

QUERY	1	10	20	30	40
UniRef90_Q3A944	T R A M K Q	V A G T M K L E L A Q Y R E	V A A F A Q F G S D	D L D A A T Q Q L L S	
UniRef90_M1ZB1	K A M K Q V	V A G S L R L D L A Q Y R E	L A A F A Q F G S D	D L D K A T L A R L	
UniRef90_G2LJ89	K A M K Q V	V A G S L R L D L A Q Y R E	L A A F A Q F G S D	D L D R D T Q R R L	
UniRef90_Q9X1U7	T K A M K Q V	V A G T M K L E L A Q Y R E	L A A F A Q F G S D	D L D P A T R A Q I	I D
UniRef90_R7PRE8	K A M K Q V	V A G M L R I D L A Q Y R E	L E T F A Q F A T E	D L D P A T K A Q I	D
UniRef90_M2TAT1	T K A M K Q V	V A G S I K L D L A Q Y R E	M A A F A Q F G S D	D L D P S T Q K L L A	
UniRef90_Q8DLP3	K A M K Q V	V A G K L K L E L A Q F D E	L Q A F A Q F A S D	D L D K A T Q N Q L L A	
UniRef90_E4RP52	K A M K E V	V A G T L R R D L S Q Y R E	L E A F S Q F G S D	D L D K A T Q Q K L L A	
UniRef90_E4L720	K A M K K V	V A G T L R R D L A Q F R E	L A A F A Q F G S D	D L D A A T K A Q I	D
UniRef90_T2G8G4	K A M K Q V	V S G T L R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q A K L L D	
UniRef90_R6I141	K A M K S V	V A G T L R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q A R L L A	
UniRef90_E6SLM5	K A M K Q V	V A G R L R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q A R L L A	
UniRef90_Q2RFX7	K A M K Q V	V A G R L R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q A R L L A	
UniRef90_F3Z120	V K A M K Q V	V A G T L R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q K A K L L D	
UniRef90_Q72E02	K A M K Q V	V A G T M R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q A R L L A	
UniRef90UPI0003FFAE08	T K A M K K V	V A G T L R R D L A Q Y R E	L Q A F A Q F G S D	D L D K A T Q A R L L A	
UniRef90UPI000404E9E5	V K A M K S V	V A G T I K L D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q A Q L L N	
UniRef90UPI0003B6ED2E	K A M K Q V	V A G K L R R E L A R Y R E	L E A F S Q F A S D	D L D P A T R A Q L L A	
UniRef90_R1CRX3	K A M K V	V A G K L K L E L A Q Y R E	L A A F A Q F G S E	D L D K E T Q E R L A A	
UniRef90_C4X108	V K A M K Q V	V A G T L R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q L K L S	
UniRef90UPI000361B0DF	K A M K Q V	V A G S L R R D L A Q F R E	L A A F A Q F G S D	D L D K A T Q L A R L T	
UniRef90_C6BSP8	K A M K Q V	V A G T L R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q Q K L L N	
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UniRef90_K4AQY8	T K A M K K V	V S G S I K K L E L A Q Y R E	M A A F A Q F G S D	D L D A S T Q K L L K	
UniRef90_C0QTG5	K A M K Q V	V A G T L R R D L A Q F R E	L E A F V Q F A S E	D L D K A T Q A Q I	A
UniRef90_D6SSD0	K A V K V	V A G T L R R D L A Q Y R E	L A A F A Q F G S D	D L D K A T Q K R L T	
UniRef90_F5LA74	K A M K V	V A G T L R R D L A Q Y R E	L Q A F A Q F G S D	D L D K A T Q A K L L N	
UniRef90_Q0G1M1	K A M K Q V	V A G S I I K G E L L A Q Y R E	M E A F A Q F G S D	D L D A S T Q R L L K	
UniRef90_V4R394	T K A M K Q V	V A G K I I K G E L L A Q Y R E	M A A F A Q F G S D	D L D A T T Q R L L N	
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UniRef90_K9H4Q0	V K A M K Q V	V A G S I K K L L E L A Q Y D D	M A A F A Q F G S D	D L D P A T Q K L L N	
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UniRef90UPI00036C211C	K A M K S V	V A G T L K L D M S S Q Y R E	L E A F A A F A S D	D L D E S T Q N Q K L L A	
UniRef90_D1AE21	K A M K V	V A G T L R R A L L S S Q Y R E	L E A F A A F A S D	D L D A A S R A Q L E	
UniRef90_N2N8Z5	T K A M K V	V S G S I K L E L A Q Y R E	M A A F A Q F G S D	D L D A S T Q K L L N	
UniRef90UPI0003A0A269	V K A M K Q V	V A G K I K G E L L A Q Y R E	M A A F A Q F G S D	D L D A S T Q R L L N	
UniRef90UPI00031807B2	K A M K Q V	V A G K L K L E L A Q F D E	L E A F S Q F A S D	D L D A A T Q A Q L L A	
UniRef90UPI000310E1F4	T K A M K K V	V A G S I K K L L E L A Q Y R E	M A A F A Q F G S D	D L D A S T Q K L L N	
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UniRef90_A3Q3B3	K A M K E V	V A G S L R R D L S S Q Y R E	L E S F A A F A S D	D L D A T S K A Q L L D	
UniRef90_D3DFW7	K A M K Q V	V A G T L R R D L A Q F R E	L E A F V Q F A A E	D L D K A T Q T Q I	N
UniRef90UPI000373DC39	K A M K V	V A G T L K T D L A Q Y R E	L A A F A A F G S D	D L D K A T Q S R L L N	
UniRef90_T1JRA0	T K A M K Q V	V A G S M K L E L A Q Y R E	V A A F A Q F G S D	D L D A A T Q Q L L S	
UniRef90UPI0002488ED3	T K A M K K V	V A G S I K K L L E L A Q Y R E	M A A F A Q F G S D	D L D A S T Q K L L N	
UniRef90_C9RAE8	C M R Q V	V A G R L R R D L A Q Y R E	L A A F A Q F G T D	D L D K A T Q A R L R	
UniRef90_A0LLG0	T K A M K V	V A G R L R R D L A Q Y R E	L E A F A K F G S D	D L D K E S R A R I E	
UniRef90_R7RQ09	K A M K Q V	V A G M L R I E L A Q Y R E	L A A F A Q F G S D	D L D D G E S K R R L L E	
UniRef90_C6PVC9	K A M K Q V	V S G T L K L D L A Q Y R E	L A A F A Q F G S D	D L D D A A T Q A Q L L E	
UniRef90UPI000361EF65	V K A M K Q V	V A G K L R R D L A Q Y R E	M A A F A Q F G S D	D L D D A A T K R Q I	D
UniRef90_D1C3P1	R A M R Q V	V A G R L R R D L A Q Y R E	S L A A F A Q F G S D	D L D D P A T K R Q I	D
UniRef90UPI0003B59A67	K A M K S V	V S G R L K V D L A Q F R E	M E A F A F M F A S D	D L D D A A S K A Q L E	
UniRef90_P63674	K A M K E V	V A G S L R R D L S S Q Y R E	L E A F A A F A S D	D L D D A A S K A Q L E	
UniRef90UPI00035CE3AE	K A M K Q V	V A G S I K K L L E L A Q Y R E	M E A F A Q F G S D	D L D D A A T Q K L L N	
UniRef90UPI00039C37AB	K A M K K I V	V A G K L R R D L A Q F A E	L E A F A K F A S D	D L D D E S T A A Q Q I	A
UniRef90_P27179	T K A M K K V	V A G K L K L E L A Q Q F A E	L E A F S Q F A S D	D L D D A A T Q A Q L L A	
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UniRef90_A7HT50	K A M K Q V	V A G K I K G E L L A Q Y R E	M A A F A Q F G S D	D L D D A A T Q R L L N	
UniRef90_W7J367	T K A M K S V	V A S T L R E L A Q Y R E	M A A F A Q F G S D	D L D D A T S K A Q L E	
UniRef90_U6HQX5	T K A M K Q V	V A G R M K L E L A Q Y R E	V A A F A A Q F G S D	D L D D A T T Q A L L N	
UniRef90UPI00046D3478	K A M K S V	V A G S L R L D L A Q Y R E	L E A F A A Q F G S D	D L D D K A T Q R Q L L A	
UniRef90_Q0AKV8	T K A M K Q V	V A G K M K G E L L A Q Y R E	M A A F A Q F G S D	D L D D A A T Q K L L N	
UniRef90_C6WJH6	T K A M K T V	V S G S L R L D L S Q F R E	L E A F S A F A S D	D L D D A A S R A Q L D	
UniRef90_B4WEN1	T K A M K V	V A G T I K G E L L A Q Y R E	M A A F A K F G S D	D L D D A S T Q K L L A	
UniRef90_S3C3K0	K A M K Q V	V A G S L K L F L A Q Y R E	V A A F A A Q F G S D	D L D D A A T K Q T L L A	
UniRef90UPI0002DE72C6	V K A M K Q V	V A G T L R R D L A Q Y R E	K E A F A A Q F G S D	D L D D D L A T T Q R Q L L A	
UniRef90_W0RGE1	V K A M R S V	V A G R L R R D L A Q Y R E	L E A F A A F A S D	D L D D D Q A T T R R Q L L D	
UniRef90_B6QU16	V K A M K Q V	V A G S L K L F L A Q Y R E	V A A F A A Q F G S D	D L D D D A S T K Q T L L D	
UniRef90_B8FZ36	K A M K Q V	V A G Q L R R D L A Q Y R E	L A A F A A Q F G S D	D L D D D K I T Q M R L L T	
UniRef90_U1Y4H6	K A M K K V	V A G S L K L D L A Q Y R E	L L Q A F A A Q F G S D	D L D D D K A T Q A R L L T	
UniRef90_D1J797	K A M K Q V	V A G K L K L E L A Q F D E	L E A F Q S Q F A S D	D L D D D K A T Q N Q L L A	
UniRef90UPI0003473377	T K A M K K V	V A G K L K L E L A Q F D E	L D L Q A F S Q F A S D	D L D D D K A T Q D Q L L A	
UniRef90_D3W7E4	T K A M K Q V	V A G S M K L L E L A Q Y R E	A A A F S Q F A S D	D L D D D K A S T Q K L L N	
UniRef90_K9SKR5	G G M K Q V	V A G K L K L E L A Q Y S E	L E A F S Q F A S D	D L D D D K A T Q A Q L L A	
UniRef90_A0Q2Z6	K A M K Q V	V S G T L R R E L A Q Y R E	L A A F A A Q F G S D	D L D D D N S S S K E R L L E	
UniRef90_A0A017S5D2	V K A M K Q V	V A G S L K L F L A Q Y R E	V A A F A A Q F G S D	D L D D D A S T R Q T L L A	
UniRef90_E0XZ68	T K A M K V	V A G S I K K L L E L A Q Y R E	M A A F A Q F G S D	D L D D D A S T Q R L L A	
UniRef90_B4VTZ9	T K A M K K V	V A G K L K L D L A Q Y R E	L Q A F A A Q F G S D	D L D D D D K A T Q D Q L L S	
UniRef90_I0AHM7	K A M K K V	V A G S L K L D L A Q Y R E	L E A F A K F G S D	D L D D D D K A T Q A T L L A	
UniRef90_S0ESP8	A M M K V	V A G R L R R D L A Q Y R E	V A A F A A Q F G S D	D L D D D D K V T R D Q R L L E	
UniRef90_R5BS02	K A M K Q V	V A G K L R R D L A Q Y R E	L L A A F A Q F G S D	D L D D D D K S T K A Q A L L D	
UniRef90_K0ATV8	K A M K K V	V S G G L K L E L A Q Y A E	L A A F S Q F G S D	D L D D D D K E T K A Q R L L D	
UniRef90_B9DX63	K A M K Q V	V A G T L R I D L A Q Y R E	V A A F S Q F G S D	D L D D D D K E S K R T L L E	
UniRef90_A9V9Z0	T K A M R Q V	V A G K M K L E L A Q Y R E	M A A F A Q F G S D	D L D D D D A A T Q Q L L A	
UniRef90_E3I272	K A M K Q V	V A G A I K G E L L A Q Y R E	M A A F A Q F G S D	D L D D D D A A T Q R Q L L A	
UniRef90_D0RQY6	K A M K Q V	V A G T I K K L E L A Q Y R E	M A A F A Q F G S D	D L D D D D A S T Q Q L L A	
UniRef90UPI00034A8974	V K A M K Q V	V A G K I K L L E L A Q F D D	L A A F A Q F A S D	D L D D D D K A T Q A Q L L Q	
UniRef90_E3H898	K A M K Q V	V A A K V K L E L A Q Y S E	L T L Q A F A Q F G S D	D L D D D D K A T Q A Q L L Q	
UniRef90_D4KG36	K A M K Q V	V A G R M M R L D L A Q Y R E	V Q A F A Q F G S D	D L D D D D K S T K E Q R L L D	
UniRef90_C7MKU5	T K A M K Q V	V A G S L R R D L A A Y R E	L Q A F T Q F G S D	D L D D D D K S T Q Q Q L L S	

QUERY	50	60	70	80
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UniRef90_M1Z9B1	R G E R L V E L L K Q D Q Y K P M P V	V E E Q V V M A I F A A V N G Y L D D L P V E		
UniRef90_G2LJ89	Q G E R M M E I L K Q P Q Y S P M K V	E D Q V V I L Y A V V N G H L A D I P V S E		
UniRef90_Q9X1U7	R G Q R L T E I L K Q E Q Y S P M P V	E E Q V V V L F A G V R G Y L D D L P V E		
UniRef90_R7PRE8	R G Q R T T E V L K Q P Q Y S P L P V	E E Q V V Q A F A A V K G Y L D D D I A V E		
UniRef90_M2TAT1	R G A R L T E L L K Q G Q Y S P M P V	E E Q V V S F A G V E G Y L D D D I P T D		
UniRef90_Q8DLP3	R G Q R L R E I L K Q P Q Y S P I P V	E Y Q V V A T Y A G T N G Y L D D D I P V E		
UniRef90_E4RP52	R G E R I V E I L K Q D Q Y S P M D V	E D Q V V I Y T V V N G F L D D D I P V V D		
UniRef90_E4L720	R G Q R T T E I L K Q P Q Y N P Y P V	E D Q V V M A I Y V G V K G Y L D D D I E P L E		
UniRef90_T2G8G4	R G A R M V E L L K Q P Q Y K P M T A E	Q V C S I Y A G T R G Y M D D V P L E		
UniRef90_R6I41	R G Q R L T E I L K Q G Q Y V P L P V	E E Q V V M A I Y L G T K G Y L D D D V P V E		
UniRef90_E6SLM5	R G Q R V T E I L K Q G E H E P M P V	E E Q V V A T Y C G V N G Y L D D D V P V E		
UniRef90_Q2RFX7	R G E R M M E I L K Q D Q Y Q P M P V	E E Q V V V L Y A A V N G F L D D D L P V A		
UniRef90_F3Z120	R G A R M V E L L K Q P Q Y Q P L P V	E E Q V V A V I F A G G R G Y M D D V P V A		
UniRef90_Q72E02	R G A R L V E L L K Q P Q Y E P M P V	M A E R Q V V S L W A V V N G H V D D I P V V A		
UniRef90UPI0003FFAE08	R G E R T V E I L K Q G Q Y E P M A M E	R Q V V S L W A V V N G H V D D I P V V A		
UniRef90UPI000404E9E5	R G Q R L V E I L K Q G Q Y Q P M A V	E K Q V V S I W A A T N G F V D D D L P V P		
UniRef90UPI0003B6ED2E	R G R R M M E L L K Q P P Y S P I P V	E K Q V V A F F A A I Y A A V N G Y I D D I P V E		
UniRef90_R1CRX3	Q G E R I M E L L K Q P Q Y K P V A V E	H Q M T I Y A V I N K Y L S D I P V E		
UniRef90_C4X108	R G M R M V E L L K Q P Q Y K P M N V	A E Q V V I S I F A G T R G F M D D V P V E		
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UniRef90_C6BSP8	R G A R M V E L L K Q P Q Y K P M N V	M E Q V V V S L Y A G T R G Y M D E F P V S		
UniRef90_E4TF57	R G E K L V E L L K Q G Q Y K P V P	E E Q V V L A I F C G V N G Y L D D I P T K		
UniRef90_K4AQY8	R G A R L T E L L K Q Q A Q F S P M P F	E E Q V T V S I F A G T N G Y I D A V P V A		
UniRef90_C0QTG5	R G Q R L V E L L K Q P P N K P V P	V E K Q V A V I I Y A G T K G Y L D D D V P V N		
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UniRef90_Q0G1M1	R G Q R L T E L L K Q P Q F S P L K T	E E Q V V V L Y A G T N G Y L D D D L K V S		
UniRef90_V4R394	R G A R L T E L L K Q P Q F S P L K M E E	Q V V V L Y A G V N G Y L D D D I P P V S		
UniRef90_X4ZIW5	R G A R M M E I L K Q G V G Q P L S	V E H Q V I S L Y T A V K G Y L D D D I P V V K		
UniRef90_K9H4Q0	R G E R L T E L L K Q P Q F S P L A V E	E E Q V V S F A G T N G Y L D D D I P V V T		
UniRef90_K9VXY4	R G Q R L R E I L K Q S Q F S P L A V E	E E Q V V A V I I Y T V T N G Y L D D D I P V V E		
UniRef90UPI00036C211C	R G E R I V E V I L K Q D E T S P L E	V E E Q V I I I Y A G T N G Y L D D D I P V V E		
UniRef90_D1AE21	R G A R L V E L L K Q D E H K P M P	V E E Q V I S Y A V T N G F M D D I P V V E		
UniRef90_Q2N8Z5	R G A R L T E L L K Q P Q Y S P F P V	E E Q V V S F A A I N G Y L D D D I E V K		
UniRef90UPI0003A0A269	R G D R L T E L L K Q D Q F S P L R M E	E E Q V T V S I Y A G T N G Y I D D D I P V V E		
UniRef90UPI00031807B2	R G Q R L R E L L K Q P Q Y S P L A V Y	E E Q V V A L V Y A G I I N G Y M D D I P V V A		
UniRef90UPI000310E1F4	R G K R L T E L L K Q G Q Y Q P M P F	E E D Q V V V S F A G V N G F L D D G I D A T		
UniRef90_V2Q4C7	R G S R L M E L L K Q N K N K P F P	V E E Q V V A V I F A A I N G Y L D D D I P V V E		
UniRef90UPI000361683D	R G Q R L R Q L L K Q P Q Y E P L S V P	E E Q V V A T Y S G L N G Y L D D D I P V V E		
UniRef90_F5SH07	R G E R L V E I L K Q Q G E N E P M P V	I I S Y T A T R G Y L D D D I P V V E		
UniRef90_A3Q3B3	R G A R L V E I L K Q P Q N S P M P V	E E Q V V V A I F L G T R G H L D D D I P V V E		
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UniRef90UPI000373DC39	R G V R L T E L L K Q G Q Y V P M P V	E E D Q V V A V I Y T G V R G Y L D D K I D P A		
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UniRef90UPI0002488ED3	R G A R L T E L L K Q D Q Y C P M P L E	P E E Q V V M S I Y T G V H G Y L D D D I P V V D		
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QUERY	90	100	110	120
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UniRef90C7MKU5	D I T R F R T E M I L D Y I R T S H T S V F A D I R E A K K W T D E I K H E A N E	D D A L E A S I N S		

QUERY UniRef90_Q3A944 UniRef90_M1Z9B1 UniRef90_G2LJ89 UniRef90_Q9X1U7 UniRef90_R7PRE8 UniRef90_M2TAT1 UniRef90_Q8DLP3 UniRef90_E4RP52 UniRef90_E4L720 UniRef90_T2G8G4 UniRef90_R6I41 UniRef90_E6SLM5 UniRef90_Q2RFX7 UniRef90_F3Z120 UniRef90_Q72E02 UniRef90UPI0003FFAE08 UniRef90UPI000404E9E5 UniRef90UPI0003B6ED2E UniRef90_R1CRX3 UniRef90_C4XI08 UniRef90UPI000361B0DF UniRef90_C6BSP8 UniRef90_E4TF57 UniRef90_K4AQY8 UniRef90_C0QTG5 UniRef90_D6SSD0 UniRef90_F5LA74 UniRef90_Q0G1M1 UniRef90_V4R394 UniRef90_X4ZIW5 UniRef90_K9H4Q0 UniRef90_K9VXY4 UniRef90UPI00036C211C UniRef90_D1AE21 UniRef90_Q2N8Z5 UniRef90UPI0003A0A269 UniRef90UPI00031807B2 UniRef90UPI000310E1F4 UniRef90_V2Q4C7 UniRef90UPI000361683D UniRef90_F5SH07 UniRef90_A3Q3B3 UniRef90_D3DFW7 UniRef90UPI000373DC39 UniRef90_T1JRA0 UniRef90UPI0002488ED3 UniRef90_C9RAE8 UniRef90_A0LLG0 UniRef90_R7RQ09 UniRef90_C6PVC9 UniRef90UPI000361EF65 UniRef90_D1C3P1 UniRef90UPI0003B59A67 UniRef90_P63674 UniRef90UPI00035CE3AE UniRef90UPI00039C37AB UniRef90_P27179 UniRef90_X0MSD1 UniRef90_A7HT50 UniRef90_W7J367 UniRef90_U6HQX5 UniRef90UPI00046D3478 UniRef90_Q0AKV8 UniRef90_C6WHJ6 UniRef90_B4WEN1 UniRef90_S3C3K0 UniRef90UPI0002DE72C6 UniRef90_W0RGE1 UniRef90_B6QU16 UniRef90_B8FZ36 UniRef90_U1Y4H6 UniRef90_D1J797 UniRef90UPI0003473377 UniRef90_D3W7E4 UniRef90_K9SKR5 UniRef90_A0Q2Z6 UniRef90_A0A017S5D2 UniRef90_E0XZ68 UniRef90_B4VTZ9 UniRef90_I0AHM7 UniRef90_S0ESP8 UniRef90_R5BS02 UniRef90_K0ATV8 UniRef90_B9DX63 UniRef90_A9V9Z0 UniRef90_E31272 UniRef90_D0RQY6 UniRef90UPI00034A8974 UniRef90_E3H898 UniRef90_D4KG36 UniRef90_C7MKU5

