90_UPI00036F0941	G P F G S F Y L R E D S D K P I V L L S A G T G F A P I K A L I E Q L
UniRef90_U3HRJ9	G E F T L Q P G D K P L V L I S G G G V G I T P T L A M L E D A
UniRef90_C9P7C6	G N F H L R P S M L S M I L R Y L
UniRef90_UPI0003B63AC3	G P Y G L A H L R A D S T R D I V C L A G G G S G L T P F I S F L E S I
UniRef90_W9AR48	P S G N F T L P Q K I D Y P V V I F A G G G I G I T P V L S I L K T V
UniRef90_UPI00046AA512	A M P P Q G K F F T A E P G K N Y L G F A G G G S G I T P V L S I L K T V
UniRef90_L7L8Z4	V L P P S G V F T P A N I H A P L L L I A A G G S G V T P V M S I L K K A
UniRef90_X0RYL0	G P Y G N S F P P Y E E K Q K N L Y F V A G G G I G L T P P L R S L I K T V
UniRef90_E2SEK4	V L P P S G I F T P A D L D A D L L L F A G G G S G I T P V L S I V R T A
UniRef90_11G874	G P F G E F Q Y S P N R F K E L V M L A C G T G I A P M I Q V I R A V
UniRef90_F0GAG2	G P A G A F V C D E R S E R P V V L L M S G G V G V T P L V S M I L Y R
UniRef90_W0TLG6	G P F G R F F V R K S A P E P M I F L A G G G S G L S S P K S M I L D L
UniRef90_D6TQY2	G D F T L P A N P Q K L V F I A G G G I G I T P F R S M I L K Y L
UniRef90_UPI0002E8B92E	P A G H F H V Q L D P E R H Y L A V A A G G S G I T P I L S I I K S T
UniRef90_F8EEK7	I A L E P S G R F V P S Q V V P R H V F L M G A G S G I T P L F S L L K H L
UniRef90_A1WR56	G P Y G T C F R R E E Q P G P M V L V G G G S G M S P L W A I L N D H
UniRef90_C4LA03	A L A P T G A F F P A D Y S A G K I I L L C S A G S G I T P M M S M A H W L
UniRef90_UPI000329B54A	P A G D F F L Q E P Q T P V T L I S A G V G Q T P M L A M L D T L
UniRef90_R6W1F0	G P Y G E F R P Q Y D T K R E M I W V G G G A G M A P L R A Q I M H M
UniRef90_Q3SJU2	Q G Q G P F V Y L P E M S D N V V L I G G G V G I I T P M L S I F R H V
UniRef90_A1UJH0	P P E G R F L L R D T D S E I V A F A G G G S G I I T P I M S I I R T A
UniRef90_E8WMA3	G P F G S G F P L Q E M A R P V L L L A G G L G I A P L R S L L M H L
UniRef90_A0A014M4M2	G A Y G K G W P V E Q K D K N V I I V A G G T G V A P V R S L I N K F
UniRef90_Q8XK66	G E L T L S A P G D V / A L D D S D T P L V L V L S A G I G C T P M V A M L E H L
UniRef90_J2IUF1	G T F F I R N N E R P V I F I A G G T G F A P V K A M V E S L
UniRef90_L7FIR1	F A E G P Y G A F T A M H R T R P E A V L I A G G V G V T P I R A L L E E I
UniRef90_E9UZF0	F T G P N G S F F L R E A R R P V L M L A G G T G L A P V L S M L R Q L
UniRef90_W9BV83	G P A G A F T I D A A Q R R P A V L V A A G V G I T P M L A M L R H V
UniRef90_M5U5U8	I A L G P P G E F T L L D V Q S P R P V V F I A G G G I G V T P P L L S M A K A L
UniRef90_L8MBM7	V L P P A G H F H L L P G E R D L V L F G G G S G I A P V F S I L K S A
UniRef90_N9CYH4	F T G P F G S F Y L R L S V V R P V V M L A G G T G I A P F M S M L Q L
UniRef90_B6B4E4	A M P P M G K F Y A D P N Q A K N Y L G F A G G G S G I T P V L S I V K T T
UniRef90_G2PDQ4	A E G P Y G A M T A A R R S Q G K V L M I A G G G A G I T P I R A L L F E T L
UniRef90_G7NTS2	G L G Q A F W R E D S H N P I L L A G G T G F S Y I Y S I A Q A I
UniRef90_G3LGX1	P H G D F F L R P S T A P M I C V A G G G S G L A P V L L S I L E D A
UniRef90_Q51603	T F T F D G P Y G A F Y L R E P V R P I L M L A G G T G L A P F L S M L Q Y M
UniRef90_UPI0004706C8B	I G P V G A F H L A D Y D R R R F L L L A A G G A G I T P L M S M I R T V
UniRef90_I2IY89	P F G E F S L Q D D S T K P V I L L A T G T G F A P V K S I V E D A
UniRef90_S6AJB9	T L T I S T P N N L F P L A E Y G G R S L L L A G G I G I T P L L C M A E Q L
UniRef90_X7G8Z3	Y P P A G D F F L L R N S K N P A V L I S A G V G Q T P M L A H L H E L L
UniRef90_W1YVY0	K L M I G P L R N H F P L N E S A P H T L L I A G G G I G I T P P M W C M A Q R L
UniRef90_UPI000471E726	P F G D L G L V L E H D G P L L L A S A G L G V T P M L A M L D H L
UniRef90_H1QLS3	F I R G P Y G K G W P T E Q Q G K T L I L V A G G G I G L T P P C L Q L I H D L
UniRef90_M1VBW0	G P F G S L T L H N N R A R P A V F I A G G G I G I T P P F M S I L R Q A
UniRef90_B3E0W6	Q G P N N L F P L D S E A P H A L L F A G G G I G I T P V L S M A R Y L
UniRef90_G2J3J0	R F E V E G P R N H F P L A E D A E T T V L F G G G I G V T P M L A M A Q R L
UniRef90_UPI00036321D0	F R G P I G R H F I W S Q T G G P I C L V A G G G T G I T P L M A M L R H
UniRef90_UPI0004658AC8	G P F G S F F L L R D D P E K P L I F L A S G T G F A P I K A I L E Q M
UniRef90_G7DKE1	P A G V F T L N L T K E T P V V L I S A G G G V G I T P P L F S M A S T V
UniRef90_D5X4U3	P Q G V F F Q K A A K G Q N Y L G V A A G G S G L T P I L S I I K Q V
UniRef90_E3IE82	G P Y G E F H P I L N S K R E M L W I G G G A G M A P L R S Q I M H L
UniRef90_A0A023RTT1	G P F G D F H P I F D S K K E M I W V G G G A G M A P L R S Q I M H M
UniRef90_UPI000369F037	G P Y G S F Y F R D S T D P I I C I A G G S G L A P K A I L E Q V
UniRef90_D3H1N7	G P S G A F H L N P T E T R E V V L L A A G G S G I T P L M S M I R A L
UniRef90_N0ATU0	I S S P R N N F Q L D L S A R H S V L V A G G G I G I T P Y C M F R Q L
UniRef90_C6WK98	P M G S F T L L D Q Q S T R P L V L I A G G G V G I T P P L L A M L R Q Q
UniRef90_J2YDR3	G P L G S F Y L R E I K R P V L M L A G G T G L A P K S I L V R H S
UniRef90_A5VZP8	P M G G F G L F A D S L R P R W F V A G G T G L A P L K S I V R H S
UniRef90_F5S5G1	G P L G Q F N L V T D Q E E A A I L I G G G T G L A P L K S I V R H S
UniRef90_Q1LH74	R I E E P A P Q G A F Y L R H I V R P L V L V A G G G T G L A P L K S I L M E A L L
UniRef90_Q47CC1	P M G E F S C Q H V I A N N Y L L V G A G G S G V T P P I M S M A R W L
UniRef90_H5U3H3	G P L G T F F L L R E D S D K P I I F V A S G T G F A P K A I I E H A
UniRef90_B1YXE8	V L E P L G N F K V D T N P A R N M V L I G A G S G I T P P L L A M A K A V
UniRef90_I4Y3F9	N Y L G F A A G S G I T P P L L A M L R Q Q
UniRef90_I3D8N5	P M G E F S C Q H V I A N N Y L L V G A G G S G V T P P I M S M A R W L
UniRef90_D9SD88	G P L G T F F L L R E D S D K P I I F V A S G T G F A P K A I I E H A
UniRef90_UPI0003FACE99	V L E P L G N F K V D T N P A R N M V L I G A G S G I T P P L L A M A K A V
UniRef90_N8ZH70	G G F T L P P R R T E K L V F I A G G G I G I T P P F R S M I Q H M
UniRef90_A0A059IPC6	A E G P Y G A M T A A R R S R G K V L L L A G G G A G I T P P L R A L F E T L
UniRef90_K4QT36	G E F F F D P Q T D T P R N L V L I A G G G V G I N P L L S I L R Y A
UniRef90_H0W5W3	G P M G S F H H P F H G Q D L V F L A G G G S G I A P A M S M L K A I
UniRef90_N1W854	L F E G P Y G A F T T H A R T R R V L L L A A G G G I G I T P P I L C M A E Q L
UniRef90_W9G314	V V P P A G R F F T E L S A D N H Y C G I A G G G S G I T P P I L C M A E Q L
UniRef90_UPI0003683526	I L S E P R N L F P L A E N S R R T L L F G G G I G I T P P V L S M L R T L
UniRef90_A0A038GAZ4	P G V H F L P D E R P D R V L L I S A G G S G I T P P V L S M L H A L
UniRef90_H6R5G2	P R G S F F F L L D D S P Q V P V L L I S A G G V G V T P P V L S M L H A L
UniRef90_Z5XIN2	P K N Y F F P L S F Q A R H H V F I A A G I G I T P P F L S M M R E C
UniRef90_UPI0001E89FAA	F M R G P Y G N S F P V D K K G E D I V V I A G G G T G V C A V K S L L Q Y F
UniRef90_D3D7N7	I S E P R N F F A L A P K A S R S L L F A G G G I G I T P P I L C M A E Q L
UniRef90_D9QRP5	G P Y G D F H P N F T S G K E M I W I G G G A G M A P L R S Q I M H M
UniRef90_U5VGX2	G P Y G D F H P N F T S G K E M I W I G G G A G M A P L R S Q I M H M
UniRef90_H1Q3N0	G P Y G D F H P N F T S G K E M I W I G G G A G M A P L R S Q I M H M

