

QUERY	1	10	20	30	40
UniRef90_UPI000255C24F	K	T R E E V E H I A N L A R L Q S P E E T E M A N T L E S L D F A K Q N			
UniRef90_F7NF01	R	D K D Q V K Y V A N L A R L S F T D E E E T F T T Q L L D D I I G F A E Q L			
UniRef90_R1AT38	T P K D V E H V A L L S R L E D Q Q E T G K F T G Q L L N A I L E Y V E V L				
UniRef90_N1M9V6	T I Q D V E H I A K L A R L R L T D A E E D E F A G Q L L D T I L S H V K A V				
UniRef90_T0MPP6	S K E Q V Q K V A M L G R L K L S E E E A E Q Y T T Q L L N D I L Q F V E K L				
UniRef90_D9S200	K S L E Q V E H V A R L A R L K L T E R E A E I Y A E Q L L G A I L A F A D Q L				
UniRef90_UPI0003B39CFD	S V D T A T V R R I A G L A R I A V T D D E A A R L A P E L G N I L D W I E Q L				
UniRef90_UPI0003B5B426	E I T K E Q V K H V A N L A R L E V T T E E A E M F T K Q L L S S I K F A E Q L				
UniRef90_UPI0004131431	K D Q A Q V R K V A R L A R L A I T E E E A T V E E F T K Q L L S A M L D Y V E K M				
UniRef90_X1QHQ9	R S K D Q V K H V A N L A R L A I T E E E T D M F T K Q L L D A I I T F A E Q L				
UniRef90_UPI00047E8EC7	S S R S E V E H V A K L A R L K F S Q E E I E E F T V Q L L S K I I D Y V N K L				
UniRef90_B0KBN5	K S R E E I E H V A L L A R L E L T S E E E L I T N T E Q L L N S I L D Y A A M L				
UniRef90_UPI0003756F99	S S V K D V E H V A N L A R L A I L S E D E A D T F T K Q L L D D I T Y A E Q L				
UniRef90_I0JIL5	R S K D E V K H V A N L A R L A I L T E E E A V V K Y T E Q L L N S I L E F A G K L				
UniRef90_U1X809	S S R K E V E Y V A K L A R L A I L T E E E A T K F S A Q L L E A I L N F A D Q L				
UniRef90_B9E827	K T N E Q V K H V A H L A R L E I I T E E E A T K F S A Q L L E A I L E Y A Q M L				
UniRef90_F6CR26	T I K D V E H V A L L A R L E I I S E E E K Q M Y T K Q L L A K I I S F A E Q L				
UniRef90_UPI0001850992	R S K D E V K H V A H L A R L A I I T E E E A E K F T Q E L L N S I L S F A E Q L				
UniRef90_G7WBX0	S S R E D V E Y V A A L A R L E L L T E E Q E T Q E Y T E Q L L N S I L G Y A A M L				
UniRef90_Q746Y5	K T R T D V E H V A T L A R L E L L T E D E K D R F T G Q L L D A I L A Y V E K L				
UniRef90_M7NF30	T K D Q V K H V A N L A R L A I I T E E E A E H Y T E K L L A S I E F A E Q L				
UniRef90_UPI0003B3F96D	S V D K D T V A H V A K L A R L R M D P E K T E A M A G E L S Q L L G W I E Q L				
UniRef90_UPI0004717CDC	K T K E E V G Y V A H L A R L E F S D E E M A K F T S Q L L N D I L L Y M E K L				
UniRef90_C6WG78	S S R D E V A H V A R L A R L A V T D D E E L D L F A G Q L L D V L Q S V A T V				
UniRef90_S7V571	K T K E V K H V A N L A R L D M D D D A V E K F S D Q I G T L S S Y M D S L				
UniRef90_UPI0001E2D46F	K T K D T I E H V A N L A R L M D D D E E L K S K L T L D M E Q I S Y V D K L				
UniRef90_C8WTJ2	K T D E T V S H V A K L A R L W L H P Q E L S Q L V P Q L N D I L E Y A A K L				
UniRef90_F0T0M3	K L S R Q E V E H V A L L A R L E L I S E E E I G R Y T E Q L L N S V L G H A E M L				
UniRef90_UPI000318EA27	E I S K Q Q V K H V A H L A R L A I V T D Q E V E V M T K Q L L G D I H Y A E L L				
UniRef90_A7HX16	S V D Q K T V H V A R L A R L A I V T D R D E E L A E L A K E L N G I L D W V E Q L				
UniRef90_O06492	R I S I E E V K H V A H L A R L A I I T E E E A K M F T E Q L L D S I S F A E E L				
UniRef90_B5ED18	K I T R E Q V E H V A R L A R L E L L S T E A E E L D T F T G Q M D S I S Y V E K L				
UniRef90_L0KA42	K L D K E T V E H V A H L A R L A I I T E E E A K M F T E Q L L S D I L G H H A E K L				
UniRef90_Q2RGY3	S S T A E V E H V A L L A R L S P E E K T A Y T E Q L L N A I L E Y F R S L				
UniRef90_H8I9Y1	S V K D V K H I A S L A C I D L I D E A Q E E R F A R Q F N S I L E Y F K E L				
UniRef90_A5CZ64	T K K E V D H V A L L S R L K I S D E E R V E P M A Q E L L N G I L N W I E Q L				
UniRef90_UPI00036C2E93	S V T P D D V R K V A R L S R I K I S D E E R V E P M A Q E L L N G I L H Y V D K L				
UniRef90_B4S415	S V T P D D V R K V A Y I A E L A K L R F T E A E Q K M F T E Q L L N A I L E Y F R S L				
UniRef90_D5MLK8	K K T V E E V E H V A R L A R L E L T A D E E K E R M R A Q L L D S I L S Y I D K L				
UniRef90_L0EH78	S S T I Q D V E H V A K L A R L E L T T E E E K A K Y A E Q L L G A I L D Y A Q K L				
UniRef90_K6DDV1	R S I Q E V K H V A H L A R L A V T D E E E A E K F T Q H L D A I V A A V R V				
UniRef90_D6Y6N6	T S T R D Q V V A H L A R L S R L A V T D E E E A E K F T Q H L D A I V A A V R V				
UniRef90_W7CH37	T S K A E V E K V A S A R L E I I T T E A E Q Y A T Q L L E Q I I Q M V E K L				
UniRef90_E8RH71	K I T R E E V Q H V A K L A R L D I I T S A E V D R M T G Q L L D A I L S Y V A K L				
UniRef90_E0I705	S I T T N D V D H V A K L A R L D I I T S D E E R A T F T G Q L L D A I L E Y A Q M L				
UniRef90_C8W210	T T K A D V E H V A H L A R L G R L I S S Y I T S E E E K E R Y T D Q L L D A I L E Y A Q M L				
UniRef90_Q5WJ21	R I S K E Q V K H V A H L A R L A I V T D Q E E A E T F R N Q L L D E I I T A A E E Q L				
UniRef90_U7UR73	K V S A E E I K K I A L L S R L E I I V Q D D E D L E S V G K Q L L N D I L T Y M E L I				
UniRef90_UPI00037DEA66	S L D R D T V R K I A F L S R I E V A D E K L E P L A G Q L L S G I L D W F E Q L				
UniRef90_M8DE99	S R K E V E H V A N L A R L E L N I T E E E A E R Y T K D L L N S I L Q F A A K L				
UniRef90_R9C2T4	R T K E V K H V A N L A R L E L I T E E E A E L F Q K Q L L D A I I S F A E E L				
UniRef90_K2E0P1	T I K E V E H V A K L A R L A I L N E E E K V K F K A E Q L L G N I I L D Y F N Q L				
UniRef90_A6W7L6	S R S E V E H L A R L A R I D M T D E E L D R M A G Q L L D A V I L D A V A Q V				
UniRef90_UPI0001FFEDA1	T R D E V A H L A R L A R I A V T D E E E L D V F A G Q L L D V I I G S V A R V				
UniRef90_X4ZPB1	S T V K D V Q H V A R L A R L H S P E E E A V F T E Q M N A I L Q Y A E K L				
UniRef90_C6CVQ4	S S T I K D V E H V A N L A R L E L S N E E E K Q F T G Q L L N A I L K Y A E K L				
UniRef90_M1WXB9	D K E V V R K V A H L A R L E L L T Q A E E E K F T P Q L L G S I L D Y V E K L				
UniRef90_B8D124	I K K E V E K I A G L A Y L K L S D E E R E T F T R Q L L G D I L D Y V E K L				
UniRef90_U2V4X6	K V T K E T L E N V A V L S R S V P A D R A D M Y I K Q M D D I L T Y M D N L L				
UniRef90_UPI0002898A21	R I S I E E V K H V A N L A R L A V T D E E A K M F Q Q Q L L D A I I S F A E Q L				
UniRef90_Q0BZU9	S V T R D D V R K V A R L S R I A V P E E R R L D E L A G E L L N G I I L G W I D Q L				
UniRef90_D2SEL3	R D D V A H L A R L A R L A L T E E E L D H F A G Q L L S A V I L D A V A A V				
UniRef90_Q1MYL3	R D D V A H L A R L A R L A L D D Q Q I L E Q Y R T D Q L L S N I I L V E Q M				
UniRef90_UPI000416FC16	L D S K D V K H V A N L A R L E L T P E E E Q Q F T T Q L L G E I L D Y F E Q L				
UniRef90_D4KD96	I D R E Q V S K V A F L A R L E L T P E E E Q Q F T T Q L L G E I L D Y F E Q L				
UniRef90_E3I7Y3	K V T R E D V E N V A L L S R L I K D E D M D K N I S E L L N D F I L E Y V D R L L				
UniRef90_UPI00024885AF	E I D E A T V R R I A H L A R V K T A E E A K S L Q R E L L N G I I L S W V E E L				
UniRef90_C6J7K9	S V D A T T V R K V A S L A R I A V S D A E E A D A M V P E L L N N I I L G W I E Q L				
UniRef90_D4J4J6	S I Q T K D V E H V A R L A R L H L T D E E R D M F T E Q L L N A I L Q Y A E K L				
UniRef90_UPI0002D5AF8B	I T D E T I E Y V A A L A K L D L L T D E E K E R A K K D L L G N I I G Y V D T M				
UniRef90_C3PBQ3	I D R E Q V S K V A H L A R L E L T P E E E K F T T Q L L G S I I L D Y F Q Q L				
UniRef90_S6BG98	R I S V E N K H V A H L A R L A I T D Q E E A E A L R R D D L S N I I L G L V E Q M				
UniRef90_A3UJX5	S L S S D D V K H V A H L A R L A I V S D E E E A E A L R R D D L S N I I L G L V E Q M				
UniRef90_K4LDN6	S V T Q D D V R R I A R L A R I A E P A D R L D S L T N E L L N G I I L D W V E Q L				
UniRef90_B3EG61	K L S R K E V E H V A M L A R L S L R D D E I L D V G A Q L L S S I I L E F V E K I				
UniRef90_A7HIH1	S V T R D D V R R I A A L A R L R L S P E E E R T F A G Q L L S A I I L D H V A Q L				
UniRef90_S0EZ92	S L T L D E V R R I A A L A R L R L S P E E E R T F A G Q L L S A I I L D H V A Q L				
UniRef90_X1N7C6	S L T P E E V R K V A H L A R L E L T D E E V L Q Q A Q N I I N N I I L Q Q F E K L				
UniRef90_S1QYE8	K I D R K E E V K H V A H L A R L Q L T S E E E E K F S R S R Q L L G E I I L S Y V D K L				
UniRef90_E3GPJ6	S I T R E E V T Y V A D L A R L E F T T E T D R L A D E L L G A V I L D Y A A T L				
UniRef90_L7VVY2	R I T T S D V Q K V A K L A R L R L T E D E L G R F T G Q L L A A I I L D H A A D L				
UniRef90_A1BI67	S V T K K D V A Y I A E L A R L K F G D T E M E T M T V E I L N N I I L H Y I D K L				
UniRef90_UPI0003264F6	R I S E E E V R H V A H L A R L A V T D E E V K Q F Q K S L D S A I I D F A E Q L				
UniRef90_Q8ES79	E I S K D Q V A K V A H L A R L A V T D E E V K Q F Q K S L D S A I I D F A E Q L				
UniRef90_G7QBR2	K I R P D E V A K V A H L A R L R L D D D S L E A F A G Q M D G I I A Y M E T L				
UniRef90_Q5FND2	S L D A K T V T R I A R L A R I G L Q P E E E I T L G K D M G S I I D W V E Q L				
UniRef90_B4WD50	S L D A A T V R K V A H L A R L R I K T P E D D L Q P E L Q A G E L L N G I I L Q W I E Q L				
UniRef90_D5QEX8	S L D P A T V R R I A R L A R I G G D E S D L Q S P G E L L N G I I L G W I E Q L				
UniRef90_UPI000470413C	I S K E Q V K H V A N L A R L E M N E A E V E K F T T Q L L G N I I H L A E S L				

