

QUERY	1	10	20	30	40																																						
UniRef90_G2DEA5	S	T	L	S	D	S	A	A	R	V	N	T	F	L	A	N	R	G	K	G	F	G	L	R	L	G	V	R	T	S	G	C	S	G	M	A	Y	V					
UniRef90_C6WXDO	A	I	T	I	T	E	A	A	A	K	R	V	E	A	F	L	S	N	R	G	K	G	I	G	I	R	R	L	S	V	R	T	S	G	C	S	G	M	A	Y	E		
UniRef90_A6D2Z7	A	I	T	L	T	E	T	A	A	S	R	V	E	K	F	L	A	N	R	G	K	G	V	G	L	R	R	L	G	V	K	T	T	S	G	C	S	G	M	A	Y	V	
UniRef90_UP1000429A423	A	V	T	L	T	E	K	A	A	R	Q	V	Q	K	H	L	A	A	R	G	T	G	L	G	L	R	R	V	A	V	K	T	T	S	G	C	S	G	L	A	Y	A	
UniRef90_C9R386	S	I	T	L	T	E	S	A	A	D	R	V	K	T	F	L	A	K	R	G	K	G	I	G	I	R	R	L	G	V	V	R	T	S	G	C	S	G	L	S	Y	M	
UniRef90_Q47EN3	A	V	T	L	T	E	S	D	K	A	A	H	V	A	N	F	L	T	K	R	G	K	G	I	G	I	R	R	L	G	V	V	R	T	S	G	C	S	G	M	A	Y	K
UniRef90_H0PVT7	S	V	T	L	S	E	T	A	A	R	V	N	A	F	L	A	K	R	G	K	G	V	G	L	R	R	L	G	V	V	K	T	T	S	G	C	S	G	M	A	Y	A	
UniRef90_X2H3F8	A	I	S	L	T	E	K	A	A	K	H	I	S	N	Y	L	T	K	R	G	K	G	E	G	I	R	R	L	G	V	V	K	N	S	G	C	S	G	M	A	Y	T	
UniRef90_A4JRL2	A	I	S	V	T	P	A	A	A	R	H	I	E	K	A	L	Q	K	R	G	K	G	I	G	I	R	R	L	R	V	A	V	K	T	S	G	C	S	G	F	A	Y	A
UniRef90_UP100037C5D00	A	V	T	L	T	E	A	A	A	R	V	Q	H	F	L	Q	N	R	G	K	G	I	G	I	R	R	L	R	G	V	V	R	T	S	G	C	S	G	M	A	Y	V	
UniRef90_D1P3S1	S	I	S	L	T	E	S	A	A	Q	R	V	Q	A	F	L	K	N	R	G	K	G	E	G	I	R	R	L	R	G	V	V	R	T	S	G	C	S	G	M	A	Y	V
UniRef90_C7RCC4	A	I	T	L	S	D	A	A	A	R	V	K	S	F	L	A	N	R	G	K	G	I	G	I	R	R	L	R	G	V	V	K	T	T	S	G	C	S	G	L	A	Y	V
UniRef90_UP10003B7AD17	A	T	L	T	E	S	A	A	L	H	V	Q	N	T	L	Q	R	R	G	K	G	I	G	I	R	R	L	R	G	V	V	R	T	S	G	C	S	G	M	A	Y	K	
UniRef90_D1CC04	V	T	I	T	E	S	A	A	A	K	H	I	K	D	L	M	E	K	E	G	Q	G	A	A	R	L	R	Y	V	A	G	G	C	S	G	L	N	Y	G				
UniRef90_UP1000474259E	A	I	T	L	T	E	K	A	A	H	H	S	R	Y	I	D	R	R	G	N	G	I	G	I	R	R	L	R	F	G	V	R	T	T	G	C	S	G	L	A	Y	K	
UniRef90_A11S12	I	T	L	T	E	N	A	A	A	K	H	N	D	Y	L	A	K	R	G	K	G	I	G	I	R	R	L	R	G	V	K	T	S	G	C	S	G	M	A	Y	K		
UniRef90_W8XA50	L	I	F	T	D	A	A	A	A	K	V	R	E	L	E	N	N	P	G	L	K	L	R	R	L	R	V	F	V	G	G	C	S	G	F	Q	Y	G					
UniRef90_A6GT53	A	I	T	L	T	E	R	A	A	D	H	I	S	K	F	L	T	K	R	G	K	G	I	G	I	R	R	L	R	V	R	T	T	G	C	S	G	M	A	Y	K		
UniRef90_A0A014QF03	A	V	T	L	T	D	A	A	A	R	H	V	G	R	Y	L	E	T	Q	R	G	K	G	V	G	V	R	L	R	G	V	V	R	T	T	G	C	S	G	M	A	Y	V
