

QUERY	1	10	20	30	40
UniRef90_B4GNQ7	A K P Q P	I A A N W K C	G N T T A S I E K L V Q F N E H T I S H D V Q C V V		
UniRef90_A8B3A8	S A R K F C V	G G N W K M N G D Q K S I A E I C K T L S G A A L L D P N T E V V I			
UniRef90_R7TTG2	A A R R F C V	G G N W K M H G S K N S I R D I C N T L K G A S L D P N V E V V I			
UniRef90_K8EFU9	Q R K F F V	G G N W K M N G N K A S M D V I V S T L N E G G C N P N T E V V V			
UniRef90_L7UZA7	R Q K F F V	G G N W K M N G N K T A I K E I V D F L K N G P L D S N V E V V V			
UniRef90_UPI00047A7CA8	R R R I V	G G N W K M N M T P A K T V E L I A T L R P L V E S L D D V V F			
UniRef90_G0S613	R K F F V	G G N F K C M N G T K E S I K A I V K N L N E A Q L D P N V E V V I			
UniRef90_S9PLC5	S R R K L I	A G N W K M N K T L S E A L A L V R E L K A G L P A E R V E V A V			
UniRef90_G6CIZ7	R K F F V	G G N W K M N G Q S N Q I N E I V V N N L K N G S L D R S A E V V I			
UniRef90_D9TNA1	R I P I I	A G N W K M H M T P S D A V N L V N E L K P L V A D T D V E V V V			
UniRef90_W5LL60	A S R R F F V	G G N W K M N G S K D T L G E L I T T L N T A S L N E E T E V V C			
UniRef90_A4J8T9	R K L I I	A G N W K M H K T V A E A V S F V Q E L K Q K D L G N G V E V V V			
UniRef90_R6Q571	R K K L I I	A G N W K M N K T P A E A K A L C E L L K D K V N T T D A D V V F			
UniRef90_E7A2J8	R T F F V	G G N W K M N G S L E S I K S L T Q T L T Q A K L D S N V E V V V			
UniRef90_R6G8M7	R K K I V	A G N W K M N K T P S E A V E L V N M L K P L C A N E D V D V V F			
UniRef90_K9LHF9	R K F F V	G G N W K M N G S T A L I K S L V A E I K P L C A N E D V D V V F			
UniRef90_D6Y129	R K P I I	A G N W K M N K T K S E A V E F L Q A I K T A V P S A D V D S V V			
UniRef90_F0S313	R R F L I I	A G N W K M H K T V S E A I E L V R E L K N L V K D S D R D I L I I			
UniRef90_A0PYP2	R K A I I	A G N W K M N N T I S Q G L K L V E E L K P L V A D A N C D V V V			
UniRef90_R5JLP2	R R K L I I	A G N W K M N M T P S Q A L A L V E E L K P L V V N P D V D V V Y			
UniRef90_S2IZQ2	R N F F I	G G N W K M N G S V K Q A K E L V E M L N G F E V P A N T E V V V			
UniRef90_X8J5R5	R K F F V	G G N F K M N G T V K S I Q E I I I E N L N N A K L N S D T E V V I			
UniRef90_W6N518	R K A I I	A G N W K M N K T V D E A A K L I E E L K P L V K D A K A D V V V			
UniRef90_E1IA19	R K P I I	A G N W K M Y K T L G E A R E L V A G L L A G L G D A D R E V V V			
UniRef90_H3NMX7	R K P I I	A G N W K M N K T Y S E A K E L L K E I A A L E L N S E V E A V V			
UniRef90_M5DCH3	S G R K F F V	G G N W K M N G D R D S I G A L V Q V L N D G E F N P E T E V V V			
UniRef90_UPI0002D9181E	R K P I I	A G N W K M N K V L A D A E A F V A D A K D K V P A D K V D S I V			
UniRef90_UP10003A53FB2	R K I V I	A G N W K M Y K T N Q E A V K V L S E L K D L V K D K N V E I V I			
UniRef90_Q5YBB3	R K F F V	G G N W K C N G T K E S V S A L V K A L S A A K L P D K V D V V V			
UniRef90_B814U5	P R K V I A	A G N W K M N K T A S E A V E F V N A L K P A V A D A K N E V V V			
UniRef90_W2S8C1	R K F F V	G G N F K M N G T I Q S I K D I V H N L S S A K L D P N T E V V I			
UniRef90_C0EAW8	R E A I I	A G N W K M N K T R P E A K S L I E E L K P M V A N A N C C G V V I			
UniRef90_M1W5Z8	R K F F V	G G N F K M N G S V S S I K E I V K N L N N A V L D A E V E V V V			
UniRef90_Q12574	R S F F V	G G N W K L N P T L S A A K A L V E A L N K A D L D P S T E V V V			
UniRef90_A5G381	R K P V I	A G N W K L Y K T T S E A L E L V N E I I P L V K N A G V E I V V			
UniRef90_B3QV54	R R K F V	A G N W K M N K D L L G A V S L A T E I L Q L L G D E A C V A I			
UniRef90_G9XDJ7	R K P I I	A G N W K M N L T I K E A V K F V E D I I K S E V S G T D V E S V I			
UniRef90_D2QWI9	R R K F I	A G N W K M N L T K A A A V E L A A Q G L A A K I G T P S V D V A V			
UniRef90_A6CEM4	R R F L V	A G N W K M N T T K E S G A Q L A Q A L A S E V P S E N V E V L V			
UniRef90_S8FUL8	R Q F F V	G G N F K M N P A T R E A K K L V K T L N G A T L D P N V E V V I			
UniRef90_R7A1X8	R R K V I	A G N W K M N M L P N E A I D F I Q E L T P L V K D T K N E V V I			
UniRef90_R7H8F4	R R K V V	A G N W K M N M T P S E A V A L V K K L K P N M E N S D V D V I F			
UniRef90_E6MEK9	S R R P V I	A G N W K M N K T I G E T K E L L I E T L K P L V K D A T A E V V F			
UniRef90_A8MFY0	R K P I I	A G N W K M N K V S K E A L D L V N Q I K D E V H K T E V E V V V			
UniRef90_S8DIS1	R K F F V	G G N W K C N G S K E S I G K L V S E L N N A T L E A D V D V V V			
UniRef90_D6SAR1	R K P L I	A G N W K M N M T D G E T K Q F L N D D L K N F E I S D N V E A C I			
UniRef90_F2DTB2	K F F V	G G N W K C N G T K E S I S K L V S D D L N A A T L E S D V D V V V			
UniRef90_UP1000479DBD8	R K P I I	A G N W K M N K V S S E A R S F V E E V K S L V P N E N V D S V V			
UniRef90_L8GA44	R Q F F V	G G N F K M N G S V Q S I K K I I S G L N E A N L D P K V E V V V			
UniRef90_R7KPG5	R K A V I	A G N W K M N K T R P E A K A L L E A I K P L V A N A K V E V I A			
UniRef90_C4JUZ9	R K F F V	G G N F K M N G T Q K S I A D I I S N L N N A N D P N T E V V L			
UniRef90_UP100047ADDBB	R I P L I	A G N W K M N K T V T D A I E L V N E I K D V A N N T D V E V V V			
UniRef90_R7RJUZ	R R V I V	A G N W K M N K T A K E A A K F I I S E L K P L V A D K K T G I V I			
UniRef90_M7NAJ4	R K P I I	A G N W K M H K T L G E A E S F F D S V K G K L P D A D D T V I C			
UniRef90_UP100036FF478	R K N M V	A G N W K M N T T L P E A Q A L I S E I V H M V Q D P A V E V V V			
UniRef90_G8PC31	R T P I	A G N W K M N K N P E E T Q A F L E A I K G K L P D A N V E S V I			
UniRef90_R5L068	S L R K A V I	A G N W K M N N T P S Q T T A L I N E M K P L V K D A D C D V I I			
UniRef90_Q5WDK7	R K P I I	A G N W K M N K T I G E A V D F V E A V K A N V P A A T V D S V V			
UniRef90_R1CQ06	R T P I I	A G N W K M N K T I S E G V E L V N K I K D V A A K T D V E V V V			
UniRef90_R6BNT4	A L R K A I V	A G N W K M N D R K A A R E L G E L T P M V K D A A C E V V L			
UniRef90_D0LTS6	S K R T P V	V G N W K L N K T V T E A L S L V T D L N Q L G A R D V E I G V			
UniRef90_K2A8B0	S R I P I I	A G N W K M N M T L T E A K E L V Q G I Y S L K F P G Q V D V V V			
UniRef90_J9GPA8	R K K L V	A G N W K M N K N L Q E G V A L A K E L N E A L T A P N C D V V I			
UniRef90_A9SAR2	K F F V	G G N W K C N G T E S I K K L V E D L N S A Q I E D D V D V V V			
UniRef90_R5AFT4	R K P I I	A G N W K M N K T P E E A K E L V T A L V P L V K N A K C D V V I			
UniRef90_R5X6W6	R K P I I	A G N W K M N K N I K E A L E F V K E V G S R A D R D D V E A V I			
UniRef90_E6U865	S R K T V I	A G N W K M N K T P D E A A A L I N E M K P A A D K A A C D V V L			
UniRef90_I3IN58	R K K P L I	I G N W K M N L T L K E G V A F A Q S L R D S L S G K N V L C G I			
UniRef90_M4BC88	R K Y V I	G G N W K C N G T I Q S V T D L C T N Q V D A S D K V E V V V			
UniRef90_UP100034870F4	R K P I I	A G N W K M N K T L G E A K M F V Q E V K G Q Q V P A N D V D A V V			
UniRef90_M3CQP9	R Q F F V	G G N F K M N G S V N T I K D I V S H L N A A K V D P A T E V V I			
UniRef90_U4TWL1	R K P I I	A G N W K M N M N P D E T R A F V A A V K N E L P D P K V E S V I			
UniRef90_Q8ENP4	R K K V I	A G N W K M N K V L S E A G E F M N S V V K A P K G N D V E A I V			
UniRef90_W7BE80	R K P I I	A G N W K M N K T A A K A A E F V E E V K G K V P G E A V D S V I			
UniRef90_UP100039ED7A7	R R P L V	A G N W K M H G T R Q S V D S L L K G L G Q Q D W P E G V D V M I			
UniRef90_K2GRF2	R K Q V I	A G N W K M N K T H K E A E S F I N E V K G K V P S E S V E S V V			
UniRef90_L7VQH0	K M A	A G N W K M N K T P N E A V E F I Q N Q L K D K V K D A E T E V V V			
UniRef90_UP100036A880F	R K P F I	A G N W K M N M T I S E A S E L V K T V L E K S R D T E A E I V I			
UniRef90_Z4WZP4	S M R K N I V	A G N W K M N K T L Q E G T S F I E E L K A T L S G K H C D V V I			
UniRef90_UP10004418569	R K F F V	G G N F K L N P S R E Q K K A I V K V L N E A E L L D D A V I E V V I			
UniRef90_W4JNS5	P R Q F F V	G G N F K M N K T P R E Q K R A L I K T L N G A T L D P Q T E V V I			
UniRef90_Q7UP89	S R R L I I	A G N W K M N M R A E S G A S L A K G L V D A V K S P A V E V V L			
UniRef90_A4BAM1	R R T L V	A A N W K M N G N K A S N E A L L E A F K K G F D G S A D T A V			
UniRef90_K6D5F6	R K P I I	A G N W K M H K I L T E A T S F V E Q V K G S I P S P K I D S V V			
UniRef90_D1AY87	R K I V I	A G N W K M N K T R T E T E K F K E L L P V E G K N V E I V V			
UniRef90_A0A017RWZ7	R K A I I	A G N W K M H N T P K E S V K L I M E L K D K V K D A N C C E V V V			
UniRef90_A4G646	R R K L V	A G N W K M N G S L A A N A L L L A E I K A E F G N P A C D V A V			
UniRef90_E1L4Y4	R K Q I I	A G N W K M N G T I A S G S I L I E A F T S F L G D K D E C V V V			
UniRef90_UP10003672669	R K P I I	A G N W K M N K T P S E A K S F A A E V K N S V P D K S V D S V I			
UniRef90_V5WJ97	R N Y F L	A G N W K M N K T P S E A K S F A A E V K N S V P D K S V D S V I			
UniRef90_Q33BU2	R F F I	G G N W K C N G T L Q S V T Q L V D E L N A G S V P D S V E I V V			

QUERY		50	60	70	80
UniRef90_B4GNQ7	A P T F V H I P L V Q A K L R N P K Y V I S A Q N A A K S G A F T G E E V S M P				
UniRef90_A8B3A8	G C P A I Y L M Y A R N L L P C T V G V A G Q N A Y K V A K G A F T G E E I S P S G				
UniRef90_R7TTG2	A C P A P Y L D Y C R S L L P P S V A L A A Q N C Y K V E Q G A F T G E E I S P P Q				
UniRef90_K8EFU9	S P P A I Y L D Y V R Q K L D K R I G V A A Q N C Y K A E K G A F T G E E I S P Q				
UniRef90_L7UZA7	C P P F T A L A A V A E V L A G S K L A L G A Q N M H W D Q G A Y T G E E I S P L				
UniRef90_UPI00047A7CA8	G V P A I Y L M L C K N I L P D N I R V A A Q N C Y K V D K G A F T G E E I S P Q				
UniRef90_G0S613	C V P A I D I V P A I T A T R G T N I A I G A Q N M Y F E S G A Y T G E E I S V S				
UniRef90_S9PLC5	A P P A L Y L Q L A V D S L T T K E G V V S A Q N V Y D K P N G A F T G E E V S A P				
UniRef90_G6CIZ7	G V P A I Y L A Q V R S N L P K S I G V A A Q N C Y W K A D K G A F T G E E V S A P				
UniRef90_D9TNA1	I P P F V D L V D V K K A L D G S N I R L G A Q N M H W E K G A F T G E E V S P L				
UniRef90_W5LL60	G A P S I Y L D Y A R S N L D P K I G V A A Q N C Y K V A K G A F T G E E I S P A				
UniRef90_A4J8T9	C P T F T A L A P V A E A L K G S N I A L G A Q N M H W E Q G A F T G E E I S A A				
UniRef90_R6Q571	C V P F V D L Y P V L E A L K D T N I A V G A E N M H F E S G A Y T G E E V S V				
UniRef90_E7A2J8	A P P S L Y L V A V Q E H L K G S K V A V A A Q N A Y H K S G A Y T G E E V S V				
UniRef90_R6G8M7	C V P A I D I I P A M E A A K G S N I A I G A E N M Y E S G A Y T G E E I S P A				
UniRef90_K9LHF9	A P P A V Y L E K T R A T A N K N I G V A A Q N V Y Y K E K G A Y T G E E I S P A				
UniRef90_D6Y129	C S P H L Y L D A L V Q E A A G T D V K I G A Q N M Y F E S G A F T G E E T S P M				
UniRef90_F0S313	C P P F T A L Y P V S K E L E G S N I L G G Q N M Y F E E Q G A F T G E E I S P L				
UniRef90_A0PYP2	C P P T L A L D A V V K A T E G T N I K V G A Q N M H F E S G A F T G E E T A P A				
UniRef90_R5JLP2	C V P A I D I V P V V N A V V K G T N V E V G A E N M Y E K G A Y T G E E I S A P				
UniRef90_S2IZQ2	A P P A L Y V D R V N Q G L K K E I K V A A Q N T Y I K A S G A Y T G E E I S P Q				
UniRef90_X8J5R5	A P P A L Y L L T S L A A V K N N I Q V A A Q N A Y I K S S G A F T G E E I S P A				
UniRef90_W6N518	C P P Y V C L D T V L K A A K G T N I K V G A Q N M H F E S G A F T G E E I A P Q				
UniRef90_E11AM9	C P P Y T A L A S V G E Q V A N T T G I S L G Q E V F Y E A Q G A F T G A I A P Q				
UniRef90_H3NMX7	C P P F T N L A L A K E L L K D T N V N V E V G A Q N A Y F E S G A F T G E E V S P V				
UniRef90_M5DCH3	S P P P M V Y V G L V Q Q S L R P E I T V A V V Q N C Y A A A K G A F T G E E I S P Q				
UniRef90_UPI0002D9181E	C A P F P Y L Q A L V S K A K G T D L A I A A Q N M H F E S G A F T G E E V S P V				
UniRef90_Q5YBB3	G A P F T T L S D A V K A V E G S N I K I A A E N V Y P K Q G A F T G E E I S P N				
UniRef90_B814U5	A P T F L H S Q A L S S L P S R V E V S A Q N C W I K G G G A F T G E E I S A E				
UniRef90_W2S8C1	G V P F V C L P G V V A A A K G S N I K V A A Q N M H W E K G A F T G E E V S G P				
UniRef90_C0EAW8	S P P A L Y L L L T R E H L R E G L E V A A Q N V F D K P N G A F T G E E I S V Q				
UniRef90_M1W5Z8	C V P F T N L E T A L Q L T Q G S N I K V G A E N C H F E S G A F T G E E I S A D				
UniRef90_Q12574	S P P A L Y L Q L V R D S L R S G I D V A A Q N V Y D K P N G A F T G E E I S V S				
UniRef90_A5G381	A P P A L Y L L P I Q E I A G K A V K V A A Q N A Y F K E S G A F T G E E I S P K				
UniRef90_B3QV54	A P V F T V L S T V K N A L K G T N I L A A Q D C F W D E Q G A Y T G E E V S S T				
UniRef90_G9XDJ7	A P T F L B L C Q Q A V F Q V I D E S A I K L A A Q Q N C Y H F E S G A F T G E E V S A P				
UniRef90_D2QWI9	C P P P S V Y L D A V V V G A L A G S A I Q V G G Q N C Y H E E K G A F T G E E L S A A				
UniRef90_A6CEM4	C P P F P Y L T T I G E I V V S G S G V G F G A Q N C Y H E P G A F T G E E T S T E				
UniRef90_S8FUL8	A P P A I Y L L A L Q E I L R K D V K P V S A Q N C Y H F K P S G A F T G E E I S P A				
UniRef90_R7A1X8	C V P Y T D L F Y A L L H V Q D T N I K I G A Q N M H W E K G A Y T G E E V S A P				
UniRef90_R7H8F4	C V P S I D I V P V V E A C K G T K G T K I S V G A E N M Y Y E K G A Y T G E E V S P Q				
UniRef90_E6MEK9	A P T F V N L T A A V E A T K G T N I G I A A Q N M F Y E S G A F T G E E V S G E				
UniRef90_A8MFY0	C C P F T V L S Q V Q K A L V G T N T K L G A Q N M H W E E G A Y T G E E I S A N				
UniRef90_S8DIS1	A P P F V Y I D Q V K N S L V N S R I Q I A A Q N C W T G K G A F T G E E I S V E				
UniRef90_D6SAR1	I S P F T S L K T L T E A L K D T N I S T G A Q N M Y F E S G A F T G E E I S P N				
UniRef90_F2DTB2	A P P F I Y I D Q V K S S L T D R I E V S A Q N T W I G K G G A F T G E E I S A E				
UniRef90_UPI000479DBD8	C A P A L A F L E S L V G L T E G S D L K V G A Q N M H F E N G G A F T G E E V S P V				
UniRef90_L8GA44	A P P S L Y L L L A R A E L R K E V E V A A Q N V F D K P N G A F T G E E I S A D				
UniRef90_R7KPG5	C V P F T N L E T A V N T T A G S N V K V G A E N V H F E S G A F T G E E I S A D				
UniRef90_C4JUZ9	S P P A L Y L L L T R S Q A D P K F G V A A Q N V F D K P M G A Y T G E E L S V E				
UniRef90_UPI00047ADDDB	C T P F I S L V G V S E I L K D S N V K L G A Q N M H W E S G A Y T G E E I S P T				
UniRef90_D0GIC8	G T P F T A L E S A V K C E A A G S N V K I A A Q N M N D N D G A F T G E E I S P L				
UniRef90_M7NAJ4	A P A P F L A A L S G R A G D G T P A V G A Q T M H E E E K G A F T G E E V S P V				
UniRef90_UPI00036FF478	C P P F P F L L P V G K L L Q G G Q F H G A Q N C H Q K S G A F T G E E V S A A				
UniRef90_G8PC31	A A P A I D L N A L Q E I L R K D V K P S G A F T G E E I S P T				
UniRef90_R5L068	C A P F V D L Q A A L E A A K G S N I M T G A E N C H W E S G A F T G E E V S A V				
UniRef90_Q5WDK7	C A P A L F L D R L L Q A V K G T E L K I G Q T M H F E D N G A F T G E E I S P K				
UniRef90_R1CQ06	C V P F V S L D A I K K E L E G T E V K L G A Q N M H W E S G A F T G E E I S P L				
UniRef90_R6BNT4	C V P Y T N L E T A L S L C E L T H G A E N C H W K S G A F T G E E I S A Q				
UniRef90_D0LTS6	A P V F P A L H P V A K A R L E D S N V V A G Q N C F W E E S G A F T G E E V S P A				
UniRef90_K2A8B0	A P P F T A L A Q V S Q I A K D T Y D L A A Q N H E E D Q G A F T G E E V S G R				
UniRef90_J9GPA8	C T P F I H A S V A N V I D S N L I G L G A E N C A D K S G A Y T G E E V S A E				
UniRef90_A9SAR2	A P P F F L Y I S Q V V G S L T D R I E V S A Q N Q S W V G K G G A F T G E E I S A D				
UniRef90_R5AFT4	C P P F V D L C A V K P I A G T N I H L G V Q N I H W E K G A F T G E E I S A D				
UniRef90_R5X6W6	C A P F L Q L K D L K E A T K G T K I K V G A Q N M H F E S G A F T G E E V S A E				
UniRef90_E6U865	C V P Y V D L P A A V I E A A K G S K I S I G A E N H W E E S G A F T G E E I S A P				
UniRef90_I3IN58	C P S F V S L R D I G K V L E G S G I Y M A A Q N V H S E N G A Y T G E E V S A P				
UniRef90_M4BC88	S P P A L H A L A K S L L Q D K I A V S A Q N V S Q S G L G A F T G E E I A A E				
UniRef90_UPI00034870F4	C A P A L F L E S L V N E A K G T D L K I G A Q N H F E E E S G A F T G E E I S P V				
UniRef90_M3CQP9	A P P A L Y L L L T R E H R P G I E V A A Q N V F D K P N G A F T G E E I S V E				
UniRef90_U4TWL1	A A P A V D I T A L V D A A K D S V L V P A A Q N N D H E S G A F T G E E I S P K				
UniRef90_Q8ENP4	C A P F P F L S K L V E Q A K G S N E S V K V A A Q N M H F E S G A F T G E E V S P V				
UniRef90_W7BE80	A S P A L F L R D L L T R L T E G T N L Q I A A Q N C Y F E D E G A F T G E E T S P F				
UniRef90_UPI00039ED7A7	A P P A L Y I Q Q C H A S L I K T P V Y I G A Q S C Q A E P G A T G E E I S P V				
UniRef90_K2GRF2	C A P F P F L Q K L V E E T K D S D V E I G A Q N M Y F E N G A F T G E E V S C S				
UniRef90_L7VQH0	A V P Y V A I P A V V E T T C K G T N I K V G A Q N V H W E S G A Y T G E E V S C S				
UniRef90_UPI00036A880F	I P P F T A L Y A T K K V L Q G G S S I H I G A Q N F W E D S G A F T G E E I S P T				
UniRef90_Z4WZP4	G A P F I H A S I A R L A E G S P I G I A A E N C A N K E G A Y T G E E V S A A				
UniRef90UPI0004418569	A P P S I Y L L S S L E L V R P S I K I S A Q N C Y S K S S G A F T G E E I S A A				
UniRef90_W4JNS5	A P P A L Y L I P L L E T L R K D I K S A Q N S Y T K T A G A F T G E E I S P A				
UniRef90_Q7UP89	C P P S V Y L S G V A D A V V G T P V E L G A Q N Y A A E D G A F T G E E V N A S				
UniRef90_A4BAM1	F P P A L Y I S Q L A E S L K G T D I A Y G Q N A Y F E E E K G A Y T G E E L A L S				
UniRef90_K6D5F6	C A P F L F E R L V S E V K E S D L K I G A Q N M H F E K G A F T G E E V S P V				
UniRef90_D1AY87	A A P T F T N L E T A I R T K D S N I K V I A A Q N M N P D N G A Y T G E E I S P V				
UniRef90_A4G646	C P T F T S L A Q V L T L V E N T N I K V G A Q N M H Y E S G A Y T G E E I S P V				
UniRef90_E1L4Y4	C V P A P Y L A Q C L S S L S D S T I A L G Q D V S S H D S G A Y T G E E V S T A				
UniRef90UPI0003672669	C P P F T A L E R A V S L T R D T Q V V G V G A Q N M Y H D A G A F T G E E V S P V				
UniRef90_V5WJ97	A P S F I A I P G V V A E E L K G S N I L V G A Q N M S N E S G A H T G E E V S P E				
UniRef90_Q33BU2	A P T F V H D R V V Q R S L K S P F Q I A A Q D C F W V S K G G A Y T G E E V S A E				

QUERY	90	100	110	120
UniRef90_B4GNQ7	I L K D I G V H W V I L	G H S E R R T Y Y G E T D E I V A Q K V S E A C K Q G F		
UniRef90_A8B3A8	M L K D I G A D W V I L	G H S E R R A I F N E S D E L I A E K A E H A L A E G G L		
UniRef90_R7TTG2	M I K D I C G G Q W V I L	G H S E R R H V F K E D D V L I G E K I C K H A L L E S G L		
UniRef90_K8EFU9	M L Q D I C G C R Y V I L	G H S E R R Q Y F G E T D G Q V N Q K V K A A L A H G L		
UniRef90_L7UZA7	M I K D I V G A E W V I L	G H S E R R R N V F G E S D Q L I G E K V E H A L Q E G L		
UniRef90_UPI00047A7CA8	M L K E A G V V Y V I L	G H S E R R R T L L G E S D F V A S K S K Y A D N G I		
UniRef90_G0S613	Q L K D S G V H W T I L	G H S E R R R T L L G E S D F V A S K S K Y A D N G I		
UniRef90_S9PLC5	M L K D V G C S Y V I L	G H S E R R R Q Y F G E T D E T V N K R I R A V L A A G M		
UniRef90_G6CIZ7	M I K D V G A E W V I L	G H S E R R T I F G E S D S L V A E K V A N A L Q H N L		
UniRef90_D9TNA1	M L K E I G V E Y V I L	G H S E R R R Q Y F A E T D E T V N R K V K S A L S H G L		
UniRef90_W5LL60	M I K D I C D W V I L	R H V F G E D D E L I G Q K V A H A L E S D L		
UniRef90_A4J8T9	M L Q E L G V K Y V I L	G H S E R R R Q Y F G E T D Q N V N Q K V K A A L E V G L		
UniRef90_R6Q571	M L K E M G V K Y V I L	G H S E R R R Q Y F A E T D E T V N K K V K K A L L E S G L		
UniRef90_E7A2J8	M L K D A A I P W V V L	G H S E R R R T L F H E S D A N V A E K T A A A L E Q R L		
UniRef90_R6G8M7	M L V D A D G V K Y V I L	G H S E R R R E Y F A E T D E T V N G E K T A F A L E N G L		
UniRef90_K9LHF9	I L K D V N V D W V I L	G H S E R R R Q Y F N E T F V G E K T A F A L E N G L		
UniRef90_D6Y129	A L N D L G V T Y V V L	G H S E R R R E L F G E T D E S V N K K T H A A F S H G L		
UniRef90_F0S313	M L K S V G C S Y V I L	M L K S V G C S Y V I L		
UniRef90_A0PYP2	M L E E L G V K Y V I L	G H S E R R R D Y F K E D D A F L V G E K T A F A L D A G V		
UniRef90_R5JLP2	M L V D A D G V K Y V I L	G H S E R R R E Y F H E S D E L V A D K T K A A L E A G L		
UniRef90_S2IZQ2	M L K D M G V D W V V L	G H S E R R R E Y F H E S D E L V A D K T K A A L E A G L		
UniRef90_X8J5R5	Q L V D A D G V P W V I L	G H S E R R R T L F G E T D E I V A D K T K A A L E A G L		
UniRef90_W6N518	M L E S M G V E Y V I L	G H S E R R R Q Y F G D T D A S V N R K L H A A L L A N G L		
UniRef90_E11AM9	M L C D V G C R Y V I V	G H S E R R R Q F F G D T D A S V N R K L H A A L L A N G L		
UniRef90_H3NMX7	F L K D L G I K Y V I L	G H S E R R R E Y F G E T D E D I N K K I K A V L S Q G L		
UniRef90_M5DCH3	M A L D V G A T W A I L	G H S E R R R N V F G E S D E L I A R K V G F A L Q S G V		
UniRef90_UPI0002D9181E	M L K D L G V K Y V I L	G H S E R R R E Y F A E T D E T V N K K A H A A F E H G M		
UniRef90_UPI0003A53FB2	M L K A I G V S H V I L	G H S E R R R E I F K E T D E T V N E K V K A V L E N G L		
UniRef90_Q5YBB3	Q I V D L G A K W V I L	G H S E R R R H I M G E S D A T V A D K V A Y A L S K G L		
UniRef90_B814U5	M L A D L G V D Y V I I	G H S E R R R E Y F G E T T N E M I V N K K A H A I F K Y G M		
UniRef90_W2S8C1	Q L K D S N I T W T I L	G H S E R R R T I L Q E S D D F V A S K T K N S L D G G V		
UniRef90_C0EAW8	M L A E M G V E Y V I L	G H S E R R R Q Y F G E T D E T V N K T R A A I E A G L		
UniRef90_M1W5Z8	Q L K D S N I N W V I L	G H S E R R R T I L K E S D E V V A S K T K Y A T E N G V		
UniRef90_Q12574	Q I S D A G I L P Y V I L	G H S E R R R T L F H E T S E E V V A L K T R A A L D N G L		
UniRef90_A5G381	M L L D A G C S H V I L	G H S E R R R Q Y F F G E T D E T V N K N I A A L L R A G L		
UniRef90_B3QV54	M L R N S S G C E Y V I L	G H S E R R R Q Y F N E T D E I V N K K V K N A L L S V E L		
UniRef90_G9XDJ7	M L K E I G I D Y C V I L	G H S E R R R Q Y F A E T D E T V N K K L K Q A F K Y D I		
UniRef90_D2QWI9	M L L D I G C K Y V I L	G H S E R R R H I L K E T T N A D I Q K K V V A A L A A G L		
UniRef90_A6CEM4	M L T D V G C R S V I L	G H S E R R R H V L K E T D T D I N L K V K K A L L E A G L		
UniRef90_S8FUL8	Q L A A D A Q V P Y V I L	G H S E R R R T L F H E T S E L V A Q K T K A A L E A G L		
UniRef90_R7A1X8	M L K S I G V E Y V I I	G H S E R R R Q Y F A E T D E T V N K K I K S A L A H G L		
UniRef90_R7H8F4	M L V D A G V S Y V I I	G H S E R R R Q Y F K E D N E M V V N R K I R K A I E H D I		
UniRef90_E6MEK9	M L K A I G V R Y V I L	G H S E R R R Q Y F A E T D E T V N K K T L K A A L L G		
UniRef90_A8MFY0	M L K D I G V E Y V I L	G H S E R R R Q Y F N E T D E T V N K K V K K A I K E N L		
UniRef90_S8DIS1	Q I K D I G A G W V V L	G H S E R R R H I I G E D D Q F I G K K A A Y A L S Q D L		
UniRef90_D6SAR1	M L K D L G V D Y V I I	G H S E R R R T I F K E D D E L L N K K I K S A L N H N L		
UniRef90_F2DTB2	Q L V D I G C Q W V I L	G H S E R R R R H V I G E D D Q F I G K K A A Y A L S Q N L		
UniRef90_UPI000479DBD8	A L K D L G V S Y V I L	G H S E R R R E M F A E T D E T V N K K T L A A F K H G G L		
UniRef90_L8GA44	Q L K D S N I N G W T I L	G H S E R R R R V I L K E S D E F V A S K T K N A L D Q G V		
UniRef90_R7KPG5	M L T D L G V E Y V V I	G H S E R R R R Q Y F G E T D E T V N K K R T K A A L A A G L		
UniRef90_C4JUZ9	Q L H D C G V S W A L V	G H S E R R R R V I L K E D D D F A A R K T K A A I D G G L		
UniRef90_UPI00047ADDBB	M L K D I G V D Y V I I	G H S E R R R R Q Y F N E T D E T V N K K I K S A F I H G L		
UniRef90_D0GIC8	M L K D L G V E Y V I I	G H S E R R R R E Y Y G E T D E T V N K K V K A A A L K H G L		
UniRef90_M7NAJ4	M L T D L G V R Y V I I	G H S E R R R R E Y Y G E T D E T V N K K V K S A F A H G L		
UniRef90_UPI00036FF478	M L Q S V G C E Y V I L	G H S E R R R R Q Y F F R E D D E L S Q K K A A L I A A G L		
UniRef90_G8PC31	A L S E M G V D Y V I I	G H S E R R R R Q Y F F G E T D E T V N K K A K A I F R N N M		
UniRef90_R5L068	M L K E M G V P Y V I I	G H S E R R R R Q Y F F G E T D E T V N K K R V R A A L D A G L		
UniRef90_Q5WDK7	A L S D M G V H Y V I I	G H S E R R R R E M F A E T D E T V N K K V H A A F A H H L		
UniRef90_R1CQ06	M L K E I G I D Y V I I	G H S E R R R R Q Y F F N E T D E T V N K K I K A A A I A H G I L		
UniRef90_R6BNT4	M L A E M G V E Y V I I	G H S E R R R R Q Y F F G E T D Q T V N A R R A A L D A G L		
UniRef90_D0LTS6	Q L A D V G C R Y V I I	G H S E R R R R Q Y F F G E T D E T V N G K K A R A A I I D A G L		
UniRef90_K2A8B0	F I K D A G A G N Y V I I	G H S E R R R R Q Y F N E T T N E L I A K K I K S A A L R H E L		
UniRef90_J9GPA8	M V K S T G A N Y V I L	G H S E R R R R A Y Y Y H E T T P E I L K E K V N L A L E N N L		
UniRef90_A9SAR2	Q L V D V G K V K W V I Q	G H S E R R R R H V I G E S N T V G K K S A Y A L S K G L		
UniRef90_R5AFT4	M L K A H G V E Y V A I V	G H S E R R R R Q Y F F G E T D E T V N K K R A K A A I A A G I I		
UniRef90_R5X6W6	M L Q E I G M D Y V I I	G H S E R R R R E Y F F G E T D E T V N K K V L K A L Q I G I		
UniRef90_E6U865	M L N A L G V Q Y A I V I	G H S E R R R R Q Y F F G E T T N E T V N K K R T A A A L A H G L		
UniRef90_I3IN58	M V K E T G C T H V L I	G H S E R R R R N I F G E T D A F I N A K K A K A A L L S V G L		
UniRef90_M4BC88	Q L V D F E L K W T L I	T G H S E R R R R A L Y G E T D E I V A K K T K R A L L D V G L		
UniRef90_UPI00034870F4	A L Q D M N V S Y V I I	G H S E R R R R E M F A E T D E T V N K K V H A A F A H S L		
UniRef90_M3CQP9	Q L K D S N I T W T I L	G H S E R R R R V I L Q E T T N Q F V G S K T K V A L D G G L		
UniRef90_U4TWL1	V L A D L G V K Y V I I	G H S E R R R R R G Y Y H E T N E D V N K K V H A A F A H S L		
UniRef90_Q8ENP4	M L K D L G V T H V V I I	G H S E R R R R E L F A E T D E T V N K K T K A A F A H D L		
UniRef90_W7BE80	A L A D L G V S Y V V I	G H S E R R R R E Y Y F H E T D E D I V N K K A H A I L K H G M		
UniRef90_UPI00039ED7A7	Q L R D A G C E Y V V L	G H S E R R R R S L F D E S D E V V R K K F A A A L A C G L		
UniRef90_K2GRF2	M L K E L G V T Y V V L	G H S E R R R R R D V F G E T D E T V N K K V H A A F D H D L		
UniRef90_L7VQH0	M L K E L G V Q Y V I I	G H S E R R R R Q Y F F G E T T N E T V N K K A H A I L N A G M		
UniRef90UPI00036A880F	M L K D A G C T Y V V I I	G H S E R R R R R Q Y F F G E T T N E T V N K K V H A A F K N E L		
UniRef90_Z4WZP4	M V A S T G A R Y V I I	G H S E R R R R A Y Y Y G E D D N T I L T E K V R L A L E N G L		
UniRef90UPI0004418569	Q L V D A G V P Y V I I	G H S E R R R R R L F H E T S E I V A E K T K A A V V D A G L		
UniRef90_W4JNS5	Q L V D A G I P Y V I I	G H S E R R R R S I F G E T S A V T K T R V A L D A G L		
UniRef90_Q7UP89	M L T D V G C R F V I I	G H S E R R R R Q L I M G E T D A C V A K L H A A L L A G N L		
UniRef90_A4BAM1	M V K E F G C Q Y V I I	G H S E R R R R E I F G E T T D E Q I A A K V E A T L A A D L		
UniRef90_K6DF56	A L K D I G V D Y V I I	G H S E R R R R E M F A E T D E T V N K K V H A A F K N E L		
UniRef90_D1AY87	M L K D L G V K Y V I I	G H S E R R R R R Q Y F F H E G D D L I V N K K V K S A L L T H E L		
UniRef90_A0A017RWZ7	M L K E F A C R Y V I I	G H S E R R R R R A Y F F G E T T N E L V A Q K T V R A L S A G L		
UniRef90_A4G646	M L T E L G V S Y V I I	G H S E R R R R R E Y Y G E T T D A M V N E K I K S A F H H N L		
UniRef90_E1L4Y4	M L T E L G V D Y V I I	G H S E R R R R R E Y Y G E T T D A M V N E K I K S A F H H N L		
UniRef90UPI0003672669	A L A D L G V D V V I I	G H S E R R R R R M F N E T D A V N K K V K A A F A H H L		
UniRef90_V5WJ97	M L K D A G V D V V I I	G H S E R R R R R A I Y G E S D A F I N E K V Q L A L N H G F		
UniRef90_Q33BU2	M L H D M G I P W V I I	G H S E R R R R R R S L C R E D D E L V G M K C E Y A L S Q G L		