QUERY UniRef90_UPI000255C24F D S A D T E G V E P T Y H V L D Q N V L R E D K A I K G I P Q E L A L K N A K
UniRef90_F7NF01 N E L N T D G I E P T T H V R D M Y N V M R E D V V E P S L I P R E E A L K N A P
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UniRef90_T0MPP6 K K L N T D G V P P T T H V V P L E N V L R E D A V K P C L S V E E A L A N A P
UniRef90_D9S200 N E L D T S N V E P T S H V L P M Q N V L R E D E V R P S L E R D K A L A N A P
UniRef90_UPI0003B39CFD N E L D T E N V E P T S H V L P I S N V L R E D E Q R P G L S R E A A L A G A P
UniRef90_D5WUX4 Q E L D V S D V P P T S H V L P I S N V L R E D E Q R P G L S R E A A L A G A P
UniRef90_UPI0003B5B426 G E V D T A G I A P M T A V I P N H L R L R D D V V T D G G G I R R E R V L A N A P
UniRef90_UPI0004131431 N E L D T D G I E P T T H V L D L K N V M R K D E P R E W I T T R E E A L K N A P
UniRef90_X1QHQ9 N E L D T G N V E P T Y H C L P V S N V F R T D S V K E S L G T E E K T L A N A P
UniRef90_UPI00047E8EC7 N E L D T E N V E P T A H L V P I H N V F R E D E V K P S M D R D K I L M N A P
UniRef90_B0KBN5 N E L D T E N V E P T A H L V P I H N V F R E D E V K P S M D R D K I L M N A P
UniRef90_L0F6F4 E K L N T D D I K P T A H A V P L H N V L R E D Q V Q P S M D R E K V L G N A P
UniRef90_UPI0003756F99 N E L N T D G I E P T S H V L P L Y N V M R E D E V K P S L P H A K V M A N A P
UniRef90_I0JIL5 N E L D T E G V A P T T H V L D L K N V L R K D E P K E W L N K E D D V L N N A P
UniRef90_U1X809 N E L D T A D V P P T S H V L D V Y N V M R D D E V R P S V E R E D A L R N A P
UniRef90_B9E827 E E V D T E G V E P T F H V L D L Q N V L R E D V A E T S L T Q E E I L K N A A P
UniRef90_F6CR26 N E L N T D D I P P T A H V L P L V W R E D E V G E H L P P E E V L K N A P
UniRef90_UPI0001850992 N E L D T T N V E P T S H V L D M K N I M R E D D K P Q G Q G L P R E E V L K N A P
UniRef90_G7WBX0 E R L D T S N V A P T A H A V P L H N V L R E D Q V K E S I I N H E K A L K N A P
UniRef90_Q746Y5 N E L D T D G I P P T S H A V P L V N V L R E D E V R P S I I G V E N A L A N A P
UniRef90_M7NF30 N E L D T S G V E P T T H P V P L V N V L R E D E V P S K G L D R D L M K N V P
UniRef90_UPI0003B3F96D N R V D T T G V E P L T H A T F L S N A F R E D E V K P S L P H D L S M A N A P
UniRef90_C6WG78 G D I A T A D I P P T S H A V P L T N V F R E D D V V R P S L G Q Q Q A L A G A P
UniRef90_S7V571 N G V D T E G V A P T S H A I S L N N A F R E D E E T G S L D R D A A L A N A P
UniRef90_UPI0001E2D46F N E L D T S K V K P T D H V I P L S N V F R E D E A K P S Y P R E K I L E N A P
UniRef90_C8WTJ2 Q S V S L D G V E P T S H P F H E V N V V R S D V P R E S L S R E E A L R N A P
UniRef90_F0T0M3 Q K L D T T G I M P T A H A V E L L Y N V M R D D E V K A S I E Q E K A L Q N A P
UniRef90_UPI000318EA27 N D L D T S Q V E P T T H V L D L K N V M R K D V P R K W I D R E E D A L K N A P
UniRef90_A7HX16 G E V D T S G V E P M T S S A V A V A M K M R D D V V E V Q N L Q A E V T T R N A P
UniRef90_O06492 N E V N T D N V E P T T H V L K M K N V M R E D E A G K G L P V E D V M K N A P
UniRef90_B5ED18 N A L D T E G I V P T S H A V P M E N A F R A D E A T G S I G V E A A L A N A P
UniRef90_L0KA42 N Q L D T E D V D P M A H V L P V N N V F R D D E V R E S L D R E E D A L K N A P
UniRef90_Q2RGY3 N A L D T R D V E P T A H V L P L R N V F R D D C A R P G L P R E E K A L Q G A P
UniRef90_H8I9Y1 D G L N T E G V E P T Y H V I G L N N V F R E D D V V E P S L P Q E E A L R N A P
UniRef90_A5CZ64 Q R L D T E N V V P P T A H V L P L Q N V F R E D D W V G Q H M S R E E D A L A N C P
UniRef90_UPI00036C2E93 N E V D V E P M T S V E M S L P M R K D E I T D G N R S D E V L A N A P
UniRef90_B4S415 N E V D T D G V E P L S S I H D Q V N V L R E D D C L K P S L D N E E A L K N A P
UniRef90_D5MLK8 N E L D T S A V E P T S H V L P M T N V F R E D E V T P S L Q A E A V L A N A P
UniRef90_L0EH78 N E L D T E N V P P T S H V L P V A N V M R D D E P R P S W P I E K V M L N A P
UniRef90_K6DDV1 N E L D T E N V E P T T H V L D I K N V L R E D T A R H W L T Q E E A L K N A P
UniRef90_D6Y6N6 S E V V A A D D I P P S S H A L P L T N V F R P D E V R P G L T P E Q A L S G A P
UniRef90_W7CH37 N E L D T D N I E P T T H A V V P L T N V L R E D K V V V A G L P R D V V L K N A P
UniRef90_E8RH71 D E L D T T G V P V T T H T Q Q V V N A F R E D E V R P S L P R E R A L V N G P
UniRef90_E0I705 N E L N T D D V E P T S H V L P L A N V T R A D E V R P S V P L E T A M R N A P
UniRef90_C8W210 Q K L D T E N V V P P T A H A L P M Q N V F R E D D C A G D C L T N E E V L S N A P
UniRef90_Q5WJ21 N E V D T E G V V P T T H V L Q M H N V L R E D D K P E K G L E V K E V L K N A P
UniRef90_U7UR73 G Q V D S D V E P T A H A V S M F N V M R E D D V P Q P S M S N E D A L Q N A P
UniRef90_UPI00037DEA66 K E V D T D G V Q P M S S V T D A V L R W R D D V T D G G I P E K I L A N A P
UniRef90_M8DE99 N E L D T S N V V P T S H A T D V K N V M R E D V N R P S I S N E E A L K N A P
UniRef90_R9C2T4 K E L D T E G I E P T S H V L D M K N V L R E D V P T K G L P V E E V L R N A P
UniRef90_K2E0P1 K E I N T E N V E P M A Q A V P K I N V M R E D K V W P P C D R E E I L A N A P
UniRef90_A6W7L6 A S V V T D D D V P A T S H P V P L T N V T R P D V V R P G L L T A E E A L A G A P
UniRef90_UPI0001FFEDA1 G E V V A A D D I P P T S H A V P L V N F R P D E R V K P S S L E Q S Q A L A G A P
UniRef90_X4ZPB1 S G L D T E G V E P T T H V L V H V S N V M R E D D V V K E S L S E D V L L N A P
UniRef90_C6CVQ4 D S L D T D N V E P T S H V L P I T N V M R E D I T R E S L P L E K V L L N A P
UniRef90_M1WXB9 S E L D V D N I V P P T T R V L N I S N S V T R P D V L Q T Y T E R E A I L Q N A P
UniRef90_B8D124 N E L D T D G V V P T A T Y T V P M K N V L R D D K V G S S I P R E E A L D N A P
UniRef90_U2V4X6 S V L D T T G V P K T T Y A L V P M Q N V F R E D D E V R P S L D R E A A L A N A P
UniRef90_UPI0002898A21 N E L D T E S V E P T S H V L S V K N V M R E D I T A K E G L P V E E V L K N A P
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QUERY	
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UniRef90_K2E0P1	D H Q D G Q I K V P S I
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UniRef90_M1WXB9	D E E D G Q I K V P A V
UniRef90_B8D124	E Q E G D F F K V P K I
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UniRef90_D2SEL3	R S E H G F F V V P K
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UniRef90_UPI000416FC16	A Q E Q G L F L V P K V
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UniRef90_W9VJQ7	L	D R S D I E K I A H L A R L A I A P E E Q T E R Y A A D Q L S N L L D V A Q M	S N L L D V A Q M		
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UniRef90_H7F3P5	I	S K E T V L K V A N L A K L D V S S E E A V A F A S Q L G N I I E M V E K L	I I E M V E K L		
UniRef90_D3NVY5	S	D K A T V A K I A H L A R L K V P D E E L E S L A G E L S R I L T F V E Q L	D K A T V A K I A H L A R L K V P D E E L E S L A G E L S R I L T F V E Q L		
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UniRef90_M1PD14	K	T R E E V V H V A K L A R L Q M S E E E L A R M T G Q L D T L L Y V A K L	T R E E V V H V A K L A R L Q M S E E E L A R M T G Q L D T L L Y V A K L		
UniRef90_UPI00037F3AD4	K	V T A K D V E S V A I L S R L E L K E T D M E K Y T K H L N A F L E Y A D V M	E S V A I L S R L E L K E T D M E K Y T K H L N A F L E Y A D V M		
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UniRef90_U5L6F5	R	S E D Q V R R V A H L A R I R M D D A E L L D R M V P E L N A M L A F V E Q L	S E D Q V R R V A H L A R I R M D D A E L L D R M V P E L N A M L A F V E Q L		
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UniRef90_B7KZ9	D	T T E Q V K K I A H L A R L E I T P E Q E E Q F T G Q L S S I L E Y F D Q L	T T E Q V K K I A H L A R L E I T P E Q E E Q F T G Q L S S I L E Y F D Q L		
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UniRef90_V4QV24	S	V D V A T V K K R I A H L A R I A V T E E A A A L Q G E L N T L D W V E Q L	V D V A T V K K R I A H L A R I A V T E E A A A L Q G E L N T L D W V E Q L		
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UniRef90_D7AU54	T	T R D E V A H V A K L A R I D L T D E S E D L T A A Q G D L T A V A K V	T R D E V A H V A K L A R I D L T D E S E D L T A A Q G D L T A V A K V		
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UniRef90_UPI000361C041	K	V T K K D L E N V A V L S R I A S I L P E E D E A E R V V M G E L L G F V E Q L	V T K K D L E N V A V L S R I A S I L P E E D E A E R V V M G E L L G F V E Q L		
UniRef90_A1WVR8	I	D A D E V Q Q I A H L A R I R G I L D E E A V S G Y A R D L T Y M D N L	D A D E V Q Q I A H L A R I R G I L D E E A V S G Y A R D L T Y M D N L		
UniRef90_A5VZ23	D	V E K I A H L A R I R G I L D E E A V S G Y A R D L T Y M D N L	V E K I A H L A R I R G I L D E E A V S G Y A R D L T Y M D N L		
UniRef90_Q47JV5	S	T L E Q V K R I A H L A R I R G I L D E E A V S G Y A R D L T Y M D N L	T L E Q V K R I A H L A R I R G I L D E E A V S G Y A R D L T Y M D N L		
UniRef90_M7YDA8	K	D L D T I K K I A H L A R I R G I L D E E A V S G Y A R D L T Y M D N L	D L D T I K K I A H L A R I R G I L D E E A V S G Y A R D L T Y M D N L		
UniRef90_R5T51	K	T L E E A Q K I A L S R L R F D A E S A D K M K K D M T Q L D W V E Q L	T L E E A Q K I A L S R L R F D A E S A D K M K K D M T Q L D W V E Q L		
UniRef90_H3RRC6	Q	D Q Q Q V K H V A L S R L R F D A E S A D K M K K D M T Q L D W V E Q L	D Q Q Q V K H V A L S R L R F D A E S A D K M K K D M T Q L D W V E Q L		
UniRef90_W6K735	S	D K D T V R N I A R A R I K V P E E K D L D G L A G E L L D W V E Q L	D K D T V R N I A R A R I K V P E E K D L D G L A G E L L D W V E Q L		
UniRef90_UPI000376AEE7	S	D S S T V K H V A S S A R I A V T P E E A E R L T A E L L D Y F D E L	D S S T V K H V A S S A R I A V T P E E A E R L T A E L L D Y F D E L		
UniRef90_Q3A2K1	K	N R E Q V E H V A K N A R I R V E E D E L D E P L A N E L N A L G W V E Q L	N R E Q V E H V A K N A R I R V E E D E L D E P L A N E L N A L G W V E Q L		
UniRef90_UPI0004715BFC	S	D K A T V A K V A N L A R I R V E E D E L D E P L A N E L N A L G W V E Q L	D K A T V A K V A N L A R I R V E E D E L D E P L A N E L N A L G W V E Q L		
UniRef90_UPI0003687602	S	T K K E V E Y V A K L A R I E F N E G E K D E F T S Q L N S L D Y F K K L	T K K E V E Y V A K L A R I E F N E G E K D E F T S Q L N S L D Y F K K L		
UniRef90_Q0IDA2	K	T A D D V R K V A K L A R I D L P E D T I A T Y T G Q L E R L D Y V D Q L	T A D D V R K V A K L A R I D L P E D T I A T Y T G Q L E R L D Y V D Q L		
UniRef90_2ESR0	K	N Q K T V Q N I A H L A R I E L S E Q E E V K M V D D L S K L N W M D Q L	N Q K T V Q N I A H L A R I E L S E Q E E V K M V D D L S K L N W M D Q L		
UniRef90_H0A6D5	S	D T A T V R R V A S S A R I R V E E D E L D P L Q S E L N G L G W I E Q L	D T A T V R R V A S S A R I R V E E D E L D P L Q S E L N G L G W I E Q L		
UniRef90_K9CIA7	V	T E N D L E R T A R S R L A P D E K E D A L A R L G F L S Y V D N L	T E N D L E R T A R S R L A P D E K E D A L A R L G F L S Y V D N L		
UniRef90_F2C851	K	T Q E E V S H V A K L S K A F S S E E T A E F A T T L T K V D M V E L	T Q E E V S H V A K L S K A F S S E E T A E F A T T L T K V D M V E L		
UniRef90_A6C5C6	Q	T Q D E V L K V A S L S R L K L S E T E V T A L G E Q M G S V L K Y I A M L	T Q D E V L K V A S L S R L K L S E T E V T A L G E Q M G S V L K Y I A M L		
UniRef90_XOTP61	R	D E K L I R H V A G L S R L E L S D D E V G T M A A E L S S V L G H I E K I	D E K L I R H V A G L S R L E L S D D E V G T M A A E L S S V L G H I E K I		
UniRef90_UPI00041E1F87	I	D R E Q V V H V A R A R I R L S D D E V G T M A A E L S S V L G H I E K I	D R E Q V V H V A R A R I R L S D D E V G T M A A E L S S V L G H I E K I		
UniRef90_S2XZ62	E	T K D Q V A H V A N L A R I N V T E E E T S D M Q Q T L E G L N F C H Q I L	T K D Q V A H V A N L A R I N V T E E E T S D M Q Q T L E G L N F C H Q I L		
UniRef90_Q6AQK0	K	S E K E V Q H V A H L S R L H D Q D E L A S M T E Q L D G L S Y M E K L	S E K E V Q H V A H L S R L H D Q D E L A S M T E Q L D G L S Y M E K L		
UniRef90_R7RTV8	S	T I R D V E Y V A R A R I E F T E E V Q K Q F T E D L N G L N Y V E M L	T I R D V E Y V A R A R I E F T E E V Q K Q F T E D L N G L N Y V E M L		
UniRef90_UPI000418667F	R	S T D E V A R V A G L A R I A L T E E E I T R I A G E L D V A S A V A T V	S T D E V A R V A G L A R I A L T E E E I T R I A G E L D V A S A V A T V		
UniRef90_R5SQW7	V	S R D D I I H A K L S R L E F T D E E L E K Y T K D L D N V N F A N T L	S R D D I I H A K L S R L E F T D E E L E K Y T K D L D N V N F A N T L		
UniRef90_A1K1T6	S	S N E Q V G R I A R A R I A L S E G E I D A V R A K L D G F L I E Q M	S N E Q V G R I A R A R I A L S E G E I D A V R A K L D G F L I E Q M		
UniRef90_B0BZ26	E	E R A E V D K V A H L A R I A L S T D A E S E Q F T T Q L D G D L D Y F E Q L	E R A E V D K V A H L A R I A L S T D A E S E Q F T T Q L D G D L D Y F E Q L		
UniRef90_Q2J6U5	T	T R D E V A H L A R I A L S T D A E S E Q F T T Q L D G D L D Y F E Q L	T R D E V A H L A R I A L S T D A E S E Q F T T Q L D G D L D Y F E Q L		
UniRef90_Q11R87	S	D T K T I G K I A H L A R I R E F D D K S L E A F S T D F F N K L S W I D K L	D T K T I G K I A H L A R I R E F D D K S L E A F S T D F F N K L S W I D K L		
UniRef90_A0YXB5	D	R E Q V R K V A H L A R I R K V T P E E E K F T T E L G S S L E Y F E Q L	R E Q V R K V A H L A R I R K V T P E E E K F T T E L G S S L E Y F E Q L		
UniRef90_Q10W19	D	N D E Q V R K V A H L A R I A I S D A E A A A M E G E L L G S S L E Y F E Q L	N D E Q V R K V A H L A R I A I S D A E A A A M E G E L L G S S L E Y F E Q L		
UniRef90_Q1GUW4	D	D Q A T V R K V A H L A R I A I S D A E A A A M E G E L L G S S L E Y F E Q L	D Q A T V R K V A H L A R I A I S D A E A A A M E G E L L G S S L E Y F E Q L		
UniRef90_K9YD30	K	T T E E V K K I A L S R L E L T P E E E Q Q F T T Q L D G D L D Y M E E L	T T E E V K K I A L S R L E L T P E E E Q Q F T T Q L D G D L D Y M E E L		
UniRef90_R7PQ13	S	T D E V A R V A A A R I R L R P E E V D R L A E Q L S G G L T F M E Q L	T D E V A R V A A A R I R L R P E E V D R L A E Q L S G G L T F M E Q L		
UniRef90_D5ANX8	S	S R D E V A R V A A A R I R L R P E E V D R L A E Q L S G G L T F M E Q L	S R D E V A R V A A A R I R L R P E E V D R L A E Q L S G G L T F M E Q L		
UniRef90_C7QYX2	K	S A D D V T R I A H L A R I R E M T P E K A H F A P Q L D Q V L S Y M D K L	S A D D V T R I A		