50 60 70 80

UniRef90_A3K7C0	L S R E P K A T F T L V Y A N R Q V S S □ M F R E E L E D L K N T Y □ G R F S
UniRef90_D713E2	L E S G E R P V T F I H Y A R N G Q A H A F S V L L R D W Q Q R Y P L F H V
UniRef90_UPI0001E2884B	L R T G N R D V V F I H Y A R N A S V Q G F Q T A I D E W R G R Y P Q F A H
UniRef90_UPI0004630555	L G A G A S E R I H F W Y G A R D L R E A P Y V D E M R R L A R E H A N F S W
UniRef90_F8JBL9	Y D L G E D R D V V F V H S A R T P R D I I F R N E L A T I A H G M N R F R T A
UniRef90_Q5LT33	E R M G G A W E L H Y S C R S R E L G T Y V D E L T Y K H P N K V H
UniRef90_UPI00046E5735	L E T E P Q S S V S L V Y G N R T V S S I L F L E E L D L K N K Y P T R M N
UniRef90_B5WS21	I D L G L D R D I A F V H S A R T P A D I V F R A E L Q R L A K L S P Q K L F
UniRef90_M9WCY0	F R A G K S F A I H Y C G R R R D G M A F L H E L A D C P F S D R V H L H
UniRef90_A1CN79	A G S S T V Q R K I H F I H G S R T S Q A R A F K D H V Q E L E K K F P N L Q V
UniRef90_UPI00036F0941	Q F K G S T R A V T L Y W G G R R P Q D L Y L H D W V L A R T A E M P Q L R Y
UniRef90_U3HRJ9	L K T E R P I H F I H C A R N A D A H A F R Q M V D T L A E R H G Q L K R
UniRef90_C9P7C6	A D H Q M M Q D I V F Y H Q C R S E A D I P A R D E L D A L R S A H S G L T
UniRef90_UPI0003B63AC3	S R S G P R E R K L D F F Y G G R R P A D L C A S T M I E R D A L L R K R V S C
UniRef90_W9AR48	S E P E T P M P E V W L Y Y A N L N S D T H A F A D R L N T L A H R M P K L H V
UniRef90_UPI00046AA512	L M R E P Q S T F T L V Y A N R A V N T I M F R E E L E D L K N H F M G R L T
UniRef90_L7L8Z4	L A D G T G P I T F F Y Y A N R S E N D V I F A A D L R A L Q Q K H P G R L T
UniRef90_X0RYL0	F D R R P D Y G K I K I L Y G A K T P D E I C F K E E L K A W K K I P D T E L L
UniRef90_E2SEK4	L A R G S G R I V L F Y A N R D E R S V I F G P V L A A L A A E H P E R L Q
UniRef90_11G874	L E N E D D F T K L R L L Y A S K T Q H D I L L K N L I N E F S D Y W N F S V M
UniRef90_F0GAG2	L S R A S H R R V H F I H A C E H G A V H A F A D E V R A L A A T R D G I D V H
UniRef90_W0TLG6	F E N G E M R D V T L I Y G A R N Q D E L Y Y R E L F E E L L A K E H S N F R Y
UniRef90_D6TQY2	L D T R E K R D I I L F Y V N K T A N E F V Y V D V L Q A A Q A Q L G A K V Y
UniRef90_UPI0002E8B92E	L E T E P H S R V T L L Y G N R A S S A A L F R E Q L E D L K N R Y L Q R L N
UniRef90_F8EEK7	L Y T A P E T S V T L L Y S N R T V E S T I Y Y E Q Q Q L Q Q A A H P Q R L K
UniRef90_A1WR56	V Q S G E E R P I R F F Y G A R S R R D L L F Y L D D F A E L E D K L P D F R F
UniRef90_C4LA03	L D N Q R E T E I L F L H S A R H A E D I I F R D E L M A L A A K Y P Q F K
UniRef90_UPI000329B54A	A E Q G H P A Q V T W L H A A E N G R V D A F A D E V A A R G Q R L P H F S S
UniRef90_R6W1F0	L R T R N C R E M H Y F Y G A R A L E E I P F L D D F L Q L E K E Y P N F H F
UniRef90_Q3SJU2	R D A G L G T Q A H L V Y S V S D S R E I I L F R D E L E A V R N H R N L H
UniRef90_A1UJH0	L A T S A R S I R L F Y A N R N R G S V I F A D D L A R L V I E H N A D R L V
UniRef90_E8WMA3	L R H R D S Y G D I T L M Y G A R Q P K L M L F R E E L T L A A E G G L R L F
UniRef90_A0A014M4M2	A A T G S A R P V L V L H A D R A P A D H A L R A D T T R R L V I A Q L P E A R A
UniRef90_Q8XK66	Y D E P N Y V E T L S L V F G F K N S E G I I L F K N D L D R W N E K F N T I Y T
UniRef90_J2IUF1	I A E N T Q R K I Y I Y W G M Q H S T H F Y S S L P Q Q W A D A N P D I H
UniRef90_L7FIR1	G H A V V I Y R V A R D Q D A V L Y E E L R D L A H A K G A E L H
UniRef90_E9UZF0	E V D G C D R G G R L V Y V G V S T D D D L V K L E E V G E L V S R L P G F S
UniRef90_W9BV83	V F E G R T T R Q T W L V H S A R N R A E R A F D A E I D A L V E A A Q G A V K
UniRef90_M5U5U8	V A A G N K T P V Y F L Q A A R N S G A H A F R D E V R G L A D R E A P V V T R
UniRef90_L8MBM7	L K T S R R R I K L V Y A N R D E A S V I F R D E L R V L A K A H V D Q L E
UniRef90_N9CYH4	L E E K G A E H P V R L V F G V T N D F D L V A L E Q Q N A L Q A K L P W F E Y
UniRef90_B6B4E4	L A R E P D S R F T L L V Y R A R S V G D L A L W S E E L K Q Q I A T E R G A R L L
UniRef90_G2PDQ4	P G K G S D L T L L Y R A R S V G D L A L W S E E L K Q Q I A T E R G A R L L
UniRef90_F7NTS2	A A A G V K R P V F L Y W G V R H E E A L Y H M P E L L Q Q W A A T H D Y R
UniRef90_G3LGX1	R K K R V E R S S C T V L F G A R T T A D L Y A L E Q Q L A T I G R G W K G Y F N Y
UniRef90_Q51603	A G Q R N D L P S V R L V Y G V N R D D D L V G L D K D L E D L A T Q L S G F S Y
UniRef90_UPI0004706C8B	H A L P G Q A D V V L L Y H G S A P D S F A F S E E L D F L A K A D F R I K V I
UniRef90_I2IY89	I K R R L D R P L T L Y W G A R R V I E D L Y L A E L A Q K W H D G G K L K
UniRef90_S6AJB9	A S S D A D F Q L H Y C V R S E E H A A F V A R L E G S P F A G R V Q L H
UniRef90_X7G8Z3	Q R S G Q R Y H L H Y C F H S E E H N A F Q Q Q L T Q A P F T D N V S C H
UniRef90_W1YVY0	L S D N S K Q N I M Y L H A C E N T Q Q H S F A H Y L N E L S T A Y N S L Q T I
UniRef90_UPI000471E726	E S L G R S W E L I Y C A R T Q P Q A A F L E V L R N L Q P R S G K V R F
UniRef90_H1QLS3	A A A G A T R P V T V V H A D R T P D D H A H R Q E Q F D L V R A L P D A R L
UniRef90_M1VBW0	V E R Q R E P E P E K I F I F A N T E M E I I L L R E E L D E M A A S S N G F L D D
UniRef90_B3E0W6	K Q Q R G Y F K K L V L L Y G A R T K E E I L L F M P F L E K M A Q E K V I D
UniRef90_G2J3J0	V Q D G L A Q R L V L I Y S N R R P E D A A F L A E L Q A L E Q R N H H F R L
UniRef90_UPI00036321D0	Q A Q G R S S W S H Y A T R S H D R C A F H E T L T S
UniRef90_UPI0004658AC8	H A L G R D F T L H Y C T R S R D R T A F R T V I E Q A P W A E S V V F H
UniRef90_G7DKE1	R R R S I A P I P A S L I Y S I A R S I A D V V Y R D E L D T M A H G D R D L R L
UniRef90_D5X4U3	R A N A D P R E V T L Y W G G R K Q Q D L Y L H D W A V I Q C A A M P H L R
UniRef90_E3IE82	V S R Q P N R Q T T F I H A A I N G N V H A F D Q E L R R L A E H P A F S Y H
UniRef90_A0A023RTT1	L F E Q P E A N F T L L Y G N R S W K Q T M F A E Q I M D L K D Q F K E R F Q
UniRef90_UPI000369F037	T K T K I T D R K M S Y F Y G A R A L I E A F Y L E D F Y E L L E R E F P N F S F
UniRef90_D3H1N7	L K T L H T R R E M H Y F Y G A R S L I S E A F F L E D F H E E L E K E Y P N F H F
UniRef90_N0ATU0	A E L G E N T P V L F L F G A R T K K D L Y C L D E I H E L I S F W N A P F H
UniRef90_C6WK98	L A T D A P A R I S L L R T D R T A Q D E I F A D E L T T L A R H N P D R L T
UniRef90_J2YDR3	L A L G K S A E L I Y C A R S R Q E A A L V E E L S G L S A K V
UniRef90_A5VZP8	L R T G Q A R R I H L F H G A R S L A D L P F Q Q E L L A T L Q Q Q A G E L L H
UniRef90_F5S5G1	A Q T Q N T R H V H Y G T R F A N G L Y D E A A L C E V L A Q L P N A K
UniRef90_Q1LH74	M D D P D C P P V W L Y W G M R S A A D L Y L H D E I A R W G E R L Y D F Q
UniRef90_Q47CC1	V A D G G S A H A I H L I Y G V N T D T D L V E L D K L A A F A A T L P N F T Y
UniRef90_H5U3H3	L D H H L V P E L Y L Y H G G R R Q E D L Y D I E Y F T R L S Q R H D N
UniRef90_B1YXE8	A E Y Q E R G D A R L F F G V N E E N E L F M L D E L A R L R A E L P Q L L V
UniRef90_I4Y3F9	V A D G G C T Q P V H L Y Y G V N R V A D L C E T A R I E A Y A D Q L P G F R
UniRef90_I3D8N5	L K N R P E T N V T V I H S V H S P E D V I F K Q E W A E L K A Q F P R L N L
UniRef90_D9SD88	L Y I G I K R P M H F Y W G A R K L S D L Y M L E M A K Q W E A Q G I Q F T
UniRef90_UPI0003FACE99	L H D E P K S R V T L I Y G N R N E G T V I F K N K L T D M V A E Y A G R F A
UniRef90_N8ZH70	L F N Q K D A T F S L Y H G N R S W K Q T M F S E Q I M D L K D Q F K E H F Q
UniRef90_A0A059IPC6	M D T G D L R P A V L L Y G A T R A A D I S Y S E L L I D D A R A R I I G L R T
UniRef90_K4QT36	P G G P G D L T L L Y R A R T A E E L A L R D E L E E I A D E R G A Q L L
UniRef90_H0W5W3	A R S G Y E I G T I K L F Y S A K N T S E L V F K K N I L D L V N E F P E K I A
UniRef90_N1W854	L S S S E L L F R F H I I Y S N S F E D D V I F I E E L R K L A A I H K N F F L
UniRef90_W9G314	I R R E R H A V P E L T V V Y R V N D E S E A T L R G E E R L R V A A G G H E L L
UniRef90_UPI0003683526	L E E E P N S R F T L V Y A N R D P E S □ M F F G E I T D Y Q F R Y P D R L K
UniRef90_A0A038GAZ4	T L E E G A D F E L H Y C I R S A E R G A F □ K R L R Q S P F A E R V T L H
UniRef90_H6R5G2	T E E G Y T G P V V F L H Y A R S P E Y V P H R A E L D A I A A A N P N
UniRef90_Z5XIN2	A E R G S Q R P I W W L G H A D G T E L P F A A E V R E L T S A A Y A S Q V H L H
UniRef90_UPI0001E89FAA	K E Q G S S F E L H Y S T K T K D D C A F Y S Y L K N E Y P Q H
UniRef90_D3D7N7	T R T R P D R R V V V A H A D R S A L S H P V R D E V R M L G R Q L R G F E E
UniRef90_D9QRP5	Y K N Y A D V N S V H F L T G F K D K A S I L Y S E E L E K Y R E K F S N
UniRef90_U5VGX2	W S Q G E E F E L H Y C A R S H E R A A F L E R L T S A A Y A S Q V H L H
UniRef90_H1Q3N0	L K T L N T R R E M H Y F Y G A R A L S E A F F L E D F W E L E K E Y P N H F H