QUERY	130	140	150	160
UniRef90_B4GNQ7	M V I A C I G E T L Q Q R E A N Q T A K	V V L S Q T S A I A A K L T K D A W N Q		
UniRef90_A8B3A8	K V I A C I G E T L D E R E A G K T N E	V V A R Q M C A Y A K K V R D W T N		
UniRef90_R7TTG2	N V I A C I G E L L E D R E A G R T T E E	V C F R Q I K H I A S N V K D W T N		
UniRef90_K8EFU9	K I P I C V G E T L E E R E A G K T T E E	V V F R Q T Q V I S K H V K D W F K		
UniRef90_L7UZA7	H V I A C I G E L L E E R E A G K T T E E	T P E Q V A G L T P E D W K S		
UniRef90_UPI00047A7CA8	T P I L C C G E T L E Q R E A G K T T E E	R M Q I K S D L N G I P A S K V E E		
UniRef90_G0S613	S V I W C C G E S L Q E R E A G Q T I A V I	E K Q L A A L A A K L T P E D W K S		
UniRef90_S9PLC5	T P I V C C G E T L E E R E A G R T K D V V	E Q Q V L G A L K G Y Q A A E V A N		
UniRef90_G6CIZ7	K V I A C I G E T L E E R E S G K T E E V V	F R Q T K A L V P A I G D K W K N		
UniRef90_D9TNA1	K P I V C C G E T L E S Q R E D G K A F D V V	R E T K K A L D D V L K N D V T N		
UniRef90_W5LL60	G V I A C I G E K L E E R E A G T S E E V V	F E Q T R V I A D N V S D W S K		
UniRef90_A4J8T9	V P I V C C G E T L E Q R E A G S T E Q I V T Q T T G A L R P E Q V A G	G L R P E Q V A G L T P E D W K S		
UniRef90_R6Q571	L P I M C C G E T L E Q R E A N I T I E W V R M Q I K C G L A G L S A D D V K K	I K C G L A G L T P E D W K S		
UniRef90_E7A2J8	S V I L C C G E T L E Q R E A N E T V S V V V R Q L D A V A Q Q V T D W S S	V T A D Q A K T P E D W K S		
UniRef90_R6G8M7	T P I M C C G E T L E Q R E Q G V T M D F I R Q Q V K V G F L N V T A D Q A K T P E D W K S	V T A D Q A K T P E D W K S		
UniRef90_K9LHF9	K V I P C V G E K L E E R E A G K T M D I I F A Q L K A L A D N V K D W T N	K D W T N		
UniRef90_D6Y129	T P I V C C G E T L E E R E A N K T S D V V T L Q V K E G L K G L T A D Q V K E	T A D Q V K E		
UniRef90_F0S313	I P I L C C G E L L E E R E N G K T K E V V E E Q I R E G L K N V N K D A E	N K D A E		
UniRef90_A0PYP2	T P I L C C G E T L E E R E A D V T E E V L A Q K I K L D L A G L T E A Q I A E	T E A Q I A E		
UniRef90_R5JLP2	T P I L C C G E S L E E Q R E T G V T M D W I R L Q I K S D L A G V S A D D V K N N	V S A D D V K N N		
UniRef90_S2IZQ2	S V I A C I G E K L E E R E A N I T N D V V A R Q M K A I A S V K D W T N	K D W T N		
UniRef90_X8J5R5	S V V I L C C G E T L D E R E A G V T V K V C E R Q L D A V K A K V S D W T K K	V S D W T K K		
UniRef90_W6N518	I P I C C G E T L E E R E A N K T S D V V T L Q V K E G L K G L T A D Q V K E	I P I C C G E T L E E R E A N K T S D V V T L Q V K E G L K G L T A D Q V K E		
UniRef90_E1AM9	R P I M C V G E S K P Q R D A G E A E A V I N S N Q V R K G L K D L T K E E A K K	G V S A A Q M A E		
UniRef90_H3NMX7	V P I L C C G E T L E E R E A E K A Q E K V E T Q L K A D F E G L D A S Q F E N	V P I L C C G E T L E E R E A E K A Q E K V E T Q L K A D F E G L D A S Q F E N		
UniRef90_M5DCH3	K V I A C I G E Q L E E H R E A G Q T A E V L Y A Q M A A L F K T E P L E A W S N Q	K V I A C I G E Q L E E H R E A G Q T A E V L Y A Q M A A L F K T E P L E A W S N Q		
UniRef90_UPI0002D9181E	T P I I C C G E T L E E Q R E A N Q T M T L V A D Q V K K A L S G L T E E Q V K Q	T P I I C C G E T L E E Q R E A N Q T M T L V A D Q V K K A L S G L T E E Q V K Q		
UniRef90_UP10003A53FB2	V P I F C V G E K L E E R E S G K T L E I N S N Q V R K G L K D L T K E E A K K	V P I F C V G E K L E E R E S G K T L E I N S N Q V R K G L K D L T K E E A K K		
UniRef90_Q5YBB3	G V I F C I G E Q L E E R E A N H T M D V C T R Q M A A L A S K I S D W S R	G V I F C I G E Q L E E R E A N H T M D V C T R Q M A A L A S K I S D W S R		
UniRef90_B814U5	T P I I C C G E T L T Q R E Q G V T A D H I R Y Q I K V A L L D L T A E Q V S K	T P I I C C G E T L T Q R E Q G V T A D H I R Y Q I K V A L L D L T A E Q V S K		
UniRef90_W2S8C1	G V I L C C G E S L E E Q R E Q G T T V Q V V T K Q L D A V N K V I G K D G W S K	G V I L C C G E S L E E Q R E Q G T T V Q V V T K Q L D A V N K V I G K D G W S K		
UniRef90_C0EAW8	K V I L C V G E M L E E D R E N N I T E E L I S M Q T K I A L K G V T R D E L K N K	K V I L C V G E M L E E D R E N N I T E E L I S M Q T K I A L K G V T R D E L K N K		
UniRef90_M1W5Z8	S V I W C C G E S L E E R E A G K T V D V I V T K Q L E A L K T Q I N D W S K	S V I W C C G E S L E E R E A G K T V D V I V T K Q L E A L K T Q I N D W S K		
UniRef90_Q12574	K V I L C I G E T L K E E R E E G R T A A V C E E Q I S A V V K Q L K E E D W S N N	K V I L C I G E T L K E E R E E G R T A A V C E E Q I S A V V K Q L K E E D W S N N		
UniRef90_A5G381	T I I F C I G E T L H R E E N Q T F T V K S V V E T Q R V R G G L K D L T A E D M K S	T I I F C I G E T L H R E E N Q T F T V K S V V E T Q R V R G G L K D L T A E D M K S		
UniRef90_B3QV54	D V I M C V G E T L E E Q R E S G V T K S V V E T Q R V R G G L K D L T A E D M K S	D V I M C V G E T L E E Q R E S G V T K S V V E T Q R V R G G L K D L T A E D M K S		
UniRef90_G9XDJ7	V P I L C C G E T L E E R E S G V T K T N E I V K S Q V V A D I A G L D K S L V S K	V P I L C C G E T L E E R E S G V T K T N E I V K S Q V V A D I A G L D K S L V S K		
UniRef90_D2QWI9	T P I L C C G E T L L S S E R E A G Q T A A V V V H D Q F D G S L A G I S A E Q V Q Q	T P I L C C G E T L L S S E R E A G Q T A A V V V H D Q F D G S L A G I S A E Q V Q Q		
UniRef90_A6CEM4	Q V V L C C G E T L Q S S E R E A S D Q T E T V L N T Q M T G G L S G V D A S A F G Q Q	Q V V L C C G E T L Q S S E R E A S D Q T E T V L N T Q M T G G L S G V D A S A F G Q Q		
UniRef90_S8FUL8	S V I L C C G E T L Q E R E A S Q T E A V V V Q A Q K P V V A A L K E S D W A K	S V I L C C G E T L Q E R E A S Q T E A V V V Q A Q K P V V A A L K E S D W A K		
UniRef90_R7A1X8	K P I V C C G E T L E E R E A G K T E K V V T N Q I A K F E G I N A S D L E K	K P I V C C G E T L E E R E A G K T E K V V T N Q I A K F E G I N A S D L E K		
UniRef90_R7H8F4	I P I I C C G E T L E E R E A G K T E K V V T N Q I A K F E G I N A S D L E K	I P I I C C G E T L E E R E A G K T E K V V T N Q I A K F E G I N A S D L E K		
UniRef90_E6MEK9	T P I V C C G E T L E E R E A D K A E K V V S Q I K A G L I D D I T K	T P I V C C G E T L E E R E A D K A E K V V S Q I K A G L I D D I T K		
UniRef90_A8MFY0	K P I V C I G E S L E E R E A N Q T F D V I S R Q I K L D F A G V V P A E A M D N N	K P I V C I G E S L E E R E A N Q T F D V I S R Q I K L D F A G V V P A E A M D N N		
UniRef90_S8DIS1	G V I A C I G E L L E E R E A G R T F F E V C F Q Q L K A Y A D A V V S S W D K	G V I A C I G E L L E E R E A G R T F F E V C F Q Q L K A Y A D A V V S S W D K		
UniRef90_D6SAR1	K P I L C C G E N L E E R E S N N H E K I V E S Q I R S D L K G I S E Q D K S K	K P I L C C G E N L E E R E S N N H E K I V E S Q I R S D L K G I S E Q D K S K		
UniRef90_F2DTB2	K V I M A C I G E L L E E R E A G K T F D V C F Q Q L M K A F A D N I T D W K N Q	K V I M A C I G E L L E E R E A G K T F D V C F Q Q L M K A F A D N I T D W K N Q		
UniRef90_UPI00047DBD8	T P I V C C G E T L E E R E A G K T F D V C F Q Q L M K A F A D N I T D W K N Q	T P I V C C G E T L E E R E A G K T F D V C F Q Q L M K A F A D N I T D W K N Q		
UniRef90_L8GA44	R V I L C C G E S L E E R E A G K T F D V S V V T A Q L G A V A K I S A E Q W A N	R V I L C C G E S L E E R E A G K T F D V S V V T A Q L G A V A K I S A E Q W A N		
UniRef90_R7KPG5	K P I V C V G E L L E E R E A D I T E E V I S R Q I K L D F A G V V S A D D I K K	K P I V C V G E L L E E R E A D I T E E V I S R Q I K L D F A G V V S A D D I K K		
UniRef90_C4JUZ9	G V I L C V G E T L E E R E A S G K T V D V V T R Q L G A V A S R R L S V Q D W A K	G V I L C V G E T L E E R E A S G K T V D V V T R Q L G A V A S R R L S V Q D W A K		
UniRef90_UPI00047ADDB	N P I V C C G E T L E E R E S G I Q R E I V V K N Q I L K G I D G V E E K Y L K N Q	N P I V C C G E T L E E R E S G I Q R E I V V K N Q I L K G I D G V E E K Y L K N Q		
UniRef90_D0GIC8	K V I L C V G E V L E E R E E G K T F D V V V K E Q T V G G L K D F A G V V S A A D M A N N	K V I L C V G E V L E E R E E G K T F D V V V K E Q T V G G L K D F A G V V S A A D M A N N		
UniRef90_M7NAJ4	I P I V C C G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q	I P I V C C G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q		
UniRef90_UPI00036FF478	K P I F C V G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q	K P I F C V G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q		
UniRef90_G8PC31	T P I V C C G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q	T P I V C C G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q		
UniRef90_R5L068	K V I L C V G E V L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q	K V I L C V G E V L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q		
UniRef90_Q5WDK7	V P I M C C G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q	V P I M C C G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q		
UniRef90_R1CQ06	N P I V C V G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q	N P I V C V G E T L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q		
UniRef90_R6BNT4	K V I L C V G E V L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q	K V I L C V G E V L E E R E E G K T F D V V V N E Q V L K A L E D V S A E E D V K K Q		
UniRef90_D0LTS6	I A I I C M G E R E H E R D G G H T F R I D A Q L T G A L T P L K S E D D L E F E R	I A I I C M G E R E H E R D G G H T F R I D A Q L T G A L T P L K S E D D L E F E R		
UniRef90_K2A8B0	K P I V C V G E T L E E R E E G K T F D V V V K A Q L E G S L F D I T A E Q F A H	K P I V C V G E T L E E R E E G K T F D V V V K A Q L E G S L F D I T A E Q F A H		
UniRef90_J9GP8	E V I F C V G E V L E E R E E G K T F D V V V K A Q L E G S L F D I T A E Q F A H	E V I F C V G E V L E E R E E G K T F D V V V K A Q L E G S L F D I T A E Q F A H		
UniRef90_A9SAR2	G L I A C V G E L L E E R E E G K T F D V V V K A Q L E G S L F D I T A E Q F A H	G L I A C V G E L L E E R E E G K T F D V V V K A Q L E G S L F D I T A E Q F A H		
UniRef90_R5AFT4	T P I I C V G E S L E E R E E G K T F D V V V K A Q L E G S L F D I T A E Q F A H	T P I I C V G E S L E E R E E G K T F D V V V K A Q L E G S L F D I T A E Q F A H		
UniRef90_R5X6W6	N P I L C C G E T L E E R E E G K T F D V V V K			

QUERY	170	180	190	200
UniRef90_B4GNQ7	V V L A Y E P V W A G T G K V A T P E Q A Q E V H L L R K W V S E N I G T D			
UniRef90_A8B3A8	V V V A Y E P V W A G T G K T A T P E Q A Q E V H A F L R Q W L T D N I S K E D			
UniRef90_R7TTG2	V V I A Y E P V W A G T G K T A T P D Q A Q E V H S K V R N W L S T N V S A D			
UniRef90_K8EFU9	L V I A Y E P V W A G T G Q T A S E Q D A Q Q V N Q Y I R A L L A E Q Y G Q A			
UniRef90_L7UZA7	V V L A Y E P V W A G T G K T A S P Q Q A Q E V H Q K L R Q C F S E N V S P Q			
UniRef90_UPI00047A7CA8	M V I A Y E P I W A G T G K T A S P Q Q A Q E V C K A I R D C I A E I Y D D A			
UniRef90_G0S613	V V I A Y E P I W A G T G K V A T V E Q A Q E V H E A I R K W L A A N V N Q T			
UniRef90_S9PLC5	F V L A Y E P V W A G T G R T A T S A Q A Q E V H R A L R E Q L G R L Y D V G			
UniRef90_G6CIZ7	V V L A Y E P V W A G T G K T A S P Q Q A Q D V H A S L R K W L A E N V S A E			
UniRef90_D9TNA1	V V I A Y E P I W A G T G K T A T S K D A N D V I K V I R E T I A S I Y D I N			
UniRef90_W5LL60	V V L A Y E P V W A G T G K T A T P E Q A Q E V H E K L R A W M R E N I S E D			
UniRef90_A4J8T9	L V I A Y E P I W A G T G Q T A S D E D A Q Q V N Q I R Q V I D G Q F G G A			
UniRef90_R6Q571	V V V A Y E P I W A G T G K T A T S A Q A Q E V C C A I R R V L A E M Y G Q A			
UniRef90_E7A2J8	I V V A Y E P V W A G T G K V A T S Q Q A Q E V H A A I R N W A A E K L G K E			
UniRef90_R6G8M7	A V I A Y E P I W A G T G K T A T T E Q A Q E V C A E I R K C I A E I Y D D A			
UniRef90_K9LHF9	V V I A Y E P V W A G T G K V A T P E Q A Q E V H A G I R K W L A D N V S A E			
UniRef90_D6Y129	T V V A Y E P I W A G T G K T A T S E D A N E T C G V I R K V I A G E F G Q D			
UniRef90_F0S313	F V I A Y E P V W A G T G K T A T P E L A E E V H L F I R E V L S D M F G N E			
UniRef90_A0PYP2	T V I A Y E P I W A G T G K T A T S D Q A Q E T I A F V R K T V A G M F G A E			
UniRef90_R5JLP2	L V I A Y E P I W A G T G K T A T A D Q A Q E V C K G I R D L I A E I Y D E A			
UniRef90_S2IZQ2	V V V A Y E P V W A G T G K V A T P E Q A Q D V H A F L R Q W L A E N V S Q K			
UniRef90_X8J5R5	I V I A Y E P I W A G T G K V A S C Q Q A Q D V H K D I R A W V A K N I N S E			
UniRef90_W6N518	L V V A Y E P I W A G T G K T A T D E Q A N A T I A Y I S V I G K L Y G K D			
UniRef90_E11AM9	V V I A Y E P I W A G T G D T A S A D A Q A M H A A I R A T L A E L F G A E			
UniRef90_H3NMX7	I V I A Y E P I W A G T G K T A S A E D A E E M C A F I R Q H E N T F G K D			
UniRef90_M5DCH3	I V V A Y E P V W A G T G K T A T P E Q A Q E V H H Q L R E W L A A N V S V Q			
UniRef90_UPI0002D9181E	A V I A Y E P V W A G T G K T A T P E M A Q E T H K E I R K V L A D M F G Q E			
UniRef90_Q5YBB3	I V V A Y E P V W A G T G K V A T P D Q A Q E V H G L C R R W V A Q H V S P A			
UniRef90_B814U5	L V I A Y E P I W A G T G K T A T N E Q A N E V C T I I R E L V A E L Y G S E			
UniRef90_W2S8C1	V V I A Y E P I W A G T G K V A T T E Q A Q E V H A A I R K W L K D S V S S E			
UniRef90_C0EAW8	V I I A Y E P V W A G T G K T A T A D Q A A E V C G F I R E T I A K I Y D Q E			
UniRef90_M1W5Z8	I V I A Y E P I W A G T G K V A T T E Q A Q E V H K A I R E W L K S V S S K			
UniRef90_Q12574	I V I A Y E P V W A G T G K V A T T S Q A Q E T H V D V R K Y L A T A V S P K			
UniRef90_A5G381	V I I A Y E P V W A G T G K T A T D D Q A Q E A H K F I R G V V A K L C D S E			
UniRef90_B3QV54	V V I A Y E P V W A G T G K T A T P E Q A Q E V H A F I R G I V K D M F G E E			
UniRef90_G9XDJ7	L V I A Y E P I W A G T G K T A T S K Q A N E V I A Y I R E V V K D L Y D D E			
UniRef90_D2QWI9	V V I A Y E P V W A G T G K V A T P E Q A E E V H A N L R A H A A K L G Q A			
UniRef90_A6CEM4	I V I A Y E P V W A G T G L T A S P E Q A E A A H L Y R N W L K D Q Y S A E			
UniRef90_S8FUL8	I V I A Y E P V W A G T G R V A S A A Q A Q E A H A D T R K F L A Q A V S A A			
UniRef90_R7A1X8	I I V A Y E P I W A G T G K T A T K E D A N T T I M Q I R K K I A E I Y G Q N			
UniRef90_R7H8F4	C I I A Y E P I W A G T G R V A T T Q Q A Q E V C C S I R G I R D I Y G T Q			
UniRef90_E6MEK9	V I V A Y E P I W A G T G K T A S N E Q A D E A C G W V R A A I A D M Y G K E			
UniRef90_A8MFY0	V V L A Y E P I W A G T G K T A S P E Q A Q E V C A H V R Q T I A E Q F S S D			
UniRef90_S8DIS1	I V I A Y E P V W A G T G K V A T P E Q A Q E V H D A V R D W L R K N V S T E			
UniRef90_D6SAR1	L V I A Y E P I W A G T G K T A S S D D A Q S M C N F I R N L A E M Y S K D			
UniRef90_F2DTB2	V V V A Y E P V W A G T G K V A S P E Q A Q E V H A A V R D W L K T N V S A D			
UniRef90_UPI00047DBD8	T V I A Y E P I W A G T G K V A T S S E E A Q T V I A Y I R Q W L S K T I S D K			
UniRef90_L8GA44	V V I A Y E P I W A G T G K V A T T A Q A Q E V H A H R T A L R Q W L A K L Y D A A			
UniRef90_R7KPG5	T I I A Y E P V W A G T G K T A T A D Q A E E V C G F I R G V L A K L Y D A A			
UniRef90_C4JUZ9	V V I A Y E P V W A G T G K V A T T E Q A Q E V H A A L R K F V A D S I S P S			
UniRef90_UPI00047ADDBB	I V I A Y E P I W A G T G K T A S S E D A N E M I G Y I R N I I K E K Y G E E			
UniRef90_G0GIC8	V V I A Y E P V W A G T G K T A S P A Q A Q E V H A F I R S T L A E L Y G Q E			
UniRef90_M7NAJ4	A V V A Y E P I W A G T G K T A T S D M A N E A C A E I R S T L T D L Y G Q E			
UniRef90_UPI00036FF478	V T V A Y E P I W A G T G K T A T S Q Q A Q E V H A F I R E Q I A R A Y D A K			
UniRef90_G8PC31	L V I A Y E P V W A G T G K T A T S D Q A Q E V C H V R E T V A K L Y N D E			
UniRef90_R5L068	V I I A Y E P V W A G T G K T A T A D Q A D E V N G Y I R K V V A E L Y G K D			
UniRef90_Q5WDK7	T V I A Y E P I W A G T G K S A T E K D A N E A C A Y V R Q T V A A N F S E E			
UniRef90_R1CQ06	V V I A Y E P I W A G T G K T A S S E D A N E M I E Y I R S T I E G K Y G V D			
UniRef90_R6BNT4	I V I A Y E P V W A G T G K T A T A E Q A Q E V C A I I R G V V A K L Y N K A			
UniRef90_D0LTS6	V V L A Y E P V W A G T G R T A T P A Q A Q E V H A H R T R L R E R F G E			
UniRef90_K2A8B0	L V L A Y E P V W A G T G K V A S I E Q I D E L H R H A R S V L A G V F T K S			
UniRef90_J9GPA8	I V L A Y E P V W A G T G K T A T A E Q A E E M H A F I R R A T I A E K F G A E			
UniRef90_A9SAR2	V V I A Y E P V W A G T G K V A S P Q Q A Q E V H S A I R S W L S D K I S P E			
UniRef90_R5AFT4	V V I A Y E P I W A G T G K T A T K E D A N A T I A V I R G A I A E V Y G K D			
UniRef90_R5X6W6	L V I A Y E P I W A G T G K T A T A E Q A N D V I S Y I R E V V A S V Y G D			
UniRef90_E6U865	V I I A Y E P V W A G T G K T A T A E Q A N E V N K F I R D T V A A L Y G K E			
UniRef90_I3IN58	F T I A Y E P V W A G T G K T A L P E Q A N E V H S F I R S I L A E K Y G K Y			
UniRef90_M4BC88	V V I A Y E P V W A G T G V V A T T P A Q A Q E T H K E L R S Y I A D K V S P K			
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UniRef90_M3CQP9	V V V A Y E P V W A G T G K V A T T E Q A Q E V H K G I R E W I A K E L G A E			
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UniRef90_Q8ENP4	T I I A Y E P V W A G T G K T A T S E Q A N E V C T E I R K V V A E V T S A D			
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UniRef90_K2GRF2	L I I A Y E P I W A G T G R T A S S E Q A N E T H H D I R A Y I L S K A V V S Q D			
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UniRef90_UPI00036A880F	I V I A Y E P L W A G T G L T A A P S Q A Q E V H S F I R N K I S E K Y G N E			
UniRef90_Z4WZP4	V V L A Y E P V W A G T G L T A S S E Q A Q E L H A H I R H L I A K K F G A S			
UniRef90_UPI0004418569	I V I A Y E P V W A G T G K V A S P Q A Q E T H H D I R A Y I L S K A V V S Q D			
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UniRef90_K6D5F6	L V I A Y E P I W A G T G K S S S A Q D A D E V C G F I R Q V V E K M Y S K D			
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UniRef90_A0A017RWZ7	I V I A Y E P I W A G T G K T A T A D Q A E E V C H Y V R R R L K K I A G E E Q			
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QUERY	210	220	230	240
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UniRef90_D9TNA1	T A N E V R Q Y G G S V K P D N A A K E	L M S E S D I D G F L V G G A S L K A D		
UniRef90_W5LL60	V A D S V R L Y G G S V T G G N C K E	L A A Q Q D V D G F L V G G A S L K P E		
UniRef90_A4J8T9	A A E A V R Q Y G G S V K P G N A R G	L M A Q P D I D G F L V G G A S L K V E		
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UniRef90_A8MFY0	I S E E V R Q Y G G S V K A S N A T E	L L M N E T D I D G A L V G G A S L K A E		
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UniRef90_D6SAR1	L A D S T R Q Y G G S V K P E N V T D	L L M S K E D D I D G A L V G G A S L E A D		
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UniRef90_R7KPG5	T A D A V T Q Y G G S M N A K N C A E	L L M L S K P N V D G G L I G G A S L K A E		
UniRef90_C4JUZ9	V A E N I R L Y G G S V N D K N C Q E	L L M A K Q P D V D G F L V G G A S L K P A		
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UniRef90_UPI00036FF478	A A L N T S L Y G G S C Q A N Q A R E	L L F S Q P D V D G G L I G G A A L K S D E		
UniRef90_G8PC31	V A G K V R Q Y G G S V K P A N I V E	L L F M G K E D D I D G F L V G G A S L D P E		
UniRef90_R5L068	A A D A F V V Q Y G G S M N A K N A E	L L F M K A E D D I D G F L V G G A S L K A D		
UniRef90_Q5WDK7	A A E A I R Q Y G G S V K P G N I K D	L L F M A Q P D I D G A L V G G A S L D A D		
UniRef90_R1CQ06	I S E E V R Q Y G G S V K P K N V T D	L L F M N Q P D I D G A L V G G A S L K A E		
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UniRef90_D0LTS6	V A D S V R Q Y G G S V K P G N A E	L L F M L R E A D D I D G F L V G G A S L K A D		
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QUERY	F R D	I I D A T R
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UniRef90_A8B3A8	F V Q	I I N A M Q
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UniRef90_A6CEM4	F I P	I I I Q A A
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UniRef90_R7A1X8	F S K	I I V K
UniRef90_R7H8F4	F S K	I I V N
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UniRef90_A8MFY0	F L G	I I I N
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UniRef90_L8GA44	F V D	I I V N A
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UniRef90_D0GIC8	F A E	I I I L K A
UniRef90_M7NAJ4	F I A L	I I A E A A
UniRef90UPI00036FF478	F T D	I I I K S
UniRef90_G8PC31	F L Q	I I V N
UniRef90_R5L068	F S V	I I V K A A
UniRef90_Q5WDK7	F L E	I I L V G A A K
UniRef90_R1CQ06	F T D	I I V N
UniRef90_R6BNT4	F A A	I I I D A A R
UniRef90_D0LTS6	F V A	I I V K A A R
UniRef90_K2A8B0	F V T	I I I K A A Q
UniRef90_J9GPA8	F K G	I I I D A W K
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UniRef90_R5X6W6	Y V A L	I I V N
UniRef90_E6U865	F A V	I I L E A A A
UniRef90_I3IN58	F L H	I I I E A A
UniRef90_M4BC88	F A K	I I I Q S A
UniRef90UPI00034870F4	F V Q	I I L E A G K
UniRef90_M3CQP9	F V D	I I I N A K Q
UniRef90_U4TWL1	F L Q	I I L V
UniRef90_Q8ENP4	F L Q	I I V E A
UniRef90_W7BE80	F L A L	I I L E A <input checked="" type="checkbox"/> K
UniRef90UPI00039ED7A7	F G A	I I A R A A
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UniRef90_C5DDZ8	C A P A P Y D Y A A G L V S K P Q V S V G A Q N A Y Y K A G A F T T G Q I S V E
UniRef90_G0A5F5	C V P F V Y V S D I R G A L A S S P I A L G A Q N M H D Q A S G A Y T G E E I S A A
UniRef90_A2EGX9	A A P F I F L P T L Q Q K L R K D W K V S A E N V F T K P N G A F T T G Q I V T V P
UniRef90UPI000375864B	C P P F T A L S E V V S K K I I E S N I R L G A Q N M S E H T G A Y T G E E I A A E
UniRef90_U2KBF8	C P T A T A L A G V T D A V K G T N I A V G A Q N V H W E S G A F T T G Q I S T D
UniRef90_W5XBC7	C P P Y L A L D C Y Q Y L L R N T S I A L G Q D V F W K E S G A F T T G Q I V S A N E
UniRef90_D8SZK9	S P P F V Y D D Q V I G S I S N G I E V S G Q N S W I G K G A F T T G Q I S A A E
UniRef90_R6AH99	C P P F V D L C C A A K V L E G S N V K L G S Q N I H W A K G A F T T G Q I S A D
UniRef90UPI00037CBC0F	A P V F T A L S R V S A R L T G S P L L A G Q N C Y P Q E T G A F T T G Q I S P L
UniRef90_C5BPZ9	C P P F V Y A Q A A E L L E N T N I I G F G Q D L S K Q A S G A Y T G E E V S G P
UniRef90_R5SM91	C V P S V D I S A A V R A F K D S R V A V G A Q N F Y E D H G A Y T G E E V S A A
UniRef90UPI00034DA99E	L P P F T D R S V Q T L V D G D K L R I Q G Q D I S A H D K G A Y T T G Q I S G P
UniRef90_I0H1E5	L P P F T D R S V Q A A V E D D K L N I A Q D V S Q H V S G A Y T T G Q I S G G
UniRef90_A8UHL9	A P T F V N L V T A V K R A K K S K I E V A A Q N M H Q A S G A F T T G Q I S A D
UniRef90_K4IXK5	A P P F T N L Y A A H K T L E N T S I K I S S Q N I N N D K G A Y T T G Q I S P S
UniRef90TONWA6	C S P F I H H S I A Q O L A K A S H V A V G A Q N H Q E S G A Y T T G Q I S A S
UniRef90UPI00047AEAA4	C V P F V N I P S A I K V L K D S R V A V A A Q N H W E E Q G A F T T G Q I S G P
UniRef90_L0EJV5	C A P F T N L P A L V K A A A G T T I A I G A Q N M H F E S G A F T T G Q I S A D
UniRef90_G9WN15	C V P S I D S T V V E K V G K G T S I S V G A E N Y F E D K G A Y T T G Q I S V E
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UniRef90_H7FTH5	A P T F V N L A S A V D H L E F I N I V A A Q N V H Q A E S G A Y T T G Q I S A D
UniRef90_N6X4Z4	I P P A L Y S R V R Q L A G S E A G V G V Q D I A P W S Q G A Y T T G Q I S A A
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UniRef90UPI00023795A4	L P P F T D R S V Q T L I D G D K L H G A Q D S E H E S G A Y T T G D I V S G P
UniRef90_E4T3W7	G T P A I H A S V V A A A I D T T K I G V A A Q N C N K E S G A Y T T G Q I S A A
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UniRef90_Q39U97	A P V F T V L S A V K R A I A D C N I M S A Q D C F W E E E G A F T T G Q I S P G
UniRef90_H3AAV9	G A P F I Y E F A R K Q L D S K F G V A A Q N C Y V K S G A F T T G Q I R P V
UniRef90C5KWC7	A P T A L H P L A M E Q F K G S S N I Q I A A Q N C S K T G P G A Y T T G Q I T A E
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UniRef90_D5URT6	I P P F T D R S V Q T A V D G D G L L I A Q D L S P H D S G A Y T T G D I S G A
UniRef90R5PUL0	C V P F V D I A A A V E A T K G T N I E I G A E N H M E E K G A Y T T G Q I S G K
UniRef90I3BRR2	C A P Y V Y P M T Q G L L V G S K V G L Q D A D Q D S G A F T T G Q I V S G P
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UniRef90UPI00036A9A67	T I A D L G V E Y V I L G H S E R R R D Y F H E T D E D I N K K A H A I F A N G M			
UniRef90UPI000237B7B13	M V K S T G A E Y V I L G H S E R R R A Y Y H E D N A M L K T K T D L A L K N G L			
UniRef90UPI00047858EE	M L K E V G C R Y V I L G H S E R R R Q L F G E S D T L I N R K V R A A V G H G L			
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UniRef90_G0A5F5	M L A D C G V K Y A L V G H S E R R R R S Y Y G D T S Q S V A N R F C Q A Q K Q N V			
UniRef90_A2EGX9	M I K S F G I E W T I L G H S E R R R R D L K E D D F L A A K K F A L E N G M			
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UniRef90_W5XBC7	M L A D V G C S Y C V L G H S E R R R R T R G F G E T D E T V N L K K A L L Y C S I			
UniRef90_D8SZK9	Q L S D I G C K W V I I G H S E R R R R H L G E A N D F V G K S A Y A L E K G L			
UniRef90_R6AH99	M L K C G V E Y A I I G H S E R R R R Q Y F G E T D E T V N M R T K A A L E N G L			
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		130	140	150	160
V	P	L C V G E S L E Q R E A G E T A K V V R T Q T E A A L L A E A E Q V A D			
A	P	F C V G E V L E E R E A N K Q N E V V K S Q I T E E A L L F H L S A E D F A K			
V	P	L C V G E T L E E R E E N K H E A K V K D Q L T K N L K D V S E A D V E K			
K	P	L C V G E L L E E R E E S G V T E Q V V A R Q L D A V M D L E G V S A L A D			
R	I	F C F G E E L S D R K S G N Q E Q V V E N Q I K S A L F H L E A S A F K N			
R	I	F C G E K L A E R K A E K H F F E V V Q R Q I E K A L F H L P K D A W K H			
K	P	L C L G E S L E E R E E A N K T I D V V T R Q L T A V A N V I S K E Q W S Q			
G	V	L C L G E S L E E R E E A G Q T N A V V A S Q V E K A L L A G L T P E Q V K Q			
I	P	I C C G E S L E E R E E A G Q T F S I V V E M Q A R A A L A G V E A E Q V A G			
V	P	V C V G E D L A E R E A G Q T F S I V V E M Q A R A A L A G V E A E Q V A G			
D	V	V C I G E T L E E R K A D Q T L N V L T R Q L L K A V A D D L T E D L W S R			
T	P	F C I G E T K D E R L G G I L E P V I L Q L K G K D L T P E E V S N			
S	V	A C C I G E K L L E E R E E S G Q T E S V V S Q Q L R A I A			
S	P	I C V G E S L L E E Q R E L G I T K E L I D L Q V V K T A L A G I P A E K M R H			
T	P	V C V G E T L L D E R E T G N T T S K V E G Q V E K G L L A N L T E D Q V K Q			
T	P	I C C G E S L E E T Y E A G K A V E F V G A Q V V S A L K G L T A E Q V A S			
T	P	F C V G E V L L E E R E E A N K H F E I V V K S Q L V E E S L F H L S A N D F K K			
T	P	L C V G E T K P Q R D A G Q A E T V T L A Q L R R A G L E G L S A E Q L R G			
V	P	I C V G E T L L E E R E E A G K T N E L V V A D Q V V K K A L A G F T T Q Q V A E			
K	V	M F C L G E T L L E E R E E E G R T L D V C V R Q L H A L A E T I G A D D W K D			
K	V	F C C G E T L L E E R E E A E K Q N E V V K A E L L E G S V F H L S A E A W K N			
V	P	I C C G E T L L E E R E E A G Q T E A K V V A R Q I T K A L K D F A P I E V E H			
K	T	L C I G E L L E E R E E E G K T N D V C F R Q V M D A L A K N I P N P E W D K			
E	I	F C F G E E L L E E D R K A G N H F N I V E N Q L K N A L F H L D T A A A W K N			
T	P	I C C G E T L L E E Q R E E G I A K E W I T G Q I V K A A L K E L S Q E E I A K			
I	P	V C V G E T L L E Q R E A N E T M S H I E S Q V V R T G L R H L S D E Q I G S			
N	P	V C V G E T L L E Q K E A G E T Q A V V V A D Q V V K A A L L A G L T A D Q V A D			
K	V	F C I G E S L L A Q R E A N E Q E A V C V A K E L A G S V F H L T A E Q W K N			
K	P	I C V G E S L L E E R E E G G K T E E V V R S Q T T A A L A G V V S A E Q A A E			
S	V	V C C G E S L L E E R K A E K T V I E V N I R Q L R A V A K V L S K D D W K H			
T	P	F C I G E V L L E E R E E A N K Q N E V V K A Q L S E A L F D L S P E D F S K			
G	V	L C I G E T L L A T R E E A N Q A Q T V W V Q N Q V V T A A L K D L S A D Q V A R			
S	A	I C I G E T L L E E R E E A D K T F D V L E R Q V V R C G L E G L D A A A M E Q			
S	V	L C I G E T L L E E R K A N V T L D V C A R Q L D A V A R V V S D W S K			
T	P	I C C G E T L L E T Y E A G K T A E W V E E G Q I T A A L K D L T P E Q V S N			
K	P	C V G E T L L E Q R E E H G E T E K I V S Q I K L A L K D L T K E Q I R A			
T	P	I C C G E T L L E T Y E A G K A E E F V V G G Q I K A A L K D L S A D Q V A S			
R	V	M F C F G E E L L D D R K S D N H F K V V E S Q L V K N A L F S S L E A S D W G K			
T	P	F C C G E P L L E E R E E R E N G T F N E V V V A K Q V E E G L I T A D Q F D K			
T	P	V C V G E K L L E E R E E A G D T K N V C K V Q T Q G A F Q G L L S A E E Q A A E			
T	P	V L C V G E H L L E E R E E R E K G I T S D I V S T Q T K E A F K G K L L T A D Q V A Q			
T	P	I C C G E T L L E T R E A G Q E K E W V S Q G I R A A L E E G L L T A D Q V A Q			
T	P	F C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
I	P	V C V G E T L L A Q R E Q V I T E P V V D I Q V R L G L A G L S P E E E L A G			
T	P	F C I G E V L L D Q R E A G E T N D L V A S Q I K A A L E G L T E E Q V S S N K			
T	P	V C V G E K L L E E R E E A G D T K N V C k v q t q g a f q g l l s a e e q a a e			
I	P	V L C V G E H L L E E R E E R E K G I T S D I V S T Q T K E A F K G K L L T A D Q V A Q			
T	P	I C C G E T L L E T R E A G Q E K E W V S Q G I R A A L E E G L L T A D Q V A Q			
T	P	F C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
I	P	V C V G E T L L A Q R E Q V I T E P V V D I Q V R L G L A G L S P E E E L A G			
K	I	Y C C G E H L L E E R E E A G K A S E F V V S A Q I E K M I P A I P A G K W D D			
K	P	I C V G E T L L E Q R E S D V T K D V I G S Q I R G S L L A G L T S E Q M L E			
T	P	I C C G E S L L E I R E A E T Y L A Y V A Y Q I E A A L A G F T A E D V A K			
S	P	L C V G E T L L A E R E A G Q T D E V I A S Q L K G A L D G I D G S E F R E			
G	V	A C V G E K L L E E R E E A G K T D F D V F Q K Q L V K A F A E I I S G W D N			
L	P	V C V G E T L L E Q R E A G I T D T F L V A G Q V K A L Y N G I P A E E A A R			
T	A	I L C V G E T L L E E R Q A D Q A L D V L A R Q I K G G L L A G L S A Q Q M L D			
T	P	V L C V G E S L L E D R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
N	P	I C V G E S L L D Q R E M G V T M E L I A L Q V K S A L A G V V A A E N I R R			
V	P	L C V G E G S L L E V R K A G K Q V E H V L S Q L D D G A L K E I P A E Q A E K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
E	V	F C F G G E E L L A D R K A G N E E A V V G G Q I K N A L F H L E A D A F K N			
K	V	M F C I G E D L L E E R K A K D K H F E V V E E Q L V K N G L L F H I D A S E M K D			
T	P	V L C V G E S L L D Q R E A G K T F D V V G A Q L L A V I E H C G L A G V A K			
L	P	I C V G E T L L K E E R E E S G K F F D I I K T Q L A E G V F H L S K E E F A K			
T	P	F C V G E G L L S V R E E S A H V G H C T A Q V D A G L D G L K E D D Q I K Q			
T	P	I C C G E S L L E I R E A G T H E S N V K F Q L T D S L F S L S A E E I Q K</			