I V T N F [] A G F E A
 A I E E F K K T F
 V I E E F K K S F
 A T D A F K Q T F
 A I E E F K T T F
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 I L K E F T R T F
 A I A E Y K A T F T A
 A I N E F K D M F E
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 A I I E F K K G F Q A
 A I V E F K D T F
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 A M R A F K Q E F N
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 I L D A F A K S F
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 A V D G F K R Q F E
 A V E N F S K A F
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 I V T D F [] S S Y Q S
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UniRef90_B1W0A5	K A M K Q V	S G R I R V L D L A Q F R E L E A F A A F G F G S D L	D A A S K A S R L E			
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	50	60	70	80
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UniRef90_D1BCV2	R G A R L L E E L L K Q P Q Y S P Y P I E D Q V A S	W A G T K G K L D D D I V P V E		
UniRef90_R4K970	K G K R L L E I F K Q D Q Y Q P V S V E N Q V I V I	Y A C V E E Y L M D I E V G D		
UniRef90_V4GSV4	R G V R L V E L L K Q P Q F K P M S L S Q E I V V L	F A G T K G F I D K Y D V D		
UniRef90_S8BN79	R G E R L T E L L K Q P Q Y T P M G V E E Q V P L I	F A G V R G H L D K V P V A		
UniRef90_C6XL24	R G E R L T A L L K Q P Q Y S P L S V E E Q V V V S I	Y A G T R G Y L D D G V K V D		
UniRef90_H0QRK1	R G A R L M E L L K Q G Q Y S P F P V E N Q V V S I	W A G T Q G Y L D D D V P V E		
UniRef90_UPI000379339A	R G A R M M E L L K Q G V N P M P V Q K Q V V S I	F T A T K G H L D D I P V N G		
UniRef90_B6IPC8	R G A R L T E L L K Q P Q F S P M A V E E Q V V V S I	Y A G V K G Y L D D K V K V E		
UniRef90_R7QMR3	R G D R L N E L L K Q D Q F V P M P P E E Q V V V T I	Y A G V R G F L D D K M P V		
UniRef90_UPI000364226F	R G V R L T E I L K Q P Q F S P L P T E K Q V M I L	F A G T N G Y L D D D L K V E		
UniRef90_UPI0002F39906	R G A R L T E L L K Q K F S P M P F E E Q T V S I	Y A G T N G F L D D A I P V		
UniRef90_UPI000370F646	R G E R L T E L L K Q P Q F S P L Q V Q E Q V C V I	Y A G T R G Y L D K I A V G		
UniRef90_U2EAG6	K G K R I T E I L K Q D Q Y K P V E K Q I M I L	Y A A V N D F L M D I E V S		
UniRef90_UPI0003B4DF07	Q G E R I R E M L K Q P Q Y K P M P V E K Q V I I I	Y A A T K K Y L D I P V V		
UniRef90_K9VFVN3	R G Q R L R E L L K Q P Q S S P L P M N E Q V A V I	Y A G I N G Y M D D I P V		
UniRef90_A0A024KII1	R G A R L T E L L K Q P Q F S P L K T E E V E A V I	F A G V N G Y L D D D L P V		
UniRef90_I4B736	R G S R L V E L L K Q P Q Y K P M P G E K Q V I S I	Y A A T K G F M D K V P V A		
UniRef90_R5Q0U7	R G A R L T E L L K Q K Q Y H P M P V E E E V V S I	F T G I R G Y L D D D M P V		
UniRef90_T2MGZ6	R G V R L T E L L K Q G Q Y V P M D I A E Q V A T I	Y A G V R G H L D K L D P S		
UniRef90_E8RBC5	R G E R L V E I L L K Q P Q Y Q P L P M E K Q V T I I	F A G T K G F L D K F P V		
UniRef90_X1DFW6	R G Q R I T E I L K Q A Q Y V P M S V E K Q V M I L	Y A A I S G Y L D D I P V		
UniRef90_Q39ZT9	R G A R L V E I L L K Q P Q Y Q P L P V E K Q I L V I	Y A A N N G Y V D D Y P L T		
UniRef90_G8PMY8	R G A R L T E L L K Q P Q F S P P L K T E E Q V A V I	F A G V N G Y L D D D R P V		
UniRef90_B6KOK8	R G L R L T E L L K Q P Q Y S P P L A V E E Q V P L I	Y C G V N G Y L D D D R P V		
UniRef90_Q0C0Z8	R G A R L T E L L K Q P Q Y S P P L L M E E Q V V I I	Y A G T R G Y L D D K I V A L		
UniRef90_Q7NCS3	R G L R L R E I L L K Q P Q Y S P P L S V A Q Q V A I I	Y A A T N G Y L D D D I D P V		
UniRef90_K2JM37	R G S R L T Q L L K Q P Q Y S P P L P V E E Q V A V I	Y A G V K G Y L D D K I I P V		
UniRef90_U9UBA5	R G E R L V E L L K Q P Q Y R P M S T E H Q P L I	F A G V H G F L D D K I I D S		
UniRef90_J9H7F8	R G A R M V E L L K Q G Q Y S P F S V E R Q V A S I	W A G T T G K M D S I P V P		
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UniRef90_A3TEG1	K G A R L V E L L K Q S Q S N P F P V E E Q V V S I	W A G T T G Q L D S V A V E		
UniRef90_UPI00047A44B3	K G E R I M E V L L K Q P Q Y E P V P V Q H Q V M I L	Y V V M N D Y L S D K I E V		
UniRef90_L0P833	R G E R I T E L L K Q G Q Y S P M P V E E Q V P L I	Y A G V N G L L D K I L P V		
UniRef90_UPI000379AC82	R G A R L T E L L K Q P A F S P L R V E E Q V V V I	Y A G T N G Y L D D K L P V		
UniRef90_UPI00038165EB	R G E R V V E T L L K Q P Q Y S P L L V E E Q V L V L	Y T A V H G F L A D I P V		
UniRef90_UPI0003B63D68	R G R R L T E L L K Q N P H D V L A V E E Q V C V I	Y A G T R G Y L D K I L K T T		
UniRef90_Q2RV20	R G A R L T E L L K Q A Q Y S P L A V E E Q V C V I	R G A L N N G Y L D D D V A L K		
UniRef90_K1Y717	R G Q R A V E I L L K Q K Q Y E P M P F Y E Q V L V I	F A L N N G Y L D A I D I K		
UniRef90_G9PHF7	R G A R L M E L L K Q P Q Y T P Y K V Q D Q V A S I	W A G T N G Y L D D K W P E		
UniRef90_D8F233	R G R R L T E L L K Q P Q F Q P M S A E K E V A I I	R G A S N G F L D E M P L E		
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UniRef90_H5UMS2	R G A R L V E I L L K Q P Q A S P M P V E E Q V V A I	W A G T T G K L D D V E A S		
UniRef90_A7ZC35	R G Q K M V E V L L K Q P P Y S P L P V E N Q V V I I	F A G A K G Y L D D D V A T A		
UniRef90_UPI000288494A	R G A R T F E L L K Q G V N Q S M S V E K Q V V S I	F T A V V R G F L D D I A L E		
UniRef90_B1W0A5	R G K R M V E L L K Q P Q Y A P F P M E E Q V V S I	W A G T T G K M D D V P V		
UniRef90_R6LEE8	Q G V R I K E I L L K Q P Q Y Q P M P V E Y Q I I I I	Y A A V V K K L L D I A V E		
UniRef90_D8PA90	R G V R M V E L L K Q G Q Y K P M P V A D Q V L S I	Y A G V N G F L D D D L P V		
UniRef90_W0JQ1	R G S K L T E L L K Q P P F A P L P V Y K Q I L I V I	Y A G N N G F L D D D L P N K		
UniRef90_UPI0003FEA749	R G A R T V E V L L K Q G Q L H Q P L A V E K Q V V I I	F A L T K G F L D D D V A V E		
UniRef90_K2A5A0	R G K R L I E T L L K Q G Q Y V P M P V S L Q I V Q I	F A T T N G F L D D D I E V N		
UniRef90_T1JDX9	R G V R L T E L L K Q G Q Y V P M A I E E Q V A V I	Y S G V K G H D D K M D P S		
UniRef90_UPI00046ED343	R G T R M V E V L L K Q P P Y S P L A V E K Q T V I I	I P A S T V G N G F L D D D V A V N		
UniRef90_UPI0003B60DA0	R G A R L T E L L K Q P Q Y R P L P F E E Q T C V I	Y A G V R G F L D D D I Q V Q V		
UniRef90_UPI00035FD580	R G E Q L V E L L K Q P Q Y E P M P V E K Q I A S I	F C G S N G Y L D D D L E T T		
UniRef90_E3PTN4	K G E R I V E V L L K Q P E S S S P I D V E N Q I M I I	Y A V N N N N Y L K D I E V E		
UniRef90_B9XPE9	R G K R I V E V F Q K P Q Y Y N P I A V E V Q A A T I	W T V Q N G F M D D V A V D		
UniRef90_C0JX43	R G V R L R E L L K Q A Q S S P L V V A D Q V V T I I	Y T G V N G Y L D D D P I Q V V Q		
UniRef90_C9LS80	R G A R M V E T L L K Q P Q Y T P L A V E D Q V L V L	F T A V V R G F L A D I P V		
UniRef90_H1XNU2	R G E R L V E I L L K Q D Q Y R P I P F E K Q I A I I	Y A G T N G F L D D K I L P V		
UniRef90_UPI00036508E1	R G E R L V E I L L K Q G Q Y Q P L P V A K Q V L A I	Y A V N N G Y T D H I P A A		
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UniRef90_G8M1V7	Q G E R L V E T L L K Q S L H K T L P V E D Q V I V L	F C A T N R Y L M D D L P L K		
UniRef90_L0EXS2	R G Q R L T E L L K Q P Q F S P F K I E E Q V V V M	M F A G I N G Y L D D K I D L S		
UniRef90_R6P478	H G K R V M E I L L K Q P Q Y K T L E V E K E V V I I	Y A V T N K Y L D D D V P V		
UniRef90_G3W270	R G I R L T E L L K Q A Q Y A P M A I E E Q V T V I I	Y A G V R G Y L D D K M D P I		
UniRef90_L1QI16	K G R R I V E I L L K Q D Q Y K P M D V E K Q I V I I	Y A A V V N D F L S D D V K V T		
UniRef90_A0A017RYR5	K G K R L V E I L L K Q N Q Y S P M E V E E Q I L I I	Y A T I N N N F L K D I P V		
UniRef90_J1K312	R G A R L T E L L K Q P Q F S P L K T E E Q V A V I I	F A G V N G Y L D D D P I A V H		
UniRef90_B0JWV1	R G Q R L R Q I L L K Q P Q N F S P L S V A D M G V T I	Y A G L N G Y L D D D I A T D		
UniRef90_UPI000470488F	H G E R V T E L M K Q K Q Y S P L S V A D M G V T I	F T A N E G Y L S D D V P V		
UniRef90_Q30QP9	R G Q R M V E V L L K Q P P F S P L S V E K Q V L I I	F A G N E G F F D D M A P S		
UniRef90_F4P4J0	R G A R L T E L L K Q N Q Y S P L S V E H M V I V I	Y S G V N G F L D D K I P V		
UniRef90_W4Q5F6	R G Q R L T V E V L L K Q D L N K P Q P V E Y Q V T I I	Y A L T K G F L D D D I P V		
UniRef90_W0S270	R G Q R L R E I L L K Q N Q N S P L P V E E Q C A L I I	Y A G I N G Y L D D N L L A V S		
UniRef90_K4K6F2	R G R R L R E I L L K Q S Q S N P L S V S D Q I M T I	Y T G T N G Y L D S L L E I G		
UniRef90_J6LJS8	R G A R L T E L L K Q P Q F S P L K M E E Q V V V I I	Y A G V N G Y L D D P L P V		
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UniRef90_Q19VA5	R G R R L R E I L L K Q A Q A P L S V E E Q V S T I I	T Y G I N G Y L D S S I E V E		
UniRef90_D2RLW6	R G A R V T E M L K Q Q G Q Y Q P L S M A Q E V I S I	Y A V N N G F L D E I I P V		

	90	100	110	120
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UniRef90_B3EA03	A L K K Y E T E L Y A F F D N R Q A D	V L T E L R E K Q A I I G D D L K A K L V S		
UniRef90_UPI000304B6D3	K V T T F E A R M L S E L R A A Q P G	I L E A I R T E G A I S K E T E N K L T A		
UniRef90_L0EK39	A V G R F E R E L H L Y L E S N A P E	I A Q S I R D T K D L T P E T E N A L L N E		
UniRef90_Q1AVH7	D V P D W E A Q L R E Y Y L R S S H	E D L L K D I R E S K K D I T D E T A E R L R E E		
UniRef90_A9BFX5	R I S D F E R Q F L A Y Y L K E N Y R	D T L N K R E S K K D I A D E I K K E L N E		
UniRef90_K8GIW2	K V A S Y L Q G L R E Y Y L A T S A P	K Y S E L R E E K R E L S A E A E E I L K G		
UniRef90_S6CEG0	S V V R F R T E L L A S L R A S K P	E I L Q T I N T E K K I L S D E T K V A L L K E		
UniRef90_UPI000344A4E6	D V R R F E A D F L L S Y L D R E H	K A V L D T I R D S G K F E D D S Q K T L Q A		
UniRef90_K2LYG7	K I R A F E E Q F L L N D I V R S T G	S D I L D A R T E K V L S E A T E T K L L K A		
UniRef90_Q2J6N1	D I R R F E S E F L D F Y V G R S Y	P G V Y D A V T L S D D T I A M L L E E K		
UniRef90_M1E6L7	D I Q R F E K E L L L S Y V I E A H N	Q N D I I E A I T K E K A I S K E T E E K L L E E K		
UniRef90_D1BCV2	D V R R F E A E L L I D H L R R N T	E V L T T K S S G K I L E D D T E A A A L L T S		
UniRef90_R4K970	K I K E F E K G G L L D Y I V D T H	H K E I G E A I L T K K V L D D E L K K S L N S E		
UniRef90_V4GSV4	K V R V Y E E Q L L S F V E S K H P	D F P D I M K E I E D K K I I S P D L E K K M K E		
UniRef90_S8BN79	K I Q A F E K E D F L L A Y V K S S E	A G L L E E I K T K G V L S K E L E D K K L T S		
UniRef90_C6XL24	D V Q R Y E A E L L S F A H A N H	A D S L L K T I R D E K K I L S G D T E G K V K E		
UniRef90_H0QRK1	D I S R F E S E F L L E H L K H K S	S S I L T T A Q T N V L D D D T V A A L K T		
UniRef90_UPI000379339A	D V L R F E K E F L L F Y L E S N E	P A I L Q S I V D V T A D N E K A L I I D		
UniRef90_B6IPC8	D V N R Y E E A H L L D V M R D N G	A D I L A A R T D K Q I V T K D T T E E K L L K A		
UniRef90_R7QMR3	K I K E F E E T S Y L K Y M R A N H	N D I L L E T R K E G S I V S D K T D G S L K N		
UniRef90_UPI000364226F	D I R G F E E G L Y K Y L D S A Q S	Q L K D I L E K K K T D D D L K N R I I K A		
UniRef90_UPI0002F39906	R V N E Y E A Q M L D Y M R R E H	G A V L A E R T S K K F F F E G E V A D K T K A		
UniRef90_UPI000370F646	D I Q K Y E E A E L L A H L H A E H	D A I L S D I A T Q K Q K L T D D I E N R L K T		
UniRef90_U2EAG6	K I K A F E K G F L E F M D A H H R	E V G A M I V D K K K E L T D E I K K A L L S E		
UniRef90_UPI0003B4DF07	D V L R F Q D E L F D F I I D T K Y	A E I P A E R E K K K E M T T D E A E K L L K E		
UniRef90_K9VFN3	K V N K F T V G L R D Y L R T S K P	K Y G E I V Q G G K A L L S D D L R A Q L K A		
UniRef90_A0A024KII1	K V G D F E E T C T V L S T L R S K	H A D I L L G A A K D K A L S D D L R A Q L K A		
UniRef90_I4B736	Q I R E F E T K L L D F I I E K T H	N E F Y V T I R D T K G L P D E A K K L N S A Y		
UniRef90_R5Q0U7	K I A R F E K E M M L E A L K A S V	P S V L I E A I R D E K V I S P D T E D D L R Y		
UniRef90_T2MGZ6	K V T S F E R S F V K H V R T A H	S G L L D T I R S E G K I S E S T E A K L K E		
UniRef90_E8RBC5	V L A D Y E E K E L Y Y S Y L V E	T N E P S I F N E I S P E L E E K M K K		
UniRef90_X1DFW6	K I T A A E E A N F H R F M E A N H	P E I G K K I A K E K K E I S P K T E E A L L K		
UniRef90_Q39ZT9	V L R R Y E E E L Y Y S F L L E H R	H G D L L K D L A E K K K A I D T D L E A R I K A		
UniRef90_G8PMY8	D V R E F E A G L L R F L L R A E H	A D L S T I W E K K A L D A D L T D K K L K A		
UniRef90_B6KOK8	R V T E F E Q K F I P F L R T S A P	V L A D I R N E G V L D N E A T E N E L K S		
UniRef90_Q0C0Z8	D V T R Y E K E L L V H M R G A K K	E L L A K L R E K K E L T D K A V D L L K K		
UniRef90_Q7NCS3	G I Q P F K Q Q F L N Y L D S S V S	E Y G Q E I E T T K A L T S E I E G K L K D		
UniRef90_K2JM37	Q V N K Y E A G L L S E L L R G K G	K D I L L A A I R K E Q Q I L T S E I E G K L K D		
UniRef90_U9UBA5	R V T E F E S S L I P H T S N H S D	V L E T I K K D G V I L S D A T D K K L L R E E S		
UniRef90_J9H7F8	D I R R F E T E F L D F I I F D V	S S T R E I L T D D T V K A L L K E E S		
UniRef90_UPI000373E6F3	K V G E F E Q G L L T H M R G E G K S	I L E T A K E Q K K L T D S T E E A L L K V		
UniRef90_A3TGE1	D I R R F E A D F L I G H L R R S K	K D I L D A R E T G K F E E E S T E E A L L K V		
UniRef90_UPI00047A44B3	K I K E F E K Q F Y V F M D D K Y P	D K I L G K S I L E N G K I L T E E I E E K I R T		
UniRef90_L0P833	K I G A F E Q A F L I H F R Q N F S	Q D I L L A T K K E A S L S K E T E E K I R T		
UniRef90_UPI000379AC82	K I R K Y E E A E L L E H L N S S E K	G K G L L D T I R K D K A L L K D E T I I A K V K S		
UniRef90_UPI00038165EB	K V V E F Q E S F L K F M R T A H P	E V S K K I I E Q K K K I L D D A L E G E I I Q A K		
UniRef90_UPI0003B63D68	L C R K Y E E E L Y Y P F L L E H S	E F D V I R T G K A L L S K E L E Q K L L V K		
UniRef90_Q2RV20	D V V R Y E E A S L L G A L R T S S	G A D L L E S V R T G K A L L S K E L E Q K L L V K		
UniRef90_K1Y717	E I K R W E N E F V S F Y V R S S H	P K L L E S V K S E T K D I L S E Q T E K D L L K K		
UniRef90_G9PHF7	D V S R Y F E K E M M L N Y L H S E	T D V L E T I A T T G Q I L T D E T D K L L R K		
UniRef90_D8F233	V L G Q Y E E K E L Y E F I E M T S	K Y A D V L E K G G D I S D E T D G K L L K K		
UniRef90_UPI0003B4F8E8	UniRef90_H5UMS2	K Y P F L D D V R R N H P G I L D S R E T K K K I L D D G T K N A M E E		
UniRef90_A7ZC35	N V T K F E E A E L L Y P Y I V E A	K Y P E I F E Q I R T K K V I D K E V E E I L H K		
UniRef90_UPI000288494A	D V I R F E K E F L L A F V E M N H	P E I F T S I T K E K D L L T K E N E Q E L L I K		
UniRef90_B1W0A5	D I R R F E A E L L E A F L R R E M	N H P E I F T S I A E G G K M S D D T L Q S V A D		
UniRef90_R6LEE8	D I L A F E S G L L F D Y I K T K Y	P E I P E S I K N D K V L K E E V E E A L L R K		
UniRef90_D8PA90	K V L Q F E E A D L L H Y V A Q N H	R D M R K D I A T V G K I D D K V G G K L L K E		
UniRef90_W0JQ1	K V L Q F K Y E E E L Y K F V E T K Y	P D I F F K E K E K K T I S D E L K S K I I D K		
UniRef90_UPI0003FEA749	A L K Y K Y E E E L Y K F V E T K Y	P D I F F K E K E K K T I S D E L K S K I I D K		
UniRef90_K2A5A0	D V Q R F E E A D M Y S Y L E H N	D H R T G N L R T T G N L P E D A D L R K		
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UniRef90_D4J5K0	K A M K K V A G K I K L D L A Q Y R E L L Q S F A Q F G S D L D D A D T L Q N L A				
UniRef90_A5FZ52	K A M K Q V A G K I K L D L A Q Y R E L M A A F A Q F A S D L D A S T Q K L L A				
UniRef90_R5HKE5	T K A I K Q V A G K L R R L D L A Q F R E L L Q A F T Q F G S D L D D Q A T K N Q L L				
UniRef90_UPI000363379F	K A M K Q V A G T I K L D L A Q Y R E L L A A F A Q F A S D L M D A S T R Q L L S				
UniRef90_G8NTP5	K A T K Q V G S T L K L D L A Q Y R E L L A A F A Q F G S D L D D K V T Q N Q L N				
UniRef90_F5XKF8	K A M K T V A G S L K L D L A Q F R D L M Q A F A M F A S D L D A T T R R Q L D				
UniRef90_W7CT13	K A M K K V A G T L R R L D L A S Y R E L L E A F A Q F G S D L D D E Q T Q S K L D				
UniRef90_D7GDF9	T K A M K K V S G T L K I D L A Q Y R E L L M Q A F A M F A S D L D A T S R R Q L D				
UniRef90_UPI000237A0D2	K A M R S V T G S L R R L D L A Q Y R E L L E A F A S F A S D L D D A S K A Q L D				
UniRef90_D5GM61	V K A M K Q V A G S L K L F L D L A Q Y R E L V A A F A Q F G S D L D D A S T K S T L N				
UniRef90_Q8EM81	K A M K K V A G T L R R L D L A S F R E L L E A F S Q F G S D L D D K S T Q A K L N				
UniRef90_F1DPL1	K A M K Q V A G T L R R L D L A Q Y R E L V A A F A Q F G S D L D D A A T Q Y L L N				
UniRef90_R6QFA0	T K A M K Q V S G S L R R L D L A Q Y R E L D P Q T K E L L D D A S T K Q T L L D				
UniRef90_Q6C326	V K A M K Q V A G S L K L F L D L A Q Y R E L V A A F A Q F G S D L D D K S T Q A K L N				