90 100 110 120

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UniRef90_UPI0001E2884B	V V H S D L M P G D V S A G R L T G L P S I A H L R Q W L P A S R D I E V Y F L			
UniRef90_UPI0004630555	H L V L S E A A E C G D G L Q R G L V H E A A G A G L L A P S L H D C D F Y L C			
UniRef90_F8JBL9	F V C E N I G E Q R D W S A P T G F L T L P L L K S M V P D L S E R E I F C C			
UniRef90_Q5LT33	V Y F D D Q D Q A I G L E D D L L D G Q P L G T H V Y V C			
UniRef90_UPI00046E5735	L L H I L S R E E Q D S E L F N G R I S A A E K C A Q I L D G P L K G D A F I C			
UniRef90_B5WS21	F V C E G I G L G E E S D W A G A T G R L S L Q Q L S E W L P D F K E R E V F T C			
UniRef90_M9WCY0	I S E E G E K I R P H E V L A P H R A A A H V Y V C			
UniRef90_A1CN79	T F F T S T K P S E Q D Q A G I D Y H H L G R I D L Q K L G D S A D Q T E F Y I C			
UniRef90_UPI00036F0941	V P V V S Q D P E D G W S G R T G F V H Q A V L D D F A D L S G H Q V Y A C			
UniRef90_U3HRJ9	F Y C Y D E H R G D E P Q P D A V G L I T E E R L D A W L P A D R D L G A Y F L			
UniRef90_C9P7C6	L M I S L T Q P S I D W P A L K G R L S L S H L K K I E N V I Q R Q V F V C			
UniRef90_UPI0003B63AC3	F S S I S D S T Y A E P W G G A R G F V H E V A R R S L E A G S D P T D Y Y F C			
UniRef90_W9AR48	I N H Y N D P L P R D N K G E D Y A T S E L I T A A V V N D L E Q R A R F Y I C			
UniRef90_UPI00046AA512	V I H M S G Q Q D I D L F T G R V D Q D K C A Q L F K H W I D I K S I D T A F I C			
UniRef90_L7L8Z4	L V H W L E T L Q Q L P T A K A L A T V F K P M A G T H S A Y L C			
UniRef90_X0RYL0	L T V D Q P P D A W K E N V G V V T T L W D K T D M D A S G S V A F V C			
UniRef90_E2SEK4	V V H W L E S V Q V G L P T Q A Q L K A F A G S H A E W D A F V C			
UniRef90_11G874	Y F F S S C N E C Y G D C V K F G R I D Q S I L E S E L G N S E S I Q F L I C			
UniRef90_F0GAG2	V C Y R Q P R E D D L A R G G F D L V T R E L L Q S S L P L D D Y D V Y L C			
UniRef90_W0TLG6	V P L S E E P E D S G W E G E R G Y V H E V A E H F F N G R F E G H K A Y L C			
UniRef90_D6TQY2	V V T D T T A V P R N W P G L V G R L N E Q V I Y A T V P D Y R E R T Y Y L S			
UniRef90_UPI0002E8B92E	L I F V F S R E Q Q D I D L Y N G R I D A D K C A R L F S R W L D V D A A F I C			
UniRef90_F8EEK7	V I F F W G N A K N L R Q A R L N N S M L E E H L I S S K D D V L F Y T C			
UniRef90_A1WR56	I P A L S N A E P G D D W S G A T G L I H E V L G R A L Q A L A G E I D A Y T C			
UniRef90_C4LA03	L S L I L D N T T D A F V C Y Q G F L N P V L F D Q L V I P D L S D C H A F M C			
UniRef90_UPI000329B54A	H T W Y R V P D A G D R Y D T Q G L M E L A P H K E Q L T D P A M Q F Y L C			
UniRef90_R6W1F0	H R P D P K A D A A G V K Y T P G F V V A P V M G D T Y L K E D P E D C E Y Y L C			
UniRef90_Q3SJU2	L S I T V T Q P D P A W H G L T G R I D P V K L H A L D V P D D T L Y Y Y L C			
UniRef90_A1UJH0	L T H H Y D D D S G V V T P A A I E S F V A G A G D A D F Y I C			
UniRef90_E8WMA3	L T V D F A Q E T C N G G Y S C A V G L L P D L L K G F R F D A S S S Y A A V C			
UniRef90_A0A014M4M2	E F W Y E Q D A A E E A G A R T G L M D L D G L D L P A D A D V Y L C			
UniRef90_Q8XK66	L D N D T K E G W E T G L V T V H L N K L P L E S F G D N Y E V I I V C			
UniRef90_J2IUF1	F I P V V S G E E S N W Q G R K G F V H N A V V E D F E N L A D F D V Y A C			
UniRef90_L7FIR1	L V S G P V V P D R L A P A A L A E L V P D I A D R D V F L C			
UniRef90_E9UZF0	W D H C V S D P A S T A A N K G Y V M S L I R E Q D L H D G D V A I Y L C			
UniRef90_W9BV83	V Q P G P D E R T G R D H Q G V G R L T A D T F R Q I L L P F G D Y D F Y L C			
UniRef90_M5U5U8	F I Y D A P L P T D E S D G K C D D V G L V T K E Y L A E P T A D A L Y Y F C			
UniRef90_L8MBM7	V V H V L D S V Q G F L S E G E V R Q L V R G H A G E F Y I C			
UniRef90_N9CYH4	R T V V A S P D S A H E R K G Y V T G H I D N E W L N G G D V D V Y L C			
UniRef90_B6B4E4	V I H I L E S D A Q D I E L F K G R V D C G A L F A N W I D I K S V D T A F I C			
UniRef90_G2PDQ4	Y A V N G P D G A R P E I T A E R L G H L L P D I A D H D V Y L C			
UniRef90_F7NTS2	L M P V V Q S P T D N W Q G R S G L V H Q A V L D D F V S L D A Y D I Y L A			
UniRef90_G3LGX1	F V P V H E P E D S A W T G A R G L V T D F I A P S L S R E P N D K S E M Y M C			
UniRef90_Q51603	I T T V V D K D S A Q L R R G Y V T Q Q I T N D D M N G G D V D I Y V C			
UniRef90_UPI0004706C8B	Y C L G D R E C G E E W T G R T G R L S Q E L L E E L V P D A N G R Q V F A C			
UniRef90_I2IY89	F V P V L S E P N A D W H G R R G F V H E T V L E D L G S L G G Y Q V Y A C C			
UniRef90_S6AJB9	F D V S R R L L A A Q P G D T Q L Y T C			
UniRef90_X7G8Z3	U V S S L N G R L D L A R T L A D V E P G A H I Y V C			
UniRef90_W1YVY0	T W F N Q S S E G A D F T G L M D L A A I K T Q L P L T N G D F Y L C			
UniRef90_UPI000471E726	N F D G E P G G S I L D I A A V V N E A A P G T H F Y C C			
UniRef90_H1QLS3	H L W Y E E P G D R A T E A S T G R A D L S G I D L P E N L T V Y L C			
UniRef90_M1VBW0	I H Y L V R E A P L V P G P Q L M Q V I S R R Y L E E R L P P P E Q N P L I F V C			
UniRef90_B3E0W6	L H L S L D R P S P G W N G H V G T V I T L V S T V Q F D P Q Q T V V F C C			
UniRef90_G2J3J0	V A T M T Q M E Q R P W T G E A G K I D E T L L K R V I S E L P A P I C Y L A			
UniRef90_UPI00036321D0	U S S L A S S S H L Y F D D G A A N R R L D L A Q T I A S A P A G A H L Y V C			
UniRef90_UPI0004658AC8	F D D G D D A Q R L D L A R D L P P P G K N T H L Y V C			
UniRef90_G7DKE1	V Y A L T R E H P S D W N G H R G R V N E A L L A E S S F T R E Q N P T F F I C			
UniRef90_D5X4U3	F I P V L S D A D A D W S G R T G F V H R A V V M D D V P D L S G Y A V Y A C C			
UniRef90_E3IE82	Y C Y Q S P D R K H P Y F G K E G F I D L P W M Q T V I P A K E A D F Y F C			
UniRef90_A0A023RTT1	L I N I F S R E F N D S E L M N G R I D A E K L K Q L F D L E T N F D H V F A C			
UniRef90_UPI000369F037	H L A L D K P D P Y T P G F V H Q V I H D T Y L K D H D A P E D I E Y Y M C			
UniRef90_D3IH7N	H R P D P K A D E A G V I P Y V A G F V H E V M Y N T Y L K D A P E D I E F Y M C			
UniRef90_N0ATU0	F I P V L S E E S L G S D W L G A R L V T D Y I K D F P G I R L S S C K A Y L C			
UniRef90_C6WK98	V V T S A R T A E Q G R L D A T R V G A W L T A P S E R A H Y Y Y A C			
UniRef90_J2YDR3	V Y H F N D E K G M P P D L S A Y L A G Q P D D T H F Y C C			
UniRef90_A5VZP8	I I H R A L S Q P E G H A Q V G R D Y L G I E Q V K A T L A L D D Y D F Y L C			
UniRef90_F5S5G1	Y T P V L S R P N D D W T G A T G Y I T E H V L R D Y P D L S A H E V Y A C C			
UniRef90_Q1LH74	Y V P V L S R A D D T W Q G R R G Y V H D A V A A D I G D L S E H A I Y L C			
UniRef90_Q47CC1	A L V V V I A A D S A Q P K K G Y V T Q H I E P A Q L N D G D V D I Y L C			
UniRef90_H5U3H3	F H Y R P A L S E E T W S G A T G L V T D V V L L D D F S S C K G M S A Y L C			
UniRef90_B1YXE8	D V C V W P R G V E W T G L R G T P V D A L R A L A H A P V L P D V Y V C			
UniRef90_I4Y3F9	Y T A V I S E P T A D W P G K R G Y I A E H F D C S E L R D S P V D M Y V C			
UniRef90_I3D8N5	V V M N A S V D A T P G F E S G R I S K E M I A K A V P N I A D Y T V M T C			
UniRef90_D9SD88	P V L S D A L P E D H W Q G R T G F V H C A V L E D Y S D L S A H V V Y A C C			
UniRef90_UPI0003FACE99	V E H V F S Q P H K Y T G R L N R K M L I Q I L E N L N F S G A P N T E Y Y L C			
UniRef90_N8ZH70	L I N I F S R E M N D S E L F N G R I D A D K I Q K L F N S D Q F D H C F A C			
UniRef90_A0A059IPC6	V Y A L S D P E P E V D P G H A G R I D C A L I A R E V P D F R D R I F Y V S			
UniRef90_K4QT36	Y A L N S P D G R R R A I T A K M L R K I L P D I A H H D V Y L C			
UniRef90_H0W5W3	C S L H V T K Q T T Q I S A E F R R I T E E I K D H I S N E T L F Y I C			
UniRef90_N1W854	T E F L S R E S G P N F K G Y R G R I T L S V L Q E L I P E A A S K M Y Y V C			
UniRef90_W9G314	L L S G P P V Q G G S W L P P D S R S V Y S D V T R L Q E L V P H L S A H E A Y L C			
UniRef90_UPI0003683526	V I H V L E Q G G D S G P G F V G R I D A E K L S D L A T K G D V G N W F M C			
UniRef90_UPI0004638GAZ4	L D E Q P D T A L D A S R V L A N P D A E T H L Y V C			
UniRef90_H6R5G2	V S V Q M R Y P E L D G S A F D Y D E L E R T A P W F A D A H T Y L C			
UniRef90_Z5XIN2	R I F F S S P G P S D R S G V D F D E R G R I T A Q A L S A L P S Q A Q V F V C			
UniRef90_UPI0001E89FAA	L T W Y E Q H D G A P E P G V E A G L I D A D K L P V P D G V R A Y L C			
UniRef90_D3D7N7	T I Y S L D N E E I D G F E T G F V T E Y I D Q V P F A D F A D Y Q V V I V C			
UniRef90_D9QRP5	F D A H P N T R L D L A Q V L A N P G A Q D H L Y V C			
UniRef90_U5VGX2	L S L D R P D P K A D E A G V K Y Y I R D T Y L K D H E A P E D C E Y Y L C			
UniRef90_H1Q3N0				

130 140

UniRef90_A3K7C0	G P E P M M [L] T [I] A E S L R E A G L A D E Q I
UniRef90_D713E2	G P T P F M A F M K R A L K D L G V P E N Q
UniRef90_UPI0001E2884B	G P Q P F M A F M K R A L H E L G V P D R Q S H
UniRef90_UPI0004630555	G P P A M L A A T R Q [L] Q R L G V Q D D R I
UniRef90_F8JBL9	G P E A Y M A N V R A M L A A A G F D M A R Y H
UniRef90_Q5LT33	G P K G M I D W V H A T A A A H G W P D E N V H S
UniRef90_UPI00046E5735	G P E Q M T L D V K S C L I S K G V D K S N I H
UniRef90_B5WS21	G P A G Y M S A V R Q [L] H E G G H D P D R Y H Q
UniRef90_M9WCY0	G P E G F M D G I A D A A R G C G Y P P E Q L H Q
UniRef90_A1CN79	G P E G F M T E M E D C L K A R G R V G D D R I
UniRef90_UPI00036F0941	G A P I V V E S A R T A Y S A Q R G L P A E E F Y A
UniRef90_U3HRJ9	G P K P F M A A I R R Q L R A L G V P E Q Q
UniRef90_C9P7C6	G P D G F M Q K A K N [L] L K L G V P E T A Y H Q
UniRef90_UPI0003B63AC3	G P P A M T D A V Q R M L L D L K V P V S Q M F
UniRef90_W9AR48	G P E P M M Q A I T E Q L I E R D V I A K F D I F S
UniRef90_UPI00046AA512	G P E P M M [L] A I S D A L K T H G L E P D Q I
UniRef90_L7L8Z4	G P G P F M E A V H Q G G L A K A K F D H R E V H T
UniRef90_X0RYL0	G P L I M I K F S V Q R L Q Q S G F K A R D I Y
UniRef90_E2SEK4	G P A P F M A A A V A V A L K E L G F P R S R R H Q
UniRef90_11G874	G T K S F D K D M I K Y L K L N F N Y E Q I F K F
UniRef90_F0GAG2	G P P G F M Q A N W R L L R G L G V A R E R I
UniRef90_W0TLG6	G P P P M I D A C V T T L M K G R L F E R D M F
UniRef90_D6TQY2	G P P E M V R A S V E M L G H M H I R P N Q I H
UniRef90_UPI0002E8B92E	G P Q A M T E T V R D S L K A H G M A A E R I H
UniRef90_F8EEK7	G P L L H F M L M V Q I T L T M G F E K A R I H
UniRef90_A1WR56	G P T P M I D A V I P V L Q M A G V A P E R L Y
UniRef90_C4LA03	G P T P Y M D S L E S C L R D R Q F P M H N S H K
UniRef90_UPI000329B54A	G P V G F M Q F A A K Q L G L G V G A D R I H
UniRef90_R6W1F0	G P P M M A K T V L D L L H S L G V E D D M I
UniRef90_Q3SJU2	G P R G M V E D M S T L L H D L G V P M N R I
UniRef90_A1UJH0	G P G P F F M D T V E G A L A T R G A P R D R V H
UniRef90_E8WMA3	G P P P L Y R C L V S D L E K A G V P A E R I
UniRef90_A0A014M4M2	G A L L P F M R A V V R A Q L L Q A G I V P A R R I
UniRef90_Q8XK66	G P P P V M M H F T A L E F L K L G V P E E K I W V
UniRef90_J2IUF1	G S P V V M I D A S R K F D L M T L G L P A K H F Y A
UniRef90_L7FIR1	G P P P M M N A V L R S L R E L G V P R S Q T H
UniRef90_E9UZF0	G P P P M V E A V R T H V A G A G I V E P
UniRef90_W9BV83	G P G G F M Q D L Y D G L R D L D V A D K R I H A
UniRef90_M5U5U8	G P K P F M L S I E R S L N E L L G V D S D R I L H
UniRef90_L8MBM7	G P G P F M D T V E R A L R G A G E D A A R I H V
UniRef90_N9CYH4	G P V P V M V D D A V R G W L D S E G V K P A N F
UniRef90_B6B4E4	G P E P M M L G I A A A A L K D H G L S E E Q I
UniRef90_G2PDQ4	G P P G L A E H A Y G A L R E A G V P D R R I H
UniRef90_F7NTS2	G P F P M V G V V R D A F L D Q G A K R E Q M F A
UniRef90_G3LGX1	G P P G M I D R A I E T A V G H G I A I E Q I H
UniRef90_Q51603	G P P P M V E A V R S W L A A E K L N P V N F Y
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UniRef90_I2IY89	G N P A M T T A A H E S F L K A G L P D D D F F S
UniRef90_S6AJB9	G P G G F M Q H V L D S A R E L G G W E E S R L H
UniRef90_X7G8Z3	G P A A L L N E A V V Y R T A A E L L G I D A A R L H S
UniRef90_W1YVY0	G P A G F M A F V K S Q L L A L G V K N E H I Y
UniRef90_UPI000471E726	G P T P M I E A F E R A T D N Y P A E Q V H V
UniRef90_H1QLS3	G P V P F M R A I R G D L L R R G V P A E A V H
UniRef90_M1VBW0	G P P G M M E L V L A G I L R D L G Y T E S H V W K
UniRef90_B3E0W6	G P E I M M R F A A R E F E R W K V P K K N I F
UniRef90_G2J3J0	G P P A M V E D M H R V L N L A G V D D D D I
UniRef90_UPI00036321D0	G P T G F I D A A L D A A R A Q G W A E S R L H S
UniRef90_UPI0004658AC8	G P E G F M D W L I G Y A E A N G H D G G T V H
UniRef90_G7DKE1	G P T G F V E G I S S M L V K L G F D P
UniRef90_D5X4U3	G A P V M V E A A Q R D F T Q L C Q L P E D A F F A
UniRef90_E3IE82	G P L P F M K T V Y H S L K E W G V A D E N I H T
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UniRef90_D3IH7	G P G P M S K A V V Q V M L D S I G V D R E N I
UniRef90_N0ATU0	G P P G M I D A A I G K L S D Y G I N N N Q I F
UniRef90_C6WKG8	G P D P L V A L F R E L L T T R G V P P E H V H
UniRef90_J2YDR3	G P T P M L D A F E S T C E G L G Y P H A H I E R F
UniRef90_A5VZP8	G P G S F T Q Q L Y E G L R G V H V P D A R I H A
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UniRef90_Q47CC1	G P P P M V E A V A Q N L R E R A I Q P A S F H
UniRef90_H5U3H3	G P P P M I T A A V K A L K R R R M A P R I F
UniRef90_B1YXE8	G P P P L V E G A R E V A I A G V P D A Q F
UniRef90_I4Y3F9	G P P P M V E S I R N W L Q D Q Q L E S G Q L Y
UniRef90_I3D8N5	G P E S Y M N A L K D I V L S L G V T E D R F F T
UniRef90_D9SD88	G A P V V V E A A H T D F T S T R G L P N D A F F S
UniRef90_UPI0003FACE99	G P E G M M T E A R E A L N I L K V A P E R I Y K
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UniRef90_H6R5G2	G P A P L M D S V R R V F A E Q L G D R L H T
UniRef90_Z5XIN2	G P E R F M D A V S G A L I A S G V D A L N I H S
UniRef90_UPI0001E89FAA	G P E G F T S S F S R A A T I I G Y P K A S I H
UniRef90_D3D7N7	G P L P F M R D V R A S L L R R G V P A E N I
UniRef90_D9QRP5	G P Q P M M D A A A E C L E Q G V A E D R I W V
UniRef90_U5VGX2	G P G G F M Q H V L D S A R S H G W P D A R L H
UniRef90_H1Q3N0	G P P M L I K T V T D Y L D S L G V D Q D A I

