

QUERY	1	10	20	30	40
UniRef90_Q5QY38	M K F T V E R E H L L K P L Q Q V S G P L P I L G N L L L Q V A D G T L S L T G G G				
UniRef90_K2GLG7	M K F S I N R D A F L K P L Q V V S G T L P I L S N L L L Q V D N G Q L L S L T G G				
UniRef90_M5DMB4	M K F T I N R E L L L K P L Q Q V A G T L P I L S N V L I E E V T D Q Q L L S L T G G				
UniRef90_Q9KVX5	M K F T I E R S H L I K P L Q Q V S G T L P I L G N L L L K V E E N Q L S M T A G G				
UniRef90_UP100046AD1F8	M K F S I S R E A L L L R P P L S L V A G T L P I L S N V L L E E V S S D Q Q L S L T G G				
UniRef90_E1SUL1	M Q F V I N R E T L L L K P P L Q Q V S G T L P I L G N I L F K V D A G Q L T M T C				
UniRef90_UP10002E4225C	M K F T I L T R D V F L K P P L Q Q V S G T L P I L G N I L V E E E G Q L L S L T G G				
UniRef90_A6VR66	M K F S V V R E T L L L K P P L Q Q V A G T M P I L G N I L V E K D Q L L T L T G G				
UniRef90_D0Z134	M K F T I L A R E Q L L L K P P L Q Q V S G A L P I L G N I L V E E E G Q L L S L T G G				
UniRef90_S6EZ1	M Q F T V S R E N I L L L K P P L Q Q V C G V I P I L V L S N V L L H I E E G Q S L S T I T G G				
UniRef90_U7FMZ4	M K L T I S R E A L L L R P P L Q S I A G T M P I L V L S N V L L A E A E D N T L L S L T G G				
UniRef90_UP100037FA8B5	M K F S I S R E A L L L R P P L T L V A G T L P I L V L S N V L L K A Q D D G T L Q L T G G				
UniRef90_UP10003709216	M K F T I L R D D F L K P P L N M V C G A V P I L G N V L I R V N D D A L W M T G G				
UniRef90_H5TDX1	M N F T I S R E D F L H P P L Q L V A G T L P I L G N V L I R V N D D A L W L T G G				
UniRef90_F4AH42	M K F S I S R E N F L Q P P L Q L V S G T L P I L S N V L L K V S D N A L T L T G G				
UniRef90_UP10000E0DBEA	M K F T I S R E Q F L Q P P L Q L V S G T L P I L S N I L L V V K E G V L T L T G G				
UniRef90_A0Z2Y6	M K F S I S R E A L L I K P P L N L V A G T L P I L S N N V L L N L E E G T Q L S L T G G				
UniRef90_U1JF6	M Q I T I S R E Q F L K P P L T Q V S G T L P I L S N N V L L E I K D G T L A M T G G				
UniRef90_Q21PW3	M K F I V V S R E T I L K P P L Q Q V A G T L P I L V L A N V L I V L E E G E Q L S L T G G				
UniRef90_B8GSS2	M R F S I Q R E D L L L K P P L Q Q V G T M P I L V L A N V L I K A D E D R L L S V T G G				
UniRef90_Q2SQZ8	M K L T I T R E A L L V T S L Q M I S G T M P I L V L A N V L L D A R D G K L V I T G G				
UniRef90_Q12TC7	M K F S I I D R D A L L L K P P L Q L V T G A L P I L A N L L V K V S Q D V I S L S M T G				
UniRef90_UP10003B5A743	M H F T I Q R E A L L L K P P L Q Q V A G T M P I L V L S N N V L L V I E G Q N L S M T G				
UniRef90_W6M4C6	M K F I I I S R D Q I L P P L Q Q V I V S T M P I L V L S N N V L L Q A S D E Q L V M T G				
UniRef90_UP10003B34B15	M Q F I I V S R E N I L L K P P L Q Q V C G V I P I L V L N N V L L Q I E E G D R L T I T G				
UniRef90_UP10004799110	M K I R V D R D V L N E A V S W T A R S L P I L L S G I L L K A E A G T L V S L A T G				
UniRef90_B2UQB4	M K F T I I S K Q V F L D G L R Q V A S T L P I L L S N V K I E A E N G Q V R F T A				
UniRef90_M4U128	M Q F S I S R E A F L Q P P L Q Q V A G A L P I L M A N I L Q I K D G I L L S L T G G				
UniRef90_UP100037E8A6C	M K F I I I S R D Q I L P P L Q Q V I V S T M P I L V L S N N V L L Q A S D E Q L V M T G				
UniRef90_A6VK87	M Q F I I V S R E N I L L K P P L Q Q V C G V I P I L V L N N V L L Q I E E D Y R T I T G				
UniRef90_UP100037AAE5	M R I L I I E R S N I L L K S L S H Q R T I P I L V L N N V L L K T E D G G M R L K A G				
UniRef90_P43744	M Q F S I S R E N I L L K P P L Q Q V C G V I P I L V L N N V L L Q I E E D Y R T I T G				
UniRef90_UP10004660006	M K F T I D K F G E A I T Q V A D T L P M L T G I R V E I E G S K I V M A A				
UniRef90_UP10001DD0761	M K A T I I E R A T L L R C L S H V Q N T I P I L V L S N V L I D A D G G G V K V M A				
UniRef90_W9BV09	M K A T I I E R A T L L R C L S H V Q N T I P I L V L S N V L I D A S D G A L R F M A				
UniRef90_E9UPA9	M K F R V D R D V F A D A V A W A A R S L P I L V L S N V L I E A G H E G L V L S T G				
UniRef90_J3Z4U4	M K F I I V Q R D L V L K P P L Q Q V V S S T L P I L V L G N L L L Q V F K N R L L L T S G				
UniRef90_UP100047A9C39	M K L S M T R D Q L L K P P L Q Q V A G T L P I L V L S N V L M V V D Q Q G S L T G				
UniRef90_UP10004656DDC	M V V D G A F S K A V S Q V I D T L P I L T G V R M E I E D D L I T L L A				
UniRef90_M7NE19	M V V D G A F A F H A I N Q V I D T L P I L T G V K M E I E D D L I T F L A				
UniRef90_UP100037B0303	M H F E I I D R E T F L K P P L Q S I I G T L P I L V L S N I L I V A D S N S L S L T S G				
UniRef90_D7ALT7	M E F T I I D R D T F S R A L Q K I Q N T M P I L V L S N V L I E A L E D R I I E L T A G				
UniRef90_UP10004762886	M K F T V N R E Q I L G P P L Q Q V I A R T L P I L V L S N V L I C Y C R N N R L V M T G				
UniRef90_UP100041B93CC	M R F S L L Q R E V F E L K P P L A Q V V N T L P I L V L A N L L V I Q V Q G G G S L T G				
UniRef90_Q48AS6	M K F S L I N R E L L L K P P L Q Q V V S G T L P I L V L S N I L F E V S G Q S S L T G				
UniRef90_UP10003829D77	M K L T I I E R S D L L N A L L S H V Q N T I P I L V L S N V L M E A K G G Q V T F V A G				
UniRef90_G2KT96	M K F S I I N R A S F I K A L N I V Q R T I P I L V L T G L K L D V T G N N N I M L T G				
UniRef90_M2XW08	M K F S I I D R A A L L L K P P L A H V Q N T I P I L V L T G V R I E I D G E R M T L L A				
UniRef90_A8U125	M K I T I I D R A A L L L K P P L A H V Q N T I P I L V L A N V L L R A A D G T L S L T A				
UniRef90_A4F5N3	M S V P G D L F S E A V S Q V A D T L P M L T G V R M E I I N A D R L L T M V A				
UniRef90_P27903	M T V P G E V F A S A V Q Q V A D T L P V L T G V R I E I E G D S V T L L A S				
UniRef90_C6XRU5	M K L T I I D R G A L M K A L S H V Q N T I P I L V L S N V L I D A E G T S S L T R L T A G				
UniRef90_E4MZE2	M K F R V D R D V L A E A V A W V A A R S L P I L V L A G L L L T A Q E G S S L A L L S G G				
UniRef90_E2S8Q9	M K F R I I D R D T F A D A V A W T A R S L P I L V L A G L L V E A S A E E G L T L S G G				
UniRef90_B5E7P7	M E F R I I S K E I F M K A L Q R I Q N T M P I L S N A L L E V V Q N D Q F I T T A G				
UniRef90_Q0H1A9	M E F R I I S K E I F M K A L Q R I Q N T M P I L T L P I L G N L L L K V S D G V L H T G				
UniRef90_B3E8N8	M N F K I I D R D T F L K A L Q K V Q G S M P I L S N I L I E A Q G D N L E I I T A				
UniRef90_R7XSP9	M T V S S N D F A H A V A Q A V T A L P I L V L T G V R I E I D G S T M S L L A				
UniRef90_H0QWS7	M K F R V A V A R D D F A D A V A W V V A A R S L P I L V L G C V L I T S D T G I S V S G				
UniRef90_U1SNF8	M I D P Q T I L A Q V A Q V S D T L P I L T L G A V C T E L T G S T I T F L A				
UniRef90_H8KZ22	M Q F S I I Q R E A L L K P P L Q Q V V G T L P I L V L A N L L V I N V H Q G R V V S F T G				
UniRef90_UP10004052F98	M M N F K I I K T D L L K A L V S T A E T R P I L T G I H W G M E N A V L T C T A				
UniRef90_W8H299	M S I P A D V F S E A I S Q V A D T L P M L T G I R V E I E R N A I V L T L A A				
UniRef90_A0A022LRM7	M K F E V I V N R D V F S E A V S F A V K T L P I L V L S N V L I H A D G D R L T L L S S				
UniRef90_H6RJ97	M I V D S D V F A E A V A Q V A D T L P M L T G V R L I E I D D D R I T L L A A				
UniRef90_Q02D48	M E F T V V S K S D L V R E L S L S Q G T I I P I L V L S N V L L E A A D D R I T L L A A				
UniRef90_UP1000363858C	M K F S I I E R S E L L K A L G H V Q N T I I P I L V L S N V L I S A D D K G L L T L V A				
UniRef90_A0A010YF15	M K F R V E R A E L A D A V A W T A K S L P I L V L T D N D R L T L V S G				
UniRef90_B3QK00	M K V T V E R A Q L L K A L S S H V R N T I I P I L V L G N V L V R A E N A Q L T A L K A				
UniRef90_Q1YFI9	M R I I I I E R S N I L L K S L S A H V R N T I I P I L V L S N V L L K T E G E G R L K A				
UniRef90_G7H7A5	M T I P S S V F A E A I S Q V A D T L P M L T G V R I E I D G K I V V L A A				
UniRef90_H1G401	M K L S I I Q R E V L L K P P L Q Q V I G T M Q I L S N V L L R C D G T H K I T A A				
UniRef90_D3NY85	M N I T I I E R S A A L L R S L S G H V Q N T I I P I L V L S N V L L R A G D G E L S L L A A				
UniRef90_K9HV07	M K L T I I E R S V L L K P P L S G H V Q N T I I P I L V L S N V L L K D A T P D G L L S K L L N A				
UniRef90_UP10003B46CF4	M K L T I I D R S D L L R A L S H V Q N T I I P I L V L S N V L L S A S S G S S Q L L T A				
UniRef90_UP10003B3A816	M K F T V I V A R D V L A E A V S W T A R A L P I L V L L A G V R I H A E Q E E L T L L S S				
UniRef90_UP100047EE792	M E I T V I V S R Q E L V K P P L T A T Q S T I I P I L V L A N V L I E K T E D R L L C L T A				
UniRef90_UST169	M E F Q T E R E T T L L R P P L Q S I I I G T L P I L V L A N V L I E K T E D R L L C L T A				
UniRef90_Q075F8	M I Q T N K D A L L K P P L Q A V V T G T L P I L V L S N V L L I E R K R E E I S F T A				
UniRef90_W9G6Y8	M T I A G D V F V T Q A V A Q V S D T L P I L V L T G V R M E I E G D K V T L L L A				
UniRef90_L7VVD9	M K F R V I V N R D V L T E A V A W T A R T L P I L V L L A G L L L D A S E Q R V R L L S S				
UniRef90_UP10003758882	M K F E V I V N R D M F E S D A V A S F V V K T L P I L V L S G V V L L E A T G D K L Q L S T				
UniRef90_D1ADA1	M K F R I I D R D A L A D A V A W T A R S L P I L V L G G M H E A A G D R L K L S A G				
UniRef90_J7L7M0	M K F R V E R D V L S D A V A W T A R T L P I L V L A G I L L D A S E Q R V R L L S G				
UniRef90_P21174	M T V D G A A F A H A V A Q V T D T L P I L V L T A V K V E I E G D T I T F L A				
UniRef90_S2WU12	M T I D A Q V F V S Q A I A Q V V S D T L P I L V L T G V R M E I E D D D T I T L L L G				
UniRef90_L1PE18	M S V D S Q V F Q Q A V A Q V S E T L P I L V L T A V R V E I I D G D N I T L L L A				
UniRef90_UP100040DEF1E	M R V T L I E R S H L A S L T H V R N T I I P I L V L S N V L L R T D D G Q L K L K A				
UniRef90_UP10003B2E5E1	M S I D G D G F A R A I A Q V T E T T L P I L V L T G V K L E I E G D T L T M L A				
UniRef90_A8HQ04	M K V T V E R A E L L K S L S H V R N T I I P I L V L T G I R I E I E G D T V T L L A A				
UniRef90_UP1000379A338					