	50	60	70	80
UniRef90_I3TPY7	R G A R L T E L L K Q P Q F S P L K M E E Q V C V I F A G V R G Y L D A I P V N			
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UniRef90_U9VK69	R G V R L T E L L K Q A Q Y S P R A L H E Q V T I V Y G G I N G L F D D P V V D			
UniRef90_UPI0003FC74FD	R G A R L T E L L K Q P Q F S P L K T Q E V A V I F A G V S G F L D P L P L G			
UniRef90_G4SWW7	R G Q R V T E L M K Q N Q Y S P M S V A Q M A V S F A A N E G Y L D S V E V N S N			
UniRef90_UPI0004790ADA	Q G Q R I V E S S I K Q E Q Y K P L P L E Y Q V L M F A V N N K F L V D V P V			
UniRef90_Q5X0P1	R G Q R I T E L M K Q K Q Y S P L T V A E M G V S F V V E K G Y L D D V P V			
UniRef90_M4QKN6	R G A R L T E L L K Q D Q Y S P I P T E L Q V I V L F A G V K G Y L N N I E L S			
UniRef90_A0LDA2	R G K R L M E L L K Q A Q Y A P L S M E E Q V V S F A G T R G F L D D V P V			
UniRef90_M1PEV1	R G R R V T E L L K Q P Q Y S P M N I A Q M A V S L L A V N N G F F D D V P V			
UniRef90_R5HDS2	Q G E R I R E V L L K Q P Q Y Q P M P V E Y Q V I T Y V A T G K Y L L D D V A I			
UniRef90_V61YD1	R G A R T V E V L L K Q P Q F N P M S M A D Q V V S Y A G T K G F F D A V P I N			
UniRef90_A6BZC0	R G Y R M V E L L K Q P Q Y Q P M S V T E Q I M S L F A G T R G Y L D D V P I			
UniRef90_M5S018	R G Y R M V E L L K Q P Q Y Q P M S V T E Q I M S L F A G T R G Y L D D V P I			
UniRef90_A7TDW2	R G E R L T Q L L K Q S Q Y S P L A A E E Q V P L I Y A G V N G Y L D N V E L S			
UniRef90_K9UG73	R G A R L R E L L K Q P Q Y S P L S V A E E Q V A V L Y A G L N G Y L D D D I A V			
UniRef90_UPI000373F875	R G R R T V E V L L K Q P Q F L H K P L P V E K Q V A V L Y A L T H G F L D S V V V			
UniRef90_A0YJF0	R G E R L R E L L K Q P Q N S P L Q L F E Q V A V I I Y T G I N G Y L D E V P V			
UniRef90_UPI0003B78EE8	R G A R L T E L L R Q G Q Y A P Y P V E D Q V V S W A G T T G E F D D V P V			
UniRef90_Q8RC17	Q G E R I V E T K Q P Q Y K P M P V E Y Q V I I Y T V M N R Y V T D I E V S D			
UniRef90_Q5FRC7	R G A R L V E L L K Q P Q E T S P L P V E E Q V V V L Y A G T R G Y V T D P I A V			
UniRef90_Q31DL8	R G K R V T E L M K Q K Q Y S P L T I A E M A V S L Y A A N E G Y L D D V E V			
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UniRef90_R5LRX8	Q G E R L K E V L K Q P Q Y K P M P V E Y Q V I I Y A A T N K Y L L D I A V			
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UniRef90_I2JUZ8	R G E R L T Q L L K Q K Q Y H P Y A E E E V P V I Y A G V N G F L D K K F P A			
UniRef90_W4LLH4	R G Q R M V E L L K Q D D Q Y V P R S E V Q V T S T Y A G V N G L M D D I P V			
UniRef90_C7BEK1	R G Q R L R E L L K Q P Q A S P L S V A E Q V A T T Y T G T N G Y L D K I R V			
UniRef90_J0V0D9	R G A R M V E V L L K Q P P Y S P V A P E Y Q V I I F A G N K G Y L D A M S T N			
UniRef90_F4F814	R G A R L V E L L K Q P N Y S P Y P V Q D E V V S S W A G T E G K L D D I P V			
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UniRef90_S2VM44	R G E R L M E L L K Q P Q Y T P Y P I E E E Q V V S V W A G S K G Y L D D V P V			
UniRef90_U5W950	K G V R V E L L K Q P Q Y S P Y S V A E E Q T I I W A G T T G Q L D D K L P V			
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UniRef90_R8W285	Q G E R I V E V L L K Q P Q N S P V P V E E K Q V V I I F A V V V N K Y L I D V			
UniRef90_J9YZ82	R G E R L T E L L K Q D D Q Y V P M S V A D Q V L S S Y S G V R G F L D K I D T A			
UniRef90_G8B7R3	R G E R L T Q L L K Q K Q Y H P L A A E E Q V P V F A G V N G Y L D D L P V			
UniRef90_K2EW86	R G S R L T E L L K Q S Q Y S P M P V E D Q V I S F A G V K G Y L D E L P V			
UniRef90_R5T4M8	Q G E R I R E L L K Q D Q Y K P M P V E E N Q V I I Y A A T K K Y L I D V E V			
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UniRef90_UPI0002627DCD	R G A R L Y E V L L K Q P Q Y S P V P V E Q Q V V T T F L G T K G H F D D V P V			
UniRef90_UPI0003B6A65B	R G Q V V M M E L L K Q N Q Y S P L P V E E K Q V V I L F L G V Q G G Y L D D V S I E L T			
UniRef90_UPI0004705EDE	R G S K L T E L L K Q D D Q Y S P M T V A Q Q V I A V F S G V K G Y L D D V P V			
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UniRef90_B3E0Z8	R G S R I V E F K P Q Y S P V P V E I Q V A V L W A V Q N G Y F D K I P L E			
UniRef90_D4JCW3	H G A R L T Q L L I Q K Q Y S P M R V S E Q V V S L F A A K N K Y L K D I P V			
UniRef90_R5GPA4	Q G E R L K E V L L K Q P Q Y S P L A V E E K Q V I I Y A V T R K Y L L D V P V			
UniRef90_UPI000428FD7C	R G A R T V E V L L K Q G L H Q P V V A V E E K Q V M I Y A L V N G Y L D D I P V			
UniRef90_C7MDS4	R G A R L M E L L K Q S Q Y S P F P M E E Q V V V S S W A G T K G K F D D I E V E			
UniRef90_Q5FKY2	R G Q R T V E V L L K Q P D H P P V E K Q V L I Y A L T H G Y L D A I P V			
UniRef90_E8X3M5	R G A R L V E V L L K Q P Q Y K P L S A E E K Q V A I I Y A G V N G L L D D V E V			
UniRef90_UPI00030587D2	R G Q R T V E I L L K Q G L H Q P Q R V E Y Q V A V I I Y A L V N G F L D D I P V			
UniRef90_D6PD09	R G K R I V E V F K Q P Q F K P V S V P M Q V V T T W A V Q N G Y F D D V D V			
UniRef90_Q7VA63	R G K R L R E L L K Q A Q F A P L N L A E E Q V A V V Y A G V K G L I D E V P V			
UniRef90_UPI0002197087	R G A R T V E V L L K Q P L H S P P V E E K Q V L I Y C L T H G Y L D K I A V			
UniRef90_A7Z9Q2	R G A R T V E V L L K Q D L N K P P V E E K Q V A I L Y A L T K G Y L D D D I P V			
UniRef90_Q7UFB7	R G Y R M V E L L K Q P Q Y Q P L S V A E E Q V I S Y A G T N G H L D D D V A V			
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UniRef90_UPI0003B3A845	R G A R L T E L L K Q P Q Y S P Y P V E D Q V V S I W A G T K G H L D D E V P V			
UniRef90_D6S4A2	R G R R I V E V L L K Q P H E P L P V E E K Q V L I Y A L T H G F L D D S I P V			
UniRef90_R7B6K4	R G A A M T E L L K Q G R F M P M P V E E K Q A I S W A G N Q G F L D S L P V			
UniRef90_B1XSD2	R G R R V T E L L K Q A Q Y K P L Q V W E M A A S L Y A V N N G F F D D L E V			
UniRef90_R6HIC8	R G A A M T E L L K Q G R Y T P M S V E D Q A T A I W A G A H G F L D D D V P V			
UniRef90_Q3SF64	R G R R R V T E L M K Q A Q Y S P M S V S Q M A L T F A V N N G Y M D E E V V			
UniRef90_F5YRJ4	R G A R L V E V L L K Q P F S P L A M E E Q V A V V L F M A I N G F L M E V P V			
UniRef90_C8WPC6	R G A H M T E L L K Q G R Y V P M P V M D Q A M S S Y A G A H G Y L D D I L V			
UniRef90_D4J5K0	Q G E R I Q I L L K Q P Q Y S P Y P V E E K Q V V M I Y A V T R R H L T D I P V			
UniRef90_A5FZ52	R G A R L T E L L K Q P Q F K P L P V E E Q V V S I F V G T R G Y L D D V P V			
UniRef90_R5HKE5	R G E K L T E V L L K Q P Q Y N P L S V A E E Q V S I L F A A N E G L L D D V P T Q			
UniRef90_UPI000363379F	R G E R L T E L L K Q P Q Y S P M D V E E Q V A V V L F A G V K G Y L D Q I P V			
UniRef90_G8NTP5	R G A R L T E L L K Q P Q F K P L T W V Q V A V L F A G T Q G L L D D V E V K			
UniRef90_F5XKF8	R G S R L T E L L R Q P Q Y S P Y P V E E Q V V S S W A G L Q G L M D E V P V			
UniRef90_W7CT13	R G K R T V E L L K Q G L N Q P P L V E E K Q V V S L F S L T R G L L D D V P V			
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UniRef90_Q8EM81	R G Q R T V E V L L K Q G L H K P M V V E K Q V A I Y S L T R G L L D D V P V			
UniRef90_F1DPL1	R G A R L T E M L K Q P Q F S P I P I E R Q V V I L F A G V K G Y L D R L S L S N			
UniRef90_R6QFA0	H G N R L V E L L K Q P L Y H P M S L H K Q V I V L L C A A N H R L L M D V P V			
UniRef90_Q6C326	R G E R L T L L K Q K Q A S P M S S E E M V P L I Y A G V N G Y I D N I P V			

90 100 110 120

UniRef90_I3TPY7	S G K F E Q A L L A D L R G E N K A I L D A I A T E G K L S D E V E A K L V I A
UniRef90_UPI000225B707	H V S K F E K E Y I Q A L K I E H P K L I A E I D K A G K K L T E E Q E K L L N E
UniRef90_U9VK69	K V A P L V V E L L C N Y I N T S K P E L V K E I N E G K K L T D K V Q E L A K E
UniRef90_UPI0003FC74FD	K V R D F E D A L Q L Y M K S E K S E L M A Q I N A T G D F S D E I K E G I K S E
UniRef90_G4SWW7	E V R R F H E G L I E Y V K N N Y P D I L Q E I K E K K K D I S S E E L A N R M K E
UniRef90_UPI0004790ADA	E I S S F E A S L H D Y M R S T H A A L L H A N E A G A Y D N E I E A K L K K
UniRef90_Q5XOP1	A V K A E L E L L K Q M H A K H S D L L D T I R T S G K L I D A D T E T K L G V
UniRef90_M4QKN6	K V N A Y E K G L V K H F N T N H A D I L T R Q K E E K S I I S A E L N E K I A N
UniRef90_A0LDA2	A V K A E L E L L K Q M H A K H S D L L D T I R T S G K L I D A D T E T K L G V
UniRef90_M1PEV1	K V L A C Y E H D M H Q Y V A Q Q L P D V M E R L K T G E I L S A E D E Q R L K D
UniRef90_R5HDS2	Q I T R F E Q E F F T F L D K K Y P E V P K A I R T E K V I S D E T D A L L K K
UniRef90_V61YD1	D V K R F E E K E L L A Y L E Q N D S G I L E S I R N T K Q L E D D T I E Q L K T
UniRef90_A6BZC0	Q V Q A E S E M L Q F I H D Q Y P E I T D K T E T G K L E D D T I E Q L K T
UniRef90_M5S018	S V P Q W E K D F I Q F V H D K H G K V L I S D L E E K G D L T D E I T E S I I A
UniRef90_A7TDW2	R V G E F E A A F L A Y L K S N H Q E I L N T I R D K G E L L N K E L L A S L K T
UniRef90_K9UG73	K V V G Y T T A L K D Y L K N S K P E Y A Q T K D N Q K Q L P D T D K L D T
UniRef90_UPI000373F875	D I L K Y Q D Q L F D F M D N N Y S D L L Q E A Q S G Q I L P D T D K L D T
UniRef90_A0YJF0	K V V A F A A G L R D Y L K N S K P K Y G E I Q S E T K V L T E E A E N L L K E
UniRef90_UPI0003B78EE8	D V L R F E Q E L L E H M R H N T P I L K T A E T Q V F D D D Q K Q A A K E
UniRef90_Q8RC17	E V R P F V M G L L K F L D E A Y P E I K Q S I K P D T E E K L K A
UniRef90_Q5FRC7	K V V A Y E A A L L S E L R G A G S D I L T A R N D R Q L K P E T E G K L K E
UniRef90_Q31DL8	K V L D F E A A L H A Y Y L N S N N A D L A A K N A K G D W N D E I I S E V K A
UniRef90_Q2VZN0	Q V G R F E S S S L L S E I K S K A P E I L T A A T E K Q I I S A Q T E E K L K A
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UniRef90_R5LRX8	R I A D F E K E L F T F I D T K Y P E I P A A I K Q E K V L S D D D N E Q A L I K
UniRef90_U7JFG2	D V Q R F E H D M L E Y Y V G A N T D V F D S I R E T G K F P D E D Q E K A A E
UniRef90_I2JUZ8	R V P E F E E K F L A Y L K G A E H S G I L S N R E N G A L K D A D F A N L K K
UniRef90_W4LLH4	Q C R E F E G E L T R F L E T H H S A L A Q D L V D K K R I T E E T E E Q L R G
UniRef90_C7BEK1	Q V R A F L A G L R Q F L S N K K S R Y G Q I L A E T N A L N A E A E G L L K E
UniRef90_J0V0D9	K V S E F E N G L Y S Y I I N S K Y P D L P K Q V I A D Q K L T K E S E A L L T K
UniRef90_F4F814	D V R R F E T Q F L E Y Y R R K H N A T L Q A A D N K W D D E I I A A L D A
UniRef90_Q8KAW8	Q V R R F E E F L A M L E Q K H P E I L S S A E K G T L E S D I A S K L K E
UniRef90_UPI000255DB66	D V Q R F E T E W I D H H L R R H S S V L T T A E S G A W G D D Q I N A L N E
UniRef90_S2VM44	K V H D W E A R M L D Y V R H N S S V L E T A S T G E M D K D L E A E L E A
UniRef90_U5W950	D V R R F E G E L L D W V K R N R N D T F T A E S T G Q L T D D E Q V E T L Q T
UniRef90_A3AVD4	A V A K F E G S L L N H L R S K H A D V L E A I R S T G K L E T E T E N A L L K A
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UniRef90_R8W285	L I A E F F E R E L F F A Y M D G N H G D I L D S I R E T K T I L D G V K D T L P K
UniRef90_J9YZ82	U I S D F Q L K F L E G L R A E H G D I F D E N N T G N F S D E S D Q K I E A K
UniRef90_G8B7R3	K V G F E E E A V A F H L K S D Y S D L L K S Q E K G E L S K E Q L D Q L L H
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UniRef90_K2CHK3	T K A M K A V A G K L R L D L A A Q F R A L L Q A F A Q F F S S D L D P A T K T Q I L L				
UniRef90_W6EBJ2	K A T K Q V A G T M R L D L A A Q Y R E E L L Q A F A Q F F A S D L D E S S R K Q L L				
UniRef90_X2GK9	T K [] M K K L S G G I T R T A L A A Q Y R E E L L Q A F S Q F A S D L D E A T R N Q L L				
UniRef90_I2F4A2	K A M K K I A G S L R I E L L A A Q Y R D L L L S F A Q F A T E E L L D K A T R D Q L L				
UniRef90_R5P3N1	K A [] I K K L A A P I R V E L L A A Q Y R E E L L A A F S Q F G S E L L D A D T K E K L L				
UniRef90_F5RFX8	T K [] I K K L G G G V R L L A A Q Y R E E L L L A A F A Q F A S D L D E A T R K Q L L				
UniRef90_E4UBS8	V K A M K Q V S G A V K G D L L A A Q Y R E E M L S F A F K G F G S D L D V S T Q S F L L				
UniRef90_A7HIX9	K A M K Q V A G S L K L E L L A A Q Y R E E L L L A A F A Q F G S D L D K A T Q E T L L				
UniRef90_B3EL39	K A M K K I V T G T L R L D L A A Q F R E E L L E A F S K F G S D L D K A T K A Q L L				
UniRef90_S8AK58	K A M K K V A S S L K L F F L A A Q Y R E E L L V A A F S Q L G S D L D A A T K Q T L L				
UniRef90_G3EAB2	K A M K Q V A G K L R L D L L A A Q F A E L L E A F S Q F A S D L D Q A T Q N Q L L				
UniRef90_UPI000376B85A	K P M K K V S G R L R L D L L A A Q Y R E E L L E A F A A F A S D L D K A S R A Q L L				
UniRef90_K5Z1Q6	K A M K Q V A G K I K L D L L A A Q Y R E E M A A F A Q F S S D L D P A T Q K L L				
UniRef90_B8KUD2	T K [] M K K L S G G G V R T A L A A Q Y R E E L L L A A F S Q F A S D L D E A T K A Q L L				
UniRef90_V7PX46	K A M K K V A G T L K L D L L A S F R E E L L E A F S Q F G S D L D E G T K K Q L L				
UniRef90_B1Y3S9	T K [] I K G L S G G I R T D L A A Q Y R E E L L L A A F A Q F A S D L D A S T R K Q L L				
UniRef90_F9DRA6	K A M K K V A G T L R L D L A A A F R E E L L E A F S Q F G S D L D P S T R A K L L				
UniRef90_I6Y4V7	V K A M K S V A G S L K I N L A A Q Y R D M Q A F A M F A S D L D A A S R Q Q L L				
UniRef90_K2H051	T K [] I K K L G G G I R T A L A A Q Y R E E L L L A A F S M F A S D L D E A T R A Q L L				
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UniRef90_V5ADD9	T K I I K K L K S L S G G I R T D L A A Q Y R E E L L L A A F A Q F A S D L D E A T R K Q L L				
UniRef90_D3SFE0	T K I I K K L G G G V R L L A A Q Y R E E L L L A A F S Q F A S D L D E L T R K Q L L				
UniRef90_R7GZL9	T K A M K K V A G K M R I E L L A A Q F R E E L L M Q A F A M F A S D L D A T T Q A L L				
UniRef90_A0A010NNH9	K A M K K V S G T L K L D L A A Q Y R D M Q A F A M F A S D L D P A T R Q Q L L				
UniRef90_R5L6E9	T K A M K K V S G T L R L D L A A S Y R S L E E A F S Q L G I G L D K A T L S Q L L				
UniRef90_C1DND5	T K [] I K K L S G G G I R T A L A A Q Y R E E L L L A A F A Q F A S D L D E A T R K Q L L				
UniRef90_UPI00016C0ECE	K A M K Q I V A G P I R V E L L A A Q Y R S L L L A A F A Q F G S D L D T A T Q N A L L				
UniRef90_UPI00037E1769	T K G L K V V S G S L R L E L L A A Q F R E E L L E A F S A F A S D L D D A S K A Q L L				
UniRef90_F2JGW4	K A M K Q V A G P I R T E L L A A Q Y R S L L L A A F A Q F G S D L D T A T K N A L T				
UniRef90_UPI000466B3F0	T K G M K K V S G S L R L E L L A A Q Y R E E L L E A F S A F A S D L D A A S K A Q L L				