		170	180	190	200
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UniRef90UPI000237BB13	M I I	A Y E P V W A	G T G K T A T P E Q A Q E M H A F	R K T L A G K Y G Q E	
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UniRef90_A1S458	C P P T I Y L E S V R Q L L E A N K R M G A Q N L S Q H D F G A Y T G E I S G Q			
UniRef90_R5Z1W8	G A P F T D L R T A L D N A S N L I V A A E N C H F E D A G A F T G E V S V P			
UniRef90_U6JY14	F P T A L H P L A R E K L K N E F Q I G C Q N I S R T G S G A Y T G E I T A E			
UniRef90_V2YCM1	C V P A T N I Q S A V R L F K D C H I A I G A E T C H D H G A Y T G E I T A E			
UniRef90_R6DZR5	L A P F T Q L A M L A E E L K G T G I G L G A Q N V H Y E E G A F T G E I S V P			
UniRef90_D8HZK5	L P P F T D I R S V Q T L V D G D K L Y G A Q D V A P Q O D S G A Y T G E I S G L			
UniRef90_S2Z5Z1	L P P F T D I R T Q V T I V D A D D D L Q A Q D V S I H D N G A Y T G E I S T E			
UniRef90_Q76BB2	A P P S I Y L K Y I R E V M D A K I G V A A Q N C Y K V P S G A F T G E I S P A			
UniRef90_Q1JZ50	A P V F T A L S E V G K I C T E S P V L A A Q N C H C M D D G A Y T G E V S V P			
UniRef90_B6Q6B7	A P P S I Y L T T R E L A D P S I G V S A Q N V Y D K P N G A F T G E V S V E			
UniRef90_F5WUF6	A V P F T A L Q A S I A N A K N L N I A A E N V H W A N G A Y T G E I S V E			
UniRef90_N2J6F0	F P P F L F D R V E V G L A D S S I G L G A Q D C Q P E Q G A L T G E I A A S K			
UniRef90_I3YSG4	A P P F T S L N Q A F K S L H E H P V V V A Q N M H Q S K E G A F T G E I S A K S			
UniRef90_U7FXQ4	C P P F P F L A Q A R E L F A G H V A I G A Q N L S D Q E E G A Y T G E V S A S			
UniRef90_D3Q9H3	L P P F V D R S V Q T V I D G D N L L Q D V S A H A S G A Y T G E I S A A Q			
UniRef90_U6MH12	A P P S L H A G F V L R G L Q R P F K V A A Q D S S L V E S G A F T G E I A P Q			
UniRef90_L7W4U2	A P S H P F L Y N A F N S T C D T V I V V S Q N V C E A E K G A Y T G E I S V D			
UniRef90_Q38Y19	G A P A V D L P A L L E A A K G T D L K V A A E N C Y F E E G A F T G E I T S P K			
UniRef90_U2B8D8	F P G S L H I A Q V V A G L A G V K V G A Q N C Q A E Q G A L T G E I L A T S G			
UniRef90_C6XTZ5	C A P Y I H I N S L A K L G A D V V K I G A Q N L S D Q E E G A Y T G E I S A G			
UniRef90_A0A023Y1H2	L P P L P Y L G E L V E A F E G R A I A F G Q D V S S N E K G A Y T G E V S A A			
UniRef90_D5C2P7	C P P F V Y L A D A S L L Q G S A V V S W G A Q N S Q H E T G A Y T G E V A P S P			
UniRef90_UPI00037BBE2C	U P P F T H I R S V Q T L V D G E K L L I G Q D L S P F A S G A Y T G E I S G P			
UniRef90_UPI00028D09F	C S P A L F P T L V E A T K G T D L A I G A Q N M H Y E T G A F T G E V S P V			
UniRef90_UPI0003FF421F	A P T F V N L K E A L K K V K K S K I E V A A Q N M H E A N G A F T G E V S A D			
UniRef90_W0EFE1	C A P F T A L N A L K D D L E E S S V I H I G A Q D L F W G S G A F T G E I S A E			
UniRef90_UPI0004799580	C P P F T L L S Q I R P I L G G T G I A L G A Q D L C H S E G A H T G D I S A G			
UniRef90_Q76BH6	G A P A I Y I Q Y A R E M L D P K I G V S A Q N C Y K V A K G A F T G E I S P A			
UniRef90_F8EBU7	C T P Y I Y L P V L Q K Y V E D R I S L G A Q N C H Q K A S G A Y T G E I S A A			
UniRef90_Q6C2T9	S P P F P Y L L L A K E S L K K P T V V A G Q N S F D K G D G A F T G E V S V A			
UniRef90_F6D054	T P P F P Y L S Q V A D V V Q S G L V L A A Q N L S Q Y E K G A Y T G E V S T A H			
UniRef90_UPI000373EA94	C P P F P Y L S A V A D D L L D D S E V A L G A Q N L S Q Y E K G A Y T G E V S A H			
UniRef90_L8XVS6	A P P F V Y L P Q V A L W A K E S K I L S A Q N L A K F D Q G A Y T G E V S G K			
UniRef90_B6A168	F P T F I H I P L A Y E I L E D S G I N I G Q D I S S T G N G A Y T G E V S C D			
UniRef90_R7WKG8	U P P F T D I R S V Q T L V D G D K L Y G A Q D V S Q H E S G A Y T G E I S A A			
UniRef90_U7UQD4	A P P F T A I R S V Q T V I D G D G L L M A Q D I S P H E S G A Y T T G E V S V A P			
UniRef90_H7EKC3	A P P F V Y L D A V A S V I K G S N I R L G A Q N A S T E N G A H T G E V S V D			
UniRef90_F4CYG6	L P P F T A I R S V Q T V I D G D G L L M A Q D I S P H E S G A Y T T G E V S G P			
UniRef90_A4CM80	A P V F V N L A E A V R R L E H S K I A I A Q N M H F A D S G A Y T G E V A A D			
UniRef90_A6VU25	A P S F P Y L S Q V D G L I S A S S I V L A A Q N V S Q E K G A F T G E V S T S			
UniRef90_W0DVW6	C P P S L Y I S D V Q S K L A G S L I A V G V Q N V C E G Y G A F T G E V S V D			
UniRef90_E4KXK0	A P S F V T L E S L R K N L K D E I K V A G Q N V S Q F D E G A Y T G E V S T S E			
UniRef90_K1M4Q9	A P P A L Y L M M A K D L Y E N N N E V V F A Q D I S H D S G A Y T G E I S A E			
UniRef90_UPI00040C0889	A T P F I H I D Y V M Q H I D K D K Y Q L A A Q N C W I G N G A F T G E V S A K			
UniRef90_G8ULQ5	S P T S I N L T S A V A T K G S S V I V S A Q N M H Q A T S G A F T G E V S A A G			
UniRef90_L7FN55	G V P F T H I T K V Q Q I L N G A N V L V S A E N A W T K S G A Y T G E V H V G			
UniRef90_UPI00042A6972	C A P Y I H I H S L V A L G K G N K V V G A Q N C H Q E A G A Y T G E I S A G			
UniRef90_D7BNV9	V P P F T D I R S V Q T L V D S E D F K I A Q D V S I N D E G A F T G E I S T G			
UniRef90_U2U8D0	C P P F T V D I K G V S T V I N Q S Q A H F G Q N V Y W E E S G A Y T G E T A P T			
UniRef90_UPI0003AD570A	L P P F T A I R S A Q T L I E A D K I Y G A Q D V D V S Q H A S G A Y T G E I S A E			
UniRef90_B2RZH9	A P P F I Y I D Y V M Q H I D K D K Y Q L A A Q N C W I G N G A F T G E V S A N			
UniRef90_UPI00036FB2C1	S P T S I N L T S A V A T K G S S V I V S A Q N M H Q A T S G A F T G E V N A R			
UniRef90_W9UQ82	C P P N V Y L S Q V G E L L K N S S V M F G A Q N I H Q G D G A H T G E V N A R			
UniRef90_D2U3C3	A P P A L Y L A Q A Q Q A L A G S K I A L G A Q D V D V N S G A F T G D T S A E S			
UniRef90_Q1LPW5	C A P P F P Y L A Q C Q T L L S G S Q V V A W G A Q D V S S E A G A F T G E V V A A S G			
UniRef90_G0HDF9	U P P F T D I R S V Q T I V D G D K L Y G A Q D V D V S V H E S G A Y T G E V S A G			
UniRef90_L0K9L8	C A P A I D Y P L N E V L A D T N V K L G S E N M Y Y E S G A Y T G E V S P A			
UniRef90_H3NHW5	G A P A V Y L T T L S E A L E D T P I Q L A A Q N C F W E N G A Y T G E I N S P S			
UniRef90_A5K411	F P V S V H Y E L A K S L L K P F H T G I Q N V S K F G S G S Y T G E I S A E			
UniRef90_UPI00037F8416	A P T A L S P L V A A A L G K D S Q V R A Q N I Y P G K E G A F T G E V V S G E			
UniRef90_UPI00030E68C9	A P P F T H I S E V K A A R G T G I A V S A Q N C A A E K G A Y T T G E V S A K			
UniRef90_Q56738	C P P A V F I P Q V E A L T A D T A I T Y G A Q D C D V N S G A F T G E N S A V			
UniRef90_C4LIR5	I I P P F T D I R S V Q T L V D G D K L Y G A Q D I S T H D S G A Y T G E I A P S			
UniRef90_UPI00036F4F31	C P P Y P Y L D R S V Q T L V D G D K L K I A Q D I S P H D A G A Y T G E V S G P			
UniRef90_D7BH79	M V P F T A L A A A Q E I L A G T G V A Y G A Q D V S V H E S G A Y T T G E V S A R			
UniRef90_UPI000422DEA9	C P P Y I H I H N G M A Q L A Q N N I S V G A Q N C H Q A D K G A Y T G E I S A E			
UniRef90_A1WXW9	C P P Y P L L A A A S Q L P F G V A L G A Q D V S E Y D S G A Y T T G E V S A S D			
UniRef90_F5Z8M8	C P P A L Y I S A F S T Q A F G A P I V G G Q N D V S H L D N G A H T G D L S A D			
UniRef90_A0LTX7	L P P F T A I R S V Q T L V D G D K L Y G A Q D V D V P Y P S G A Y T T G E I S A G			
UniRef90_X5MH90	A P P F T L V A D F S S T C A S S P V I A G Q D C S A L A P G A H T G D V A A S S			
UniRef90_UPI00035CC41E	C P P A V Y L A E I A N D L S G G P I A V G A Q D C D Q E K G A Y T G E I L A G S S			
UniRef90_F8GIT9	C V P Y P Y L P S V Q S I L Q N T N I A W G A Q N S Q F E R G A Y T G E I S A S S			
UniRef90_UPI0003B36A24	C P P A L Y I D A V R R H I G A P I V G G Q N D V S H L D N G A H T G D L S A D			
UniRef90_UPI00040DF388	A P S F V N L Q A A V K Q T A G T N V I V A A Q N M H Q E N G A F T G E V S V G			
UniRef90_D4IMM0	C P P F T H I A M V A E A L K G S D V A L G A Q D C A T E K G A Y T G E I A A S T			
UniRef90_UPI00046766CC	C P P Y V Y L S Q A A E A L S G S P V E L G Q T V S E Y A D S G A F T G E V S G T			
UniRef90_F2K4F1	A P P F P Y L E K A S A L V A D L N G V S A Q N V S S D G A F T G E V S V A			
UniRef90_U2L2M3	A P P F V Y L D A V S Q V V K G S N I L L G Q D V A S T G N G A H T G E V S A E			
UniRef90_X8K523	C A P F T Q L V A L K E A F A G T N V K L G A Q N V H F E E G A F T G E V S V E			
UniRef90_Q72K37	L P P F P Y L P V A K E V V L A E T Q V G Y G Q D V S A H K E G A Y T G E T S A A			
UniRef90_C9YHG3	C V P A A Y L H Q V I S V I K G A L A V G A Q D C S P H D D L S P F D S G A H T G E V S A R			
UniRef90_UPI000255E65A	L P P F T D I R S V Q T L V Q G D K L Y G Q D L S P H D D L S P F D S G A H T G E I S G A A			
UniRef90_UPI0004781820	G V P A I Q L M S I K E I T H E G Y F V V A Q N M H H K D N G A Y T G E I S V A A P			
UniRef90_E1QL68	C P N F V C L E A V V R A V A G S H V V G G Q N L H W Q D E G A F T A E I S G P			
UniRef90_L8D6R4	F P P F P L I A Q V A K T G I A T Q G T V S E Q D A G A F T G E V V E A K			
UniRef90_K6KBU2	C P P F P Y F G Q F D S K L K G S Q N I E F D S G A H T G E V S V A			
UniRef90_M5DV50	F P P F P Y L A L A H S T I A D A P I R L G Q T C S L E Q S G A F T G E V A V S			

		90	100	110	120
UniRef90_UPI000369AE4D	M	I K D F G A N H V I V G H S E R R S L Y G E T T S E I V A E K T K A A I D D S G L			
UniRef90_B4U3U0	V	L A D M G A D Y V V I I G H S E R R D Y F H E T D E D I N K K A A I F A N G L			
UniRef90_D9S1I8	M	L V D F G C S Y V V I I G H S E R R R G L F H E S N E I A A A K F E A Q K A G M			
UniRef90_J9HG71	M	L A K L G C T Y V L V G H S E R R T N H Q E D D Q L V N K K I K A A L A H E L			
UniRef90_R9AAV2	Q	L K D F D I K W T L T G H S E R R R H I F K E N D D D D V A M R T K G A L L N E Q L			
UniRef90_A1S458	M	L K D S G C R Y V I V G H S E R R R R M Y G E T S D I V A E K F A A A Q K H G L			
UniRef90_R5Z1W8	M	L E E L G L K W C I I G H S E R R R Q M F G D T D E T V N K K A K R L I A A G I			
UniRef90_U6JY14	M	V A D M G M K W V M V G H S E R R R Q Y Y Y G E T D E V V V A E K V A M A L L K Q G L			
UniRef90_V2YCM1	M	I K E A G A K Y V V I I G H S E R R R Q Y Y Y N E T D F T V V N K K V H A A L A A A G I			
UniRef90_R6DZR5	M	L R E T G V E Y C I V G H S E R R R Q Y F N E S D E T V N R K A K A L L E A G I			
UniRef90_D8HZK5	M	L A K L G C K F V T V G H S E R R R E Y Y H A E S D E L V N K K V K A A L K H G L			
UniRef90_S2Z5Z1	M	L T K L G V T Y V V V M G H S E R R R E Y Y H G E S D E L V G A K A R K V F D A G M			
UniRef90_Q76BB2	M	I K D C G A A W V V V L G H S E R R R H V F G E S D E L L I G Q K V G H A L A E G I			
UniRef90_Q1JZ50	L	L A D V G C S H L I V G H S E R R R Q Y F G E T D H F V V N V K A R A L L K H G L			
UniRef90_B6Q6B7	Q	K D A G I D D W T L V G H S E R R R V L L R E D D D F V A R K T K A A I D G G I			
UniRef90_F5WFU6	M	L K E L G T K W V V V I G H S E R R R Q Y F N E T D D I V N K K A A V L I E N G M			
UniRef90_N2J6F0	Q	R D V G C G Y V L V G H S E R R R R L I L L E D D D T V A K K F A S A Q K M G L			
UniRef90_I3YSG4	M	L K S V G V E T V V I V G H S E R R R R A F F N E D S A V L A E K V N T A L E N E M			
UniRef90_U7FXQ4	M	L A G A G C G Y V I I I G H S E R R R A L Y G E T D A L I A A K F A R A Q T E G I			
UniRef90_D3Q9H3	M	L A K L G C T Y V V T V G H S E R R R Q Y H D E D D K L V G A K A K A L A N E I			
UniRef90_U6MH12	M	M K D F G I K T V I V G H S E R R R R A G F G N S N E V V A A K A K N A I K N G I			
UniRef90_L7W4U2	M	L Q S L G I Q T V I V I G H S E R R R D T Y G E T D E D L L A A A K T K A A I D K K G M			
UniRef90_Q38Y19	T	L N E M G V D Y V I V I G H S E R R R D Y F H E T D E D I V N K K A A H A I F K N M			
UniRef90_U2B8D8	Q	V L D A G C E L V L V G H S E R R R R L I L G E S D E A V I R K F A A A Q V A G I			
UniRef90_C6XTZ5	M	I K S V G V E Y V I V G H S E R R R R E Y F A E S D E L L A Q K T I K V L E N G I			
UniRef90_A0A023Y1H2	M	L A E V G A R F G L V G H S E R R R Q Y H N E T S E L L V A R K F A A A L H A G I			
UniRef90_D5C2P7	M	R D L D C C F V I V G H S E R R R R A L Y G E T D S L L V A E K V V A A Q G A E I			
UniRef90_UP100037B7BE2C	M	A K L G C T Y V V T V G H S E R R R R Q Y H N E D D D A L V N S K V K A A L T N D I			
UniRef90_UP1000288D09F	Q	A D I G V S Y V V I I G H S E R R R E Y F N E T D E S V N A K A H A A F A H H			
UniRef90_UP10003FF421F	M	L T S I N I K T V I V L G H S E R R R T Y F G E T D E D E L L A K K V K A A I D N G I			
UniRef90_W0EEF1	M	V D I A C T Y V I V G H S E R R R R E L I H E T D E E I V A K K V K A A L L K A G G			
UniRef90_UP10004799580	M	S D V G C G Y V I V G H S E R R R R Q N H G E S D A I V R A K A N A A L Q Q A G G			
UniRef90_Q76BH6	M	K D C G A N W V I V L G H S E R R R R H V F G E S D A I V R A K A N A A L Q S E N G			
UniRef90_F8EBU7	M	A A L G T P Y V V L I G H S E R R R R Q Y F G E T S N E L L A E E K V K I A L L A S E N G			
UniRef90_Q6C2T9	Q	K D V V G A K W V I V L G H S E R R R R T I N K E S S E S D E V W I A D K T K Y A L L D N G G			
UniRef90_F6D054	M	T D F D K V T Y V V L V G H S E R R R R S L Y G E T T N D D A L V V A E K V K M A L L S A G G			
UniRef90_UP1000373EA94	M	H D N G C R F V I V G H S E R R R R A L Y A E D D D A L V V A E K V F S T A L L K N G G			
UniRef90_L8XVS6	M	K D G C Q Y V L V G H S E R R R R Q Y F G E T T N D D A L V V A E K V E F A L L K N G G			
UniRef90_B6Ai68	I	L K D D Y N I H C T L I G H S E R R R R Q Y Y S E T D S V V V N A K V L H A L L K H N F			
UniRef90_R7WKG8	M	A K L G C T Y V V V L G H S E R R R R S R T L H A E T D E V V L A K A K K E H G			
UniRef90_U7UQD4	M	K D L N V K Y V I V G H S E R R R R N Y Y K E S N Q L V N A K A E K V V E G G M			
UniRef90_H7EKC3	M	K D I G V Q S V I V L G H S E R R R R D A Q N E S D K L I N E K I L A V L N G G F			
UniRef90_F4CYG6	M	A K L M C R Y V V V L G H S E R R R R R A Y R H E D D D A L V V N A K V R A A F A S G I			
UniRef90_A4CM80	M	L G G V D T V I V L G H S E R R R R A Y F G E D D D A L L V V N A K V G Q A I E K G M			
UniRef90_A6VU25	M	G D F G V K Y V L V G H S E R R R R S L Y G E T T N E L V V N A K V K T V L D S G			
UniRef90_W0DVW6	M	A D F S I P Y A I V G H S E R R R R A I Y G E T D A Q V A D K V V A A L L A S N I			
UniRef90_E4KXK0	M	K D I G V E D V I I G H S E R R R R E K F L E S D E I I I N A K V K K A L L E D D D I			
UniRef90_K1M4Q9	M	E S I E A D G S I I G H S E R R R R Q Y H G E T D A L L C V V K K A L L A K N G I			
UniRef90_UP100040C0889	M	Q S I L G V S Y V I I G H S E R R R R S R Y S I H E D D D A L L V V N A K V K A A E G I			
UniRef90_G8ULQ5	M	V A S T G A K Y V I I L G H S E R R R R A Y Y H E T P G I V L K E K V K L A L A H N G I			
UniRef90_L7FN55	M	V D C K V P Y V I I L G H S E R R R R Q I F K E T D E V V V A E K V K V A I I G A G I			
UniRef90_UP100042A6972	M	T S I G V Q Y V I I L G H S E R R R R Q Y F G E D N A L L I G K T D I A L K K N N			
UniRef90_D7BNV9	M	T K L G V T Y V V V L G H S E R R R R E Y Y H G E T D E D E L I G K A K K V L D A G M			
UniRef90_U2U8D0	M	T T I G A Q Y C I I G H S E R R R R E Y F G E T D E D V V N K K A Q A L M E H D I			
UniRef90_UP10003AD570A	M	A K L G C S H V T V G H S E R R R R Q Y H A E D D D A T V V N A K A R A A L A A D I I			
UniRef90_B2RZ9H	Q	Q D F G L P W V I I L G H S E R R R R S L C G E T N Q V V A K T A H A L L D V G I			
UniRef90_UP100036FB2C1	M	Q D V G V K T V I I L G H S E R R R R T F F G E D D D T M L T E K V T T A L L E N H Y G			
UniRef90_W9UQ82	M	K E F G A Q F V I I V G H S E R R R R A N Q Y E T D A N V L D K I L K H A L L H Y G			
UniRef90_D2U3C3	M	K D I G A K Y I I I G H S E R R R R T Y H Q E S D Q Y I A R K F A V V L K S Q G I			
UniRef90_Q1LPW5	M	E F G C G Y A L V G H S E R R R R T Y H G E T D A V V A A K A L R A L L E F D I			
UniRef90_G0HDF9	M	A K L G C S W V V V G H S E R R R R Q Y H A E D D D A T V V A Q K A V A T L G A G G M			
UniRef90_L0K9L8	M	K S V G C E Y A I I G H S E R R R R E I F G E D D Q L V N L K L K T A F A N D I			
UniRef90_H3NHW5	A	L A S I G V S H V I I G H S E R R R R Q Y F H E S D Q E I I N Q K A Q A I F A N G M			
UniRef90_A5K411	I	A K D L N I E Y V I I G H F E R R R R K Y F N E T D E D V V K D K L Q Q C L K N N			
UniRef90_UP100037F8416	M	K D A G A D Y V I I G H S E R R R R Q F F G E T D E S V A I K I R A A L D A Q I			
UniRef90_UP100030E68C9	M	A S L G V E Y V I I L G H S E R R R R E Y Y G E T S Q T L N K M Q A Q Y A E N G			
UniRef90_Q56738	M	K E F G C K Y T L V G H S E R R R R R V I H G E S S E V V A D K F A V T P E N G			
UniRef90_C4LIR5	M	S K L G C S W V I I V G H S E R R R R D Y H S E T N E I V A A K T K K A L L D A D M			
UniRef90_UP100036F4F31	M	A K L N C T Y V V V G H S E R R R R Q Y H G E D D A L V N S K V K A A F K Y G I			
UniRef90_D7BH79	M	E D L G C T Y T I V G H S E R R R R Q Y H G E S D T L V V A Q K A K R L L E H S I			
UniRef90_UP1000422DEA9	M	Q S V G V K Y V I I L G H S E R R R R Q Y F N E S N T L L A E K V V N S A L K N N G			
UniRef90_A1WXW9	M	L E A G C R Y V I I V G H S E R R R R T L Y G E D D N G R V V A G K F V V A A R N A G I			
UniRef90_F5Z8M8	M	C L E G C K Y A I V G H S E R R R R D D H G E S N S L V V A E K A K S T I A S G I			
UniRef90_A0LTX7	M	A K L G C S Y V I I V G H S E R R R R H Y H E N D E L I N A K V R A V I G A E M			
UniRef90_X5MH90	M	A D A G A T A V I I V G H S E R R R R Q D H R E T D E D V V N A K A L A A Y E A G I			
UniRef90_UP100035CC41E	M	E V G C R Y V I I V G H S E R R R R E R Q N E D S N A W V V A A K F V V A A Q A A G I			
UniRef90_F8GIT9	M	N D F E C C R Y V I I V G H S E R R R R S L F G E D S Q I V A E K Y Q A A Q R A G I			
UniRef90_UP10003B36A24	M	N D V G C S H V I I V G H S E R R R R T L Y G E N D A C L V A R K F V V A Q A G G I			
UniRef90_UP100040DF388	M	K S I K V N T V I I L G H S E R R R R A Y F G E T N A L L A Q K V D T A L R H G N I			
UniRef90_D4IMM0	M	A A L G C K Y V I I L G H S E R R R R Q Y Y G E T S A T L N K K M A Q A Y A N G I			
UniRef90_UP100046766CC	M	A D L G C R Y V I I V G H S E R R R R R M Q G E T S D Q V V A E K F H A A Q Q A G G I			
UniRef90_F2K4F1	M	K D I G A D S V I I V G H S E R R R R E L F G E T D A I V V A E K I S Q V L K F G G I			
UniRef90_U2L2M3	M	K D I G V Q A V I I I G H S E R R R R R H E I G E S D M L V I N K V R K A L A S G I			
UniRef90_X8K523	M	K E I G V D Y C I I I G H S E R R R R R E Y F A E T D E T V V N L K L K F S S E I			
UniRef90_Q72K37	M	S D L G C R Y A I I V G H S E R R R R R R Y H G E T T D A L V V A E K A K R L L E E G			
UniRef90_C9YGJ3	M	R D L G V H Y A I I V G H S E R R R R R Q Y H G E T D A I V V A T K A Q K A L L A A G V			
UniRef90_UP1000255E65A	F	A K L G C T Y V A I I V G H S E R R R R R Q Y H G E T D A I V V A T K A Q K A L L R H D I			
UniRef90_UP10004781820	M	A D A G V D Y V I I L G H S E R R R R R E Y F G E N D S L V N I K I K N A L L N A G I			
UniRef90_E1QL68	M	R S V G A S H V I I I G H S E R R R R Q F F G E T E K T V R M R L A A A L L R H G I			
UniRef90_L8D6R4	L	V A E L G A S Y S I I I G H S E R R R R T L F N E S D E L L V V S K F V K A Q E A G I			
UniRef90_K6XBU2	M	K E F N C Q Y V I I I G H S E R R R R R A D N H E S N E L V V A L V K A Q V L K C A N L			
UniRef90_M5DV50	M	S E F Q V A L V L V G H S E R R R R S L Y G E T D K I V L L K T L R V L E Q G M			

This figure displays a sequence alignment between UniRef90 and UPI000369AE4D, showing the distribution of specific amino acid residues (A, C, D, E, F, G, H, I, K, L, M, N, P, Q, R, S, T, V, W, Y) across various protein families. The alignment is color-coded, with yellow highlighting specific regions of interest or conserved motifs.