QUERY	50	60	70	80
UniRef90_Q5QY38	T D L E M E M V A R V A L V Q P H E P G A T T V P A R K F F D I C R G L P E G A			
UniRef90_K2GLG7	T D L E L E L V S A V P L E S A D M D A A V T V P A K K L L D I V R S L P P E G S			
UniRef90_M5DMB4	T D L E L E L V A R L P L E G E V Q S G E T T V P A R K L L D I C R S L P A E A			
UniRef90_Q9KVX5	T D L E V E L I S R V T L L D E V G E F E A G S I T V P A R K F L D I C C R G L P D S A			
UniRef90_UP100046AD1F8	T D L E V E L I G R V E P S R V D E P G S A T V P A R K L M D I C C K S L P D G S			
UniRef90_E1SUL1	T D L E V E L I A S L P L E G E V E D G A V T V P S R K F L D I C C R G L P D Q A			
UniRef90_UP10002E4225C	T D L E V E L I V G H V P L D E C E E G R I I T V P S R K F L D I C C K S L P D S A			
UniRef90_A6VR66	S D L E V E L I V G H V P L D E C E E G R I I T V P A R K F L M D I C C R G L P D S A			
UniRef90_D0Z134	T D L E V E L I V A K I V L E G E F E A G A I I T V P S R K F L D I C C R G L P D S A			
UniRef90_S6EZ1	T D L E V E L I S T Q A Q L S Q V D Q D G R F T I P A K K F L D I C C R S L P D D A			
UniRef90_U7FMZ4	T N M E V E L I V G R V T P V H P D Q D G P G R I T V P A R K L L S D I C C R S L G D E A			
UniRef90_UP100037FA8B5	T D L E V E L I V G R V E P S Q V E E S G A V T V P A R K L L M D I I K S L P P E G C			
UniRef90_UP10003709216	T D L E I E L V A S A V L S Q I E A P G Q V T V P A K K L L D I V R G L P D D C			
UniRef90_H5TDX1	T D L E V E L I T N V A L V G N S T N G K I T V P A K K L L D I I R G L A E G S			
UniRef90_F4AH42	T D L E V E L I I S H L S L A D S Y E D G E I T V P A K K L L V D I C C R G L S D G N S			
UniRef90_A0Z2Y6	T D L E V E L I G R V E V E A G G G V D G D I T V P A R K L V D I C C K S L P D S S			
UniRef90_U1JF6	T D L E I E L V A A I Q L E G S V V S D A K I T L P A K K F L L D I C C K S L P D G S S			
UniRef90_Q21PW3	T D L E V E L I V G R V T V D Q A I S E G E I T V P A K K F L D I C C R A L P P D G S S			
UniRef90_B8GSS2	T D L E V E L I V G A E A S E V S A S P G E A T V P A R K L L D I C C R A L P P D E A A			
UniRef90_Q2SQZ8	T N M E V E L I V A E I S D V N I E H E S R I T V P A K K F T D I C C R A L P P E G A S			
UniRef90_Q12TC7	T D L E V E L I V G Q A A I H G D I V P G N T T V P A K K L L D I V K S L P P E Q S			
UniRef90_UP10003B5A743	T D T E V E L I V G R I T L Q E P A Q A G E I T V P A R K L L M D I C C K N L P A D A			
UniRef90_W6M4C6	T D L E V E L I S V R I E P V E T P G E I T L P A R K L H D I C C R A L P P E D A			
UniRef90_UP10003B34B15	T D L E V E L I G R V D L G E A S E T G E I T V P A K K L V D I C C K A L P D G A A			
UniRef90_UP10004799110	F D Y E I S A R L E V P A E V E T E G T I L V S G K L L A E I C R S L P P S A A			
UniRef90_B2UQB4	T D L D V C I T G V V P A N V L R E G T V T L P A K K F L L V S I S E L P P E A E			
UniRef90_M4U128	T D L E V E L I I T Q I H L E S P S E E G E I T V P A R K L L N D I C C R G L S D P C			
UniRef90_UP100037E8A6C	T D T E I Q I V A K L N I E S I A H S G E I T V P A R K F L D I C C R R L L P N G A			
UniRef90_A6VK87	T D L E V E L I S T Q A Q L N S H G E G T F T I P A K K F L D I C C R S L P P E D A			
UniRef90_UP100037AEAE5	T D L D I E I T T E T V P A V S E Q P G A T T V P A H L L Y D I V R K L P P D G S S			
UniRef90_P43744	T D L E V E L I L S S Q T Q L L S S S E N G T F T I P A K K F L D I C C R T L S D D S S			
UniRef90_UP10004660006	T D R F R L A V R E L E P A D S T V E A A I L V P A R T L S E A A K T M A G G S A			
UniRef90_UP10001DD0761	T D L D L Q V V E T M T A A S V E S A G A I T V S A H L L F D I A R K L P P D G S S			
UniRef90_W9BV09	T D L D L Q V I V E T M S A Y S V E T P G S I T V S A H T L F E I A R K L P P D G S S			
UniRef90_E9UPA9	F D Y E T S A R A T L I S A E V A D E G K A L V S G K L L A D I C C R S L P P A K			
UniRef90_J3Z4U4	T D L E I E I L A Q V R L N A I H E E G E T T V S A R K F F D I C C R G L P P E G A			
UniRef90_UP100047A9C39	T D L E V E L V A R Q A L D A P S S S G Q V T V P C R K L L D I C C R A L P P G N A G			
UniRef90_UP10004656DDC	T D R E V S W S K P R T P G I S T S A L V K A K T L L N E V A K T L G S A G G			
UniRef90_M7NE19	T D R Y R M R E V H W K P S Q S G I L S T S A L V K A K T L L N E V A K T L G S A G G			
UniRef90_UP100037B0303	T D L E V E L I Q A H L S L P V E E P G Q I T V P A R K L L D I V R N L P P D E S T			
UniRef90_D7ALT7	T D L E V G M K S S Y P T T V A S Q G K I I T V S A K K L L Y E I V K E L P P D E S T			
UniRef90_UP10004762886	T D L E V Q I I S N L N M D V R D E G N I T L P A K K F L L D I C K L L P A D S S			
UniRef90_UP100041B93CC	T D L E V E M V S R V A V D D A Q D G E T T I P A R K F L L D I V R A L P P D G S S			
UniRef90_Q48AS6	T D L E L E M V A Y A E I Q N Q G D D G K I T I P A R K F L L D I C C K S L P P E S S			
UniRef90_UP10003829D77	T D L D I E A V D S A D A N I T S E G A V T A P A G T L L F D I V V R K L P P S G A			
UniRef90_G2KT96	S N A D I S I Q T T I S G D N P D N D G S I V L P A R F F S E I V K K L P P D T E			
UniRef90_M2XW08	T D R Y R M R E L T T W R P N S S S L Q T A A L I K A K T L N D V A K T L P A G E			
UniRef90_A8U125	T D M D L D L V I V E S V G C S V D Q P G Q T T V P A H T L Y E I V R K L Q D G S K			
UniRef90_A4F5N3	T D R F R M R E F T W E P G T T I E D T S V L V P A K T L L S D S A K T L G T N K D			
UniRef90_P27903	T D R Y R F A V R E F K P E N P D I S A V A L V P A K T L L Q D T A K A L T S G D S			
UniRef90_C6XRU5	T D L D M E A S D T I A H I E K P G S V T A P A Q T L F D I V V R K L P P D G S			
UniRef90_E4MZE2	F D Y E V I S A R V E L E A D V E E A G T V L V S G R L L N D I S R N L P P N R			
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UniRef90_B3E8N8	T D L E V G L K G N Y P A K V E K D G R I T V P A R K F L L D I V K E L P P N Q E			
UniRef90_R7XSP9	T D F R L S H R E T W N P Q T P D A S V A A L V P A K V L G D T A K S L T S G A			
UniRef90_H0QWS7	F D Y E V I S A Q E S L A A E I A E P G T V L V S G R L L A E I T K A L P A K			
UniRef90_U1SNF8	T D R Y R M R E L D W Q P T D T S I E E V T V I K A R I L Q D V A K S M T S G T			
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UniRef90_UP100040DEF1E	T D L D L E A Q E T V P A M V E R P G A T T V P A H M F Y D I V R K L P P E G S G			
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UniRef90_R7XSP9	E V T I A L D G G E G L I	G F E G S R T	T T R L L D G E F F P K V
UniRef90_H0QWS7	P V D V A L L D G S R V A I S	C G S A R F S	L P T M P V E D Y P Q L P E
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UniRef90_G7H7A5	E T D V T L D D G I F G I	L G G G K K T T	T T R L L D A E F F P K F
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UniRef90_L7VVD9	P V E V S T D G P K V T L T	C G S A R F T	L P T L P V E D Y P P I P
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 M K F T I N R A A F I G Q L N N V K S T I P I L T G L K L V V D N N E V V L T G  
 T V D G A E F A K A V S Q V Q E T L P I L T G I R L E I S G S T M T L L A  
 M K I E I E V Q R E D L V P A L T S V A Q T L P I L L S N L L I K T T E D G F L L T A  
 M K V T I E R A A L L R A L G H V H R T I P I L A N V L L S A K D G A L T L K A  
 I K T R R D V L L A P L Q T V S G T L P I L S N V L L E K R G E V L T L L A  
 E V F T E S I A Q V A D T L P M L T G I R V E I S G D A V V L L A A  
 M R F T V V S S N D L L K A L T A V A G T M P I L E C Y L F E A E D G A L R L S A  
 M Q F T V V S Q E N L V R P L Q L V R S T L P I L S N I L L K A Q A D K L T M T S  
 K I E I P F P H Q F S T M V K R V S R V V S I L T G V L I T L E A G V L R M V I A  
 M K F H V N R D V F S D V S F V V K V L L P I L A G V L I E A G P D G L S L S A  
 T V D G A V L A E A V G Q V V A V A L P T L P I L T G I R E I E G E T V T L G A  
 M K L I T D R D T L L K P L Q M V T G T L P I L S N V L I E R K H E S I S F I A  
 M E F R V D R H T L A E A V A W A A R T L P V L A G M L I I E A G E D G I A L A G  
 M K F K I H R D H F S N G L Q Q V L N T M P I L S N V L I E A E G D T I S L T T  
 M Q F S I E R E E I V R H L A T V C G T L P I L F N V L L S V E E D R L S L T A  
 L K S Q R D A L L A P L Q S V S G T L P I L S N V L L E K Q G E S T L T L I A  
 M K L N I N K E D L L E P L Q K V R Q T L P I L S S N V Y L S I N N G T I K F T G  
 M R A T L E R S N N L K S L N H V R N T I P I L S N V L I R A T G S E T L L K A G  
 M R F T I S R E K L Q E G L G A V K T T L P V L S N I L L E T T E R R G I R L S G G  
 M N I Q I S R G E L L S A L Q S V G S L P I L L G N N L L E A K D D R L S L T G  
 M K I R V E R D A L A D A V A W V A R S L P I L A G L L M N A S G D E V T L L S S  
 M K V S I E R S A L L K A M S Q A Q N T I P I L A N V L I I E A E G G E I S F R A  
 M K V R I G R E E L L T G L Q R V Q N T M P I L S N I l l E A K H D D G A E I V A  
 M Q L T I E R S A L L K A L G H V Q N T I P I L S N V L L S A G R D R L S F A A  
 M K F T I N R N L F I D N L N N V M R T I P M L T G I R L E I E G S Q L T L A A G  
 R F R V T R E E F A D A V A W V A R S L P V L G G V L L E A G T E G T V S G  
 S V A G N F T Q A V A Q V S D T L P I L T G V R V E I I E G S K M T L L A  
 T R P I L T G V N I K L E N G N L T F T A  
 F S I P S D L L K T M I R Q T S F A V P P I L T G I M W T L E E G L L K F V A  
 M K F T I A R N T F I K K L N A V Q R T I P I L T G I K I E A E E D R L I I L T G  
 M K I I C T R Q N L I Q G V T T A Q R P L P I L S G I L L S A K D N Q L E L K A G  
 M K F E I A R D R I L L D G L S D V M K A I P I L T G I K L D V D E E G L H L T G  
 M K F R V E R D V L A E A V T W V A R P V P I L A G V L I E A S D G T I T L L S T G  
 M H F V I D R D I F V Q N V N H V S K T L P I L T G I K I V A D A H E G V I T L T G  
 M K F S V S Q S S L S Q A L A V V S K T L P I L S G I L I T A A E G T I T F Q T  
 K L R V E R D V L A E A V T W V V R P V P I L A G V L L E T A T E D G L T L S A  
 M E I K I G R D A F L N G V H K V Q G A M P I L S H T L I S T E K K G V Y L Q A  
 M R F R V E R D V L A E A V T W T A R S L P V L A G V R I E A D A G T I Q L S S  
 T I D A H D L A Q A V G Q V S E T L P I L T S V R V E I E G G D R V A L L I A  
 T V I A A A E F Q H A V S Q V S D T V P I L T S V R V E I E G G D R V A L L I A  
 M K F I I Q R D Q L I A S I Q D V M K A I P I L T G M K I E V K Q H G I T L T G  
 M E F T V S Q N A L S E A L A I V S K T L P I L S G V L I T A H D T G V L T L S G  
 K F R V A R D D F A D S V A W V A R T V P V L A G V V L T A H D T G V L T L S G  
 D V F S E A I G Q V A D T L P M L T G I R V E I N G D T V V L A A G  
 K F R L V R E S F A D A V S W V V A K S L P V L S G V L L S G T D E G L T I S G  
 M R L S I E R A A L L K A L G H V Q N T I P I L S N V L I M S A E G G G K V T L V A  
 M R F V V D R N A M L R A L G H I R N T I P I L S N I L I G A D D G G L T F K A C  
 M K I I C D K E K L L K A I N S V T K T M P I L E G I L I Q T N E N D K L T F T A  
 T R P I L T G V N L S V D N K L T F T A  
 T V D G A V F A R A V S Q V I T T P I L T G V K V E I E G D T I T F L A  
 M K F T I Q K D R L V E S V Q D V R T T P I L T G I K I V A S D D G V S F T G  
 M E F T V S Q N A L S E A L A I V S K T L P I L T G I Q W Q L Q G G E L K F T A  
 M K F T I Q K D R L V E S V Q D V R T T P I L T G I V R E I I E G E T I T L L A  
 M K L T I E R A T L L K A L G H V Q N T I P I L S N V L I S A G P D G A S F A A  
 M K I I C S K D A L L S G V N A V Q R T L P V L Q G I L I V A E Q Q S L Q F A A  
 S V V S E D F A R S V A Q V V I A L P V F T G V R L E I D G D R L S L L A  
 M K F Q V D R D T F A D A V S W T A K S L P V L A G A R L S V D E G T T I S G  
 M K L T L N R E Q F L K G L Q T V A G T M P V L G N F L L Q I N G Q H L T L T G  
 M K F S I R S V F I K E L S N V Q R T I P I L T G L K L V V A T D N G L T L T G  
 M K I I C S K D S L I S G V N A V Q R T L P V L S G I L I S A E N N Q C L R F S A  
 M Q I K I N R E T L L K P L M N V T S T L P I L S N L L E A K K N N Q L Q L T A  
 M K F R V E R D V L A D A V A W T A K S L P V L A G V M R V T D G R L Q V S G  
 M K V T L E R T E L L K S L T H V R N T I P I L S N V M L Q A E G G N L K L K A  
 M Q L I I E R G A L L K A L G H V Q N T I P I L S N V L L S A E G S Q V S F S A  
 F S I P A Q L L K S L I R Q T S F A V P P I L T G V L L K L E E G L L T L V A  
 M K F S I G R T A F T K G L N T V S R T I P I L T G L K I V A G P D G L V L T G  
 M K F V I Q R D R L V Q A V N E V T R T I P I L T G I K I T V N D E G V T L T G  
 M K F T V S Q S S L T Q A I G V V A S T L P I L S G V L V K A Q D G L L E F Q T  
 T L P S D L F A E A I S Q V A D T L P M L T G I R V E I S G K T V V L A A  
 V I A S D L F A E A I G Q V A D T L P M L T G I R V E I S G E S V V L A A  
 M K L T I S K N E L N D A I Q Q V A K A I P I L T G I K I D V H Q G V T L T A  
 M R F E V Q R E P L L A A L Q S I V G T L P V L G N I V R E A R S Q Q L Q L T A  
 M K F R V E R D V L S E A V A W T A R S L P V L A G L V F E A D H H G S V T L S G  
 M K F T C T K E N I I E S L G L V S G S L P I L T N V Y I E A K D S G V E M I A  
 M K I S T N R D D F L P A L Q V R Q T L P I L T G L M W S L D G G Q L K F V A  
 M K F S I N R A L F I K T L N D V Q R T I P I L T G L K L V L S Q E G L T L T G  
 M K I S T N R D D F L P A L Q V R Q T L P I L A N I L F R V D K G L M T L L A