50 60 70 80

UniRef90_R7LVA9	N E V D T S D V K P M T Q V I D F V N V M R E D V P H Q E I S K E A L M S N A P
UniRef90_Q0YUE0	N E V D T E G V E P L S S I H D Q I N V L R E D V E L Q P L S S E A L L K N A P
UniRef90_F0SQ10	N Q V E T D N V E P L A H P I E V Q N V F R D D E P T P M L S R E D A L L K N A P
UniRef90_UPI000380D95B	N E L D T T G I V P T A H A V P M E N A F R A D E V K A S I G L E R A L Q N A P
UniRef90_UPI0003623A65	N E L D T D E V E P T T H V L H V S N V M R E D E V R P S L S D E V M L N A P
UniRef90_W9VJQ7	D A V D T S G V E P M A H P L H M A Q R L R P D Q P T E P N Q R E H F Q S I A P
UniRef90_W4LMS6	N E V P T D G I E P T S H V L D L V N V F R E D R V Q T V T V E E A L R N A P
UniRef90_Q7NPY6	Q A V D T A G I E P M A H P Q D V S L R L R D D V V T T E P N R R E A F Q A V A P
UniRef90_UPI000377392B	G E V A A E D I E P M A H P Q D V S L R L R D D V V F R P D E P R P G L T R A A A L A G A P
UniRef90_H7P5P	D Q L D T A N V E P T S H A I E V S N V L R E D V S H P G L K R E K V L R N A P
UniRef90_D3NVY5	N E V D T K D V P P M T S V A A Q K L R R R K D E V T D G G Y A A Q V L S N G P
UniRef90_UPI00031377A2	N E L N T D Q V Q P T M H V I P M T M P L R E D L V R P S L P V E E A L K N A P
UniRef90_M1PD14	D E L D T A G V V P P T T H A F S I S N A F R E D E V Q K S L S V D E A L S N G P
UniRef90_UPI00037F3AD4	T S L N T D G V K P T D H V L P L Q N V F R E D V V K P S L D R E L A L S N A P
UniRef90_A0A022KRP8	S E V A T A D V P A T S H P P M T V F R K D E V T D G H C P E K V L A N A P
UniRef90_I0AL92	N E L N T D N I Q P L S H P I E A T N V F R N D E L K P S I T T E D A L R N A P
UniRef90_H1XY68	N E L D T S D V E P L A H P L E L L Q N V F R E D E K K P S L K R E E A L K N A P
UniRef90_UPI000371401B	Q E V A G P D V P A T S H P P L T N V F R K D E V R P S L T V E Q A L S G A P
UniRef90_A7IMA6	A D L D V S G V E P L T S V V P V E L P M R E D V V T D G H C P E K V L A N A P
UniRef90_X0SX87	Q Q I D T E G V V P P T S Q P I S L E N V M R A D E P R P S Y P T E D I L A N A P
UniRef90_U5L6F5	S E L L D T E K V E P T S H V L D I K N V F R E D I A K E G L P Q E E V L K N A P
UniRef90_UPI00034A4EC6	S Q V D V E G V E P M T S V T P M E M K M R A D V V S D G G I D Q L L A N A P
UniRef90_B7KKZ9	S E L L D T T D V P P T T R A I E I K N I T R S D S M Q P Y P S R E E L L K E A P
UniRef90_C7NG27	S D G A S D D V P A M S H P I P M T N V M R P D E V R P G L T Q D Q A L S G A P
UniRef90_V4QV24	G E V V D V A D V E P M T S V V A T T M R K R R D E V T D G G R A T D V T A N A P
UniRef90_D3LT86	K E V D L T D V E P T A H A V T M R N V M R E D V P H E S L P H E A A L A N A P
UniRef90_UPI0001DD115A	G E V D T S S V E P M T A V I P Q A T R L R D D V V T A G G R R E D V L A N A P
UniRef90_E6VTP2	G E L D T D S V E P M Y S P V E H T T V L R A D E K R E H G R D E V L A N A P
UniRef90_B7K034	S E L L D T E N V P P M T R A I E L S N I T R S D R T T Y G D R E S L L K S A P
UniRef90_D8EV7	K D L D T E N V S P M S H V L E V N N V W R D D R P E R R K E T E P L L N A P
UniRef90_A0A023X1X2	Q E L L D E G V V P P T A N P I N L T N V M R P D E P Q P E L P R E V A L S T A P
UniRef90_T1CB57	A S V D T S S V S A M S H P L S V A N V V R E D L P T T C L D H D E V L A M A P
UniRef90_K9KRE2	S E L D T E N V V A P T T R A I E L S N I T R P D Q L K P F T D K D A L L K A A P
UniRef90_D5BRF7	D E E V N T D N V E P L A S V T G H S L P M R E D V V T D G G Y V D D V L A N A P
UniRef90_Q0AZZ3	N E L D T G E V E P L I H I L P V F N V L R Q D E A L P G S S Q E E I L S N A P
UniRef90_K9PZS0	S E L L N T D D V A P T T R A I D V S N I F R E D T Q T F G D R E G L L E N A P
UniRef90_E8T5F0	N E L L D T E G V I D P K F S V I P E N V L R E D V P G M S L P R E K V F M N A P
UniRef90_D7A9Q9	A E E V D T A G V E P M T S V I P M K L P L R A D V V N D G G D A R V L A N A P
UniRef90_H6RX81	G K A D V T D V A P T T H A V P M T N V M R P D V A R P S L P C D V V L A G A P
UniRef90_E2ZC46	E Q A D I S E V E P T A H A V S M S N V M R D D V P Q E S L P N E D A L R N A P
UniRef90_D7AU54	Q E V V A Q G D I P P S S H A L P L T N V Y R P D E A R P G L A H D Q A L A G A P
UniRef90_G2KN47	G E V V N T D N V A P L A S V V N M E M E L R A D K V T D G D I Q S D V L A N A P
UniRef90_C6BSF0	N E I D T S E V E P M F S P V E H T T R L R K D E V K K E H T R E E V L S N A P
UniRef90_UPI0003B664C2	E E L D V T G I E P T S H V L E L S S V V M R E D V A K P S L G T D N A L G N A P
UniRef90_I01M0	Q E V D T S G V E P P T Y V L P L Q N V M A E D I P Q P S L P N E V A L A N A P
UniRef90_UPI00037D0A44	D E V V N T D N I E P M S S V V D A K L R W R A D E V T D G D K Q Q S V L K N A P
UniRef90_B9JV0	S E V N V D G V E P M T S V M P M A M R K R K D A V T D G G K A D I V A N A P
UniRef90_UPI000361C041	S A V D T E N V N P T T Y A L P M A N V F R E D L V K S S L A R D A A L S N A P
UniRef90_A1WVR8	G N V D T D G V E P M A H P W D A T Q R L R P D E V T E P N L R E H Y Q S G A P
UniRef90_A5VZ23	Q A V D T T G V E P L A H P L E A S Q R L R E D A V S E G D R R A A Y Q A V A P
UniRef90_Q47JV5	Q A V D T T G V E P M A H A Q D V S Q R L R E D A V S E G D R R A A Y Q A V A P
UniRef90_M7YDA8	N E V D T T G V E P L T T M S S E V N V M R E D V T G E H L S H E A G L K N A P
UniRef90_R5T5I1	N Q H D T D G V E P T A H A V E Q Y N V M R E D E P H Q S L S N E E A L F N A P
UniRef90_H3RRC6	Q A Q N T D G V E P M Y S P T D R V N V M R E D V A V K S N E R E A L L K N A P
UniRef90_W6K735	G E V D T D G V E P M T S V V H V T L P Q R D D A V T D G G Y P D R V L A N A P
UniRef90_UPI000376AEE7	D E V D V T D V P P M T A V V A T A M K M R E D R T D G D R V D E V L S N A P
UniRef90_Q3A2K1	N E L D T D H I I P T A H A V P V E N A F R E D D C A G S S I G T D K A L Q N A P
UniRef90_UPI0004715BFC	S E V D T E N V A P M T S V S V A E M S L R W R D D E V T D G G Y Q Q V V A N A P
UniRef90_UPI0003687602	N K L D T E R V E P T A Y V I S M P N L L N E D V V K P S L S Q N E V L S N S K P
UniRef90_Q0IDA2	Q A V D T E G V P P T T R A V E V V N A T R E D S D V V A T D V R Q E L L D Q A P
UniRef90_I2ESR0	K E L D T D D V V P L T H M S E V N V F R D D V G V N A L S R E K G L K N A P
UniRef90_H0A6D5	Q A V N T D G V Q P M A G G G S E K L R M R D R V T D G G I A E K V L A N A P
UniRef90_K9CIA7	S G V D T E G V Q P T T Y A L P I E N V F R A D E V C P S L P N E A A L S N A P
UniRef90_F2C851	N E E V D T E G V P F T S N V A A N I N Y M R E D V A Q P G W N R D E L F Q N V P P
UniRef90_A6C5C6	D E L D T A D I E P M A H A I E I S N V F R D D Q L K Q S L P R E Q A L S N A P
UniRef90_XOTP61	Q E L L N T D G V E P M A R A L P V H N V F A E D A P G E S L P V A R A L A N A P
UniRef90_UPI00041E1F87	S E L L S L D D V A P T T H V V E V G N A L R E D V P V P C L P R E V A L S Q A P
UniRef90_S2XZ62	D A V D T E N V K P T H H V L D L Q N V L R E D V A G Q G L P Q E K V L S N A P
UniRef90_Q6AQK0	U N E V D T E G V L P T H T H A F S K T N A F R E D V I V K D S L S Q E E S L A N G P
UniRef90_R7RTV8	K E V D T E N V E I S I G A Y R V E V N A L R E D V V K P S L P F D R E A L L K N A P
UniRef90_UPI000418667F	S E E V A T P D I E P A T S H P I P L S N V W R D D V V G P T L D R D E V M A Q A P
UniRef90_R5SQW7	S E I D V T G V K P T N H I L D I K N V F R K D E V K P S Y D R D L I L K N A P
UniRef90_A1K1T6	Q A V D T D G V E P M S H P Q E L A T R L R D D V V T E D R R S A F Q S V A P
UniRef90_B0BZ26	S E L D V A E V E P T T R A I D V S N V S V T R V D H L T P Y D D R E S I L A C A P
UniRef90_Q2J6U5	S E I I A A G D I E P P T S H A V P L T N V F R P D T I C P S L P V T E A L A G A P
UniRef90_Q11R87	N E E V N T D N V E P L I H M S H E L N V L R E D I D K V T I S H E E A L K N A P
UniRef90_A0YXB5	K E L D T E N V Q P T T R A I D V S N I S R P D E L K P Y E N R E S L L G S A P
UniRef90_Q10W19	S E L D T E N V L P P T T R A I D V N N V T R D S L E P F P Y R E D I L S C A P
UniRef90_Q1GUW4	G E V D V S G V E P M T A V I P N T L R L R D D V V T G G N R R D D I L A N A P
UniRef90_K9YD30	N E L D T T D V P P T T R A I D V S N I T R E D K C Y P Y S E Q E A L D Q A P
UniRef90_R7PQ13	K Q Y D T E G V A P M A H A V E Q F N V M R E D I P D T S F T H E E A L M N A P
UniRef90_D5ANX8	N E V N V D G I E P M T S V T P M R L K R A D V V T D G N Y P E A V L K N A P
UniRef90_C7QYX2	S E L L S A T P D V E P A T S H P V P L S N V F R D D E P T P P L D R D K V L N A A P
UniRef90_S7TD49	G Q V D T S A V E P L Y S P V E L P T A L R V D E D T R R D S R D E I L A N A P
UniRef90_A0A011NS20	Q A I D T Q G V A P M A H A Q D L A Q R L R P D C Y P C T E N D Q R S A F Q A I A P