	50	60	70	80
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UniRef90_B1R2J2	K G K R L M E V L L	K Q D Q Y Q P L D V E	K Q V M M L Y A T V N D F L S D I P V N	
UniRef90_D5SN99	R G Y R M V E I L L	K Q P Q Y V P F P	V E E E V V S I Y A G T R G Y F D D I P V	
UniRef90_UPI000361F8A6	R G A R L M E I L L	K Q G E G V P F P	T N A E T V I V L F A G T R G Y L D D K L A L R	
UniRef90_UPI000375B77F	R G A R L T E I L L	K Q P Q Y A P L T	P V E E E V V S I Y S G I N G Y I D D D V P V	
UniRef90_C6KIJ6	R G Q R L R E I L L	K Q N Q N S P P I P	T M S Q Q V L S F A A K N G Y L L K N V P V	
UniRef90_B9Y4L4	H G A R L T E I L L	K Q G Q Y S P L P	V A K Q V M I L Y A L T H G F L D S D I P V	
UniRef90_K8E2M1	R G R R T V E I L L	K Q D D L H S P L P	V A K Q V M I L Y A V T K K Y V I D I P D V	
UniRef90_R5DLI8	Q G E R I R E M L	K Q P Q Y K P M P	V E Y Q V V I I I Y A V T K K Y V I D I P D V	
UniRef90_E4NH15	R G A R M V E I L L	K Q G Q Y Q P F P	V E E Q V V S I W A G T T G Q L D E V P V	
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UniRef90_A0A037ZAT9	K G R R L L V E I L L	K Q D Q Y K P I D	V E E Q V V S I Y A G V N D Y L M D I I P V	
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UniRef90_R6C730	F G D R L M E I L L	K Q P L Y R P L P	H E Q V I V I L C I A N H K L M L D V P I	
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UniRef90_I3ZLE3	R G S R L V E I I L	K Q P F Q P L T A	Q V S I V F A G T K G L L D D I A V V	
UniRef90_R4LQ40	R G A R L V E I I L	K Q P Q F S P L S	V T E E V V V I W S G T T G Q L D D I A V V	
UniRef90_D2Q3E1	R G Q R L V E I I L	R Q P Q Y S P Y P	V E E Q V V V S I W A G T T G K F D D I V P V	
UniRef90_D2SER5	R G Q R L V E I I L	K Q G Q Y Q P Y P	V E R E E V V S I W L G T T G K M D K V P V P	
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UniRef90_A0T0F1	R G T R L R E I V L	K Q K Q Y V P M V	A E E Q V C V L Y T G I N G Y L D D D L P V	
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UniRef90_I7L8Q5	R G E R L V E I I L	K Q P E S S P Q T	V D Y Q M V S I F L A N E G V F D D V P V	
UniRef90_D5VAE9	H G V R V T E I I L	M K Q K Q Y A P M S I	A D Q A A V I Y A S N E G Y L S D D V P V	
UniRef90_J1YGE0	H G Q K V T E I I L	M K Q Q Y S P M S I	V A E M G I S I F A I E K G F M K D V D V A	
UniRef90_Q1IIG6	R G Q R L V E I I L	K Q D Q F Q P L P	F S K Q I T I F A G T N G L L D D D I E V	
UniRef90_S3YAM6	R G A R L T E I I L	K Q G Q A N P M P	M E E Q V V S I W A G T R G K L D D D I E V	
UniRef90_Q0FEX3	R G E R L T E I I L	K Q P Q Y S P L T	T T A E Q V V L V I Y A G T K G Y L D D K I V	
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UniRef90_UPI00036BFA8D	H G Q R V T E I I L	M K Q N Q Y S P P	M S I A Q M A V T Y A A N E G F I E D V P V	
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UniRef90_UPI0003764C7D	R G E R L V E V L L	K Q D D Q Y Q P M	M A L W E Q V V M I I F A G V N G Y L D D M P A	
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UniRef90_R7WID4	R G A R L T E I I L	K Q D Q F S P V P	V E D D Q I V S I W L A G E G V Y D S V P	
UniRef90_S6BW63	R G Q R V T E I I L	M K Q P Q Y S P L S	V A E M A I S L F A A N E G Y L D D D I E V	
UniRef90_S2XHB8	R G A R T V E V L L	K Q D D L N K P L	K V E K Q V V I I Y A L T R G H L D D D I P V	
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UniRef90_C6LAJ4	Q G E R I K L E I I L	K Q T Q T Q Y H P M P	V A E Q V V M I I Y A A T R K Y L L D I A V	
UniRef90_Q5B2Z6	R G E H L T E I I L	K Q K Q Y A P M A	V E E Q V V V I Y A G I N G L I D R I V P I	
UniRef90_C8XID3	R G S R L V E I I L	K Q P Q F T P P Y P	V E E Q V V V S I W A G T R G H L D D R I V P	
UniRef90_F8L1Z3	R G E R M V E I I L	K Q D K F N P Y P L	E K Q V V T I Y V G S R G Y L D D D I P V	
UniRef90_D5MLX8	R G A R M V E I V L	K Q G Q Y V P P E	V E V E R Q I L I I Y A G T A G G H L D E L P V	
UniRef90_UPI0002490735	R G A R T V E I V L	K Q P L H S P L S	V I S K V L I I F A L T N G F L D D K I V	
UniRef90_T0R9C1	K G E R L V E I I L	K Q A Q Y S P V D	I D Q T I A F A G T N G L L D D P V	
UniRef90_R5D897	R G A R M T E I I L	K Q G Q Y K P M S	A A D Q V V I I F A G S E G Y T D D D I E L E	
UniRef90_W1TPT2	R G A R L M E I I L	R Q P Q A T P P Y E	V E D Q V C S Y L W A G T S G Y L D D D I E V	
UniRef90_UPI0003634F15	R G E R L V E I I L	K Q P E S S P Q P	V E V E Q V L V S I H L A N E G G F D S V P V	
UniRef90_I3BW14	R G Q R V T E I I L	M K Q A Q F A P M T	V A E M A F S L Y A A N E G Y L D D D V D A K	
UniRef90_K2CHK3	R G K R I T E I I L	K Q P P Y Q P V P	V A E Q V V A S I W A V T N G Y L D D E V E I	
UniRef90_W6EBJ2	R G Q R M V E I I L	K Q P P Y A P I P	V E K Q I L I I F A G A K G Y L D D S I D V K	
UniRef90_X2GWK9	H G E K V T E I I L	K Q K Q Y S P M T	V A E Q S I V L Y A A E R G Y L E D V E L A	
UniRef90_I2F4A2	R G E K L T E I I L	K Q D Q Y V P M P	V E E Q V V V L Y A G T K G Y L D D D I D T S	
UniRef90_R5P3N1	Q G E R I K E M L	K Q D Q Y N T M P	V E E Q V V V I Y A A T K K Y L L D I P V	
UniRef90_F5RFX8	R G R R V T E I I L	M K Q P Q Y S P L S	V A Q M G I S L Y A A N E G Y F D D V E V	
UniRef90_E4UBS8	R G E R L T E I I L	K Q P Q F S P M P	V E K Q V I Q F S G V N G Y L D D K I E V	
UniRef90_A7HIX9	R G E R L V E I I L	K Q G Q Y S P M P	V E E Q V V V I Y A A T Q G W I R Q V P	
UniRef90_B3EL39	R G A R L V E I I L	K Q D Q Y V P M A	V E K Q V A I I F A G T Q G V L D D Q I P V	
UniRef90_S8AK58	R G E R I K L E I I L	K Q K Q Y A P M A	V E N E M V P L Y A G I H G L D D N I I P	
UniRef90_G3EAB2	R G A R L R E I I L	K Q P Q S S P L S	V I E E Q V A S I Y A G T N G Y L D D K I E V	
UniRef90_UPI000376B85A	K G V R L V E I I L	K Q Q N Y A P V S	P A E Q T V S I W I G T E N K L D D D I P V	
UniRef90_K5Z1Q6	R G A R L T E I I L	K Q P Q F K P L S	V A E Q V V I S V F A G T R G Y L D D G V A V	
UniRef90_B8KUD2	H G E R V T E I I L	M K Q K Q Y S P M S	V A E M G L M L Y A A N E G H H L D D V E V	
UniRef90_V7PX46	R G K R A V E I I L	K Q P Q Y S P V A T	E K Q V V I I Y A A N E G H H L D D V E V	
UniRef90_B1Y3S9	R G A R V T E I I L	K Q A Q Y S P Q P	I S L M G A T L Y A L T R G Y T D D N I I P	
UniRef90_F9DRA6	R G Q R T V E I I L	K Q D L N K P L	K V E Y Q V I S L Y A L T R G Y L D D D I P V	
UniRef90_I6Y4V7	R G A R L V E I I L	R Q P Q Y A P Y P	V E E Q V I S V W A G V Q G H F D D V P V	
UniRef90_K2H051	H G Q R A T E I I L	M K Q K Q F S P Q S	V A E M G V V L Y A I N E G F I L K D I E V	
UniRef90_UPI0003654501	R G A R L T E I I L	R Q G Q Y N P Y P I	E E Q V V S I W A G T N G K L D D K I E V	
UniRef90_A6YE89	R G A R L T E I I L	K Q D Q Y S P I P I	E E K Q V V V I Y A A V K G Y L D D K I S V S	
UniRef90_G2D9T8	R G A R V T E I I L	M K Q K Q Y S P L S I	A E M A V S L F A A N E G F I L D D V E T S	
UniRef90_L0DNW2	R G Y R M V E I I L	K Q P Q Y Q P M E A I D	Q V M S L Y A G S E G Y L D D D I P V	
UniRef90_V5ADD9	R G A R V T E I I L	K Q S Q Y S P L P V S L M G A T L F A V N G Y M D D D I P D L		
UniRef90_D3SFE0	R G K R V T E I I L	M K Q G Q Y Q P M S I	G E M A F S L Y A A N E G Y L D D D V E A D	
UniRef90_R7GZL9	H G H V L M E I I L	K Q P L Y H P L P	W Q Q V V I L A A A S E R L L D D V E T A	
UniRef90_A0A010NNH9	R G E R Q T E I I L	K Q A Q Y T P Y P I	E D Q V A S I W T G A Q G H H L D D V E T A	
UniRef90_R5L6E9	R G A K M V E I I L	K Q K Q Y S P M P V	V E E Q I V I L F A S T K G F L D D N V E I	
UniRef90_C1DND5	H G Q R V T E I I L	M K Q K Q Y A P M S I	A E M S V S L Y A A E R G F L Q D D V P V	
UniRef90_UPI00016C0ECE	Q G E R I M E V L	K Q G Q Y E P M P V	V A K Q V V I I L Y A A T R K Y L M D V P L S	
UniRef90_UPI00037E1769	R G A R W V E I I L	K Q D Q F S P V A	V E D Q I V S I F A A T R K F L M D I P L S	
UniRef90_F2JGW4	Q G E R I T E I I L	K Q P Q Y S P L P E	V E S K Q V I V I L F A A T R K F L M D I P L S	
UniRef90_UPI000466B3F0	R G V R L V E I I L	M M K Q D Q Y R P V A	V E D Q I V T I Y L A G E G H F D S V P V	

	90	100	110	120	
UniRef90_K9AM67	D T R F E E E I T E W A K V N A S D L L S E I K D T G K P D A D K F D K				
UniRef90_D0WGA1	D V R F R T E L L E Y L R A K H A D V L A Q I H A D A K F T D T T E G A L K E				
UniRef90_B1R2J2	D R K F E R F E L F M D T H R E V G K A I G T E K V L T D D K S N L E A				
UniRef90_D5SN99	Q V A E A E K Q L L E Y V R L E H A A F R E N L I S S S K T L D D A Q E A Q L K T				
UniRef90_UPI000361F8A6	D V A R F E T E F L A H M R R R N Q E T V L K D I V E S K K L S D D G A K A I D D				
UniRef90_UPI000375B77F	D V G R F E K G L L S Y L R T Q K K D L L D D R T D R A V K G E L E E K I R A E				
UniRef90_C6KIJ6	Q V K Q F A V E L R D Y L R V S K P A Y G E A V R S T K K F E A E A E N M V K E				
UniRef90_B9Y4L4	Q I K G F E E G M H K F F A Q D K A D L I A R I E A E K K L D A D L E T A L K Q				
UniRef90_K8E2M1	E I L R F E G E F F D Y L D S Q R P E I I L K T I V E T K D L P D S E E L D A				
UniRef90_R5DLI8	R V I D F Q D G L F E F I D T K Y P Q I P E K I K E T K V L D E E T E K E L I S				
UniRef90_E4NH15	D I R R F E R E F L D N V R L E H K G L A G I V E T K G L F T E E A E A L L R E				
UniRef90_A6BM08	E V K K F L D Q R E Y Y L K K K K P Q F G E I R T T K V L F T E E A E A L L R E				
UniRef90_A0A037ZAT9	K I G S F E E D E F L S Y M D H N R D I E R L L E K G E L S G E I K E K L N A				
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 UniRef90_S5DIW6
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1 K A I K Q V S G T L R L D L A Q Y R E L Q A F Q F A S D L D E S S R K Q I E
 10 K Q V S G T L R L D L A Q Y R E L Q A F Q F A S D L D P A T R A Q K L L D D
 20 K A M K K V A G T L R L D L A Q Y R E L Q A F Q F G S D L D A A T K A K L N K
 30 K A M K K V S G T L R L D L A Q Y R S L E A F A F M F A S D L D A A S R A Q K L
 40 K A M K K V A G S L R L D L A Q Y R E L E A F A Q M G T E L L D K S T Q Q K L D E
 50 K A M K S V A G Q L R L D L A Q Y R D L A A F A K L A S D L D K G T Q M Q L D M
 60 K A M K Q V S G S L R L D L A Q Y A E M Q A F A Q F G S D L D A A T K A Q L L D A
 70 K A M K K L S G G V R T A L A Q Y R E L A A F S Q F A S D L D D A T K A Q L L D A
 80 K A M R K V A G S L R L D L A Q Y R E L E A F A A F A S D L D A A S R A Q L L D A
 90 K A M K K A A G S V R I R I D L A Q F R E M E V F T Q F S S D L D E T T K K Q L L T
 100 K A M K K V S G T L R L D L A Q Y R E L I Q A F S Q F G S D L D S S T Q Q L L T
 110 K A M K Q V S G S L R L D L A Q Y R E L V A A F A Q F G S D L D A A T Q Y Q L L N
 120 K A M R D V A G R L R L D L A Q Y R E L E S F A T F A S D L D K A T R D Q L L N
 130 K G M R S V A G S L R L D L A Q Y R E L E A F A A F A S D L D A A S K A Q L L E E
 140 K A M K K V S G T L R L D L A S Y R S M Q A F A M F A S D L D P A S R Q Q L L T Q
 150 K A M K K A A G S I R I R I D L A Q F R E M E V F T Q F A S D L D N A T K E Q L L Q
 160 K A M K K V S G N L R L D L A A Y R D L E A F A Q F G S D L D K A T Q A K L L Q N E
 170 K A M K Q V A G K L R L D L A Q Y A E L E A F S Q F A S D L D D A S K A Q L L Q N E
 180 K G M K V S G N L R L D L A A Y R D L E A F A Q F G S D L D Q A T Q N Q L L A S S
 190 K A M K K V A G T L R L D L A Q Y R E L E A F T Q F G S D L D A A T Q A K L L A S S
 200 K A M K Q V A G S L R L D L A S Y R E L V A A F A Q F G S D L D A S T K Q T L L A S S
 210 K A M K K V S G G I R I R I D L A Q Y R E L E A F S Q F G S E L D K A T Q S K L L A S S
 220 K I M K K L S G G I R T A L A Q Y R E L A A F S Q F A S D L D E A T K A Q L L A S S
 230 K A M K Q V A G K L R L D L E M A Q F R E L A A F A Q F A S D L D K T T R D Q I L E E S A
 240 K G T K Q V A G T L R L D L A Q Y R E L Q A F S Q F A S D L D E V S R K Q L L A S S
 250 K A T K Q V G S T L R L D L A Q Y R E L A A F A Q F G S D L D P L T Q K Q L L A S S
 260 K A M K D V A G T L R L D L S Q Y R E L E A F A Q F G S D L D E A T Q Q K L L A S S
 270 K A M K Q V A G S L R L D L Y L A Q Y R E L V A A F A Q F G S D L D A S T K Q T L L A S S
 280 K G M K V S G N L R L D L A A Y R D L E A F A A F A S D L D A A S K K Q L L A S S
 290 K I I K K L S G G I R T A L A A Y R E L A A F A Q F S S D L D E A T K K Q L L A S S
 300 T N S M K S V A G P V K L E L A Q Y R E L M A A F A Q F G S D L D A A T Q K L L A S S
 310 K A M K Q V A G S M K L L D L A Q Y R E L M A A F A Q F A S D L D M D A S T R Q Q L L N E
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		50	60	70	80
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UniRef90UPI000174658E	R G Q R V L E L F K Q G Q Y N P K S L E I M A S I L		W A M Q N G G F F D D P V D		
UniRef90_V7HYS3	R G R R T V E V L K Q P L H K P L A V E K Q V V I L		Y A L T H G F L D D A V A L E		
UniRef90_C5C1U6	R G A A L T E L L K Q P Q Y S P F A V E D Q V A M I		W S G T N G Y L D D V E T A		
UniRef90UPI00029AC17F	R G Y R M V E L L K Q P Q F Q P L A M T D Q V M S I		Y A G S K G Y F D D V P V		
UniRef90UPI00036BE7A	R G Q R V T E L M K Q P Q Y S P M S T A E I G I A L		Y A A N N G Y L D D V A N		
UniRef90_E6PGD2	R G E K L T E L L K Q A Q Y Q P Q P V E E Q V V L L		Y G A T N G F A N D V P T P		
UniRef90_R5QB15	H G A K V T E V L K Q A Q Y Q S P R S V P T Q V I T L		F A L K Y G Y T K Q I A V E		
UniRef90_K6G6A7	H G K A L M E L L K Q K Q Y A P L S I P C L Q I C		H M A N N G V F D D I P T D		
UniRef90UPI000401C21F	R G T L T E L L K Q K Q Y A P L S I P L Q I C V I		Y G G V N G L L D K L D P K		
UniRef90_R5KUJ6	R G A R L V E L L K Q K P Q G N P F P V E Q V V V I		Y A A T K G Y L D D S L K M T		
UniRef90_Q4MFZ1	R G S R L T E L L K Q Q F V P M P V E Q V V V I		Y A V T H N H A D D V P V		
UniRef90_Q0P3H4	R G Q R L T E L L K Q P Q V P L D L Q V M L		Y L A G E G F Y D T V P P V		
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UniRef90_R6EFQ1	R G V R T V E V L K Q Q L N K P L A V E K Q V V I L		Y A L T K G F L D E I P V A		
UniRef90_K6DPY5	H G R K V M E I M K Q P Q N S P R D M S D Q V I V L		W L A G E G E F D D V P V		
UniRef90_B1FY5Y	H G E R V T E L M K Q T Q Y S P L S V A E M G I M V		F A A D T N G F L D K I A V E		
UniRef90_H8ZXH3	R G E R L V E L L K Q T P H Y S P L S V E K Q I A I		K P G		
UniRef90_V6QDH2	R G S R L R E L L K Q A Q S S P L P L V S D Q V A T I		Y T G V K G F L D D G I P A N		
UniRef90_F9WYG2	R G R R R T V E L L K Q P H Q P L S M A Q V V I L		F S G T K G Y L D D P L E I D		
UniRef90_H3NPQ2	R G E R L T E L L K Q K Q Y Q P M P V S E M V P L I		Y A V T N G Y M D D D P V D		
UniRef90UPI00036AAEC9	H G R K V V M E I M K Q P Q N S P R D M S D Q V I V L		Y A G V N G H L D D K I P V N		
UniRef90_J9Z8A4	H G E R V T E L M K Q T Q Y S P L S V A E M G I M V		Y A T T N R M I D D E L E		
UniRef90_F8KU97	R G L R L T E I L K Q P P H Y S P L S V E K Q I A I		F A A D T K G F L D K I A V E		
UniRef90_E6QHR6	R G Q R M V E I V L K Q P P Y P S P L P I E K Q I V I I		Y T G V K G F L D D G I P A N		
UniRef90_D9QTY3	R G Q R L T E L L K Q P Q F Q P L T W Q Q Q V V V L		F S G T K G Y L D D P L E I D		
UniRef90_Q6BRW3	R G D R I L E V L L K Q P P E N N P M V E N V Q V L S I		Y A V T N G Y M D D D P V D		
UniRef90_C2GJ59	R G E R L T N I L K Q K Q G S P L A E E Q V P L I		W L A S N G H L D D V P V		
UniRef90_Q87KA6	H G Q K V T E L M K Q K Q Y A P M S V F D Q A L V I		F A A E R G Y L D D D V E L N		
UniRef90_P72245	R G A R L T E L M K Q P Q Y S P L T N A E I V A V I		F A G T N G F L D D D A V P V K		
UniRef90_B3QWX7	R G G R L V E L L K Q Q Y V P M P V S E Q A L V L		F V G T Q G I L T P A N S I		
UniRef90_D0KX17	R G K R V T E I M K Q K Q F K P L S V T E M A L S I		T A A N E G Y L D D V P V		
UniRef90_A4ZHD7	R G V R L T E M L K Q G L N I P L S V E D Q I V I I		Y L G V R G F L D D K I A V D		
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UniRef90_G6A0Q3	R G A R L T E L L K Q P Q Y S P L M V E E Q V V A V I		F A G V V K G H L D D K V D P S		
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UniRef90_U5T5K9	R G E R A M E V L L K Q G Q Y A P L S V A F M A L S I		F A L N E G Y L D D D K I D P K		
UniRef90_L1LDN7	R G T L L T E L L K Q K Q Y A P L P I P L Q V C I I		Y G G V N G L L D D K I D P K		
UniRef90_K2C0M3	R G K R L E E L L K Q K Q F E P P L P V E Y Q V Q I V I		Y A A V T K T G L T D D V A V A		
UniRef90UPI0004212BC1	R G A R T V E I L L K Q G Q L H K P K V E K Q V T S L		Y A A I N D K L N D I A V K		
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UniRef90_B2UNX6	R G Q R R I V E L L K Q P Q Y T P Y P V E E Q T V T S I		W A G T K G F M D D D V P V E		
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UniRef90_A6W3T0	H G K Q V T E I M K Q P Q F S P S M V A D M G V S I		Y S G I N G Y Y D D D P T E		
UniRef90_U5DLQ8	R G Q R L R E M L K Q P Q Y S P L T V Y E Q I A V V		Y A A A D A G Y L D D D V E V N		
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UniRef90_R4YSV7	F G Q R R V T E I M K Q K Q Y A P M S T G E M G L S I		F A A T E G F L D D D V E V N		
UniRef90_R6U711	Q G E R R I V E V L K Q G K T S P L D V E K Q V V I I		Y A V V V N N Y L D D K N I R V E		
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G	V E S F R R T F
A	L E E W R T R W Q
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F	C D T Y T Q Q F K A
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S	T S E F K R G F Q
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V	L N E F K E L F
L	I N E F K K T F
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L	L S N F Q N I F Q
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A	I E D F K A M F
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L	T D D F K A T
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V	I E T F K A
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G	L Q
L	I G S Y A K S F
I	V E N F K Q N
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A	Q E T K K E Y L A
V	L D D F K S T
V	E N F I S S
M	K D F K A T
M	I T S F K K N F I A
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A	F D T F K S T
A	E K F K A T
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A	V K Q F K S G
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A	N E D F A R G F Q
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A	V K S F K K T
V	A K E Y K S
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V	V E D F K T N
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A	S D C K Q A F L S
A	K E F A E T F Q
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A	R D F M K N
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UniRef90_M5GCC4	R G S R L T E L L K Q G Q Y Q P L A T E V Q V P I Y A A V G N G L L D N V P V E			
UniRef90_K1ZIJ1	R G Q R I T E V M K Q K Q Y Q P L S V A E M A I I F A A D Q G Y L D S V A L N			
UniRef90_UPI0003B58DD33	R G E R L V E I L K Q D E F S P R S V V G E Q V G I I Y V A I E G M L D E E V P V E			
UniRef90_UPI00021954A1	R G K R L T V E V L L K Q P L H K P M A V Q H Q V F V L Y A L T H G Y L D D D V D V E			
UniRef90_C6XFDF7	K G E R L T E L L K Q P Q F S P L A M E E Q V V M I F A G I S S G C L D E V A V S E			
UniRef90_F0RHV5	K G K R N V E I L K Q A Q N D P Y T V I E D Q V A V I Y A G S K N L L K N D V P V E			
UniRef90_U4TFH9	R G Q R M M E L L M K Q K Q Y S P L S I A E M G L A L Y A A E K G H R D D V A V N			
UniRef90_C4ZH21	H G K A L M E L L K Q P L C H P L S L H E Q V M T L I M A N N G V F D T I E T K			
UniRef90_G9ZC47	R G Q R V T E L M K Q K Q F S P M S V A E M S V S I F A A E N G F L D D V P V E			
UniRef90_M7N75	R G R A N Q E I L K Q A Q Y S P V P V E E Q V A L I F A S T K G L L D K V P V V E			
UniRef90_Q79VG7	R G Q R L V V Q L L I Q S E N A P Q A V E Y Q I I S I W L A G E G A F D N V P V E			
UniRef90_R6P238	R G Q Q K L T E V L L K Q P Q Y S P L S V A K Q V S I L F A A N E G I L D D D I D N K			
UniRef90_S6HU21	H G Q S V T E L M K Q K Q Y S P M T V A E M G L S L F A A N E G F L K E I P I S			
UniRef90_UPI00036A975B	R G Q R T V E L L K Q D L N K P I R V D K Q V M I L Y A L T R G F L D D I A I V Q			
UniRef90_R7G834	H G E R L T R L L I Q N Q Y D P M S A S H Q V L S L F A A K N K Y L K N V K V			
UniRef90_H2BUD7	R G K R N V E I L K Q A E N D P Y A V E D Q V A L I F A G A K N L L R S V P V E			
UniRef90_U2RE40	R G A K I M E V L L K Q S Q Y P P Y R V E E Q V V S F F C V T N G Y F D D I P T E			
UniRef90_M5C220	R G A R L T E L L K Q S Q F S P M S F E K Q T V S I F A G T H G Y L D E I P V V S E			
UniRef90_UPI0000510046	R G A R L T E L L K Q K Q F S P R A M E Q E V V V S I W A G T H G K L D D D I P V V S K			
UniRef90_D2RCY3	R G A R L T E L L K Q K Q F S P R A M E Q E V V V S I W A G T H G K L D D D I P V V S K			
UniRef90_Q9TC93	R G Q R L T E L L K Q G L Y P I V P E L Q V V I I Y S A T R G Y L D R I P V V S E			
UniRef90_X5EB05	R G E R L V E I L K Q R E T E P Q A V E D Q M V S I F L A G E G E F D S V A V E			
UniRef90_R7HXC5	H G K I L M E L L K Q P L S K P L S L H Q Q V I T I I A A N K L L L D I D P K			
UniRef90_Q5FF66	R G R R M M E L L K Q K Q Y S P L S V G E Q V A V I F A G T S G Y L D D D I S V N			
UniRef90_I8AE03	R G A R T V E I L K Q G L H K P L R V E L Q V A S L F A L T R G Y I D D V A V E			
UniRef90_K4IDZ0	K G K R N V E I L K Q S E A S P F A V E D Q I A I V F A G T K N L M R D V P V E			
UniRef90_W2C1P9	H G A V L M E I L K Q G Q Y R P L D V E H Q I I I I Y V A A A G F L D D D I D V			
UniRef90_Q04G22	R G R R T V E V L L N Q P L H Q P M P V E H Q V I I V L Y A L T H G Y L D D D I D V			
UniRef90_G4L965	R G R R T V E V L L K Q G L H E P L E M S K Q V L L I Y S L T H G F L D D D I D V			
UniRef90_U5YGI0	R G A R L T E V L L K Q G Q Y A P M S A E M G L V I F A V N E G Y L N D D V E			
UniRef90_Q1KT15	R G E R V M E I L K Q D E N Q P L S V A I Q V V S I Y L V T K G Y L D D D I D V			
UniRef90_B7VSU5	H G E R V T E L L M K Q K Q Y S P M S V A E Q A T V I Y A A E K G Y L A D D V E L H			
UniRef90_E1X1L1	H G E R V L V E L L K Q G Q Y V P M E V V D Q V I G I F A A T K G L L D S V P V D A S T			
UniRef90_M5DWY1	H G R A V T E L M K Q G Q Y A P M S A E M G L V I F A V N E G Y L N D D V E			
UniRef90_A4BNZ6	H G Q R V T E L L M K Q K Q Y S P M S V A A M A V S I F A V D R G Y L E D D V D L S T			
UniRef90_R6NL49	H G K C L M E L L K Q P L C H P R P L A S H E Q V I T L W V A T H K L L T D I P V V T			
UniRef90_R5VPG5	H G K G L M E L L K Q P L C N P L S M A E E V I I I I V A T N K V F L P V E V S H			
UniRef90_M2XY08	R G Q R L T E M L K Q S Q N S P I P V E E Q I A I I Y S G I N G Y L D E I P L H			
UniRef90_M2Q637	H G E K V R E V L L K Q A Q Y S P R L V T E Q V I T L F A L K Y G F T K T I K T N			
UniRef90_L0GXF9	R G Q R V T E L L M K Q R Q Y S P M S V G Q M A V S I F A V N E G Y L D D D V D V			
UniRef90_M0QQL0	R G A R W V E I L L K Q N Q F S P V P V E D Q I V V S I Y L C G D G H Y D S V P V S E			
UniRef90_R7A1W1	Y G S G L M E L L K Q P L E H P L S M E E Q V V I I Y A A T S H L L V D I P K E			
UniRef90_U2FRP0	H G E R V T K L M I L K Q K Q Y N P L S V A L T A S S L F A A E E G Y L D D D V D A D			
UniRef90_H2G0W7	H G Q K V T E L L M K Q K Q Y R P M S V A E Q A L S L F A A E E G Y L D D D V E			
UniRef90_R6KJY3	H G G C L M E L L K Q P L C H P N P L S L H Q Q V I T L W T A T H K K L V H V D K K			
UniRef90_UPI00034CA214	R G Q R L T E L L K Q A Q Y T P L S L A E Q V S L V Y A G V N G L L D E I P L D			
UniRef90_R7FV22	H G S C L T E L L K Q P L G R P L S L H E Q V I T L C V A T N K G L L M L D I D T K			
UniRef90_F4C6G9	K G V R N V E I L K Q G Q F A P V P E K Q V A I I Y A G V K G L F R S V P V N			
UniRef90_K1XZ77	R G K R M V E I L K Q D V Y S P V P F Q K Q T C I I Y A G T N G Y L D S S V A V G			
UniRef90_Q180W8	Q G E R I V E I L K Q G E H Q P I K V E N Q V M I I Y A V I N N H L E D I P V I			
UniRef90_R5A9A5	H G N R L V E I L K Q P L Y H P M A V S R Q V V V L Y A A T Q K L L A D D V P V E			
UniRef90_E8R028	R G Y R M V E I L K Q G A Y S P L H V A D Q V A L I F V A S E G L L D E I P I K			