		170	180	190	200
UniRef90_UP1000369AE4D	I I V A Y E P V W A I	G T G M T A T P E Q A Q A V H K F I	R D L L A S S S Q D		
UniRef90_B4U3U0	L V L A Y E P I W A I	G T G K S A T Q E D A Q S M C K A V	R D V V A A D F G Q E		
UniRef90_D9SII8	A V I A Y E P V W A I	G T G K T A S P D Q A Q A V H A F I	R Q R V A A H D A A		
UniRef90_J9HG71	I V I A Y E P V W A I	G T G K T A P E D A Q A E V C G V I	R N E L R S I G S D E		
UniRef90_R9AAV2	I V I A Y E P V W A I	G T G K V A T P E I A Q A E A H K D I	R Q W L T T N L G Q D		
UniRef90_A1S458	A I I A Y E P L W A V	G T G K S A T P E Q A Q E V H A F I	R R R L S E V S P F		
UniRef90_R5Z1W8	M V I A Y E P I W A I	G T G K S A S V E I A E N C C K T V	R D T V R E L F G D K		
UniRef90_U6JY14	V V I A Y E P V W A I	G T G K V A T P E Q A Q E V H Q E L	R K F I S E R V G K E		
UniRef90_V2YCM1	V V I A Y E P L W A I	G T G K T A T P E Q A G E V C Q A I	R T V I R K I L Y G A H		
UniRef90_R6DZR5	V V I A Y E P I W A I	G T G R T A T P I Q A N H M C K V I	R D E L E E I Y D E E		
UniRef90_D8HZK5	V V I A Y E P V W A I	G T G K V A S S A D A E E V C C K A I	R A T L Q E K Y G D E		
UniRef90_S2Z5Z1	I V I A Y E P I W A I	G T G E T A S A E D A Q E V C C K A I	R A A L A E D F G A E		
UniRef90_Q76BB2	V V L A Y E P V W A I	G T G K T A T P Q Q A Q E I H E K M R K W L	K E N V G E A		
UniRef90_Q1JZ50	V V L A Y E P V W A I	G T G K T A T S E E A E E V H A Y I	R G L H G S F G T D		
UniRef90_B6Q6B7	V V I A Y E P I W A I	G T G K V A T T A Q A Q E V H A A I	R K W L G E T I S A K		
UniRef90_F5WUF6	I V I A Y E P V W A I	G T G K S A T V E I A Q N T C A L V	R D E V K N L F G A E		
UniRef90_N2J6F0	A V V A Y E P V W A I	G T G L T A T P D E Q A Q V H Q E L	R Q F I R S Y S N V		
UniRef90_I3YSG4	L V I A Y E P V W A I	G T G E T A T P E Q A Q E M H K F I	R K T I A E N Y S K N		
UniRef90_U7FXQ4	A V V A Y E P V W A I	G T G M T A S P E Q A Q E V H A T L	R Q T V A S Y S A D		
UniRef90_D3Q9H3	L V V A Y E P V W A I	G T G K T C A P D D A Q E V I G A L	R A A L A K D H P E		
UniRef90_U6MH12	V V L A Y E P I W A I	G T G Q T A T P D M A Q T H K E I	R Q W L R K N V G Q Q		
UniRef90_L7W4U2	V V V A Y E P V W A I	G T G E T A S P E Q A Q E M H A H I	R S F I E S K F G K D		
UniRef90_Q38Y19	M V I A Y E P I W A I	G T G K T A S A D Q A Q E I C A V V	R Q T V A K L Y D Q T		
UniRef90_U2B8D8	A V V A Y E P V W A I	G T G L T A T P E Q A Q V H A A I	R A Q V A Q A D A E		
UniRef90_C6XTZ5	I V I A Y E P V W A I	G T G L T A S S D Q A Q E V H A F I	R K E I A A K Y N A Q		
UniRef90_A0A023Y1H2	A V V A Y E P V W A I	G T G R T A S K E Q A Q Q V H A F I	R G E V A K L D A R		
UniRef90_D5C2P7	A V I A Y E P I W A I	G T G R T A T P E Q A Q E V H G L I	R A R L A E T Q G D T		
UniRef90_UP100037BBE2C	V V V A Y E P V W A I	G T G K T A T P A D A Q E V I G A I	R E T Q F S E E		
UniRef90_UP100028D09F	S V I A Y E P I W A I	G T G K T A T A A D A N E V C G E V	R R K A I A E V F S E E		
UniRef90_UP10003FF421F	I I L A Y E P V W A I	G T G E T A S P E Q A Q E M H A F I	R N L I A R Q Y S E V		
UniRef90_W0EFE1	V V I A Y E P L W A I	G T G K T A S S Q D A Q D M C S A I	R S T L A G I I A G A		
UniRef90_UP10004799580	L V I A Y E P V W A I	G T G K S A A V Q D V I D A H E G I	R S H L A E R Y G S G		
UniRef90_Q76B6	V V L A Y E P V W A I	G T G K T A T P Q Q A Q E V H T L I	R D W V K K N V S E D		
UniRef90_F8EBU7	V V I A Y E P V W A I	G T G L T A S S Q Q A Q D M H A A I	R E H I A G Q Y G A E		
UniRef90_Q6C2T9	V V I A Y E P V W A I	G T G L A A T A E D A Q Q I H H E I	R A Y I L K D K I G A Q		
UniRef90_F6D054	I V I A Y E P V W A I	G T G L S A S A Q Q A Q D V H Q A I	R A N L A S L S T P		
UniRef90_UP1000373EA94	G V I A Y E P V W A I	G T G E T A T P E Q A Q A V H R H I	R Q W L A T Q N H A A		
UniRef90_L8XVS6	V V V A Y E P V W A I	G T G K S A A E I A N E V H A F I	F C T L I G K S D S		
UniRef90_B6AI68	I V I A Y E P I W A I	G T G V V A T P E Q A Q E A H E F I	R K C L L N M Y N N N		
UniRef90_R7WKG8	I V V A Y E P V W A I	G T G K V A T P A D A Q E V C C A V	R S A L A D L A G A D		
UniRef90_U7UQD4	F V I A Y E P I W A I	G T G N T C S S Q D A Q D M C K F I	R E S L T S I N R D Y		
UniRef90_H7EKC3	V V I A Y E P V W A I	G T G K T A T P E E A N A V H K F I	R G V L A E M F G N E		
UniRef90_F4CYG6	L V V A Y E P I W A I	G T G R V A G A G D A Q E V C C A V	R G T L G K Y G D T		
UniRef90_A4CM80	I V L A Y E P V W A I	G T G E T A S P E Q A Q E M H A F I	R K I L V S D A Y T D A		
UniRef90_A6VU25	L V I A Y E P V W A I	G T G L S A S A E Q A Q E V H E S I	R S F L A K S S E S		
UniRef90_W0DVW6	I V I A Y E P V W A I	G T G K T A T P D Q A Q E V H A F I	R N L L A Q H D Q K		
UniRef90_E4KXK0	V T I A Y E P I W A I	G T G K T C S S E D A E K M C R E I	R N I I D E K Y G E E		
UniRef90_K1M4Q9	V V I A Y E P V W A I	G T G E T A T P E Q A Q E I H A H I	R K V L A S K F G E E		
UniRef90_UP100040C0889	V V V A Y E P V W A I	G T G R T A S S D Q A Q E I H A H I	R Q S I A K Q Y G E A		
UniRef90_G8ULQ5	L V L A Y E P V W A I	G T G R T A T A E Q A Q E I H A H I	H T I A Q Q Y G P E		
UniRef90_L7FN55	V V L A Y E P V W A I	G T G K T A T P D Q A Q E A H A F I	R N W M A A N I S K E		
UniRef90_UP100042A6972	L V I A Y E P V W A I	G T G V T A S S E Q A Q E V H A F I	R K E I A S K Y G E A		
UniRef90_D7BNV9	L V I A Y E P I W A I	G T G E V A T P A D A Q E V C C G A I	R G K I A E M F D A P		
UniRef90_U2U8D0	Y V I A Y E P I W A I	G T G K T A T A D D A Q E V C C G A I	R A A L V D I F G Q T		
UniRef90_UP10003AD570A	T V I A Y E P V W A I	G T G E V A T P Q D A Q E V C C A V	R T R L A E L Y D G G		
UniRef90_B2RZH9	V V I A Y E P V W A I	G T G V V A T P E Q A Q E V H A Y I L	R R F C Q S K L G T S		
UniRef90_UP100036FB2C1	I V I A Y E P V W A I	G T G E T A S P E Q A Q E M H A F I	R G L V E A T Y G K T		
UniRef90_W9UQ82	L V V A Y E P V W A I	G T G E T A S P E Q A Q E M H A F I	R S H I F S S K Y G Q G		
UniRef90_D2U3C3	S V I A Y E P I W A I	G T G K S A T P A Q A Q A V H K F I	R D H I A K Q D R A G		
UniRef90_Q1LPW5	I V L A Y E P V W A I	G T G K T A T S A Q A Q E V H A A L	R A R V T A K D A G		
UniRef90_G0HDF9	V V V A Y E P V W A I	G T G K V A S A G D A Q E V C C A V	R G V L R E G G D D		
UniRef90_L0K9L8	M V L A Y E P L W A I	G T G E S A T P E Q A Q E E L I K F I	R E T V A K M Y D E E		
UniRef90_H3NHW5	L M I A Y E P I W A I	G T G Q S A T Q E D A Q R M C Q A I	R Q V I A Q E F S E E		
UniRef90_A5K411	V V L A Y E P I W A I	G T G K T A T P E Q A Q E V H K E I	R N I V K E K C G E K		
UniRef90_UP100037F8416	L I L A Y E P V W A I	G T G K T A T P D Q A Q E V H V F I	R H L I K E K Y A E D		
UniRef90_UP100030E68C9	L I V A Y E P V W A I	G T G K T A T A D Q A Q E M H A F I	R Q V L A E K F G G N		
UniRef90_Q56738	A V I G Y E P V W A I	G T G K T A T P E I A Q E I P A H I	R S W L A E Q D A A		
UniRef90_C4LIR5	S V I A Y E P I W A I	G T G K T A S A S D A Q E V C H A I	R G A L L A E L T D E E		
UniRef90_UP100036F4F31	I V V A Y E P V W A I	G T G E V A T P D Q A Q E V C C G A I	R Q R L A E L Y S D E		
UniRef90_D7BH79	L V I A Y E P V W A I	G T G K T A T P Q D A E A M H G E I	R S W L A G R Y S P G		
UniRef90_UP1000422DEA9	I I L A Y E P V W A I	G T G L T A T P D Q A Q E V H A F I	R K E I E E K F G Q S		
UniRef90_A1WXW9	A V I A Y E P V W A I	G T G R T A T P E Q A Q A V H A F I	R Q R V Q E R D A G E		
UniRef90_F5Z8M8	S V L A Y E P V W A I	G T G K T A S P E Q A Q D V H E F I	R G Y F A K V D A E		
UniRef90_A0LTX7	L V I A Y E P V W A I	G T G E V A T P K D A Q E V C C A I	R A R L A E S F G D A		
UniRef90_X5MH90	T V V A Y E P V W A I	G T G R T P T A D D V A K V H A T M	R E T L V A R F G D E		
UniRef90_UP100035CC41E	A V I A Y E P V W A I	G T G L T A T P E Q A Q E V H A F I	R N R V A G R D P Q		
UniRef90_F8GIT9	A I V A Y E P V W A I	G T G R T A S P E Q A Q D V H S F I	R E G I A K Q N V N		
UniRef90_UP10003B36A24	A V V A Y E P V W A I	G T G R T A S V E Q A Q A A H A F I	R G V L A A N D A K		
UniRef90_UP100040DF388	V V L A Y E P V W A I	G T G V T A S A E Q A Q E M H A F I	R T L L R E N V G N K		
UniRef90_D4IMM0	L V I A Y E P V W A I	G T G K T A S A E Q A Q E I H A Y I	R Q V L T A K F G		
UniRef90_UP100046766CC	A V V A Y E P V W A V	G T G K T A S P E Q A Q E E V H R F I	R A E L S E S L E G		
UniRef90_F2K4F1	V V I A Y E P V W A I	G T G K T A S A E Q A Q E V H A S I	R K L L S E S L E G		
UniRef90_U2L2M3	V T I A Y E P V W A I	G T G K T A T P E D A Q A Q E V C R A H	E K L Y D K K		
UniRef90_X8K523	L V I A Y E P I W A I	G T G K T A T P E Q A G E M C A H	I R N V E K L Y D E D		
UniRef90_Q72K37	L V I A Y E P V W A I	G T G K N A T P E D A E A M H Q E I	R K A L S E R Y G E A		
UniRef90_C9YGJ3	I V V A Y E P V W A I	G T G K T A S P E Q A Q E V C C A A V	I R G Q L A A A T P H		
UniRef90_UP1000255E65A	V V V A Y E P V W A I	G T G E V A T P D D A Q E V H S F I	V R S A V G D L V G G D		
UniRef90_UP10004781820	V V I A Y E P V W A I	G T G V T A S P E Q A Q E M H S F I	R Q M V A N Q F G D T		
UniRef90_E1QL68	V T L A Y E P V W A I	G T G L T A S D E Q A Q Q V H A F I	R A W L A A R F D N Q		
UniRef90_L8D6R4	S V I A Y E P V W A I	G T G K T A S P E Q A Q E V H K F I	D L V A Q F D T E		
UniRef90_K6XBU2	I V L A Y E P I W A I	G T G K T A S P A Q A Q E V H A F I	R G H L A K Q D D K		
UniRef90_M5DV50	V V L A Y E P V W A I	G T G E T A T P E Q A Q A M H R Y I	R S L L Q Q R S A D		

UniRef90_UPI000369AE4D | I A D K T T | L Y G G S M N A S N A V E L I S C A D I D G G L I G G A A L K A E
 UniRef90_B4U3U0 | V A D K V R V | Q Y G G S V K P E N I K E Y M A C P D I D G A L V G G A S L E A D
 UniRef90_D9SII8 | V A Q G L C I | L Y G G S V K A S N A V E L F G M P D I D G G L I G G A S L V A D
 UniRef90_J9HG71 | I A D N C R I | L Y G G S V K S I N T L D I M K E P D I D G A L V G G A S L D P E
 UniRef90_R9AAV2 | A A D S V R V | I Y G G S V S H T N C G D L A K Q P D I D G F L V G G A S V K P E
 UniRef90_A1S458 | I G E N V R I | L Y G G S V K P S N A A D L F A Q P D I D G G L I G G A S L N S E D
 UniRef90_R5Z1W8 | A A D E V R I | Q Y G G S V K P N V N V E E Y M A Q P D I D G A L V G G A S L K K A D
 UniRef90_U6JY14 | V A A S L R I | V Y G G S V S D S N C V S L I K C E D P D I D G F L V G G A S L K P D
 UniRef90_V2YCM1 | V A R S V T V | Q Y G G S M N A G N A Q E L L I A Q P D I D G G L I V G G A S L E P K
 UniRef90_R6DZR5 | T A D K V V | Q Y G G S V K P E N A S E I L L N M E E I D G A L V G G A S L E P K
 UniRef90_D8HZK5 | V A S S V R V | L Y G G S V K S G N I S E L L V G C E N I D G A L V G G A S L D E E
 UniRef90_S2Z5Z1 | T A E S T R I | L Y G G S V K P G N I K E E L M A Q P D I D G G L V G G A S L K A D
 UniRef90_Q76BB2 | V A T S V R I | I Y G G S V T A A T C K E L L A G M S D E D I D G A L V G G A S L K P E
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UniRef90_W5SM86	R K I F L I A G N W K M H Y T S I E A A G V A K Q I V D G V R N D D I V V M I
UniRef90_D7CPG9	R L P I I A A A N W K M H K T V K D S L I Q F A E E F I E M L G E D H I E I V I
UniRef90_U2YRJ0	N R M P L I A G N W K M N [] D H L Q A V A F V Q K L H W T L K D A K V E V A V
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UniRef90_B0VFR7	R K I Y I A G N W K M N K G L Q E T K N F L E T V I P E L N K L K L E N V I
UniRef90_R5H2L0	S R K P L I A G N W K M N [] L L Q A Q K A E V F E G V R D F V K D Y T A V V V I
UniRef90_Q4U9J9	K R K W L G G N W K C N G T K Q S I S D L L L H F N R H T K N N N L D V V L
UniRef90_M5DJY8	R S K L V A G N W K M H G G M V Q N R D L L G A I V A G T A A H K A G F A V
UniRef90_UP1000262878E	P K P V I A G N W K M N G N R A L L L D M V A A L S R M M N N S S K V V M
UniRef90_S2L5P2	R T A L I A G N W K M N G S L A L V E R F A Q A F V E T R M P A G V E V A L
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UniRef90_UP1000380CDC5	R R A L I A G N W K M N G L S A D L G W A Q D V C A G L P H P P G D V V V
UniRef90_P36186	R R P F I G G N F K C N G S L L D F I K S H V A A I A A H K L P D S V D V V I
UniRef90_R6J889	R K K L I A G N W K M N G L L E D G V A L A K G V A Q E V K A S D C E F L V
UniRef90_A0A010PMF3	R R P L I A G N W K M N [] D H M E A I A L V Q K L A W T L N D A G V Q V S V
UniRef90_N4TND9	R K F F V G G N F K M N G S K S S I K E I V D N L N N A D L D K N A E V V V
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UniRef90_W8S7P7	R V K L A A G N W K M N G T R A A L E I D T L V A A H G D A A I E I L I
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UniRef90_UP10002D5189D	R P R P L V I A G N W K M N G T R A A T K T F A A I L C D A A L R S K V D L L V
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UniRef90_UP100046E7A5E	R P L I A G N W K M N G L R S E S I T Q I E Q L V K K S A D A G C D I L I

50 60 70 80

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

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

		170	180	190	200
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UniRef90_S6BZ24	G V I I A Y E P V W A I	G T G K T A S P E Q A Q E V H A F I	R G R I A A A S A T		
UniRef90_K9RCA2	L V V I A Y E P I W A I	G T G D T C E V T E A N R V I G L I	R S S L L I		
UniRef90_UPI00047BBF23	L V V I A Y E P P V W A I	G T G R T A T P Q I A E D A H K I I	R A R L I A A I A G S H		
UniRef90_W0EZ65	V V V I A Y E P I W A I	G T G K T A T T A Q A Q E I H A Y I	R S V I A N Q Y G A E		
UniRef90_K2EYW0	S V F I A Y E P P V W A I	G T G K T C D A Q E A N R V I K M I	R S V I A E V S T Q D		
UniRef90_D3LUV7	V I V V A Y E P P V W A I	G T G Q T A T V V A Q A R V T C A F L	R R Q L I A A L Y N S D		
UniRef90_B9CP50	Y V V V A Y E P P V W A I	G T G K T A T A D D A Q E V C C G A I	R K T L I A E I F G S		
UniRef90_E3J1Q9	V V V I A Y E P P V W A I	G T G R T A S A Q D A Q D M C A A L	R E R L L A G L F D A E		
UniRef90_UPI0003607581	T V V I A Y E P P V W A I	G T G K T A S P D D V A E V H K H L	R Q R L I G E R F G E G		
UniRef90_S9RNH5	L V V V A Y E P I W A I	G T G K V P T T D E I G E V H D F M	R A R L L E R R F G E G		
UniRef90_Q1LTT4	L V V V A Y E P P V W A I	G T G R T A S A Q D A Q D M C A A L	R Q R L I G E R F G E G		
UniRef90_Q2SRB2	T I I I A Y E P P V W A I	G T G K T A N S L D A E E V H C K K I	R E R N L A K I Y D N		
UniRef90_K9TKH5	L V V I A Y E P I W A I	G T G E T C E S D E A N R V I G L I	R S K I I		
UniRef90_J9Y8Z2	T V V I A Y E P P V W A I	G T G K T A S P E Q A Q E V H E F I	R G Y F N K V D A Q		
UniRef90_W4HKN0	L V V V A Y E P P V W A I	G T G K V A T P E Q A Q E V H D A I	R S A L I C E R F G D D		
UniRef90_UPI0003A43C62	V I V I A Y E P I W A I	G T G K T A S S D D Q A Q E M H A H	R T Q I I G R K Y G E A		
UniRef90_B1WSS3	L V V V A Y E P P V W A I	G T G D T C D A T E A N R V I I R V	R D Q L I S S N		
UniRef90_G6FNE5	L V V V A Y E P I W A I	G T G D T C E A S E A N R V I G L V	R K Q Q L I K N		
UniRef90_R6H5X8	V V V V A Y E P P V W A I	G T G R T A T P E Q A Q E E V C C A A I	R A T L I N A E F G G D		
UniRef90_A7INK7	L V V V A Y E P P V W A I	G T G R T P T P E D V A N I I H G T I	R S V L I R S Q F G A E		
UniRef90_UPI00045EAD38	I V V I A Y E P P V W A I	G T G K T A T P E I A Q E A H A F I	R N W L I S A H F N T I		
UniRef90_F5Y8D6	I T I I A Y E P P V W A I	G T G K T A T P D D A E I I H A Y I	R S V L I A K L Y G A Q		
UniRef90_W0B145	C I V I A Y E P P V W A I	G T G Q T A T P E Q A Q Q A H A F I	R A Q V I A A F D E K		
UniRef90_A0A037ZIW9	T V V I A Y E P P V W A I	G T G L V P T T E E I A Q V H G F I	R D E L I A T Q F G Q G E		
UniRef90_A9E945	T V V I A Y E P I W A I	G T G K V P S I A Q I K E V H D F I	R T R T L I D R F G T E		
UniRef90_D8PCA5	V T I I A Y E P P V W A I	G T G R A A S P E Q A V P V H R L I	R K T L I N E L G G A D E		
UniRef90_UPI00039E15FA	V V V I A Y E P P V W A I	G T G R T A E P Q D I A E M H E F I	R T R T L I R H I M G E		
UniRef90_W8S7P7	L I V V A Y E P P V W A I	G T G R T P T L D Q I G E V H D Y I	R A E L I E R R F G A G		
UniRef90_UP100046EAF68	I T V V A Y E P P V W A I	G T G L S A T P E Q A G E V H A F I	R R Q S L I V D R F G A E		
UniRef90_UPI00025189D	V V V V A Y E P P V W A I	G T G R T P T V A D V A E V M H G F I	R Q S L I V D R F G A E		
UniRef90_A7HXY9	T V V V A Y E P P V W A I	G T G K T P T A D V A E V H A F I	R K Q A L I D A R G F A G E		
UniRef90_UPI00046E7A5E	T V V I A Y E P P V W A I	G T G Q T A T P E Q A Q Q A H A F I	R E K L I G A L T I		

210 220 230 240

UniRef90_Q5CMF9	V S S N L R I I Y G G S V T P D N C N E L I K C A D I D G F L V G G A S L K P T
UniRef90_UP100046A7D44	V A E L I P L L Y G G S V K P D N A A M I F Q A E N V D G A L V G G A S L K A D
UniRef90_A1AXX3	I A Q I T S I L Y G G S M N S R N A A E L L N C K D I D G G L I V G G A S L K A D
UniRef90_B1XPX4	T N K K N V T I Q Y G G S V K P N N V D E I M A Q P E I D G A L V G G A S L E A E
UniRef90_C8X9I9	T A D K I R I L Y G G S V K S G N V A E I I C A Q T D V D G A L V G G A S L D T E
UniRef90_UP1000470EA94	A G K A I K I L Y G G S V K P G N A S E L V L S I P E V A G A L V G G A S L K A D
UniRef90_A4A9Y6	S A E S L R L L Y G G S V K P G N A S E L M G K E D V D G V L V G G A S L D A E
UniRef90_E3H220	V A Q K V R I L Y G G S V K S S S A P S I F A Q K D I N G G L V G G A S L Q A E
UniRef90_W0FR79	C A E A I T I Q Y G G S V K P E N A A E A Y F S Q P D I D G A L V G G A S L K A E
UniRef90_Q87T31	V A A Q V I I Q Y G G S V K P E N A A E A Y F S Q P D I D G A L V G G A S L D A K
UniRef90_B2V9Z2	N D E T T R I L Y G G S V N N E N N A K D L I S Q K N V D G F L V G T A S L D P K
UniRef90_H4GIY3	V A D K I R I L Y G G S V K P D N I E L M R K R D I D G V L I G R A S L D A D
UniRef90_B6AV74	I A R S I R L Y G G S V K P A N A A E E I I F A I Q N V D G A L V G G A S L K P E
UniRef90_M8AXJ0	V A E S T R I I Y G G S V T G A S C K E L L A A Q P D V D G F L V G G A S L K P E
UniRef90_S6GC79	M A A K T R I L Y G G S V N A E T A S Q L F S Q P D I D G G L V G G A S L K P E
UniRef90_UP10004207C24	T A K A V R I L Y G G S V K G N N A A S I I Q Q R D V D G V L V G G A S L D P E
UniRef90_B4DU15	V A Q S T R I I Y G G S V T G A T C K E L L A S Q P D V D G F L V G G A S L K P E
UniRef90_A0YEX6	V A D S L R I L Y G G S V K A D N A S E L F A N P P D I D G A L V G G A S L A A D
UniRef90_X1PDL2	I A G E M R I L Y G G S V T A A N I A E F V N Q P E I D G A L V G G A S L K A E
UniRef90_UP100047C9DB4	I A E E S I R I L Y G G S V K A A N A K A E L F S Q P D V D G G L I V G G A S L D P E
UniRef90_UP10003744BA7	A A E A V R I Q Y G G S V K A D N V V E I I M A E P D V D G A L V G G A S L K A E
UniRef90_A9VWC8	E A H K I R I L Y G G S V K P S N A R E L I M A V E N V D G A L V G G A S L V A E
UniRef90_B2GH86	F A A A A T R I L Y G G S V K S S N V A S I L S G A D V D G A L V G G A S L D A E
UniRef90_D5UF26	T A D A V R V L Y G G S V K P A N A A E L M D K P D V D G A L V G G A S L D P E
UniRef90_K4KKW1	A G E Q V R I L Y G G S V K P A N A A E L F A K T D I D G A L V G G A A L K A D
UniRef90_T0L7C6	T A Q K M Y I L Y G G S V T P E S A D D L I E M P E I N G F L V G G A S L D P E
UniRef90_M7ML58	T A A K V R I L Y G G S V K A A A N A A S I I L A Q R D V D G V L V G G A S L D A E
UniRef90_F8EA00	T A A S E I K I L Y G G S V K P E N I K E L I M N E N I D G A L V G G A S L K F E
UniRef90_UP100047C5190	H A D R V V A I L Y G G S V M N A A N A A S I L L A Q P D I D G G L I V G G A S L K A D
UniRef90_R7LB19	I A E N V I I Q Y G G S V K A S N A K E L F S T S D I D G G L V G G A S L K V E
UniRef90_F5SGJ2	V A N E V R I L Y G G S V K P D N I E S F L I Q T G E I D G A L V G G A S L D P S
UniRef90_A0QHY3	I A D S S V R V L Y G G S V N A K N V G E L I I A Q D D I D G G L V G G A S L L D G E
UniRef90_A9KBK2	L A E S T R L L Y G G S V K P D N A A A A L F E M P N I D G A L V G G A S L E A E
UniRef90_K2JUX7	A G K D I T L L Y G G S V K P D N A A A E L F A Q A D D I N G G L I V G G A S L V A D
UniRef90_Q1QSY6	L A Q S S M R L I Y G G S V M N A A N A A E L I A Q P D I D G G L V G G A S L K V D
UniRef90_Q1GZK6	A A E S V R I I Y G G S V N P R N A A Q L I L S S M P D I D G G L I G R C S L D A D
UniRef90_W5TJW4	V A A G V R I L Y G G S V N A K N V G E L I I A S P D I D G A L V G G A S L K D E
UniRef90_UP100029AAB32	L A Q E L L A I L Y G G S V K A A N A R A L F S A P P D V D G A L V G G A S L V A E
UniRef90_C8WU23	A A E G G L R I L Y G G S V K P D N V A S F V R E P D L D G A L V G G A S L D P S
UniRef90_C7XX29	I A D K I R I L Y G G S V N P K N I Q E I I M A K P D I D G V L I G R A S L D V D
UniRef90_G0QLU1	A S Q D T R I I Y G G S V T E K N S N E L I I G M K D I D G F L V G G A A L K P A
UniRef90_UP100047C846B	I A R L T R I L Y G G S V K P A N A A A E L F A Q A D D V D G G L V G G A C L T A D
UniRef90_W5SM86	A A D N I I I Q Y G G S V N V Y N I E R L I M G E D D I D G A L I V G G A S L K A D
UniRef90_D7CPG9	V A Q E M R I L Y G G S V N P G N I I G G F V A Q P D I D G A L V G G A S L E A S
UniRef90_U2YRJ0	A A A R T R I L Y G G S V K S A N I A G F M R E P D V D G A L V G G A S L V A E
UniRef90_Q82TU1	I A E N I I Q I L Y G G S V K A D N A R E L I F T M P D I D G G L I V G G A S L V A E
UniRef90_B0VFR7	V A A E K L I S L L Y G G S I I K P G N L Q E L I D C E D D I D G G L I V G G A S L K E E
UniRef90_R5H2L0	A A D A I R I L Y G G S V K P S T I T A E Q M S K S D V D G A L V G G A S L K A E
UniRef90_Q4U9J9	V A D K V R I L Y G G S V N E K N C L E L S K C S D V D G F L V G G A S L K K E E
UniRef90_M5DJY8	V A A G L K I L Y G G S V K A N N A E E L F A M P D I D G G L I V G G A S L V A E
UniRef90_UP1000262878E	I A A E I P I L Y G G S V K G S N A R E M L A K S D I D G A L V G G A S L Q E D
UniRef90_S2L5P2	L A A G T R I L Y G G S V M K A A N A A E L L A Q P D I D G G L V G G A S L Q D D
UniRef90_L1ILQ4	T A D T I R I I Q Y G G S V T P D S V D E L I M S K P D I D G C L V G G A S L D P K
UniRef90_UP1000380CDC5	G A E A L R I L Y G G S V K P D N A Q D L I L A Q K D I D G A L V G G A S L N A D
UniRef90_P36186	G A Q H R I I Y G G S A N G S N C E K L I G Q C P N I D G F L V G G A S L K P E
UniRef90_R6J889	N A N K M K I L Y G G S V K P A N A R E F L I L S L P D V D G A L I V G G A S L K A D
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UniRef90_N4TND9	V A D E T R I L Y G G S V N E K N C G E I L S K Q P D I D G F L V G G A S L K P A
UniRef90_UP100036424BA	I A A A G I R I I L Y G G S V K T D T I G E I I I A Q P D V D G G L V G G A S L D G D
UniRef90_S6BZ24	V A E G L K R I L Y G G S V M N P G N A A Q L I A Q S D I D G G L I V G G A S L K A D
UniRef90_K9RCA2	T N K N V T I Q Y G G S V K P S N V D E I I M A Q P E I D G A L V G G A S L E S E
UniRef90_UP100047BBF23	V A D A T R I L Y G G S V K P D N A T N L C C L D D I D G A L V G G A S L D P D
UniRef90_W0EZ65	V A D M V P I L Y G G S V K A N N A K E L F A C H C P D V D G G L V G G A S L V A D
UniRef90_K2EYW0	A A N Q A R I L Y G G S V K P S T I E Q M A M S D I D G A L V G G A S L E V D
UniRef90_D3LUY7	I A A T V P I L Y G G S V M K A D N A A A L L I A A A D I D G G L I V G G A S L Q A A
UniRef90_B9CP50	I A A G I R V L Y G G S A K P E N I N G F L E K E D V D G A L V G G A S L K A D
UniRef90_E3J1Q9	I A A G I R V L Y G G S V K A S S A G E L I F T M P D V D G G L V G G A S L V A E
UniRef90_UP10003607581	R G Q G F R L L Y G G S V Q P G N A A A L I M A V A D D V D G A L V G G A S L K A D
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UniRef90_Q1LTT4	I A E Q V I I Q Y G G S V N A S N A A E L I F N Q P D V D G A L V G G A S L L K A D
UniRef90_Q2SRB2	T A E K I T I Q Y G G S V K P S N I Q E Y L K M P N I D G A L V G G A S L L A D
UniRef90_K9TKH5	D N K D V T I Q Y G G S V K P D N I D E L I M A K P E I D G V L V G G A S L T P D
UniRef90_J9Y8Z2	L A Q G L R I L Y G G S V K P D N A E T L I F A Q K D V D G G L I V G G A S L K A E
UniRef90_W4HKN0	I I G T A I P L L Y G G S V K A A N A A A E I I F A T S N V D G A L V G G A S L Q A D
UniRef90_UP10003A43C62	V A D G I S I L Y G G S V K A S N A K D I I F G K P D D V D G G L V G G S S L I A E
UniRef90_B1WSS3	K N V T I Q Y G G S V K P N N I D E I I M A Q S D I D G A L V G G A S L D P S
UniRef90_G6FNE5	P D V P I Q Y G G S V K P N N I D E I I M A Q P E I D G V L V G G A S L E P A
UniRef90_R6H5X8	V A N A T R I L Y G G S V M N A G N V K A L I L A Q S D I D G G L V G G A S L K A D
UniRef90_A7INK7	A D G I R I L Y G G S V K P D N A A T L I M A V A D V D G A L V G G A S L K A D
UniRef90_UP100045EAD38	V A K K T R I L Y G G S V K V T I N C E G L I E K S D I D G A L I V G G A S L K I D
UniRef90_F5Y8D6	A A K Q I V I Q Y G G S V K A E N A A Q L I M A K E D I D G A L V G G A S L K E E
UniRef90_W0B145	Y A Q K L S I L Y G G S V N E K N A Q A L I F A M P D V D G G L V G G A S L N A Q
UniRef90_A0A037ZIW9	M A N G T R I L Y G G S V K P G N A A E I I F A T A D V D G A L V G G A S L K A D
UniRef90_A9E945	I G N A L P I L Y G G S V K A A N A V E I I F A V E N V D G A L V G G A S L K A D
UniRef90_D8PCA5	I G N H V R I L Y G G S V T P H N I A D F L A S E E I D G A L V G G A C L D P S
UniRef90_UP100039E15FA	E A E G V R I L Y G G S V K P G N A A E I I F L G I D N V D G A L V G G A S L K A D
UniRef90_W8S7P7	V G R S V R L L Y G G S V K P G N A A E I I F A V S N V D G A L V G G A S L K A D
UniRef90_UP100046EAF68	A A L R I R I L Y G G S V Q G Q D N A R A L I F S E S E I D G A L V G G A S L D A E
UniRef90_UP10002D5189D	A G R N M R I L Y G G S V K P G N A A E L I G V A E V D G A L V G G A S L V A E
UniRef90_A7HXY9	G A K M R I L Y G G S V K P S N A A E L I M A V P N V N G A L V G G A S L K A E
UniRef90_UP100046E7A5E	G A E G V R I L Y G G S V K A S N A D E L I M A L E N V D G A L V G G A S L K V D