UniRef90_C7MXC4	S E V A S A D I E P P T M H T A V A L T N A F R D D E V R P G L S Q E E A L S G A P
UniRef90_C4L691	D E L D T T G V E P T T H A L D L K N V L R D D E V R P G S L P R E E V R M A P
UniRef90_U9VVX0	N E L N T E N I E P T T R A I E L S N I T R Q D E L A P F E D R E S I L G I A P
UniRef90_UPI000361B5A0	R A V D T T G V E P M S H A Q D V L V R L R D D A A T A P N R R E A F Q A V A P
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UniRef90_R4KMU4	Q D L N T D N I P P T A H V P L Q N V F R E D R V G E H M L V D K V L A N A P
UniRef90_F1YEW8	S E V A A D D V P P T A H P A D L R D V L R E D V V V P S L T A A E A L S G A P
UniRef90_K9W5I6	S E L D V S N V Q P T T R A I D V S V N S V T R A D Q L Q P Y S D R E T L L N Q A P
UniRef90_W1TU27	N E L D T S N V P P T V H A V E L T N V W R E D V V P Q P S L D H E K A L Q N A P
UniRef90_UPI000299F0EA	S E V D T T D V P V T T H V T D A K N V M R A D V A E K G T D R E L L M K N V P
UniRef90_UPI0002880FC1	Q E L D T T N V E P T T H V L P V H N V F R E D I P V K G L D R D V V M K N V K
UniRef90_F5L447	N E L D T E N V E P T S H V L P L V N V M R D D V P H E S L P V E E A L Q N T A P
UniRef90_B3EA23	N E L N T D D I A P T S H A V P M E N A F R P D C V A P S I G H D R A L A N A P
UniRef90_E8TRJ5	N E V D V S D V Q P M T S C V E M T Q P L R D D V V T D G G K V A D V V S N A P
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UniRef90_H8FRK4	S E V N T D D G I E P M N S V A D L G L P M R A D L V T D G D I A D Q L A N A P
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UniRef90_UPI00030F691E	N E L D T S G V K P L Y M N E A V N V L R P D V V I Q E L T R D E A L K N A P
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G D V D T S G V D P T S S V L P D H G A L R S D E P R S G G V K A L L H N A P	E E C C D T E N T E I T Y N V L G L E N V M R D D T I T P S F D R E D I L K N A P	A E V D T D G V A P T F S V T R N V N H L R E D K A E N W H E K K A L L K Q A P	Q T L D T E K V N P T F H T L R I K T P F R E D E I K E F P Y I E D I L K N A P	S E I A T A D V P A T S H P L P L T N V Y R E D L A E E P L P V A D V L A G A P	D E V D L S S T E P M F H A L D L T N V L R E D E V V E P L S Q E E A L S N A P	N E L D L K D V E P L M H M S D V T N V L R N D A V K G S V S R E E A L L N A P	N E L K T D N V E P L T S V A E T T L R L R G D E V K S N N I K E I I K N S P	G T V D T E G I E P T Y S V T D R I N V L R E D V A D N W G Q R D T L L A N A P	Q A V D T Q A I I E P M A N P H D A S Q R L R A D V V T E T D Q R E H F Q R I A P	Q S S V D T T G I A P P M P N P H G D V Q R L R D D V V S E E V D R S E N M K N A P	N Q L D T S D V E P L T H I F P L I K N V F R E D V V L E S T P K E E L L K N A P	T N V D T E G V E P M T S A S D R E N V M R E D K A V K S E E T D A L L N N A P	S M I D L D G I E P L G T P L A L E N V L R A D V P G K T L D R G E V L A S A P	G E V D T E G V E P M T H I H P E V N C F R E D V V T N G D D H E A I L K N A P	D E L D T K G V E P L S H I F G D Q N V F R E D V V T N G D N K E A M L A N A P	Q A V D T E G I E P M A H A Q D V H Q R L R E D L V T E Y N Q R T V F Q A L A P	N E L D T D D V E I I V N P Y Y I E N K F R E D E I I E P S M E L S S V L D N A P	Q A I D T T D V E P L K S P F D H Q P L R D D V I V A E P N R R R D D Y Q A V A P	Q A V N T D G V L P M A H P L D A V Q R L R A D V I T E P N Q R E T F Q A I A P	G E L D L E G V E P T A H V L A E R S P L R A D E P S P S L P R E V A L D Q A P	E A V N T E G V E P L A H P G D V A L R L R D D I A S E P N Q R E A S Q A S P	R E V D T T D V K P L C H P T E N V D V M R E D V V V I P S L T P E Q A L D Q A P	N K L N T E N I A P L I H P F N I F R E D T L E E S I R E K A L S L A P	Q A V D T A G I E P M S H S Q D V V Q R L R D D V V T K T N Q R E S F Q K I S P	S E A Q Q G D I P P T S H A L P L V N V T R P D V E R P C L D P A D V L G Q A P	N E V D T T G V P I T T T M A D R R T T V V R E D K A E A G T D R D L L F K N V P	E E V D T E G V V P M S N P H D M Y Q R L R A D K V T E S N Q R E A L Q K T A P	N N V D T N N V V K P T H V L D L V N V F R E D T A E Q G I N R E D V L L K N S K	S E L D T E D I E P M T T A L D V D N R W R A D E L K P S L T N D Q A L Q N A P	G E V N T E N V E F T M S V A D N L N N R M R E D I A V P G G D D R D E L M R N V P	N E L D T T D V G V E E E M S H P F S T T N N F R E D E A V N T E N R E A L L A N A P	G E V D V T G I E P M T A V I P T L R L R D D V V T G G D I R D K V L A N A P	N E L D T A G V P A M A Q V G M G T M L R A D A L R P S L A R E T V M A A A P	K E V D T T G V P V T T H G Y P L V N V M R E D V A E K G T D R D L L M R N V K	R D V P T G G A E P M Q R P V T L V N V L R D D V P G E T F P Q S V V S A L A P	S K I N T A G I E P M V T P T E I E A Y W R E D V V K Q D F T A E E M T G N A P	N E L D T N K I V E P L T S I L N Q S L R S R K D E I I N D G K I R E K V L K N S P	R A V D T A G V Q P L A H P E D V Q L R L R E D I P G E P D Q R E A N Q Q S A P	N E I D T E N T L P L I H I S E V N V M R N D K V A N V L S H E K A L K N A P	N E V D V E G I E P M T S V T P M K M R M R E D K V T D G G I A A A V V A N A P	S A L D T D G V E P L T N L S D T V N V L R E D E P G E T L G V E A A L S N A A P	S E L D V D G I E P T A H S A P V F D R I R D D I A H P G L E R D A F L L A N A P	D E L D L D K H E A V F H V I E L Q N V F R E D K V K E S I D N G R A L E N A P	S E V N T D D I L P P M T A V V E T E I K R E D A V T D G G Y V E D I T A N A P	R A V D T T G V A P L Y T P Q D V S L R L R D D A V T E T D Q R E A N Q K S A P	R Q T D T D G I A P M T H P H D L P L R L R E D T V T E A D H A A E Y Q A C A P	A E V D T E G V K P T Y S V T E M H T V L R D D V A V N A H Q S A E L L A N A P	N K V D T T G I E P M A H P L E A I Q R L R P D E V T E I D Q R E I F Q A T A P	Q K V D T R G V P P T V H A G G T N V L R E D V A K K Q E D R D E L L H A P P	Q E L D T T E I S A S S G I Q P E D C P L R M D D P L T A M S T A D L L K N A P	N Q L D T T G V P A M A Q V G E L I Q T L R P D Q I T R P S I S D R K A V M C A P	S E L D T K D V I P T A Y T V P M K N V L R E D K V E E S S S E K S I A N A P	N E L D T E Q V E P M P H L F P I V N V F R E D I D V T N G D G H E D T L R N A P	N E V D T E G V E P T F S V T D Q V D R M R E D V A V Q A N Q K D A L L K N A P	R S V D T K G I A P L I H P F A L H Q R L R E D A V T E A D C V A E L E A I A P	N E L D T D G V E P M T H I F P V T N V F R E D T V R E S D G R E N T L K N A P	Q A V D T T G V E P L A H P R D L A Q P M R A D Q V T E T D H R S E N M Q S A P	K Q V D V T H V E P T A H G F P I Y N V W Q A D E P G P V F T P E Q A L A N A P	N E L D T S D V E P M A Q V S E V V Q F L R K D E V R S S L D R V Q V M A S A P	G E V D V E G V D A M A S T V A K S L P M R E D V Q T G G P D E I V A N A P	N E L D T S G V E P M S H V F P L D M A Q R L R A D D V V I E A D Q R A H F Q A I A P	N E L D T E G I E P M S H V F P L N N V F R S D E A E N G D G S A H T L A N A P	E K V D T T G V E P T Y T V T D Q I N V T R K D I A E D W G E R D A L L K N A P	A S I V T A E T P S T H P I P L V N V M R D D V V G E L L D R D E V L A N A P	S A V D T G D L T P L A H P Q A V A L R L R D D V V S E P N Q R E A N Q R S A P	E E L D T E K V E P I G H I T G M K N V S R F D K A S D F I G R E N I L K N A P	Q Q L E L A E V P P T R H A V D L M M P L R P D Q V E P S L P P D A A L A N G P P	N E L D T D Q V E P L V Y M M E E N V W R E D K V K Q E I S V A D G L K N A A A P	Q A L D T D D V E P L V Y V L N E D V N V W R E D K V K Q E I S V A D G L K N A A A P	N E L N T D D I N I T V N P Y Y I E N Q Y R E D V V E E S F T L D M V L K N A A P	N E L D T T G I E P M A H A Q D V V L R L R N D V A T E I D R H A A Y Q A V A P	S E L D T E N V L P T T R A E I Q N I T R A D S N R L Y P D H E V L V Q E S P	S E L D T E A I P P T A Q V I E I L L D V F A K D E P P S T Y S T D E M L A N A P	Q L V N T D G I E P L A H P I E Q Q R L R D D T V T E I P T R D E Y Q R N A P	Q A L D T T G V E E E M Q R P V D L V N I L R A D E P G E T F S Q A V A L S L A H P P	Q S V N T D G I E P M A H P H A A L R L R E D K I T E T D R A A E Y Q S V A P	S A V A T D D V D P P T S H A L P L S N V F R E D V D V I K E S M S A D D A L A M A P	Q A V D T Q G V E P L A H P E D I V L R L R Q D A V T E T A S R A E L L A N A P	Q T V N T D G V E P M A H P H E V A L R L R E D T V T E S D H A T E Y L A V A P	UniRef90_A4BLX7 UniRef90_B3WD56 UniRef90_D9S8A1 UniRef90_G4L8B9 UniRef90_R5Z6F6 UniRef90_M5A5N9 UniRef90_E4UB43 UniRef90_UP100036DCBCF