F D Y E V S A R S E V D V Q A S E G G R T L V P G R L L A E I T R A L P P H  
UniRef90\_I4EQ12 T D L A V R Q V D W T P A G A D T T T A V L I P A K T L S E S A K T L G G N S  
UniRef90\_L8DDU5 T D L D L Q I V E T A D A Q V E T P G T I T V S A H T L F D I A R K L R E G S  
UniRef90\_UPI0003B6AE53 T D R F R V R E L T W K P E V A G T T S A V L V P A K T L A E A A R  
UniRef90\_V8D515 T D Y E I S S H I E I P A D I S E Q G S I I L V S G K L L A E I T R S L P N S  
UniRef90\_E1VRJ8 T D L S I E I I A R V V I S N T N D F G K I T V P A R K F F D I C R C M P E K A  
UniRef90\_F7XX60 T D R F R V R E L T W S P T N P E I S A Q V L I K S K T L A E V G R T L A G S G  
UniRef90\_UPI00047ED9E2 T D R Y R M R E L T W S P T N P E I S A Q V L I K S K T L A E V G R T L A G S G  
UniRef90\_X5M5T4 T D L D L I E I V E G V S A D V A S G G G T T A P A H T M Y D I V R K L P D G A  
UniRef90\_UPI00029A9F47 T D Y E T S A Q V S V P A E V S E P G S T L V S G R L L A D I A R A L P D R  
UniRef90\_B2GEU9 S D A D I S I E T T L S G A D V E E P G A I V L V P A R F F S D I V K K L P D Q Q  
UniRef90\_E3H319 T D R Y R M R E I T W N P E N P E I E A A V L L K A T M T E V G R T L S S S G S  
UniRef90\_H8Z1G9 T D L E L Q I S S N I A S K V V E P G A I T L P A K K F A D V C K A L P E N S  
UniRef90\_J7Q4I0 T D L D L E I T E R T T A E V S Q P G A T T L P A H T L Y D I V R K L P E G A  
UniRef90\_A0A011R327 T D I E I Q I T T S M A D V D G E G E G A V I V A A R K L L Q E I L R S L P E T A  
UniRef90\_F6EQ9R T D R F R L A V R T I E P E A S G T E T S V L V P A K T L S E A G K T L P D L P  
UniRef90\_D0MJZ8 T D L E I S I V E R L P I N G K E G A R R V A V P A R R L L E T L R A L P D L P  
UniRef90\_I1YJA2 T D M E L E M I A T L P V A A D E E A G E T T V S A R K L L D V R A L P G S A  
UniRef90\_S6CF45 T D S Y R L A L T D A P L P N S A A D E F H A V I S G S F L S E I A S L P K T E  
UniRef90\_W0ZD66 T D Y E A S A R T V I E A T V D S P G T I L V H G R L L S E L A N R L P N A P  
UniRef90\_UPI00047AF24A T D R Y R V R E F T W N P G R P D T S V V A L V P A R T L V D A A K T L A P A G  
UniRef90\_Q075G4 T D L E I Q I T T S A Q D V D N D E E H S V T V A A K K L L Q D I L R A L P D K A  
UniRef90\_UPI00040D5B3C F D Y E V S A R A R I D A E T A E P G R V L V P G R L L S D I V K N L P P A Q  
UniRef90\_B5JPS7 T N L D L G I C A R I K A T I E E G A V T L P V K R L L A T I V K E L P N S D  
UniRef90\_D5C436 T D L E L E V E I R T T L E V L H P K G G K T T V S A R K F L D I C R A L P A R A  
UniRef90\_UPI000421A343 T D I E I Q I T T R S E N V G G N G D G A V T V V A A K K L L Q D I L R S L P D S A  
UniRef90\_K0COM4 T D L E E V Q V S A K S I L I G E D S F N I T I P A R K L L L D I C R S L P D H C  
UniRef90\_UPI0004754A47 T D L D L E I L E T I A A D V G R P G A T T V P V A H M L Y D I V R K L P D G S  
UniRef90\_W0RBY0 T D L D L D I A V S T E V A A D V E T A G A I T L P A K K L L S E I A R E L P P S P  
UniRef90\_UPI0003B549CF T D L E L Q V E R M V R V Q N L A P G R I T A P A R K L L H D I C R G L P E G A  
UniRef90\_I6XPY7 F D S T T S A Q V T M P A E V T D E G T V L V S G R L L N E I A R S L P P N K  
UniRef90\_Q0FEB4 T D L D I E V V Y K V V G M V E R A G A T T V G A H T L H D I V R K L P D G A E  
UniRef90\_D8P7E8 T D L E I G M R G L Y K A T V L E A G G V T I S A R K L L Y E I I K E L P S G E  
UniRef90\_UPI000360D44D T D R F R M R E L N W Q P A G S A E D T A V L V P A R T L L S E S A K T L G S G T  
UniRef90\_D9QHP2 T D L D L D M E I V D E A D A T V Q V E V G Q I T A P A H T L L Y E I V R K L P D G A  
UniRef90\_UPI0001FFE665 T D R F R L A V R E L E P E D A S I S T A V L I P A K T L A E V A K T L A G S G D  
UniRef90\_UPI0004695CCD UniRef90\_R7WK45 F D Y E V S A Q I R V A A E V A N G G R A L V S G K L L A D I T K S L P G K D  
UniRef90\_K6VUS7 T D R Y R M R E L D W N P R D P E A A G V L L V P A R T L L S E S T A K S L G A A A  
UniRef90\_W9BEY3 T D S H R L A S R E I P V T E P Q G L P T V V V P G K S L N E L N K I L D D T E  
UniRef90\_U4WNM5 T D S H R S R N A K V E C S E S L R F Y N I V P G K S L N E L V K I L D D Q N  
UniRef90\_Q03159 T S N T D I S I E T T I A H L N I E S T G A V V L T A R F F G D I V K K L L P D N T  
UniRef90\_F6DL00 T D L E I M G I Q C T V P A N I Q E E G S I V L P A K Y L V E I V R R L L P D T P  
UniRef90\_M7NEE6 S D S D I T I Q T F I P A E E N G Q S G S I V L Q A K Y F N E I V R K L L P T N D  
UniRef90\_K1E7W2 F D Y E V S A R I T V A A E V S E P G T V L V L G R L L A D I S R N K L P G K  
UniRef90\_Q9RCA1 S D S D I S I E T F I P L V E V K Q E G S I V L Q A K V F A E I V K K L L P P E Q E  
UniRef90\_E1QXL3 T D L T I N V R H R I A A M V E E A G S T I V V S G K I L L M N V K T L P P D A A  
UniRef90\_UPI00037A2F19 F D Y E V S A R V R V D A Q V E E P G T V L V L G R L L A D I S R S L L P P A Q  
UniRef90\_M1YN37 T D L E I G M K R F C P A N V T Q G S S V T V N A R K L L F D I L K E L P D  
UniRef90\_F8A1L5 F D Y E V S A R S Q I P A D V T E P G T V L V S G R L L A E I S R S L L P D K  
UniRef90\_UPI0002E5E7EC T D L A V R E M T W T P S D S S L E T T A L L K A R T L L S D V A K S L T S S G  
UniRef90\_UPI000474A42D T D R Y R V R E F T W S P T S P D I T R S A I L R G K T L L S D A A K S M G G D V  
UniRef90\_A0A024PP03 S D S D I S I E S Y I P A E E D G N E G S I I V L Q A K Y F P D I V R K L P E K T  
UniRef90\_X5DP73 T D R F R F A V R T L D P A R A D F A E L L I P A R T L L A E T A R S L D E P V  
UniRef90\_F2N6T5 S N Y T I S I R H R I A A H V E K D G S S L V V P C K T L L S N I T K T L P D A  
UniRef90\_X7VZK4 F D Y E V S A Q V K V P A E V A A A A G N A L V S G R L L S D I T R S L P N K  
UniRef90\_B1MDH7 T D R F R L A V R E L N S G S E T S A A V L V P A K T L L S D E A A K S A S S G S K  
UniRef90\_Q9L7L6 F D Y E V S A E A Q V A A E I A S P G S V L V S G R L L S D I V R A L P P N K  
UniRef90\_UPI000479B220 T D L D L I E I S E D T A A D V G A P G Q I T A P A H T L L Y D I A R K L L P D G A  
UniRef90\_E3I475 T D L D L D M E A V E A V P A K V E V T G A V T V P A H T L L H D I V R K L L P D G A  
UniRef90\_R5NQD1 Y D L E L G I E Y I I K D C T V A E Q G A T V V N A I M F S E I I R K L P D T E  
UniRef90\_UP10003FEE1B3 T D S H R L A A R E V P V V S S S N V Q F S I V V P G K S L N E L N K I L D D T E  
UniRef90\_A0A010PD95 T D R Y R M R E I N W S P A D P D S T S V L I K A K T L L N D V A K S L A A G S E  
UniRef90\_L0EJE8 T D R H R L S T C S A D L G E S D K F A G I V I S A R T L L N E L S R I L I P D E E  
UniRef90\_P05649 S D S D I S I E S F I P K E E I E Q P G S I V L Q A R F F S E I V K K L P M A T  
UniRef90\_D7B602 T D R Y R V R E F T W K P E N P D L S A V A L V P A K T L L H D T A K S L T S G A  
UniRef90\_N0E1Z5 T D R Y R M R E L H W N P A A T D A N Q V L L V P G R T L L D T A K S L  
UniRef90\_Q0ATT9 T D L D L I E I L E T T D A S C D G E G L V T A P A H T L L Y D I T R K L L P D G A  
UniRef90\_G2FU01 T D L E M G I R C E V P A Q V A E E G T M V V P A K L F S E V V R K L L P E T  
UniRef90\_UPI0003FDE4BF F D Y E I S T R V T V D V T G E S A G T T L V S G K L L A E I V K A L L P N K  
UniRef90\_F6DB38 S D L E I I E S R A Q V V I D Q L E G D F D I T L P A Q K L L T I V R S L L P E G V  
UniRef90\_UPI0002490F04 S N A D I S I E T T I S A S D E D N T G A I V L P A R F F S E I I K R L L P D T  
UniRef90\_I4D000 T D L E L G I Q C E I P A Q I E E E G K T V V P A K L F A E V V R K L L P E S A K  
UniRef90\_UPI0003793D62 T D L E M Q Q I S L N V E N N F S G E L S T T I S A K K F L D I C R S L L P D E N  
UniRef90\_R4L201 F D Y E V S S Q V S V D V Q A D A D G A A L V S G R L L A E I T K A L P A K  
UniRef90\_UP10003829864 T D S H R L A M K K V P L S G G D K V Y N I V I P G K S L N E L V K I L D D R D S  
UniRef90\_G8PKA2 T D L D L D E V V E S I A A M V E T P G A T T V P A H M I Y E I V V R K L L P D G S  
UniRef90\_E8RMU3 T D L D M E I V D S A E A I V A V P G Q I T A P A H T L L Y E I V V R K L L P D G A  
UniRef90\_F5L539 T D S H R L A R A Q V E V N H N L Y L E N V V I P G R S M N E I Q R I L E D D E S T  
UniRef90\_F4FVI4 S D A D I S I E T T L K A D D I E S E G A I V L P A R F F T E V V K K L L P K D T  
UniRef90\_W7CI42 S D S D I S I E A F I P L V E V E N F G G I V L V Q A R Y F G D I V V R R L L P D E N  
UniRef90\_R5ZF5 J S N Y T I S I S R H R I A A H V E E E G E M V I P C K M L S N E L T K T L P D A  
UniRef90\_X7YM03 T D L A V R E L T W T A L S P D I E A S V L V P A K T L L A E A A K A N S D G S  
UniRef90\_P52851 T D R E L T W V T T A G D V E A A V L V P A K T L L A E A A K A G T D D G N E  
UniRef90\_W8YPM8 S D T D I S I Q S F I P A A K V D K P G S V V M P A K F F V E I I R K L P A E E  
UniRef90\_A1WWD9 T D L E V E L V V A Y L E A N T K D E G V I T L P A R K W L D I C R N L L P E G A  
UniRef90\_C7QFL8 F D Y E V S S R A Q I G A D V T E P G R I L I H G K L L A D I A K S L L P N R  
UniRef90\_K2AGG0 T N L E L A L K T Y L R A K V E M T G T F T V P A K V L G D Y L Q L L P D E  
UniRef90\_M8DGU0 T D S H R S R T A M V E C P E E L S F T N V V V P G K S C N E L V K I L D D Q N  
UniRef90\_Q38ZS3 S D A D I S I E A T L S A S D V E E V G E I V L P A R F F S E I I V K K L L P E D Q  
UniRef90\_W0TIT6 T D L E V E V R T N I K V E A E E D L E F T L P A R K I M D I C K A L G D G A

90              100              110

This block contains the sequence alignment for UniRef90 entries from I4EQ12 to W0TIT6. Positions 90, 100, and 110 are highlighted in yellow. The sequence is aligned in two columns, showing the variation in these specific positions across different UniRef90 entries. The color-coding of amino acids (blue for polar/acidic, red for basic, black for hydrophobic) is used to highlight conservation or divergence.



	50	60	70	80
UniRef90_UPI0002627C6A	T D S H R L A L R S I P L E G V T L N M N I V V P G K S L N E L N K I L D D K E			
UniRef90_A0A023CZS3	T D S H L S Q R K L T I D S A Q D N A Y D I I I P G K S L N E L A K M P P D D S			
UniRef90_UPI000425EC63	F D Y E V V S A H A R E D A A V A E P G R A L V P G R L L A D I I V R N L P Q E			
UniRef90_Q0EVY9	T D L E I V G I R S H I D G S V E E D G T A T V S A K K L F E I I R K L P D A E M			
UniRef90_UPI000479B641	T D L E I V G I E S I I E A E V L Q E G S I V I D A K L F S E I I R K L P D A E M			
UniRef90_Q47TU0	F D Y E V V S A Q A S V D V H A E E A G S V L V P G R L L A E I I V R T L P P H			
UniRef90_K0AWF5	T D L E I V G I E S I I E C N V I E E G S I V V T S R I F G D I I R K L S D L P			
UniRef90_U1YS61	T D L L D V E I T T S L P V L D C Q P G S V T V P G K M L A D I A K R V T G			
UniRef90_C8WXS8	T D G L R L A Q H R V P Q A D L P E R Q V V I P A K S L S E L S K I L P E D E			
UniRef90_H4GIG7	S N A D I S I E T T I N Q T D G E Y P G A I V L P A R F F I E I I K K L P D Q E			
UniRef90_UPI0003AD2F96	T D R Y R V R E L H W K P E R P D F S A V A L V P A R T L A D T A K S L T A G A			
UniRef90_N1ZTE5	S N S D I S I E T V I S I A D I E K T G S V V L V P A R F F N E I V K K L P P E D S			
UniRef90_F7V2E7	N D M E L G I E T V I V T G T I E E R G S I A L D A R V F S D I V R K L P P D S T			
UniRef90_R5XV15	T D M D I L E I T E I V I E A K V I E E G A T T A P A H M L Y D I V R K L S D G S			
UniRef90_K2EHK5	T D G H R L A V H S I E S P V V D S S F A Q V I P R K C V F E L M R L L E N P			
UniRef90_UPI0002486F8C	F D R E V S T K V R V S A D V A E P G R V L V A G R L A A N I I S A L P D K			
UniRef90_A0L318	T D L E V S M K M S H C P A E V E S E S S G A I A V S A R K L F E I V R E L P Q D S			
UniRef90_K0YVS2	T D R Y R M R E L D W E P A D T S I E Q V A L V K A R I L Q D V S K S M T S G A			
UniRef90_Q11MG8	T D L L D L E M T E A A P A S V E Q G G G A T T V P A H L L Y D I V R K L P D G A			
UniRef90_UPI0003B5C7EE	T D L L E I E L S A S I N I Q V D R E G A V T A P A R K L L D I T K A L P S D S S			
UniRef90_U2XVC2	T D L L E I E I K E S I E A E V A E T G A T T A P A H M L Y D I V N K L P P A G S S			
UniRef90_UPI00037D8BC1	T N L L E I E V A I S T P I I D A T L G E V T L P A R K L L F D I C K S L P P D G E S			
UniRef90_K2GM43	T D L L D I E V V D H A P A E V E R A G A T T V N A V M F H E I V R K L P D G A A			
UniRef90_Q5YSM7	T D Y R L A V R T E W S P T D P S V E T Q V L V P A R T L A E A V K A L E S A A			
UniRef90_F7Z106	S D S D I S I L E S F V P K E E D G D E I L A V L Q A K I F G E L V K K L P P M D			
UniRef90_W5W598	F D Y E V S A T V G V P A T I A A G G G K T L V S G R L L A D I T K A L P N H			
UniRef90_Q3JF38	T D L E I E I R T A L K V L S S E E G K V T V S A R K F L E I C R A L P P S G S S			
UniRef90_UPI0003B2E1E8	S D S D I S I E T F I P P A E E N D N Q Y S I V L Q A R F F A E I V K K L P P G E E S T			
UniRef90_I3EC04	S D S D I S I E S F I P L V E I K E P G A I V L V Q A R F F S E I V K K L P T E T			
UniRef90_W1TKQ8	F D Y E V V S S R N Q F E A D I E S E G E V L V S G K M V A N I C K Q L P K K			
UniRef90_G5F295	T D S Y R L A V C D T E T S S V D E A F V A I V P G N T F H D V L T L P S M E D			
UniRef90_UPI0002890565	S D A D I T I Q V F I P L I Q V T T P G S I V L V Q A R M M F N E I V R K L P T K D			
UniRef90_D3FQH8	S D S D V S I S I E T F I P I V L T I V L Q A R F F A E I V K K L P P G E T			
UniRef90_UPI000380851C	T D L E I Q I N T S G P A T N A E D F R I T T S A K K L Q D I L R A L P E S A			
UniRef90_V5SAM9	T D L L E R E V T E E V K A E V G A A G A V T V P A H L L H D I V R K L P E G S D			
UniRef90_R7CA25	N D M Q L G I E T K I P A E I E Q D G I I L V N A K M I S E I V R R L P D D D			
UniRef90_W7D1L9	S D S D I S I E E A F I P L E K I E K Y G S I V L V P S R Y V T D I V K R L P P N E T S			
UniRef90_D6XUZ6	S D S D L S I E S F I P L V N I Q E E G S I V L V Q A R F F G D M I K K L P E T S			
UniRef90_V2UMQ6	S D L E V E L V A S M P F A N G G C V Q E T T V P A R K L L M D I C K S L P S A A			
UniRef90_F8B074	F D Y E V V A A Q S G V D A T I E Q E G R A L V S G K L L A E I T R A L P S A A			
UniRef90_F5RGF5	T D I E I Q I R T S T G S I S A A Q P A S L T V A A R K L L Q D I L R A L P E G Q Q			
UniRef90_Q08TC4	F D L L D I G V V S E H P A E V S K P G V A V T L N A K Y I F D I V Q N L P D A Q Q			
UniRef90_F5LHF1	C D R H R S R E I N L D L E P G Q K F H P I V I S G R T L N E I S K I L P D Q S T			
UniRef90_Q1WVP4	S N S D I S I E T I I S I A D I E Q E G A V V L P A R F F S E I V K K L P E Q T			
UniRef90_UPI0004792339	T D L E I Q I H T E G P P S E A G D F A I T T N A K K L H D I L R A L P D Q E			
UniRef90_UPI0004772862	F D Y E V S A R A R V D A E V E E A G A V L V S G R L L A E I A R S L P A H			
UniRef90_UPI000364428F	T D L E V S I I Q T V V P G T I V D E G A T V S A R K L L S E E V R E L P P D S			
UniRef90_UPI00046A615E	S D S D I S I Q A S I P I E K D G K E I S V L P S K Y L T S E E V K K L P P Y S T			
UniRef90_UPI000380CE6E	T D L E T G I E T I L P A V Q I M E E G A V L S A R Y F S S E I V R K L P P G K D			
UniRef90_I7LD67	S D T D I S I E L T L P S S D I V E S T G S V L S A R F F S S E I I K K L P P E A T			
UniRef90_UPI0002D94DBC	S D T D I S I E T T L A E L N V E E A G N I V L P A R F F F G D E I V K R L L P N A			
UniRef90_UPI0003B737CE	F D Y E T S A Q L D V E A H I E S E G Q I L V E G R M L S D V K S L P N A			
UniRef90_I4X2R7	T D S H R L A R R K T K L E T P E G E Y S V V I P G K S L T E L N K I L D D T S E			
UniRef90_C3PE73	F D Y E V S T I R V R I A G M V D E P G R I I A V A G K L L S I D V A S L P P N K E			
UniRef90_W9EEI5	S N A D I S I Q T T I S T S N P D N E L Q I L S P A R F F F A E I V K K L P D R E			
UniRef90_UPI00036522FF	T D M D M D I V E T V E C I V S N S P G K I T V A A H T L Y D I V R K L T D G S			
UniRef90_W7YIF3	S D T D I S I Q S F I P I V Q V E Q P G S V V V L P A K F F V E I I K K L P P S Q D			
UniRef90_UPI000362A7C4	S D S D I S I E S F I P V E E M K Q T G S I V L V N A R F F G D I V R K L P P M D T			
UniRef90_A6NQE1	Y N L E T G I R T V V P A D I Q A K G S L V L S A R L F G E I I R K L P D D T			
UniRef90_P46387	T D R F R V R E L K W S V L S S D F E A S V L V P A K T L V E V A K A G T D G S			
UniRef90_B7GFK9	S D S D I S I E S F I P P A E E V I K Q G S V V L V Q A R F F F S E I V R K L P P K E T			
UniRef90_UPI000348D25D	T D R Y R I A V R R M P S E H P D A P A S A L V P A R T L S D L A R T L D P A A			
UniRef90_UPI0002EF8C10	T D M E I A V V E E T G V E V T Q P G R C T A P A A T L Y E L A R K L L G D G L			
UniRef90_UPI00036D3A08	T D R Y R V R E F S W S P A T P G V V S T S A L M R A R T L A D A A K S L V G T K			
UniRef90_UPI00031CEC02	T D R Y R V R E F S W S P A T P G V V S T S A L M R A R T L A D A A K S L V G T K			
UniRef90_B0UM02	T D L D I E V T E T I P A D V V D G G A T T V P A H V I Y D I V R K L P D G V			
UniRef90_C8NI23	S D S E V S I E V F L P I E D V Q E P G S I V L V P A R F F G E I V K K L P L N L			
UniRef90_W0E8Z1	T D M E I G I R C V V E A Q I E E E G M I V V L P A R L F F S E I V R K L P P T			
UniRef90_UPI0004122B84	S D S D I S I E R F I P P A E E V V Q T P G S I I I L Q A R Y F S E I V K K L P D E T			
UniRef90_U1QUW6	F D Y E V V S A H C E V A A D V E V Q T P G S I I I L Q A R Y F S E I V K K L P P N			
UniRef90_UPI00046FF263	T D M E I I E V V E T V P A T I T R D G A T T A P A S V L Y E I V R K L P D G V			
UniRef90_R5A974	N D L E I G I R T A P I E A E I Q K A G E V I A I E A R I F N E I V R R L P N G E S			
UniRef90_UPI0003FD8FC0	F D Y E S S G Q V Q V A A T V H D E G E A L V S G K L F A D I S K Q L P N H			
UniRef90_Q8GE18	T D M E L G I E Y T I P V K T V Q T G S T V N A R I F N E M A R R L P P E G P			
UniRef90_V9H8E4	T D G H R L A Y S V C E I E A N L S K T E V I V L P R K T V L E L N K L P Q P N E E			
UniRef90_E3GHQ1	T D L E I I G V Q T S I P A N V D M D G E I I I L S S N L I T E V I R K L P S G E E			
UniRef90_D4YKU6	Y D L E I V S Q R I T V E A D V E T P G T F L V S G R L L A D I A R A L P P Q Q			
UniRef90_R9WDS8	S N S D I T I E S V I N A N D I V T E G A I V V L V S G R L L A D I V V K K L P D K K			
UniRef90_R6N0B9	Y N L E I I G I T T D I D V T I Q E E G E I I V V S A K L F L D I V V R K L P P E E			
UniRef90_W6SC48	S D I D L S I E T K V K A A V L E E E G S I V L V V D A R L L F G D I I R K K L P N S D			
UniRef90_KOYHY3	T D L L E R S R Y T V P A L I E E E E G S I V I P E K L L L D I V V K Q L P P E A A			
UniRef90_W8F098	S D L E T S M M T E L P V E A R E S G R I I A P A R I L L D I L V K Q L P D Q P			
UniRef90_UPI000380DF3E	T D L E I Q I Q T T D I D V N Q S D D V R F T T S A K K L L D I L V R K L P D D S Q			
UniRef90_UPI00047CFA20	S D T D I S I Q S F I P L V T V D R T G S V V V L P A K F F V E I V K K L P H E E			
UniRef90_UPI000380BCC9	T D L E I I S Y E Y I N A D I E E D G A V A I P A R R L L E T L R Q L P N D K			
UniRef90_U2NHP6	S D I D L S I E T K V K G T I V D R I V V P S K N S Q E L I I K L L P E D R E			
UniRef90_M1ZDB9	T D S H R L A K G T I T L S E S D D D I R I V V P S K N S Q E L I I K L L P E D R E			
UniRef90_D9TMC3	T D M E I G I E C K V D A E L V E E G S I V V V S S K V F S D L V R K L P E N T			
UniRef90_W0DVE0	T D L E V E V V Q T R C E A A V Q Q E V G E T T V P A R K L V D C R N L G E G T			
UniRef90_F5XGB0	T D R Y R M R E F T W N P A T P Q T S A V A L V P A K V L S D T A R S M A A G E			
UniRef90_R6YBJ5	Y D L E L G I E Y E D C E V K E E G N T V V N A M M F S E I R K L P D T E E			
UniRef90_I3CEJ3	T D A E I E I S C C I P L E S D V V E G R T T I P A R K F L D I C R S L G D N S			