	90	100	110	120
UniRef90_B0SDA3	K V R E F E A F L L K T M R E Q H P E I L E E	R T A K E V K Q E A A L Q K		
UniRef90_UPI000237BCAB	K V K D F E R E F I L E N L Q [REDACTED] S D V L K N K	L S G K F D D E I T G K I L E Q		
UniRef90_B8C6C6	H V Q A F E G A F L A H M K G A H A A V L K E	V D S G V L S P E I V E K I L H		
UniRef90_G1WKB2	D V V P F R D G L I Q Y L E G A Y G K V L A E	G G G K I D D A L S M K K L E Q		
UniRef90_R6JQS5	K I K G F R A D M L E F F H S Q H S E I V N T	E S T K D L T D E T K E A I I Q A		
UniRef90_W2BU22	D V L R F E K Q F W D Y L E H D T D I L K K E	D E T G E L S A D I L E A E L E S S		
UniRef90_R5MM17	R V K P F Q T E L L R Y F D S S Y P E I G E E	E N T G V L S D E L L E R E I V		
UniRef90_Q37628	D I E K Y E Q T L L K E I D P A I I L S T K	K D K K A L S D E L L L G T L K T K		
UniRef90_E0E3D7	D I K R F E E A E L Y S Y M D S V H P E I I K K	L N A E D F N E E L D A A E E V F E		
UniRef90_Q2S432	D I E D F E E E Y L E R L R H E D V L T E	R E T E E L T D A A E E V F E		
UniRef90_Q21DK6	K I G D F E S A L L S Y M N S S H A D L M N T	M N T M G G S Y S D E I A G Q L K E S S		
UniRef90_R7GJR7	K V Q E Y M D G L V E K F A V A H S D L L D E	R E K K V V L S D E L L T K D L A D D S E Q K K L T K		
UniRef90_C7TRQ13	K A L S V E K Q M H G F I K Q K Y A D L I S K	E T T K D L D A D S E Q K K L T K		
UniRef90_A5EXJ7	D I M A Y E T A L L S F M R E N H A D L M N T	I N T T G K Y D E A V I Q T G L V K E K		
UniRef90_B6BVQ8	K I L T C E S D L L H G F I A S K H K V M E S	L N D L S E A D V I K D E K D L V		
UniRef90_B1N6Q2	D V R R F E S E L L H A L H V K S R H G A M I	A G I R Q D P K A D V I P K D L A		
UniRef90_S7VZZ0	D I L R F E S E L L H D H A R A N T K I L D T	L R E K N A L D D Q L I A D M D A		
UniRef90_JOVAM8	E V R T F E K D F L R T M R A Q H Q D T L N A	L A G K L D D D E T T G V I K Q		
UniRef90_L0B6B8	R I L V F E K L L K D F L K T N F A T L I N Q	E K S S D L S K N D E D A L L T E R E		
UniRef90_D2QUJ8	K V K E F E T E F G M V L S A Q H P T V L N D	L G K L T D E A T A T L K		
UniRef90_G3XH49	Q V R N F I G E L R S Y L L K Y K P Q F G E	I R S T G T F T E Q A E A L L K		
UniRef90_R5EHV5	K V L P F E K A L L A F A H S K Y D S	L L K D L D A K P D Y S D E V V A K I L T E		
UniRef90_B6GDA8	D I V P F R D G L V D Y L K G A H R K L L E E	F R T A K M S D E V A Q Q L K T		
UniRef90_G2J8E6	E E V L D F E K E L L R E H L S M R H A A L I A R	E A R A K E L S K D D E A T A T L H		
UniRef90_Q07VU2	E I G R F E E A S L L S Y M N S S Q H T D	L M N T I N A T G D Y N A D I E G E L K A		
UniRef90_R5UCP0	K I K Q F Q A D L L R H F D S D Y P E I L G Q E	E E K K V L I T E E L I I E K I K V E		
UniRef90_UPI00046E5669	K I L S F E G A L L A Y F N S E K K A K L V D	T N E S G D Y N D D I A A Q L K T		
UniRef90_C3PFR3	D V R R F E K E L L H D H L N S A T P Q V F E Q	I Q G G T A L T D E S K D A L V		
UniRef90_U5YF71	Y I T Q Y E Q E L L K S I D T N L S K I	I Q E K V L S D Q L N N Q L A D		
UniRef90_E2IGZ6	Q V K R F L V Q L R E Y V T T N K P Q F G E	T R S T K V S T E Q A E T L S K E		
UniRef90_UP100037A02F1	D V L K F E R E F L D Y L R T S E A G L L G A	R E T L K F E E D D T E Q Q L S A		
UniRef90_R2SRF8	K I L E F F Q D D L F F E Q I L E N N H N E L	F E T R T T K D L P A E A D L D A		
UniRef90_E8V838	Q I V N F E D G F H A Y M A T N G Q Q G L L D A	Q D E I K T Q L T A		
UniRef90_D0EVQ7	Q V R S F V T G L R Q Y L S T N K Y T D	M S T N T F S E E A E V L L K		
UniRef90_UP100040D6C0A	D V R R F E A E L L E E Y L H D N A P Q V Y Q Q	D G G K M F D S E S I A T I V D		
UniRef90_A5CD07	K V K E F E N N M L E Y F R I H P D I M N E	I N T K I T K I D E E L I S S K Q S I V D		
UniRef90_R5TCW0	D I P E F E K Q L F K F L E G A Y P N L G K S M I E H N D I T K E D E E L L H	E H Q		
UniRef90_D6GTQ8	N L R D F V I N D L M A H L E Q S Q A A L I K K	Q E T G Q L S D E D K E A T I I A		
UniRef90_R5VLJ9	K V A D Y E V R L C E R H L A T T H K G L T E K	R V Q R E F T P E I E E Q L K S		
UniRef90_K2AS30	K I T Q W E T F E R E H L A T S Q G P B L L E E	A K G A A S D E E L E A K I K S		
UniRef90_M5GCC4	K I L A E F F E H E L L A D L R N N H G E L M E K	N Q T G D Y N D E I V K Q F R A S		
UniRef90_K1ZIJ1	K I I T A F E D E Y L E R R L R Q H G D L L D E E	S S E G T W T D E M K E T F A S		
UniRef90_UP10003B58DD3	D I Q H F Q D E F I A Y F N A S Q K D L I V	V T T K Q L P D T D K M D A		
UniRef90_UP100021954A1	K I K V F E E T N F L S H M R V S S Q D I D L E D	R K Q K V L L D I I R S K L I		
UniRef90_C6XFDF7	Q V R K F E E A E Y V E F L N A K H R D V L D T	K A G K L T D E V T D T L L V		
UniRef90_F0RHV5	K V V D F E A A L L L A Y F N D Q E K D L I A K	K N D T G A Y G D D I I E A E L L K M R		
UniRef90_U4TFH9	E V K K Y Q Q G D I L L S Y M D L S Y P E I G Q K	E E N R A I D E E L V N K I M D		
UniRef90_C4ZH21	K I Q A Y E Q A L L Q Y M H S D H Q V L D K	E N E R G V Y D E I R Q G F G T		
UniRef90_G9ZC47	H V K E F E K E Y Y L S L L R A Q H R A T L D K	R G G A Y S D E I T D T L L T Q		
UniRef90_M7NJ75	D V R R F E E S E L L H E Y L G S N A A Q V Y E Q	A G G A Q L S S D E S K E T T L L K		
UniRef90_Q79VG7	N I Q K F K K E W F E Y F D A N M S D L A Q K	N D G G A L S D E D K K A L K L E		
UniRef90_R6P238	K I G D F E A A L I S F F N S D Y A D V M D K	I N V S G A Y N D E I A T F K A		
UniRef90_S6HU21	D I L R F E E E L Y S W L D H N R A D L L E S	R T T K Q L P A D E D M A		
UniRef90_UP100036A975B	D V A L Y E E K E M L K Y M E R E H H E I I A Q	D E K Q A L D E A L S E S I I K Q		
UniRef90_R7G834	K V K D F E R E D Y L E Y L N V K H R D V L D S	K S G K W T D E I I T E T E L L I T T		
UniRef90_H2BUD7	K V K A F E E H D L I G S L H A S S Q K A L L A E	K K E E K V T T A E T E L I K R		
UniRef90_U2RE40	Q I V V R W E G E F R Q H L L A S S Q K A L L D Q	S K G K T V T A E T E L I K R		
UniRef90_M5C220	D V L K F E E T E L H D H I E R K T G I F T I	R E T L K L D D D T E S A K L L D A		
UniRef90_UP10000510046	D V L K F E E S E L L D Y L D K G T D I L Q V	R D T E D F T K E T E A K L L D A		
UniRef90_D2RCY3	D V L K F E E T E L H D H I E R K T G I F T I	R D T E D F T K E T E A K L L D A		
UniRef90_Q9TC93	D V L K F E E S E L L D Y L D K G T D I L Q V	R D T E D F T K E T E A K L L D A		
UniRef90_X5EB05	S I A S F E Q Q G L V K E V P P A I L E T	R K E R V L S P S T D A K L L D A		
UniRef90_R4QG22	D I R R F E E A E F L W E Y L H A N N A A V Y E Q	N G G T P L D E S K D A K L L V		
UniRef90_R7HXC5	E V K A Y V N D M L N Y F E A K H A D I V E K	D T E K V L T D E L I Q Q I		
UniRef90_Q5FF66	D I S K F E E R L L S E L N S N Y P D I L S S	S N N N N F T D D D I R S L L S K		
UniRef90_I8AE03	D V T R F E E E L H A H M E V N A K D V L N Q	K T T G K L P E G E S E D L D		
UniRef90_K4IDZ0	K I K F E E K D Y L S F L N A K Y R N V D Q L	K A G K L T D E I T D A L T S K		
UniRef90_W2C1P9	D L S R F E D E F C H Y V D D H Y P E V R R E	S T T G D F S D N C R E L I N S K		
UniRef90_R04G22	D I Q R F E Q K E L I D F V D K S Y K K I F A A	K K T G N L P D E E K D I N S E		
UniRef90_G4L965	Q L L N L F E H E L F D Y F E A N H Q D V L D K	K Q T E D L P A D E E K D I N S E		
UniRef90_U5YG10	E I L P F E E T A L L K E I D P S I F T T	R D E K V L S P A T S T K L L S K		
UniRef90_Q1KT15	R V K D F E E K F H A Y L I E E C P K L P Q D	I K S G K L T E S I D K D L L S K		
UniRef90_B7VSU5	K V A R F E E E L I A Y A K G Q N P E F D T	N A N G D Y N D E I D G A L L A K		
UniRef90_E1X1L1	K I Q E C E G L I E L M N S K H A D M V K E	S T T G D F S D N C R E L I N S K		
UniRef90_M5DWY1	K I L A F E A A L L S F A N S E Y A S L M A S	G E K G N Y N D E I A A G K L L K A		
UniRef90_A4BNZ6	K V G D F E A A L Q A Y M D S E Q T E L M R E	G E K G N Y N D E I A A G K L L K A		
UniRef90_R6NL49	E L K T F Q M D M L E Y F E Q K Y P E I K E E	L D K K V L S D E L L I S S K L		
UniRef90_R5VP5G	E I K K K K L E M L E F F H S A H K D V L D E	E E K Q V L T D E L K D K I V V A		
UniRef90_M2XY08	K V S S F S I K A L R E Y I V N S K S K F I E	K L N K Q V L S D E L L I S S K L		
UniRef90_M2Q637	K I S E F M T G I T E N V K M T H P E Y L T E	E E K K V L S D E L L I S S K L		
UniRef90_L0GXF9	K V V D F E S A L L Q S Y M K S S H A A L L E	D S T G N Y N E E I Q Q G L L H A		
UniRef90_M0QQL0	K V R N F E E Q L L S H L H N A S G V Y E S I	A G G A V L T T D D Q A E A L V A		
UniRef90_R7A1W1	K L K T F Q G G L Y E Y M R S S Y P Q V G D A	R T T K T L S E D I I K Q R E I A K		
UniRef90_U2FRP0	K V T T D F E A A L H Q Y M E S E Q K E L V D K	I N D T G D Y G D E I I K Q R E I A K		
UniRef90_H2G0W7	F I T T F E D A L L A Y A N S E H A A L L M A E	I N E K A D Y N K D E I V V A Q L T		
UniRef90_R6KYJ3	A V K K Y Q M D M L E Y F D N V Y P E I G K E	I D E S K V L S D E L L I S S K L		
UniRef90_UP100034CA214	K V T D F T K L V R N Y L K T S G V Q F V E T	V Q S T K K L E A A E E A T K L		
UniRef90_R7FV22	K V K F E F Q M D M L A F F D R E H K E I G K A	L E D K V L D L E K Q E Q I L		
UniRef90_F4C6G9	K V K F E F E S N Y L Q L E L R H P E V L K D L	K A G K F T D D I T A V L D		
UniRef90_K1XZ77	D I K K F E E K D L Y T A L L E E E G T I L K T	V L E S K D L N D E T K A S L L N E		
UniRef90_Q180W8	N I A R F E S E L L Y A F V D N N Y P E I S R K	I L R E Q K M T P E V A S G L K A		
UniRef90_R5A9A5	K V R E V A W G L A D E M T E R Y P D V M K S	D T G E L S T Q G E E A I L R K A		
UniRef90_E8R028	Q V S R L E E K E F L A F L R E Q K S E V R D	L L I R E Q K M T P E V A S G L K A		