UniRef90_Q5CMF9 F A K I E S A Q
 UniRef90_UP100046A7D44 F G P I I S A
 UniRef90_A1AXX3 F L Q I C K A
 UniRef90_B1XPX4 F A R L V N Y V
 UniRef90_C8X9I9 F A T L A A N A
 UniRef90_UP1000470EA94 F L S I V S A A
 UniRef90_A4A9Y6 F A A I V S A A
 UniRef90_E3H220 F A A I A R
 UniRef90_W0FR79 F S I I C N A
 UniRef90_Q87T31 F Y K I I
 UniRef90_B2V9Z2 F L S M V N
 UniRef90_H4GIY3 F S P I I K A
 UniRef90_B6AV74 F I D I I N A A
 UniRef90_M8AXJ0 F K N I C S A A
 UniRef90_S6GC79 F A S I V R F E Q
 UniRef90_UP10004207C24 F V D I I N A K Q
 UniRef90_B4DU15 F A A I C R A A
 UniRef90_A0YEX6 F L S I V
 UniRef90_X1PDL2 F I K I C Q A A
 UniRef90_UP100047C9DB4 F A R I V
 UniRef90_UP10003744BA7 F L G I C R A A
 UniRef90_A9VWC8 F A K I A R F E Q
 UniRef90_B2GH86 F A K I A R
 UniRef90_D5UF26 F A K I C R A A
 UniRef90_K4KKW1 F Y A I C R A A
 UniRef90_T0L7C6 F E K I V R S
 UniRef90_M7ML58 F A N I V R
 UniRef90_F8EA00 F S K I Q
 UniRef90_UP100047C5190 F L Q I I A A A R
 UniRef90_R7LB19 F A N I V N Y N K
 UniRef90_F5SGJ2 F A R L V I E
 UniRef90_A0QHY3 F A T L A A I A
 UniRef90_UP1000365EB92 F A Q I V R
 UniRef90_A9KBK2 F L K I C Q A A R
 UniRef90_K2JUX7 F L A I C H S A R
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 UniRef90_W5TJW4 F L Q I C L A A Q
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 UniRef90_C8WU23 F L A M V N Y Q Q
 UniRef90_C7XX29 F A D I I K S
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 UniRef90_UP100047C846B F L S I I N
 UniRef90_W5SM86 F L D I V K
 UniRef90_D7CPG9 F A A I I R Y Q K
 UniRef90_U2YRJ0 F I S I C L A A Q
 UniRef90_Q82TU1 F L E M V Q I G R
 UniRef90_B0VFR7 F N E I I
 UniRef90_R5H2L0 F L D I L K S
 UniRef90_Q4U9J9 F I A I C R A A
 UniRef90_M5DJY8 F K S I I L S A Q
 UniRef90_UP1000262878E F L A I C Q S A
 UniRef90_S2L5P2 F T R I M N
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 UniRef90_P36186 F M A I A K
 UniRef90_R6J889 F S K I I
 UniRef90_AOA010PMF3 F V D I I N A T K
 UniRef90_N4TND9 F A K L C
 UniRef90_UP100036424BA F L A I A T A A
 UniRef90_S6BZ24 F A R I V N
 UniRef90_K9RCA2 F A Q I I
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 UniRef90_W0EZ65 F V G I I K
 UniRef90_K2EYW0 F T A I I R A A
 UniRef90_D3LUY7 F A A M V K S A
 UniRef90_B9CP50 F T A I V R S
 UniRef90_E3J1Q9 F L A I C E A A R
 UniRef90_UP10003607581 F V P I I E A
 UniRef90_S9RNH5 F A T I I K A A
 UniRef90_Q1LTT4 F L G I V N
 UniRef90_Q2SRB2 W G K I V N
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 UniRef90_W4HKN0 F V P I I K A I K
 UniRef90_UP10003A43C62 F A R I V N
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 UniRef90_G6FNE5 F R Q I I E A A
 UniRef90_R6H5X8 F L A I A R A T
 UniRef90_A7INK7 Y I E I I K I
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 UniRef90_D8PCA5 F G P I I A S A Q
 UniRef90_W8S7P7 F G G I I D A I Q
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 UniRef90_UP10002D5189D F L A I A R A
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UniRef90_C1D1L89	R G K L V I G N W K M N G S L D A N R R L L Q E L L P P L A A K G L E V A V			
UniRef90_K1W079	M N G S Q S L V K Q I V D Q L N N A N L D G T N E V V I			
UniRef90_V5HLP2	R H P V V M G N W K L N G S K E M V V D L L T G L N A E L E G T G V D V A V			
UniRef90_D3AX99	R K F F I G G N H K L H G N K E S L T T L I K S L N N A T F P S E V E L V I			
UniRef90_K4LB9	R I P L V A G N W K M N F D H L E A T Y F V Q K L A W L R D A H F D V A L			
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UniRef90_G7G3R9	F P P F P L V	S S M V L T G V I C T G	A Q T V S E N E P G A F T G E E V D A K	
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UniRef90_Q215B4	C P P A T L V	A A F A Q K L S N S F A I G A Q D C H P R A S G A H T G D I I S A E		
UniRef90_UPI00036ECCBA	F P P F T A L	S N M A D A V V N G S F V K F G Q S Q N M Y F E S G A F T G E E I S P A		
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UniRef90_J0X241	T P P F T S I	R S V Q V L V E A D D H L K I A Q T V S V T S Q G A F T G D D V V S A D		
UniRef90_Q823U7	A P A F T A C E S I K E M D S I W L G A Q N V H Q D S S G A F T G E E V V S L P			
UniRef90_UPI00035FA889	A L P A T L I	A P A A E R A P A L S I G A E D V H A A D H G A H T G C I I S A A		
UniRef90_C5CBP6	F P P F T G L	R S V Q T L V T G D R V Y G A Q D L S P E D A G A Y T G D I V S G A T		
UniRef90_A3ZAP5	A P P F T A I	S T L A A M G Q G S R L L S S Q N V H W E G E G A F T G E E I S P T		
UniRef90_E3C9V9	A P T L S L V	P M V Q V A A A G S P L K V M A E N C Y Q D E G A Y T G E E T S P Y		
UniRef90_G7VJJ8	A A Q D L F L	S D M V R A T A Q S P I H I V A E N V H W E S G A Y T T G E E T S P K		
UniRef90_S7KDV2	C P A F T S L	L S S C R S L I D E P I I W L G A Q N V H Q A S S G A F T G E E I S A G		
UniRef90_I3IDZ9	C P P Y L Y M	R M D M L T F L Q Y S E L Q I G Q N V S R Y E S G A Y T T G E E T S A Q		
UniRef90_UPI0003B6795E	C P P F T D L	R S V Q T L V S A D K V Y G S Q D V S Q Y A P G A Y T T G D I I A A A		
UniRef90_A3WPL1	C P P Y T L L	S E M A G H I Y Y D D V A L G A Q N V E Y E S G A H T G E E V V S V A		
UniRef90_M5AE20	A P S F P F L	H I S N Q I S Q G T T L N I A A Q N I H Q E K G P Y T G E E V S A S		
UniRef90_UPI0003B68C37	F P P F T S L	W R A L I E G K R Y L P W V G A Q N V H W A T E G A F T G E E V V S A G		
UniRef90_UPI00020031F8	A P P F T A I	A S L S S S L A G S G I R I A A Q N H W Q E K G A F T G M V S A G		
UniRef90_UPI0003B3F690	F P P Y T D L	F P V Q T L V A A D D S L P I G Q D L S K H D S G A Y T T G E E I S G A		
UniRef90_C7D7V3	A T P A T L I	H R A V A I A G G V Q I A G Q D C H A N V S G A H T G D D T S A D		
UniRef90_I6WDX5	C P P F P Y L	H Q V R D I L F D P I S L G A Q D L S F N Q N G A H T G D D V V S A E		
UniRef90_E4RN74	C P T A L A L	T A F K E A A A G S D I V T G A Q N I Y W E S G A Y T T G E E I S A K		
UniRef90_Q0APU0	C P P A T L I	H A A V Q V A C A G T G I V G G Q D C H A Q D H G A Y T T G D I I S A A		
UniRef90_H8YWS4	C P P F P Y L	P I V E N L L A G G S S I R W G S Q D V S S E T G A F T G Q V V S A R		
UniRef90_H0SHM9	C P P A T L L	A A F A E K A R G S I A V G A Q D C H A K A S G A H T G D D I I S A E		
UniRef90_L0EUW7	C P P A T L V	Y L A A Q L C K G S S L L I G Q D C H K N E F G A H T G D D I I S A K		
UniRef90_N9RQ01	A P I A I A L	S H I Q T Q F E D T V Y T V A Q D V S R V G T G A Y T T G E E V S A E		
UniRef90_Q98ME7	C V P A T L L	S H A A E I L S R T P V H A G G E D C H K E S G A Y T T G C I I S A E		
UniRef90_Q801K6	G V P A P Y L	E C I R K A L D S K F E V A A Q N C Y K V E K G A F T G E E I S P A		
UniRef90_B7FSQ0	C P P F P Y L	F G A V Q N A V G D K L V V G A E M V S P Q D A G A F T G G I S C S P		
UniRef90_Q5L6H0	A F T A L H	C C E S I K F F H S P L W L G A Q N V H Q D S G A F T G E E I S L P		
UniRef90_H6RF29	A M P A P Y L	A A C A P G A P K G L H V L A A Q N V S A E G F G A H T G E E Y T A E		
UniRef90_G4R8Y1	C P P A T L L	D R A A R R A Q S S A I R I G G Q D C H A D P G A H T G D I I S A S P		
UniRef90_UPI000349B23E	C A P F T T L	P T L L G L A A N A P T I G A Q N V H W A D N G A F T G E E I I A A P		
UniRef90_B4RBW9	C P P S L L V	H R M S E A L A G T P V V G Q D C H T D E S G A F T G D D V V S A E		
UniRef90_UPI0003A807EB	C P P A T L L	Y V A T T L T E D T R L L I G Q Q D C H E K S G A H T G D D I I S A E		
UniRef90_B8J003	F P P F T A I	E S V A R V F D G K K A V G G Q N F Y P A P E G A F T G E E I S D		
UniRef90_A9HJ86	C P P F T Q L	A G I G P L L K G G S G I A L G A Q D C H Q A S G A H T G D I I S A A S		
UniRef90_G7SQI6	A P S F P F L	H I S N Q I L Q G S T L S I A A Q N H Q M E N G S Y T G E E V V S A S		
UniRef90_F8I081	A G Q D V L L	P A M V E A A K Q T D I S I G A E N H Q M W D R G A F T G E E T S P A		
UniRef90_N8QAE7	A P S M L A L	T H V Q A E L V S S P I Y T V A Q N R I A G L G A Y T T G E E V V S A E		

	90	100	110	120
UniRef90_Q1GIL9	M R D A G A T Y V I	G H S E R R A D H G E G D A D V	R A K T E A A Q A A G L	
UniRef90_B2GAL9	A L R E L G K H V I	G H S E R R R L F Y E E D D A T I N K K V H A A L S A G I		
UniRef90_M4XJ63	M L K E F G A K Y I I	G H S E R R R T Y H K E S D E F I A Q K F K V L K D A G L		
UniRef90_A8PNU6	M L Y E F G C Y V L	G H S E R R Q H Y A E T N D Q I A K K F N L A V N S G L		
UniRef90_B8IP95	M L A D L G A T H T I	V G H S E R R R A D Q H E T D A Q V C A K A L G A R R A G L		
UniRef90_R7B5R4	M L K D A G C T Y S I I	V G H S E R R E Y F A E T D E T V N L K V K A L V A D G L		
UniRef90_UPI0002E64C0F	M L K E A G C C R Y C I	V G H S E R R E I F G E N N I S C Q I K T R A L E A N L		
UniRef90_E4U8B8	Q L A D L G C Y V V	V G H S E R R A R Y W N E S D A L V A A K A R R A M E A G L		
UniRef90_G7G3R9	L I K D L G A K Y V V L	V G H S E R R S I Y N E S N T T V A E K F A R A Q N V G L		
UniRef90_W8IGX6	M I A D C F G T H V V	V G H S E R R T D H A E H D G L V R A K T D A A H A A E L		
UniRef90_C1DL89	M L E E L G C P Y V L	V G H S E R R S L F G E S D E T V A E K F E A A L R A G L		
UniRef90_K1W079	M L K D A G I P W V I	V G H S E R R S L F G D S D K I V A D K V K A A L A V G L		
UniRef90_V5HLP2	M L K E F G A T H I I	V G H S E R R E Y H K E S D E F V A K K F A F L K E N G L		
UniRef90_D3AX99	M V K D L G C Q W V I	V G H S E R R R V F G E S S A V I A K K I E H A M Q V G L		
UniRef90_K4LB9	M L A Q L G C S Y V I	V G H S E R R R K Y H P E D D A N I V D Q V R A V L I A A D M		
UniRef90_C0W1G7	M L K K L G V S Y V I	V G H S E R R R S L Y N E A A D V A V K F K V L S D S G I		
UniRef90_UPI0003B3165A	M L S E F G C Q Y G L	V G H S E R R R S L Y N E A A D V A V K F K V L S D S G I		
UniRef90_K2LX58	M L A D G A T H V L V	V G H S E R R R A D H G E S S S T V I R Q K T M A A H D A G L		
UniRef90_W9S4U6	M L V N L G I P W V I L	V G H S E R R R L L I N E S N E F V G D K V A Y A L S R G L		
UniRef90_N1WKA6	Q L R E L G V K V M	V G H S E R R R Q F L G E S S F V C N E K I R F F L L K N G F		
UniRef90_B7RHC8	M I A D T G A G A S Y V V	V G H S E R R R D A H E E T N G D I R K K A R A A W A A G L		
UniRef90_UPI0003B6E1A4	M I A R L G C S Y V V	V G H S E R R R K Y H P E D D A N I V D Q V R A V L A A G M		
UniRef90_D5HAI2	M L S S I G C D A V I L	V G H S E R R R T Y Y D E T D A E V N A K A Q Q A R A H D L		
UniRef90_UPI0003B68953	F L K K L D C T Y C I	V G H S E R R R Y R H V E S D E T V A A K T K A A L E A E L		
UniRef90_UPI0003B63D44	M L A D V G C O R Y A I	V G H S E R R R A L Y G E S S A V A V K V Q R C I N A G V		
UniRef90_A3JL10	M L K E M G C V Y V L V	V G H S E R R R S L Y G E T T D A D I A A R F A A V R G L		
UniRef90_J0B6R2	M L A D G C O R Y V V	V G H S E R R R Q Y H Q E S S A Q V V A A K V L A A L D A G V		
UniRef90_J6LGS1	M L F D A G A S A V I V	V G H S E R R R E R T Y H K E T D A E V C A K A K A A W R A R L		
UniRef90_E8V017	M L T S I G A T H V L V	V G H S E R R R L Y A N E S Y E H V N L K L K A A V V Q H D L		
UniRef90_A5GSL8	M L L E L G V G Y T I V	V G H S E R R R P R K Y F S E S D E Q I N Q R A R A S Q A A G L		
UniRef90_UPI0003B6EA56	M L K D L G V S H V I I	V G H S E R R R R I Y H G E T T D Q D V N T K A K I A L E H G V		
UniRef90_A0A031K6L9	M L K D A G A D F T I V	V G H S E R R R E R E Y H G E S D A D V N A K A Q Q A A L S A G L		
UniRef90_R7L9V6	M L K L E F D C S Y V I	V G H S E R R R E Y F K E S D E F I N E K V K A V L A A G M		
UniRef90_Q9PK66	M L K D C G V D F V L I	V G H S E R R R H I F H E Q N H S L A E K L L A A I I R N G I		
UniRef90_E3HN83	M L K E F F G C O R W A L G	V G H S E R R R R V L H G E T D E I V A A A K A Q A A L A A G L		
UniRef90_A5P7Q2	M V A D A G A K F V V I L	V G H S E R R R R A D H K E T T N T Q I V N A K A Q E A A L E A G L		
UniRef90_UP1000382368F	M L A D I G G E Y V V I V	V G H S E R R R R Q F L G E T S S F C N Q K I S Y L T K H G F		
UniRef90_A1BA25	Q L R D A G S S H V I L V	V G H S E R R R R T D H A E T D E Q V R A K A A A A H E A G L		
UniRef90_X0W4M5	M L A A C C G C O R Y V V	V G H S E R R R R H V F G D D D D A I V R Q K R V A A L D G S L		
UniRef90_KOYM57	M L K D V G C T W C I	V G H S E R R R R E M F G E T D A M V N K V K V R A L V E S G M		
UniRef90_I3ZEPO	M L T S I G A T H V V L V	V G H S E R R R R L Y A N E S Y E Q V S L K L K A A A H A L		
UniRef90_I0XMM0	Q L S E L G I K F A L V V	V G H S E R R R R Q F L G E T S S F C N Q K I S Y L T K H G F		
UniRef90_U7G8R5	M A R D M G C G Y V V	V G H S E R R R R Q L F G E T D E T V A A K V K V E Q V L Q S G L		
UniRef90_B6JFZ2	M L A D A G A T Y V V I V	V G H S E R R R R T D H G E T D A V V R A K A E A A A W R A G L		
UniRef90_D4MAJ5	M L E E A G A T H T H V I L	V G H S E R R R R H I L G E G D D D L I A K K V K A C I D A G L		
UniRef90_J1TCP4	M I A D C Y G T Y V V I L	V G H S E R R R R R I D H A E T D H M V R A K A Q A A Y Q A D L		
UniRef90_K2AC18	M L V E Y G C Q Y V L V V	V G H S E R R R R V I F H E D V N L V A A K F K A A G Q F G L		
UniRef90_G2KVF3	A L S E M G V G Y V V I V V	V G H S E R R R R R R Y F N E T T N D I I V N K K V H A V L I N N R M		
UniRef90_I0IBN6	M L S D L G V A S V L V	V G H S E R R R R H V L G E S D A L V N E K V L A A L E A G L		
UniRef90_UP1000225E796	M V A D A G A G F V V I L V	V G H S E R R R R R E T H G E K D K D K L I A E K G K A A L D A G L		
UniRef90_U5NDC9	S L A D A G A S Y V M	V G H S E R R R R R R L F H E D D A T I A L K V G A A A R S G V		
UniRef90_Q3ZBH2	M L Q D C P Y V V I V V	V G H S E R R R R R R R A D H G E S D A L V R E K A E A A A W R A G L		
UniRef90_Q215B4	M L A D A G A S A V V I V V	V G H S E R R R R R R R H I F N E S D E L L M K K L E A A H R H N F		
UniRef90_UP100036ECCBA	M L E E L G V D Y V L V L	V G H S E R R R R R R H I F N E S D E L L M K K L E A A H R H N F		
UniRef90_T0Y4E9	M L R E F G C R Y T V V V V	V G H S E R R R R R Q R H G E T D V Q V A A K A Q Q A L S Q D L		
UniRef90_J0X241	M L A Q L G C K Y V V I V	V G H S E R R R R R R R R K Y H P D D D A N L V I D Q R A V L I A A G M		
UniRef90_Q823U7	M L Q E F H V N F V V L V V	V G H S E R R R R R R C R H F H E D D A T I A L K V G A A A R S G V		
UniRef90_UP100035FA889	M V K E A G A G A R F S I V V	V G H S E R R R R R R R R A D Q G E T T D A D V V A R K A E A L H R H G L		
UniRef90_C5CBP6	F L A A L G C P Y V V I V	V G H S E R R R R R R R R R T L H G E D D A L V A R K A A A A L H R H G L		
UniRef90_A3ZAP5	M L L E H G V R Y A I V V	V G H S E R R R R R R R R R P R K Y F S E S D E Q I N H R G R S A Q S H G L		
UniRef90_E3C9V9	A L Y Q A G I H H V V I V V	V G H S E R R R R R R R R R R N Y F H E D D E L I N K K V K A A A L R N G L		
UniRef90_G7VJJ8	A L K D L G A K Y V V I V V	V G H S E R R R R R R R R R R K F F E K N K N V L L K I K I A L K Y G L		
UniRef90_S7KDV2	M L Q E F N V N F V V L A G H S I C H I F H E Q D S D I A E K V V A S R S G M	V G H S E R R R R R R R R R R A M F A E N N N E G C K I K V N T A L I N H G L		
UniRef90_I3IDZ9	M L K Q A G C S L C L I	V G H S E R R R R R R R R R R A M F A E N N N E G C K I K V N T A L I N H G L		
UniRef90_UP10003B6795E	F L A Q L D C T Y A I I	V G H S E R R R R R R R R R R R A M F A E N N N E G C K I K V N T A L I N H G L		
UniRef90_A3WPL1	M L Q E L G V E Y V L L G H S I C H I F H E Q D S D I A E K V V A S G L	V G H S E R R R R R R R R R R R A M F A E N N N E G C K I K V N T A L I N H G L		
UniRef90_M5AE20	M L K S I G V Q K V I L G H S E R R F F E K N N V L L K I K I A L K Y G L	V G H S E R R R R R R R R R R R A M F A E N N N E G C K I K V N T A L I N H G L		
UniRef90_UP10003B68C37	M L K E A G C D D Y V I I	V G H S E R R R R R R R R R R Q H F A E T T D D Q V H K K I D A A I S A G V		
UniRef90_UP100020031F8	M L L E H G V S H A I V V V	V G H S E R R R R R R R R R R Q H F A E T T D D Q V H K K I D A A I S A G V		
UniRef90_UP10003B3F690	F L K Q L D C G Y V I V V	V G H S E R R R R R R R R R R T L H A E T T D D D I V N A K V V A A H R H G L		
UniRef90_C7D7V3	M L A D A G A T A V V I L V V	V G H S E R R R R R R R R R R A D Y G E T T D A D V A A K T N A A A W G A E L		
UniRef90_I6WDX5	M L R D F G C D D W V V V V	V G H S E R R R R R R R R R R A T H S E S T A V V V G L K A K M A V D Y G I V		
UniRef90_E4RN74	M L A D S E I E Y T I V V V V	V G H S E R R R R R R R R R R E L F G E S D F E V N K V H A A L L E N G V		
UniRef90_Q0APU0	M L R D C G A T H T H V I V V	V G H S E R R R R R R R R R R R A A H G E T T D G D V V R A K A V A A L L A A G L		
UniRef90_H8YWS4	M I H E F F G C T Y A I V V V	V G H S E R R R R R R R R R R R M F N A E S D A T I A K K Y Q Q A L A V G L		
UniRef90_H0SHM9	M L A D A G A S A I I V V V V V	V G H S E R R R R R R R R R R A D H G E S D V V V H Q K A E A A A W R A G L		
UniRef90_L0EUW7	M L V D C D G A E F V I V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_N9RQ01	M L K D G S D G E F V I V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_Q98ME7	M L K D A G A S H V V I V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_Q801K6	M I K D C G G K W V I L G H S E C H I F H E Q D S D I A E K V V A S G L	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_B7FSQ0	M L K S I G V D W A L G H S E R T T I F H E D T T I A E K V V A S G L	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_Q5L6H0	M L K F E F D V N F V L L G H S E R T T I F H E D T T I A E K V V A S G L	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_H6RF29	M L K S S G V A G A I V V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_G4R8Y1	M L D A G A S H V V I V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_UP1000349B23E	M L V E L G I K Y V V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_B4RBW9	M L A D A G A K L V V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_UP10003A807EB	M I K D C L A T H V V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_B8J003	M L R D V G A Q W V L V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_A9HJ86	M L A D L G V E Y V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_G7SQI6	M L K S I G V Q K V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_F8I081	M L E D L G V T Y V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		
UniRef90_N8QAE7	M L K D H H I D F V V V V	V G H S E R R R R R R R R R R R F H Y Q E T T D D I I C S K I K T V C F S G L		

130 140 150 160

UniRef90_Q1GIL9	V A V V C I G E T L E E R E A G T T L E V V G A Q L A G S L P D G V T A E N
UniRef90_B2GAL9	C P I L C V D E T M K R K Q E H D R I V W V V S Q V I S G L Q G V K E S E L S R
UniRef90_M4XJ63	V P V L C I G E S E A E N E A G K T E E V C A R Q I D A V I N A H G V E A F N G
UniRef90_A8PNU6	T P I L C V G E T L A E R Q A N Q T Q V V L Q T Q L Q E K I I A H A S P L L P Q
UniRef90_B8IP95	V A I I C V G E T R E R E A G R T L A V V R G Q L A G S L P D G A T A A D
UniRef90_R7B5R4	G A I V C V G E S L A I R D D D R Y I E F V V A Q V R A A L A G D A E D L E H
UniRef90_UPI0002E64C0F	T P V Y C I G E S Q N E Y E Q G L T E Q V L S H Q L R E A L E G I D L T N K N L
UniRef90_E4U8B8	V P I L C V G E R L E E R E A G R A V S F T L E Q L A G S L P D G E V G L E T G E E
UniRef90_G7G3R9	I P I L C V G E S E T E Q E N G K T E L V V S T Q I D A I I N K L G V A A L K D
UniRef90_W8IGX6	V A I V C V G E T G D E R Q V G K T L D V L K R Q L A E S L P D G A T A E N
UniRef90_C1DL89	V P V L C V G E T L A Q R R D G S T E A V I A G Q V R A V L Q R V G G A G I A A
UniRef90_K1W079	K V I A C I G E T L E E R D W R G R L E V S I L A E Q L S D I V K S V P D W R R
UniRef90_V5HLP2	T P V L C I G E T E A Q N E A G E T E S V C A R Q I D A V I N L L G A E A L N G
UniRef90_D3AX99	S V I F C I G E L L V D R E A N K T E S I L A E Q L S D I V K S V P D W R R
UniRef90_K4LB9	K P I L C V G E S Y E E R R Q G I Q L D F A V G Q V N D V T R D L A K E D M A N
UniRef90_C0W1G7	T P I L C C G E G L E V R K A G E H V A H V L K Q I D G G L E G F S A E E V A K
UniRef90_UPI0003B3165A	I P V L C V G E T L E E R D Q G V T E S V V S R Q I Q A V I D Q H G A A F A A N
UniRef90_K2LX58	I A V C V G E T E Q E R D L G A T L A V V N G Q I A V S V P D E A T A E N
UniRef90_W9S4U6	K V I A C V G E T L E Q R E S G S T M A V V A A Q T Q S I A D K V L N W D N
UniRef90_N1WKA6	T A I Y C V G E T L S E R E S G K T F E V I S S Q I K E G L K E I E S N F S N N
UniRef90_B7RHC8	T A I V C V G E S G D D R E A D N T L D I L A G Q L S G S V P D G A T G D N N
UniRef90_UPI0003B6E1A4	Q P I L C V G E S L E E R R K G I E L D F A V G Q V H D V T R D L S D E E A A K
UniRef90_D5HAI2	V P I V C V G E T L E Q R K A G E A D T V V R S Q V D G A L S D V S D G A D E K
UniRef90_UPI0003B68953	V P I L C V G E T A K D L E R H E P S A V P A N Q L R G A L L D V K P G T D D
UniRef90_UPI0003B63D44	V P I L C V G E T D D E R E A G R T L D V V A E Q L D A V M Q T V A V G E L S S
UniRef90_A3JL10	T P V L C V G E S L Q D R E S G R T A E V V Q A Q I Q A V I K K V G L A G L A E R
UniRef90_J0B6R2	T P I V C V G E Q L A D R Q A G Q E V C V Q D Q L E P I K A L G A Q I V S R
UniRef90_J6LGS1	L A I V C I G E T K D R V G G K T L D V L A T Q L A G S L P D G C T A K N S
UniRef90_E8V017	I P M L C F G E M L A D R Q A G Y T A D T L M A Q M G G A L A N L S P E K A Q S K
UniRef90_A5GSL8	I P I L C V G E S D E Q R S S N E T E R V I R R Q V E Q G L E G I D P S K
UniRef90_UPI0003B6EA56	I P I L C V G E T L E Q Y E S K Q S K K I V E K Q I K D C V K D L D L S K
UniRef90_A0A031K6L9	A V I L C V G E T E A Q R D A G D A E G V V T A Q I E G S C P I A D G A P E K L
UniRef90_R7L9V6	K P I L C V G E K L E E R E A G K T I S L V S G Q T E K G L A G I S K E D A E K P
UniRef90_Q9PK66	V P V L C I G E T L E E Q R E A G A T Q D I L L E Q L T V G L S R L P E H A P
UniRef90_E3HN83	T P V V C V G E S L A D R E A G N T L T V I E R Q L K P V L A L G A E A V S R
UniRef90_A5P7Q2	R I I L C C G E T L A T R E K G D A V F V L K Q L K A S L P K I E D A A E R S R
UniRef90_UP1000382368F	T P I L C I G E T L E E R E A G R T I E V V S Q L A G S V P D G A T A A N R
UniRef90_A1BA25	V A V I C V G E T E V Q R D A G Q T L D V I S A Q L A G S V P D G A T A A N R
UniRef90_X0W4M5	F P I L C V G E T L A E R R R S G E T E A V L T R Q L S T V L A G I E A G T M E R
UniRef90_KOYM57	K A I V C V G E S L A V R D A G D A E G F V C D Q V R A A L A G L S D E A A Q R
UniRef90_I3ZEPO	T P V L C L G E M L A D R Q G G F T K D T L M A Q M G A L A S N L P A S S A G T
UniRef90_I0XMM0	T A V Y C V G E T L A E R E S G K T F E I L L K K Q I Q E G L G S I E S D Q F S R Q
UniRef90_U7G8R5	T A V L C V G E T L E Q R E A G D A E R V V V A T Q V I R G L A R V E G E S W S Q
UniRef90_B6JFZ2	V A I V C V G E T E T R A R D A G R A A E V V G R Q L D G S V P D G A R A A N R
UniRef90_D4MAJ5	T P V L C Y C G E T L E E R E G G E A F S V M E R Q L R S A L T G L S A E E C G R R
UniRef90_J1TCP4	T A I V C V G E T G D E R D A Y Q T L D I L K R Q L S G S L P E E A T A E N R
UniRef90_K2AC18	Q P V L C L G E T L P E R E S G K T E Y I I R Q Q L A S V V E A A S P D A F R N R
UniRef90_G2KVF3	I P I I C C G E T D T M G R V D N G D H F S W V V S Q V T A A V Q G V S E D A A K R
UniRef90_I0IBN6	D V T L A I G E K L E Q R E N G R G T D V A N V A G Q L A L G L P G V P A E R L A R
UniRef90_U5ND9	K L I L C C G E N Q E K R D S G K A T D H V L R Q I K A S L P A D I E D P V E R K
UniRef90_Q32H2	M P I V C V G E K L E E N E N G Q T R Q I L E T Q M K E A L P A G L I N P S S
UniRef90_Q215B4	V A I I C V G E T L Q G Q R D A G Q T L D V G T Q L A G S L P D G A T A A N R
UniRef90_UP100036ECCBA	P V V F C I G E T L D E R K S G V T K D V L K R Q L I L V K D L L R L G P D G A T A A N R
UniRef90_U5ND9	I P I L C L G E S L E Q R E A G K T A Q V M R H Q L G V L L D V L G E A G M V R
UniRef90_T0Y4E9	Q P I L C V G E G L T E R R R G I E L N Y A V G Q V D D V T R D L G K E E A E Q R
UniRef90_J0X241	V P V L C I G E T L E A R E N G T T K E V L S N Q L M G L A Q L P E T A P R
UniRef90_Q823U7	V P V L C I G E T L E A R E N G T T K E V L S N Q L M G L A Q L P E T A P R
UniRef90_UP100035FA889	H A I V C V G E T L D E R E A G H A E A V V T A Q I A G S L P D G A S G D W R
UniRef90_C5CBP6	T P V I C V G E G L E V R Q A G R H V E H T L A Q L E G S I A G L S A Q D V A G
UniRef90_A3ZAP5	I P I V C V G E S D E Q R S R G E A E R V I R R Q V E Q G L E G I D P A K R
UniRef90_E3C9V9	C P I V C C D T M A R I A A D D K I H W V N R I L A D L K G L S E A D C I C R
UniRef90_G7VJJ8	R P I I D V D E D M S T Y A Q F M D A E P S V A Q V A A L A G V S V D Q I R N
UniRef90_S7KDV2	V P V L C I G E T L E V R E R Q A T Q D Y L A N Q L V L G S Q L P K T E P R
UniRef90_I3IDZ9	L P V L C V G E N R E R E A N I T E Q V L F K Q L S E G L G L D L A G K D L
UniRef90_UP10003B6795E	T P L I C V G E T A D D L E P H G A S A V P V A Q L N A V L D A P A G T D R
UniRef90_A3WPL1	T A V I C V G E D K A Q R E A N T W S V I Q A Q L E K S L A G L S A K Q M A R
UniRef90_M5AE20	N I I F C V G E S Y L E R S N D Q Q F E I I K D Q L K K T V F D C S S D E I K S
UniRef90_UP10003B68C37	Q A V L C V G E T L Q E R E S E T V P V V E R Q L M K A L V G L P P D E I G G R
UniRef90_UP10002031F8	T P I L C C G E S D S Q R E A G E A E K V I R R Q V Q G V D G L D H S R G R
UniRef90_UP10003B3F690	V P V L C V G E T A E D L E P H G A S A V P V A Q L R A L V G L P P D E I G G R
UniRef90_C7D7V3	T A I V C V G E T L D E R E T G A T L S V V A T Q L T G S V P D G A S G E T R
UniRef90_I6WDX5	T P I V C L G E S L E L E R E A G Q A L H A I D V Q Q L Q P I L E F G P D L I K S
UniRef90_E4RN74	K A I V C V G E T L E E R K A E K I E A K V N F Q L S E G L G L S E E E I A E
UniRef90_Q0APU0	V P V I C V G E T L E E R E A G A T L E V L S R Q V A G S V P P S A T P S N K
UniRef90_H8YWS4	T P I L C V G E S L E E R E A G K T E E V V V A R H D A V L E G I G A E A I G S
UniRef90_H0SHM9	V A I V C V G E T Q Q Q R D A G L T L D I L S G Q L T L S L P E G S R A D N S
UniRef90_L0EUW7	K P I L C I G E S A D E Y S C G K T Y Q L Q R Q L E Y S L P D D E A A D N S
UniRef90_N9RQ01	T V I Y C V G E S L E Q R E Q G A A E Q V V L Q Q I C D I A A V V Q A D Q W Q K
UniRef90_Q98ME7	V A I I C I G E T Q Q R E A G A T L E V L S R Q V A G S V P P S A T P S N K
UniRef90_Q801K6	G V I A C I G E K L D E R E G G C T E E V V V F A Q T K V I A E N V K N W E K
UniRef90_B7FSQ0	N V V L C I G E T L Q E F E K D L V G A I C E V Q V Q L K A L G I S A T D M S R
UniRef90_Q5L6H0	I P V L C I G E T L E V R E K G A T E A M L S N Q L M G L A Q L P E T A S
UniRef90_H6RF29	T A V F C C G E T L E V R E A G R A E D V V L Q Q L Q A G V L R L P V D Q I G N
UniRef90_G4R8Y1	I P I I C V G E T E A E R L A G T A N Q V V G E Q I D L S L P D A F G E T P
UniRef90_UP1000349B23E	T P I L C V G E S K Q H R A A G E T E T W A S Q L Q N G L Q D V D L T N
UniRef90_B4RBW9	E P V C V G E T L E E R K A G Q A L A V T R Q V R G S L P T E L A G K A
UniRef90_UP10003A807EB	T A L V C I G E S R E E H A G R T M E V L K T Q L F E S M P D D A T A D N R
UniRef90_B8J003	K T M L C I G E K L E E R E Q G S L Y A V L E R Q L T A F F E A R P D G M P G R
UniRef90_A9HJ86	T P V C V G E T G D Q K A S G E S R D A I G W Q I Q G S L P D G F
UniRef90_G7SQI6	I I F C V G E T E V R R K E H F L S V K Y Q L E E T I F H F S L E N I S S S
UniRef90_F8I081	I P I I A D E A I K P K D D N D R S H W V V N E V I E S L E G I S A E V A K S S
UniRef90_N8QAE7	T I Y C V G E S L E Q R E Q G A E Q V V L Q Q I C D I A A V V Q A E Q W Q K