90                    100                    110

K V E I S V T N N Q I M F R T K H L N F L S R L L D G N Y P E	D V E L R I S E N Q I L F V F G N T S F Y S R L L E G N Y P D	P V D V V M T G T E V V V R C G P A E F G L Q T L P V E D Y P T L P D
D V S L T T G N G F I S I V S G S S R F R V N T R P A D E Y P A M A E	V D I S I E D D H Q V L I K C E N S K F N I L S Q S A N D F P E L P	P V E F H V E G S R A L L T C G N A R F T L L T L P L E D Y P T L P
V N L E V D E K G N I H I S C G P S N F N I L G Q P S E E Y P Q L E	V N L E V D E K G N I H I S C G P S N F N I L G Q P S E E Y P Q L E	T V E M V L T P S H G L F V I G P T R F Y T R L E G T Y P D
T V S I A I N D G F Q A V I T S G T A E F T V N G Q D A N N F P H L P E	E V S I A L A G	V S I A I N D G F Q A V I T S G T A E F T V N G Q D A N N F P H L P E
UniRef90_UP10002627C6A	UniRef90_A0A023CZS3	UniRef90_UP1000425EC63
UniRef90_Q0EVY9	UniRef90_UP1000479B641	UniRef90_Q47TU0
UniRef90_K0AWF5	UniRef90_U1YS61	UniRef90_C8WXS8
UniRef90_H4GIG7	UniRef90_UP10003AD2F96	UniRef90_N1ZTE5
UniRef90_F7V2E7	UniRef90_R5XV15	UniRef90_K2EHK5
UniRef90_UP10002486F8C	UniRef90_A0L318	UniRef90_K0YVS2
UniRef90_Q11MG8	UniRef90_UP10003B5C7EE	UniRef90_U2XVC2
UniRef90_K2GM43	UniRef90_Q5YSM7	UniRef90_F7Z106
UniRef90_W5W598	UniRef90_Q3JF38	UniRef90_I3EC04
UniRef90_W1TKQ8	UniRef90_G5F295	UniRef90_UP10002890565
UniRef90_D3FQH8	UniRef90_UP1000380851C	UniRef90_V5SAM9
UniRef90_R7CA25	UniRef90_W7D1L9	UniRef90_D6XUZ6
UniRef90_V2UMQ6	UniRef90_F8B074	UniRef90_F5RGF5
UniRef90_Q08TC4	UniRef90_F5LHF1	UniRef90_Q1WVP4
UniRef90_UP10004792339	UniRef90_UP10004772862	UniRef90_UP10004793339
UniRef90_UP1000364428F	UniRef90_UP100046A615E	UniRef90_UP1000380CE6E
UniRef90_I7LD67	UniRef90_UP10002D94DBC	UniRef90_UP10003B737CE
UniRef90_I4X2R7	UniRef90_C3PE73	UniRef90_W9EEI5
UniRef90_UP10003636522FF	UniRef90_W7YIF3	UniRef90_UP1000362A7C4
UniRef90_A6NQE1	UniRef90_P46387	UniRef90_B7GFK9
UniRef90_UP1000348D25D	UniRef90_UP10002EF8C10	UniRef90_UP1000363D3A08
UniRef90_UP100031CEC02	UniRef90_B0UM02	UniRef90_C8NI23
UniRef90_W0E8Z1	UniRef90_UP10004122B84	UniRef90_W0E8Z1
UniRef90_UP10004793339	UniRef90_U1QUW6	UniRef90_UP100046FF263
UniRef90_R5A974	UniRef90_UP10003FD8FC0	UniRef90_Q8GE18
UniRef90_V9H8E4	UniRef90_E3GHQ1	UniRef90_UP100047CFA20
UniRef90_D4YKU6	UniRef90_R9WDS8	UniRef90_UP1000380BC9
UniRef90_R6NOB9	UniRef90_W6SC48	UniRef90_UP1000380DF3E
UniRef90_W8F098	UniRef90_KOYHY3	UniRef90_UP100047CFA20
UniRef90_UP1000380BC9	UniRef90_U2NHP6	UniRef90_M1ZDB9
UniRef90_W0DVE0	UniRef90_D9TMC3	UniRef90_F5XGB0
UniRef90_R6YBJ5	UniRef90_I3CEJ3	UniRef90_W0DVE0

	1	10	20	30	40
UniRef90_B5EJ65	N A K T F R E A L	A V V A N T M A F L	N G V L I E V E G Q E	L   R L V I A	
UniRef90_UPI00029B54EB	M K F S I K R T A F I	Q R L T N V Q R T I	P I L T G I K L T   L T N E K	L I L T G	
UniRef90_A0P510	M N   K I N R D V L L	K P L S N V S G A L	P I L S N L L E   G D N N S	L K F T A	
UniRef90_M5AB16	M K F T I N R A A F I	K E L N N V S R T	P I L Q G I K L R A E N N T	L L T G	
UniRef90_F0SUH0	M K I K V T K T D L L	T G V N T V Q R T L	P I L Q G I K L   C F E A G		
UniRef90_UPI0003497E64	M R L R V D R D A F A	E A V A W T A R A L	P I L A G M R I E V S G D G	L H S G	
UniRef90_UPI00047EB0C1	M K F I C K K S I L Q	E A I S V A Q K A M	P I L E A S D G K I T I I G		
UniRef90_D4J4X8	M K I I C N K S A L L	T G V N T V R T T M P	E C I L I D T T S G V I	K L T A	
UniRef90_C7MEK8	V A A D   V F S E A I	A Q V T D T L P	L T G V K V E I S G E T	M T L M A	
UniRef90_U2UAK4	M I F S V S Q S S L A	K A L S I V S K T L	P I L T G V H L S A A D G M	L E L L Q S	
UniRef90_W2EE56	M K L T I L K N Q Y L	T E S I Q H V S K T I	P I L T G I K I D A A T S G	V T L T A	
UniRef90_H0PYC2	M K F S V D H K E F T	E A V T W A S R T I	P I L L S N V L I E K R G D Q	L T M L A	
UniRef90_E6YTH2	M R I T I G R S Q L L	K L S R V H R A I	P I L L S N V L I I D T S D G	R M Q L K A G	
UniRef90_UPI00046797BF	H F T I E R R A L L	P A L A V A N R T V	P I L L G N V L I I Q C E N G	H L T V S G	
UniRef90_X4RAN6	M K F S V D H K E F T	E A V T W A S R T I	P I L L G N V L I I Q C E N G	H L T V S G	
UniRef90_E0E1L9	M K I L C N Q K K L A	H A I T N A Q R A I	E I L R G I L I S A E D N K	L K V R G	
UniRef90_R4JXW7	M K F K C E K N K L Q	E A I S I A Q K S M P	I L Q G I L I I A E Q G Q	I T I I G G	
UniRef90_R2T754	M K L T V K R N T F L	Q E L Q T V Q R T I	P I L L T G V K I V L T D E G	L S L T G	
UniRef90_UPI00046F4E77		Q E T T P I	P I L L T G I L W N L S D G E	L L K F T A G	
UniRef90_I8TDB1					
UniRef90_UPI00036E7962	M K F I V S T S A L L	K Q I S A I S G V I	R N E L L G A L Q S V I G T L	P V L T V I G	
UniRef90_K9AM76	K F K V N R D V L A	D A V T W A T K T L	P V L L E N F L F E I K D G K	L S I T A	
UniRef90_K7ZCX4	M K I T I D R S S F L	K P M A H I Q N T I	P V L L T G I L I T A E G G	G T V T M G A G	
UniRef90_G5G9T4	M K F V L N S S L L S	S Q R L Q T A K N S L	P V L L A N V L L Q A K A G R	L L S M T A	
UniRef90_UPI00035CD4DA	S V P A D L F A D A	L A Q V S D V T	P V L L P I L N N F L F E I E G G Q	K L R I T A	
UniRef90_UPI00036264C3	M K I R V D R D L L A	D V A G W V A R S L	P V L L T G V Q F E V S E N S	L T L T A	
UniRef90_F2F253	M K F N I L R D R L L	A G L N D V V K T T	P V L L T G I K I D V T N E G M	T L T G M T L	
UniRef90_A8LB18					
UniRef90_A6TJ77	M H F S C S Q K A L	M H S I S I V Q K T L	T L P V L A N F L L E V S E D	D V L T V I G	
UniRef90_G4STN4	M K Y I I N R E Q L L	V P L Q Q I V S T M P	T L P V L L E N F L F E I K D G	K L S I T A	
UniRef90_UPI00047BEB98	M K F S I R Q S S L L	Q T I V Q T V S K A V	P V L L T G I L L Q A K G D	T L T A G	
UniRef90_B0K0W9	M K F V C D K N S L	F E G V N I A I R T L	P V L L P I L Q G I K I S A L K	G Q V K F S G	
UniRef90_D0WHH4	K A S I S F K A F S Q	A V K R V A K V   V A P A L	P V L L T G V L I T T I P	D G M R L V I A	
UniRef90_UPI0003122FF1	M K F E I M R D R L L	D G L N D V T K T I	P V L L T G I K I D V T D N G	V L L T G	
UniRef90_A0A037Z3A0	M K L T C E K N I L Q	E A I S I S Q K T M P	P V L L T G I K I D V T D N G	V L L T G	
UniRef90_X1EFS5	M K I K L P K N K L L	T G I V Q R V S N T L	P V L L L S N I L L E T T T G S G	I R L I G G	
UniRef90_V6J114	M E C K V Q K V Q K	E L K A D A V N R V K T T	P V L L T G V K I T A G   L D G	T L T G	
UniRef90_A5KS03	M K L T V T Q E N L	T K A L L N A V G R V L	P V L L L S N I L L R T D N N R	L V V A A	
UniRef90_W0SAE7	M F K G P R D Q L L	S P L Q S V C G T L	P V L L L S N I L L M E K N G E R	L T L L A	
UniRef90_R7FT11	M K I T C S K S N L V	K V G V S I V S K T M P	P V L L L E C I L I D A T T D I	I K L T A G	
UniRef90_M5JR09	M A I F A E R G A L	L P A A A V R T N T I	P V L L L K G I Y I E A N K E G	L T L I G	
UniRef90_UPI0002629601	V P A D   V F A Q A I	S Q V T D T L P	P V L L L T G V K V E I S G E T	M T L M A	
UniRef90_L1QI34	M N I I C S K Q K L	Q E G I S I V T K T M P	P V L L L E E G I Y I E A N K E G	L T L I G	
UniRef90_K4HT4	M H V T V D R N Q L L	K S L G R V R N T V P	P V L L L S N I L L D A D K N G	V Q L K A A	
UniRef90_F8FH08	M R I Q I P S D L L	K L T M I K Q T A F A I	P V L L L T G I K I D A T D G K	L K F T A	
UniRef90_UPI000366628E	M K I S I E K N R I L	F K T L T H V Q N T I	P V L L L T G I L L W T I A D G K	L L S S	
UniRef90_E3J252	M K F R V E R D E F	T E A V A W T A R S L	P V L L L M G I L L D A T G P G	V V V A A T	
UniRef90_R6ZOF5	M K I V C Y K D N I L	K A L N S V K T T M P	P V L L L E E G I L I Q T N D N E	I K L T T T	
UniRef90_UPI0002ED8E00	M K F I I Q R D L L	L E S I Q H V Q N T I	P V L L L T G I K I D A T D G K	L K F T A	
UniRef90_D5WQZ3	M R I I H V H Q Q S L	A A A L Q Q V Q R T M P	P V L L L T G I K I D A T D G K	L R L I A	
UniRef90_C5WC33	M K F I I E R E I L L	K L S Q Q I S P P L A	P V L L L N H L L K I I N N D I L	V M V T	
UniRef90_UPI00037898D5	M D I T V N R E H I L	P I L N K V V G T L	P V L L L G N L L V S A D E G E	V S I V G	
UniRef90_W7ZPV5	M H V L I D R N R M V	H D V Q H V S K T I	P V L L L T G I K I D A T K N G	L T T L T G	
UniRef90_M5E2K8	M K F S I N Q K N L Y	N A L N I V R R T L	P V L L L T G I F L N L K N G	T L L K S G G	
UniRef90_T4W8B8	M K I I C N Q K I L A	H K I S I V Q K Q T L	P V L L L T G I K I D A T D G K	T L L T G	
UniRef90_R2Q7H7	M K F T I I R S R F I	Q E L A T V Q R T I	P V L L L T G V K I V L T D E G	L N L T G	
UniRef90_R6TXK6	M K F S C S Q K D F S	S S A V T N V Q R A V	P V L L L T G I K I D A T D G K	L N L T G	
UniRef90_D1CG53	M K L L W C L Q E N L	S L S R G L S V V S R T L	P V L L L T G I K I D A T D G K	L K L Q A	
UniRef90_K2DRK3	M K F T C L Q E N L	A R G L T T I K S T L	P V L L L T G I K I D A T D G K	L K L S A G	
UniRef90_W7KRE9	M K F E I Q K E V L I	H A V G V V I K A I I	P V L L L T G I K I D A T S K E	I I F V I G	
UniRef90_UPI0003672E93	M K I S I S K S H L S D A I	Q H V S K T I	P V L L L T G I K I D A T D G K	H G V T L T A	
UniRef90_UPI000478FA4B	M K I T V R V S S D M	L A A I R A T A N T R	P V L L L T G I K I D A T D G K	T F T A	
UniRef90_N2A172	M K I I C S R N N L V	K G V S I V S K T M P	P V L L L E C I L I D A S L D	T I K L T A G	
UniRef90_L0K679	M K V E V N Q K E F Y	Q V A I Q T V K K T L	P V L L L E E G I L I R T Q G N T	I K L L V I G	
UniRef90_A1UU74	M R V T I D R N Q F L	K S L G C V R N T V P	P V L L L T G I F L N L K N G	T L L K S G G	
UniRef90_UPI00035C85B2	M K F R I I A K E A F	L F D G L Q Q V Q T T	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_U1XUU3	M Q L V A T R D A L L	K P L S T V V G T L	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_UPI0002491AD7	M K F S I I R R N T F I	A S L N D A Q R A I I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_R5TMP2	M K I K I K E L L L E	N L N K V V S K A I I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_R5C6K9	M K F I V V S S T A L	S S H Q A V V S R A I I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_X0ZFY8	M K L K T L K G S L L	K L K A I Q T L Q S T L	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_K2ABM0	M K L T C T Q E N F	K F K K A I Y S T E R T	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_F9MS90	M K I Q L A R E S L V	D S L R S T S F A V	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_W5WVN5	F V V P K D D F S S	A S L G W V V A R S L	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_X2HII1	F S L P Q E T F R E	M L S Q V Q Y S M A I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_W4VLX8	M K I I I N R E K L	M E S I Q H V V T K A I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_D6TNP3	M K F V I C Q K D L	S R G L S T V V S S T L	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_L1IMRY5	M K F V I I S S S I	L S Q R L Q T L K N S M P	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_UPI0003478D02	M K L G C T Q T D L	S L S V V S R A V	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_J9H589	M K F V V E R D S L	V D A L V N W V V S K S I I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_I7JBK9	M Q F T I I R N Q A F	I K A L N D V V S R T I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_UPI00030F5A0E	M K I S V Q K E T M	V T A I N Q V V S K T L	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_C1DUC3	M D I I V D K K S F	Q D A V V K V V K A A L	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_UPI0004699D7D	M K F S I I D R T K F	V N Q T T N V Q R T I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_UPI000463E94A	M K I I C T K S N L	A L A K G V G I V S K T M P	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_R5VSC0	M K I S I R K A N L	L Q G I V T T V S K A V	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_B1GZ05	M K V I C E K E E L	M R G I Q M V S N T L P A L	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_N9XW95	M K I E V P Q N I L	K L K N M I K S T T F A I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_A0M2N4	M K F I V V S S N Y	L L K Q I L Q I L S N T L P	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_B6G1U6	M K L I C N Q K I L	S Q K T V S I V Q K T I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_UPI0003662393	M Q F T L S K Q A I	Y Q A V V L R Y Q G T I	P V L L L T G I K I D A D S D G	M R L K A	
UniRef90_C7MLD3	S T F S H M V K R V A R V	V V S I L T G V V L L E V H	P V L L L T G I K I D A D S D G	M R L K A	