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E	E	A	A	D	L	I	K	V	P	A	I	
Q	L	F	E	R	M	I	V	V	P	K	V	
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E	T	D	G	V	F	F	K		V	P	K	
K	E	N	K	D	F	F	V	V	P	K	V	
E	T	T	D	G	L	I	R		V	P	T	
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D	T	D	D	G	Y	I	K		V	P	A	
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A	V	E	G	G	L	Y		L	V	P	K	V		
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K	S	K	D	G	Q	Y		V	P	K	V			
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L	H	D	D	V	Y	F	K	V	A	K	V			
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A	A	E	K	G		Y	L	V		P	Q	V		
A	T	G	D	G	C	Y		L	V	P	R	V		
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A	T	E	D	G	L	Y		V	P	R	V			
E	T	E	D	G	F	I	K	V	P	A	I			
K	H	T	D	Q	F	F	M		V	P	K	I		
N	T	D	G	R	F	F	K	V		P	K	V		
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D	I	Y	N	G	L	Y	R		V	P	Q	V		
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E	Q	E	R	N	M	F	K		V	P	K	V		
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E	S	D	G	A	F	F	K		V	P	K	V		
Q	M	K	N	D	F	F	K	V	P	K	V			
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A														
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I	S K E T V E R V A N L A R L E F K I S L N P Q E I E E F A P K I R Q V V D W F G Q L						
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I	N E E T V R Q V A K L A K L E I E E S V H A F T K E M D S I I E M V E Q L						
L	S T E T L M N I A K L A R L G V T A E Q A D S Y A N D L S K I L S M M D I L						
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D	I S R I S K L A N L S L S D E E K G K F E K Q L D E T I E Y I D K L						
K	I D H Q L K R L Q N L S M V E V D E A K K D Q L L E E L N K F L E F V D I L						
V	T R E D V L R C A A A L A H L S L R E D E I E P M R L A M A R L L T H A A S L						
V	D A D E V R H V A E L A R V D L D D E D E V E E F F A A R F A D I L G Y F D A L						
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V	T K K E E V E K I A Q L A D I T I D K E K L L S G F T Q F V S Q L I G L D Y V D K L						
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R	R K E L E I T A E L A A A L L S E E E F S R L Q E E V E Q M L H Y F E T M						
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 580 V N H L E R R L A L V D F G N E E G V E R L A T A V K F A D Q L
 590 M D K T T L A H H L C E E L S K I D F T E E Q Q D A V I A Q M D D I A L M D Q I
 600 I T K C M F E Q Q F A Q V G E V E L T P A E A E S M I A K M N A Q I K V I D Q L
 610 E I N N T L L E K L L A E S S M L I E N S E H D K L K A H L E E V L D F V E N L
 620 Q V S A E M I E H L V D I F G S R E A V A R L E K A I A F A D R L
 630 K I T K D D I L K L A Q I S M I D V S P D E I P I L I E R L D T L L N Y V S C
 640 R I S P E V V E Y I K R I S L V E L L K G G G E D K M L E E S S I K C A D R L
 650 L D R E E I L L L A K A S A L Q L S E E L I Q E Y Q T S L S A V I T S M K E A
 660 M D T K E L D L T A E L A H L E L S D E E L E K Y S S D L Q D I L D Y F K V L
 670 K I T R D N I Q D Y A L K L M F K M K E E E F P S F E K E F E T I L K H M D L I
 680 D R Q Y F Q S L A K Q L M F Q L S D E E A G S L S D D F K I L D K Q L A L L
 690 M
 700 K I N I S D L K D Y A H K L M F D M D D L E Y E T L L K E F D V V L K Q M D I I
 710 K I E Q S T V E L L E R L S L V D F S N A E A V S R L L E E A V K F A S V I
 720 M D R D V V A R V A R T A H I K L T D D E L E R Y S K N L A D I L D Y F K V L
 730 V Q K L L A G L A R L A L T K E E N I Y E G Q L K T I V E Y V G R I
 740 I D K N Y L K S L A K D L M I E A N D Q E L D Y V L S I E N A I S Q K L E K V