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UniRef90_UPI000237BCAB	V A R D V A A Q F K
UniRef90_B8C6C6	I A E D F T N G F
UniRef90_G1WKB2	A I S D Y K A E F L A
UniRef90_R6JQS5	A A N E F K S
UniRef90_W2BU22	N I E S F Q Q T Y
UniRef90_R5MM17	A A K Q Y A E T
UniRef90_Q37628	F F D G F T D R F
UniRef90_E0E3D7	A I E E F K V K F K
UniRef90_Q2S432	V A A D
UniRef90_Q21DK6	A L D T F K A T
UniRef90_R7GJR7	A V K A Y T T Q F E
UniRef90_C7RQI3	A I E E F K A T
UniRef90_A5EXJ7	A L D A F V E
UniRef90_B6BVQ8	A I E D F K S S
UniRef90_B1N6Q2	I V T A F K T Q F K
UniRef90_S7VZZ0	A V D E F K L G F Q
UniRef90_J0VAM8	V A R E L S A R Y K
UniRef90_L0B6B8	A V K E F K Q N
UniRef90_D2QUJ8	V A A D L S A N Y
UniRef90_G3XH49	A I Q E N T E L F L
UniRef90_R5EHV5	V V K D F K S T
UniRef90_B6GDA8	A I R D Y K S Q F L A
UniRef90_G2J8E6	A I A E F K Q
UniRef90_Q07VU2	G M D K F L E T
UniRef90_R5UCP0	T A K E F K K S
UniRef90_UPI00046E5669	G L D T F K A T
UniRef90_C3PFR3	A A K D F T P S F
UniRef90_U5YF71	F C Q K F T Q T F V S
UniRef90_E2IGZ6	A I K E S T E L F L
UniRef90_UPI00037A02F1	A Y D A F L P Q F E
UniRef90_R2SRF8	A I K E A K D L F M S
UniRef90_E8V838	K I N E F K T T F K
UniRef90_D0EVQ7	A L E T Y L K E F
UniRef90_UPI00040D6C0A	M T G Q F K K S F Q
UniRef90_A5CD07	I L Q E F V K S
UniRef90_R5TCW0	G V K E F K Q N
UniRef90_D6GTQ8	A L S E F V E E F K
UniRef90_R5VLJ9	E A E A Y K K Q V K
UniRef90_K2AS30	L L N S
UniRef90_M5GCC4	V V T D H V S A F
UniRef90_K1ZIJ1	I I E A L K K N
UniRef90_UPI0003B58DD3	V A E D
UniRef90_UPI00021954A1	A V K N F K D S Y
UniRef90_C6XFD7	E I K V F L E D F N
UniRef90_F0RHV5	V C K D L S A K Y K A
UniRef90_U4TFH9	V V T Q F K A T
UniRef90_C4ZH21	A V K E Y K
UniRef90_G9ZC47	A L N A F K
UniRef90_M7NJ75	V A R E V A K R
UniRef90_Q79VG7	A T E D F K S A F Q
UniRef90_R6P238	N L E T F K S S
UniRef90_S6HU21	G I E K F K S T
UniRef90_UPI00036A975B	A L N T F K K T F
UniRef90_R7G834	A L D A F A K E F
UniRef90_H2BUD7	A A K E L S A K F K
UniRef90_U2RE40	Y V T N Y K Q D Y
UniRef90_M5C220	V V E E H V A A F T A
UniRef90_UPI0000510046	V L G E F T K N F
UniRef90_D2RCY3	A I D D F R R T F K
UniRef90_Q9TC93	F F N K F M T N F
UniRef90_X5EB05	A T G E F K R S F Q S
UniRef90_R7HXC5	A V K A F K K
UniRef90_Q5FF66	V I S K I A S S S L K
UniRef90_I8AE03	A I K A F K K V F
UniRef90_K4IDZ0	A A K E I S S S K Y K A
UniRef90_W2C1P9	A I D V F K K
UniRef90_Q04G22	A I D D F K K H F
UniRef90_G4L965	P I K E F I Q T F L
UniRef90_U5YG10	F L D K F T A N F I A
UniRef90_Q1KT15	A I K T F K S
UniRef90_B7VSU5	L L G D F V A
UniRef90_E1X1L1	I I K D Y V A G L K
UniRef90_M5DWY1	C I E A F K N T
UniRef90_A4BNZ6	A L E N F K Q R Y
UniRef90_R6NL49	A A K E F K
UniRef90_R5VPG5	A A K E F I E R
UniRef90_M2XY08	S I Q E T K A T F L
UniRef90_M2Q637	V M S A Y V K Q F E
UniRef90_L0GXF9	A L K D F K A T
UniRef90_M0QQL0	E T N K F K N S Y L
UniRef90_R7A1W1	A V G E Y K A K F L
UniRef90_U2FRP0	A M K E F K E T
UniRef90_H2G0W7	L L D S F K A T
UniRef90_R6KYJ3	V A D E F K
UniRef90_UPI00034CA214	I I T E C T Q T L L A
UniRef90_R7FV22	A A K E F K E R
UniRef90_F4C6G9	V A K E I A A S Y
UniRef90_K1XZ77	V I A G V K K M Y
UniRef90_Q180W8	A I N E F K E K F
UniRef90_R5A9A5	C C E T Y K K Q V S A
UniRef90_E8R028	A F A E F L T Q F K

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UniRef90_R5UA47	T K A M K K A A G S I R I D L A Q Y R E M E V F T Q F S S D L D D D T K E Q L Q				
UniRef90_H6RHF4	K S M K K V A G T L K L D Q A Q Q F R E L E A F A K F G S D L D E A T K A V L G				
UniRef90_T0YD64	A M K Q V A G K L R L D M A Q Q F R E L L A A F A Q F A S D L D K T T R D Q I G				
UniRef90_A7M8Y9	UniRef90_R6CDV9	K A M K Q V A G K L R L D L A Q Y R E L E A F A Q F A S D L D Q A S Q N L L A			
UniRef90_Q7P097	T K A M K K A A G S I R I D L A Q Y R E M E V F T Q F S S D L D E S T K Q Q L A				
UniRef90_D1W1X9	T K V K K L G G G I R I D L A Q Y R E L L A A F A Q F A S D L D E A T R K Q L A				
UniRef90_R5TAF2	K A M K K I A A P I R I V E L A Q Y R E L E A F S K F S S D L D M D T K E Q L A				
UniRef90_G2T5P4	T K A M K K A A G S T I R I V E L A Q Y R E L E M E V F T Q F S S D L D K E T T E Q L A				
UniRef90UPI000422E957	T K I V K L G G G V R I L A Q Y R E L L A A F A Q F A S D L D E A T R K Q L Q E				
UniRef90UPI0003606D57	K S M K K V A G T L K K I D Q A Q Q Y R E L E A F S K F S S D L D M D A V T A M T L L				
UniRef90_F0P301	T K P M K K V S G T L K K I D Q A Q Q Y R E L L A A F S Q F Q F G S D L D A A T M G V I G				
UniRef90UPI0003750AB1	T K I I K K L S G G I R T A L A Q Y R E L L Q S F A Q F G S D L D E D T K A R L E				
UniRef90UPI0003FF2CEE	K A M K K V A G T L K K I L I Y S F R E L L A A F S Q F Q F G S D L D E A T Q Q K L A				
UniRef90UPI0004706E73	K A M K Q V S G T L R I D L A Q Y R E L E S F S Q F G S D L D E A T K N Q L K				
UniRef90_J5ARM7	T K A M K K A A G S L R I D L A Q Y R E L M Q V F T Q F S S D L D E A T K N Q L K				
UniRef90_E2DSJ4	K A M K Q T A G S L R I D L A Q Y R E L L Q A F S Q F A S D L D Q A T Q N Q L A				
UniRef90_R7FFF3	T K A M K K V A G Q M R V D L A Q Y R E L M E V F T Q F S S D L D P A T Q A M L A				
UniRef90_B2A3G4	K G M K Q V S G T L R L D L A Q Y R E L L E A F A Q F G T D L D K S T Q Q K L A				
UniRef90_R9M216	K A M K Q V S S S L K L E L A Q Y H R E M E S F A K F G S D L D A A T T E V L A				
UniRef90_K2AYE3	T K A M K K V S G T L K L S L A Q Y R E L L E A F S Q F A S D L D E D T R K D L A				
UniRef90_R6JP46	T K A M K K A A G S L R I D L A Q Y R E L M E V F T Q F S S D L D D E T K A S L A				
UniRef90_I3ZY42	K S M K K V S G T L K L D Q A Q Q F R E L L E A F A K F G S D L D P A T M A V I G				
UniRef90_K2AUW8	T A A M K S V A V K L R R L E L A Q Y R E L L A A F A Q F G S S D L D P T T L S Q L G				
UniRef90_W1VLG4	K A M K K V A G T L R I I D L A S Y R E L L E A F T K F G S D L D A A T Q A K L A				
UniRef90_C4GD35	T K A M K K A T G S L R I I D L A Q Y R E L M Q V F T Q F S S D L D E A T K N Q L A				
UniRef90_C0C1K3	T K A M K K A S G S V R I I D L A Q A R E L M E S F T Q F S S D L D D A T K M Q L A				
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UniRef90_R5JYP4	T K A M K K A A G S I R I D L A Q Y R E L M E V F T Q F S S D L D E S T K K Q L A				
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UniRef90_R7MQK4	T K A M K K V A G N L R I I E L L A Q Q F R E L M E V F T Q F S S D L D Q S T A D L L N				
UniRef90_C8NDM6	K A M K K V S G T L R I I D L A S Y R E L L E A F T Q F G S D L D A A T Q Q K L N				
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UniRef90_U2FEU5	K A I K K V S G T L R I I N L A T Y R E L L E A F T Q F G S D L D E T T K S K L D				
UniRef90_K4IN60	T K A L K K V S S T L K I S L A Q Y R S L L Q S F A M F A S D L D A A S K A Q L D				
UniRef90_A6FI80	T K I K K L S G G I R T A L A Q Y R E L L A A A F A Q F S S D L D D A T R K Q L D				
UniRef90_H8KWX4	K S M K K V A G T L K I D Q A Q Y R E L L E A F S K F G S D L D A S T K A V L D				
UniRef90_F3LJC4	S K I V K K L S G G I R T A L A Q Y R E L L A A A F S Q F A S D L D D A T K A Q L D				
UniRef90UPI00041ED571	K A M K K V A G T L K L L Y S Q F R E L L Q S F A Q F G S D L D E D T R S R L D				
UniRef90_A0Y954	T K I K K L S G G I R T A L A Q Y R E L L L A A F S Q F A S D L D D A T R A Q L D				
UniRef90_U2SAR2	T K A M K K I S G T L K I D L A Q Y R D M Q A F A M F A S D L D A T S R R Q L D				
UniRef90_K2D3D3	T K I R K L A S A I R I S L A Q Y R D L L E A F S Q F A S D L D E V T R K Q L D				
UniRef90UPI0003B520A4	T K I K K L G G G V R R I D L A Q Y R E L L A A A F S Q F A S D L D E G T R K Q L D				
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UniRef90_Q06J68	K A M K Q V A G T L K L E L A Q Y R E L M Q V F T Q F S S D L D Q A T Q N Q L A				
UniRef90_R719R1	T K I K K L G G G V R R I D L A Q Y R E L L E A F S Q F A S D L D E T T R K E L A				
UniRef90UPI000405B057	K P M K K V A G T L K L D Q A Q Q F R E L L E A F S K F G S D L D A A T K L V I E				
UniRef90UPI0002556103	T K I K K L S G G I R T A L A Q Y R E L L A A A F S Q F S S D L D E A T S K Q L N				
UniRef90UPI00035C3C8B	V K A M K Q V S G S L K L E L L A S Y F R E L M E A F S K F G S D L D A A T A E V L N N				
UniRef90_C8W8D3	V K A M K Q V S G S L K L E L L A S Y F R E L K Q A F S Q F G S D L D A T T Q Y Q L A				
UniRef90_Q03QY6	K A M K K V A G T L R L D L A S Y K E L L E S F A Q F G S D L D A A T Q A R L A				
UniRef90UPI0003B3817E	T K I K K L S G G I R T S L A Q Y R E L L A A A F A Q F A S D L D E A T R K Q L E				
UniRef90UPI00046ED39C	T D I K R L G G G V R R I D L A Q Y R E L L A A A F A Q F A S D L D D A T R R Q L E				
UniRef90_R5P7F6	T K A M K K A A G S I R I D L A Q Y R E L M E V F T Q F S S D L D E N T K K Q L A				
UniRef90_F7YV83	T K A M K Q V A G M R I I E L L A Q Y R E L L L E T F A Q F A S E L D P A T R A Q I L				
UniRef90_A6DUE0	T K S M K K T A G T L R R I I D L A Q Y R E L L L A A F S Q F A S D L D P A T R A Q L E				
UniRef90_B7CCE0	T K A M K K A S G S L R I I D L A Q Y R E L M K E F T Q F A S D L D D A T K R Q L D				
UniRef90UPI0004113B1A	T K A V K S V S G H R I I D L A Q Y R E L L L A S F A Q F G S D L D E A T K S Q I D				
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UniRef90_D3JO4J	K A M K Q V C G S L K L E L L A Q Y R E L V A A S A Q F G S D L D A A I K Y L L N				
UniRef90_Q1GEU6	T D A M S S V A G P V K L L S L A Q Y R E L L M A A F A Q F G S D L D A A T Q Q L N A				
UniRef90_R5KON6	T K A M K K V A T G T V R I I D L A Q Y R E L M E V F T Q F S S D L D E N T K E Q L N				
UniRef90UPI0003B2E2A8	T K G M K K V A G N L R I I D L A A Y R D L L E A F A A F A S D L D S A S K A Q L N				
UniRef90_B3PIS9	T K V K K L S G G I R T A L A Q Y R E L L A A A F S Q F A S D L D E A T K S Q I D				
UniRef90_L1MBI4	K S M K K V A G T L K I D Q A Q Y R E L L E A F A K F G S D L M D A V T A M T D				
UniRef90_F4KS31	K S M K K V S G T L K I D Q A Q Y R E L L L E A F A K F G S D L D P A T L A L D				
UniRef90_T4VUY6	K S M K K V A G P L K I L Y S F R E L L L A A F S Q F G S D L D D E T T K K R L A				
UniRef90_R5B5T8	K A M K Q V A G R L R M D L A Q Y R E L L L A S F A Q F G S D L D K A T R D T L A				
UniRef90_R6D9Z6	T K A M K K A A G S T I R I D L A Q Y R E L M E V F T Q F S S D L D D T T K A Q L R				
UniRef90UPI00036D361F	T K V K K L G G G V R R I I D L A Q Y R E L L L A A F S Q F A S D L D E A T R K Q L R				
UniRef90_R5ZSU0	T K I M K V A G N L R I I D L A Q Y R E L L L E V F T Q F S S D L D D G T K A T L N				
UniRef90UPI00045E7980	K A M K Q V A G R L R I E L L A Q Y R E L L L E A F A K F G A E L D K D T Q D Q L N				
UniRef90_H6L484	T K P M K V S G T L K I D Q A Q Y R E L L L E A F A K F G S D L D A A T K L V L D				
UniRef90_W0P4G6	T K I K K L S G G I R T A L A Q Y R E L L V A F S Q F G S D L D E I T R K Q L N				
UniRef90_G9WLF9	K A M K K V A G T L K I L V Y S F R E L L Q S F A Q F G S D L D Q D T K Q R L A				
UniRef90UPI000423296D	M K T V A G T L K I D Q A Q Y R E L L L E A F A K F G S D L D A A T K L T I E				
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UniRef90_G5G9C4	K S M K K V A G T L K I D Q A Q Y R E L L L E S F A K F G S D L M D S V T A M T I D				
UniRef90_U4UR98	T K I M K V A G P L K I L Y S F R E L L L A A F S Q F G S D L D E A T R K Q L N A				
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	50	60	70	80
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UniRef90_R5IYK9	Y G K R L M E	L L K Q P P L G R P L S M A E Q V I T L	C T A T H K V M V S V D V K	
UniRef90_R5UA47	Y G K G L M E	L L K Q P L C Q P L D M A E Q V I T L	W T A T H K I F L N V E V K	
UniRef90_H6RHF4	K G E R N V E	I L L K Q D Q N S P F P V E D Q I A I I	Y C G T K N L L K D V P V D	
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UniRef90_A7M8Y9	R G Q R L R E	I L L K Q S Q S A P L T T A E Q I M S I	Y A G I N G Y L D D S I L E L G	
UniRef90_R6CDV9	Y G N G L M E	I L L K Q P L G R P L S M A E Q V I T L	Y A A T H K K F M D I P K D	
UniRef90_Q7P097	H G E V V T E	L M K Q K Q F S T L S T A E M A L T L	W A V N K G S Y E D V P V K	
UniRef90_D1W1X9	R G R K N N Q	L L I Q P Q Y S P M P I G E Q V A I I	M Y C G V N S L F A D D V P I D	
UniRef90_R5TAF2	Q G E R I K E	V L L K Q G Q Y Q P P M P V E Y Q V M I I	F A A T R K L L L D I P T H	
UniRef90_G2T5P4	H G K C L M E	L L K Q P L C H P M S L A D Q V I T L	V A A N K R L L M L D V D T A	
UniRef90UPI000422E957	R G R L V T E	L M K Q A Q Y S P M S V S E M S V T L	Y A A D K G F Y D D V E V K	
UniRef90UPI0003606D57	R G R K N N Q	L L I Q P Q Y S P M A V G E Q V A I I	Y C G V H G L M H D D V P V E	
UniRef90_F0P301	K G E R N V E	L L L K Q G V N S P I P V E E Q V A V I I	F A G T N G L L R N V P V N	
UniRef90UPI0003750AB1	H G E K V T E	L M K Q K Q Y S P I P V E E Q V A V I I	F A V E R G F L E D V E L K	
UniRef90UPI0003FF2CEE	K G A R L V E	I L L K Q N R G T P I P V E K Q V A I I	Y A V V N D Y L K N V A V E	
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 910 K S M M K K V A G T L K I D Q A Q Q Y R E E L E A F S K F G G D M D A V T A M V I D
 920 K A M K K V A G T L K I I Y S Q Y R E E L Q S F A Q F G G S D L D A D T K A R L E

UniRef90_F3KHB0
 UniRef90_A0A023X480
 UniRef90_R4Y45
 UniRef90_J9FS98
 UniRef90_K0P4Q8
 UniRef90_B9VL82
 UniRef90_R6TLM2
 UniRef90_E4KNG9
 UniRef90_A6CXT8
 UniRef90_S2WSI2
 UniRef90_K9TEF3
 UniRef90_B7IG42
 UniRef90_R5I3M5
 UniRef90_J3VSU9
 UniRef90_X5DZE1
 UniRef90_E4TP15
 UniRef90_F8WXY2
 UniRef90_A8Q669
 UniRef90_K1ZG31
 UniRef90_W8VK11
 UniRef90_Q2WGJ0
 UniRef90_UP100047AFEF0
 UniRef90_UP10001C3777D
 UniRef90_W0EZR4
 UniRef90_F8ELJ2
 UniRef90_Q7VQV8
 UniRef90_R7ZTF8
 UniRef90_R5VAU8
 UniRef90_B1ZW8
 UniRef90_H3NCE1
 UniRef90_UP1000478E96A
 UniRef90_K2F607
 UniRef90_V2XNM7
 UniRef90_Q2GIG2
 UniRef90_A6L4M4
 UniRef90_M7YB38
 UniRef90_R7CYW5
 UniRef90_S9QM89
 UniRef90_R8W0S1
 UniRef90_H1HRB9
 UniRef90_F5WRP5
 UniRef90_W0GK71
 UniRef90_B5YBQ0
 UniRef90_B1H0B7
 UniRef90_K1XWM3
 UniRef90_X5K9X7
 UniRef90_B6G0M2
 UniRef90_C9LFX2
 UniRef90_K2DR48
 UniRef90_I719M9
 UniRef90_Q494C5
 UniRef90_UP10003F8400A
 UniRef90_R6QT4
 UniRef90_R5VQF2
 UniRef90_R4IQH4
 UniRef90_R7IRV4
 UniRef90_UP1000363BA69
 UniRef90_E1QY04
 UniRef90_K2AL96
 UniRef90_D7JGQ4
 UniRef90_M3YMM9
 UniRef90_S5R130
 UniRef90_B6YR06
 UniRef90_R5NL57
 UniRef90_UP10003B4B4EC
 UniRef90_U5NCH0
 UniRef90_E6ZSF5
 UniRef90_V2XVM9
 UniRef90_R5ANM6
 UniRef90_K9YYN8
 UniRef90_R5XBX7
 UniRef90_UP10003954DD8
 UniRef90_UP10003733A60
 UniRef90_UP100039A9F8A
 UniRef90_F9ZT84
 UniRef90_D1PIS0
 UniRef90_R9ANA8
 UniRef90_Q7RC14
 UniRef90_I3YUK1
 UniRef90_R6ASA1
 UniRef90_A2TYK2
 UniRef90_UP100035C3C92
 UniRef90_R5GLD0
 UniRef90_G8UMG8
 UniRef90_UP1000470BF18
 UniRef90_D3F938
 UniRef90_E8Q5V1
 UniRef90_G8IVT3
 UniRef90_S0G0B4
 UniRef90_R7W2E9
 UniRef90_R5UXS8
 UniRef90_R5WTB7

50 60 70 80

The sequence alignment shows the evolution of specific amino acid residues across 80 positions. Position 50 is a hydrophobic residue (black). Position 60 is a polar residue (red). Position 70 is a basic residue (green). Position 80 is a hydrophobic residue (black). The alignment highlights conserved amino acids at these positions, such as Cysteine (C) at position 60 and Tyrosine (Y) at position 70.