	50	60	70	
UniRef90_B5EJ65	T D G H R L A M M T L   P F A S S S G S Y Q A I L   P R K A V L E   L R   L   D D G			
UniRef90_UPI00029B54EB	S D S D I S I E A A I A Q L E   I E E T G A T V L   P A R F F S E I I K K   L   P G D T			
UniRef90_A0P510	T D L E V Q I T L N A K T E V P T D F S I T I   A A R K L F D I T R S   L   P E G S			
UniRef90_M5AB16	S N A D I S I E T L I R A D N I D E P G S I V L   P S R L F S E I V K R   L   P E K E			
UniRef90_F0SUH0	T D L E L G I R S S F D A E I I E E G T I V L   P G R L L A E I V R N   L   P D G S			
UniRef90_UPI0003497E64	F D Y E V S A R A S V E V L S E E P G A A L V   P G R L L A E I V R N   L   P E G S			
UniRef90_UPI00047EB0C1	S D I D L S I I E T T I D A K V I E S G K I V V   D A R L L F G D I V R K   L   P N N E			
UniRef90_D4J4X8	N D M D L G I E T T V D G D V L D K G C   I A L E A K L F S E I V R K   L   P D S E			
UniRef90_C7MEK8	T D R Y R L R E L T W N P T T P G T E L T A L V   R G R T L H E V A R S   L   A T G G			
UniRef90_U2UAK4	T D L S I S I R C K I I P A N V E D P G Q T I V L   S G K T L L N   I V K N   L   S G G			
UniRef90_W2EE56	S D T D I S I Q S E I A A I E L H Q P G S V V L   P A K F F M E I I R K   L   P S Q K			
UniRef90_H0PYC2	T D I E I Q I R T T G H G H G E D A S I T V   V A A K L Q D I L R A   L   P A G E			
UniRef90_E6YTH2	T D L D L E I J E S S S V N I E Q G G A I T V   P A H L L Y D I V R K   L   P D D S			
UniRef90_UPI00046797BF	T N L L D V E V K A R A V Q G G I S D F P A F T V   S S G L L H S A V S K   L   P D G C			
UniRef90_X4RAN6	R D S D I S S Q I S V D N A D V V V P G E V L V   N G K L L A E S R S   L   P D Q			
UniRef90_E0E1L9	Y D N E I S I I E T E I E A Q V E L A G S I V I N S K L L I G E I V R K   L   P D S Y			
UniRef90_R4JXW7	S D I D L S I I E T K L E A E I I E T G K I V V D A K L L F G D I I R K   L   P N S Y			
UniRef90_R2T754	S N A D I S I I E S F L A Q M T I E S T G S I I V L Q A R F F G G E I I R K   L   P E D M			
UniRef90_UPI00046F4E77	T D R H R T R A A R L E G T E D I H F G N V V I   A G K T L N E L S K I I P D Q N			
UniRef90_I8TDB1	T D L E M E L V G R A R V Q N L A P G K T T V   P A R K L F D I C R G   L   P E G A			
UniRef90_UPI00036E7962	S D L Q T S I I T Q I N V E A E E D G S V A I P A K M L A E T L R N   L   P E Q P			
UniRef90_K9AM76	F D Y E V V S S R V E I S A E V V S P G T V L V   S G R L L A D I S K A   L   P N Q E			
UniRef90_K7ZCX4	T D M D M D L V N S T V C   V D Q P G S I T V   S A F T L Y D I I R K   L   P N G S			
UniRef90_G5G9T4	S D N E C T L K T T I E L I E S E Q D I R F T V   N A K T I Q D A M K E I P D Q P			
UniRef90_UPI00035CD4DA	T D R Y R V A T R S I E N Q S G Q S D L S A V   P S K I V T E V G K T F S G D G			
UniRef90_UPI00036264C3	F D Y E V S T H A S V A A L G G E P G T V L V   S A R L L S E I A K A   L   P N K			
UniRef90_F2F253	S D A D I T I Q T F I I P V E E I T Q T G S I V L Q A R M Y N E I I R K   L   P T N E			
UniRef90_A8LB18	T D Y R L A V R T K W R P A T P D A S G V A L V   P A R T L L D T A K S   L   P			
UniRef90_A6T7J7	T D L E I I G I E H V M E A D V L Q E G I V V V   D A R L F S E I I R K   L   P D A E			
UniRef90_G4STN4	T D L E V Q Q I V T E I A I E N T F A E I T   P A R K F L D I C R L   L   P T G A			
UniRef90_UPI00047BEB98	Y D L E E L G I Q D K V I A S E I V D E G S I V L P A R Y F A D V I R K   L   P E G D			
UniRef90_B0K0W9	T D L D I G I E C Q I P A V I E E E G E I V V V   P A K I F S E L V R K   L   P E G D			
UniRef90_D0WHH4	T D S Y R L A M M D D I P C E N P T E G F E A L V   S G S F M Q E V A S   L   P E K E			
UniRef90_UPI0003122FF1	S D A D I T I Q T F I I P A E E D G N Q I S I V L Q A R M F N E I V R K   L   P T N D			
UniRef90_A0A037Z3A0	S D I D L S I I E T K I N A N I Y E E G S I V V D S K I F G E I I R K   L   P N D T			
UniRef90_X1EFS5	T D W E I G I S Y T T E A E I L E K G G I T I P A K K I G D I V K E   L   P D E E			
UniRef90_V6J114	S N S D I S I I K S F I P L E E D G N E N A I V L P S R L F S E L V R K   L   P K G			
UniRef90_A5KS03	T N L E I A I T E H I G A K V A Q N G A I T V   P A R L M A E F I S N   L   P E T A			
UniRef90_W0SAE7	T D I E I Q I T T E T P T V G A E K V A M T V G A R K L Q D L R S   L   P D N E			
UniRef90_R7FT11	N D M E L G I Q T E I S G D I I D R G M   A I D A K I F S E V R K   L   P D N E			
UniRef90_M5JR09	T N L D I E V Q A V A K Q E G L P T I A P F T V Q S G L L H D A V K K   F A D G S			
UniRef90_UPI0002629601	T D R Y R M R E L T W T P P S S P G A E Q T A L V   R G R T L Q E V A R S   L   A T G G			
UniRef90_L1QI34	S D M D V S I E T K V E A D V I Q E G S I V I D A K I F A E I I R K   L   P N S D			
UniRef90_K4HT4	T D L D I E V T E S F M A N V K Q A G A I T V   P A H L L Y D I V R K   L   L D G S			
UniRef90_F8FH08	C D R H R S R E T S I D T E E G L V L N N V S I S G K T L N E L S K I L   P D Q T			
UniRef90_UPI000366628E	T D M D I S I T E S I N C S V I E K G S V T V   P A H T L Y D I V R K   L   P D G N			
UniRef90_E3J252	F D Y E V V A A Q A T L E A T V H E E G R A L A P G R M   A D I T K Q   L   P A A			
UniRef90_R6ZOF5	Y D L E I G I E Y E Y V M E C E V K E Q G S T V N A I M F S E I I R K   L   P D T E			
UniRef90_UPI0002ED8E00	S D S D V S I I E S F I I P N V E Q I E P G Q V V V Q S K Y F P   L   P L K T			
UniRef90_D5WQZ3	T N Q E L I A V E T Y L I A A D S I E M P G S I V L P A R Y F V E L V R K   L   P D P W			
UniRef90_C5WC33	T N L D M E I V T N I H L K K N Y N F S P I T I P A R K L L Y I C   R C N   L   P A G A			
UniRef90_UPI00037898D5	T D L E I E I R A S S E A K I T E S E G Q V T I P A R K L S D R S   L   G E G A			
UniRef90_W7ZPV5	S D S D L S I I E A F I I P L V E V Q E E G S I V L Q S K Y F S E I V K K   L   P G D T			
UniRef90_M5E2K8	T D L E L G I E Y K L I Q V E G Q D D G S I V L P A T Q F S N   I R E   L   P N E T			
UniRef90_T4W8B8	Y D L E I G I D T H I Q A E I V E E G E I V I N A R L F G D I I R K   L   P D T F			
UniRef90_R2Q7H7	S N A D I S I I E S F L I A A D D I E S T G M I V L Q A R F F S E I I R R   L   P E S T			
UniRef90_R6TXK6	Y D L E I G T T F I S C N V A K K G E I V V S A K L L G D I V R R   L   P P E N T			
UniRef90_D1CG53	T N L L E L V I T T W V G A D I E R E G V T T V   P A K L F R D F V L N   L   P S			
UniRef90_K2DRK3	T N L E T A I T T H V G A Q T E E P G S T T V   P A K L F R D F V L N   L   P			
UniRef90_W7KRE9	S N N D I S I I Q K T V P L A K V H E E G S V V L N A K F L N E I V R K   V   P K D			
UniRef90_UPI0003672E93	S D T D I S I I Q S F I I P A E E V E K V G S V V L P A K F F V E I I K K   L   P T A E			
UniRef90_UPI00047FA4B	T D L R L A T R S V T R Q V S Q D T E W D A V L V   P G K S L V E L L K   L   P D E Q			
UniRef90_N2A172	N D M E L G I E T T I E G E V V E H G I L A L N A K I F S E I V R K   L   P D S D			
UniRef90_L0K679	T D L E I G I E C F V D A T V T E G D I V L P A K Y L A S I I I R E   L   P D G N E			
UniRef90_A1UU74	T D L D L E I I T E F S V P H I E Q T G G I L T V   P A H L L Y D I V R K   L   P			
UniRef90_UPI00035C85B2	T D L D V G V V S G T A Q A E V S K T G A T T V   P V K R L V N   I R E   L   P S A E			
UniRef90_U1XUU3	T D L E V Q Q I T T N A D F G V G E D N A A T T V   A A R K L L D I L K A   L   P D F G			
UniRef90_UPI0002491AD7	S D A D I S I I E T V I I S Q E E I D E P G S I V L P A R F F N E I V K K   L   P E D M			
UniRef90_R5TMP2	S D N D I T I I Q T F I I P D M E I E K E G S I I I Q G K Y V L D   V R K   L   P D E F			
UniRef90_R5C6K9	S D S E T T M V T S L E V N E S D A D G R F A V T A K T L L D A   K E   L   P E Q P			
UniRef90_X0ZFY8	T D L D V G V V S G T A Q A E V S K T G A T T V   P V K R L V N   I R E   L   P E G E			
UniRef90_K2ABM0	T N L E I G V F L K I G A K I E E E G T I T V   P A R L L S N F V N N   L   P A D G			
UniRef90_F9MS90	L D G Y R M A L N E L I Q S D A E I Q A I V P A R A C T E V R L   D D S D			
UniRef90_W5WVN5	F D R E V V S T R V R I N A E V D E P G Q V L V A G K L A S D I V G S   S D D			
UniRef90_X2HII1	T D G H R L A Y A A C N I E A D L P K A E V I L P R K T V L E L F K   L   T F P E			
UniRef90_W4VLX8	T D G H R L A Y A A C N I E A D L P K A E V I L P R K T V L E L F K   L   T F P E			
UniRef90_D6TNP3	S N S D I T I I E S F I I P C I E E E G I Q F E I I L H A K Y F P E I I R K   L   P S S T			
UniRef90_L1LMY5	T N L E I G I N C C W I D A E V Q E E G S T T V   P A K T I S D L V S S   L   P S Q V			
UniRef90_UPI0003478D02	S D N E I T L R T T L E L V E S D G N L S F A V N A K T I Q D A M K E I P E Q P			
UniRef90_J9H589	F D L S L G I Q T S F P A Q V E A S G A I T L P A R L L S D I V T K   L   P S H			
UniRef90_I7JBK9	S D L E T S A K A K F A A Q V S Q K G K V L V P G R L L A E I S R S   L   P A K			
UniRef90_UPI000305F5A0E	S N A D I S I I E T T I P Q S D I T Q P G G I V L P A T F F T N I V K R   L   P A D N			
UniRef90_C1DUC3	S D G D I S I I T T F I I P L V E V E K E E G S V C V N A K K L T D I S K V   L   P K D			
UniRef90_UPI0004699D7D	T D L E V F I T Y W I N A D V K E E G S V C V N A K K L T D I S K V   L   P P A A S			
UniRef90_UPI000463E94A	S N S D I S I I T A F I I S S S D I E S T G S I V L P A R F F N E I I K K   L   P G D N			
UniRef90_R5VSC0	N D M E L G I E T I I E G D I V Q P G M I A L D A K I F S E I V R K   L   P D S E			
UniRef90_B1GZ05	N D M E I G I E S Y V D G T V I E D G K V A L E A K L F S D I I K K   L   P D S F			
UniRef90_N9XW95	T D L E I A V Q C Y K G E T E D G G I T P S K R F A N I L K E I S T D D Q			
UniRef90_A0M2N4	L D G Y R L A L K K E Y L D S D D I E V V I P G K T L N E V S K   L   E D D Q			
UniRef90_B6G1U6	S D A E I R I E T F V Q S E I E E D G K I V L D A K L L F G D I I V R K   L   P D S F			
UniRef90_UPI0003662393	T D S Y R L A V T D I D F T T P S E D F T A V I S G S F M S D L A G L S D T G E			
UniRef90_C7MLD3	T D S Y R L A V T D I D F T T P S E D F T A V I S G S F M S D L A G L S D T G E			