1 10 20 30 40

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UniRef90_UPI000363C058	F E G P L G S F G L H E D S Q A P V V L L A G G T G F A P I K S I V E H A																
UniRef90_H6R155	P E G R F L L N P E V H K N Y I G F A A G S G I T P L S M L K S V																
UniRef90_F5RHA9	R L R I S E P R N L F P L V H E A G R S L L F A G G I G I T P M L A M A Q Q L																
UniRef90_S6JVE0	I G A P R N L F A L Q P A R R T L L F A G G I G I T P M L A M A Q Q L																
UniRef90_Q5P6H3	F E G P L G S F G L H E D S Q A P V V L L A G G T G F A P I K S I V E H A																
UniRef90_E0IEV8	P A G D F Y M D R E D S R P V V L I S G G V G L T P M V S M L H A A																
UniRef90_W4NHE3	A F G P S G I F T P S A G P S R K A L Y L S A G S G V T P L M A M T R A A																
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UniRef90_G9C9M3	V L P P A G R F T L A R H G Q P V V L L Y A G G S G I A P I F A L A R Q A																
UniRef90_Q4CMU8	K K L C L I A G G T G V A P M L Q I R A A																
UniRef90_A6LR18	F L R G P Y G N G F D I E N K G K E L I V V A G G T G L S P V R G V V D Y F																
UniRef90_B0JFC8	P Q G E F F L D N T D S P V V L I S A G V G L T P M V S I L N T																
UniRef90_UPI000415D612	G R F V L E E S F G T P R D V L I A A G S G I T P L F S L K Q A																
UniRef90_L1LV11	P P A G D F T L A A S D K P L V L I S G G V G I T P T L A M L D K A																
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UniRef90_L7LPU1	L T L R G P H G S F F L R E S M R P A L L L A G G T G L A P I L A I L R K L																
UniRef90_D3V8J6	P R G D G F L L D V Q S S D T P V T I S A G V G L T P M M S M L Q H L																
UniRef90_V9KPJ0	P E G S F R C S Q M K G K E L L L L A A G T G F T P M I N V I R F A																
UniRef90_H0JGD6	P A G D F T L G A A A D Q S L V L L A A G G I T P P L L A M L R H L																
UniRef90_Q09DN2	R P E G R G F P L D Q K G R D L L L F A T G S G I S A I R S V I E S L																
UniRef90_C0D1V8	F L R G A Y G K G W P V E Q F A K H V V L I T G G T G L A P V K S M L N M F																
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UniRef90_A0A024E833	P Y G E F S L D E E V D H P V I L L G T G T G M A P L K S I E D Q																
UniRef90_U6C0H5	G P L G T A Y L R R K H T G P M L C V V G G G T G L A P V L S V R G A																
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UniRef90_K8NY08	T V D P R R N N F P M S Q S D G K C F L G G G I G I T P P L L S M A R H L																
UniRef90_J7LE57	P A G D V T P A D G D H P V L I S A G I G C T P M V A I L N H																
UniRef90_K6X433	G P W G D F V H D A D A D G P M I L L A G G T G L A P L K S I A L H A																
UniRef90_Q0AH85	F E G P L G S F F L H P K N D T P I F L A G G T G F A P V K S M L E Y L																
UniRef90_Q3JR0	Y P P A G D F F L R N N T S P A V L I S A G V G Q T P M V A M L E T L																
UniRef90_Q46SX7	G S F Y L R V Q R P V L L A G G T G I T P M I G M L S H L																
UniRef90_L8PEU2	P A G S M V D H T T D R G L L C V G G G T G I A P I K A M V E D V																
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UniRef90_J9ZX59	P L G R F T R K S A N L P M F L A G G S G L S S P K A M I E E L																
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UniRef90_M5DQW7	P A G D F V L P S T L S R P V L L V T G G V G I T P V L S M T R A S																
UniRef90_B2JTG4	L A Y G P S G A F T P T G S R A A K S I Y L S A G S G V T P V L S M T R T																
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UniRef90_I4D0Z9	P L G S S Y L R Q H E S N P I L C I A G G S G L A P V N S I V E T A																
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UniRef90_B0SDU7	P A G D F V L N T A G D L P V V L L A G G S G I A P A M S M L K A F																
UniRef90_UPI00030D4604	P A G D F V F M D V E P Q T P V T L I S A G V G Q T P M L A M L D T L																
UniRef90_V5TXT8	G P L G G F T L N G E S S R P M I F L G T G T G F A P L K S L L A H L																
UniRef90_UPI0004249632	G P T G S F P L D P L T R R D N V A V A A G G S G I T P I L S I M R T T																
UniRef90_L2TQG1	G P L G G F G I R E G S L P R W F V A A G G S G I T P M L S M L R R M																
UniRef90_G8M9A1	G P L G G F G I R E G S L P R W F V A A G G T G V V A P M L S M L R R M																
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UniRef90_W3XAM2	UniRef90_F9XQ54	UniRef90_UPI0003743A36	UniRef90_Q0AI51	UniRef90_Q9KZ38	UniRef90_D6YB43	UniRef90_A4FD83	UniRef90_S5T9M0	UniRef90_UPI0001DEBD99	UniRef90_K5W0S2	UniRef90_UPI0003F1889C	UniRef90_L1NPJ1	UniRef90_UPI000465C9AA	UniRef90_W7ZUP1	UniRef90_K0C619	UniRef90_M3ZF9	UniRef90_V9QVB7	UniRef90_I6ZGL2
P E N Y F P L H D D D R P A L L A G G I G I T P K A M E A L	G D F Y F D P S G P A V F V F I T P V R S I I A Q A	G W F V W R P P T G T M V P A D T G R D I L C V A D G T G L A P M K A I I E H A	G K F E Y R G V C T I S G K Q R N I K R F I M C G G S G I T P I F Q V L R A V	P G D F V L N T A G D L P V V L L A G G S G I T P M L Q V I H T I	S I E S P P F G D F F L D D T N S A A V L I S A G V G V T P L A S M L H T I	G E F F F D P Q M E A S R N L V L V I A G G V G I T P N P L L S I L R H A	G P L G T F V P L Q E D D G S P L I L V T G T G Y A P V Q S I L H R L	G W F V W R P D V Q R E P V L L V G G G S G I T P V M S I L K S A	P S G H F Y I D D D P A R E Y L A V A A G G S G I T P I L S I I I K S T	R L R I S E P R N L F P L V H E A G R S L L F A G G I G I T P N P L Y S I L Q S S	V L T P S G V F V P R S L D S D F L L I A A G G S G I T P M L S I A K S V						

50 60 70 80

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

90 100 110 120

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UniRef90_S6JVE0	F D E Q P Q	T A L D A A K V L A G P A D N V H L Y V C	
UniRef90_Q5P6H3	V P V S E S G P D D S W S G R T G L V H H A V M Q D L P D L S V H E V Y A C		
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UniRef90_S7U288	R H V L T R G P D G E R L D A E G L A G M I A A V P P S A R V F L C		
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UniRef90_K5W0S2	R A V F Y S A P A G S D L Q G Q D Y D F A G R L E D T L R L D D P A A H Y Y V C		
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UniRef90_W7ZUP1	V H H W L E S D R G L P T P H A I A G W A R P Y R R H D V Y L C		
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130 140

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UniRef90_UPI00047DC19D	G P P P M V E A V K G Y L K S E G I E P A N F Y S
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UniRef90_L8PEU2	G P P G M I R S G V D A L R D I G I P S D R I
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UniRef90_J2VED9	G P E D M L Q A A S Q S L Q A H G L D K A S I
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UniRef90_UPI00034B0137	G P T A M S E E I A A T C G E L G I A D E R I H V
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UniRef90_M3ZF9	G P P P M I E A I S K T L M D L G L P K D R I
UniRef90_V9QVB7	G P N G F M E H V L G T A R A Q G W A E T Q L H
UniRef90_I6ZGL2	G P A P F M D E A R A A L S A V G M P A N H I H

The figure displays a sequence logo for a protein alignment across 40 positions. The x-axis represents the position number (1 to 40). The y-axis lists UniProt IDs grouped by their first four letters: UniRef90_ (e.g., UniRef90_O05617), UniRef90_C (e.g., UniRef90_C8XA23), UniRef90_I (e.g., UniRef90_I7DLM0), UniRef90_A (e.g., UniRef90_A0A059MLX0), UniRef90_V (e.g., UniRef90_V5HMF5), UniRef90_I2JMH8, UniRef90_F5YMW5, UniRef90_UPI000371F242, UniRef90_UOFBY9, UniRef90UPI0003023736, UniRef90_N9RFE4, UniRef90_R0ELG8, UniRef90_A0A059IUM5, UniRef90_S3DD13, UniRef90_C5EVG4, UniRef90_F9RFF4, UniRef90_B2AZ63, UniRef90UPI00042B46FE, UniRef90_J2HJI9, UniRef90_I7DWX5, UniRef90_N9VE28, UniRef90UPI00047CBA25, UniRef90_U1MXZ2, UniRef90_W9GM82, UniRef90UPI0003B5F034, UniRef90UPI000374A41B, UniRef90_V6SC72, UniRef90_J1R1U8, UniRef90_M4VEW6, UniRef90_F4F6H6, UniRef90_U7DRR7, UniRef90_A4AP32, UniRef90_D5NWS7, UniRef90_A4XDP3, UniRef90_S2K633, UniRef90_H5UUD9, UniRef90_A3VW14, UniRef90UPI00034F5AA7, UniRef90_A4ATH2, UniRef90_C7N7B5, UniRef90_J9VG18, UniRef90_W5TPU6, UniRef90_A0A011PQD1, UniRef90UPI00047A660C, UniRef90_U1KRK6, UniRef90_A8M4N7, UniRef90_S3P3C3, UniRef90_B1QVZ5, UniRef90_FOL207, UniRef90_I0HGG2, UniRef90UPI00036A07EC, UniRef90UPI00036D60B1, UniRef90UPI00035D3F8E, UniRef90_T0Z7V8, UniRef90_A3GF86, UniRef90_E3HNT5, UniRef90_I0HCM5, UniRef90_V9LTT5, UniRef90_D2B6Q5, UniRef90_F6QZF6, UniRef90_G8RJZ8, UniRef90_W8HGN1, UniRef90_L7LLG7, UniRef90_L0HJC3, UniRef90_F8AWZ7, UniRef90_A0A021W4L3, UniRef90_D5PDC1, UniRef90_E6QS74, UniRef90_W5WN66, UniRef90_Q143R0, UniRef90_H0QXF4, UniRef90_H2JLM9, UniRef90_G7UPA9, UniRef90_C4S7L6, UniRef90_V6KYD6, UniRef90_V6MJ42, UniRef90_I9E3X2, UniRef90_G8RLG1, UniRef90UPI00037FFBC8, UniRef90UPI000332EE21, UniRef90_A0A015JZN1, UniRef90_W0F1V2, UniRef90_Z5X9A9, UniRef90_M1F9N6, UniRef90_B1FTA3, UniRef90_A3VLQ0, UniRef90_R7X300, UniRef90UPI0003492652, UniRef90_V4KUI8, UniRef90_R7V9E1, UniRef90_H5Y468, UniRef90UPI0003745EA5