170 180 190 200

UniRef90_Q1GIL9	V V V A Y E P V W A I G T G K V P T L D Q L A E V H D A L R A D L V A R F G A
UniRef90_B2GAL9	V T I A Y E P S W A I G S G E A A T P Q E A N E G C Y L I R Q T I A H L Y N D E
UniRef90_M4XJ63	A V I A Y E P I W A I G T G K S A T P A Q A Q A V H K F I R D H A A K S Q A
UniRef90_A8PNU6	A I I A Y E P V W A I G T G V S A E P E Q A Q E I H Q F I R M V D S D
UniRef90_B8IP95	T V I A Y E P V W A I G T G L T P T A A D V A E V H G L I R R E L Q A R L G A E
UniRef90_R7B5R4	V V V A Y E P V W A I G T G R T A T P E Q A E E V C A A I R Q T I A D M F T A E
UniRef90_UPI0002E64C0F	C I A Y E P V W A I G T G L T P T A D V E E A H A F M R Q E L V S R F G G A
UniRef90_E4U8B8	L V I A Y E P V W A I G T G K T A S A D D A Q A M A A A I R G F L A E R Y G E S
UniRef90_G7G3R9	S V I A Y E P V W A I G T G K T A S P E Q A Q N V H K F I R D K I A S L D G N
UniRef90_W8IGX6	T V I A Y E P V W A I G T G L T P T T A D V E E A H A F M R Q E L V S R F G G A
UniRef90_C1DL89	G V I A Y E P V W A I G T G E T A S P E Q A Q A V H R H I R A L L G E
UniRef90_K1W079	I V V A Y E P V W A I G T G K V A T A Q A Q D V H D L R K W G Q R V S Q P
UniRef90_V5HLP2	A I I A Y E P I W A I G T G K A A T A D D A Q R I H A S I R A H I A E K N A D
UniRef90_D3AX99	L V I A Y E P V W A I G T G V V A T P K Q T Q D A H Q F I R K W L A T N V S E Q
UniRef90_K4LB9	L I V A Y E P V W A I G T G M V A T P D T A Q Q A R A R I R D H I S N K F G E P
UniRef90_C0W1G7	S V I A Y E P I W A I G T G E V A T P E D A Q E V C A A I R V R G E L Y D A D
UniRef90_UPI0003B3165A	A V I A Y E P V W A I G T G R T A T P E Q A Q D V H A A I R A L L A T Y D K A
UniRef90_K2LX58	T V I A Y E P V W A I G S G R T A S V D E V A E V H H A I R A G L T A R F D D
UniRef90_W9S4U6	I V L A Y E P V W A I G T G K V A T P A Q A Q E V H S E L R K W L H D N A G V E
UniRef90_N1WKA6	L I L A Y E P V W A I G T G K V A T P A Q A Q E V H F A I R K E V A G L F V G A
UniRef90_B7RHC8	T V I A Y E P I W A I G T G K I P T L A Q I E V H D F I R A R L I A R F G D V
UniRef90_UPI0003B6E1A4	L I I A Y E P I W A I G T G M V A T P Q S A Q D A A Q A F R E H L R A R T F N E H
UniRef90_D5HAI2	L I V A Y E P I W A I G T G E S A A A E Q A Q A M H A V I R D D L R E R R Y G G D
UniRef90_UPI0003B68953	F V V A Y E P V W A I G S G A P A T P E Q A Q N V A S V L R R V R A Q S L D E E
UniRef90_UPI0003B63D44	L V V A Y E P V W A I G T G K T A S P E Q A Q D V H Y A I R Q R I A G Y S E K
UniRef90_A3JL10	G V L A Y E P V W A I G T G K T A T P E Q V A E T H F G I R Q F I A G C G E P K
UniRef90_J0B6R2	L V L A Y E P V W A I G T G L T A S P Q Q A Q Q M H Q Q I R A Y M E
UniRef90_J6LGS1	L V V A Y E P V W A I G T G L T P T T A D V A E A H G F R E K L T A R F G G E
UniRef90_E8V017	L V I A Y E P I W A I G T G S T A S P E V A E A A H S I I R E R L A N R M G E E
UniRef90_A5GSL8	L V V A Y E P I W A I G T G K T C E S E E A N R V C G L I R N W V G Y
UniRef90_UPI0003B6EA56	I V I A Y E P V W A I G T G K T A T N E Y A Q V M C N H I R K L
UniRef90_A0A031K6L9	S V I A Y E P V W A I G T G R V P S V A D V A A M H K A I R A K L V A I Y G D A
UniRef90_R7L9V6	V V V A Y E P V W A I G T G K T A P T E M A Q E V H A E I R K V L S K L F G E D
UniRef90_Q9PK66	F I I A Y E P V W A I G T G K V A N P D L V Q E I H A F C R N V V K D L I S K D
UniRef90_E3HN83	V V V A Y E P V W A I G T G R T A S P E Q A Q E V H G A R I R A A L R A L R A L
UniRef90_A5P7Q2	L T V A Y E P V W A I G T G K T A T P K D I E E M H R A I R G L L D E T Y G A E
UniRef90_UP1000382368F	F V V A Y E P V W A I G T G K V A S T G Q V E V H D K I R E I L G E R F P G Q
UniRef90_A1BA25	T V I A Y E P V W A I G T G R T P T S D Q I A E V H A L M R E R L S A R L R G L D
UniRef90_X0W4M5	I V I A Y E P V W A I G T G E T A T P E Q A Q E A I G R I R G W L S D R F D E P
UniRef90_KOYM57	C T I A Y E P I W A I G T G R T A T P E Q A Q E V H G A R A T V Q E L I G E Q
UniRef90_I3ZEPO	L V V A Y E P V W A I G T G S T A S P E V A N E V H A I R S E L A R V F N Y E
UniRef90_I0XMM0	I W V A Y E P V W A I G T G K V A T P A Q A Q E A H S F I R K E I S G L F Q K T
UniRef90_U7G8R5	V V V A Y E P V W A I G T G R T A T A E D A Q A M H A E I R N V L S S M K A
UniRef90_B6JFZ2	L V V A Y E P V W A I G T G L T P T S Q D I E E I H A V I R Q N L T G R F K A E
UniRef90_D4MAJ5	I V F A Y E P V W A I G T G R S A T S A Q A Q E V C A W S R K L V R E I A Q K G
UniRef90_J1TCP4	T V I A Y E P V W A I G T G L T P T A K D V E I V H A F I R D E L V L R F G D E
UniRef90_K2AC18	A V I A Y E P V W A I G T G L T A S P E E A Q D V H A F I R N L L A E Y H P D
UniRef90_G2KVF3	I I I A Y E P S W A I G T G H S A S T A E A E G C Y L I R Q T L A D I Y S D E
UniRef90_I0IBN6	V T V A Y E P V W A I G T G R T A S P E D A Q A A H A A I R A R L V S L Y G A D
UniRef90_U5ND9	L T I A Y E P L W A I G S S G A S V E D V E V H T A I R A F L V K T F G E E
UniRef90_Q3Z8H2	I V L S Y E P S W A V G S S Q T A N P K V A Q Q G C Q R I R Q T V C N L Y G S L
UniRef90_Q215B4	I I I A Y E P T W A I G T G K A T A A E A N T I S Y I R K V L G D L W G N T
UniRef90_UP100036ECCBA	T V V A Y E P V W A I G T G R T P T V A D V E Q V H G F I R K S L T Q R M S G E
UniRef90_T0Y4E9	S V L A Y E P V W A I G T G R S A T P A Q V Q E V H A W L R Q Q C A E V S P G
UniRef90_J0X241	M L I A Y E P V W A I G T G L V A T P Q T A Q D A A H A I R D H F G H V Y G K A
UniRef90_Q823U7	V I I A Y E P V W A I G T G K V A S T A D V Q E V H A F C R E V L S R I F S K E
UniRef90_UP100035FA889	C S I A Y E P V W A I G T G K T C E A S E A N R L C G L I R A K L R E L I G G E
UniRef90_C5CBP6	V V V A Y E P V W A I G T G E V A G P E D A Q Q M C A A L R A R V A A L H G D D
UniRef90_A3ZAP5	L V V A Y E P L W A I G T G K T C E A S E A N R L C G L I R S W V I F S K E
UniRef90_E3C9V9	V T V A Y E P S W A I G S G Q S A D S Q D E G C Y L I R Q T L N D M Y G E D
UniRef90_G7VJJ8	V T L A Y E P T W A I G S G E A A S A V Q A Q K A H L I R Q T L A K L Y S P V
UniRef90_S7KDV2	V I I A Y E P V W A I G T G R V A S T S D V Q E V H A F C R D V L S N I F S H E
UniRef90_I3IDZ9	C I A Y E P V W A I G T G L A A T P A I A Q H V H Q Y I R A E V V R L F D E D
UniRef90_UP10003B6795E	F V V A Y E P V W A I G T G K A T A R E A Q E V C Q Q I R D W V G Y I F S K E
UniRef90_A3WPL1	L I I A Y E P I W A I G S G Q A T P D Q A Q V Q V A A L R T A I A D R K G D E
UniRef90_M5AE20	F Y I A Y E P I W A I G T G K T A T F E Q A Q T M H E F I R S L L L E K Y G E R
UniRef90_UP10003B68C37	S V V A Y E P V W A I G T G K N A T A R E A Q E V C Q Q I R R F L L S E R F G D E
UniRef90_UP100020031F8	L I I A Y E P I W A I G T G K T C E A A E A N R I C G L I R D W V G Y I F S K E
UniRef90_UP10003B3F690	L V V A Y E P V W A I G S G Q A T P A Q A Q E V H A K I R G W L V E N Y Q Q I F S K E
UniRef90_C7D7V3	L V I A Y E P V W A I G T G K V P T L E Q I A E V H D F I R A E L T N R F G A E
UniRef90_I6WDX5	C V F A Y E P V W A I G S G G I A N S E Q I F E M H S H R K Q I Q S V V G Q E
UniRef90_E4RN74	V V V A Y E P I W A I G T G E T A S A E E A N R V I G I R D H I R E S Y P Q A
UniRef90_Q0APU0	L V I A Y E P V W A I G T G R T A S A A D V A M H A I R E R L P D P L I F S K E
UniRef90_H8YWS4	G V I A Y E P V W A I G T G V T A T P E Q A Q E V H A F I R Q R I A A K S Q A I F S K E
UniRef90_H0SHM9	L I V A Y E P V W A I G T G L T P T A G D V E Q I H A F I R Q L L I D R F K E Q I F S K E
UniRef90_L0EUW7	L V V A Y E P I W A I G T G C V P S L D N L E E V H T F I R S L L V S R F S D I F S K E
UniRef90_N9RQ01	I V F A Y E P I W A I G T G K T A S P A D A Q A M H A K I R E G L K Q I T S 1 L F S K E
UniRef90_Q98ME7	T V I A Y E P V W A I G T G L T P T A D V A E A H A H I R E R L L S E K L G A S D I F S K E
UniRef90_Q801K6	V V L A Y E P V W A I G T G K T A T P Q Q A Q E I H E K I R K W L K D H V S E D I F S K E
UniRef90_B7FSQ0	V T I A Y E P I W A I G T G K V A T P E I A Q D V H A T C R Q I L V G M Y G E Q I F S K E
UniRef90_Q5L6H0	V I I A Y E P V W A I G T G K V A S A V D V Q E A H A F C R E V L A N I F S K E I F S K E
UniRef90_H6RF29	V I V A Y E P V W A I G T G V T A T S E Q A Q D M H A C I R G W L T E A F G T E I F S K E
UniRef90_G4R8Y1	I I I A Y E P V W A I G T G R T P T D D I A H M H A H R N L L V A R F G T A I F S K E
UniRef90_UP1000349B23E	L I I A Y E P I W A I G T G D T C E A K E A N R V I G K I R S Q L N D R I F S K E
UniRef90_B4RBW9	F A V A Y E P V W A I G T G L T P T P E I E E M H R A I R A T L V E M F G E I F S K E
UniRef90_UP10003A807EB	T I I A Y E P I W A I G T G Q T P G P E Q V A E V H A A M R A D L V E R F G A I F S K E
UniRef90_B8J003	L A I A Y E P V W A I G T G K V A G P G E V R E A H G V T R A L E R F V G D I F S K E
UniRef90_A9HJ86	G V V A Y E P V W A I G S G N P A A S Q D I A D M M G F I R A E L V R Q F G A I F S K E
UniRef90_G7SQI6	F I I A Y E P L W A I G T G K T A P T E P E V V Q V M H Q Y I R S L F M D K Y G K N I F S K E
UniRef90_F8I081	V I I A Y E P T A S I G S G Q A M T P A L A Q F S L R R I R L T L A D M Y D W D I F S K E
UniRef90_N8QAE7	I V I A Y E P I W A I G T G K T A S P E D A Q A M H A K I R E G L T Q I T P I F S K E

210 220 230 240

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UniRef90_M4XJ63	V A D Q V I [] Q Y G G S S V N D A N A A E L F T Q P D I D G A L V G G V S L K A
UniRef90_A8PNU6	L A Q [] L P I L Y G G S S V K [] S N A A L F Q M P D I D G G L I G G A S L D A E
UniRef90_B8IP95	G D R V R I L Y G G S S V K P S N A A E L M A V P N V D G A L V G G A S L K A E
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UniRef90_UPI0002E64C0F	V A D T I R I M Y G G S S V N K T N A H L M E Q A D V D G L V G G A S L D P E
UniRef90_E4U8B8	V A G R T R I L Y G G S S M K P A N T T E I L A G P D V D G G L V G G A S L E A S
UniRef90_G7G3R9	L A Q G L T I L Y G G S S V N E K N S E L L F A Q T D I D G G L I G G A S L K A D
UniRef90_W8IGX6	G G K M R I L Y G G S S V K P S N A R E L M G V A N V D G A L I G G A S L K A E
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UniRef90_D3AX99	V A K E T R I I Y G G S S V N A T N C V D L S K E T D V D G F L L G F A A L V A D
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UniRef90_W9S4U6	V A S S T R I I Y G G S S V N G T N C R E L A K Q L D I D G F L V G G A S L L K V D
UniRef90_N1WKA6	V A E S T L S I L Y G G S S V K P D N I Q O D I L K Q K D I D G G L V G G A S L Q K I D
UniRef90_B7RHC8	E G N A I R I L Y G G S S V K P D N A A E I I F T A E N V D G A L V G G A S L L K A D
UniRef90_UPI0003B6E1A4	V A Q A V R I V L Y G G S S V S S K N A V E L I T E P D V D G F L I G G A A L D V D
UniRef90_D5HAI2	V A D E V P I L L Y G G S S M K P H N A Y G L L I S Q P D I D G G L I G S A S L E A E
UniRef90_UPI0003B68953	T A A K T R I L Y G G S S V K P D N I V G F M K C P D I D G A L V G T A S L D V D
UniRef90_UPI0003B63D44	L A A G V R I L Y G G S S V K A A N A A E L F S Q A D I D G G L V G G A S L L D A E
UniRef90_A3JL10	I S Q A L R I L Y G G S S V K P A N A V A I F S L D D V D G G L I G G A S L H A D
UniRef90_J0B6R2	S D Q V R I V L Y G G S S V K A D N A A A E L F A M P D I D G A L V G G A S L L D A E
UniRef90_J6LGS1	G E G V R I V L Y G G S S V K P S N A A E L M A V A N V D G A L V G G A S L L K A D
UniRef90_E8V017	[] A E S T R I L Y G G S S V K P D N I G A L L I S M P N I D G A L I G G A S L D P S D
UniRef90_A5GSL8	P N L T [] Q Y G G S S V K P G N I D E L L M A K S D I D G V L V G G A S L E P D
UniRef90_UPI0003B6EA56	T S D D T L I [] Q Y G G S S V T P E T I N D L L K Q P D V D G A L V G G A S L L K V D
UniRef90_A0A031K6L9	G A E V R I L Y G G S S V K A D N A A E L L A V P D I D G V L V G G A S L L T A E
UniRef90_R7L9V6	T A E N M Q I L Y G G S S V K P E N A D N A L L K E K D I D G G L I V G G A S L L K A D
UniRef90_Q9PK66	A A E R T P I L Y G G S S V K A D N T R A L T L C P D V N G L L V G G A S L L S V E
UniRef90_E3HN83	G A A Q V Q V V L Y G G S S V K A A N A A S L F A M T D I D G A L V G G A S L V A E
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UniRef90_UP1000382368F	A D E T P I L Y G G S S V K P D N A A E I I F A I P H V N G A L V G G A S L L K A E
UniRef90_A1BA25	G A D F A L L Y G G S S V K P G N A A E I I F A I P H V N G A L V G G A S L L K A E
UniRef90_X0W4M5	T A E R I [] R I L Y G G S S V K P E N A A D L L A R S D I D G A L V G G A S L D P D
UniRef90_KOYM57	A A Q G M R I L Y G G S S V K M K P A N A A F L L A C E Y C E N V D G G L I G G A A L L K A D
UniRef90_I3ZEPO	I A E N T R I L Y G G S S V K P E N S A S L L S Q S D I D G L L I G G A S L D P K
UniRef90_I0XMM0	I S D A M P I L Y G G S S V K A D N V K E L L I S Q A D I D G G L V G G A S L Q K I E
UniRef90_U7G8R5	P A E S T S V I L Y G G S S V K A D N A A A L F S E P D I D G G L I G G A S L L K A E
UniRef90_B6JFZ2	G E G V R I L Y G G S S L K P A N A A E I I L A L A N V N G G L I G G A S L L K A D
UniRef90_D4MAJ5	E L G C V V L Y G G S S V K G A N A K E L L I S M E D I D G A L V G G A S L L K P
UniRef90_J1TCP4	G K G M R I L Y G G S S V K P A N A R E L L A V D N V D G A L L I G G A S L L K A D
UniRef90_K2AC18	I A R S V R I L Y G G S S V K A D N A R G L L F A M P D V D G G L L V G G A S L L D A K
UniRef90_G2KVF3	V A D Q I R V L Y G G S S V T E K N [] K S L L M K E N D I D G V L A G K A S L S A E
UniRef90_I0IBN6	A A A G V R I [] Q Y G G S S V N P Q N I S A I I M A Q P D V D G A L L I G R A S S L R P D
UniRef90_UP1000225E796	D G A G I R I L Y G G S S V N A E N A A E I I L A G D E V D G G L I V G G A S L S A E
UniRef90_U5NDC9	L A D Q V R I L Y G G S S V N P Q N I S A I I M A Q P D V D G A L L I G R A S S L R P D
UniRef90_Q3ZBH2	A S R I T P I L Y G G S S V N E K N T A E L L C Q S D I D G A L V G G A S S L K A D
UniRef90_Q215B4	G S K V R I L Y G G S S V K P S N A Q E L L M A V A D V N G A L V G G A S S L K A D
UniRef90_UP100036ECCBA	D I P V I L Y G G S S V N K G N A K D I I A A I N I V D G A L V G G A S S L K V E
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UniRef90_Q823U7	K S E I I S I L Y G G S S V K A D N A E G F A R C P D V D G L L V V G G A S S L D P Q
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UniRef90_G7VJJ8	I A E Q V R V L Y G G S S V T P D N A R E I M L Q K D I D G V L V G T S A L D P E
UniRef90_S7KDV2	K S K K I S I L Y G G S S V K P E N A E G F A H C P D V D G L L V V G G A S S L D P K
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UniRef90_A3WPL1	V G A K T P I L Y G G S S V K A N A N E S L F S E A D I N G G L I G G A S S L N E D
UniRef90_M5AE20	I S N R I P I L Y G G S S I N D F N A K D L F Y Q K D I D G G L V G S S S M E K K
UniRef90_UP10003B68C37	T G M T V R I L Y G G S S V K P D N A A G L L N E P D I D G A L V G G A S S L L A S
UniRef90_UP10002031F8	S D V V V I [] Q Y G G S S V N P G T I D Q L M A Q S D I D G V L V G G A S S L D P E
UniRef90_UP10003B3F690	[] A A A T R I L Y G G S S V K A A N I I A S F L R E P N V D G A L V G G A S S L D D E
UniRef90_C7D7V3	T A D A I R I L Y G G S S V K P S N A T E I I F A T S N V D G A L V G G A S S L K A D
UniRef90_I6WDX5	G N P I R I I L Y G G S S V K P E Q A K E L L F S L D C P D V D G A L V G G A S S L N P E
UniRef90_E4RN74	A E K I R I [] Q Y G G S S V K P H N V E E I I M A Q E E I D G A L V G G A S S L K A E
UniRef90_Q0APU0	T T C I L Y G G S S V K P G N A R E L L S L A D V D G A L V G G A S S L D A D
UniRef90_H8YWS4	H A D A V R I L Y G G S S M K P G N A M E L L I G Q G D I D G G L I G G A A L L K A D
UniRef90_H0SHM9	G A R M R I L Y G G S S V K P S N A A A E L M A V A N V N G A L V G G A S S L K A D
UniRef90_L0EUW7	I G Q K I K R I L Y G G S S V N A N N S S Q F I S V N N L D G L L V V G G A S S L K S S
UniRef90_N9RQ01	Y G E H T A I L Y G G S S V K A E N A V E L L A A C P D I N G A L V V G G A S S L N A Q
UniRef90_Q98ME7	A A K T R I L Y G G S S V K P S N A V E L L L G V R N D V D G A L V V G G A S S L K A D
UniRef90_Q801K6	V S K C C R I I Y G G S S V T A G T C A E L L A C M G D V D G F L V G
UniRef90_B7FSQ0	V A N D T R I L Y G G S S V S P E S V D G L L A K P D I D G A L V G G A S S L L E S E
UniRef90_Q5L6H0	K A E E I S I L Y G G S S V K A D N A E G F A R C P D V D G L L V V G G A S S L K A D
UniRef90_H6RF29	V A E S I P V L Y G G S S V C K P S N A A E L F S Q K D I N G G L I G G A S S L K P E
UniRef90_G4R8Y1	G E S A L L L Y G G S S V K P S N A A E E I I L R T P E V N G A L V V G G A S S L L A D
UniRef90_UP1000349B23E	D L T I I [] Q Y G G S S V K S D N [] D E I I M A Q P E I D G V L V V G G A S S L D P E
UniRef90_B4RBW9	A G R A V P I L Y G G S S V K P S N A A E I I L H A D E V G G A L V V G G A S S L K A D
UniRef90_UP10003A807EB	A G E K I R I L Y G G S S V K P A N A R E L L I S V A N V N G A L I G G A S S L K A D
UniRef90_B8J003	S G K K L P I L Y G G S S V K P D N A G A L L I A L D N V D G L L V V G G A S S L E A Q
UniRef90_A9HJ86	A G K T I R I L Y G G S S V N G R D A A S I L P I A E V G G A L V V G S A S S L Q A D
UniRef90_G7SQI6	I S R K I S I L Y G G S S V K P E N A Y E L F Y Q K D I D G G L V V G N S S L N I E
UniRef90_F8I081	V A N A V R I M Y G G S S V K P E N A Y E L M I Q D D I D G V L V G D S A L D P D
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UniRef90_B2GAL9	F L E M V N Y Q R
UniRef90_M4XJ63	
UniRef90_A8PNU6	F L S I
UniRef90_B8IP95	F L G I A A A
UniRef90_R7B5R4	F K Q L I E A A
UniRef90_UPI0002E64C0F	F S E I C R S A
UniRef90_E4U8B8	F S A M V E A A
UniRef90_G7G3R9	F I A I C K S A
UniRef90_W8IGX6	F L A I Y R A
UniRef90_C1DL89	F L A I C R A A Q
UniRef90_K1W079	F I D C K C K K
UniRef90_V5HLP2	
UniRef90_D3AX99	F T T I V S Y A K
UniRef90_K4LB9	F S R I V R A A K
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UniRef90_UPI0003B3165A	F L A I C R A A
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UniRef90_A0A031K6L9	F L A I V G A A
UniRef90_R7L9V6	F A A L V E S A
UniRef90_Q9PK66	F L A I I Q
UniRef90_E3HN83	F L R I
UniRef90_A5P7Q2	F L G I V V A A
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UniRef90_A1BA25	F G P I I A A
UniRef90_X0W4M5	Y A A I V D A G R
UniRef90_K0YM57	F A A L V A A A
UniRef90_I3ZEPO	S L A K I
UniRef90_I0XMM0	F L A L
UniRef90_U7G8R5	F I S I C R A
UniRef90_B6JFZ2	F L A I A E A
UniRef90_D4MAJ5	F L D I
UniRef90_J1TCP4	F L A I
UniRef90_K2AC18	F L A I C N A A R
UniRef90_G2KVF3	F V K L A N
UniRef90_I0IBN6	F L A I V S A A
UniRef90_UPI000225E796	F M N I V L A V Q
UniRef90_U5NDC9	F L E M V N
UniRef90_Q3Z8H2	F V S I C R Q A
UniRef90_Q215B4	F L A I
UniRef90_UPI00036ECCBA	F A I I I K A
UniRef90_T0Y4E9	F L
UniRef90_J0X241	F S M I V R L T Q
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UniRef90_G7VJJ8	F L Q L V A I A Q
UniRef90_S7KDV2	F V D T I
UniRef90_I3IDZ9	F V A I C E Q A
UniRef90_UPI0003B6795E	F S A I V R Y Q K
UniRef90_A3WPL1	F C A I C R A A K
UniRef90_M5AE20	F L K I V Q S
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UniRef90_UPI0003B3F690	F S S I V R F K K
UniRef90_C7D7V3	F S G I I S A
UniRef90_I6wdx5	F L S I I E A
UniRef90_E4RN74	F S E I I
UniRef90_Q0APU0	F S A I I E A V
UniRef90_H8YWS4	F L
UniRef90_H0SHM9	F L A I A K
UniRef90_L0EUW7	F L D I I K S F R
UniRef90_N9RQ01	F Y Q I A K A
UniRef90_Q98ME7	F L G I A E A Y R
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UniRef90_Q5L6H0	F A D V V
UniRef90_H6RF29	F Q G V I E
UniRef90_G4R8Y1	F F S I I V A A
UniRef90_UPI000349B23E	F A R I V N
UniRef90_B4RBW9	F L G I V N A
UniRef90_UPI0003A807EB	F L A I Y Q A
UniRef90_B8J003	F L Q I I G A
UniRef90_A9HJ86	F L P I V R A A
UniRef90_G7SQI6	F M R I I Q S
UniRef90_F8I081	F L E L C Q V A
UniRef90_N8QAE7	F Y E I A Q A

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UniRef90_B9JHW9	R R L I	A G N W K M N G D L A E V T T L A Q R L L E T P P R P D N V D V V V			
UniRef90_EOTGS3	P R Q K L	A G N W K M N G T G A A L A E L E A L I Q T Q S A A K S E I L I			
UniRef90_C7P153	Q R I K V I	A C N W K M Y K N K P E A L N F I K K V N F F V P N P K V E T I I			
UniRef90_A3X811	R P L I A	G N W K M N G T S E S L G E L I A A G V I S S D L G R L F E A L I			
UniRef90_U6E3P6	R K P L V A	G N W K M N G S S A S N K L L L D A L A Q R D S F A S V D V A L			
UniRef90_J0Z311	R P I V G	N W K M H G L R A S D K I E K I V E S V E K N H R I D V A I			
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UniRef90_E4UDE7					
UniRef90_K1PJ59					
UniRef90_G2H3S0					
UniRef90_B7QP30					
UniRef90_A0A023D1T8	R R K L	L M A A N W K M Y K T A G E A R T T A A S L A A L T A P D D R E V L V			
UniRef90_P0C0J6	L I V G	N W K M N G T S A S A A T L I G E I L A A A L P P S V A L V I			
UniRef90_E6W5F7	K K I I I	I G N W K M N K T V S E T R D F Q K F N V G K I K E D L L D F A I			
UniRef90_K2M867	R T T Y L V	G N W K M H Y A P A D T R T F L A R F L S G T V T A G R E I V F			
UniRef90_N9MCV6	R P L I A	G N W K M N G T G A A L V E L T A M T A G D F A A C E A L I			
UniRef90_E5ASV0	S A I T P	W V I G N W K M N P V Q A E A Q Q L V S E F K Q A D A A Q C H L G V			
UniRef90_A5FXW5	Q R S K L	V G N W K M H G R V A D N D A L H A L V Q A T L G P Q V R L G V			
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UniRef90_UPI0004175B17	K P L I V	G N W K M N K D H E A M L T V Q A F D F A L P K E Y V D A G F			
UniRef90_I7LBZ8	S P R R P L	V G N W K M N G L R K N L P E I A K I C A A A E G G A G E A V I			
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UniRef90_UP10003B7B29C	K L V A G	N W K M F G N K A M I A D I K K I D R Y C K E K T C E V A I			
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UniRef90_M3WUE6	S R K F F V	G G D R K M Y G W K K N L E E L I T T P N T T M V L A D M T S N P			
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UniRef90_W0NZY3	K K Y L F V	V A N W K L N G S I E F L S N Y F K F N S E I G L E K N I V I			
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UniRef90_F2JYZ6	R K W V I	G N W K M N G R L Q N N A L M H R F R I L P E A D K V T I G L			
UniRef90_G2DL26	R K P L V A	G N W K M H T D S S Q A Q D L A S S I V S R V S S T D V E V V L			
UniRef90_D1CFX6	R N S I I	G G N W K M N G S P S E A T K M L K E L I P L V K K R V D I V I			
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UniRef90_UP1000252C86A	R P L I A	G N W K M N G L R K D L D E I A A I R D G G V K G G A V E I V V			
UniRef90_B2IKQ0	K K V W I	G T S W K M N K T S A A A D A W A S A V A P A V K S E S V Q P F V			
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UniRef90_B8KS04	R K L A	A G N W K M N G A R A D L S M I D R L N T S H P S P D C D I L L			
UniRef90_F7ZF33	R K L V A	G N W K M N G S L G S L A E L D A I A A A A K A Q A S V D V A V			
UniRef90_A5V8U3	Q P L L A L	N W K M N K T P S E A R A W A A D L S S A I T P G N A E L J A V			
UniRef90_Q1IZA2					
UniRef90_Q3CZR0					
UniRef90_H6UNT3	Q K W V V G	T K A S I D D I L K N L K K A E L D K N T E V L I			
UniRef90_UP100047C592E		T K A S I D D I L K N L K K A E L D K N T E V L I			
UniRef90_12CCR5		S K S S I D E I A E F L N K G P L S A D S E V V V			
UniRef90_UP10003679FCD	K K I I I	G N W K L N D H L E A I Q L F Q K L N N A D I D E K I S I V V			
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UniRef90_A7TAT0					
UniRef90_D2TTM2					
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UniRef90_N4WJ25					
UniRef90_E6SKU6					
UniRef90_N6YZC3					
UniRef90_L5M8B4					
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50 60 70 80