90                    100                    110

UniRef90_B5EJ65	D I V L E M S D A S F L L N D G T Q Q F A C K L I D A K Y P D		
UniRef90_UPI00029B54EB	F S L N T F E N Q Q T Q I L A G K S I F K V N G I S A E E Y P H L P E		
UniRef90_A0P510	T I D L Q V E E S K V V L K A G K S K F N L Q T L P A K D Y P V M		
UniRef90_M5AB16	M T V E V K D G F Q T E I T S G A A A F N I N G Q D A N N Y P H L P E		
UniRef90_F0SUH0	D V V L E S T D H I T N I N Y S G S S F T I N G Y D P E E F P E I G D		
UniRef90_UPI0003497E64	V R I E A D G S K L L V T G G A A R F T L V T M P L E D Y P S L P		
UniRef90_UPI00047EB0C1	I E L S S T T D S S I E I C E K T K F N L V H M S A D D F P T L P		
UniRef90_D4J4X8	V T I E T D D D N N K A I L K C E K A K F N I A G K D G E D F V A L P E		
UniRef90_C7MEK8	G V E I E D D S A T L L I G F E A G G R R T S T L V D G E Y P P V		
UniRef90_U2UAK4	I R F T T T S S M C T I T C G S S Q F N L I V L N P V D F P E F P E F		
UniRef90_W2EE56	I E I E V R D H F Q T I I R S G S S E I Q I M G L D P E E Y P L L P		
UniRef90_H0PYC2	V T L T L D D K R L T V K A G R S R F A L Q T L P A A D Y P N L P E		
UniRef90_E6YTH2	N V I L E V N E D Q M S I T S G C T N F Q L Q C L P K V D F P E		
UniRef90_UPI00046797BF	E I E F E G D D A V I N I R A G R S K L Q V P V L P A S D F P E M P		
UniRef90_X4RAN6	P I E I E K D G G K F E I S C G R S H F T L K T M A T E D Y A D L P		
UniRef90_E0E1L9	I S I E T D D D N F N V I S C M S S R F K I K G L S A E D F P N I D		
UniRef90_R4JXW7	I E I N S L D D N N S I K L I C E K S E F T L V H M N A D D F P S L P		
UniRef90_R2T754	F T L E V L D D N N Q V A I T S G K A D F T V N G L D A D N Y P H L P		
UniRef90_UPI00046F4E77	M V D I V V A D N Q V L F K L D R V L F Y T R I L D G I Y P D		
UniRef90_I8TDB1	E V S I L E Q S G D K V L K S G K S R F S L S T L K A D E F P P S M		
UniRef90_UPI00036E7962	V T F I D F E S Y S V E I S S D N G R Y K L M T M P V A E Y P S L P		
UniRef90_K9AM76	V T L E Q I G S K V D V T C G S S R F S L Q T L P A E D F P S L P		
UniRef90_K7ZCX4	E V K L N M D K D S V S I S A G R S K F L L P T L K A D E F P S L P		
UniRef90_G5G9T4	L E F F V G S N L D V T I Q Y Q G G H Y N F M A Q P A D E Y P E M P D		
UniRef90_UPI00035CD4DA	Q V I I K D D E R E L I A F T G G S K T V T S L L I K G N Y P P V		
UniRef90_UPI00036264C3	P V D L A A A G T H E L V C G S A R F T L P T M P V E D Y P T L P		
UniRef90_F2F253	V E I E I T N G Y A T I I R S G K S E F H I G L D A T E Y P Q L P E		
UniRef90_A8LB18			
UniRef90_A6TJ77	V D I T L K E N N Q L E I K C A S T E F N I L V Y S P D E F P E L P		
UniRef90_G4STN4	D I K L E V A D D K V K V L S G R S R F I L S T L P A E N Y P E F S E		
UniRef90_UPI00047BEB98	V W I R V N N N Y M T E I R S G Q A E F H L H G I D A A E F P K L P V F		
UniRef90_B0K0W9	V K I I E S D S Q N T V N V C D S I N F T L A G S D A V E F P E I P		
UniRef90_D0WHH4	E I E I C L S S N H V V F T Y G S I V F		
UniRef90_UPI0003122FF1	V E I E V K N E L Q T H I R S G K T E F H L I G S D A S E Y P L L P E		
UniRef90_A0A037Z3A0	I E I S T K D N N V I E I I C Q K S N F T L I H M D S S D F P E L P N		
UniRef90_X1EFS5	I T V S S Q K N N T I I I T S Q K S F F K I L G L P K E D F P D L P		
UniRef90_V6J114	V H I E V D S R M I A K T S Q T T E F S L N G L D P E E Y P N L P		
UniRef90_A5KS03	N V E L S V E G A H L H I A A G A Y S S T I I N G M E A E E F P E L P		
UniRef90_W0SAE7	E V S L A L D D K R L Q L K A G K S R F N L Q T L P A E D F P R M		
UniRef90_R7FT11	V T I E T L D N L Q T V T I T C E K A K F D I A G K P G D E F A Y L P		
UniRef90_M5JR09	M V E F E G D Q T H V N K S G R S R F R L Q V L P A S D F P E M D D F		
UniRef90_UPI0002629601	S V E V A L E G G N L V G F E A G G R R T S T L V D G D Y P P F P E		
UniRef90_L1QI34	V K I I E I A E N D L I Q I T C E K S V F N L V F M N S S D Y P A L P N		
UniRef90_K4HT4	E I V L S V D M N Q M S V V S G C A H F Q L Q C L P K V D F P E		
UniRef90_F8FH08	E I D V V F A E N Q V L F K M S S I L F Y S R I L D G T Y P D		
UniRef90_UPI000366628E	E I F I S N D G S K F S I R S G K S K F S L S C L P K S D F P I E		
UniRef90_E3J252	P V E V E T D D N K L V I T C G N A R F T L Q T L P V D E Y		
UniRef90_R6ZOF5	I Y I T L N E N N I L L E I E C E G A L Y K L T T M N P E E F P E L P		
UniRef90_UPI0002ED8E00	L E I N T D D Q F Q V N I V S G G S E F H L N G Q D A M E Y P Q L P		
UniRef90_D5WQZ3	V H L T V Q Q P Y S V Q N I T S A Q A A F L L H G F D P E E F P R L P		
UniRef90_C5WC33	E I S I C L D D N N K V L V V S S E H S K F S L S T L P A T D F P V L S D W		
UniRef90_UPI00037898D5	D I R L K V T G D R C V L T A E R G R Y V L G T L P A A D F P S V E		
UniRef90_W7ZPV5	I D I T V H D Q F A A T I R S G S S V F T L N G L D P D E Y P R L P		
UniRef90_M5E2K8	I I E L N K D K W Q L Q I K C I N S L F K I I N G Y D P D E F P N L P		
UniRef90_T4W8B8	V E I E T D S D N N V Y I I N C L N S R F K I I K G D S A V E Y P R L P D		
UniRef90_R2Q7H7	F T L E V M D N Y Q V A I T S G A A E F T V N G L D A D N Y P H L P		
UniRef90_R6TXK6	V D I E T D D K M I I Y I V K S G Q A Q Y Q L V V G I S S E E Y P E L P		
UniRef90_D1CG53	V L L E L N E G H K L H V A A G H S A A D I H G M D P E D F P T V P		
UniRef90_K2DRK3	T I N A T L K D D V L H L T S D K T K S K I I N G V N S D D Y P T L P T F		
UniRef90_W7KRE9	I T F T V E K N N V T K I K S G G K S V F S I L N G F P A E E Y P K L P E		
UniRef90_UPI0003672E93	I E M E V G S G F Q T F I R A G A T D I Q L V G L D P E E F P V L P		
UniRef90_UPI000478FA4B	P V T I Q F T T S H C L E A Q A S T L F Y T R L I D G A Y P D		
UniRef90_N2A172	V V I D A E S D N Q A L I T C E K A K F N I A A Q S G E D F S Y L P		
UniRef90_L0K679	V I L T E P S N N T S Q I K C D N S Q F N I H G S A A D E F P L L P E		
UniRef90_A1UU74	E I I L A V D P N T M S V I S G G F A N F R I Q G F P K M D F P E		
UniRef90_UPI00035C85B2	I E V S V D G K N V A S I K S G P S F F K I I G L P D G E F P P L A G F		
UniRef90_U1XUU3	D V R L G L D S G K L T I Q S G K S R F Q L Q T L E A A D F P N L P E		
UniRef90_UPI0002491AD7	M T I S V D E R F Q A T I T S G Q A E F T I I N G L D S E T Y P H L P E		
UniRef90_R5TMP2	I N I E V I D E L K I L I Y A E N S E F N L N G I N Q K E Y P N V		
UniRef90_R5C6K9	L F D I N I G T L E I N V Q Y Q N G N K Y S L M G Q S A D E F P Q L P		
UniRef90_X0ZFY8	I D V T V R K N N S V S I E S Q R C F F R L M G L P K E E F P K L P		
UniRef90_K2ABM0	T V S L V V I I D Q T L H I E S G S S S K A Q I K G L Q A Q D F P I P E		
UniRef90_F9MS90	T I L I E L A D N Y I K I D L G S T I F V S K L I N G E F F		
UniRef90_W5WVN5	P I R I D Y E G T T V V M T S G S S R F E L P A M T I E D Y P V L P E		
UniRef90_X2HII1	P I T I E L L N N Q V R F R C N D T I I V S K V V D G K F P D		
UniRef90_W4VLX8	V I I T T D E N L Q I T I Q S G H A E F H L N G Q D A D E Y P Q I		
UniRef90_D6TPN3	E L S V A D E S H T M S I K G Q G S N A T I K G M D P S E F P L I P		
UniRef90_L1IMRY5	E F T V N P D G L E I R V D F Q N G H Y T L V G Q N A D E Y P		
UniRef90_UPI0003478D02	D I T L E K D D T Q V N I T S S S G R Y Q L R G M G A E E Y P D L P		
UniRef90_J9H589	P I T F N L E G S R V L V S A G S A K F T I P T L P I A E Y P T L P E		
UniRef90_I7JBK9	M T L A I D G L R A A I T S G A S A F T I I N G Q D V Q N Y P Q L P E		
UniRef90_UPI00030F5A0E	D L Q I N V N D N L V S T I K S G K S K F T I L N G L D S E E Y P R L P		
UniRef90_C1DUC3	V S L T I L D K N N L K I V S G K T K Y S I P T T D P E D F P V F E E F		
UniRef90_UPI0004699D7D	F E L E V L N N N Q T L I T S G V S E F T I I N G L D A G N Y P H L P D		
UniRef90_UPI000463E94A	I V I T T D D D N D Q T L I T C E K A K F Q I A G K S G S D F A Y L P		
UniRef90_R5VSC0	I S I L E S D K E N K T L I K C E R L E F N I P G K S G N D F S N L P		
UniRef90_B1GZ05	E I E I K A D E N Q I N I K S G K S K F N I M G S K T E Y P V I P E		
UniRef90_N9XW95	N V Q I T F T T N N H I L F N L D K T K		
UniRef90_A0M2N4	L T F V V E D N N T I E L S S N H G K Y A L A Y A D G E E F P N		
UniRef90_B6G1U6	V Q I E T D A N N N V H I Y C E N S R F T I I K G H S A E E Y P A F S D		
UniRef90_UPI0003662393	D V N I S L E K S F L T I H S A S S N C R L S T L P A N D Y P N L N E		
UniRef90_C7MLD3	S L T L A L A E N Q I V V T Y D G T T F		

1            10            20            30            40

UniRef90_S6AZA8	I Q T N R D A I L K P L Q S V I G T L P I L S N I L I E K N G E N L S V I A			
UniRef90_H8KNZ6	M K F I V S T S T L L K Q L Q A I S G A L P P I L E N F L F E I I N E G T L T V S A			
UniRef90_F8I195	M Q F S I N R Q I L I K A L N N V N R A I P P I L A N I K L V L T E E G G L T L T G			
UniRef90_A5Z7E5	M K L V C K K S D L I T G I N I V K T T T M S E C I L I D A T E G E I K F T A			
UniRef90_E4KR66	M K F T I N R Q K F T D V L N N V S R T I P P I L T G I K I E V N P D G V T L I G			
UniRef90_R6HOT4	R F S C E K A L L Q G A V V N T A S R A I P A L E G I I L L E G G D T L T L S G			
UniRef90_U1LAS1	V V E G K A F S E A I G Q V A D V T P V I L T G V Q L E A S D H T L T L I A			
UniRef90_J9HDM9	V E T T A F A T A T S E V R P P I L T G V H M V L K E Q Q L A V A			
UniRef90_S0L5A1				
UniRef90_W6EVT5	V D A Q T F V Q A V N Q A S V A V P V I L T G V R M Q F Q D D K V I M T S			
UniRef90_R5HEG9	M K F I C P K S E L L N G L Q V V S K A V P P I L E C I L Y D C T Q G C I K L T A			
UniRef90_R5FZ09	M K F S I N Q S E L L Q N A L S S T R S T L S I L A G V Y K A E E G S I I T L Q T A			
UniRef90UPI0003B4668E	M K L S V S Q S L L S Q A L G I V S R S L P I L T N I I L T E D G N R L S A			
UniRef90UPI000404A8E3	I D P R L F S E A V T Q V A T T L P M L T G V H M E I H G E K M L L A A G			
UniRef90UPI00046458D3	M K I I I S Q K T L A N K I G I A Q K T I E L L K G I L L V A K N D Q L K I I T G			
UniRef90D4IXS6	M K I I T C Q K A D L V K G V N I V S K A V P P I L E C I L I D A S A G E I K L T A			
UniRef90J3BUH2	M R L T Q T R E H L L E S L Q S T L G A I P P I L E V N V L L R I I A G N Q S F W R G			
UniRef90J4A2Z8	M K F I V A S T L L Q K H Q N S S N T L A I L D N F L F D L D H N Q L K I T A			
UniRef90U7JMM6	K I R L R E D V M A D A V G W A A R T V P I L A G I L I T A T E D G V T M S G			
UniRef90R6VBV8	M K L I C S K S E L L V K G V N I V K T V A T T L P Q C I L I D A S A N I K F T S G G			
UniRef90SSSZ19	F R V A R D D L A N A V A W V A R S L P V I L R A M L I T A T D T G L E L A G			
UniRef90Q04CX4	M K F T V Q R N L F I N D L N S V L K A I P P I L S G I K L E L T E A E L I M T			
UniRef90UPI00047818F5	M R F R V D R D A F A E A V A W T A R A M P V P I L A G M R L E E L P S G S L R L S S G			
UniRef90B5IIX0	M K L V C S Q T E L S A S L Q L V S R A V P V I L A N V L L T A D A G T L S L T G G			
UniRef90U2DWL6	M K F I C F D R Q S L S E A M L N I Q K A I P A L E G G V I L Q T G E D G I T L S G			
UniRef90UPI000237BEF3	M K F V V S S S G L L S H L Q A I S R A I P P I L D N F L F S L E G Q K L T I T A			
UniRef90A6L4B9	M K F I V I S S S T G L F S H L Q A I S R V I P P I L D C I F L M E L T D G T L S L T A			
UniRef90E8TQK7	F S V P Q K T L K T L S Q V S F A M A V L N G I L F V A E G K T L S L V A			
UniRef90D8GJZ8	M N F I C T K T K E L Q E A I S I A Q K A I P P I L N G L I L T C K N Q I K L T A			
UniRef90V8AB82	M K F Q A D R T T L I R A L A H I Q N T I P P I L D N F L F E L T T N A L L T I S A			
UniRef90F9YTU8	M K F I V I S S S T G L F S H L Q A I S R V I P P I L D N F L F E L T T N A L L T I S A			
UniRef90D0J7K8	F S V P Q K V K D L L Q V I S N T M P P I L D N F L F E L T T N A L L T I S A			
UniRef90M5J5C3	M K F T V N R L L A F I S Y L N D V V Q R A I P P I L D N F L F E L T T N A L L T I S A			
UniRef90R5JVJ1	M K I A C S K S N L L S A V N T V K T T L P P I L E C I L I E V V S D R I K L T A			
UniRef90U3GXU2	D S K L F T R A V N Q V A E T L P M L T G V H I E I I D G N S S V L M A A G			
UniRef90XOS0M9	M K I S V S K G P L L H V V T A I K S T M P I L Y N I L L E A E E G Q K L K L A G			
UniRef90UPI00038224AB	L L K A P Q D Q V L V S A L Q A V A G T L P I L T G I K I D A K E H E V I L T G			
UniRef90A2C5J7	M K L V C S Q A E L N T A L Q L V S R A V P P I L T G I K I D A K E H E V I L T G			
UniRef90UPI00037D9D0E	M K F R V E R D A F A D A V A F V A R S L P P I L T G I K I D A K E H E V I L T G			
UniRef90R7AI56	M K V S V N Q S E L L S R A L A T V R R S T L S I L S G I L I Q A R D S E I V L L Q T G			
UniRef90C4LGB1	F R V A K D D L L S A A L S W V A R S L P P I L R G V V M M T A D D E G I L L L A G			
UniRef90UPI0003955090	F S V P Q K V L K D L L G Q V S F A M A V L N G I L F V A E G N T L S L V I A G			
UniRef90Q5HJZ4	M E F T I K R D Y F I T Q L N D T R T T L P P I L T G I K I D A K E H E V I L T G			
UniRef90UPI000349C2E3	M K F T C N K N D I N N S L D I V K T T M P P I L E C V V I E T L D D S I L R V V A			
UniRef90UPI00047CBA1A	M K F V V S S S V L L L K Q L S T V N G V I P P I L E N F L F Q L E Q S Q I L T V T A			
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50            60            70            80

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N D M E L G I E T K V E G E I I E A G S I A I D A K I F S E I V R K L P D N D
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UniRef90_UP100047818F5	P V N M E C D A T R V L V	C G S A R F T L L T L P L E D Y P T L P E	
UniRef90_B5IIX0	P I T I Q S P D G Q V D L I S L S G N Y Q M R G M P A E D F P D L P		
UniRef90_U2DWL6	V S V T V D A N L L T T V	T K Q T E F T I I G D A A E F P A I P E	
UniRef90_UP1000237BEF3	L F F E I D L E T L A V D I V T E T G K F S V V G Q N G E D F P A L P E		
UniRef90_A6L4B9	L T F L V T E N L E I T V	Q Y Q O N G K Y S L M G Q N A D E Y P Q A P	
UniRef90_E8TQK7	A I E M R F A N N Q A K F G F G G M E F		
UniRef90_D8GJZ8	I N I S T T E N N S I E I I C Q K S K F N L I H M N A E D F P E I P N		
UniRef90_V8AB82	V V E L D H G G G D L A L R A G R Y A T S L N V L P V E D F P S M		
UniRef90_F9YTU8	L T F I V K D N N T I L E I S S T H G K Y S L A Y L N G E E F P N L P E		
UniRef90_D0J7K8	V I E M Q F A N N Q A K F T F G G M E F		
UniRef90_R5JVJ1	I S I E T N E A F Q A V I R C E K S K F S I S G K S G D D F S L L P E		
UniRef90_U3GXU2	T I H L A V G N G E F G I E A E S R K T T T R M L I S A E F P N F		
UniRef90_X0SM9	P I S I E Q T G E R I K I V C E K S S I V L P G L P K S D F P A F P E		
UniRef90_UP100038224AB	V V S L S A Q Q N K L T L T G G K S R F T L Q T L P A E D F P L V Q E		
UniRef90_A2C5J7	P I T L A T D G E Q V E L K S L S G S Y Q M R G M S A D D F P E L P		
UniRef90_UP100037D9D0E	P V D L L T V D G P R A S S L S C G N A R F T L P T M S A E D Y P Q L P E		
UniRef90_R7AI56	P V S I S T N D Q T A T I F C N N T T Y S L K T L N P L D F P L F P E		
UniRef90_C4LGB1	D V A L S V D G T K V H V T C G Q S N F E L P A M T I E D Y P E L P		
UniRef90_UP10003955090	G D N Q P V I E M Q F A S N Q A R F T F A G M		
UniRef90_Q5HJZ4	V K L S T N E Q F Q T L I T S G H S E F N S G L D P D Q Y P L L P		
UniRef90_UP1000349C2E3	N V D I A L		
UniRef90_UP100047CBA1A	L S F E A D E N N N I L I F C G K S K F N M G M D H E E F P L L P		
UniRef90_UP100047AD94F	I T F V D T D T F G T E I I T E N G R Y K L S G E N A I D F P R V P		
UniRef90_U5QF18	L A I A V S D D N A I S L E C G S S Q Y Q V Q G A A A E E F P K L P		
UniRef90_UP1000374037E	P V E V S T D G S R M L L L A G S A R F E L P L M P L D D Y P Q L P		
UniRef90_UP1000427C711	L T F E I N D D N E I F I Y F H N G K Y N F I G Q S G E E Y P Q		
UniRef90_L0WN35	V V I D A P E D T R C I T S G T G R Y T L S C L P A D D F P T I		
UniRef90_UP100040E938A	K T Q L E T S D S S L T I T S G K S T F T L Q L M P L S E Y P D L P		
UniRef90_G9QJF7	V E I E V T N N Y Q T V I R S G Q A E F N L N G L D P D E Y P H L P		
UniRef90_Q8DGG8	D I E I T A E D T R V I L D Y G S G F E I Q G M S A E E F P A L P		
UniRef90_D2RCN8	K T Y L K S E N N T L T I T S G K S T F T L Q L M P L G E Y P D L P E		
UniRef90_UP1000477A005	P V V V D A T E A R M I I E C G A A R F R I P T L D A E D Y P A L P E		
UniRef90_A0LQR8	E V T I S T S N E N L I G F S G R G		
UniRef90_A9WIW8	T L S L D Q K T Q T L R L V E C G R F V S N I K G V D A D E F P S L P		
UniRef90_B3T256	V E I F L I Q S A N K L L V S G N S K F N L L C L S P D N F P L A D E		
UniRef90_S4HLS2	N V L I H L N E E E P S L F E N S G R T S T S Q L I D G E F P S I D		
UniRef90_F3Y7M3	V T M E V L E N N Q I S I V S G K A D F I V N G Q D A E N Y P H L P		
UniRef90_G8LYP4	V L I E V L P N N S V I E C E N S H F E L K G Q P S D T Y P A L P		
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UniRef90_H6LEA2	I F F E S N E N H Q I E C L S N F T L K G L S S E E F P A F P E		
UniRef90_B3EUH9	I S F Y I D E S Y S I S I K S D T G Q Y N L A G E N A T D F P Q I P E		
UniRef90_Q9REN0	D I K I S L N K E K I H S L E N S N Y I L N T L P A E N F P N H N N F		
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UniRef90_R5FAK9	L T F L D T D T N E I T V T Y Q N G H Y Q F T A Q N A N E Y P H		
UniRef90_F2NF31	I S L E S T E N S N L V I Q V G D A R Y Q F L G L P V E N F P P L P		