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50 60 70 80

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

90 100 110 120

UniRef90_O05617	F D N G P D Q Q K L N A A A [L] L A	V G K V V A N	A E A E G T H [L] Y V C
UniRef90_C8XA23	V I A I S D D I R W K G P R G	C A Q L F E H W I D I Q S V D T A F I	A G D W S S H D V M V C
UniRef90_I7DLM0	V I H V L E S D A Q E I D L F T G L V S C	G R I D M D E I E I R P	D S R V Y L C
UniRef90_A0A059MLX0	H H W Y E D L G V R P A T D T T R L G R I	L Q D L E I R P	D S R V Y L C
UniRef90_V5HMF5	V W A V S R E H D Q T L Y H G R L S Q A L L Q S V V P D V T S R T	P D V T S R T	V L M C
UniRef90_I2JM98	W V N I L S R E D Q G V D L L N G R L D N A A L S K R L L P	L P G Q F D S Y Y	C
UniRef90_F5YMW5	V D K D E G N G G Y P V G L V T E Y I P K L D I Q D L	N T A A A I V V	C
UniRef90_UPI000371F242	V D R G D E S W N G K V G L V T K Y I P E	I P D L K N M A A F L I	C
UniRef90_U0FBY9	H R W Y E D L G T H V A F G S V H E G R A D L Q D I A V E P	D T Q A F L I	C
UniRef90_UPI0003023736	T W A Y T R R G P A G W A G S V G R V D D D A L R S A V W P A E D D P T F F V	C	C
UniRef90_N9RFE4	I F S Y V D S D G K C L D L D Q L I G S Q P K G T H V Y V	C	C
UniRef90_R0ELG8	Y F D N E G Q K L D L A D I A R S R Q P D D H L Y V	C	C
UniRef90_A0A059IUM5	V F Y E T P S E D D L A R G R A G R I D P H W L A Q	I S D P T Q A D Y F	C
UniRef90_S3DD13	V H Y V L S D P P N D W R Y G T G Y V T K D		
UniRef90_C5EVG4	V D G A E D G Y G G R V G L V T K Y I P D L D L K D	A P S A K A I V V	
UniRef90_F9RFF4	L L L K D A G G T M H P Q G R L N K E W L L Q L V P D L M Q R T	V Y L C	
UniRef90_B2AZ63	L V Y V S L S R P Q A S W Q G R K G R M D R P F F E S A V P D P E G K T L V L V	C	
UniRef90_UPI00042B46FE	V Y Y V L N Q P P E V W D G G V G Y V S K E I I Q I H C P A P A P D I Q I L R	C	
UniRef90_J2HJ9	F D Q G Q Q A H A L D	I D A V L G E P C L G T H V Y V	C
UniRef90_I7DWX5	E T P S D A D A R A A R Y D V E G R I T P D W L A A N T N A L S D	Y Y I C	
UniRef90_N9VE28	L L Q V L S I R P D A H W Q G H S G H L S R E L L A T V P E L E A R D D V Y L	C	
UniRef90_UPI00047CBA25	H I A L S R P L P Q D R P E I D F D S Q G R L S A D T L K P P N G D F D Y Y L	C	
UniRef90_U1MXZ2	F S L S R E E W H G H T G Y I Q D Q L P G V I D T V G D D V D Y Y A C	C	
UniRef90_W9GM82	L L V G P P V H G S W L P A A A P G E T P S G R A G D V A P D V A E H E A Y L	C	
UniRef90_UPI0003B5F034	V Q V L L R G Y V E A Q D Q G G E L S G L F G R A H L N D A V P D Y A E A Q T F L	C	
UniRef90_UPI000374A41B	H L W Y E V P G D H A P Q A S P G Q A D V S S L E L P A D L T A Y L	C	
UniRef90_V6SC72	I Q F V Y T K V N V E D A L F G R V D K S V V N F V L N N K H A E S K F Y L	C	
UniRef90_J1R1U8	V E H R L E S E S G L P T S E S L A T F A D G G Q D S D V F V	C	
UniRef90_M4VEW6	V P V V Q Q D D K S R P A D A K G G M V G D V V I H D H A D L S G A S I Y V A	C	
UniRef90_F4F6H6	V P T F S H D E L A E P G E R G D A L T V A L D H L C P E H E V Y V	C	
UniRef90_U7DRR7	U Y F T N S K T Q E E G S L F G R I D T S T V N Y A L K N K H K D T Q F Y L	C	
UniRef90_A4AP32	F T V L S Q E E G H E R C G F V T D H M D P T E H L A D G E A D S Y L	C	
UniRef90_D5NWS7	L L W Y E E A A G E A V D G L K A E V T A G R V D P S R I P L P A G A H I H	C	
UniRef90_A4XDP3	V H R A L S Q P E G E A I S G R D Y E H A G R L A I E A A L P L G D Y D F Y L	C	
UniRef90_S2K633	V T T H L W Y E E V A D D G R G A R P G F M D L S D L D V P A G A H V F M	C	
UniRef90_H5UU9	I Y Y D D D Q E Q A I P L Y L S E S S D E F P S K Y E E P I I C T K F N F N E L S P F R I S D Q Y L L	C	
UniRef90_A3VW14	L A L S E P M E E D N W D G F V G F I H N C V I D N Y L H E S P E D I E L Y F C	C	
UniRef90_UPI00034F5AA7	V H V S L Y H S D E R W E G P V D Y T A P F L E T L E G P E D G N R V A V F C	C	
UniRef90_A4ATH2	V T Y A V S G T G K M G E G R K G H V S R E M L E E A I K R D A R G M K V F L	C	
UniRef90_C7N7B5	I R L D G A P W T C A A V P G T K F L D Y D E L V R I A P Y F A T A H T Y V	C	
UniRef90_J9VG18	V P V S D P A P D D S W S G R T G L V H E A I L E D F P E L K E H E I Y A	C	
UniRef90_W5TPU6	V H V H V L S R E Q R I S P L L T G R I D E N K L E T M L I R T D E V D E W F L	C	
UniRef90_A0A011PQD1	H T W M E E N E N D L V I C A N N H A G R M R L A P L S T S L P L E H G E F Y L	C	
UniRef90_UPI00047A660C	V H H I L I A Q A D P G W T G A V K P L N A P L I V K L A A P L A G R M T Y V	C	
UniRef90_U1KRK6	Y L L F Q D Q V H I Y S E K T Q Q R L D I E Q L L S Q Q N L N S H V Y I	C	
UniRef90_A8M4N7	S D P K E D E I L G K D Y D F K G F V T K D W I K D N L D L N S Q F Y F C	C	
UniRef90_S3P3C3	V P V L S N E Y H A Q M R R G Y V G S A V A D D F D D L D G W K A Y L A	C	
UniRef90_B1QVZ5	Y I V G G R N D P G P Q R L F T P E G L R G L V P D V N R R D V Y L	C	
UniRef90_F0L207	H S H G D P A R A F A V E P L L A Q Y A G G T H V Y V	C	
UniRef90_I0HG22	F S D E R A E Q R F D I E R V L D S Q S P R T H L Y I A	C	
UniRef90_UPI00036A07EC	F K F I P T L T Q E E K E G V L S G R I P N I L K D H Y P D L S K H A I Y I A	C	
UniRef90_UPI00036D60B1	L V V T H S R P E P G W E G L S G R V P V E I L P N L F A K H E G E V V Y L	C	
UniRef90_UPI00035D3F8E	V H Y V L N E A P E N W K G S V G F V T P E I I D S K L P K A S D D S N L L L	C	
UniRef90_E3HNT5	Y D D K A D E Q K L H P D E L F S Q V G P E E E I Y V	C	
UniRef90_10HCM5	V L T G R T G G G N Q P F Q P E N L A T L V P D V T D R D T Y V	C	
UniRef90_V9LTT5	Y N W L S E V T P A D K Q G V D Y D F Q G H I D L A K I P E L C A N T Q Y Y F V	C	
UniRef90_D2B6Q5	V T V D H P D L A W K G P V G L V T R L I D R I V F E P R R T F A F V	C	
UniRef90_F6QZF6	F H V T Q E V V Q K L S D I S G N F N T E K I S E K S L S F S P D I A D C Y I	C	
UniRef90_G8RJZ8	Y R L R S R A T R T Q G R L D L S R L D D E V P D W R E R Q V W A C	C	
UniRef90_W8HGN1	A L C G D R M I T V S T P G E L A D R L V P K L A D Q P L G T H V Y T C	C	
UniRef90_L7LLG7	L Q W Y E H G L A T D E A T R I G Y M D L E G V D I A P D T T A L L C	C	
UniRef90_L0HJC3	L L L T V D E A E P G W K G H V G V V T T L C D K I R H V A G T V T F M C	C	
UniRef90_F8AWZ7	L I V H R V V G S R R D L G H D P L A A R F L V A A V P D V A E R D V F V	C	
UniRef90_A0A021W4L3	R F L L T R Q E P R A A D E D A G R I D A S L L D A H V D D L A A R Q V Y A C	C	
UniRef90_D5PDC1	L H L I V D A K T P G W A G E V G L V T E P L G R L A L D T E R T T A F L C	C	
UniRef90_E6QS74	V W L T A D T G D T L W P E R I G P V T Q F F D Q L D I D P K Q T S V M M C	C	
UniRef90_W5WN66	V P V V E S E P G L Q G V E H G T L A D V T R S W S D R D V L V	C	
UniRef90_Q143R0	V P V L S D E P L D S D W K G A R G L V T D H I A P G F E G G E G Y L	C	
UniRef90_H0QXF4	V F H S L D D R E G V P T V D G L A H A F R P F R T F D V Y L	C	
UniRef90_H2JLM9	Y A L N G P G G E R P P L T A E S L R A T F P G L A R D Y D V F L	C	
UniRef90_G7UPA9	H C V V S D G K A I D W S G N V G F V H E W L P R L L G G D L A R H E F Y F A	C	
UniRef90_C4S7L6	V P V V S G E D R S W H Q G T Q G F V H K A V I N D F P E L S H Y S I Y A C	C	
UniRef90_V6KYD6	V E V T V D R P G P G W R G A V G V V T T L L D R L D L R P E R T C A L V	C	
UniRef90_V6MJ42	A I W Y R T P R A E D V Q N T D Y Q F E G L M T L K H V K D W L P D M H F Y F C	C	
UniRef90_I9E3X2	V H Y A F S Q Q P W G D H Y T G R I N D R I V N E I F A K D L N W G R Y Y A C	C	
UniRef90_G8RLG1	V I S G V L N P D D S W T G E V G T A T E L A Q K Y I S G T D R S Q F E Y Y Y C	C	
UniRef90_UPI00037FFBC8	V Y H T R S A P D G R R P G R L T Q D E L A S L V I P V E Q K P E F R V	C	
UniRef90_UPI000332EE21	V E F I L L S A P T S E W N G K Q G H I S P A L L S E F L K R G Q E E S S V F I	C	
UniRef90_A0A015JZN1	C S Y F L T R D D P L H K Y Y K Q R I D K K L I N D V I E D Y L E K L K C F I	C	
UniRef90_W0F1V2	I Y F K F S D H E K V L H R R S H Y V L T D F I E N N L G A A K A H T S F Y I	C	
UniRef90_Z5XA99	V R V L H G Y T R A P G G E L D G R F G P E H L R A A M P D A D A V Y V	C	
UniRef90_M1F9N6	V P V V G D N E D N E W S G H H G Q L A H A V L S A D I D L S N V E V H A S	C	
UniRef90_B1FTA3	Y H F D D G E V T N R L D L R A L L H E P T P G T H V Y Y C	C	
UniRef90_A3VLQ0	L H Y H L D D E Q N G A L V D I G G I L T A	C	
UniRef90_R7X330	Y F D N D G E R A D L D T I L A Q P S G G K H L Y V	C	
UniRef90_UPI0003492652	Y T E V L S D P P P A W P G K R G Y L T E H F D L A E W R D S S A D M Y V	C	
UniRef90_V4KU18	I D F V V S V L S R E P R P S S W K G L R G H F F E A L L T A G F E N A D T Y L	C	
UniRef90_R7V9E1	M L L C S M F L Y G R I T Q E V I S S T L K E H F A D S Q S Y I	C	
UniRef90_H5Y468	L V T T I D R P A E G W T K H V G F I P S I T E Q I A P S S V D T Y A V V	C	
UniRef90_UPI0003745EA5	Y L L R S R N R R S W L P A G Y A P V P D D Q A L R H V P D I A S R D V Y V	C	