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UniRef90_B9JHW9	P P A T L I D R A A A I S K G N K L R I G G Q D C H P N S S G A H T G D V S A Q
UniRef90_E0TGS3	C P P A T L I A P M H A L Q F D T I G L G A Q D C H T E E S G A Y T G D L S A A
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UniRef90_P0C0J6	A P S F I S L S L I S K S L T T K K L E I A A Q N L S Q F D S G A F T G E I S G K
UniRef90_E6W5F7	C P P A L S L E S A L E A V K S T P V V S V G A Q N H H K E S G A Y T G E E I S A P
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UniRef90_N9MCV6	A P V A I A L G S V Q E Q L K T P V V T V A Q D V S R A G G A Y T G E E V S A E
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UniRef90_S9SAR0	P P F P L I V P V A A A L A G S G L A V G A Q D C H A R P A G A H T G D V A A P
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UniRef90_F1KXV2	A P A P A Y L S Y V K E H V K P G I E V A A Q N C Y K V P K G A F T G E E I S P A
UniRef90_UPI00035F315D	F P P Y V C I P A V V T L L A A R N I A I G A Q N I S H H S G A Y T G E E I S G K
UniRef90_UPI00050F728	I P P F T D I R S V Q T L I Q G D K L W G A Q D V S Q Y E P G A H T G E E I A A S
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UniRef90_Q057N9	A P P V L Y S H L I Q N M F S S D K F L G A Q N I L D I H F S G P F T G E E I S P I
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UniRef90_UPI00047829BA	U N A P A N L P T L A A E L P Q S V A F G A Q D I S E H E S G A Y T G E E I S G A
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UniRef90_W0NZY3	A P P A L Y L N E V Y K N I H S M N I F L G A Q N V D K N T G A F T G E E T S I L
UniRef90_A6D532	I P P P F Y L S Q M A Q T L N A D A I K G L G A Q N M C W D S G A F T G E E V S P L
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UniRef90_D1CFX6	C P P F V W L E R V A K L V E E T G I L V G A Q D T F W E D G A Y T G E E I S P L
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UniRef90_UPI000252C86A	N P E A T A E C L K K A A A G S E L R V G A E N Y F E D E G A F T G E E T S P K
UniRef90_B2IKQ0	C P P F T L L A A A A S L C E G S G I I G Q D C H P E K K G A F T G D I A P P
UniRef90_UPI0002F9017A	I P S F P Y I Q Q V S E Q L N D K G V R I G S Q N C W Q D E G A Y T G E E V S P I
UniRef90_B8KSO4	C T P Y P Y L A T L A A V L P E V G V G A Q D C S V N T E G A F T G E E V S A A
UniRef90_F7ZF33	C P P A H L V S Q A V A Q A A K G T L K I Q A G N C H S E T G A Y T G D I S A G
UniRef90_A5V8U3	C P P F T L I A P A A A R Q P G L A I G A Q D C H A Q P K G A H T G C C V S A A
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UniRef90_I2CCR5	S P P S L Y L S Y V R D K L P A G I G V A Q A Q N C C Y K A D K G A F T G E E I S P Q
UniRef90_UPI0003679FCD	S P S H T S L R S I Q T L I D A D K F L S S Q D V S M F N D G A Y T G E E V V S A H
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UniRef90_B9W438	A A P T V Y L M L K D K L R K D D W G V S A N L Y S K P N G A F T G E E V T A P
UniRef90_J2PZL8	C P P A T L L H R I L S H V L M G S A I M T G Q D C H V E A A G A F T G A V V S A G
UniRef90_UPI0004716FD8	A V P S I N L A A F Q S N E I K Q L G V V A A Q N V S K H K G A Y T G E E V S I D
UniRef90_A7TAT0	D H I S T G A Q N C H E K A S G A Y T G E E V S A A
UniRef90_D2TTM2	I P P F T A H P V S Q Y L K Q H Q I A C A A Q N M H H E M E N G A W T G E E L S A A
UniRef90_UPI00036C30DD	A A P D I Y L S Q L A T M L Q G S Q M A V A A Q D R F A A D G A F T G E E T S A A
UniRef90_UPI0003B312DC	A P P F T L I D R A V I V S A G A V K I G G Q D C H A N A K G A H T G C C V S A L
UniRef90_P91895	G C P A P Y L S L A R S L L P E T I G V A Q A Q N C C Y K V A K G A F T G E E I S P A
UniRef90_Q6PTM4	S P P A V Y L A Y M N G K I P A N V S V A A Q N C C Y K V E K G A F T G E E I S P A
UniRef90_N4WJ25	I P S F P H Y P L K E D V Q G T S I N I G A Q N M H W E K G A Y T G E E V S P V
UniRef90_E6SKU6	C P P F T S L A A A A E A L A G S A I A L G A Q D A W G D F G A F T G E E V S A P
UniRef90_N6Y7Z3	C V P Y P Y L A Q A Q Q R P A G V A L G A Q D V S E Y D G A Y T G E E V S A A
UniRef90_L5M8B4	
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UniRef90_Q45Y76	A P P F P Y L Q H V R Q T L P K S V G V A A Q N C C Y K I D S G A Y T G E E V S P Q
UniRef90_H0JIW9	I P T L V H P G V A E A L A E T S L M V G A Q T C A P V G A L T G E E V S S T
UniRef90_G2T6A8	V P P F T A L A A V H R A L G D A P V H L G Q T M H W Q D E G A Q T G E E I S P L
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		90	100	110	120
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UniRef90_UPI0003C138B9	M	L K E F G C E Y V I	I G H S E R R R H G H D T D S T G E R F E V A	V Q S G L	
UniRef90_B9JHW9	M	L A D L G A T Y V I	I G H S E R R R A D H G E T S A M V A A K A S A A Y R A G L		
UniRef90_E0TGS3	M	L R D A G A C Y C	V G H S E R R R D Y H G E T D E V V K A K L	A A A A L K A D L	
UniRef90_C7P153	M	L A S I G V D Y V I	I G H S E R R R E Y F Q E S N A V L A K K I D	D L A L A N G I	
UniRef90_A3X811	M	L K E A G A T S V I	I G H S E R R R A D H N E T S N A V L T V A A K A A A A W G A G L		
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UniRef90_J0Z311	M	L K E A G A K Y V I	I G H S E R R R S V Y Q E N D S I V R A K V Q A A W R A G L		
UniRef90_I1XMQ2	M	L R D F S C Q Y V I	I G H S E R R R C L Y A E L D H	I A E K Y E M S V K H G I	
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UniRef90_G2H3S0	M	L L D C G C G W V I	T G H S E R R R H V I	G R K T A F S L A A G L	
UniRef90_B7QP30	M	L R D A G A S A V I	I G H S E R R R R A D H G E T T D A E	V R A K A E A A I A A G L	
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UniRef90_P0C0J6	M	L Q D L G T K Y V I	I G H S E R R R R E I F K E K D E E	L K N K L Q A Q K Y D L	
UniRef90_E6W5F7	M	L Q S M G V K Y G I	I V G H S E R R R R Q Y F G E S D V	L V N Q K A V A L L N C D I	
UniRef90_K2M867	M	L A D A G A S H H V I	I V G H S E R R R T D H G E T T D A I	V A A K A E A A A W R A G L	
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UniRef90_E5ASV0	M	V A E F G A T L A I	I V G H S E R R R A R A L H A E S S E	V V A A K A R R A L E A G M	
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UniRef90_I7LBZ8	M	L A K L N C T W V V	I V G H S E R R R D H G E D D E	L V V A A K A R A A L G A G L	
UniRef90_S9SAR0	M	L L A D L G C A A V I	I V G H S E R R R A D H G E T T D A T	V K A K A E A A L A A G M	
UniRef90_V7IGB3	M	L A D L G A Q F V I	I V G H S E R R R R Q Y F G E N N E	T L S A K L D N A L A A G L	
UniRef90_Q45Y86	M	I K D V G A T W V I	I V G H S E R R R R H V F G E S S D E	L I G E K V K F A L S E G G L	
UniRef90_D4XVH2	M	K D L D V H Y V I	I V G H S E R R R R A R A Y H N E S S E	L V N Q K A V K V V L E A G L	
UniRef90_F1KXV2	M	K D L G L H W V I	I V G H S E R R R R H I F G E S S D E	L I A E K V V H A L E S G G L	
UniRef90_UPI00035F315D	M	L S D I G C S H V L	I V G H S E R R R R T N C S E S N E	L V V A E K F S A A K R S G G L	
UniRef90_UPI000050F728	F	L S R L G C T Y V I	I V G H S E R R R R A N N H E T N D	V V A A K V K A A L A Q D I	
UniRef90_G4CT13	M	M K D G V V D I V L I	I V G H S E R R R R S L Y F N E K N D	V D Q R H K I E N V L N V G L	
UniRef90_Q057N9	M	L K D I G I K Y V I	I V G H S E R R R R L N H K E T T N E	I I A K K F C M L K E E N L	
UniRef90_UPI000309620C	M	V A D A G A S F V I	I V G H S E R R R R T G H G E S D A	L V R A K A G A A F A A G L	
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UniRef90_UPI0003B7B29C	M	K D V G G C T Y A V	I V G H S E R R R R R D Y H G E T T D	T V V A A K A R Q A Q Y G L	
UniRef90_S9SCC6	M	L T D C G L D I V E	I V G H S E R R R R E R F G E T T D E	T V G L K T E A A V R H G L	
UniRef90_W0V8S2	M	R D F G S R Y V I	I V G H S E R R R R R A Y H A E S D E	L V A Q K A V V A L A A G L	
UniRef90_UPI00047829BA	M	A K L G V Q Y A L V	I V G H S E R R R R Q G H A E E G D E	V G A K A A A A H G A G G L	
UniRef90_F0RMU5	M	K D V G A R Y A I V	I V G H S E R R R R R E Y H G E T T D A N	V A A K A A Q A Q A S G L	
UniRef90_K9Y6U7	M	T E L G V T Y A V V	I V G H S E R R R R Q Y F G E T T D E	T V N F R A R A A Q K A E E L	
UniRef90_M3WUE6	M	I K D C G A T W V V P	I V G H W E R R R R V F G K S D E L	I I G Q K V A P A L A E G G L	
UniRef90_P57393	M	R D I G V K Y V I	I V G H S E R R R R R F L H H E T T D D	I I I A K K F H L I K K S N L	
UniRef90_W0NZY3	M	K D I G V K Y V I	I V G H S E R R R R R L L H N E N D N	I I I I K K F D L I K S L N L	
UniRef90_A6D532	M	K D C G V S I V E	I V G H S E R R R R R A M F G E T T D K T	V V N L K V L A A L K H G L	
UniRef90_UPI0003B707CC	M	L A E V G A R L T I	I V G H S E R R R R R Q D Q Q E S N A	D I D I K A K A E A A A H A A G L	
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UniRef90_I2CCR8	M	L V D V G G C Q W V I	I V G H S E R R R R R N V F G E T T D E	I I S A K V G Y A L S T G L	
UniRef90_UPI00036088AA	M	L K D C Q L D V E	I V G H S E R R R R R E Y F G E T T D E	T V G F K V G A A V V R H G L	
UniRef90_UPI000468F027	M	V A D C C A A T V E	I V G H S E R R R R R H F F A E N D A D	N K V V H S A L R H N L	
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UniRef90_A4TXN7	L	L K D V G C S A V I	I V G H S E R R R R T D H A E T D A Q	V V K A K A A A A H A A G G L	
UniRef90_F3WUK1	M	V K E A G A R F T I	I V G H S E R R R R R A D Q G E T T S Q	D A W K A A A A H R N G L	
UniRef90_UPI0002378500	M	R D F G V R Y T L V	I V G H S E R R R R R Q Y H G E T T D Q	V V A Q K A Q R A L A A G G L	
UniRef90_U5QMQ9	M	T E L G V L Y A I V	I V G H S E R R R R R Q Y F N E T T D A	T V N R R L K A A A Q A H D L	
UniRef90_F2JYZ6	M	K D A Q L D L V E	I V G H S E R R R R R E F F G E T T D E	F V G R K V A S A L E H G L	
UniRef90_G2DL26	M	M M A D I G V D I V L	I V G H S E R R R R S L Y F G E K N E I	Q R Q K M E N V L N V G L	
UniRef90_D1CFX6	Q	S E M C S Y V I	I V G H S E R R R R R H I I G E T T D E	I V V A R K A R A V A R A G M	
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UniRef90_B8KSO4	M	A D V G C Q R W S I	I V G H S E R R R R R Q Y H A E S D A G	V A L K A V A V Q Q Q G G L	
UniRef90_F7ZF33	M	F A E L G A S H V I	I V G H S E R R R R R R E G Y G E T T D T	D A R A K A T A A Q A A G G L	
UniRef90_A5V8U3	M	V E A G A R L A I	I V G H S E R R R R R A D Q H E T D A E	V R A K A A A A I A A G G L	
UniRef90_Q1IZA2	M	R D V G A T Y V I	I V G H S E R R R R R R T Y H A E T D A	V V A A K A R Q A Q A A G G L	
UniRef90_Q3CZR0	V	L A E M G T X Y V I	I V G H S E R R R R R D Y F H E T D Q D	I D I N K K A K A I F A N G L	
UniRef90_H6UNT3	M	K D V G A K W V I	I V G H S E R R R R R N V F G E N D Q	I I G E K V A F A L S Q G L	
UniRef90_UPI00047C592E	M	A D A G A D L V L	I V G H S E R R R R S L Y F A E T H A E	R R Q K L E N V L A A G G L	
UniRef90_I2CCR5	M	Q D I G V Q W V I	I V G H S E R R R R R N I F G E S S E	I I G E K V G F A L T S G L	
UniRef90_UPI0003679FCD	Q	L A K L N I S Y C	I V G H S E R R R R R Q H F N E T T D E F	V N V K I N N L I N K E I	
UniRef90_G2LPG7	M	K E L G V K Y V I	I V G H S E R R R R R W H H E N N D I	I I I I R D K I K G V Q A A G G L	
UniRef90_B9W438	M	K S F G V P W T I	I V G H S E R R R R R D I F G E D E E M	I I I I I S K K L Y I K K F N L	
UniRef90_J2PZL8	L	A E A G A R V V I	I V G H S E R R R R R Q G S G E D D A L	V A R K I A V A I I D A G G L	
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UniRef90_A7TAT0	M	A H L G V N Y V I	I V G H S E R R R R R R E Y F N E S N E	Q L A Q K V D A A L V N N L	
UniRef90_D2TTM2	M	A E T G A T L V E	I V G H S E R R R R R R G A F N E T D A	N Q K V H S A L R H G L	
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UniRef90_P91895	M	K D L G L G W V I	I V G H S E R R R R R R A I F G E T T D E	I I I A E K V A H A L L G E G G L	
UniRef90_Q6PTM4	M	K D L G I G W V I	I V G H S E R R R R R R H K F G E T T D E	I I I A E K T Q H A L L A S G G L	
UniRef90_N4WJ25	M	K E L G L D L V E	I V G H S E R R R R R R Q Y Y N E N D	I I I A E K V Q Y A L I S S H V	
UniRef90_E6SKU6	M	R E L G C R Y V I	I V G H S E R R R R R R Q L L G E T T D A	I I I I I R K L E A A L A G G G L	
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UniRef90_G2T6A8	M	R D C G V G I V E	I V G H S E R R R R R R R R A S H G E T T D A	I I I I I I I V A K V A S A L R H G L	
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UniRef90_H6UNP9	M	K D V G C E W V I	I V G H S E R R R R R R R R R F L E N D S	I I I I I I I I G E K V A H A L N E C V	

130 140 150 160

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UniRef90_E0TGS3	I P L C V G E N L E T R E A G K A V D T V V A Q L K A A F P G A G K G		
UniRef90_C7P153	K P F C C G E P L E V R K A E T Q N E Y V A K Q L E E S L Y H T E E Q L K D		
UniRef90_A3X811	T A V C C L G E T L A E R E A G D T L Q I I G A Q F A T S L P D G A T A K N		
UniRef90_U6E3P6	T P L C L G E T L E T K E N N K T Q I F L E Q Q L T N T L K E V C S Q A L E K		
UniRef90_J0Z311	V A L C C V G E T L E E H K S N K V L D V L A R Q L E E S L P D G A T A G N		
UniRef90_I1XMQ2	T P P I I C C I G E S P E E H S M G R T E E M V A R L M D I V I A Q Q G V E M L S K	PHE	C G D S I
UniRef90_E4UDE7	S P P I I C C I G E T D E E Y R S G R T L E V L Q K Q L D F S L P H E C G D S I		
UniRef90_K1P59	K V I A C C I G E K L E E R E A G R L A E V L R Q L A T G L E N I T A D Q W P N		
UniRef90_G2H3S0	K V V L C C I G E T I E E R E A G R L A E V L R Q L A T G L A G V K A D A V P E		
UniRef90_B7QP30	T A V I C C V G E T L E E R E N G K T L D V V R S Q L D G S L P D D S T G D T		
UniRef90_A0A023D1T8	T P P I I C C I G E T A E E R D A G D A F L R L S A Q I A G A V P A G F G A D S A G		
UniRef90_P0C0J6	I P P I F C V G E S L L E F E A G L T K V V I I S Q I N A K S V L N F Q K		
UniRef90_E6W5F7	T P P I I C C V G E T L E Q R E A G E A Q V I V R Q Q V E A A V V A G M D I T R		
UniRef90_K2M867	T A V I C C I G E T K D E R E G G E T L A V L S R Q I V A G S V P K A A K A A G		
UniRef90_N9MCV6	T V I Y C C V G E S L L Q Q R E S G Q A E Q V V L Q Q I C D I A A V V E A E Q W Q N		
UniRef90_E5ASV0	T P P I V C C V G E T L E D R Q A G Q T D S V V R A Q L A A V L D A L D E T D V A R		
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UniRef90UPI0004175B17	T A V I C C V G E T K A E R E A G E A L L P V V G A Q L A G S I P L N S S S E T		
UniRef90_I7LBZ8	T P P I V C C V G E P A E V R D A G G H V D Y V T E Q L R G S L E G I D D T S R		
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UniRef90UPI000309620C	R V I L C C V G E S A A T R E S G K A V A F I K R Q L K A S L P P A A D Q D I A D R		
UniRef90UPI00014A83B4	T A V V C I V G E T L E E R T A E K T L S V L Q E Q M L K S L P K N I T P I		
UniRef90UPI0003B7B29C	T P P I V C C V G E K L D I R E K G E H V A F T L R Q L A G S L S G V D A D		
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UniRef90_W0V8S2	T P P I V C F G E T L A Q R E A G Q T G A V V Q A Q V G A L L A A I E V S D V A K		
UniRef90UPI00047829BA	V P M I V C V G E T A A D L E E H G P A A I P L A Q M L A A V A Q L P E G A E		
UniRef90_FORMU5	T P P I V C V G E G L D V R E Q G E H V A H T L A Q L R G S L E G V G A D		
UniRef90_K9Y6U7	T P P I L C V G E S K E Q R D A G Q T E T V I K E Q L K A D L V G V D L S Q		
UniRef90_M3WUE6	G V N P C M G E K L D A K I I T D N V K		
UniRef90_P57393	T P I L C V G E T E I E K K H N Q T E Q V I Q R Q L N L I L K N L G T S A F K N		
UniRef90_W0NZY3	I P I L C V G E T E K E K K H G Q T K I V I E E Q L N C V L T A L G T S A F R N		
UniRef90_A6D532	T P P I V C V G D T A E E K M W G V S V E S V V R Q V K I A L Y D V P L D K V A N		
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170 180 190 200

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UniRef90_B9JHW9	T T I A Y E P V W A I G T G R V P T E E I A E V H A A L R R A A L S R R F G A E
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UniRef90_E4UDE7	P I V A Y E P I W A I G T G D V P S V I E L E K I H S F M H V L V D R F P A K
UniRef90_K1P59	V V L A Y E P V W A I G T G K T A T P E Q A Q E V H E K L R A W L A E R V S K E
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UniRef90_P0C0J6	A I I A Y E P I W A I G T G K T A T A A I A E K V C G L I K E
UniRef90_E6W5F7	L I I A Y E P V W A I G T G K T A T P A D A Q E V H D V I R D T L R S L G D S
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UniRef90_E5ASV0	L V V A Y E P V W A I G T G Q S A T A Q Q A Q V H A A L R A Q L T A K K
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UniRef90_S9SAR0	T V I A Y E P V W A I G T G R V A T P A Q A Q E V H A V L R A E L L A S L L G V E
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UniRef90_D4XVH2	V V L A Y E P I W A I G T G K V A T P Q I A Q D V C A Y I R E L
UniRef90_F1KXV2	V V I A Y E P V W A I G T G K T A T P D Q A Q E V H A W I R E Y L K E K V S A D
UniRef90_UPI00035F315D	A I V A Y E P V W A V G T G E T A T A D D A A E M M A A A I R A E L G S
UniRef90_UPI000050F728	I V I A Y E P V W A I G T G E T A T A D D A A E M M A A A I R A H E E K Y G S A
UniRef90_G4CT13	F A V A Y E P V W A I G T G K V A T K E Q I A D M H D F I Y N E I L S L C G E D
UniRef90_Q057N9	S I I A Y E P I W S I G S G S N S A A P K E V Q C I A H F I R N Y V K S K S N H
UniRef90_UPI000309620C	L T I I A Y E P I W A I G T G T P A T A D D I I A E M H G V I R A L L I D L L G A E
UniRef90_UPI00014A83B4	T V V A Y E P V W A I G T G L V P E T D Q I R S A H A F I R G F L A S T Y G A E
UniRef90_UPI0003B7B29C	U I V A Y E P V W A I G T G K T A T A D D A E E L A A A I R D A L R G Q Y G A K
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UniRef90_UPI00047829BA	I V L A Y E P V W A I G T G Q T A T P D M A Q E V H A M V R A L V V V Q K N A V
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UniRef90_M3WUE6	L V I A Y E P I W A I G T G D T C E A E E A N R V I G M I R S E L S
UniRef90_P57393	D T G A Y E P V C V G I G K T A T P Q Q A Q E V Q E K L Q G W L T S N V S G A
UniRef90_W0NZY3	I I I A Y E P I W A I G T G V S A D P E H V Q L I H V F I K N Y I L K Y S S I
UniRef90_A6D532	T V I A Y E P V W A I G T G L S A D P K Y V Q C I H K F I R N Y I E K Y D P I
UniRef90_UPI0003B707CC	V V L A Y E P V W A I G E G T P A T K T E E A E K V H C A I R D A L V E C Y G Q E
UniRef90_I3TLF1	L T I I A Y E P I W A I G T G R V P Q T S D V A E M H G A I R V K L R D L I G E E
UniRef90_I2CCR8	L V V A Y E P V W A I G S G L V P T T D D I R A V H G A I R A R L A A R F G D
UniRef90_UPI00036088AA	I V I A Y E P V W A I G T G K T A T P E Q A Q E V H K F I R Q W L H D S V S P A
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UniRef90_UPI0004799F7F	L V V A Y E P I W A I G T G R I P N I E Y I S I V H S H I R N I L G D I C Y D A
UniRef90_A4TXN7	T V V A Y E P V W A I G T G K T A T P E Q E Q I G E M H Q F I Y D T L L S L L G G S S
UniRef90_F3WUK1	T V I A Y E P V W A I G T G R V A T P E Q A Q E V H A A I R A E L V K L I G E S
UniRef90_UPI0002378500	F T I I A Y E P R W A I G T G Q T P T V E E I A S I H A I A R A K L L R M L G D
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UniRef90_F2JYZ6	L I V A Y E P I W A I G T G K T C A P V E A N R I I G L I R E H V G Q
UniRef90_G2DL26	M L I A Y E P I W A I G Q G T S A S P S Y A N A R H Q E I K A H A H H L L K R E
UniRef90_D1CFX6	I A V A Y E P V W A I G T G K V A T L E Q I A D M H K F I Y Q I L S L C G D D
UniRef90_X1CV02	I V I A Y E P I W A I G T G L A A S A Q Y A Q D M A A F I R E Q L S S Y G L N Q
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UniRef90_UPI0002F9017A	V I I I A Y E P V W A I G Q G I P A T S E E A E R V H L A I R N A L S A E F G S S E
UniRef90_B8KSO4	L V V V A Y E P I W A I G T G E T A T P E Q A D E M H G V I R Q V L V E L Y G E
UniRef90_F7ZF33	L V V V A Y E P I W A I G T G K I P T M D E I A E V H Q A L R A N L I D A L G Q T
UniRef90_A5V8U3	L V V V A Y E P V W A I G T G R T P S T A D V A E M H A A I R A R L G A L L G G
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UniRef90_Q3CZR0	L V I I A Y E P I W A I G T G K S A T Q D D A Q N M C K A V R D V V A A D F G Q A
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UniRef90_J2PZL8	F A V V A Y E P V W A I G T G E R A S E D D I A E M H R A I R R E L S E M F L G
UniRef90_UPI0004716FD8	I I V V A Y E P V W A I G T G K V A T P E I A Q E I C E F I H K I
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UniRef90_K8ES31	M N G G L A S A N A N L N E V M A A V A E D A V D V L V
UniRef90_A6DDW7	L V A A N F K M H K T R K E T K E Y L L K K L K S I N F E D I K V R V
UniRef90_UP10003B37FBA	Y V L A N F K M N K N L F E V K K W A E E F L A L L Y K G K K L V G C
UniRef90_P59462	K K K I I I A N W K L N G N I Q L L Q T L L K P L V N H K N K S S I K L V I
UniRef90_H6SPX8	R R P L I A G N W K M N G L K A E A R A L A E A M A N S V G S V G F D M L L
UniRef90_UP100034DD451	K S K L W I G T S W K M N K T L A E A G E Y A D T V A A A V E D D G V E A F V
UniRef90_A9UCK9	S K F S I D E L L V M L N G A K V P A N T D V V I
UniRef90_E5FT52	A K C E V V V
UniRef90_K0G5I6	
UniRef90_B3ER35	R T L I A A N W K M N K N F Q E G L Q L A K E I T Q A E P L A G A Q I I L
UniRef90_UP100036CE330	M I V A N W K A N G D T Q K N Y Q W F K T F H S L V D T K A N C V G I
UniRef90_UP10002890C7F	M I I A N W K A N G G F T S N I A W H K E L T Q I S N D E F L D I G I
UniRef90_M5CG75	R K F F V G G N F K M N G T V K S I Q S I I E N L N N A Q L D P N T E V V I
UniRef90_K2B325	
UniRef90_L0GB07	A Q R K F F V G G N W K M N G N K A G I T E I G Q F M T T G P L D P N T E I V L
UniRef90_B3L421	A R G K K I I I G N W K C Y L T K T E A Y R L I D T F T K I K Y S N N I D L V L V
UniRef90_I2CCS5	M I I A N W K A N G D F E S N K V W C N R F I T R M S S T G T K S S I
UniRef90_UP10004785123	R K F F V G G N W K C Y L T K T E A D Q V D K I V K T L N E G P P P D V V E V V V
UniRef90_K3XLK7	N I K S I D E L I S L L I Q Y P L P P N T D V V V
UniRef90_I2CCT4	K K I I I A N L K M Y G S L F Y E D L F T Q V K S A L A T N D V E I V M
UniRef90_B6BWW8	L I V A N W K M H G D F F T F S S F T K E L S N R L I N D K V K V V L
UniRef90_Q5FGU5	W V I G N W K Q N P T S Y D V N A L L D D L L T A V N T E E Q V V M V
UniRef90_UP1000289A6F6	T T A T I E V I M K N L T Q A N L S E N S E V V V
UniRef90_C9DE14	K L V I A A N W K M A I D R A S V G K F I A E W E L G H P R D V T A L I
UniRef90_H3NUM0	K K F F L L G T N W K M N K T L A E G L A Y S A A L M T I I K Y P Q F E F F I
UniRef90_UP10003FF2440	K K M F L L G T N W K M N K T T A E G L S Y T D A L T D I I S K P E F E F F I
UniRef90_E3GQE6	M Y Q T A A Q T V E Y L R C L E K R L A D G I A Q R F V
UniRef90_B0PG85	
UniRef90_Q9NBF9	T F F V G G N W K A N G S T A V V E K L V Q E L N A G I L P K D V E V V V
UniRef90_Q5I0X6	P I I A S N F K T N H T R K S T A I F V N E V N D Y L K E K N I E V Y V
UniRef90_G2HZN3	K K K N I V A G N W K M Y K T H K E T G E F I K E I I P L I S S A G S S V Y L
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UniRef90_V4Q861	G N W K M N G D K A S I T E L C K L L S G A A D P N V E V V V
UniRef90_B5TYM2	K K I Y F G T N L K M Y K G N A E V V Q Y L S E L S D F K S E Y D I Q L F V
UniRef90_A6VPN2	R P Y I I V G N W K M N G S R A M L T E A R A I D R G A Q R C P D V Q V A L
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UniRef90_R3TNL9	W V G T S W K M N G T R A S S R T Y V E A L K Q A D H S D G V Q A F I
UniRef90_D7GGT8	N N W K M N G D K K S I Q E I V D F L K K G P L D P N V E V I V
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50 60 70 80

T P S F T H | V S T V A G V L A G T P I | W V G A Q D I C Q S T G A Y T G D | V S A E
I P P F T A I R E V K A L L A N S S V L V G A Q N M H W D A G A W T G E I S A P
A P P F T A I A A L S E A L E G S A V K I A S Q N V H W D D G A Y T G M I S A P
C P P F P Y L Q Q I R D I L F D P I S L G A Q D L S V Y E N G A H T G D V S A Q
A Y P Y A L A K S M L S E A E S A I Q L G Q D V C E Y H I G A Y T G E V S A G
I P S Y T T L Q T A T S C C N R E F V R L G A Q N M C W E Q G Q F T G E I S P C
V P P F T A V R Q V K E R L N G T S V K V G A Q N M H W D D G A W T G E I S P M
F P P A T A L Q P S R E W I L T V G A Q N A Y P A E E G A Y T G E I G L S
S P P A I Y L G Y V K Q N A K N N S V A A Q N R Y K V P K G A F T G E I S P A K
F P S T I C L E A A S T S L K N S S V K W G A Q N C Y I Q E G A F T G E E T S A K S
F P P F V L I P E A V K D F T N C G V E V G A Q N S D H G E G A Y T G E V A P S
A P P L P F I H Q A Q C S F T S H I K I A A Q N C S E F I S G N H T G Q V S P I
A P P S C Y L S Y V R Q A L P A T I G V S A Q N C Y K V E K G A F T G E I S P V
C V P A P Y L A Q V Q G L S L S A L V A G Q D V S A Q A S G A Y T G E E V S A A
F P T A L T M K D V T D I L Q N T N F K T G A Q D A G H P S G A Y T G M I S A E
A P S F M H L S T T Q Q A I Q H G N I G L A A Q N Q H A D K G A F T G E E V S G A
C P P A T L A A L A V D A L K K S V I Q I G Q D C H A E E A G A F T G D I S A E
C V P A P Y L S A C Q T Q L H G S R I R L G Q D V S Q H A S G A Y T G E E V A A Y
F P P F T A L F E D E L I G A Q N G Y P A I N G A Y T G E E I G L E
A P T F I Y I K A L K E M V I G T D L L V G A Q N M Y F E K G A F T G E E V S P N
M P P Y V Y L Y P M K S I I S H S S I L L G S Q N V D I N I G A F T G E E V S I N
C P P F V I G T V V G A V A G T G I A V G G Q D C H A K S G A H T G D V S A A
I P S H T A I A T V A E R L V G G F R V G A Q N A H W Q D S G A W T G E E V S M P
A P P S I Y L D Y T K S K L S A N V Q V S A Q N C Y K V N K G A F T G E I S P S
C P T F V C L D A V V K K A V V E G T N I K I G A Q N M H F E K G A F T G E E I A P R
G C P A I Y L M F F V R N L L P C G I A V A G Q N A Y V K A V G A F T G E E V S P A
F P S F I H L E G I S K L L T P E V K L H A Q N C H D Q I A G A F T G E E V S A A
S P S H I H F H Q L K T L F Q K T D V M I G M Q D I D I E G G A R T G S I S A S
A P S H I H F T Q I Q K I F E D S N L E V G L Q D I D F S G G A R T G S I S A S
A P P A L Y L L T A L T A A K S H I Q I S A Q N A Y T A S S G A F T G E E I S A T
G C P A I Y L E F A Q K A M P S N V S I A A Q N C Y K V E K G A F T G E I S P A
S P N I L L F M P Y L L E K I N N S K I F A C S Q D I V S L A S G A F T G E E T T A T
A P P S C Y L S Y V K E N A P P G V L V S A Q N C Y K V H K G A F T G E E I S V P
A P S H L H F N Q I K S Y F K D H D I E I G F Q D I D I E G G A R T G S I S P S
S P P Y V F L P V V K S Q L R P E F Q V A A Q N C W V K K G G A F T G E E V S A E
S P P S L Y L Q Y V S D K L E T S Q I G V S A Q N C Y K A S G P F T G E E I S P E
C I P Y P Y L F L A E K I F A N S G I S W G S Q N V A K D E G P F T G E E V S V T
C P P F I A L S T Y V N C P H N I K F G G Q N C C Y V S S G K Y T G E E I S A S
A P S C I H L A A V S A R L K D T S V L C A A Q D I S A H S G A Y T G D C S A Q
A P P S C Y L K Y V R D N L P A M I G V S A Q N C Y K A E K G A F T G E E L S P H
A P P A V F L S D I E G I A G A A L C A Q D V S A N E A G A H T G E E I S A Q
I P P Y T H L W K I K E A L Q K S P L K L G A Q N M H Q D S G Q F T G E E I S P L
I P P Y V Q L W K I R E L I D S K K S L G A Q N V H Y E D A G Q F T G E E I S P T
I P S Y T A L Y P A R R Q L M G S Q I L L G A Q N M W E E Q G E Y T G E E I S P L
A P S F L Y D Q V Q G S L K S S Y Q V A A Q N C W K G K S G A F T G E E V T A E
F P T A T S L D I F D T V S N F I I G T Q N A Y A T A S G S F T G E E I G T V
A V P F T N L Q A A A E A S S N S N I I G A Q N M H D E P G S F T G E E I S G K
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G C P A V Y L S F A R G L L P A T I G V A G Q N S Y K A E K G A F T G E E I S P Q
I P S Y T T L K D A V E L V K S P K I K I G A Q N M N N D N Q F T G E E I S P L
A P P F P F L A L L R E E T S N I G I G G Q D C H T A K G A H T G D V S A A
F P S M G T I E T V A R F C K G S N L G F G A Q N I P Q K N G A Y T G E E F S I E
I P P A T V L A E V S E L L D S D V L L G A Q N A H W A D A G A W T G E E V S V P
G C P A P Y L E Y A K S L L P A T I S V S A Q N C Y K V P K G A F T G E E I S P A
L P S I G T L E S V A E Q L S N T K L G F G A Q N I S P K S G A Y T G E Y S I E
I P P H P F L V P V K D Q V D G K V A V G S Q D L Y T E D A G A F T G A S S T G
G C P S P Y L S Y A R S L L P A N I N V A A Q N S Y K V A K G A F T G E I S P A
F P P F P Y L A Q A V H L A R G A V G I G A Q D L S A H A Q G A Y T G E E V S G A
A V P F V Y I A F V R S L L P Q R I E L A A Q N C Y K V E K G A F T G E E I S P A
G C P A V Y I E H A R S L L P A E I A V A G Q N A Y K V A S G A F T G E I S P A
A P P F T L L G H L A P L L S E N G I G L G A Q D C H A E E G A Y T G D I S A A
G C P S V Y L S Y A R G L L P A T I G V A G Q N C Y K V Q K G A F T G E I S P A
F P S H V A I S I I Q D L A K G D N I K I G Q D C D I L T S G A V T G S I S V A N
I P S F T A T T T V R E V L E D S P V L L G Q N A H W E D A G A W T G E E V S V A
C V P Y V D I P Y A S N I V N D T N I Y V G A Q N M Y R E E G P Y T G E E I S V K
G C P S V Y I T Y A R S L L P P A I L L V A G Q N C Y K F P K G A Y T G E E V S P A
C P P F I A L P K V V D C I S C I K F G A Q N C F Y E T G K Y T G E E V S A K
A P P A T Y I I D F A R Q K L D P K I A V A A Q N C Y K V M D G A F T G E E I S P G
G V P A P Y I M Y V R N L L P C S I N V A A Q N C Y K V P K G A F T G E E I S P A
A P S F D S T H L S Y M H P N R N F L F G Q N I H E L N G A Y T G E E V S L N
C P P A T L I A A A A P H A A A S F A I G G Q D C H P L Q S G A Y T G E I S A L
F P P F T A L D H D P R N V L I G V Q N A Y P V Q N G A Y T G E I A L E
G C P F V Y I N F A R D L L P C K F N V A G Q N C Y K V P K G A F T G E E V S P A
G V P A P Y I S T V R N L L P S S I N V A A Q N C Y K V A K G A F T G E E I S P A
G C P A I Y L P Y T R S L L P K T I S V A A Q V N N C Y K K G A F T G E E I S P A
G V P A I Y L I M Y A R N L L P C K F H V A G Q N S Y K V A K G A F T G E E I S P A
I P S F P S I P Q A H E I L D D V A S I G A Q D L A E A D F G A Y T G E E V S G A
F P A I S N L I S S S A N V V V G A Q N A Y P T Q N G A F T G E E I G N E
G L S F P Y I Y L E K T A I G G Q L Q I F A Q D V H H A E K G A Y T S F I S A P
G C P A I Y V M Y T R E L L P P T I A V A G Q N A Y K V S Q G A F T G E N S V A
A P P F T L T A L I A P L Q S T G I G L G A Q Q D C H A E E G A F T G D I S A P
A V P F T S L S E V K K A L E G T D I K L A A Q N M H W E S G A Y T G E E V S P L
G A P S I Y L D Y A R S K L D Q R I G V A A Q N C Y K V P K G A F T G E E I S P A
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	90	100	110	120
UniRef90_L0WHK6	Q L S D L G V G F / V I I	G H S E R R N Y Y R E D H S / L L V E K M K H A F A A D L		
UniRef90_C8S162	M L V D C G M D L V E L	G H S E R R A R H F G E T D E T D E T V G L / K V A A A V R H G L		
UniRef90_S9VCS7	I L K D L D I N N W L L I	G H S E R R Q Y F G E T D E T D E I V A Q K T L D A Y Q K G F		
UniRef90_A3Z1I3	M L L E H G V V S H A I V	G H S E R R P R K Y Y S E T D E Q I N L R A R T A Q K S G M		
UniRef90_G4QCQ5	M L T D L G C K W V I V	G H S E R R K A T H F E T A A S V A D K A R I A V A A G L		
UniRef90_UP100036A3B4A	M L A D V G C E M V I V	G H S E R R R F F G E T S E T A A R K V R A T L D A G L		
UniRef90_J7FMM4	M L D L G V K Y V V I	G H S E R R E F H E T D E E I N K K A H A L F K H G M		
UniRef90_R7G1X4	M L E E M G L D L V M I	G H S E R R H V F G E S D V E E N K K V K A A L S H G F		
UniRef90_UP100035FA82C	M L K D K D C G L D I V E L	G H S E R R E H F G E T D E T D R T V G L / K T A A A V K H G L		
UniRef90_E6WZ10	M L H E F E I D T V L I	G H S E R R R Q Y F G E T D E T D L I A R K V A H A L S V G I		
UniRef90_Q6PTF7	M L K D V G L E W V I L	G H S E R R R H V F G E T D E T D L I A R K V A H A L S V G I		
UniRef90_W5WVJ1	V T K D L G A S Y M L I	G H S E R R R S L L F G E T D E T D M I A D K V A L A Q S L E M		
UniRef90_D1Y3B3	M L K E A G C R Y V L V	G H S E R R R H I Y G E S S E L V N K K A L N C L A S A L		
UniRef90_S7W5R7	H L K D I G V T Y V I L	G H S E R R R M R Q L G E N N Q T I S K K I E A A A L K S G L		
UniRef90_I2CCS0	M L D L N I E W V I L	G H S E R R R N V F G E T D E E L V G E K V A V A A L S C G M		
UniRef90_Q127X0	M L Q D F G C R Y V I L	G H S E R R R Q Y H G E S D A L V A D K A K A A L A A G L		
UniRef90_K2DNC7	M Y K N I G C T Y A L A	G H S E R R R H I F G E T D N K D V R A K I I E S Y L D A G L		
UniRef90_C8PUQ4	Q L K D A Q V N Y V L V	G H S E R R R Q Y H F N E D D A C L I R K K I R N A F A H D L		
UniRef90_C6XJT7	K W K D L G A G Y V I V	G H S E R R R A Y Y Q E D D A V K A K S K A V L R A G L		
UniRef90_K8E531	M L R E F F A C Q Y V I V	G H S E R R R R S Y H A E V S E I V A A A K A A L L A G L		
UniRef90_A6DDW7	Q L K E F N I N K I L I	G H S E R R R N I L N E S Q E F I A K K F E F F K K E N F		
UniRef90_UP10003B37FBA	Q L K D I S V D F V I I	G H S E R R R N I F G E N D E L I S K K I L L S A L K H N I		
UniRef90_P59462	M L K D V G V S Y V L V	G H S E R R R Q Y H R E N D V I I A K K F K I V K D S H		
UniRef90_H6SPX8	M L A D Q G C Q F V I V	G H S E R R R A D H G E S D A Q V R A K A E A A L A A G L		
UniRef90_UP100034DD451	Q V K D A G A T M V E I	G H S E R R R T H F H E T V E T T R F K V E S A L R H G L		
UniRef90_A9UCK9	M I K D L G I N W V I I	G H S E R R R H V F G E S D N Q L T G E K V V A A A L L C Q G L		
UniRef90_E5FT52	M L E A M N I D Y V I I	G H S E R R R E Y F N E T D E T C N K V K A A F A H N I		
UniRef90_K0G516	M L K D V G A D W V I L	G H S E R R R R A I F K E S D E L I A E K V E H A L A E G L		
UniRef90_B3ER35	M L A S I D V R Y V L V	G H S E R R R Q N F A E D D N D L I A K K I D A I L L S C K L		
UniRef90_UP100036CE330	M A S H E D C S F S L V	G H S E R R R D F F N E D D N E L L I G K K I H S V L Q H N F		
UniRef90_UP10002890C7F	M A S D A G C T F S L L	G H S E R R R H F N E D D A L L I K T K I K A A L S N G I		
UniRef90_M5CG75	Q L V D A G I P W V I L	G H S E R R R T L F G E S D D E V V A D K T K A A L D A G L		
UniRef90_K2B325	L L R E C G A D Y V I I	G H S E R R R R R K L F G A E T D A L V A Q K L K I A I D A G L		
UniRef90_L0GB07	M I K D V G V S W V I L	G H S E R R R R N I F G E K D E L I A E K V V A H A L A S G I L		
UniRef90_B3L421	L I K E F G N K Y T I I	G H S E R R R R R G F Y K N E E T L E Q K V Y N A V Q S K I		
UniRef90_I2CCS5	M L T D L G I E W T I I	G H S E R R R R N I F G E S D D N I L I S K K Y Q M L A K S H		
UniRef90_UP10004785123	M A I D S D C S F S C L	G H S E R R R R E I F G E S D D N I L I G D K V Q F A V A N N M		
UniRef90_K3XLK7	M L V N L G V P W V I L	G H S E R R R R A L L G E S D E F V G D K V A Y A L S Q G I L		
UniRef90_I2CCT4	M I L D V K A E W V I V	G H S E R R R R N V F Q E T D E L I S E K V G H A L T T V G		
UniRef90_B6BWW8	M L T D F S S Q Y A V	M L T D F S S Q Y A V C E S D L N I A E K F K R L K D H H V		
UniRef90_Q5FGU5	M L Y N S G C S Y V I V	M L Y N S G C S Y V I V H D V R L K A E C I A E S G L		
UniRef90_UP1000289A6F6	Q V A D A G A T W T I L	G H S E R R R R Q Y H Q E T H D C L L Q K L T H A L M Q N L		
UniRef90_C9DE14	M L R D I G L E W V I L	G H S E R R R R N I F G E T T N E L V G E K V V G Y A L S A G M		
UniRef90_H3NUM0	M L R E F G C S H A L V	M L R E F G C S H A L V R L A W N E S N A L V A E K A R R L E A V G I		
UniRef90_UP10003FF2440	M L A E I G V D I L E I	M L A E I G V D I L E I R Q Y F N E T D Y T V N L K T L A A L K H G F		
UniRef90_E3GQE6	Q L K E I G V D I L E I	Q L K E I G V D I L E I R Q Y F N E T D Y T V N L K T L A A L K H G F		
UniRef90_B0PG85	M L A E A G A R L V M I	G H S E R R R H T F H E T D A Q A E K V V R C A L D H G F		
UniRef90_Q9NBF9	M F Q E I G C T W I I I	M F Q E I G C T W I I I R F Y E D D E K I D Y Y L N K T S L V		
UniRef90_Q510X6	M A L D K Q I P W V I I L	M A L D K Q I P W V I I L R A L M G D T D E V V G E K V V A Y A L S L K G I		
UniRef90_G2HZN3	Q L D E F E I K T I I I	Q L D E F E I K T I I I R H I L G E T T Q N V I A Q K Y E F Y K N L G Y		
UniRef90_K2GCX6	M L K T L G V E F V I I I	M L K T L G V E F V I I I R C L F N E E D S F I I N S K I I I R A I K D G G L		
UniRef90_V4Q861	Q L R D A G A T T M V I I	Q L R D A G A T T M V I I G H S E R R R H G H L E P C E L L V A R K V K A A L L R A G G L		
UniRef90_B5TYM2	M L K D V G A D W V I I	M L K D V G A D W V I I R T I F G E S D Q L V A E K T A Y A L A A Q G L		
UniRef90_A6VPN2	M L K E L G I E L V M I I	M L K E L G I E L V M I I R H V M K E T D Q L V A E K T A Y A L K H N F		
UniRef90_F1Z9L0	M L A D I G A D V V I V	M L A D I G A D V V I V R D H G E T T D A I V K A K A E A A L A A G L		
UniRef90_R3TNL9	S L I A L G G R Y V E L E	S L I A L G G R Y V E L E R H F F E R K T L F F E T N Q Q I K E K I H L T L S E S M		
UniRef90_D7GGT8	Q V A D A G A Q L V E V	Q V A D A G A Q L V E V R A N F G D T D E V V N K K V T A H A L E E E G G L		
UniRef90_C9D9H2	M L K D L G L N W V I I L	M L K D L G L N W V I I L R V F G E S D T L V V A E K T A H A L E E E G G L		
UniRef90_R2QYI4	T L D A I I G G Q Y V E I	T L D A I I G G Q Y V E I R H F F E R R N Y F N E T D A M I K Q K V E L S L S F F G M		
UniRef90_D7FSR6	M L A S V G C E Y I L C	M L A S V G C E Y I L C G H S E R R R S V F G D S D E M V N K K V H K V L D Q G G L		
UniRef90_B4FY90		Q F V G D K V A F A L S S Q G L		
UniRef90_K7ZIG1	M L K D I D L D W V I L	M L K D I D L D W V I L G H S E R R R R Q Y H H E N D A L I A A K L Q R A M E C G L		
UniRef90_T1AIU4	M L H E I G A R W V L L	M L H E I G A R W V L L G H S E R R R R Q Y H H E N D A L I A A K L Q R A M E C G L		
UniRef90_K7Z7Z1	M L K D I G V T W V I I L	M L K D I G V T W V I I L G H S E R R R R Q Y H F K E S D E L I G E K K V A H A L A E G L		
UniRef90_B4Y1H5	M L K E I G V E Y V I I	M L K E I G V E Y V I I L G H S E R R R R E M F N E T D L D V N K K A K V U L E N N I		
UniRef90_B5TYM6	M L K D V G A T W V I I L	M L K D V G A T W V I I L G H S E R R R R Q Y F G E S D E L I A A Q K V V H A L E Q Q G M		
UniRef90_UP10004707E7D	M L A D L G V S H V I I L	M L A D L G V S H V I I L G H S E R R R R E H H H E Y N A L I I R R K V V R R A R E Y G G L		
UniRef90_K7Z7M9	M I K D I G C E W V I I I	M I K D I G C E W V I I I G H S E R R R R R A I F G E S D E L I I G E K K C A H A L A E G L		
UniRef90_UP10003A4190D	S L T S H V K V D S C I V	S L T S H V K V D S C I V R T I F N E N D E L I K K L N C H D Q I G		
UniRef90_UP10002629451	Q A A D A G A Q I V E S	Q A A D A G A Q I V E S G H S E R R R R E H F G E T T V E T T R L K V V A A A L R H G G L		
UniRef90_R6YJ78	M L K S I K T D Y V V L L	M L K S I K T D Y V V L L G H Y Y E R K L Y F N E T T E E E I N K K L I L A L K Y N I L		
UniRef90_K7Z7R6	M L K D V G A D W V I I I	M L K D V G A D W V I I I G H S E R R R R Q Y F G E S D Q L I L Q K V V A H A L A E G G L		
UniRef90_Q3YS69	M L Y D C G C S Y V V I V	M L Y D C G C S Y V V I V G H S E R R R R S I V F H E S D Q L H V Q L K A S A A I K S G G L		
UniRef90_UP10003EC5EA8	M I K D C G A T T W V V I L	M I K D C G A T T W V V I L G H S E R R R R H V F G E S D E L I I G Q K V V A H A L A E G G L		
UniRef90_K7Z7V1	M L K D I D F I L I I I	M L K D I D F I L I I I G H S E R R R R Q Y F G E S D E L I A A E K V V A H A L A S G G L		
UniRef90_N9TQZ0	V A I A A D I D F I L I I	V A I A A D I D F I L I I I G H S E R R R R R S I L F N E T T N E L L I I N K K I A H L E K T K I I		
UniRef90_E3F1K3	M L R D A G A T H V V I V	M L R D A G A T H V V I V G H S E R R R R R D H A E T N D L L V R A K A G A A L E E A G G L		
UniRef90_G3I216	M I K D L G A K W V V V I L	M I K D L G A K W V V V I L G H S E R R R R H T F V E S D D E L I I G Q K V V A H A L A E G G L		
UniRef90_K7JSI2	Q L E E F G I K T I I I L	Q L E E F G I K T I I I L G H S E R R R R H V I F G E T T Q N E Q I A A K F R F F A D Q G G F		
UniRef90_K7Z6C3	M L K D V G A G G W V I I L	M L K D V G A G G W V I I L G H S E R R R R H V F N E S D D E L I A A E K A A H A L A E G G L		
UniRef90_K7Z643	M I K D C G A G G W V I I	M I K D C G A G G W V I I L G H S E R R R R H I F K E S D E L I A A E K V V E H A L A T G G L		
UniRef90_K7Z7K8	M L K D N D I D Y A I I I	M L K D N D I D Y A I I I G H S E R R R R H A I F G E S D D E L I A A E K V V A H A L S E G G L		
UniRef90_K7Z691	M L K D V G A N W V I I L	M L K D V G A N W V I I L G H S E R R R R R A V F V E S D D E L I A A E K T E H A L D Q G G L		
UniRef90_UP10003B75897	E L A E I G C R V A L V	E L A E I G C R V A L V G H A E R R R R L F G E T T D D A V A A K T T A A L R N G G L		
UniRef90_Q30PQ5	Q L E E F F G I K T I I I L	Q L E E F F G I K T I I I L G H S E R R R R H V I F G E T T Q D S L I V K F N F Y K N L G G L		
UniRef90_F0QQ45	Q L S S I K V Y S T L I I	Q L S S I K V Y S T L I I G H S E R R R R C R E M G Q T E E I I V S K K V R S A L L N G G L		
UniRef90_K7Z7S8	M L K D V G A E W V I I L	M L K D V G A E W V I I L G H S E R R R R R Q I F K E D D D E L I V N K K V E A T I S G G G L		
UniRef90_X0W6I3		E L V N K K V E A T I S G G G L		
UniRef90_V8AA45	M L A D L G V R H V L L	M L A D L G V R H V L L G H S E R R R R R E H H H E D N T L L I R R R K A V T A Q R F G G L		
UniRef90_D1L5K0	M L K E I G T D Y C I I I	M L K E I G T D Y C I I I G H S E R R R R R Q Y F N E I D E S V N K K I K S A L K H G F S D I		
UniRef90_I3IS66	M L K D C G I D W V I I I	M L K D C G I D W V I I I G H S E R R R R R H V F G E S D E L I G Q K V V A H C A H L E A G G L		