	90	100	110
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UniRef90_C2G1M7	V A F S V D T N T A I E I S A G D G K Y K	L S G E N A D D F P K     P	
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UniRef90_F8L4Z0	V E I E C T T G E I A Y V R G G S S E F R I	N G V E S E A Y P H   L   P E	
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UniRef90_G2SPI2	F T L T V N D R F Q T T I V S G S S E F T	K G L   M A D D F P   L L   P	
UniRef90_R5BN26	V A I S T A S D S S I E C K W T S G N S V L	N G V E S E A Y P H   L   P E	
UniRef90_H2JYY9	M V R C A L E G V R F T M D G G G H T R F G L	P F F P A E D Y P E I   P	
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UniRef90_F2I029	G I H   L N L Q N D R L K L I S G K S D F N	T C L   P A S E F P   L E D	
UniRef90_K9EWZ8	E V R E V A I S D N Q I L F A L S T S Q F Y S R	L L E G K Y P D	
UniRef90_Q1B045	Q I E V Q L S E N Q A L F R V G		
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UniRef90_E0RTB2	V E F E L D E H D S L H I R T K K   L N F T	L K T   S P D K Y P E M P	
UniRef90_E0UFX1	I T I G E E E Q S K V T I E S V S G R F Q L	R G M K A D D F P E L   P	
UniRef90_UPI0001C36FC0	V T F D I D E S M V I N I S C S A T E C S F	P A M S A S E F P E L   P	
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UniRef90_Q9EVF1	D I Q I E L C E N K M H I I S D K S H Y I L	T T L   P S D N F P N H N N F	
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UniRef90_A0A011NQ42	E V S L V L D D R R L   Q V R A G R S R F S	L Q T L   P A D D F P   C   L	
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UniRef90_R7HLR7	L V F E V D D N N E I H L Q Y H N G D Y K	F V G V D G N E Y P R K E E	
UniRef90_C0QR0	V Y I K L E D S T L K I K S G K T K Y N L	P V A P S E D F P Q M Y P F	
UniRef90_K9Y924	I T E E G E D D F S A T L I S A S G R F R	L R G M T P E E Y P N   L   P E	
UniRef90_W0B4Z5	D E Q L S L S V G K N H F R L I A S Q Y S F		
UniRef90_D8K0X3	V D M T L S G N K T L T L K C G R F E A R M T	G V D A K D F P P   V   P	
UniRef90_S2W5F9	P I D L T V G E T K L K D L Q C G S S R M V	T M T S M P L E D Y P A A P	
UniRef90_L7VY77	T V S L E Q Q D E K L V F K G G K S R F T	L Q S L   P A Q D F P   L   V Q E	
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UniRef90_UPI00030538D0	A V H   E L R G P R L T L K A G S A R F I L	P T L   P   E E Y P A   L   P E	
UniRef90_E5WRW9	D I T L K L D G F T L L Q S G R S K F N L	I N T F D P E E F P K   L   P D F	
UniRef90_D7N8B6	I I D F E I N Q T N M N I K C L K S E F N I	Q C Q V   P   D E F P D   L   P	
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UniRef90_UPI00040D4244	S E Q V T I A D G I L G I L G A D R R T T	T R L L   D A E F F P K F	
UniRef90_UPI00047A6969	V T I S N G E S N I V T L E S G Y S K F E	I M G L   D P   S E F F P E	
UniRef90_C4Z174	I T L T T D S N N N A L I T C E K S K F N I	A G K S G D D F S Y   L   P	
UniRef90_R5LBJ2	I T I E T D S N F N A S I T C E K S V F N	P A R D G E D F S Y   L   P	
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UniRef90_A4SUR0	V S L N L K D N R M V V Q S G K S R F S L	Q T   L   S A T E F P   V   M	
UniRef90_U5N3S3	T I E M R F S G N R A K F A F G S   E F S T	N L V E G R F P E F P D Y	
UniRef90_D3DGS9	T L Q A Q L L E D K L K S I T G G R S K F N	L T A L E A E D F P E F P E	
UniRef90_I4BZL3	L T V E L Q E N G R I K I S S G G R S V F E	L A G M D A S E Y P	
UniRef90_U2S990	F I E I E K V S N N I I V Y S G N S E F N I	K G Y D P E E Y P E F F P	
UniRef90_H7CRF2	I K I E T V S E E A I R I T C Q K S V F D L	L H   M N A E D F P S   L   P	
UniRef90_E5XV96	V K I V A E G S K V H V R S G S A K F T	L P T M P   V   D E F P S   L   A E	
UniRef90_F9ZIK6	E V T L T R K D D H L L K S D R G S F N I	K G I   P S D D Y P N   L   P	
UniRef90_A2BTU8	P V S L D V D D D N L L I T S G K S R F M I	G T L   P   A A D F P   L   L	
UniRef90_UPI000367711B	Q I N I N A E G N R C V I T S G K S R F M I	G T L   P   A A D F P   L   L	
UniRef90_H1Q1V8	L I D I N L G E K I K Y V T Y Q N G Y Y D	P   Q   N A E E Y P Q   V	
UniRef90_Q9EVE8	P I K I E L S Q D K M H I T S D N S H Y I L	L K T   L   P   D   N F P N H N S F	
UniRef90_F4XUM5	I T L E D D D S L I V T L T S A T G R Y Q	V R G M S S E E F P E   L   P E	
UniRef90_R6N2G1	I S I I E V I D G Y K L I V S T D N T E F N	L T A L E A E D F P E F F P	
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UniRef90_UPI0003B2F1CA	Q I L L S S E G G K L D I V C G S S R M S T	M S T M S P   I E D Y P Q	
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UniRef90_D4LY78	V T I T T D S D N Y V A T I T C E K A K F T	I P   P   G K A G E D F A Y   L   P	
UniRef90_U2KBP1	P I E I E V E E G K A K T V T Y S N G H Y S	F L T T A A D   Y   P E	
UniRef90_J1HK82	E V T V A L T D S G S T T S S A G G R R T	T S L   L T D G D Y P P   F P E	
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UniRef90_R7K7K2	I E L S E T E K N R L K I S R Y N E S E G Y	L Q C L D K D D Y P D	
UniRef90_W5Y4K5	P V D V F V E G S T V Q L V C G T S R F E L	P S   L   P   L D D Y P P   L   P	
UniRef90_I3YZ98	L T F T V E D N N T I E I S S N H G K Y A	L A Y A S G E E F P N	
UniRef90_A1ZI01	V T F S I I D E H K V I E I T S N T G H Y K	L A G E N A D E F P K	
UniRef90_R5SP33	V S I T V D E D Y H M N I S C G K A K F N I	I M A K A T D E F P Y   L   P N	
UniRef90_Q2JU25	I L S Q V P E S A A V T L T S A A Q G Y Q Y	R G M P A E E Y P T   L   P E	
UniRef90_D4W3R2	N V D I Y L A N N Q I L F Q   G N   S F Q S R	L D G I   Y P E T K E F	

1 10 20 30 40

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 L D Y E A S A R I E V A D A E I L R P G K V L V M G R R L L D I C K V L P P E G A  
 Y D Y N V I S A R V T V E P L E I T E G T V V V D G K L L S E T A R A L P N I S  
 S D V E T R L V T T V D V M M A N G S G L F A V S A K I L L E P L K E L L P P E Q P P  
 Y D Y E A A A E T T I D A D I S A E G A V V H A A T L R I V V G K L D K E P D  
 S D V E T R L V T T V D V M M A N G S G L F A V S A K I L L E P L K E L L P P E Q P P  
 T D L E I S I E K K I K A D I F T E G E T V I L G K Y F T E Y V R K I D K E P D  
 T D L E S E I E T L S T I T N F K S G G Q T T A P A K K L I S E L C R L L P D L S  
 F D L S L G I R T S F T A E V L E G G T I A L P A K L L V D T S R L P P E G E  
 S D L E E T T M V S T I D V E S D S Q G S I I A V P A R L L L D T L K T F P P E Q P P  
 T D L E T G V K A S V N C A E I S G D A R F V V P G D V L Q K L V K V L P D E  
 T D L E V Y T S Y W I P A D V V E E E G S I L C V N S K K I S D I S K V L L A Q N  
 T D M E I A L R V P L T A E V Q S E G T V V L P A R L L L D V A R S L P P D R V  
 T D M E I G I R A S T A K I E V I E K G S V L V N A H Y F F D I K L L P E V P  
 N D T E L G I E T G V E G T I L S H G I I A V N A D I F S N E V R K L P P D G  
 N D M E L G I E T I L S G E I K E G S I A L P S K L F Q D F I K T Y G E Q P  
 S D G E T T L V T S L E V M S E D Q G K I I A V P A K T F Q E L I K T F G E Q P  
 T D L R M T I I E Q E L E C E I L E E E G R V T L R A H L F S N L L S N L P K G D  
 T D L E T T I T S T L E I T S P D K G S V A I S A R M L I D I L K T F R E Q P  
 T D L E L G I Q T S F A A V L V Q G G E I A I P A K L L N D I V S R L L P P D G E  
 S D S E N V M K T T L A L D E C D A N G E F A I P N R T I L D A V R E L L P P E Q P P  
 T D L E I G L K Q R V P A E V L E T G T I T L P A K K L F E V A R E S G S S I  
 Y D L E I G I K T V I P V K S D D S G E F I L N A R L F A E M I R K M P S E E  
 T N N E I G L L C R T Q A D V E R P G E I A I N G R Y F L D V I R K M P D S V  
 S D Q E L T T L R T S I E V T N S V S D G S I I A V P A R Q L I D L K N N L P D Q P P  
 T D T E V Q I T T Y T A V G Y G N S S I N I V A A R K F I D I L R S L P P E T E  
 S D S E N V M K T T L A L D E C D A N G E F A I P N R T I L D A V R E L L P P E Q P P  
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 UniRef90\_B0JPW5  
 UniRef90\_G5JXK1  
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 UniRef90\_W7KUZ2  
 UniRef90\_UPI00035D920E  
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 UniRef90\_T1AUQ1  
 UniRef90\_R5KNK5  
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UniRef90_R7IMG2	V T I S N Q I S S Q K M E V S T E N S R F S	L Q T I P A D K Y P S F P E	
UniRef90_X1GDP7	I E I N I K N N T V Y L K C E N Y K S N I	I K G L N A K D F P I I P	
UniRef90_K9SHY7	V T T L E A G E A M A A I A C G S G R Y H	V N G L P L E E F P D L P	
UniRef90_A0A023WZU0	L I E H D V A S G T V R L A A G E K E Y S I	R A Y A A D E F P Q L P E	
UniRef90_UPI00030323C4	P V T L E E D T E N I L I K S D R G S F N L	K G L A S E D Y P K L P	
UniRef90_V8G0I4	Q V S A N V K D Q K M T L Q C S G S R F S	L Q T L P G V D F P L L P E	
UniRef90_D3SM75	E V Y L H L R E D K L V V S G G R S T F K L	A V A D P E E F P E F P E	
UniRef90_A9D4N4	E V S L K T D G G Q M T L T S G R S R F F N L	Q T L P G A D W P R L Q E	
UniRef90_F8XSN8	D V V L R F D D G K A A L R S G G S R F T L	L A T L A A E V F P L M	
UniRef90_K1JNL1	P V R V Q F T D L Q V C F S F G N I T F		
UniRef90_C7PHD5	L T F I D L N S Y A V E I T S D N G K Y K V	M G E N P E N F P K E P	
UniRef90_B6YRT5	I T F V I N E N N E V L I Y Y E N G K Y S F	I A Q N G D E Y P T	
UniRef90_D3IBN4	L F D L D T N N F N V E V T Y Q N G K Y N F	T A Q D G T A Y P K P E	
UniRef90_E8LE21	T I S K N E E K H S I K V S S G K S E Q Y L	F L M N E D D Y P K F P T F	
UniRef90_UPI0003B5FD13	K T Y L A T E G S R L R I T S G K S T F S L	Q L M P V E E Y P D L P	
UniRef90_F7YYD0	T A E F T L S E E S V T V T C G R S K F K I	P T V D P S E F P D L E	
UniRef90_D4ZZN3	E V I N D E D T E A V V T L T S S S G R Y Q	V R G M V A E E Y P E L P	
UniRef90_D6DFB2	I I I E S D E K N N T T I S C D K S V F K I	Q G K D G D E F S Y I P	
UniRef90_C5R9Y3	F K L T N A S G L Q T K I T S E N A E F D I	N Q D A N N Y P H L P E	
UniRef90_UPI000475CCF1	I T L E E S D T T Q T T L T S A S G H Y Q V	Q G M S S E E F P E L P	
UniRef90_K1ZF15	P V E I N I A S N Q V L F K S G		
UniRef90_I0AFF9	L S I S T D S N S R L R K L K T D K G V Y H	I S Y F S P E D F P E I P	
UniRef90_F2KZM3	L L N V N M E E M K I Y V T Y Q N G S Y N F	P I L G A D E Y P K V	
UniRef90_R6DZB0	L N F E V D M D T M M K V N Y Q N G M Y N F	T A Q R A D E Y P	
UniRef90_W2BST9	Q V S V A I S H S E L T G E S S G C K R E	L T T L L G G E F P K V	
UniRef90_T0MHV5	I A F T A T D N R L E I K L E N G S Y K I	I G G L P A A E F P K L P E	
UniRef90_R7I781	V T F T T N D S F M A N I Q C E K A K F N L	M G K A S D E F P L L P	
UniRef90_U2TJ04	V N F E A T P H G L T S C N R S N F N L	Y A L E P A D F P E F P E F	
UniRef90_H9UF19	A T F E D D Q G N G T F Y I K N G S D F K L	K S D A E K F P E L	
UniRef90_B4VWR6	I T L E D T E S L S I T T S T S G Q Y K M	R G M N S E D F P E L P	
UniRef90_G9PGH0	P I E I A L N D D D A L I G F E S G R R T	T S V L S D G E Y P Q F P E	
UniRef90_E0P0L4	V I N T E S S D G L A E I R S G T V R F T	L R T M E V T D F P V L	
UniRef90_B7IYX6	V S F T L D N N N S L H I S S G K T N Y S	N T L S A D D Y P D F	
UniRef90_UPI000362DA97	I E I M V D D T N I A N I T Y G S S E F N	N C Y N P A D Y P E	
UniRef90_Q7VQU9	K I H I L L Q E N R F L I S S G C S N F V	L S I L P V L D F P K V	
UniRef90_R7G4R9	E I T I V S E D N S L M V E E N N T V F V S	R S R L L E G E	
UniRef90_C0GI72	D V Q L A V A D N Q L L I T C K N I K L S S R	L D E N F P N I D	
UniRef90_UPI00037BAEAC	P I D F V G R E G L F G I H T D N R E T T T	T R L L D A E F P N V	
UniRef90_X8K280	D I E F T C E D E K I T I K C L T S E F S	L V G M S S D E F P N I	
UniRef90_A6EPK2	L T F T L E E N N T V E I S S N H G K Y A L	S S N H G K Y A L A Y A D G A E F P S	
UniRef90_UPI00036A279B	P T T L A L D G T D L A L S C G S A H I L L	C L P T L P L N D Y P T L P	
UniRef90_UPI000425C161	V T V E S T N N I K V T I S C E K A K F S I	L G R S G N D F S Y L P D	
UniRef90_O67725	Y V Y L H T E G E K L V T T G G K S T Y K L	P T A P A E D F P E F P E	
UniRef90_UPI000361C6BF	V E C A V E G S R F T V S G D G A R F G L	S V L P L D D Y P A L P	
UniRef90_D0YTZ8	E V S F K T K D E N Y L H I T C G S F H Q Q	L V M P E E D Y P Q L P	
UniRef90_G8UKU1	L V F E I N D D N L S T I R Y E N G K Y E F I	G Q R G D T Y P Q	
UniRef90_UPI0003691549	V V F E F A G E R E M L I R C G S V R A S	L P L M P V G E Y P Q P T F	
UniRef90_R6X178	V I I D T S G E N T L K L T Y G E N N G Y I	Q T M E A D E Y P A F	
UniRef90_J4WZX1	E I H V F L D G E N L N K I E T S S G K Y S L	A T L P S A D F P I F D	
UniRef90_K7VW40	I T L D D Q S G D N N V T L K P K S G R Y Q	V R A M G A E E F P E L P	
UniRef90_A3UAN5	L T F V K E D N N T I E S S N H G K Y A V	A Y A D G E E F P N	
UniRef90_B9K54	T T E L S L E G D N L L V I T S G S T V F R I	T T M P A D E F P P D I	
UniRef90_UPI000429A5C8	E A L L Y T D D G E T L K I T S G K T K Y S	P T F E A D D F P P L P	
UniRef90_Q0BOZ3	T L E L R A E Q Q D V E V V A G S A K F H R	R T L R A E D F P P L P	
UniRef90_R5CD35	I I E L L N Q E T A Q L L D I K Y G R S S G F	I N T Y R D Y E Y P A L P	
UniRef90_V2XZI9	I V N I S T E G E K V V T I K C G K S V F T I	L G K D G S D F T Y L P E	
UniRef90_K1MAR0	L T L I V K D N E E L E I L D E K D N F L V	A L D N A D E Y P S I P D F	
UniRef90_D7CPN8	I Q V L T D D E N R L T V N Y G R S Q T H L	H L Y L N P Q E F P E	
UniRef90_M2Q436	V L I Y A D G S L T C I E A T G S Y F N L	G T P A F D Y P R V D	
UniRef90_K9Q6D8	I T L D D E E G L I V N L T P K S G C Y Q	R A M S A E D F P E L P	
UniRef90_E4T966	L T F T V K E G A L L E I L D D R D N Y E V	V A L D N A E D Y P E L P E	
UniRef90_UPI00035F96A7	V I M R S V G E T S V V V K S G G R T E V K	Y V T T M P P D E F P P V	
UniRef90_J2JZ00	L V F S V L E N S I I E I S S E S G I Y S	I A Y A D A K D Y P K	
UniRef90_K9W7Z2	I T L E E T D T D R R I V T L T S A S G R Y Q	V R G M S S E E F P E L P	
UniRef90_M9TTW6	P V E C A V E G S R L T V T G D G S R F G L	S I L P L D D Y P A L P	
UniRef90_R6THF4	I L I E V S E N F Q V T I S G G V T T F N I	P A T S A E E Y P A L P	
UniRef90_10GLS3	T I D F N K D E N I V Y I N S N Q A N F T	R S M N A A E F P K V	
UniRef90_R5BN67	I E I K T S A E G S F E C I W N S G N S S	H P Y F S A A D Y P E I	
UniRef90_S5R8S6	K V T I Y I E N K H M L I K S G K S K F T	Q T L D A K E Y P I M	
UniRef90_F8NCU6	U N I T Y I E N K H M L I K S G K S K F T	L Q T L D A K E Y P I M	
UniRef90_E8RH57	L T F E V N D T F E V A V V E Y Q N G R Y N	F T A Q N A E E Y P Q	
UniRef90_UPI000349EE2E	L S L K E L D N N W V E I S A G P S Y R	L A G M V A D E F P S F P A Y	
UniRef90_R6H2Z7	V S L N I S D K R L T V Q S G K S R F A L	Q T L A A S E F P T I I	
UniRef90_K9UQ16	V N F E V I D D L K I M I Y T E H S K Y N L	C L N S L D Y P Q I I D	
UniRef90_UPI0002D3743D	I T D D E A G D N L V T I T S A S G R Y Q	V R G M S A E E F P E L P	
UniRef90_UPI00030C91E0	I T L Y E N E N T T L N I I P A S G N Y T L	R A G S A E E F P E L P E	
UniRef90_F3WY41	L E L E I I L D G T Q T K I S G K T A E F K I	G M N S M D Y P M I D	
UniRef90_R5ATP0	V T I A P I D G R A V T L K A G R G Q R I	P T L S A N D F P K	
UniRef90_R7M4B2	I S F V V D M N Y A I T V E Y A N G E F K	F M G F D G D E F P E	
UniRef90_B0JPW5	I V I E V L D G Y N M I I S A N K E F N	L N G I N P S E F P N L D	
UniRef90_G5JXK1	I T I S V E E N E N A F L K T A S A Q F Q I	R G M K A D E F P E L P	
UniRef90_B7KMQ3	L D F E E I E Q H Q I V L K S G K S E I T L	K G F S A E E F P I L Q D	
UniRef90_D8DYV6	L T L E V D E N D I L W I K C S E S K Y Q	R Y L D V D E Y P D I P	
UniRef90_X0W4L2	L N F I D L E S F A I K I L Y Q N G L Y N	F T A Q N A E E F P P I V	
UniRef90_W7KUZ2	I S L E V L D N V L N V K T K Q T	I K G F S A E E F P I L P	
UniRef90_UPI00035D920E	I H I K V D E K N S M T I M S D E L L T S L	L N G F P A E E Y P A L P E F	
UniRef90_K1ZRK2	E I R A S L D A E R M S V G F G G S R F S I	A T L P G A D F P D	
UniRef90_T1AUQ1	I L L F E K L G E E A V V S T K G F K A R I	P T I A P E E F P A I P	
UniRef90_R5KNK5	L T D L D A V H Q T V R L Q S G R F D A H	V R G I D A A E F P P L P P E	
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1 10 20 30 40