130 140

UniRef90_O05617	G P G G F M G H	V L D T A K E Q G W A D N R L H
UniRef90_C8XA23	G S P A M V K F T	V A T L I A S G V P E N Q I
UniRef90_I7DLM0	G P E P M M	L G I A S A L R T A G L L N D S Q I
UniRef90_A0A059MLX0	G P L P F M E S	V R T S L L A R N V P E G N I
UniRef90_V5HMF5	G P E A Y M E S A	K A W F A A L G I A P S Q V H
UniRef90_I2JM98	G P E S M I S E V S	R G L R G F G V A D D N I H
UniRef90_F5YMW5	G P P P M M R F S T K G	L I E R G F K E S N I W
UniRef90UPI000371F242	G P P L M M E N S V	K D L L K Y G L Q P E N I F
UniRef90_U0FBY9	G P M P F M	L A M R A S L L E R D V P A Q N I H
UniRef90UPI0003023736	G P T G F V E H	V A D A L V R L G H S P A R I L T
UniRef90_N9RFE4	G P K P M I D	A V I D R C N Y H R Y R D E Y I H
UniRef90_R0ELG8	G P T G F M D F V L G E S	E R L G W K K E Q L H K
UniRef90_A0A059IUM5	G P V G F M Q E M V R G	L K A A N V P D A R I H
UniRef90_S3DD13	G P P A M M R F S V	K G L L E R G F L E E N I W
UniRef90_C5EVG4	G P S Q F M Q D T	H D N L Q A L G F D M N N F F Q
UniRef90_F9RFF4	G P E G L	E R A I R E T F T G L G W D E G D V V F F
UniRef90_B2AZ63	G P P P M	N K A M A G H L D A L G Y S P E M Q F Q F
UniRef90_I2HJI9	G P T G Y I D L	V L L R S A A A K G Y A D R Q V H
UniRef90_I7DWX5	G P K G F M A M A I	L A G L R A A N V D M D R I H
UniRef90_N9VE28	G P S G F M Q L A	Q G W L E A L G V P A E R L H
UniRef90UPI00047CBA25	G S L A F M R S	L Y Q G L L K R G I D R Q R I H
UniRef90_U1MXZ2	G V P A A V	V A A K D R L D E L G V P A D R V H T
UniRef90_W9GM82	G P N G W M R L	V R S S L H E A G I P T D H I H
UniRef90UPI0003B5F034	G P P G M M K A V	Q V K L W A D E R I A E R L H
UniRef90UPI000374A41B	G P L P F M R	A V R G G L L R H G V P A E R I H
UniRef90_V6SC72	G P E D M I	A N V S N T L K E N N V P E K N I H
UniRef90_J1R1U8	G P A P F M	A L V K D T L T G I G Y G R H R V H
UniRef90_M4VEW6	G P P P M V	S A V I P Q L L A H K A H R G D I H T
UniRef90_F4F6H6	G P P A M L A G S R L R	L L A A G V P G E R I H
UniRef90_U7DRR7	G P Q P M I E	T V S A V A L A H G V A E E S I F E F
UniRef90_A4AP32	G P E D M I	H L V S N T L Q E N G I N K E K I H
UniRef90_D5NWS7	G P P P M V E	A V R K Y F D S H D T P P L N F Y
UniRef90_A4XDP3	G P V P F M	Y Q V R A E L L R G V S K D R I H
UniRef90_S2K633	G P S S F T Q D L	Y E G L R A V H V P D A C I H A
UniRef90_H5UU9	G P L P F M R D A	R R T L I R K G V A P E N I H
UniRef90_A3VW14	G P K G M I T W	V K T R A T A L G W P D E A V H S
UniRef90UPI00034F5AA7	G S V T F M E S Y A	Q Y L I N E N V Q L A N I V K F
UniRef90_A4ATH2	G P P L M N K A V	V Q K M G E D F G I P D E H I
UniRef90_C7N7B5	G G P S L S R	T V R E S L L K A G Y D E G G I
UniRef90_J9VG18	G P P K M E E A G K G K G V L R E L G L G G K E I	Y K F
UniRef90_W5TPU6	G P P P L M D S V	R R I Y A E E L G D R L H S S
UniRef90_A0A011PQD1	G S V R M V E	A I F P F L K K H G A E D G A C F S
UniRef90UPI00047A660C	G P F D L V Q L	C R D T L A E R G V P A E K V
UniRef90_U1KRK6	G P M P F M A D	I K Q Q L I T L G V D N S R I
UniRef90_A8M4N7	G P A Y K Y P Y	L V G E L E S L G L P G R R I
UniRef90_S3P3C3	G P E R L I Q	A V I T T A K K L G W S P N R V H
UniRef90_B1QVZ5	G P P P F M K	A L N N A L L E L G V I S E E D I
UniRef90_F0L207	G P P A M I E A T	V P Q L L A R G I R T A D I H A
UniRef90_I0HG22	G P P G L V N T A V	G T L Q D L D V P S S Q I H
UniRef90UPI00036A07EC	G P R R L L M Q	A V R E A A R H W P A G T V H
UniRef90UPI00036D60B1	G P A G F I D	A V V L C A A R N R G W P E R Q L H
UniRef90UPI00035D3F8E	G S P E F V D	T C I S A K A Q L G A Q D D M I H T
UniRef90_T0Z7V8	G H P D M V S	Q T V D Y L R L A G F P E A A V
UniRef90_A3GF86	G P P P M I	S A M K K A A V G L G F A K D Q V F V F
UniRef90_E3HTN5	G P A G F I D	D W V C Q A A D Q A G V P K H R V
UniRef90_I0HCM5	G P A P L T R A V V	A S L R S L R V P S R Q I H A
UniRef90_V9LTT5	G P D G F M K N	V E H Q L H S H N V A H D H I H
UniRef90_D2B6Q5	G P E V M M R A S A A E	L V R R G V A A G R V
UniRef90_F6QZF6	G P P K F I E R	I E E Y L L Q L G Y N Q D H I F
UniRef90_G8RJZ8	G P E G M L D T A E R T W	A A A G I A D Q L H
UniRef90_W8HGN1	G P A P M I	A A V A E W A R D C G W P P G R V H S
UniRef90_L7LLG7	G P S G F L	G A I R D A L L E R D V P E D R I H
UniRef90_L0HJC3	G P P L M M K Y T S M	V L I E L G F P P S E M Y
UniRef90_F8AWZ7	G P P G M T R A V V	Q A L R G L G L S D K Q I H T
UniRef90_A0A021W4L3	G P G G F V	A N A
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 F L R G P Y G N F N I D L F K S K E V I V A A G G T G L A P V K G V V D Y F
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 L F L A P P Q G D F V L P E H P R P L L M L T A G S G I T P V M S M i R t t
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UniRef90_UPI00037DAE28	V P H R P D S D V	V L I H T A R T A A D T I F R E E L A E L A D Q F P N	
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UniRef90_W9GCQ4	V P R R P D A D V	V L I H S A R T A A D A L F R D E L L E L A D Q F P G L T	
UniRef90_FOGAF4	H A A G R R Y R F D	Y F A R R D E D V V F R D E L T A A A P L A A H T R L H	
UniRef90_E2S833	L A G G T G R V V	L L R A D T T A A E V M F A E D V A Q L Q A E H P D R L E	
UniRef90_A0A058XQ90	L I E T G A S F E V	H Y G A R T R E K L A F Y D E L L I A L N L D D R L H V Y	
UniRef90_I3ZA43	L E D A G N I D G N K I	F I F A N K T G K D V I M E S Y F H E I L A E D	
UniRef90_UPI0003650B1E	L H T Q H H L S A V L L	L Y S N S S S P E K A M F L G P L Q Q L A Q E F F P D R L H	
UniRef90_C4G8C6	L A G M E N A K D K F I	V I A G F R S P D D M L F R D D L Q R W D D A L N L T L T	
UniRef90_UPI00036C3806	L K K D H P H T P V T	L Y W G G R N K E D L Y L H D E L L S S L A S Q H E H F T	
UniRef90_F7TB17	L R D P R F K R V T	L Y W G G R T E D D C Y A G P L L N A L Q G K G A G F A W	
UniRef90_A8GZW1	I A L G Q E L E T T L	L Y W G C Y A G P L L N A L Q G K G A G F A W	
UniRef90_S9U490	L Q E K W D D G K V D L	L L F C N R T E R H I L L K G V F D Q L A K D H P K R F R	
UniRef90_K1X04	L L R D E L D D V H F M H L C	I R S E A D I P A A S E L H A M A Q Q G M T	
UniRef90_UPI000361A24D	A E R G D V R R H R	L V L A E R G S E P L F R D E L L E R Q Y P N L A F	
UniRef90_U1XVL9	L A C G M N Q P I	H Y V F G A R E L R D L Y A I D D F R A L E R Q Y P N L A F	
UniRef90_J0B7B1	E S Q G Q P F E L	H Y C T R N T N A A F G P E L R R W Q E Q G R L H L H	
UniRef90_B4MY70	L I K R N T N R E R L H	L L Y F N K T E S D I W L K E K L L A D L H V K D E	
UniRef90_S0G617	M D V R D Q Y G T I D	M D V R D Q Y G T I D V Y G A R N P G M L L Y Q D E L L D Q W C R Q P G I N M	
UniRef90_W1H124	E P Q S S R F T L	I L Y G N R S S H S M M F R Q A L A D L K D R Y P Q R L Q	
UniRef90_K6W450	V A E H Y T G Q I T F V	H Y A R T R A D V A Y R D E L V A L D A A H P	
UniRef90_S7NDL0	T D N A E D E T F V T L	V G C F K T F E G I I Y L K T F L Q E Q A R F W N V R T F	
UniRef90_T1A2G5	A A Q M R A R G V E	V L L Y G A E F E A A A H A G F R F	
UniRef90_C1N984	F K N W E F K G L A W L	F M G V A N S D A K L Y D D E F S E C K R F P G Q F R	
UniRef90_UPI00031C49E5	I A K G D K R A I R	I Y W G M Q Y E K E L Y C D E L I K M A N Q I N H I S F	
UniRef90_UPI0003A08B63	Q Q G S G R P T T L	L V V G G K S P D D L Y D H Q A L L K L A A S A P A M D A	
UniRef90_W7B6H2	L L T K D E P V I Y T F I	V Y A R T R A D V A Y R D E L V A L D A A H P	
UniRef90_UPI0002D96876	L A E G R R V A Y L H	A E Q R A F A D E L A A L A A E H P E R L T	
UniRef90_UPI00035F6E1E	T P F E P G Q A T	V L L R G H D E S E L F L G K E I M A L C Q A R G A T L F	
UniRef90_Q604N1	L Q R G H S G P I	R L F H G S R N R A G L L Y L T D R L R E L A R E Y P N F D Y	
UniRef90_UPI000375E0A5	A E K E T P T R K A T L	H Y G A R T R Q D L Y F M Q E Y K S W K M E G I E	
UniRef90_C1B3J0	R K A G A T W S L	V Y G G R R A S S M A Y R D K L I S F G D R V D L W I E	
UniRef90_W9B8S8	Q R L G L D W H F V Y	C G R S A D T P F L D E M W Q W D P A R V T	
UniRef90_A4TEY9	R A R R H A G Q V T F V	A C Y R A E L L A V I A R E M P N V T V	
UniRef90_N8YAM3	V D R R D E F E E V F	V Y A R T R Q D L Y F M Q E Y K S W K M E G I E	
UniRef90_I0V822	R R Q G K D Y E L	R H Y C G S T R A A M A L L D R V T R D H G D A L V	
UniRef90_K8XYM2	S R R G V P W R L	V Y G G R T R S T M A F V D E L Q	
UniRef90_S6FC22	A A E G N S L G E A H	Y Y F G C R H P E E D D L Y K D E F D H A E K N G L V T	
UniRef90_UPI00046D4A84	L E T G A T V T	L Y S N R S A E T V M Y D A E L R E L K E T F G D R L R	
UniRef90_N8YAM3	H H E G A S F E L	H Y C G A S P E R C A F V D E I K N	
UniRef90_UPI00035CBF90	R A Q G K E V V L	H Y C A R S R R E A A F T R Q L L G Q P G V S S	
UniRef90_D2I5L6	L T N I P S L R K V K L	M F F N K T E D D L I W R S Q L E K A F K D K R F D	

UniRef90_M7A9P8
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UniRef90_M4MJH2
UniRef90_M1PCQ0
UniRef90_UPI0002D313C6
UniRef90_V4PPZ3
UniRef90_Q5YN15
UniRef90_I9MCS2
UniRef90_UPI000307F3C3
UniRef90_Q1YY86
UniRef90_G2PPF3
UniRef90_C7NTC0
UniRef90_Q5Z018
UniRef90_W3X6Y2
UniRef90_C7JEC1
UniRef90_H5XQB7
UniRef90_W8R7P0
UniRef90_A2TQS7
UniRef90_UPI00047688CC
UniRef90_UPI00037DAE28
UniRef90_Q6D7A4
UniRef90_V5XGK6
UniRef90_B514Z0
UniRef90_UPI000477DC5F
UniRef90_G0VRN6
UniRef90_B2T4P0
UniRef90_KONKY6
UniRef90_L0FRP9
UniRef90_D2NPK8
UniRef90_V9VYA2
UniRef90_F7RXM3
UniRef90_G8MGG8
UniRef90_Q1YXK0
UniRef90_UPI000477DA4C
UniRef90_S9QIQ0
UniRef90_H6LIH3
UniRef90_B2XS41
UniRef90_X7F8H5
UniRef90_Q2KXR3
UniRef90_K4DZB5
UniRef90_S6GU75
UniRef90_D4Z908
UniRef90_A6SYL6
UniRef90_U1YJ06
UniRef90_UPI000363AC5D
UniRef90_J3BTR5
UniRef90_J2V6V9
UniRef90_UPI0004630DED
UniRef90_UPI00037CAF05
UniRef90_UPI0002487FD4
UniRef90_D0DDD4
UniRef90_FOGH52
UniRef90_W9GCQ4
UniRef90_FOGAF4
UniRef90_E2S833
UniRef90_A0A058XQ90
UniRef90_I3ZA43
UniRef90_UPI0003650B1E
UniRef90_C4G8C6
UniRef90_UPI00036C3806
UniRef90_F7TB17
UniRef90_A8GZW1
UniRef90_S9U490
UniRef90_K1X04
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UniRef90_J0B7B1
UniRef90_B4MY70
UniRef90_S0G617
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UniRef90_K6W450
UniRef90_S7NDL0
UniRef90_T1A2G5
UniRef90_C1N984
UniRef90_UPI00031C49E5
UniRef90_UPI0003A08B63
UniRef90_W7B6H2
UniRef90_UPI0002D96876
UniRef90_UPI00035F6E1E
UniRef90_Q604N1
UniRef90_UPI000375E0A5
UniRef90_C1B3J0
UniRef90_W9B8S8
UniRef90_A4TEY9
UniRef90_A0B614
UniRef90_I0V822
UniRef90_K8XYM2
UniRef90_S6FC22
UniRef90_UPI00046D4A84
UniRef90_N8YAM3
UniRef90_UPI00035CBF90
UniRef90_D2I5L6

90 100 110 120

The sequence alignment shows a highly conserved region between positions 90 and 120 across many UniRef90 entries. The highlighted positions (90, 100, 110, 120) are predominantly occupied by hydrophobic residues (yellow), indicating a likely structural or functional motif. The surrounding positions show a mix of polar, acidic, basic, and aromatic residues.