UniRef90_UP100035E3329	A	I	T	L	T	D	S	A	A	R	H	R	H	F	L	E	T	Q	R	G	K	G	V	G	V	R	L	R	G	V	V	R	T	T	G	C	S	G	M	A	Y	V	
UniRef90_A9IR03	S	V	T	L	T	Q	Q	A	A	S	H	I	G	R	Y	L	Q	K	R	G	K	G	V	G	V	R	L	R	V	T	T	G	C	S	G	M	A	Y	K				
UniRef90_UP10002F0FBAE	A	L	V	F	T	D	A	A	A	K	V	K	D	L	L	E	E	G	P	D	L	K	L	R	R	L	R	V	F	V	Q	G	C	S	G	F	Q	Y	G				
UniRef90_UP10003B511DC	A	I	S	L	T	E	A	A	A	R	V	V	S	S	F	L	Q	K	R	G	K	G	V	G	V	R	L	R	V	T	T	G	C	S	G	M	A	Y	V				
UniRef90_UP10003790347	S	I	T	L	T	E	S	A	A	S	H	V	S	S	K	Y	L	S	Q	R	G	K	G	V	G	V	R	L	R	V	T	T	G	C	S	G	L	A	Y	K			
UniRef90_Q60AU6	T	I	K	F	T	D	S	A	A	Q	R	V	S	E	L	A	E	E	G	D	N	L	K	R	R	L	R	V	Y	V	T	G	G	C	S	G	F	Q	Y	G			
UniRef90_V2TYX7	H	L	T	E	S	A	A	T	H	I	R	N	F	L	E	N	R	G	K	G	E	G	I	R	R	L	R	V	T	S	G	C	S	G	L	A	Y	V					
UniRef90_G2IZ70	A	I	T	L	T	E	S	R	A	A	D	H	V	R	N	F	L	E	K	R	G	K	G	I	R	R	L	R	V	T	S	G	C	S	G	M	A	Y	K				
UniRef90_UP10003B6B23A	A	V	S	T	L	T	E	S	A	A	G	H	V	I	K	R	Q	L	E	G	R	G	K	G	I	R	R	L	R	V	T	S	G	C	S	G	M	A	Y	V			
UniRef90_K0IMN0	T	I	T	I	T	P	K	A	A	E	K	V	A	E	F	M	K	Q	E	R	N	G	L	I	R	R	L	R	V	Y	V	S	G	G	C	A	G	L	S	Y	G		
UniRef90_W0SDW0	V	T	L	T	E	S	R	A	A	D	H	I	A	K	Y	I	A	K	R	G	K	G	I	G	I	R	R	L	R	V	K	T	S	G	C	S	G	M	A	Y	K		
UniRef90_R9PJ4D	A	V	S	T	L	T	E	S	A	A	T	H	V	I	S	Q	F	L	N	R	G	K	G	I	G	I	R	R	L	R	V	K	T	S	G	C	S	G	M	A	Y	V	
UniRef90_W8WYP5	A	I	T	L	T	E	S	A	A	G	H	V	I	Q	R	H	L	D	K	R	G	K	G	I	G	I	R	R	L	R	V	K	T	S	G	C	S	G	M	S	Y	H	
UniRef90_U6I5S5	A	V	T	L	T	D	S	A	L	A	R	K	A	K	E	L	M	S	Q	P	D	A	L	G	I	R	R	L	R	V	T	T	G	C	S	G	L	S	Y	T			
UniRef90_A5CWM4	A	V	T	L	T	E	H	A	V	E	R	I	V	E	F	L	T	N	R	G	K	G	I	G	I	R	R	L	R	V	T	T	G	C	S	G	L	G	Y	N			
UniRef90_K2KEV2	A	I	T	M	T	E	A	A	N	R	A	R	S	F	L	R	E	I	A	R	G	K	G	I	G	I	R	R	L	R	V	I	E	N	G	C	S	G	L	A	Y	V	
UniRef90_A7IP88	A	I	T	M	T	E	A	A	N	R	A	R	S	F	L	R	E	I	A	R	G	K	G	I	G	I	R	R	L	R	V	I	E	N	G	C	S	G	L	A	Y	V	
UniRef90_Q486Y8	A	V	T	M	T	P	A	A	A	E	R	V	Q	S	F	M	Q	N	R	G	K	G	I	G	I	R	R	L	R	V	I	T	T	G	C	S	G	L	A	Y	V		
UniRef90_V5SEU6	A	V	T	L	T	A	S	A	A	R	R	I	A	E	R	V	Q	H	A	E	P	A	G	T	L	L	R	R	L	V	I	T	T	G	C	S	G	F	Q	Y	N		
UniRef90_UP100025577CB	A	I	S	M	T	Q	A	A	I	D	H	V	S	R	Y	L	E	K	R	G	K	G	I	G	I	R	R	L	R	V	A	T	K	S	G	C	G	F	S	Y	V		