M K I L T F Q Q D A I L N G I N I V L K A V P I L E C I F I D A S G S E I K L T A  
M Q F T V S R K K F V Q A L S F V K T A L P P V L S H C L L K A A G D K V T I V G  
M E F K I K N E Y F N K A V G E V S S A I P P I L T G I K L T A C E N H L R L T G  
UniRef90\_UP100035E3169 M K F T V V S S T A M A N K L A T M A K A L P I L S T F L L E V K E D A L E V T A  
M K F K V N Q R D L S K A I S V V Q N T M E I L K G I Y F E I E E G N L L L T T  
UniRef90\_UP100036B7853 M N I I Q L R V K E L L E P L Q T V K Q T L P I L A H V L I Q L E N N L L T L T T  
UniRef90\_A5CY31 M R I L T I S S T A L L S A L S K V K N S L P I L D C Y L F E V N G N N L T I T A  
UniRef90\_R5D2J4 M K F T V V N Q R E F S D A L A I A S K A I D I L L K G F Y L E A Y E N E L T I T G  
UniRef90\_D6GSV8 M Y F K V S K K E F Y N A L S V A A R A I P A F S G V K I E A T M D C L I L T G  
UniRef90\_A6W3V5 UniRef90\_U1RCJ6 M K I E V D S A A F A D A I L P A R P A V P I L S G I K L D A H D G E L S F S T  
UniRef90\_UP100036F06E8 K C T F S K E N I L K A I A D K K H T M P I L S G I K L D A H D G E L S F S T  
UniRef90\_R6N1K4 M K L V C S K P Q L V D I I N T V Q R A I P I L E C I K I D A N G D G V V F T G  
UniRef90\_UP10003743A5D UniRef90\_E3IWE1 M R V T V P R A E F A H A V A Q V N D T L P I L T G V R V E I E G E K M T L L A  
UniRef90\_UP100046553B5 M E I R I D S A V L T E A V A W A A R V M P V L G G L L L E A A D G R L Y V S S G  
UniRef90\_D3PA90 M K F K C I K N D I L Q E L V Q H A K N I N T V L Q N L F I E A E G N T L T I K S  
UniRef90\_R6BLX8 M R F T V V S S A L S S K L N M L K N S L P I L D C F L F Q V A N G E M S I T A  
UniRef90\_C3A6L7 M E F I V N H K Q F T Q S L S K L N M L K N S L P I L S G I K I T A D Q S G I T L I A  
UniRef90\_A9B4J2 M R L A C L Q E N L K R G L A L A R S S L P V L A N I L L A T E S G R L K L A G  
UniRef90\_Q7UKK1 M K I T C Q R D I L A N A F V L A A S I A P I L Q N V K V T A A G D K I T L M A G  
UniRef90\_G9WL49 M K L Y F Q K N D I L I S A I Q V V G R T I S I M E C I L I D A T K G Q I V L I G  
UniRef90\_R7LU45 M K F I I S K E D L Y N G I K I V E R A T P V L Y N Y I L E T E N N S I R L T A  
UniRef90\_UP10003631D9D F S C S S D E A R P I F T G C L I E I N E G V I Q M I A  
UniRef90\_F5TDS2 M E I K I M Q N E L L G L I N I S L R A I S I L E E G I L F I A K D N R L T L K S  
UniRef90\_R7GMH8 M D F N I N R L V L L D A L T K V S R A L P I L T G I K F D L L E D G L V L T A G  
UniRef90\_FORIS2 M K A T V T K K V L S E G L G L L E R V V P I L T S L K I E A T E Q G L H L S G G  
UniRef90\_E7GAY5 M N F K I K R L A L L N A L L A K V S R A L P V L T G I K F D L K D N E I I L T G  
UniRef90\_X5KB10 H F S I N K N F F L H A L T V T K R A I P I L S T V K I E V T R D A I I I L T G  
UniRef90\_W4AXY9 M L V E T K N S L M M N A I Q Y V K A I P I L L Q G I H I Q A G A D G V T F T A S  
UniRef90\_UP100037E6941 M N I I I L A E N F K K G L S V K S T L P I L S G G V M M Q V N E S G I T L L S  
UniRef90\_V6Z1S0 F A I N K A F F L H A L N A T K R A I P I L S T I K I E V A N E Q T I T L T A  
UniRef90\_Q3A8P3 M K F T C P T S I L S E N I S L A Q K A V P V L T G I L F E A N E Q T I T L T A  
UniRef90\_H0E9J3 M K L H T N A Q D L L G H Q S L S R A N P T L S G V Q A T G D G V E L R A A  
UniRef90\_C8WVK1 M R C L I E Q S V L E P T L S A M A R V A P V L T Q G V L V E A D R G Q V T F S A  
UniRef90\_UP100046D52F0 M I V H I D K D A L A Q A I S V L E R T R E I L E H I L L E A Q G D V L E V R S G  
UniRef90\_A4VS87 Q F S I N K N I F L Q A L S I T K R A I P I L S T V K I T V T S E G I T L L T S  
UniRef90\_Q89B36 M K F E I L N K F L I K S L K K V N N L I P I L E N I L L I A K D N T I T L L T S  
UniRef90\_M1WQW3 M K L V C T Q N D L S I H S L V S R A V P P I L A N V K L Q A V K G G V F F S V  
UniRef90\_L1NHY2 M K L L I L Q E K L K E G G L N V V E R T L P I L N N I L I S T E K N F F N L S A  
UniRef90\_X1P0W9 K F S L I N R E D F A N S L S K V L F A V P P I L T G V L F V E K K S L K L V A G  
UniRef90\_K2DKX5 UniRef90\_W4EPP1 M E F I I D N K I C F N K A I S D V N K A V P P I L S G I K I T A N N N C I I L V G  
UniRef90\_R5IWP5 M K L R F Q K D D I V N G I S I V M K A V P P I L E C I L I D A S S G E I K L T G  
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UniRef90\_F7XU81 M H V T I E K K I L V K S L G K I R N S I P I L A N V K L Q A V K G G V F F S V  
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90                    100                    110

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UniRef90_X1P0W9	I I N L E V K K N N T L F I	E C E N Y K T Q	K G L S A D E F P I I P
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UniRef90_W4EPP1	H I K V S E K Q L V T I	Q S D E L V T K V	V Y G F N A E E Y P S L P
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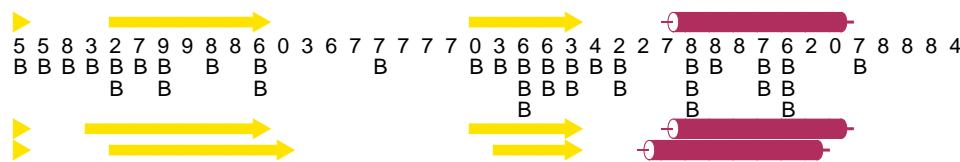
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UniRef90_UP100036609BA	T D Y R L S T R T V A P A E P P T A W A T V D G D E L R S A T T A L R R S P
UniRef90_UP100029A78C2	T D R Y R M A V A R A G T A G H G G P R V Q A L V P V P L A D A M R A L L D G E
UniRef90_V7HLP6	F E I D L A I E T T L A A E G R G E A F A V P L R T L A A F M N G A D E R V
UniRef90_X1T8E0	T D L E T L I S I P V P E A D I A C L I P Y A D V T K M L Q Y T M G G E
UniRef90_UP100037C0D84	T D R Y R M A V A Q A G T T G H G G P R V Q V I V P S P L A D A M R A L S D D A
UniRef90_L7K6I5	T D Y R L A T R T M V P S S S R P T T W A T V D G T D L R N A L A D L R R S P
UniRef90_UP10004679B60	T D Y A T S A N D V R V T R H P D E V K P F L I P H K T L K P V L G K N K A V
UniRef90_X1S574	T D L E T L M V I A D L P E A E E P M L L P F A S L A E M L K Y V P G N E
UniRef90_L8DKI8	T D Y R L S T R S L V A Q C S P G V F W S R I A R A D S L G A V S P S G E
UniRef90_X1MZP2	G N L E V F I F I D L P E A D I E C L I P H K P V L Q L L K Y V P G N E S
UniRef90_F7XZU3	S D L D I E A C A T I P C E G A S I V A A I P R A V L E F F I A R D G G D D S
UniRef90_E8S112	T D R H R L A V A R V I G G T V D G P P V S A L L P V V A V D E L R A I L L D
UniRef90_S5Y0T8	T D L D R L L S I D C P A E C L A E F G S F T L D A R Q V S A L L R G A E A K E
UniRef90_UP10003646A89	T D R F V S R S L V A K A V A T E T E W T A V V D G D D L R S A V Q S I R Q H H
UniRef90_UP10002EC3BBE	S N E I S S I A I E T T V I S S T A P C K F T I P V L A I D I L N Q L K D S
UniRef90_UP100046ED70A	Q S S M I S A K K E I K I D E V E E S G K F L I N A N I L K N L I K K F N K
UniRef90_H0RLV2	T D R F R L T T R S L V A G Q T G A T C A G T V H A D D L R C L A D L R H S P
UniRef90_L7KVW1	T D Y R L A T R T V V P T G S R P T T W A E T V D G G D L R R A L A D L R R S P
UniRef90_UP1000465B421	T D R N I F F E S T I P I V S T E N F R V L I N A S N L S D A V K N L Y D E L
UniRef90_X1NI65	S N L D L A V A V E L P S G D G E C L I P F R Q T M D L L K R I P G N Q
UniRef90_E0TJV7	T D R E L S I I Q S F I P N I E I N S L G R L L V N A N M F K N I L K K L K N
UniRef90_W8YQ73	A A G R I V H Q A V L P V D K I E H I G C L A L P A R Y F L G V I R Q A D G E W
UniRef90_UP1000476AF98	T D Y R M S V R K L Q P L G F A G Y P R N L L V R A T E L T A L A R W V G A A V

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 sol0  
 jhmm  
 jpssm



90                  100                  110

UniRef90_H5VF81	Q  L T   I K Q T D G   V V   E   L   S W E G G K A T Y K   V   D N P E D Y P P   P   E
UniRef90_X1T6G4	D   V T   L T F G E Q Q   V A M C   W
UniRef90_XOU4F3	Q   V R   L V V E G S R L   A V R
UniRef90_W7T3R4	T   L D F D A D M K T   V   A R   C G K G R   L   T   M   P   V   L   P   G   A   D   F
UniRef90_X6DEJ6	I   I L S D P D A G M L   R   L   R   C G R   T   R   A   S   L   P   M   T   D   W   R   Y   A   P   T   L   E
UniRef90_E1JRD8	D   I   S L S P Q T K T   L   G   L   K   C   A   R   F   E   A   R   S   G   D   A   K   D   F   P   P   I   P
UniRef90_X1J0M5	S   L   S I S K A K Q   V   L   Q   I   K   S   G   K   L   K   T   T   I   P   Y   M   Q   D   Y   K   W   P   E
UniRef90_R6SBB5	E   A   R   L   R   L   D   G   A   A   V   T   V   S   V   A   G   R   E   A   T   G   P   A   L   P   H   E   F   P   D
UniRef90_C4RMU7	D   I   T   L   S P   L   A   D   A   V   Q   V   S   D   G   G   I   Q   R   R   Y   A   T   I   D   A   Q   F   P   D
UniRef90_H6RA28	E   E   K   A   T   G   K   D   R   W   L   Q   L   I   C   G   L   R   A   Q   M   D   V   F   P   P   E   D   Y   P   A   M   R   E
UniRef90_V2YD33	E   I   L   I   K   A   Y   D   Y   K   I   T   A   K   N   Y   T   S   E   P
UniRef90_U2SWZ7	D   V   L   E   N   E   K   R   S   R   L   T   M   R   N   G   A   R   T   C   E   F   E   A   S   S   G   E   D   Y   P   D   L   P   N
UniRef90_H1CD05	L   V   R   L   E   A   V   S   N   G   I   W   F   R   V   D   D   R   E   D   R   H   C   R   L   L   N   E   E   F   P   D
UniRef90_UPI00037965ED	K   I   N   F   E   F   Q   N   E   K   L   I   I   E   G   E   D   L   S   A   T   I   P   L   K   Q   D   P   N   F   P   D
UniRef90_M1E519	R   V   R   L   D   A   T   P   H   G   I   R   L   R   L   P   G   R   E   D   L   H   C   R   L   L   P   E   E   F   P   D
UniRef90_UPI00036609BA	T   A   E   L   A   L   D   G   A   R   I   T   L   E   T   G   D   R   Q   A   A   G   Q   C   L   D   H   A   F   P   D
UniRef90_UPI00029A78C2	Q   I   R   K   A   A   T   D   E   R   V   T   F   T   C   G   D   F   S   A   G   I   P   M   P   A   E   D   A   P   R   L   P   N   F
UniRef90_V7HLP6	M   L   H   T   E   P   K   K   G   T   V   H   L   S   W   S   E   G   S   S   T   F   V   A   G   D   V   K   D   F   P   P   M   P   E
UniRef90_X1T8E0	S   V   Q   L   T   V   D   G   D   R   V   A   L   E   A   G   D   R   Q   A   A   G   Q   R   L   H   H   D   F   P   D
UniRef90_UPI00037C0D84	R   V   E   I   D   A   T   E   N   E   M   W   L   R   S   D   R   G   D   R   S   C   R   L   L   A   E   P   F   P   D
UniRef90_L7K6I5	W   V   T   I   R   Q   N   G   D   K   V   E   L   L   C   D   G   Y   E   I   P   V   D   T   A   P   V   A   E   Y   P   D   L   P
UniRef90_UPI0004679B60	T   I   K   I   E   V   Q   N   K   K   V   S   L   A   W   S   G   G   T   A   S   Y   P   T   Q   A   I   Q   D   F   P   L   L   P   E
UniRef90_X1S574	D   L   V   L   K   A   T   D   D   A   M   V   L   D   C   D   G   V   E   H   S   V   S   R   V   D   G   E   F   P   D   W
UniRef90_L8DKI8	M   L   T   I   E   A   N   G   E   I   T   F   S   W   D   G   G   K   S   S   Y   P   L   V   K   S   D   N   Y   P   L   S   P   E
UniRef90_X1MPZ2	G   T   L   T   F   A   D   D   M   K   T   V   V   R   H   G   K   G   R   L   T   M   P   I   L   P   G   A   D   F
UniRef90_F7XZU3	UniRef90_E8S112
UniRef90_S5Y0T8	I   V   T   I   Q   R   E   G   D   V   L   S   I   Q   L   G   P   L   T   I   K   R   Q   L   I   P   I   E   D   W   P   V   M   A   E
UniRef90_UPI0003646A89	R   V   Q   V   D   R   T   P   S   A   V   T   F   R   P   G   D   D   R   A   R   I   L   A   A   E   F   P   D
UniRef90_UPI0002EC3BBE	V   V   T   L   K   V   E   N   H   E   V   T   I   K   G   T   N   Q   G   S   T   R   G   L   D   P   E   D   Y   P   Y   I   P
UniRef90_UPI00046ED70A	T   I   T   F   N   S   T   D   S   V   I   N   I   Y   E   D   T   T   N   F   T   L   T   K   I   S   S   E   Q   Y   P   Y   V   D
UniRef90_H0RLV2	V   V   E   L   T   V   D   D   D   G   L   T   I   T   P   G   G   R   R   R   H   C   R   L   I   D   D   T   F   P   D
UniRef90_L7KVW1	R   V   E   I   E   A   N   E   N   E   M   W   L   R   T   G   R   G   D   R   S   C   R   L   L   A   E   P   F   P   D
UniRef90_UPI000465B421	K   I   K   F   K   E   D   E   S   K   L   D   I   I   G   E   S   G   N
UniRef90_X1NI65	M   L   T   I   E   Q   N   N
UniRef90_E0TJV7	K   I   S   L   E   Q   V   D   N   T   V   I   L   R   S   G   L   D   Q   F   S   I   K   L   N   D   V   D   E   F   P   E   L   D
UniRef90_W8YQ73	L   E   L   E   G   P   S   G   G   M   A   R   I   K   S   G   Q   S   E   H   R   L   A   V   A   E   F   G   E   P   P   V   L   A   D
UniRef90_UPI000476AF98	E   V   R   L   E   T   G   P   A   G   T   A   L   V   V   D   G   D   S   R   A   V   P   V   V   D   E   E   F   P   A

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