LKVNT EGVSP MRY GTI D KDH V RDD I NSQNI KEEL SNT
 NEGDA DKIRN I STSAT PAAEF R K D E V K PSL PNEKILL SNVN
 UniRef90_E9HUV4 HSVDTS AVKPLIN VLYEE QSLR EDCV TEGDIREELL SNAT
 UniRef90_R7G661 DAI DTEH VVEEMVY PFEET E TYL REDT A V DGGC AEE LLL CNAK
 UniRef90_H2LSB4 HVVDTTGIE PMDSVVEDRALYL REDTAVDGGC AEE LLL CNAK
 UniRef90_T1DKQ2 LALAI DTEGVEP LYTVEQEKLSSL REDDVLNDGDQQA E VLL QNAP
 UniRef90_R6CLX7 PDISDEL K PDPATPM KLR P DVAEGMLNPKEE VLL KLSR
 UniRef90_R5LLR0 NEVVKVY DEDMLICPTENK C VLL R D D VAGEMLNPK E VLL KNA P
 UniRef90_U5F7U5 NEIDTEGVEEMIY PFEAE T KLR REDDV VANVISQEDAL SNAK
 UniRef90_S5DKC0 KNI DVKDEKIDHPLSKVLEL REDESTPSL SHKDAMKNSPP
 UniRef90_C7LL24 TSI DTTDVEPTFYVNQIHSYLR RDDEPIQTNCQKE EILLE ENAP
 UniRef90_K2DP62 SEVNTDGGVKE TTQVTGLEDVV REDDIIVESEKRQKKLIALLF P
 UniRef90_L7ER82 DNL DLEDVN LNEYDEVNTEFRKDI P QIFEDDKKKL MQNVK
 UniRef90_M4AV06 HVVDTSGVE PMDSVVEDRALYL RDDT VTEGDC AEE ELLL KLA
 UniRef90_A6GF58 AEADVDGVP EPEFHESDEGQQL RADT PGP DGRV EA IL AGAP
 UniRef90_A0A017PS66 ISMDVTDI VDDLLVHVVGPL REDDVAASNFSREEFLL ANVPP
 UniRef90_E1RCU5 QEVVDLEGLEPTTHAL S EEPIL RND E HGENL LSDSLL DNA
 UniRef90_UPI0003C38E6A ANTDTDNIPVYRILFEEELYL RL DVVTEGN C RDDILL QNAQ
 UniRef90_A8G2P3 EKIDTDTDNIPCTTRALEEVINVFRKDEKKNYDRTTEELL E LGPP
 UniRef90_F5WRL6 QAI DTEGVEMVMSYPFEMETWL RDDEPNH VIDI DQS LA FENA P
 UniRef90_E7GCE9 EAI DTEGVEPLAFPYEISETFL REDDVADHIL SREDAL KNAH
 UniRef90_E8MZ87 EAI P DEDTPITSTPEISQPPRADEWH P Y PAP QDILL SQAPP
 UniRef90_K2FY92 UniRef90_U2VF36 NEIDNSEIMNISSENNLILPL REDDEIWKEIT TREELL NCSP
 UniRef90_UPI000359E4CA CHYELEGVEPTYHPI DLSNVNGADEV VRAL D VDTA SNAS
 UniRef90_S3XEC4 HVVDTSGVEPLD NV DRELWL C D QVTEGNC T E QVLL NAL
 UniRef90_X1B590 KKIDDTTDVESTSHVTNII NIIFRDDL INKPSSK
 UniRef90_W6SCW8 UniRef90_UPI00047BBE5A SDMDLE IDVEKEKELEPIV R K D E F C K D LFRNVK
 UniRef90_S5LT20 DNMDLS D VDINAF D QVNTTEFRK D S P K V F D E K K K LMQNVK
 UniRef90_P47344 FSINTDNVKE LYYPFEIYNYL REDDNTSVISKEA IL SNAI
 UniRef90_B9KGR3 TKIDTTNVQPMYAPFFSPTPL R K D K P V V D K HAKQLL NNCC
 UniRef90_UPI0003B5934D UniRef90_UPI0003C28907 S EVDTS G V DPL YGGAP G PS QV RDDV V D D G G I R D Q V L S H S E P
 UniRef90_G1WIS5 HEVNT EGI E PMDSVVEDR CLY LR GD N I T E G N C T K E L QNAS
 UniRef90_F4QBW1 LQYADE DVA PTFHPI DLSNVVMRA ADDADRALLPVDEA L K D A A
 UniRef90_B0W041 QQVDTTGQVPMHSVLENDHITMHD E D TS Y L K T K T I L Q H S T R
 UniRef90_K2AX95 LSVDTDGVPEPLTV E V D R L T L R D R V S D G N I Q Q D V L R N A R
 UniRef90_B1QS36 NKIDDSELIAWISLNTSKILPL R K D E L K K I S E R E E L L A C S P
 UniRef90_Q97EX7 NELL D LEINE DEKKELKPIVR K D E V K K F E C T D L F R N V K
 UniRef90_Q17X02 DKVDLSDINVNNEF D V N T E F R K D V P K V F E D K K K L MQNVK
 UniRef90_U7UNY3 FTL ETNE MIA DTEL C TPL R E D P N Q N T A K D I L S Q N K
 UniRef90_UPI00047BC031 AKIDTENI EG V F Q V N G T I N N L R E D K V K E S L D V K D A T E N T A
 UniRef90_P75535 E EI DTEGVEPLAYPYEISETFL R D D E P I D I I S L E D A L S N A K
 UniRef90_D5U638 MNIDTTS V EPMYAPFNTSTPL R K D K V I V E K H P E K L L A N C K
 UniRef90_UPI0003637A1D FEVNV D G I DPL YHVIDLPEYLR EDVAGKTL DNEVIMNLCR
 UniRef90_F5HJ21 EKI NSQDEESVTCTEVKTRMRKD E I K Q E T L T D E L L A N V P
 UniRef90_A7HN70 LPI GTDGVEPLYSVERDKL A L R P D T V D D G D R Q T E V L Q N A T
 UniRef90_G9PKW8 SEVNTENI EPMYTPIEEPFEPRIANPTTNE N I I E N F P
 UniRef90_R5VM06 QELLAHE D A A P F E W D V R K A P A R A D E P V R W T G R D V F L E E A P
 UniRef90_E7AA02 P D V D T L T V D P N N A M R L R E D V A K D H F K R E E M A N A P
 UniRef90_Q9PL38 ETLDLENT P P L E Q P P T PL R A D T P T H A P S S D I L S H A P
 UniRef90_R6TB80 VAI DLS D E A T V H H F V G P E D L R E D M V T S D F T R E E F L A N V P
 UniRef90_A0A024U7K0 PDLQ D E M T L D P D N P M I L R K D V V Q D K F T R Q E L M Q N A P
 UniRef90_A0A16VLR8 QEAATVHNVHDVY SKNSFGQVL R E D V V T E G N C P D Q V L A N A S H
 UniRef90_W8BQQ0 QRVDTTGFDP MY SVWE D Q Q F L R E D E P E E P L S D Q V L S N A H
 UniRef90_X1KKC5 TLI ETTNVLPFTYTV E D Q T L Y L R E D S V T E G N S R E N I L R G A K
 UniRef90_U1MEY2 NDL DTSN V E P M T H P R E D V A V E H F R E E M L A N A P
 UniRef90_R7H4S4 KLL NTGVEPMETVLD E C P L R D D I V E Q T V S K K E V L S N A A
 UniRef90_B3MN22 KEIDV T Y D A L A D N K N I Y L N D L R E D I K A D S F P T E K I L Q N A
 UniRef90_K1YB80 THIQ T D N V R P L Y T V E Q Q Q L R N D L V T E G D C R G K V L S N A K
 UniRef90_A0A023DWE1 GNVVP D S E L Q K V H L S E H S L I P R L D E E H R D I S R E A L L A C S P
 UniRef90_R7FDK0 ERL C Q V H Q Q E P E L A C P M V D D V P E C P I D T H I L L S N A P
 UniRef90_UPI0003B389C3 P D V E D E L T L D A E H P M K L R E D V A V E H F R E E M L A N A P
 UniRef90_M3U528 FALET H D L K T D T H L S T P L R E D E P K Q P H I A K D I L S H N K
 UniRef90_V5RUA4 DEL D T S E V S E T F Q V T G L T N V Y Q D G S Q K V T L S R E D A L K N V K
 UniRef90_T0RIB4 QEITL D D S I D D F Y T R S E A L P L R P D A A L E G N C P D D V L A N A S
 UniRef90_R7FLY2 GQIKI D D V E P M T F P I K S H Q V M R E D E P S T P L P A E E A L K N T N P
 UniRef90_B7A7E1 PKVQKA E A E E A T G R L R E D V E T P P L P Q A L A L S V A P
 UniRef90_F0WHE3 QEVDTSEV K P L V Y I N E A V N N F R E
 UniRef90_F9EPA5 N E V D T S E V K P L V Y I N E A V N N F R E
 UniRef90_B4M8L8 AHI D T Q N V R P L Y T V E K Q Q L Q L R N D Q V T A G D S R A E L L R C A K
 UniRef90_V3ZUY2 YVETSTV K P L D T V E T M P L Y L R V D E M N D G N C K K D V L K N A A
 UniRef90_W7UYV1 PEYGCNDH I P E P M E L R D D A A G N T G C A E E L S K N A P
 UniRef90_R7TA47 RTVDTS G V A P M T S V E Y W P L Y L R D D Q V T K G D T K T I L K N A Q
 UniRef90_D4LF1 KEYDVTY D D T Q D H N E I P Y Q A L R E D V A Q P S Y D T A R L Q Q N T
 UniRef90_UPI0003B7AB2E SAIP L D D M P A V V H P Q E I R I P L R E D V W T P F E N V D G I L A E A P
 UniRef90_E7G1C7 N T M D L K E V G D L E Q E T P F R E D A V H N P S V S Q A I L K Q A P
 UniRef90_UPI0003F064D4 RGV D T D R V E P M E S V E D R C L F L R S D D D V V E G N C T Q E I L Q N S H
 UniRef90_V6DHG2 KELLAQEVNI P E L P H N T N I L R E D D N S R E Q D Y V P L M N L A P
 UniRef90_H2YM5 J D V D T D D V V P M T S V L D D S A L L R R D D V P V T N A E S V L S N A K
 UniRef90_Q9Z9G8 LAIEI D D A D S C E S F M H V E D L R E D S V T S D F N R E E F L R N V P
 UniRef90_V5WMF2 D K L E L K E G D V E H H I P L K T N A L R S D N A S E S S L S D D I L E Q A P
 UniRef90_M4YMA1 D E A P G H D G V G V N P V D I S D V L R D D V P D Q E I D S A E L L K D M
 UniRef90_R6DQM3 TEID D E K V E P M T F P F N E E A H L R E D V A T S T I L T T D D A V K N A R
 UniRef90_D2MPE7 DTI D T S Q T E E M I Y P L D V E T F L R E D V V T H V I S Q E E A V N V K
 UniRef90_A0A014NISO QAVDTS G V Q P L A H P Q D I A L R L R E D V A S E P N Q R E A N M R N A P
 UniRef90_R5TEV4 SKFD D K I E P M V L P F P I E V N L R S D N L V E V L A R E D V L K N A K
 UniRef90_B7PZ18 MNV D T T G V R P M V T P E D T V L R L R D D V A E K C S S E D V L K N A A
 UniRef90_M9SEP1 D E A P D H E G I G V N P I E V S D V L R E D V P Q G D I D P A E L L K D M
 UniRef90_K1YK99 S E L E F D N N S V L S I S Q I Q S D N S A L R E D E I L E C E D R Q A C V E S F P
 UniRef90_G2RZZ3 ISIDTENVK P T F Y P K D I G S F L R E D D N P Q V I D Q K Y L L E N A P