Sequence logo showing the conservation of amino acids at each position of the protein sequence. The x-axis represents positions 130, 140, and 150. The y-axis lists UniProt IDs. A vertical yellow bar highlights the first 130 positions. The legend indicates: C (blue), D (red), E (green), G (black), H (orange), I (grey), K (purple), L (yellow), M (brown), N (pink), P (light blue), R (dark red), S (light green), T (light pink), V (light blue-grey), W (light orange), Y (light pink-orange).

170 180 190 200

UniRef90_L0WHK6	L I I A Y E P I W A I G T G [] T P S T Q E V I A T H A H I K S V L A S Y H F
UniRef90_C8S162	V L L A Y E P V W A I G Q G T P A S A D Y A D A R Q A E I A V [] A Q D V
UniRef90_S9VCS7	I V L A Y E P V W A I G T G K V A S P E Q A Q E V H A I I R R Y I K D K K I G A D
UniRef90_A3Z13	L V V A Y E P I W A I G T G K T C G A E E A N R L C [] A L I R G W V G Y
UniRef90_G4QCQ5	C V F A Y E P I W A I G S G S I A T S E Q I F E M H S H I R R Q I Q S V T G Q E
UniRef90_UP100036A3B4A	Y A V A Y E P S W A V G T G [] V A T P E Q I A E M H A F I K Q T L
UniRef90_J7FMM4	T V I A Y E P I W A I G T G K S T S E D A N E M C A F V R Q T I A D L S S K E
UniRef90_R7G1X4	I W V A Y E P V W S I G V N G T P A S A D Y A E A M H K E I K T A L Y E I F G E
UniRef90_UP100035FA82C	P V L A Y E P V W A I G N G I P A T A G Y A D A R H K I I A D V A Q R A
UniRef90_E6WZ10	L I V A Y E P V W A I G T G Q A A E P E A I A T H A E L R R R I K R
UniRef90_Q6PT7	V V V A Y E P V W A I G T G K T A T P Q A Q D V H D S L R K W M S E N I S P A
UniRef90_W5WVJ1	L V V A Y E P V W A I G T G K V A T P E Q V A E T H T D V F N L K E L G F
UniRef90_D1Y3B3	Y I V A Y E P V W A I G A G R A A G A E D A E K V C [] R L I K D S V R
UniRef90_S7W5R7	I I I A Y E P V W A I G T G K T A T K T E [] E D I V S A I I Q F K K E
UniRef90_I2CCS0	V V I A Y E P V W A I G T G V T A T P E Q A Q E V H A F V R R T L S N I A T T
UniRef90_Q127X0	I V V A Y E P V W A I G T G K T A S P E E A Q A V H A V L R A Q L R A A T D
UniRef90_K2DNC7	I L V A Y E P V W A I G T G N A C L P A D A I D R I D F I K L E I A K Y S Q
UniRef90_C8PUQ4	L I I A Y E P V W A I G T G K I P T I Q E V Q N I H A F I N T T L T D I D A
UniRef90_C6XJT7	I A V G Y E P V W A I G S G L T P T L E E I S E A H K V I R E A L H K K I G D
UniRef90_K8ES31	S V F A Y E P I W A I G T G K T A T P E M A Q A V H A M V E R I A S K H P Q
UniRef90_A6DDW7	L I T A Y E P V W A I G T G V S A S I E E I K E T H Y E I R K L
UniRef90_UP10003B37FBA	V V I A Y E P V W A I G T G [] P A T K D K I K E A V E L I K T E A S K F I
UniRef90_P59462	S V I A Y E P K W A I G T N T I P S I N F I I Q K I L M F I Q N Y I F N K Q N S T
UniRef90_H6SPX8	V V I A Y E P V W A I G T G R T P T L N D V A Q V H G A I R A K V A R V L S A E
UniRef90_UP100034DD451	V V I A Y E P R W A I G A G R P A R G E E L I A G P F A A L R S E Y G G V
UniRef90_A9UCK9	V V V A Y E P V W A I G T G K V A T P E Q A Q E V H A D L R Q W L V D N V S V D
UniRef90_E5FT52	V V I A Y E P I W A I G T G K T A T S D Q A N E T I A A I R A M V A E M F G Q E
UniRef90_K0G5I6	X V I A Y E P V W A I G T G K T A T P D Q A Q E V H A Y L K R W L V D N V S K Q
UniRef90_B3ER35	V I I A Y E P I W A I G T G L I P S L A E I E E M Q Q T I R N I L K K Q Y N T V
UniRef90_UP100036CE330	L I I A Y E P I W A I G S G K T P D P K A V N S I H E F I K D V V Q S A T A
UniRef90_UP10002890C7F	V V I A Y E P I W A I G T G N T P T P K D I N S I H E F I K D V V Q S S S A N N
UniRef90_M5CG75	I V I A Y E P V W A I G T G K V A T C Q V
UniRef90_K2B235	V I L A Y E P V W A I G T G M N A S S E Q I A E V C A F I R K N I M V K L G V D
UniRef90_L0GB07	V V L A Y E P V W A I G N W E T A S P E Q A Q K Y M
UniRef90_B3L421	I I I A L E P S F A V G T G K S L A V D V L N N C Y W D I K R N V A E E V D K Q
UniRef90_I2CCS5	V V I A Y E P V W A I G T G L S A T P E Q A Q A V H I F L R K S L R E I S D T
UniRef90_UP10004785123	L I I A Y E P I W A I G T G N T P K P K D V N T I H E F I K D V V Q S A S E
UniRef90_K3XLK7	V V V A Y E P V W A I G T G K V A T P D Q A Q E V H A S L R D W L K I N V S P E
UniRef90_I2CCT4	V V I A Y E P V W A I G T G E T A T P S Q A Q E V H N Y I R G W L T E K V S P E
UniRef90_B6BWW8	S V I A Y E P I W A I G S D M A A S P E Q A Q N M C S F I K D F I H T E V L T N
UniRef90_Q5FGU5	F I I A Y E P V W A I G N N K I P S T D V I L E A L E I I S Y D Y V S D
UniRef90_UP1000289A6F6	L I I A Y E P V W A I G T G K V P T V A E V S T T H Q H I K Q T V T G F A E
UniRef90_C9DE14	V V I A Y E P V W A I G T G L N A T P A Q A Q D V H V F L R K I L S N I S S T
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UniRef90_12G0L4	I P D F I T L T S V V S S Q I A A S S M L G A Q D V H S E D A G A F T G E E V S P L		
UniRef90_L7QN54	G V P A I Y L E Y A R Q I L P A T I N V A A Q N C Y K V E K G A F T G E E I S P S		
UniRef90_M1PP30	A P S F I C L C S L S E Y V Q A L E L I N A Q D V S P F P K G S Y T G A V A A D		
UniRef90_X0I43			
UniRef90_I0QN72	F P S [] P A I A G T L D A F R G T P M K V G A Q N M F W E N G A Y T G E V S G V		
UniRef90_U6MYY5	F P T A L H I A L A R E K L K S A F Q I G C Q N [] S K T G P G A F T G E E I T A G		
UniRef90_D8MV14	L P A F P A L P P V L E A F A G S N V L V G A Q D C Q E D N G A W T G E E V S S G A		
UniRef90_C7Z6D9	I P D H V T L V S V I N Q V K D H K I W C G A Q D T F W E S G A Y T G E E V S S S		
UniRef90_G1EQU2	G V P A V Y L S Y V K S I V P D N [] A V A A Q N C Y K V A K G A F T G E E I S P A		
UniRef90_K2AMW3	C P T F T F L A S C A E K I K T A G W K A G Q D I S K F E Q G A Y T G E E V A A S		
UniRef90_C9DE05	A P P A L Y L Y G Y V R D K L P A T V G V A A Q N C Y K V E K G A F T G E E I S P Q		
UniRef90_E3QTK1	I P D F V S L H P V N Q A L K S S P V L G A Q D C H W D D F G A F T G E E V S P V		
UniRef90_E9LRZ4	C A P F T L L K D L K E A T K G T D I K I G A Q N M H Y D N G A F T G E E V S A P		
UniRef90_K7Z0G0	G C P A L Y V I Y A R G L L P N T I S V A G Q N A Y K V P K G A X T G E E V S P A		
UniRef90_K7Z6B3	A C P F V Y I Y P L V R N L L P R N V D V A G Q N C Y K V A Q G A F T G E E I S A S		
UniRef90_L7QMT5	G V P A I Y L E Y V Q S I L P N T I S S A A Q N C Y K V A K G A F T G E E I S P A		
UniRef90_I2NGT1	A A P T V Y L L Q M Q I V L N N R I L T C A Q D V R F P N N G A Y T G E V S A E		
UniRef90_M7C1M2			
UniRef90_D0URY6	G P P T I Y L D Y T R Q N L P R N I G V A A Q N C Y K V P K G A F T G E I S P A		
UniRef90_L7QLN2	G V P A I Y L S Y A K D I V P K N I E V A A Q N C W K V P K G A F T G E I S P A		
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UniRef90_F0XPC6	L P D F V S L A A V V G R L Q A S G L A G A Q D C G S D D Y G A F T G V I S P A		
UniRef90_X0WIX0	C P P F V Y L Q S V A K A L S A S S I G V G A Q D V Y F E K G A F T G E I S S L		
UniRef90_D0URX6	G V S P C Y L E F V R N H L P A D R F G V A A Q N C Y K A S G A F T G E E I S P M		
UniRef90UPI0004791ED8	A P S F P V L E T A L R L M R G T A V K V A A Q N S Q D Q S G A L T G E E V S P A		
UniRef90_Q4EDD1	M N N N I N I G A Q N C H H K K G S Y T G E E I S A E		
UniRef90_I0ELR0	F P D F L G L L P N A F L H F T L G A Q N A Q P K D L G A F T G E E I T S K		
UniRef90_A9XXY1	G V P A I Y L D Y V R Q Q L P K T I G V A A Q N C Y K T A K G A F T G E E I S P A		
UniRef90_D7BTK9	L P S F P T L V P A A G L L A G T G V R V G A Q D C A Q D T G A Y T G E E V S G A		
UniRef90_K7Z0A2	G V P S C Y L E Y T R G L L P A N I R V A G Q N C Y K T A K G A F T G E E Q S P A		
UniRef90_X1IYL2	C P P F I S Y L L A A V R E L L I K G S S I K L G A Q N I Y F E K G A Y T G E I S P L		
UniRef90_L7QN58	A I P S I Y L L A Y V R S I V P D N L L V A A Q N C W K A E K G A Y T G E I S P A		
UniRef90_R5Y9B1	C P S S I Y L L P Y Y K G K Y D F K L G S Q N V Y I K N I T G E E Y T S K		
UniRef90_D0URY3	G V P A C Y L E Y A V Q H V P A N V Q V A A Q N C Y K V P K G A F T G E E I S P A		
UniRef90_G2Q226	A P D F V S I L P A T R A A V I A R L V V G A Q D C A A A D E G P Y T G E E V S P A		
UniRef90_J2UFZ6	P A Y P A I P A V A E I F A N T P I R F G G Q D V C Q A E N G A W T G E E V S A S		
UniRef90_L7QQY0	G A P S I Y L L E Y T H S I L L P K P I E V A A Q N A Y K V P K G A F T G E E I S P A		
UniRef90_D0URY4	G C P Q C Y L L Y T R E K L P S N I G V A A Q N C Y K V A K G A F T G E E I S P A		
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UniRef90UPI0004735A95	A P P F T A I S T F S D H S D F E Y L D I S S Q N I H W E Q G A F T A E E I S P K		
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UniRef90_A3FEN7	I P D F V S L L A E T A E R V K T P V W L G A Q D C H W E D S G A F T G E E V S P A		
UniRef90_A9XXX8	G A P T I Y L L E H A K N V L P S P V K V A A Q N C Y K V P K G A F T G E E T S P A		
UniRef90_E9KFK0	G V P S I Y L L A Y V R S I V P D N I Q V A A Q N C W K A K G A F T G E E N S P A		
UniRef90_R7HMK6	C P S D I Y L L E A F V N N S D W L I G S Q N L N Y N T D K H T G E E I S T D A S		
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UniRef90_C8XDU1	A A P Y V Y V V G D C F R Y F N E K V K I G A Q N V S K F E C G A Y T G E E V S A K		
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UniRef90_J5KD39	M L D E V G V E F V I I G H S E R R E F F H E D N E D I R K K I Q A V N E S K I		
UniRef90_I3EIM7	Q I K D A G V N T I L I G H S E R E K Y F H E T E E I R D Q L K L A I K N R L		
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UniRef90_B5TYK8	M L K D V G C D W V I I G H S E R R A I F G E S D Q L V A E K V S H A L L S E G G L		
UniRef90_C8XHV9	E L A E L G C T L A E V G H A E R R S L F G E T D E M V A G K T H A A L R H G L		
UniRef90_M5B730	Q I R E L L G G A F V E V G H A E R R R L F G E T D E V V R R K A D A A L R A G G L		
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UniRef90_R5IS06	Q L K S L G V K Y S I L I G H S E T R N M S N E D I P L K L K S C I N N G M		
UniRef90_I2G0L4	V L S Q A G V R F V E I G H A E R R R Y F G E T D E D V A N K A A A I S R N N M		
UniRef90_L7QN54	M I K D V K C E W V I L G H S E R R T V F N E P D E L V A D K V K H A L E S G G L		
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UniRef90_C7Z6D9	V L A E V G T R L V E V G H A E R R R I F G E T D E I T A K K A A A A A R N G M		
UniRef90_G1EQU2	M L N D I G V E W V I L G H S E R R T Y F G D T D E L V A E K V A H A L L S S G L L		
UniRef90_K2AMW3	Q I A D I I Q Y S I V G H S E R R R K Y F F N E T A D D D A I K K V K T L L V N N I		
UniRef90_C9DE05	M I V D V G V H W V I L G H S E R R R N I F G E S S E L V G E K V G F A L L S S G M		
UniRef90_E3QTK1	V L S E T G V T T V E V G H A E R R R I F G E T D E V V A K K A A A A A S R N G M		
UniRef90_E9LRZ4	M L N E L N I D Y V V V L G H S E R R R Q Y F F N E T E T V N K K V L K A L E A G G I		
UniRef90_K7Z0G0	M L K D A G A D W V I L G H S E R R R Q I F G E S D E L I G E K C A H A L A E G G L		
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UniRef90_I2NGT1	M L A D I G T D L V L I G H S E R R S L Y F G E K N E I Q R R K M E N V L N V G L		
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UniRef90_L7QLM6	M I K D V G V D W V I L G H S E R R R T I F G E K D D L V A E K V V Q H A L E S G G M		
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UniRef90_X0WIX0	M L K D I G C T Y C L C I G H S E R R R H V I F G E S D A L I G E K V A F A L E N G G L		
UniRef90_D0URX6	M I K D C G G C D W V I L G H S E R R R H V F G E S D A L I G E K V A F A L E N G G L		
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UniRef90_I0ELR0	M L E E L K I S T L L I G H S E R R R R T I L L N E S P N F L K E D F F P K N K N F		
UniRef90_A9XXY1	M I K D V G C E W V I L G H S E R R R Q I F G E S D E L I A D K I I E H A L L S E G G L		
UniRef90_D7BTK9	Q L K E I G C G G Y A E V G H A E R R R R L F H E D E A V V A A K T A A A L R G G G L		
UniRef90_K7Z0A2	M L K D V G A D W V I I G H S E R R R T F N E G D E L I A E K V A H A L L A E G G L		
UniRef90_X1YL2	M L A D L C E F V I I G H S E R R R Q Y F F N E T G D E I T N K K I R A A L R V K L		
UniRef90_L7QN58	M I K D I G S D W V I L G H S E R R R S F F G E S D E L I A E K V K H A L L E F D L		
UniRef90_R5Y9B1	S L K S M G V N Y V L V G H F F E R R K Q Y L H E S N E L I N L K I K D A I N N N N		
UniRef90_D0URY3	M I K D C G A S W V I L G H S E R R R N V F G E S D A I I A E K K A E H A L A E G G L		
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UniRef90_J2UFZ6	M L Q E L G C S L A E I G H A E R R R R H F H E D K V Q I A A K V A M S L R H G I		
UniRef90_L7QQY0	M I L D I G V K W V I L G H S E R R R A I F H E D E T D Q L I A E K V A H A L L Q C G I		
UniRef90_D0URY4	M I K D C G C C E W V I L G H S E R R R N V F G E S D Q L I S E K V V G H A L L D A G G L		
UniRef90_D0URZ9	M I K D V G G S W V I L G H S E R R R Q I F G E S D D Q L I A E K V E H A L L A E G G L		
UniRef90_X1JJ57	M L K D V G C E Y V V L G H S E R R R Q Y F K E T S D E V V A R K A E A A L S V N L		
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UniRef90UPI0004735A95	M L E H R V A Y A I V G H S E P R K Y F S E S D E Q V N K R A V F A Q S S G G L		
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UniRef90_S3D1W7	E L A L M G G C E M V E L G H A E R R R K L F R E T D E T V A R K A E A V L R N G M		
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UniRef90_W7ARC8	U L L H E L G I N Y T I I G H S E R R R K G F N V G E N I V A E K V V Y N A I D A N S K I		
UniRef90_C5FIM7	C L R S M D V G S I V E E I G H A E R R R A I F R E T D E Q V G R K A A A V S A Q G M		
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UniRef90_V5FVT7	U L R D L G V G S I V E E I G H A E R R R A I F G E T D D Q T V H A A F R F R N H L		
UniRef90_C4JES2	N L R D I N V S I V E E I G H A E R R R A I F G E T D D Q T V H A A F R F R N H L		
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UniRef90UPI0004783C96	E A A E S G V A Y A E V G H A E R R R L F G E T D A V V A A K V A A L R H G V		
UniRef90_U2P9E7D	M I R E L G C R F V M A G H P E R R R R I N F L E T D D D V N L K L K M S L K N G G L		

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A P T A H I V T V S R A L R A A L D A D P E I I I I A F E P R F A V G T G N P V S S S N L N N C C F C I F I A Y E P V W A I I G K P V P A G V D H I A A V Q G I R T V I D G V R G K P T V I A Y E P V W A I I G A P V P A P D D H I V A V L A G I E Q H L A T R P E L H V I F I A Y E P V W A I I G K P V P A G V D H I A A V V S G I R A G I G R R Q G D V I F I A Y E P V W A I I G Q P K P A G V D H V G A V A L G I K D I I K G I G G E R V I F I A Y E P V W A I I G K P V P A G V E H V A G V V E G I R R V V R G S G R E V V V I A Y E P V W A I I G A S T P A P L D H I A P V A R A L R A A L L G A D P C I I I A Y E P L S A I I G S G Q P E T R E V V K N V I S Q I T R L
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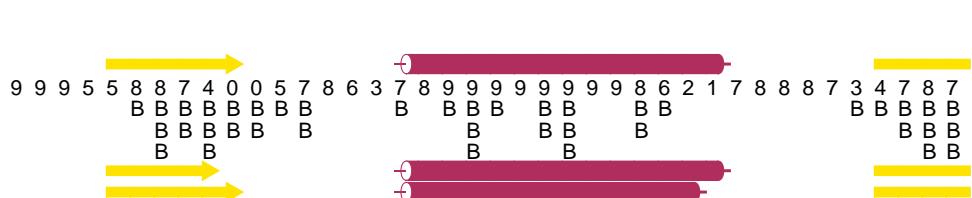
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UniRef90_K7Z718
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UniRef90_U2X9F1
UniRef90_E9KH03
UniRef90_W7ARC8
UniRef90_C5FIM7
UniRef90_A0A022LS81
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UniRef90_C4JES2
UniRef90_C0S613
UniRef90_UPI0004783C96
UniRef90_UPI00035E871D F N N | L | R | L | K
A | V E A |

The figure displays a sequence alignment of UniRef90 proteins. The top row lists protein identifiers: UniRef90_L0B2R6, UniRef90_X1UZ77, UniRef90_Q5B0M2, UniRef90_A0AAK6, UniRef90_Q1RR95, UniRef90_S1SBR6, UniRef90_UP10003A3DF53, UniRef90_Q9UH6, UniRef90_G9YW7, UniRef90_R6NBW5, UniRef90_UP10002D9FF70, UniRef90_K2F0T6, UniRef90_U2EME9, UniRef90_R5FH33, UniRef90_W9XKK8, UniRef90_G9RQW5, UniRef90_D4J6Z7, UniRef90_UP100037293F0, UniRef90_R9JB22, UniRef90_X1CRB4, UniRef90_F0RXY3, UniRef90_B8FW49, UniRef90_F2KNT7, UniRef90_E6N8A3, UniRef90_B2B354, UniRef90_UP100034D65C0, UniRef90_D1Z2Q2, UniRef90_J8INV3, UniRef90_M1PV31, UniRef90_X1BB69, UniRef90_UP1000373B2A9, UniRef90_13TD50.

The alignment shows the sequence of each protein, with gaps indicated by dashes and conservation scores by colored boxes. The x-axis is marked at positions 1, 10, 20, and 30.



Sequence alignment of UniRef90 proteins showing conservation across 100 positions. The alignment highlights identical residues in blue and similar residues in yellow. Positions 50, 60, and 80 are labeled at the top.

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
inssm

	90	100	110	120
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UniRef90_X1UZ77	M L A D L C E F V I I	G H S E R R Q F F N E T G E L V N K K L L A A L K V G L		
UniRef90_Q5B0M2	S L S S L G V S L V E L	A H A E R R S I F G E T D E Q A A A A A A C A Q G M		
UniRef90_A0AAK6	M L R E L E C T Y V I L	G H S E R R V N E I D S E I K L K L E I A M E S G L		
UniRef90_Q1RR95	L L A E A D C S H V M V	G H A E R R R G T F G E T D Q L V A R K A A A A S A A G L		
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UniRef90_UP10003A3DF53	S I D I H S C I V V G H S E	R R V I Y K E N N E I I A E K L G A V L S S K A		
UniRef90_Q9U8H6	M L K D L G I E M T L V G H S E R R R I M G E T D E Q S A Q K A A R A L A S G M			
UniRef90_G9YWP7	A A A A L G C G W V L I G H C E E R R N D K A G V N R L L N Q E V K A A Q A A G L			
UniRef90_R6NBW5	A M K A A G C C E T V I I G H C E E R R N L K A V N T I L N K E L K S A V D R G M			
UniRef90_UP10002D9FF70	V L K E I G C R Y A E V G H A E R R R R L Y G E G D T V V A A K T A A A L R N G L			
UniRef90_K2F0T6	M L S F F A E Y V I I G H S E R R K Y F K E D E V Q L V E K V E R A K G A N L			
UniRef90_U2EME9	A A R S L G C T W A L I G H S E E R R A D K M A V D A L L C D E V R C A I A A G L			
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UniRef90_B8FW49	A A K S L N G C S W T M G H S E E R R N D K M T V D T I L N Q E L K C A L N R G L			
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UniRef90_D1Z2Q2	S L Q F C G V T G S L I N H S E D R R P L E E I K K C V E V L R K H G M			
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UniRef90_X1BB69	T V K A T G A V G S L I N H S E H Q I Q S E E I E Q V V R R L R E L E L			
UniRef90_UP1000373B2A9	A L K E A G A I G V L I N H S E K R I D L T S I E F L V K K S K K L G M			
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lupas_14

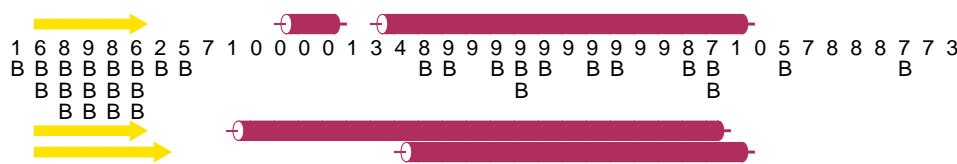
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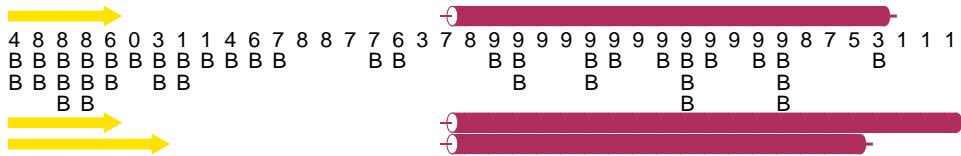
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K	P I L C I G E R L E E N E A G R T E E V V T E Q L R S S L A G I N N L N G			
V	P L V C I G E I S A P G P V A S A A V G L A V R E C E P L V R N A I P A D A P			
R	P I V C V G E N V E D C K S G K T R E V I A Y Q C K N R L L V			Y G E
T	P V V C V G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

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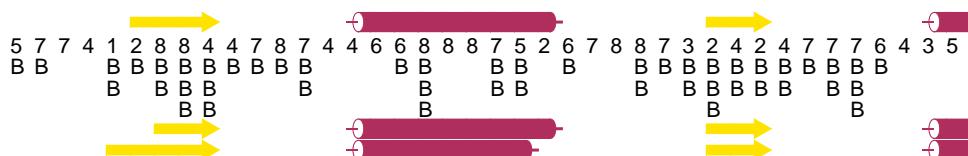
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UniRef90_I3TD50	N Y V A V E P P E L I G T G I S A K P E V I I R S V E L I R R		T L E L V K R	

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	R L P V V Y G G G G L K A E N A A F G A L P N L D G G L V G R F A G E D E M T G G M D V V Y G G G G L K T D N A R M L A S V P V M D G G L I T A E V K V V Y G G S A G P G L W S G K A N G G N V D G L F L G R F A H K T G G G L D V V Y G G G G L K Q D N A A M L A S I P E I N G G L I G D F G F Y P E V T D G M D V V Y G G G G L K T D N A K M L A S V K E I D G G L I A R F S G E D E R T G G G C P V I Y G G G G L K V D N A A M L A E I P C V D G G L I G R T G G G L P V A Y G G G G L K V D N A A M L A S I P E I D G G L I G D I G F Y P E F N F G P I V V Y G G G G L K K E N A E M I A S I K S I D G G L V P L V Y G G G G L K K E N A A S I G A I A E L D G G L I A R F S G E D E F N F V P S V L Y G G G G L K K E E N A G I I A K I D T I D G G L V V N P N V K V L C G A G I I G R H E D Y V T A L D L G A D G V L L A S G I V K A K I A P S V R V L C G A G V S T A E D V S K A L E L G T D G V L L A S A F V K A S
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 sol5
 solo
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 jpssm

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B	B		B	B		B		
B		B	B					