130 140

UniRef90_M7A9P8	G P A P F M D L	V E Q V V R D R G M H R D S I H V
UniRef90_D1P471	G P I P Y M K N	V Q Q F A T E L G V P S D H F F
UniRef90_M4MJH2	G P G P M L E S T	R S L A A E A G W P E A A V H
UniRef90_M1PCQ0	G P P V M V E	A I K K K A L A S I D V L G D H I
UniRef90_UPI0002D313C6	G P E T M I E	V V T S V L K E K N V K E S A I
UniRef90_V4PPZ3	G P D G Y I L R	T V L D L A R Q Q G W T Q A Q L H K
UniRef90_Q5YN15	G S P A M T R A T V	D R L I E T G T P A D R I
UniRef90_I9MCS2	G P P V M I R F T V	A E F L K R G I R E E N I W V
UniRef90_UPI000307F3C3	G A P V V V E S A R R D F T A T C G L	P E T A F F F A
UniRef90_Q1YY86	G R F E M A G A A R E Q F T A E K G A D R E R M F A	
UniRef90_G2PFF3	G P L P F M R S	V R T Q L L E R G V H P S A I H
UniRef90_C7NTC0	G I N A M V Y S L V	A A V E R L G I P E K R I
UniRef90_Q5Z0I8	G P A P M V	T A V E D A L A A L D V P A E R V H T
UniRef90_W3X6Y2	G P T D F M N S	M Q K Y L A L N E V D A S R I H
UniRef90_C7JEC1	G P D S F M R D	M I K A L T E A G V P E N Q I H
UniRef90_H5XQB7	G P P G M I E A T	V T A L L R T G V H P S Q I
UniRef90_W8R7P0	G P S G F M D H	V L D T A R Q Q G W A D G V L H
UniRef90_A2TQS7	G P E A M I N E	V T K V L K E N E V A D T A I H
UniRef90_UPI00047688CC	G P E G F I L N	
UniRef90_UPI00037DAE28	G P P A W T	A A V R K A A E Q A G L P R E Q W H
UniRef90_Q6D7A4	G S Q S M I E S A	K A L L E K G L P A A N F Y S
UniRef90_V5XKG6	G P G P F M	S A A E A A C K T V D A R H I H
UniRef90_B514Z0	G P H G F A R E	L Y E E L R A A G V P D R R I H
UniRef90_UPI000477DC5F	A S E G M I E G	V T Q D L K T R G V P A F E I I F S
UniRef90_G0VRN6	G P P M M I L K F S I Q E	L L K L G F D E E K I W
UniRef90_B2T4P0	G P A P F M E R	V V V A I G E T R L S S D A I H
UniRef90_KONKY6	G P P I M L K F T	Q P A L T K L G Y Q E H Q I
UniRef90_L0FRP9	G P P G F M K	A V T S S L K T L G A D P D
UniRef90_D2NPK8	G P L P F M Q G	V R S R A L V E A G V P G K N I H
UniRef90_V9VYA2	G P K G M I N W	V H G T A S E M G W P R E A V H S
UniRef90_F7RXM3	G R F E M V R V A	R D A F Y A E G L P K E Q L F
UniRef90_G8MGG8	G P G G F M T H	V L T T A Q R A G W D D A H L H
UniRef90_Q1YKX0	G P E R F I L A D	I H A G L T A R G V D P G R I H S
UniRef90_UPI000477DA4C	G S T A W M D A A	A A A A A R E C G V P A D R I H S
UniRef90_S9QIQ0	G P G P M V D D	V R D A L L K E I G V I S E D N I
UniRef90_H6LIH3	G P P M M M K	C T L T E L F N V G F K E E N I W
UniRef90_B2XS41	G P Y K M I E V A	R D W F C E K K G V E S H Q L Y A
UniRef90_X7F8H5	G P D E M L E D	V E A A L K A I G V P E D D I
UniRef90_Q2KXR3	G P T P M I L D A	
UniRef90_K4DZB5	G P D Q L L N H	V A
UniRef90_S6GU75	G S P A M I	Y A T L D A L V S A G M S A H Q M
UniRef90_D4Z908	G P S G F L D F	V L G A A S Q L G W S G S C V H
UniRef90_A6SYL6	G P R V F M D L V	E S T A A T W P P E A V H
UniRef90_U1YJ06	G P L P F M K K	I R D E A I E A G I P A T R I H
UniRef90_UPI000363AC5D	G P G G F T Q G	L Y D Q L R D L D I R D E Q I H A
UniRef90_J3BTR5	G S P G L I E	A V I A V A E A Q G F N R D
UniRef90_J2V6V9	G P A A M L N	A V L S H A E S V G L A R E Q I H
UniRef90_UPI0004630DED	G P R S M V	H A M R N L L N E A G V N D D N I
UniRef90_UPI00037CAF05	G P L P F I R D	Q R Q R L Q D A G L S T D R V F
UniRef90_UPI0002487FD4	G P N S L M Q S	V Q Q A S Q H L E K Q R I H
UniRef90_D0DDD4	G P E G L I	S A V A D Q A A R L G W P K T A V H S
UniRef90_FOGH52	G P R G F M D A	V L N E A R A R N W A E E R L H
UniRef90_W9GCQ4	G P S D F L D	A A T E
UniRef90_FOGAF4	G P S A F M Q M T	V E L A R A A L G D A N V H Q
UniRef90_E2S833	G P P A F L	A V I E S A A E R L G G P D R F
UniRef90_A0A058XQ90	G P A G L L M K G V	
UniRef90_I3ZA43	G P Q P M V E S	V S E I L L K Q L G A N P D G I
UniRef90_UPI0003650B1E	G P D N Y M R L	M S F A L R Q I G I P E S N I
UniRef90_C4G8C6	G P P P M M K F T	I I E L L Q K R G F K D D Q I
UniRef90_UPI00036C3806	G R F E M A K A A	R D D F Y E R K L P E N Q L F
UniRef90_F7TB17	G N P A M V R A A	R E R L G A A G L A R D R F H A
UniRef90_A8GZW1	G R F D M V	G A A R E L F R T M G V E E D H L Y
UniRef90_S9U490	G P D A L L N H	I A G T P L Q T L
UniRef90_K1IX04	G P R G F M A D	A A A A K V A A L G V P A T R I
UniRef90_UPI000361A24D	G P A S L A T G T	L A A L E Q L A V P A S R V H
UniRef90_U1XVL9	G P S P M V D A T	M G M V L K R G L K V Q D L H V
UniRef90_J0B7B1	G P A G F M Q A	C A Q A S S H W P A G S V H
UniRef90_B4MY70	G P T G F	N S A A I E I L A D I G V I E A N N I H V F
UniRef90_S0G617	G P P V M I K F T	R P V L A D L G Y G D E N I
UniRef90_W1H124	G P A A M M D E A	E A T L R E L G V A E K S I
UniRef90_K6W450	G P P A L M N A	V T R
UniRef90_S7NDL0	G S T E F T E D	M A K G L L R A G L A E D S Y F L F
UniRef90_T1A2G5	G N P N M V D Q S	F E A L K L A G L P I Q H I
UniRef90_C1N984	G L K G M M P E	M L E G V C K E K G I D Y E
UniRef90_UPI00031C49E5	G S L L R M I E D A	K A L F L E Y H L P V S A F F S
UniRef90_UPI0003A08B63	G S P T M T Q A T I	I A A L K A S G I D P D R L
UniRef90_W7B6H2	G P P P M I	S S L N L L L K E D I K M E N V
UniRef90_UPI0002D96876	G P R G F M	S A V D R C L K E L G I P D E R R H
UniRef90_UPI00035F6E1E	G P T P W A A S V	I R E V R A A G V P S E Q V H
UniRef90_Q604N1	G H P E M V	S A A K R R A F L A G A A M K D I Y A
UniRef90_UPI000375E0A5	G P P P M V D A A I	A L L N Q R G V D E R N I F
UniRef90_C1B3J0	G P G P M I	D A V A K E F
UniRef90_W9B8S8	G P P P M I	E T V R H G F
UniRef90_A4TEY9	G P P A L V D	A V R E L
UniRef90_A0B6I4	G P L P M I	R A V A N R L L E N G F R G S D I
UniRef90_10V822	G P Q R L L	D A L A E A T S H W P E D S L H V
UniRef90_K8XYM2	G P E P M I	R A A R C S A L D R L H V E R
UniRef90_S6FC22	G D G S K M A P	A V E N V L L Q A
UniRef90_UPI00046D4A84	G P Y E L V	
UniRef90_N8YAM3	G P N G F M D W	V I N L A E T Q Q F P S A N I H K
UniRef90_UPI00035CBF90	G P T P M L N	A F E S L C E E L D L P H V H I E R F
UniRef90_D2I5L6	G P T P F T E Q G I R	

1 10 20 30 40

UniRef90_F8ES85	R L R I S P P R N H F Q L Q E A A E Y L L I G G G I G I T P L L A M A E T L
UniRef90_W0VU58	F M G P M L K Y N W K P N T F E E V N L L C G G G T G I T P M F Q L T R H I
UniRef90_UPI000477B8C5	V F G P L G H A T F Y P G L S K N I L C I A G G G S G I A G M I S I L R A A
UniRef90_C7MEL5	P A G D L T L D T A S T D P V V L V S A G I G I V T P M L G M L R H I
UniRef90_G8WKE8	I S P P R N L F P L R A A E R V T I L L A A G I G I V T P L Y A M A L R L
UniRef90_R5J906	G P Y G N G F D I E Y K G R D L V I V A G G S A L A P V R G I V E Y V
UniRef90_A0A024JNN6	
UniRef90_W6WEQ2	P R N N F E L A Q G A R K V I L I A G G G I G V T P L K S M A H Q L
UniRef90_A4HFJ6	K I Q Y R P N R W K H V G M I G G G T G F T P F L Q L I R H A
UniRef90_UPI0003644282	P G G D S V L E L D D P R P L L L I A A G T G F A Q M K S I I E A A
UniRef90_W9DFE7	T L T V G L P R S A F A P I A R A R K H L L V A A G G I G I T P M V S H L R A A
UniRef90_I2ICC6	P E N Y F A L V D E A S D Y L L I A G G G I G I T P M R A M M A E L
UniRef90_UPI0003C7DEB4	P A G S F S L A Q R A P D H V A M V A V G G S G I T P T L S M V A T H
UniRef90_W2S8F4	G P V G S F K G Y H R F C D E I G A V A G G G S G I T P L Y G L I K R I
UniRef90_S4N8W2	E P Y G D L V L D A G P D T P L L L A S A G I G I V T P M T A M L A H L
UniRef90_UPI00040B66E3	G P Y G H A W L R P A P R D V V C V A G G G S G L G P M L S V A R G V
UniRef90_UPI000368A9E3	L P P S G H F T P S D L G A H L L L A A G G S G V T P V M S I L K A A A
UniRef90_B1KK66	P G G E A H L R H E S E R P R L M I A G G G T G F S Y I K S I I E H Q
UniRef90_K2RTF2	N F K L P S D P S K P I M V G P G T G V A P F R G F V Q E R
UniRef90_C0VH44	I G E P R N L F K I H P E T K Q A I L F A G G I G I T P I L S M A Y R L
UniRef90_D0CYD4	F V S K P N H F E L D E T A T R T L L M G G G I G I T P M I A F A H R L
UniRef90_C1BME8	Y P H N T I N A K E P H R L V L I A G G G V G I N P L I S M A L H A
UniRef90_W5TCM1	R L L R V R G P R N A F P Y S A P H Y V F V A G G G I G I T P L L P M V A D A
UniRef90_M7A1P8	M I L I G G G T G L A P L K S I V H H A
UniRef90_T1MCH9	
UniRef90_B8HCM7	G K G F P V E R A A E T L L L F A T G T G I S P R S L I E F G
UniRef90_UPI000476BEC3	P Y G E I T L K E G D G P V V L A S A G I G C T P T A S I L R S L
UniRef90_K0TF88	P L G R L H V D R E S G R D V V M I A G G T G V A P M R A I V D H L
UniRef90_J7U801	T F Q I E S A P S F H H P L D S S C P V I F V C T G T G F A P M R G L L Q Y L
UniRef90_G0IVF8	R V F I L E S N D N F R L P A D P D V P V I M I G A G T G I A P F R A F M Q Q R
UniRef90_UPI0003FE0E77	G D A W G A I S Y K G E G V F L A G G G A I T P F I S I L R D
UniRef90_D6B6K8	P C G T F T L D V P P P T P V T L I S A G G V G A T P P L S M L D S L
UniRef90_U7D125	P V L L A S A G I G C T P V V V A M L G E L
UniRef90_X1GVH0	G A P R N L F R L D P T A T E H V L C A A G I G V T P L L S M A Y R L
UniRef90_UPI00045EA6EA	G P E G F F Y E P R D L T Q I V G L A G G G S G I T P F R S I I A K E I
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 A I K P G T M N W P K E P E T P L I M I G P G T G I A P F R S I I Q E R
 P Q G E F V L P D P L P A K L L F I T A G S G I T P I M S M L R T M
 G P L G G L H D R N S G K D V L M I G A G T G I A P L R A Q L I E M
 V R G P R N H F R L A P A P S Y R F V A G G I G I T P I L P M I A E A
 I I M L A T G T G I A P F R A F M R K A
 G R G F E V T R D A R D V L V F A T G S G I S P I R S L I E S G
 G P V G K E M L L P D D E E N I I M M A T G T G I A P F R A Y L W R M
 G P G N Q F E L V D A D R Y V F V A G G I G I T P L L P M I R A V
 G P Y G R F N F R K G G A R Q I W L A G G I G I T P F L A W A E S L
 G P V G K E M L L P S D P E N V I M L A T G T G I A P M R T Y L W R M
 T L T V S A P K N N F P L Y E D A E L S V S L I A G G I G I T P L L S M I R R L
 F S L K P A G D F V L P N D T N K K L V F I L G G I G I T P F R S I I V K Y L
 F V Q I N K H F H L P E T L D K D V I M V G P G T G I A P F R S F I E E L
 H F W V V P T P N G F L T L D E A R H L W L L A T G T A I G P F L S I L K T
 K F K L P I S G A T P L V M V A A G T G L A P F R A F V A E L
 P M G Q F N I A D I K A D K Y L L S A G G C G I T P M H S I V T F L
 G P S G K K F L L P T S D G D I M F L A T G T G L A P F I G M S E E L
 V S E P R N L F P L P E A K R V L L F S A G I G I T P V I T M A R A L
 I E H P E N D F P L T D V Q K Y L L I A G G I G I T P I Y S M A R Y L
 L F L Q S N S N F K L P E N P D A P V I M I G P G T G V A P F R A F L G E R