90

UniRef90_B3CP07	K S E H G Y F V V P K \V
UniRef90_R6Q8L8	A S K G F F C \V
UniRef90_E9HUV4	\V T E E E Y F F A P
UniRef90_R7G661	S V K A G H V H V P K \V
UniRef90_H2LSB4	K T V E E Y F V V P
UniRef90_T1DQK2	\V T E E E Y F V A P
UniRef90_R6CLX7	S V K A G C L V V P K
UniRef90_R5LLR0	R H S G N Y I S V P V \V
UniRef90_U5F7U5	S V K A G H V H V P K \V
UniRef90_S5DKC0	E T K D G H F V V P
UniRef90_C7LL24	T K H D D Y I T I A R V
UniRef90_K2DP62	K K S G D L L K V D A V
UniRef90_L7ER82	N L R D G G I Q V P K I
UniRef90_M4AV06	N T V E E Y F V A P
UniRef90_A6GF58	K T R G S L V A V P K
UniRef90_A0A017PS66	E S L G G L V K V P T I
UniRef90_E1RCU5	E L E D R F I V I P N V
UniRef90_UP10003C38E6A	\V T D E D Y F I A P
UniRef90_A8G2P3	S R E D K Y F K V P K I
UniRef90_F5WRL6	R V D G D Y F E I V K V
UniRef90_E7GCE9	D V Q E N Q I K V P K V
UniRef90_E8MZ87	E V D D G Y I V V P
UniRef90_K2FY92	K
UniRef90_U2VF36	\V T S E R F F C V P S I
UniRef90_UP1000359E4CA	K T E E Q Y F V A P
UniRef90_S3XEC4	A S E D H F F V V P K I
UniRef90_X1B590	
UniRef90_W6SCW8	D M Q D T Y I R V P K I
UniRef90_UP100047BBE5A	S L R G T A I Q V P K I
UniRef90_S5LT20	D S D E D F I V I A K V
UniRef90_P47344	E V K T G F V K V
UniRef90_B9KGR3	\V T E A G C F F V Q K I
UniRef90_UP10003B5934D	K K R E R Y A V V P K V
UniRef90_UP10003C28907	Q T A E E Y F E A P
UniRef90_G1WIS5	S T R G R S F R V P S I
UniRef90_F4QBW1	S T I A N F Y K V P K
UniRef90_B0W041	\V T E E E Y F V A P
UniRef90_K2AX95	K N K V N H S I V
UniRef90_B1QS36	D K Q D T Y I R V P K I
UniRef90_Q97EX7	S L R D G A I E V P K I
UniRef90_Q17X02	H S Q G H Y F V V P K I
UniRef90_U7UNY3	E E K Y G F F K I I K
UniRef90_UP100047BC031	S V Q E N Q I K V P K V
UniRef90_P75535	E M S V G F V K V
UniRef90_D5U638	S G E Y G Y I V V P A V
UniRef90_UP10003637A1D	E P S A T Y F V V P K V
UniRef90_F5HJ21	I T E E E Y F V A P
UniRef90_A7HN70	E K V D R L I K V P G I
UniRef90_G9PKW8	\V R D G D F F R V P R I
UniRef90_R5VM06	E V Q A G C L V V P K
UniRef90_E7AA02	R A Q E G Y F I V P K I
UniRef90_Q9PL38	\V S L G G L V K V P T V
UniRef90_R6TB80	Q V K A G C L V V P K
UniRef90_A0A024U7K0	T K H G Y F F Q V P K V
UniRef90_A0A016VLR8	P V Q D H Y F T S P
UniRef90_W8BQQ0	V T E E D Y F V S P
UniRef90_X1KKC5	
UniRef90_U1MEY2	E L V E D Y F V T P
UniRef90_R7H4S4	V H D E N C F V V P K \V
UniRef90_B3MN22	\V T D E D Y F V S P
UniRef90_K1YB80	Q K
UniRef90_A0A023DWE1	K Q R K E H C V V P N V
UniRef90_R7FDK0	E V Q S G C L V V P K
UniRef90_UP10003B389C3	E S Q D G Q F M V P A I
UniRef90_M3U528	H S Q D Y Y F V V P K I
UniRef90_V5RUA4	E T A R N L V V T K G V
UniRef90_T0RIB4	\V K H G Y Y F Q V P K V
UniRef90_R7FLY2	N R L G N Q V K I P K V
UniRef90_B7A7E1	D G E D G F F R V P P V
UniRef90_F0WHE3	S T P Y F R V P K V
UniRef90_F9EPA5	
UniRef90_B4M8L8	\V T D E D Y Y V S P
UniRef90_V3ZUY2	K V E E D Y F V A P
UniRef90_W7UYV1	E F V N G C F T V P R
UniRef90_R7TA47	K L D E D Y F V A P
UniRef90_D4LF1	Q P R D D C Y V V P K
UniRef90_UP10003B7AB2E	R T Q D G Y I V A P
UniRef90_E7G1C7	Q S Q E G Y F D V P K I
UniRef90_UP10003F064D4	\V Q L E E Y S V A P
UniRef90_V6DHG2	E K T D N Y F V V P M I
UniRef90_H2YMJ5	\S V V E G Y F V A P
UniRef90_Q9Z9G8	E S L G G L V K V P A V
UniRef90_V5WMF2	D L E D R F I A L P N V
UniRef90_M4YMA1	K T Y E N Y I R G P K
UniRef90_R6DQM3	D T V Y D E I K V P K V
UniRef90_D2MPF7	K K V E G H F V L P K V
UniRef90_A0A014NISO	A Q G E G G L F L V P K V
UniRef90_R5TEV4	E I E N D Q V K V P K V
UniRef90_B7PZ18	\V I E E D Y F V A P
UniRef90_M9SEP1	K T Y E G Y I R G P K
UniRef90_K1YK99	S R E G K L L K V P A V
UniRef90_G2RZZ3	T K D Q D Y I T V V K V

This figure displays a multiple sequence alignment of UniRef90 protein fragments. The alignment is organized into three main sections: positions 1-10, 10-20, and 20-30. Each section contains a grid of amino acid residues for each position, with colors indicating conservation levels. The x-axis represents the position of the amino acid, and the y-axis lists the UniRef90 entries. A color key at the top right provides a legend for the conservation scale.

Sequence alignment showing UniRef90_UPI0003EA9E8A (top) and UniRef90UPI0003A94CA3 (bottom). The alignment highlights conserved regions and specific mutations.

Key mutations and features:

- Column 1 (Top):** KGI, DLS, KNS, PLY, TAD, EPE, PMT, HAD, DFL, LRE, DSD, VRE, GEC, CAE, QL, L, RASS.
- Column 2 (Bottom):** ANM, PTE, KVI, PMT, HAD, DFL, LRE, DSD, VRE, GEC, CAE, QL, L, RASS.
- Column 3 (Top):** KSM, MNL, DGL, VPI, PTN, FVN, ISV, NFR, DFL, LRE, DSD, VRE, GEC, CAE, QL, L, RASS.
- Column 4 (Bottom):** DNL, DLE, ENI, VPI, PTN, FVN, ISV, NFR, DFL, LRE, DSD, VRE, GEC, CAE, QL, L, RASS.
- Column 5 (Top):** KLV, DTE, TGT, GIV, KPL, ERL, KPL, FYP, PFN, NH, TFL, REDEE, F, IQS, E, K, C, A, K.
- Column 6 (Bottom):** KLV, DTE, TGT, GIV, KPL, ERL, KPL, FYP, PFN, NH, TFL, REDEE, F, IQS, E, K, C, A, K.
- Column 7 (Top):** TSI, DTE, EGK, KPL, FYP, PFN, NH, TFL, REDEE, F, IQS, E, K, C, A, K.
- Column 8 (Bottom):** TSI, DTE, EGK, KPL, FYP, PFN, NH, TFL, REDEE, F, IQS, E, K, C, A, K.
- Column 9 (Top):** KEA, DTS, SNI, KLS, STA, AE, VTN, V, RTD, VVT, TN, IN, RR, DEM, SNA, K.
- Column 10 (Bottom):** KEA, DTS, SNI, KLS, STA, AE, VTN, V, RTD, VVT, TN, IN, RR, DEM, SNA, K.
- Column 11 (Top):** KGL, DVSS, IGE, DEI, YFQ, HEN, AI, RPD, LIG, KHL, SRE, EI, R, D, V, D, H, V, I, S, R, E, D, A, L, P.
- Column 12 (Bottom):** KGL, DVSS, IGE, DEI, YFQ, HEN, AI, RPD, LIG, KHL, SRE, EI, R, D, V, D, H, V, I, S, R, E, D, A, L, P.
- Column 13 (Top):** ESI, DTT, TGT, GVE, PMV, YPF, ET, P, TY, R, D, L, G, K, H, L, S, R, E, I, R, D, I, A, V, S, Q, D, R, E, A, I, V, C, A, L, P.
- Column 14 (Bottom):** ESI, DTT, TGT, GVE, PMV, YPF, ET, P, TY, R, D, L, G, K, H, L, S, R, E, I, R, D, I, A, V, S, Q, D, R, E, A, I, V, C, A, L, P.
- Column 15 (Top):** EQV, DTSGA, KADF, AQ, P, Q, H, V, R, E, D, I, A, V, S, Q, D, R, E, A, I, V, C, A, L, P.
- Column 16 (Bottom):** EQV, DTSGA, KADF, AQ, P, Q, H, V, R, E, D, I, A, V, S, Q, D, R, E, A, I, V, C, A, L, P.
- Column 17 (Top):** LNI, INT, TDG, ISAM, HY, PENA, HT, F, L, R, E, D, S, E, S, R, N, I, D, Q, K, I, V, L, D, N, A, P.
- Column 18 (Bottom):** LNI, INT, TDG, ISAM, HY, PENA, HT, F, L, R, E, D, S, E, S, R, N, I, D, Q, K, I, V, L, D, N, A, P.
- Column 19 (Top):** RAV, DT, D, G, V, E, P, M, E, S, V, E, D, R, C, LY, L, R, S, D, N, V, V, E, G, N, C, V, E, E, L, Q, N, S, H.
- Column 20 (Bottom):** RAV, DT, D, G, V, E, P, M, E, S, V, E, D, R, C, LY, L, R, S, D, N, V, V, E, G, N, C, V, E, E, L, Q, N, S, H.
- Column 21 (Top):** HEL, NT, D, G, V, I, T, PMV, DS, H, SS, L, Q, L, R, K, D, L, P, S, E, T, S, Q, L, I, R, D, N, E, I, E, S, S, R, E, D, I, L, K, N, A, A.
- Column 22 (Bottom):** HEL, NT, D, G, V, I, T, PMV, DS, H, SS, L, Q, L, R, K, D, L, P, S, E, T, S, Q, L, I, R, D, N, E, I, E, S, S, R, E, D, I, L, K, N, A, A.
- Column 23 (Top):** NDF, NTE, ENI, V, E, P, M, S, F, P, F, D, Y, H, T, D, L, R, E, D, N, E, I, E, S, S, R, E, D, I, L, K, N, A, A.
- Column 24 (Bottom):** NDF, NTE, ENI, V, E, P, M, S, F, P, F, D, Y, H, T, D, L, R, E, D, N, E, I, E, S, S, R, E, D, I, L, K, N, A, A.
- Column 25 (Top):** AA, D, DV, K, N, V, E, P, T, T, Q, I, L, A, A, S, N, R, L, R, P, E, G, A, H, H, N, N, N, P, A, D, A, V, L, E, Q, A, P.
- Column 26 (Bottom):** AA, D, DV, K, N, V, E, P, T, T, Q, I, L, A, A, S, N, R, L, R, P, E, G, A, H, H, N, N, N, P, A, D, A, V, L, E, Q, A, P.
- Column 27 (Top):** Q, Q, V, DT, D, N, V, L, P, T, L, L, E, D, Q, S, L, L, R, E, T, T, V, T, P, A, E, Q, Q, N, N, I, L, Q, H, S, S.
- Column 28 (Bottom):** Q, Q, V, DT, D, N, V, L, P, T, L, L, E, D, Q, S, L, L, R, E, T, T, V, T, P, A, E, Q, Q, N, N, I, L, Q, H, S, S.
- Column 29 (Top):** D, D, I, D, E, K, T, V, I, S, S, G, N, H, V, T, N, L, K, D, I, T, R, V, D, K, D, E, E, S, L, T, D, Q, N, D, V, F, L, N, H, K.
- Column 30 (Bottom):** D, D, I, D, E, K, T, V, I, S, S, G, N, H, V, T, N, L, K, D, I, T, R, V, D, K, D, E, E, S, L, T, D, Q, N, D, V, F, L, N, H, K.
- Column 31 (Top):** Q, S, V, N, T, E, N, V, R, P, L, H, S, I, L, E, D, T, Q, T, L, H, F, E, Q, T, T, V, N, Q, D, H, E, H, I, L, D, H, S, N.
- Column 32 (Bottom):** Q, S, V, N, T, E, N, V, R, P, L, H, S, I, L, E, D, T, Q, T, L, H, F, E, Q, T, T, V, N, Q, D, H, E, H, I, L, D, H, S, N.
- Column 33 (Top):** NEL, L, D, T, K, V, E, P, T, A, N, V, R, E, I, D, L, D, E, G, V, G, D, Y, E, A, P, G, M, A, D, W, M, R, D, D, E, P, V, T, F, D, N, I, E, Q, M, M, E, G, S, R.
- Column 34 (Bottom):** NEL, L, D, T, K, V, E, P, T, A, N, V, R, E, I, D, L, D, E, G, V, G, D, Y, E, A, P, G, M, A, D, W, M, R, D, D, E, P, V, T, F, D, N, I, E, Q, M, M, E, G, S, R.
- Column 35 (Top):** R, E, I, D, L, D, E, G, V, G, D, Y, E, A, P, G, M, A, D, W, M, R, D, D, E, P, V, T, F, D, N, I, E, Q, M, M, E, G, S, R.
- Column 36 (Bottom):** R, E, I, D, L, D, E, G, V, G, D, Y, E, A, P, G, M, A, D, W, M, R, D, D, E, P, V, T, F, D, N, I, E, Q, M, M, E, G, S, R.
- Column 37 (Top):** NEI, E, I, E, E, N, V, I, L, I, A, P, T, E, E, K, D, D, F, E, S, T, I, T, E, E, S, L, S, K, E, E, I, I, M, K, N, A, K.
- Column 38 (Bottom):** NEI, E, I, E, E, N, V, I, L, I, A, P, T, E, E, K, D, D, F, E, S, T, I, T, E, E, S, L, S, K, E, E, I, I, M, K, N, A, K.
- Column 39 (Top):** E, L, V, D, T, E, G, L, E, P, M, Y, T, V, W, D, Q, E, C, P, T, F, E, D, I, E, E, P, L, P, I, E, E, V, F, R, N, A, P.
- Column 40 (Bottom):** E, L, V, D, T, E, G, L, E, P, M, Y, T, V, W, D, Q, E, C, P, T, F, E, D, I, E, E, P, L, P, I, E, E, V, F, R, N, A, P.
- Column 41 (Top):** L, S, I, E, V, E, D, E, G, E, L, Y, L, T, T, G, R, L, R, E, D, E, V, T, N, M, I, N, P, A, D, F, I, K, P.
- Column 42 (Bottom):** L, S, I, E, V, E, D, E, G, E, L, Y, L, T, T, G, R, L, R, E, D, E, V, T, N, M, I, N, P, A, D, F, I, K, P.
- Column 43 (Top):** R, R, V, H, I, D, E, V, R, P, M, Y, T, V, W, Q, L, E, C, P, T, F, E, D, I, E, E, P, L, P, I, E, E, V, F, R, N, A, P.
- Column 44 (Bottom):** R, R, V, H, I, D, E, V, R, P, M, Y, T, V, W, Q, L, E, C, P, T, F, E, D, I, E, E, P, L, P, I, E, E, V, F, R, N, A, P.
- Column 45 (Top):** D, E, A, P, S, V, G, E, F, D, F, N, P, V, K, I, E, D, A, L, R, R, E, D, E, V, E, R, D, S, E, P, S, E, D, L, I.
- Column 46 (Bottom):** D, E, A, P, S, V, G, E, F, D, F, N, P, V, K, I, E, D, A, L, R, R, E, D, E, V, E, R, D, S, E, P, S, E, D, L, I.
- Column 47 (Top):** R, H, V, D, V, E, N, S, S, T, M, F, T, V, W, Q, L, E, C, P, T, F, E, D, I, E, E, P, L, P, I, E, E, V, F, R, N, A, P.
- Column 48 (Bottom):** R, H, V, D, V, E, N, S, S, T, M, F, T, V, W, Q, L, E, C, P, T, F, E, D, I, E, E, P, L, P, I, E, E, V, F, R, N, A, P.
- Column 49 (Top):** Q, S, V, D, T, S, G, V, E, P, L, Y, S, L, R, D, E, T, T, R, G, I, E, D, A, T, I, G, L, D, Q, L, A, Q, A, L.
- Column 50 (Bottom):** Q, S, V, D, T, S, G, V, E, P, L, Y, S, L, R, D, E, T, T, R, G, I, E, D, A, T, I, G, L, D, Q, L, A, Q, A, L.
- Column 51 (Top):** E, D, V, S, L, N, D, E, E, L, A, F, H, S, V, E, P, E, K, L, R, D, D, S, N, K, N, K, E, I, E, N, V, F, Y, N, G.
- Column 52 (Bottom):** E, D, V, S, L, N, D, E, E, L, A, F, H, S, V, E, P, E, K, L, R, D, D, S, N, K, N, K, E, I, E, N, V, F, Y, N, G.
- Column 53 (Top):** F, D, V, D, T, S, N, V, E, P, M, H, T, V, L, E, N, R, S, V, L, R, E, D, R, P, Q, R, W, D, P, K, L, V, L, N, N, V, T.
- Column 54 (Bottom):** F, D, V, D, T, S, N, V, E, P, M, H, T, V, L, E, N, R, S, V, L, R, E, D, R, P, Q, R, W, D, P, K, L, V, L, N, N, V, T.
- Column 55 (Top):** Q, D, V, D, L, D, S, V, D, P.
- Column 56 (Bottom):** Q, D, V, D, L, D, S, V, D, P.
- Column 57 (Top):** E, L, V, D, T, E, G, V, E, P, M, H, T, V, W, D, Q, E, C, P, T, F, E, D, I, E, E, P, L, P, I, E, E, V, F, R, N, A, P.
- Column 58 (Bottom):** E, L, V, D, T, E, G, V, E, P, M, H, T, V, W, D, Q, E, C, P, T, F, E, D, I, E, E, P, L, P, I, E, E, V, F, R, N, A, P.
- Column 59 (Top):** N, E, I, N, I, K, D, T, E, P, L, S, Y, P, Y, I, E, E, L, R, S, D, D, E, V, L, E, E, P, I, E, D, L, L, K, N, A, K.
- Column 60 (Bottom):** N, E, I, N, I, K, D, T, E, P, L, S, Y, P, Y, I, E, E, L, R, S, D, D, E, V, L, E, E, P, I, E, D, L, L, K, N, A, K.
- Column 61 (Top):** M, A, V, E, L, D, N, Y, E, P, L, Y, Y, V, H, D, V, E, G, F, M, R, D, D, E, V, I, G, A, L, D, T, R, E, N, L, S, N, A.
- Column 62 (Bottom):** M, A, V, E, L, D, N, Y, E, P, L, Y, Y, V, H, D, V, E, G, F, M, R, D, D, E, V, I, G, A, L, D, T, R, E, N, L, S, N, A.
- Column 63 (Top):** E, E, F, D, L, Q, D, I, K, P, M, S, H, I, N, I, C, F, E, Q, L, R, S, D, E, P, D, K, S, L, N, K, Q, D, L, L, N, N, A, S.
- Column 64 (Bottom):** E, E, F, D, L, Q, D, I, K, P, M, S, H, I, N, I, C, F, E, Q, L, R, S, D, E, P, D, K, S, L, N, K, Q, D, L, L, N, N, A, S.
- Column 65 (Top):** L, L, V, N, E, S, T, D, E, L, L, I, S, P, C, D, N, P, C, S, L, R, D, K, S, Y, V, Y, E, I, D, K, K, P, V, P, L, A, N, A, P.
- Column 66 (Bottom):** L, L, V, N, E, S, T, D, E, L, L, I, S, P, C, D, N, P, C, S, L, R, D, K, S, Y, V, Y, E, I, D, K, K, P, V, P, L, A, N, A, P.
- Column 67 (Top):** S, L, I, N, T, N, I, K, P, I, Y, N, S, N, K, T, Q, L, I, Q, E, D, S, P, K, K, D, F, D, N, K, Y, I, L, K, N, A, P.
- Column 68 (Bottom):** S, L, I, N, T, N, I, K, P, I, Y, N, S, N, K, T, Q, L, I, Q, E, D, S, P, K, K, D, F, D, N, K, Y, I, L, K, N, A, P.

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sol5
sol0
jhmm
jpssm

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UniRef90_D1J7I3	E H D E N Y I V I M K K V
UniRef90_R5Y6E8	N V Y E D Y I E V
UniRef90_G8DB30	D H E N K L F L V P

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lupas_14
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jnet
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sol25
sol5
sol0
jhmm
jpssm