	90	100	110	120	
UniRef90_F3KHB0	K G D F E D A [L L A F A K S E I G D L L D S V A E S G D W N S D I E G K F K A				
UniRef90_A0A023X480	D V P D F E [Q L R D N [R D S H G E I L R S I R E E G K I L T E E T E E K L K E				
UniRef90_R4YY45	S V Q R F A E E L L E Y F R A R H S D L L D G I K S S G K I A D E S V L E A				
UniRef90_J9FS98	K V N E F E T N F L E Y L E R N H S A D V L D V L R T G V I N D E V S K L I E Q				
UniRef90_K0P4Q8	R I A E F E R E I L L S S I K P E L L L S L L D K G G L T K E K K D E L D T				
UniRef90_B9VL82	Q V G A Y L V G L R K F L V N T E Y S K T I E E T Q I Y D E A V E K S L K E				
UniRef90_R6TLM2	K V R D F V L D F A Q E M E T E H A D V T A E I E S T G N L S G P A I E V I R S				
UniRef90_E4KNG9	D L R D F E A A L F S H L E E H P E V L L Q S I E D D N E V I V D E N K L T D				
UniRef90_A6CXT8	K L A E F E D G L V A F A K Q T Q A G G L L E E I N K T G D Y N K E I E G K L Y T				
UniRef90_S2WSI2	D V A R F F E R G G L L D Y L R S R T G V L Q T I K E T G G L L E D D T L A A L K E				
UniRef90_K9TEF3	K I T D F T K G L R E Y M R T S K A K Y G E I				
UniRef90_B7IG42	K V R L F E E K K L I E F L K D K K S E I L N K				
UniRef90_R5I3M5	K V A E F E K L F L Q M L K S K Y Q E V L D E L K A G H L D D K V E A L L K E				
UniRef90_J3VSU9	K I S D F E T A L I A Y A Y A N Y N E S D L M H Y I N Q T G A Y N D D I E G K L Q G				
UniRef90_X5DZE1	K V K E F E F A N F L E T T M E M M M E M S H R P V L D E L K A G K L T P E I E E T I R K				
UniRef90_E4TP15	K V R A F E K E F A M M M E N Q E K T L E A F K A G K I N D D L I A V V K K				
UniRef90_F8WXY2	K I H E F E T E F L R T L E M Q Y Q A D V L D V L K K G V I N E D V E T K I R K				
UniRef90_A8Q669	K I V A W E T G Y R E E L L A S Q N D L L S E I S K G V M T P E V E E K I A N				
UniRef90_K1ZG31	M I Q K W E A S Y V E Y L H A S H Q T L L D K I T A E Q K L D D D L N K K L Q E				
UniRef90_W8VK1	E I L D F E K K L L A H F N Q Y L V K N L L N V K L N R D I T A D T D F L I A S E				
UniRef90_Q2WGJ0	Q V Q G S P A Q S R E Y L V T N K P E P A E I V R P T K T F T E R A E T I L K E				
UniRef90_UP100047AFEF0	E V K K V Q K K M L D W F S A E Q G S I I R E L D E S K A L S S D D L K N E I I L N				
UniRef90_UP10001C3777D	E L L R E H R N E L L M T Y I R S Y G Q D I I S E L E E N K V L T D D L M E R I E R				
UniRef90_W0EZR4	R V K E F E E Q F L L E M E N K Y P E V L G E F K K G N L P D E G L K Q M V D				
UniRef90_F8ELJ2	R V R E F D T E F F M N L L K A V H P E V L P N L A A G K L D D A S T D I K K				
UniRef90_Q7VQV8	K I G D F E A K L I S Y L T Y H E L E L V K H I N I Y G S Y D S N I E N K L K N				
UniRef90_R7ZTF8	K V K A F E S D F Y N L V N A Q Y A D A L V A I R K G D L D T A G D L L K K				
UniRef90_R5VAU8	R I K E Y Q A E L L K W L H Q H H E N L F E D L K K M N A L D E T L E N T L K N				
UniRef90_B1ZW8	K V V V A A N S L L K E F F V A R K D A L L A E I R T K A A L D K D L E A R L L T				
UniRef90_H3NCE1	E L R L F E K E L Y D Y I E Q G S P D I L D D I R T Q T V I T D E E R L A S E				
UniRef90_UP1000478E96A	K V R D L K D R L L N F F N T E H G D I C S E L E K S G Q M S D Q L K R R I L E				
UniRef90_K2F607	R A L A F E S A L H Y L K K S S N K A L M D A I E S S K D L N A D N E K L L T A				
UniRef90_V2XNM7	K I K E F Q T E M L D Y F E T H H P E M I R E I E N Q K A L L T E D L T E R I V D				
UniRef90_Q2GIG2	D M C R F E R G L L E K L R I D H G D L M A C L L E D D V R S K L L E				
UniRef90_A6L4M4	K V Q D F Q K S F L E M M R A D H Q K D V L D V L S S G V I N D D V T A I I E K				
UniRef90_M7YB38	K V R Q F E T E F Y N L L K S S Y P E A L E L L L K N D L D A A G K I L E K				
UniRef90_R7CYW5	Q V H E F Q D A F E L N R A A H M R G K A S D V L D F I K E D P K V K G E A E D K I K				
UniRef90_S9QM89	D V G R F E A G L L A H M R G K A S D V L D F I K E D P K V K G E A E D K I K				
UniRef90_R8W0S1	R V R T F T E E F T D A F A A A K P E V M D E I I A Q T G A L S G A A A E V I R T Q				
UniRef90_H1HRB9	K I R E F E A V L Y R F L D P D A V M E E I R Q N G A Y S A E G E E R L K Q				
UniRef90_F5WRP5	E V L P F E K H L H G R F V Q T H T D V L E R I K K D Y V L D D V L I E D L K T				
UniRef90_W0GK71	Q I K E F K D E L I E H F H T S A K V L R D E L E T K K A F N D E L M Q K I L T E				
UniRef90_B5YBQ0	K V K D V V I K Y I A Y L K L K Y S S V L T L L R E Q L E L S D Q I I Y Q I H N				
UniRef90_B1H0B7	K V L L E A E Q Q M T E F I K K T Y P E T V K K L A T G E K I D D S L K A E L E Q				
UniRef90_K1XWM3	K V L P F E K M L Y Q K M D T S H S E L T K T I K E E A L T E H I E K E I T K Q				
UniRef90_X5K9X7	K V K E F L R D Y V D F L K A K H A D T L A A L K A G K Y D N N L T S V L K Q				
UniRef90_B6G0M2	E I H N F E K E L C F Y I R K K N K P S I Y E K I L N G E D Y G K E L T E				
UniRef90_C9LFX2	K V D D F Q T S F L Q I V R S S H Q D I L D E I V K G N L S K E V C Q A I E K				
UniRef90_K2DR48	K T V A F E Q Q L H D Y F R K N H K N V L D E I N Q Q P V Y T D A I A E K L R Q				
UniRef90_I719M9	Q I T K F E S E F T S Y L T T Q H Q D I L S S I E T				
UniRef90_Q494C5	K I S D F E S A L I L Y M T Y T E K E L I K I D H D G V Y N D I E N K F K S				
UniRef90_UP10003F8400A	E V R P F A Q G L I A S A N A T E Q E L L Q D L N S K G A Y N D E V L A S L D K				
UniRef90_R6QT4	N I R E Y K E L I Y H S M T L E H R K L M K R F A D G Y Y E E S D Q K E L D E				
UniRef90_R5VQF2	D V L L A F E K G F P D Y L D S K H P E I				
UniRef90_R4IQH4	R I H Q Y E R T I P N T I D P Q L L K E L A S K G G L T P E P E T S L K E				
UniRef90_R7IRV4	F V K K Y Q A D M L A W Y E S A H P E I V K E I E E K Q V L T D L K A A I L D				
UniRef90_UP1000363BA69	S I R E F E T Q F L E T V L A K H D K E M A S L A K S G V L S D E L G Q S F I N				
UniRef90_E1QY04	H V T L F R D G L A R F M A E R Y P Q V R V A L L N G K I D D D A E K E K I K Q				
UniRef90_K2AL96	E V A N F Q E K I L T L L A T N K K L K D Y L E D K G E I D D F A E K E L A K				
UniRef90_D7JGQ4	K I N D F I A E Y N N V L E S K H R D T L D T L R Q G V L N E E T E R V L V E				
UniRef90_M3YMM9	R I T K F E H A F L A C V I S Q H Q A L L G T R T D G K I S Q S D A E L K E				
UniRef90_S5R130	K I L N F E S S L Y K F M K T C Q N S I L E K I K V N V N F A D I E D S L T T				
UniRef90_B6YR06	R V R E F E T E F L D I L E M K Y R K D I L D M L K Q G V L D E K I E K K L N T				
UniRef90_R5NL57	Q V I A F Q H E F F L E S L R A S H R Q D V L E V L E G G V I N E Q V T K V I E D				
UniRef90_UP10003B4B4EC	R I L E F E T E M L R N F E L T E G D L C Y R R I D D T G V L S P E D K E A I N K				
UniRef90_E1QY04	N V L A F E H A L H G T L K D S Y A A L L K D K E R A M D A T A Q A E L D A				
UniRef90_U5NCH0	R I V E W E S S F R E K L S T E D A L L S E I S K G V P S E E L F G K M K T				
UniRef90_E6ZSF5	K M D A F R A G L L A S V V E A D P E L C R R I D Q N G T L S Q E D R E D L L A				
UniRef90_V2XVM9	V N V A E F E A Q L Q L H A N Q A D V L D V I R S G Q L T D D C Q A K L T A				
UniRef90_R5ANM6	K A N D F I V Q G L L K D Y V T N N K P Q F A E I R D K K K L V E E A E T L L K E				
UniRef90_K9YY8	G L K K Y Q A K L L E Y F A E S R K D I I D E I E S G K V L G D A L K Q D I L D				
UniRef90_R5XBX7	K I T K F E S A F L A H V L S Q H Q A L L S T I R T E G K I S D Q T E A K L K E				
UniRef90_UP10003954DD8	R V K E W E R A F V A H L R E E H T D L L E R L E K E R D L T H D L E E E M R R				
UniRef90_UP10003733A60	K V R P F E K A L L S Y L H S S H Q D L L D P D P L K E G K I N D E I G K I E E				
UniRef90_UP100039A9F8A	K V R P F E K A L L S Y L H S S H Q D L L D P D P L K E G K I N D E I G K I E E				
UniRef90_F9ZT84	K S A A F A K D F A D L L E R E Q A D L M Q E I N E T G A L S G T A T E Q I R T				
UniRef90_D1PIS0	K I V A W E K T A T E S I K A D S E L M K L L L G T Q P S D E V K K A I E K				
UniRef90_R9ANA8	Q V Q F E F T Q Y F E L D A N Y S D T L K K I Q E N C D L S E V E D Q I K D				
UniRef90_Q7RC14	K I K F E F E R D Y L E M L N V K H R N T L D D L K A G K L T D D A I D V M T T				
UniRef90_I3YUK1	S V S D Y E A A L Y E L R S E Y S D L L N R F D A G Q Y E Q A D I D E L N S				
UniRef90_R6ASA1	Q V K F E F K D Y I D Y L N A K H R D T L D V L K S G K V L G D A L K Q D I L D				
UniRef90_A2TYK2	D I S F E F E N Q Y L E H V G F E D E M E A L A G S G V L D D A F G D K L I E				
UniRef90_UP100035C3C92	K I P Q F S R D M L D A A S A E L P D D C D L D R T G E T E D R K S L L E				
UniRef90_R5GLD0	Q V R E F E R T F L Q I L R N N H Q D D V L K P L R N G Q F D M E V A T I I E K				
UniRef90_G8UMG8	Q I Q G F V R E L R D Y L K T S A K D F V E E I Q T R R V M S A E A E D K L K A				
UniRef90_UP1000470BF18	UniRef90_D3F938	K V E K F L D G L T R R A H S E A G D L R K A I A G G D W S E E T E K G V N T			
UniRef90_E8Q5V1	K I G R F E F E L V S Y F M R T E S E L K I K H N I N G L Y D S T I E S N F K R				
UniRef90_G8IVT3	Q V R X F L L G L R F Y L I K N K P Q F G E I R S T G T F T E E A K A L L E E				
UniRef90_S0G0B4	D I S R A Q K N I R K A A N T D H K E V M D K I T A G E K I D E K A I D T L V Q				
UniRef90_R7W2E9	R I S Q Y E K K A I L S T I N Y E L Q K S F L E K G G I L T N E T K M E P D A				
UniRef90_R5UXS8	H V S D F E K L Y L E L L N A R Y K E V L D R L K A G I L D E K A E E L M T A				
UniRef90_R5WTB7	D V R Q Y E K K L Y S F L D S D A A A M Q E I R S T G K I E K T E E K L K K				

UniRef90_F3KHB0
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 UniRef90_R4YY45
 UniRef90_J9FS98
 UniRef90_K0P4Q8
 UniRef90_B9VL82
 UniRef90_R6TLM2
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 UniRef90_A8Q669
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 UniRef90_W8VK1
 UniRef90_Q2WGJ0
 UniRef90_UP100047AEFD
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 UniRef90_F8ELJ2
 UniRef90_Q7VQV8
 UniRef90_R7ZTF8
 UniRef90_R5VAU8
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 UniRef90_R8W0S1
 UniRef90_H1HRB9
 UniRef90_F5WRP5
 UniRef90_W0GK71
 UniRef90_B5YBQ0
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 UniRef90_K1XWM3
 UniRef90_X5K9X7
 UniRef90_B6G0M2
 UniRef90_C9LFX2
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 UniRef90_R6QTK4
 UniRef90_R5VQF2
 UniRef90_R4IQH4
 UniRef90_R7IRV4
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 UniRef90_D7JGQ4
 UniRef90_M3YMM9
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 UniRef90_B6YR06
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 UniRef90_UP10003B4B4EC
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 UniRef90_UP10003954DD8
 UniRef90_UP10003733A60
 UniRef90_UP100039A9F8A
 UniRef90_F9ZT84
 UniRef90_D1PIS0
 UniRef90_R9ANA8
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 UniRef90_I3YUK1
 UniRef90_R6ASA1
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 UniRef90_R5GLD0
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 UniRef90_UP1000470BF18
 UniRef90_D3F938
 UniRef90_E8Q5V1
 UniRef90_G8IVT3
 UniRef90_S0G0B4
 UniRef90_R7W2E9
 UniRef90_R5UXS8
 UniRef90_R5WTB7

CL E K F **V**S T
 A L R R F A D N F E
 G I K R F T E E F
 S A E A **V**V K **L**Y E
 F **L**K Q
CL E N F A **Q**F S A
 T L E D A K K R
LI N Q F K E **V**F M A
LL E E F S A
GV E A Y **H** S S F **I**S

VA A D **V**A N R F K A
 I L D T F K A T
VA A E T A E K Y K
VA D D **L**S S K Y
VA A D I **A**S Q Y K
SI K A S V S S F **L**
 A I E **V**F
CL K Y F T H **L**Y K
 A I K E **H**T E S F
AV D M F **L**Q R
 I L T A F
LA N A I **I**P Q Y K
VG R E L A A K Y
 I L E M F K
 A T A E **L**A P K Y K S
VM M Q F T D E F
 A V E E W K A S Y T A
 A I K D Y **V**D **F** **L**S
 A V D M F M E
 A I E T F K A T
 A A T Q F
VI R G F A **V**S F
VA A D T A Q **P** F K
 A A K D **L**T A K Y
VA A A
EL A A Y K E Q **V**S A
AL Q R C **V**E E F **L**
II D E E I S D F K A
IF Q E F
EI K E F K K
LI K E
VA D D **I**A A K Y N
LV E N F K K
VA S E V S A Q Y Q
II L E F K R E F **L**
IL E T F K S N
VV S Q Y K K G
AV R S F T E R F
SA K
AA K E Y K
IA N T V I D Q I L A
GL S S Y K S E F **L**
ML
VA N N I **V**Q S
TV T N F L A G **P** E A
IL I N F K K S Y D A
IA S I V A N N F K
VA Q S T L L L F K
AI
AI M A **C**K K N F
LI T E **H**V K N F **L**A
HS K R F L T R F Q
AA S E **V**I A A R F N
AI S E Y K E T F K A
AI D E F G K
IV T S F **L**A T F E A
VL A N F N E R F **L**
VA A D T **I**K
T**L** Q S Y K E Q **V**S A
KI S E T **V**D S F **L**S
SI Q K F L E **I**F K
VA A D L S A K Y K
AL A K L A E K F
AA E S I **I**H Q **I**N A
FA Q R F **L**E R
VA
AI E A **V**K **L**T M **L**A
LV E R Y A D D F
IL Q D F K
AL K E
AA Q N A **V**K S
SL K E
VA A E **V**A E R F K
AL E N F T G D F **L**