50 60 70 80

UniRef90_Q1GLB9	H A L G A D	F E F H Y S I K S R A L G G Y L R D L A D V P W A S K V N L H	
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UniRef90_J0M594	S A D S A S G K N W L F F G N L R F I D D F L Y Q I E W Q R Y F R D G L L		
UniRef90_Q493N4	L T D E S D K T K L S L L F C N R T E K H V L L K G V F D D L A E R Y H K R F R		
UniRef90_S9V9J5	R R A G E N A G R L M L F F G A R S H G E L P Y F G P L T K L P K E F		
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UniRef90_U5EHDS	F A N R P L Y G H I H I I Q G V K H S T D L L W R S R Y E Y W A Q Q P K T T		
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UniRef90_H6L310	D D D G V F G R S C K L Y W G C R D E E S M P W K D R V E A W D K R G V E		
UniRef90_D7FWK8	N P D L D Y R I V H G V R T A S E G Y E K D E Y D A S		
UniRef90_W7Y8G5	V A T G A K G K S W L F F G E R N F T N D F L Y Q L E W Q D Y L S S G D L T R		
UniRef90_D8JXU3	L A A G A P Y A P A L C F F G V R D P D V D Y I F R D Q F D L A E D L G I V R M		
UniRef90_W9ASR0	A A R E R Q P K V F L F A A D R T P Q D L Y A A D M L C L V Q Q L P W L T V		
UniRef90_R7WRE3	E E Q G A E G P S W L F F Y G D R H F V T D F L Y Q T D W Q R M L K D G V L S R		
UniRef90_W4CCR6	Q A R G A S F E L H Y A F R G R L T D A Y V G E L A E R L G E		
UniRef90_W9TFW9	A R R P D P P Q T F L F V G G R T P R D L Y A A D M L L I L A E A L P W L T V		
UniRef90_M2ZAC4	A R M Q A P F E L H Y A A R S R A E A A G L A F L P S A P N I H L H I S D		
UniRef90_A3SLM8	T P F P A P G Q A T V I L Y R G R S E Q E L Y L G D E I L I E L A R N R G A T L F		
UniRef90_A0K1X7	N K D G K I A S N R L F F S N K T T Q D I I I E N E E L R E L L P P E N L V L S		
UniRef90_X1BXA6	E A A S A D W R L L Y G G R L R T S M A F A E E L V A R Y P G R L E		
UniRef90_Q0SJT1	E A A G S P R R I H F L H A C R S G R V H A F R D W L N A L V A R H S N A T R		
UniRef90_F2L978	A D D L D L P H D V V F H S A R S T E D L P F T E E L L L L K R Q M G D R L K		
UniRef90_W6W7Q2	T V R S E P G A E T W L I Y G C R T R S N E L Y A Q D M R R A E Q S G H L T K Y		
UniRef90_K8F2G6	E A N G R P W Q L L Y C M R S R C R A A Y L D M L S R Y G D R V I Q		
UniRef90_H1SBC8	L S R F A V N P R V H F F G A K H P C E L Y D L R T L W E I A S T N P W L S V		
UniRef90_I4BD80	F E P T E R R G K A W L F M G A P Y T A N L L Y D D D F E R Y L R E F P D N F I		
UniRef90_A2C882	R E L G I D Y E L H Y S G R S R A C M A M L D E L A A L H G E R L H		
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UniRef90_UP100047C184E	U N Q G I Q S P I F I Y W G A R N P C Q L Y A H D E L Q A L S E S H R N L T		
UniRef90_F1Z348	Q A Q G A G G A N W L F F G E Q H A A S D F Y Y H D E I E A W H R D G H L D R		
UniRef90_W1IT39	L E K N P N R E I S I Y W G G R E L Q H L Y D L G E L Q A L N E S Y P N L A		
UniRef90_V7M619	R A L G H R G P N W L F F G E Q H A A T D F Y Y R D E L E Q M R E D G F L T		
UniRef90_D5C0C2	R E V T E A S G R N W L F F G D R H F T D F L Y Q R E W L D Y R K N G L L T R		
UniRef90_B2T481	R A R G D R G R N W L F F G E Q H A A S D F Y Y R D E L E S M R D T G V L T R		
UniRef90_BOCBF3	F Q E K H P K G N A W L F F G V P Y T A N I L Y K E Q L E A L A T Q F S D Q F Q		
UniRef90_C8N9T0	V A R E A P G K N W L V F G N P H F T E D F L Y Q T E W Q G W Q K D G F L H		
UniRef90_W1N5G4	L K R G R Q V C Y V H A A R D A A H H A F R N E V S T L G K A Y P G Q L T		
UniRef90_G8RY64	T R K A V N P R V H L F F G T R F P C E L Y D L H T L W Q I V S Q N P W L S V		
UniRef90_A0A059NYT3	R E E T E S S G K A W L F F G E Q H F V T D F L Y Q I E W Q R W L K E G V L T K		
UniRef90_UP10003959BFB	I N Q G I Q S P I F I Y W G A R N P C Q L Y A H D E L Q A L S E S H R N L T		
UniRef90_N4USH2	K K Q G K V G K S L L F F G C R R R D E D Y L Y E S E W Q E H K N T L G D S F		
UniRef90_UP100040EE918	K D N G H K L L A E A H Y F G C R H P E E D F L Y R D E L E Q A H E E G L I		
UniRef90_F7RIW5	D E P W Q R F E K I I L V Y G V R E A K D L A Y L D K L R A Y E Q Q Y P N Q F I		
UniRef90_N6XAR6	Q A A P E Q A P E A D F Y Y C V R D R E S D P F F V A R L L D T L C A Q L P		
UniRef90_R8AMA0	A A E G A G G P N W L F F G N P H F T E D F L Y Q V E W Q R W V K E G V V S		
UniRef90_E1VH81	I E S G A A G R N W L F F G A Q H F D T Q F L Y Q T E W Q D A L K K K H L N		
UniRef90_UP10003785014	L V I N H S N K V T L I Y G N R S H S T V I F K E A L E K L K K D Y P D R F T		
UniRef90_Q7UW66	L N E R T D R D V N L F Y Q V R N A V D A P F L A P I R E I A K M L E A T T G		
UniRef90_B2IEL3	I A E A P E R K I R L F Y G A R T Q A D L F W T E R F E A L A K Q L P D F R F		
UniRef90_UP100046352EB	R A L G H R G P N W L F F G D Q H R T Q N F Y Y R E D L Q D M V D D G F L N		
UniRef90_F4AHT2	R E A Q E A E G K N W L F F G N P Y T Q D F L Y Q T E W Q R F V K D G V L N K		
UniRef90_R4X1D1	R A L G I D Y A V H Y S G R A R T S M A L L D E L R A L H G E R		
UniRef90_V9D2F0	A E R G E D V G Q T V L F Y G C R R R Q S E D W L Y K A E W D E Y K K A L G D K L		
UniRef90_C5AM81	A D Y Q E M A D A R L F F G V N H E S E L F M L D E L R A A L P Q L R		
UniRef90_W9WVY3	K E S G E N F T L H L A V R S T H K V P F R E R L S K L G K S L V		
UniRef90_C8RSM3	I Q S E E R P P M V Q L F F G A Q N P D E L Y E W Q G L V G F E D A F D W L D		
UniRef90_UP1000465B5DE	V V I N K P Q C D I R V I F N V R T P A D V I F A E Q W Q R L C A A H P Q L Q		
UniRef90_UP1000348FB0A	F K D N E K K G F S W L I F G I P T S P N I L Y K E E L E E M Q Q Q Y P D N F R		
UniRef90_Q12EU3	H A L G S A F A L H Y F A R S R D R V A F L A E L Q N S G F A R N V V L H		
UniRef90_UP1000371F1ED	E A A G K P W N L F Y G G R E E A S M A F R A E L T P Y G D R		
UniRef90_K0CDY0	V L Q Q R L P D T V H I H Y A P H E F D T I F G K A L R E L S A E Q C		
UniRef90_A7TEW0	V K A N P A R P I Y W I Q S S K D E T T Q A F K K H V D A L L		
UniRef90_UP1000314F922	I A D G T E H V N L T I L Y G S R Q H D H I L L A P E F S K I L S K T N D V K L		
UniRef90_UP10000880D7	K H K G L R G S R M T L V F G C R R P D E D H L Y R E E M L E M A Q S G V L H E		
UniRef90_W7IPP3	Q R R D A L D D V V H V H S A R T E N D M I F G T M L R R T A E R A P G Y R L		
UniRef90_X4Z1Q5	A A Q E R S F E L H Y C A R T A G H A A F V D E L R A L L P E G R L H L H		
UniRef90_K9PX87	I F K E Q H E R G K A W L I F G V P Y T A N I L Y K D D F E K M A A D Y P D N F Q		
UniRef90_C7Z1K0	T D G E H D V D V R V L Y A S K V P K E R I A G W F A Q G K L K G E L K V F A T		
UniRef90_B4LDS1	L H Q G H D T G P L V V F F G C R N A K D Y H F M E D F K A W Q V D Q S V E V H		
UniRef90_UP100036534E7	E R R R Q H T D I V I H S A P T A L D V M F A E E L E R F E S Q		
UniRef90_Q5YN16	S Q R G V N P R V H F F I G G R Y P C D L Y D V E N M W Q L S Q S N P W L T I		
UniRef90_UP100036D9B47	H H A G A D W C L W Y G G R S R D S M A F R D E L A A Y G D R V R		
UniRef90_M1V6N7	F A D Y Q F K G K M I L Y L G V P T S S S L L Y R D E L E E M K A N A P D Q V E		
UniRef90_M8BC19	F G E N E K I D V S L F Y G V R N L Q R M A Y Q E R F S D W E S R G I K		
UniRef90_L8LT84	F K E K H E K G F A W I F G I P L T A N I L Y K E E L E E L Q R E F G D H F R		
UniRef90_Q13I77	E A R G A Q W S L L Y G G R H R S S M A F A A A L E A Y G E R		
UniRef90_I1AZ59	S E A D S R D I H I H C V R T Q E E A I G V E T L R A A A R N P		
UniRef90_K9X1M1	F N D A E K K G F S W L I F G V P T T P N L L Y K E E L E E I Q Q K Y P E N F R		
UniRef90_D1BLJ3	Q K G E E A Q V I L G F R N E S E T F W A D L F K D T P V Q		
UniRef90_M4Z441	E F L G R R W D L F Y A A K A R A A A A F L D E I G S L R P N V H L N L Q		
UniRef90_K2CX08	L D N N K K L P I I A F Y S N K E K L D I V Y K D L L D E A E K K L N I K T I		
UniRef90_UP100028985FF	A I Q K A T G R S W L F F G D Q H E A T D Y L Y R D E L I E K Y Q Q D G V L T K		
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UniRef90_UP10004700C45	A D T Q R S V D V A M I H S A K H R P D K S L T H L A Q T L S G F K F S L M L T		
UniRef90_T0FA53	L E H K Q F S G N I T L V Y G A P Y S D E L V M L D Y L K N L E A K Y K H F K L		
UniRef90_UP10004725967	L A N G T E F E L H H Y E Q Q R S R V A F L D E M T C G S L K E H E L G G K M		
UniRef90_A3VIV1	D K K G K M L R I I Y V S R S A E E S A Y L D E L M K D F E G R I I		
UniRef90_X5A101	E E T G A Q G K T W L F Y G D Q H F S T D F L Y Q V E W Q R W L K E G V L T R		

90 100 110 120

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

130 140

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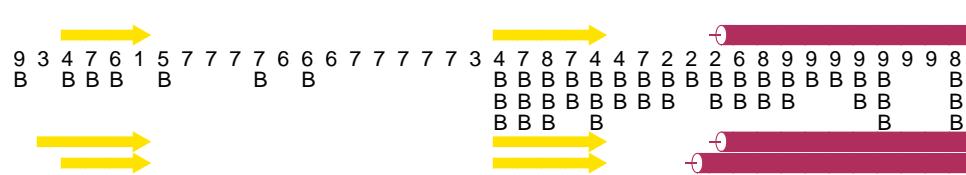
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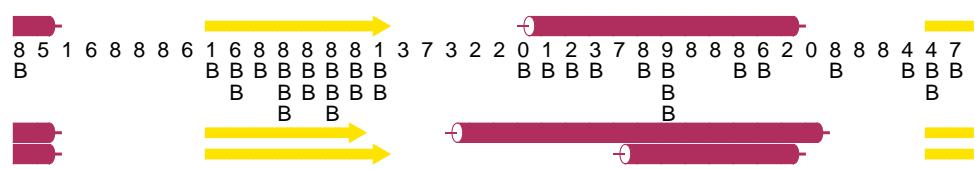
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Sequence logo showing the conservation of amino acids at each position of a protein multiple sequence alignment. The x-axis represents positions 90, 100, and 110, and the y-axis lists UniProt entries. Each square's color indicates the most frequent amino acid at that position: A (green), C (blue), D (red), E (yellow), F (orange), G (light green), H (purple), I (light blue), K (dark blue), L (light orange), M (pink), N (light purple), P (light red), Q (light yellow), R (dark red), S (light pink), T (light light green), and V (light blue).

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