1 10 20 30 40

K A M K Q V A G S L K L F L A Q Y R E L |
T K A I K K M A R S L R L E L A Q Y H E L | D F A Q F G T E L | D E V A K Q R L A
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V K A M K K I A G T L K I D Q A Q Y R E L | E S F S K F G G D M D A V T E M V I D
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K A M K Q V C G S S K L E L A Q Y R E L | V A A F A Q F G S S D L | D A A T T Q Q L N
K A M K K V A G T L K I D Q A Q Y R E L | E A F T K F G G D M D P V T A L T I D
T K P M K K V Q G G L K L L A L S Q Y R D L | E A F A Q F G S S D L | D A D T R K T L L
K A M K V A G T L K I D Q A Q F R E E L | E A F T K F G G D M D A V T A M T I D
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T P I M K K I A G T L R V L M A Q Y R E L | L E V F A Q F G S S D L | D E S S K A Q L E
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T P A I K K V S R A L K L E L A Q Y Q D L | L I G F S Q F G T E L | D V V S Q K I I L A
K S M K K I S G T F K L D Q A Q Y F R E E L | E S F S Q F G S S D L | D F I L T K N I I E
K S V K Q V S N S L K L L N L A Q Y R E L | V A A F S Q F G S S D L | D E S T K K L L T
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K A M K Q V A G S M K L E L A Q F R E E L | V A A F A Q F G S S D L | D A S T R Q L L T
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K A M K K V A G T L K I D Q A Q Y R E L | E S F S K F G S S D L | M D A V T V A V L D
S M M K V A G R L K L L E L A Q F D E L | L Q A F S Q F G S S D L | D K A T Q M Q L A
R A Y G E V A G D L R L L S Y S Q F Q E E V | E V F A R F G T Q L | D E D T R R Q T L E
T Q A M K H V S A S L K L L E L A T Y Y E L | L I S F A Q Y Q S S D V | D E E T Q R I I D
K A M K Q V S S S K V K I E L A Q Y N E L | L A F A Q F G S S D L | D K A T R D Q L N
A Q T R V M K Q F D S D L | D A A T T Q Q L L
T K A M K Q V S K S L K I E L T N Y A E L | E S F A Q F D T D | D P E T Q E I I I D
A L K E V A E F L R L L Y Y A Q F L E E V | E I F T K L G V K | V F G E T A E I I I R
T N L I K I N Q S G G I R T D L A Q Y R E L | L A A F A Q F G S S D L | D E A T R K Q L D
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K S M R K I S G T L K I D Q A Q F R E E L | E S F S Q F G S S D L | D P T T M N I I Q
K A M R Q V R G S S K P E L A Q Y R E E V | V A A S A Q S G S S D L | D A A T Q A P S N
K S I K Q V S G S L K L E L A Q Y R E E L | D T F S Q F G S S D L | D A E T K I V L E
A Y Q T I I A G D L R L L S Y Y A Q F Q E E V | E I F A R F G T Q L | D E Q T Q Q T L E
Y R A V A G D L K L L A Y A Q F T E L | E S F A K F G T R L | D D H T R K I I E
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A I K S F A S S L K L L E L A Q Y N E E V | K A F A Q F G S S D L | D E T T T N I L K
A Y R A I T G D L R L L A Y A Q F E E E L | E S F A R F S T R L | D H E T I M T I E
I I K K L S S G I R T A L A Q Y Q E E L | A A F A Q F G S S D L | D E I T R K Q L N
T K A M K S V S G D V K L K L A Q F R E E L | E A F M M Q F A S D L | D Q G T R E K L E
T K I I K K L G A G I R L L A L A K Y R E L | L E S F A Q F G S S D L | D E I T K K E I E
T K A M K K A A G S L R L I D L A Q Y R E E M | M A V F T Q F G S S D L | D E S T K T Q L
K A M K Q V C G S S K L E L A Q Y R E E V | V A A L A Q F G S S D L | D A A T Q A L L N
T K A M K Q V A G R L R L L E L A Q Y R E E L | L A A F A Q F G S S D L | D A A T R A Q L D
T K T M K K A A V G T L R L L D L A Q Y R E E M | E V F T Q F G S S D L | D E E T K S Q L A
R S I T G T L K L L A Y S Q F E E E L | L E S F A R F G T R L | D D D T R K K I I
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T K L M K K V V S S L K L L E L A Q Y N E E M | L A F A Q F G S S D L | D S I T K E K L E
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V K A M K M V A G T L K I D Q A Q F R E E L | L E S F T K F G G D L | D Q N T R D L L T
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V K A M K Q V A G T M K L L E L A Q Y R E E V | V A A F A Q F G S S D L | D A S T Q Y L L N
A Y R A V A S D L R L L S Y S Q F E E E L | E V F S R F G T R L | D E V T R Q T I E
T K A M K K A A N A N L E L A Q Y R E E M | M E S F A Q F G S S D L | D A E T R R Q I
A Y K S I V K L K L Q Y A Q F E E E L | L E S F S R F G T R L | D E N T K K I I D
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K S I K Q V S G T L K L L E L A Q Y Y E E L | Q A F A K F G S S D L | D E S T K A K L D
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A F R A V A G D L K L L A Y A Q F E E E L | E T F A R F G A R M | D E D T Q K S I E
K A M K K V A G S L K L L E L A Q Y N E E M | L A F A Q F G S S D L | D D D S T K A I L Q
R A I R S L A D S K L L D Y A Q F E E E L | L E V F T R F G A M A | D E R T V G K I A
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K A M K Q V A G K L K L L E L A Q Y Y E E L | E A F A Q F G S S D L | D K A T Q N Q L A
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R G R K R L L E L L K Q P L Y Q P M K V S Q Q A I L Y I A T N G L L D E V P L D	H G K R V I E I L K Q K Q Y T P L S Q I D Q I I I L F L L R Y D F L E S V P K I S	K G R K N A Q L L I Q P Q H A P M S V E E E I A V I Y C G T Q G L L R N V S L K	Y G S G L M E L L K Q P S S P L S L H E Q V I T C A A T H K A M M H V E T K	
R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G R K N N Q L L I Q P Q H A P M S V E E E I A V I Y C G T Q G L L R N V S L K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G R K N N Q L L I Q P Q H A P M S V E E E I A V I Y C G T Q G L L R N V S L K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G R K N T R L L V Q P Q Y S P M P V E E Q Q I A V L Y C G T H G L L K D V P L D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G R K N T R L L V Q P Q Y S P M P V E E Q Q I A V L Y C G T H G L L K D V P L D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G Q K N T R L L V Q A L H E P L P V E K Q V A V L Y C G T H G L L S N V P L D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G Q K N T R L L V Q A L H E P L P V E K Q V A V L Y C G T H G L L S N V P L D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
Y G Q K I T E L L K Q K Q Y S P M S V E S Q S L I L F V A A N N F F D D I S V D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	Y G Q K I T E L L K Q K Q Y S P M S V E S Q S L I L F V A A N N F F D D I S V D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G A V L M Q V L K Q K Q Y M P L S M P Q E V V D I F L A H E G L L D D I P A D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G A V L M Q V L K Q K Q Y M P L S M P Q E V V D I F L A H E G L L D D I P A D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G K R L V I E I L K Q K Q Y S P L S Q I D Q A I I L L A V K K K R I R W I P V G	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G K R L V I E I L K Q K Q Y S P L S Q I D Q A I I L L A V K K K R I R W I P V G	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G K R V I E I L K Q K Q Y S P L S Q I D Q A I I L L A V K K K R I R W I P V G	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G K R V I E I L K Q K Q Y S P L S Q I D Q A I I L L A V K K K R I R W I P V G	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G A V A Y E L L K Q K Q Y T Y S F V D Q S I L F L L R Y N F L D N I P S N N	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G A V A Y E L L K Q K Q Y T Y S F V D Q S I L F L L R Y N F L D N I P S N N	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
K G K R N I E I L K Q S I N S P Y R L G N Q I A I I Y A G T N N L L K E I P I N	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	K G K R N I E I L K Q S I N S P Y R L G N Q I A I I Y A G T N N L L K E I P I N	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G S T L T E I L K Q K Q Y S P L E T S L Q V V I Y I G I N G Y I D S L E I L D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G S T L T E I L K Q K Q Y S P L E T S L Q V V I Y I G I N G Y I D S L E I L D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G Q R L N G L L K Q S Q S A P L T V E E Q V I T Y T G T N G Y I D S L E I L D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G Q R L N G L L K Q S Q S A P L T V E E Q V I T Y T G T N G Y I D S L E I L D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G T A L T E I L K Q K Q N A P L P V P L Q I C I L Y C G V K G Y L D P L Q P S	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G T A L T E I L K Q K Q N A P L P V P L Q I C I L Y C G V K G Y L D P L Q P S	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G R R V V R E I L K Q P Q Y Q P L P V A E Q I A V L Y C G T H G L L R E E V P I E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G R R V V R E I L K Q P Q Y Q P L P V A E Q I A V L Y C G T H G L L R E E V P I E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G R K N T R L L V Q P Q Y S P M P V E E Q Q I A V L Y C G T H G L L R E E V P I E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G R K N T R L L V Q P Q Y S P M P V E E Q Q I A V L Y C G T H G L L R E E V P I E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G Q R L R E V L K Q P Q S H P L S V A E Q I A V L Y F A I N E G I L D D V P L E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G Q R L R E V L K Q P Q S H P L S V A E Q I A V L Y F A I N E G I L D D V P L E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G R M V T E L M K Q A Q Y A T L S V A E M A V T L H T V N K G H F D T V E V K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G R M V T E L M K Q A Q Y A T L S V A E M A V T L H T V N K G H F D T V E V K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G A R L T E L L K Q G A T T Y Y L S H D L V I L S F M N R Y K Y I D E E L E V K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G A R L T E L L K Q G A T T Y Y L S H D L V I L S F M N R Y K Y I D E E L E V K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G K R L T E L L K Q Q A I S T K K H E L L V L S I Y L N R Y G W I D K L A	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G K R L T E L L K Q Q A I S T K K H E L L V L S I Y L N R Y G W I D K L A	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G K R L R E L L K Q P K L K S Y Q V E E Q V V I F F L L N E G Y F D N I P E D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G K R L R E L L K Q P K L K S Y Q V E E Q V V I F F L L N E G Y F D N I P E D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G A R V T E L L K Q T Q Y S P L P I S L M A N A T L F A V N K G F T D D I D V K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G A R V T E L L K Q T Q Y S P L P I S L M A N A T L F A V N K G F T D D I D V K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G S R L R T E L L K Q G Q F Q P M P F E T M V P I L Y A G V N G K L D K V P V D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G S R L R T E L L K Q G Q F Q P M P F E T M V P I L Y A G V N G K L D K V P V D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
K G K R N I E I L K Q A P H N P Y N I S D Q I A I I Y A G T K N F L K N I P I E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	K G K R N I E I L K Q A P H N P Y N I S D Q I A I I Y A G T K N F L K N I P I E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
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S S R K V V E G M K Q K N N C P L S I A E Q S L I I F L L N E G Y F D N I P E D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	S S R K V V E G M K Q K N N C P L S I A E Q S L I I F L L N E G Y F D N I P E D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
K G K R I T E L M K Q K Q F N T M S V A E I S I L L Y A A N K D Y L Y D I N V K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	K G K R I T E L M K Q K Q F N T M S V A E I S I L L Y A A N K D Y L Y D I N V K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
Q G A I L L M E L L K Q P L G R P L S I L G E Q V V T L V L A L H K E F L G T A K K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	Q G A I L L M E L L K Q P L G R P L S I L G E Q V V T L V L A L H K E F L G T A K K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G A R L T E V P K Q P Q Y A P L P I E K Q I L V I Y A A V N G F C D R M P L E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G A R L T E V P K Q P Q Y A P L P I E K Q I L V I Y A A V N G F C D R M P L E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G Q R I T E I L K Q Q Y V P M S V E K Q V V M I L Y A A I N G Y I D D D V P L D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G Q R I T E I L K Q Q Y V P M S V E K Q V V M I L Y A A I N G Y I D D D V P L D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
Y G Q S L L M Y I L R Q G R S A P L S Q S Q G Q Q I V T L V T A M A H L Y Q Q V P A Q	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	Y G Q S L L M Y I L R Q G R S A P L S Q S Q G Q Q I V T L V T A M A H L Y Q Q V P A Q	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G Q R I R E G L K Q A E F H P M S V P E Q I A V M L A V T S G Q F D L V P P L Q E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G Q R I R E G L K Q A E F H P M S V P E Q I A V M L A V T S G Q F D L V P P L Q E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G R R V V R E V L K Q P Q F Q P L P V A E Q I A V M L A V T S G Q F D L V P P L Q E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G R R V V R E V L K Q P Q F Q P L P V A E Q I A V M L A V T S G Q F D L V P P L Q E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G Q K I Y E I L K Q S Q F S P Y S P A Q Q I I L L F L A K Y R R L I N V I P K A K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G Q K I Y E I L K Q S Q F S P Y S P A Q Q I I L L F L A K Y R R L I N V I P K A K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G A K V Y E E L L K Q P Q Y S P Y E Q I K Q Q I I L L F C S K Y R R L I N V I P K A K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G A K V Y E E L L K Q P Q Y S P Y E Q I K Q Q I I L L F C S K Y R R L I N V I P K A K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G Q K I T E F F K Q K Q Y N P L S I A E Q S L I I F L L N D D V S I V E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G Q K I T E F F K Q K Q Y N P L S I A E Q S L I I F L L N D D V S I V E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G L K I T E L M K Q K Q Y N P L S I F E K Q T V A I Y F M T N D F V K N I E V D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G L K I T E L M K Q K Q Y N P L S I F E K Q T V A I Y F M T N D F V K N I E V D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
K G Q K N A R L L V Q K Q Q Y T P M P V E E Q I A I L Y C G T H G L L R N I P V E	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	K G Q K N A R L L V Q K Q Q Y T P M P V E E Q I A I L Y C G T H G L L R N I P V E	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
Q G K V L M E L L K Q P L G S P M S L S D Q V I T L V V S L N H K M M D I E P K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	Q G K V L M E L L K Q P L G S P M S L S D Q V I T L V V S L N H K M M D I E P K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G R K T V E E I L K Q D D V H Q L V H V N T V Q V T V L Y A L A N G F M D D I D V T	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G R K T V E E I L K Q D D V H Q L V H V N T V Q V T V L Y A L A N G F M D D I D V T	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G A A L T E E I L K Q K Q N S P I A V P L Q P L Q I G Y L D P L Q P D K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G A A L T E E I L K Q K Q N S P I A V P L Q P L Q I G Y L D P L Q P D K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G R R I R A C L K Q P E F D P E P M P A Q I A V V L L A L G A G L F D E V P L N	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G R R I R A C L K Q P E F D P E P M P A Q I A V V L L A L G A G L F D D V P L N	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
K G N K I Y E L L K Q D K Q Y H M S Q F E Q V M V L L F V D Q G G L I E F I P L V	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	K G N K I Y E L L K Q D K Q Y H M S Q F E Q V M V L L F V D Q G G L I E F I P L V	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G A R L T E V L L K Q Q F Q P M P I E N Q V V L L Y A A T K G Y L D D K L E I K	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G A R L T E V L L K Q Q F Q P M P I E N Q V V L L Y A A T K G Y L D D K L E I K	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
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H G Q R L R E V L L K Q S Q S N P L P V V E E Q V V A T I Y T G T R G Y L D S L E M N	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G Q R L R E V L L K Q S Q S N P L P V V E E Q V V A T I Y T G T R G Y L D S L E M N	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
R G N K I Y A L L K Q D Q H F H L S E F E Q V V M L L V F I R E S L I D S I I A L E M N	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	R G N K I Y A L L K Q D Q H F H L S E F E Q V V M L L V F I R E S L I D S I I A L E M N	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
H G A R I I Q M L V Q R Q Y S P L N Q I D E A I I L F A I K S H H L I K W I P L	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	H G A R I I Q M L V Q R Q Y S P L N Q I D E A I I L F A I K S H H L I K W I P L	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
Y G Q G L M R L L R Q N Q Y K P Y K H E Q V V L L T A A L N K V F I D L D V D	R G A R L T E V S K Q A Q Y A P L N I E K Q I L V I Y A A V N G F C D R M P L E	Y G Q G L M R L L R Q N Q Y K P Y K H E Q V V L L T A A L N K V F I D L D V D	R G V R L T E L L K Q G Q Y C P M A I E E Q V T V I Y A G V R G H L D K M D P S	
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UniRef90_UPI000023E632 K I L Q W E S D F L A H L K T N E T E L L A T I D K E G A I S K D T E A K L K D

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

I	I	K	S	F	K	S	S
V	L	A	R	F	V	T	S
Q	L	V	K	I	V	K	S

I	A	A									
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A	S	K	T	A	L	K	A	F	Q		
I	V	N	K	L	I	A	S				
L	I	T	S	Y	I	L	K	T			

R	L	A	A	F	K	A				
T	L	K	H	V	E	T				
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M	A	R	Q	A	I	A	A	F	Q	A

C	L	R	Q	Y	V	E			
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V	A	G	N	A	L	T	V	F	Q
S	V	N	R	W	R	K	S	N	A

D	I					
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A	A	E	K	A	L	Q	P	F
S	L	I	A	L	A	Q	S	

V	V	M	Q	H	I	R	N	W		
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T	L	Q	A	A	I	K	T			
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I	V	T	N	F	L	A	G	F	E	A

A	V	H	T	A	L	K	Q			
L	S	R	Q	A	L	I	A	F	S	S
L	F	A	K							

I	L	E	V	F	I		
I	L	D	S	F	K	A	N
R	A	R	D	A	L		
E	I						

T	L	R	Q	Y	L	Q	T		
A	I	Q	K	A	I	N	S	F	L
F	I	E	Q	F	I				
L	L	T	K	T	I	N	K	F	N
A	V	R	T	L	A	Q			
I	I	N	Y	F	I				
I	I	N	Y	F	I				
F	C	R	E						
A	F	K	D	A	L				
A	V								
V	V	Q	S	A	L	K	Q		

I	I	N	Y	F	I
---	---	---	---	---	---

V	A	R	A	A	L	A		
A	I	E	S	F	K	K	S	
L	G	K	K	A	R	E	T	
A	I	Q	E	Q	L	E	R	F
L	I	A	Q	A	A	G		

I	V	T	N	F	L	A	G	F	E	A
L	A	R	Q	A	L	A	A	F	L	

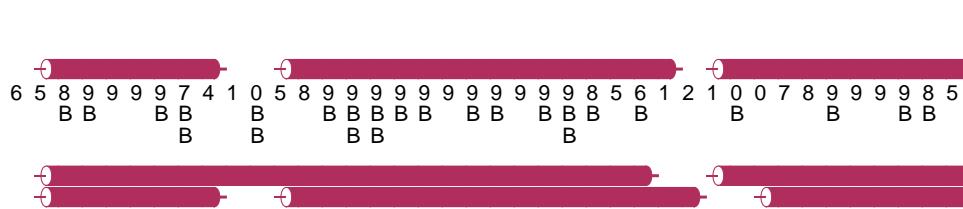
R	V	R	D	L	A	T	E	L	E	A
A										
V	A	T	K	A	L	A	S			
C	V	K	T	A	I	A	R	L	P	A

S	I	G	E	L	V	E	R
---	---	---	---	---	---	---	---

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

UniRef90_G3IUS4
 UniRef90_R6FTZ8
 UniRef90_UP10004114098
 UniRef90_UP100036C9F36
 UniRef90_S8D0S6
 UniRef90_UP10004635D28
 UniRef90_UP100036126DD
 UniRef90_B6IQS6
 UniRef90_E8ZKH0
 UniRef90_K7RW60
 UniRef90_H9M862
 UniRef90_A3PS65
 UniRef90_C5Y853
 UniRef90_U6EFN8
 UniRef90_E1T8N9
 UniRef90_B1G441
 UniRef90_V5BRI1
 UniRef90_Q90Y04
 UniRef90_D9IXG5
 UniRef90_R5BQ11
 UniRef90_R5YEM9
 UniRef90_R6R214
 UniRef90_G0A6I2
 UniRef90_F2Y9S9
 UniRef90_V9R876
 UniRef90_UP1000348542D
 UniRef90_F0QRC3
 UniRef90_I7C5S4
 UniRef90_T2RCY2
 UniRef90_M7CV72
 UniRef90_B9KX68
 UniRef90_G0TZ16
 UniRef90_A4RTZ5
 UniRef90_A1AMA4
 UniRef90_B7FRE6
 UniRef90_Q01D41
 UniRef90_Q9G8S6
 UniRef90_A5KSP4
 UniRef90_U6LQA0

1 10 20 30 40
 S **I**R D Q A G Q M K **D** Y **L** Q F **L**E **L**E A F T R F G Q R **L**E A S M E A R **K**
 I R **H** Q A G Q M K **D** Y **L** Q F **L**E **L**E A F S R F G Q R L E P S M E A R I R
 I K S **I**A G S **L**K V G **L**A Q F R E V E S F A S **L**G C D I D P I T Q Q **L**D
 A L R K E A G R M K **L**D F **L**Q F **L**E **L**E V F T R F G T K L E A S L E K R I Q
 A Y R A V A G D L K L S F A Q F E E L E T F A R F G A R V D E P T R A L I A
 S R S L R P **L**A E S L R L D Y A Q F A E L E A F T R F G G M T D E R T R R A V E
 K A I K D M S S S **L**K L E **L**A Q Y F E L L E F A R F G S E **L**N D S T K F N L N
 K A M K Q V **C** G G S K **P** E **L**A Q Y Y E V A A S A Q S G A D P D A A T Q Y S S N
 A L K A V A G R V R **L**D Y A Q Y **L**E M K M F S R F G G F G D A A L R A R L A
 F A L D K T S Q N Q L A
 M K Y V A G F Y K **L**E **L**A H F V E L Q S F S Q F A A D L G Q E S K N R L T
 R A L R D V S G R L R L D Y A Q F L E L E M F S R F G G L T D S H V A G K I A
 R A L R G V S G R L R L D Y A Q F L E L E M F S R F G G L T D A H V A D K I A
 S I R D Q A G Q M K **L**D Y **L**Q F **L**E L E A F T R F G Q R L E A S M E A R I K
 D L D A A T Q Q L L N
 K P I K K L V G P **L**K I T L A Q F I E L K S F A Q F S T E L D D A T A M I L Q
 M T L D
 M E V F T Q F A S D L D D A T K A Q L Q
 A I K A A S A R I R **L**D Y **L**Q F **L**E M E L F A R F G T R L E S G V E E K L R
 A L R L V T G N L R Y Q L A Q Y R E Y S V F A Q F D N D I D D V T R G I L N
 A I K S M T S S L K L F V S Q Y F E L I E F S K F S S D L N E E S K R I F A
 L R E V A G Q L R L Q Y S Q F L E L E L F T R F G N L S D T R V K A Q I A
 A I K S L T G S L K L A V S Q Y F E L L E F S K F S S D L N E E S R K S L A
 A I K S M T S A L K L F V S Q Y F E L I E F S K F S S D L N E E S K K T L A
 I K D E A K R M K **L**D Y **L**Q F **L**E L E V F T R F G A R L E A T M E T A I H
 M R L D Y A Q Y L E M K M F S R F G G F G D A A L R A R L A
 A M K G V A G K L K G I L A E Y R K L A A D S V G G Q Q V Q T I P M I
 R L R D L M Q S D D M G T F G S A G T E K S K L R S
 K E E V G R M K L D Y L Q F L E L F T R F G A R L E A S V E A R I R
 A L R R I V E R L R L D L S Q A A S M D G A D V T S K A S Q S Q I R
 L R L D L M Q S D D M G T F G S S G A E K S K L R S
 I S K K I K A D Y S M F K T Y E S V E K L G G E I D P I V L S Y I V
 T K R Q K E I A G G L F K S L V A Y R Q A Q E F S H F G S E V A P D T E R S L R
 M K Q V A G T M K L E L A Q F R E V A A F A Q F G F H I E T N H Q Q I L D



This figure displays a multiple sequence alignment of UniRef90 entries, focusing on positions 50, 60, and 70. The sequences are color-coded by residue type: Red (A, R, D, N), Green (G, C, T, S), Blue (P, Y, F, W), Yellow (I, V, L, M, K, Q, H, D, E), and Black (S, T, C, P, A, G, O, U). The alignment shows high conservation at position 50 (mostly I, V, L, M, K, Q, H) and position 60 (mostly P, Y, F, W). Position 70 shows significant variation, with many entries containing a yellow box around the letter 'C'.

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
ipssm

The figure displays a sequence alignment of UniRef90 entries, focusing on the first 120 amino acids. The alignment is color-coded to highlight conservation: black for identical residues, blue for conservative substitutions, red for semi-conservative substitutions, yellow for non-conservative substitutions, and white for gaps. The UniRef90 identifier is shown to the left of each sequence, and the residue number is indicated at the top of each column.

```

UniRef90_G3IUS4          90          100          110          120
UniRef90_R6FTZ8
UniRef90_UP10004114098
UniRef90_UP100036C9F36
UniRef90_S8DS6
UniRef90_UP10004635D28
UniRef90_UP100036126DD
UniRef90_B6IQS6
UniRef90_E8ZKH0
UniRef90_KTRW60
UniRef90_H9M862
UniRef90_A3PS65
UniRef90_C5Y853
UniRef90_U6EFN8
UniRef90_E1T8N9
UniRef90_B1G441
UniRef90_V5BRI1
UniRef90_Q9Y04
UniRef90_D9IXG5
UniRef90_R5BQ11
UniRef90_R5YEM9
UniRef90_R6R214
UniRef90_G0A612
UniRef90_F2Y9S9
UniRef90_V9R876
UniRef90_UP1000348542D
UniRef90_F0QRC3
UniRef90_I7C5S4
UniRef90_T2RCY2
UniRef90_M7CV72
UniRef90_B9KX68
UniRef90_G0TZI6
UniRef90_A4RTZ5
UniRef90_A1AMA4
UniRef90_B7FRE6
UniRef90_Q01D41
UniRef90_Q9G8S6
UniRef90_A5KSP4
UniRef90_U6LQA0

```

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
inssm

130

UniRef90_G3IUS4
UniRef90_R6FTZ8 A A H E F M E T
UniRef90UPI0004114098
UniRef90UPI00036C9F36
UniRef90_S8D0S6
UniRef90UPI0004635D28
UniRef90UPI00036126DD LA G R A LS G F Q S
UniRef90_B6IQS6 A M R
UniRef90_E8ZKH0 F A K K T LQ D F A S
UniRef90_K7RW60 I V Q T F LA G W
UniRef90_H9M862
UniRef90_A3PS65
UniRef90_C5Y853 A IQ E Q LE R
UniRef90_U6EFN8 A VR D IV Q R
UniRef90_E1T8N9
UniRef90_B1G441
UniRef90_V5BRI1
UniRef90_Q90Y04
UniRef90_D9IXG5
UniRef90_R5BQ11
UniRef90_R5YEM9
UniRef90_R6R214 VL S A Y T E S F L
UniRef90_G0A6I2
UniRef90_F2Y9S9
UniRef90_V9R876 IF E T E Y K H F LA
UniRef90UPI000348542D A VR E LV A
UniRef90_F0QRC3 M F R A E Y R A
UniRef90_I7C5S4 LF R S E Y R S F
UniRef90_T2RCY2 A IN D F K K K F
UniRef90_M7CV72
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UniRef90_G0TZ16
UniRef90_A4RTZ5 LL R N
UniRef90_A1AMA4
UniRef90_B7FRE6
UniRef90_Q01D41
UniRef90_Q9G8S6
UniRef90_A5KSP4
UniRef90_U6LQA0

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm

9 9 9 9 9 9 8 7 2 8 9

B B B B B
B B B
B