UniRef90_UP10003622B9B	A	I	T	M	T	Q	A	A	A	D	H	V	K	S	F	L	V	N	R	G	K	G	V	G	V	R	I	K	T	T	S	G	C	S	G	L	A	Y	V				
UniRef90_F6D9X2	V	T	L	T	P	S	A	A	Q	R	V	K	L	M	I	E	K	R	G	K	G	I	G	I	R	R	L	R	V	A	T	K	S	G	C	G	F	A	Y	V			
UniRef90_UP10003751ECD	I	S	I	T	P	A	A	A	N	Q	I	R	Q	V	L	D	E	R	G	H	G	L	G	I	R	R	L	R	V	S	V	K	P	S	G	C	S	G	M	S	Y	T	
UniRef90_R9FHBG8	I	T	I	T	S	E	S	A	A	D	H	V	I	Q	R	H	L	F	N	D	M	V	T	K	R	G	V	R	I	G	V	K	T	S	G	C	S	G	F	S	Y	T	
UniRef90_R7BWR0	A	V	T	L	T	E	S	A	A	A	H	V	I	A	Y	L	V	K	A	R	G	K	G	I	G	I	R	R	L	R	V	I	T	T	G	C	S	G	M	A	Y	K	
UniRef90_D8RRU4	A	I	T	L	S	D	K	A	L	S	H	V	Q	K	L	R	A	D	Q	K	R	D	C	I	R	R	L	R	V	G	V	T	S	G	C	S	G	M	S	Y	I		
UniRef90_UP1000225C1EE	A	M	S	I	T	E	N	A	K	S	R	V	R	E	L	A	Q	R	P	A	A	G	I	R	I	R	G	C	S	G	M	S	Y	T									
UniRef90_D3P4Z7	A	I	T	I	T	D	A	A	A	R	V	K	Q	A	M	D	I	G	L	R	R	G	N	I	R	I	G	V	K	A	R	G	C	S	G	L	S	Y	D				
UniRef90_Q0AND0	N	V	T	L	S	A	S	A	K	Q	I	K	T	I	A	Q	A	A	G	L	L	R	R	G	N	I	R	I	G	V	K	V	T	S	G	C	S	G	F	S	Y	T	
UniRef90_G8N6V2	I	T	L	T	E	S	A	A	A	Q	F	V	I	K	D	M	M	E	Q	E	G	A	Y	L	R	R	L	R	V	G	V	K	T	S	G	C	S	G	F	Y	G		
UniRef90_D8JRT1	M	T	L	T	E	S	A	A	A	R	V	N	A	F	L	K	I	D	M	M	E	Q	E	G	A	Y	L	R	R	L	V	I	T	T	G	C	S	G	M	E	Y		

50 60 70 80

QUERY	L E F V D E P T P E D I V F E D K G G	V V V D G K S M Q F L D G T Q L D F V K	
UniRef90_G2DEA5	M E F V D E L D E D D V V F E D C G G	V K V V I D P K S L V Y L D G T E L V D F A K	
UniRef90_C6WXDO	L E F V D E M H P E D V A F E S H G G	V K V V I D P K S L V Y L D G T E L L D F T K	
UniRef90_A6D2Z7	L E F V D E L D D G D E V F E H E G G	V K V V I D A K S L V Y L D G T E L L D Y V K	
UniRef90_UPI000429A423	L E F V D E P A P E D R T F E S F G G	V T L V V D P K S L V Y L D G T E L L D Y V R	
UniRef90_C9R386	L E F V D A L N E D D D Q V F E Q H G G	V K V I V D T K S L V Y L D G T Q L D F T K	
UniRef90_Q47EN3	L E F V D E V N P D D L L V F E Q N G G	H G V T V L V D R K S L P Y L D G M E L D F A R	
UniRef90_H0PVT7	L E F V D E E D A D D L L K F E S H G G	G V T V L V D R K S L P Y L D G T E L D F V	
UniRef90_X2H3F8	L E F V D N I Q P E D D L L F E Q H G G	G V K V F V D P K S L H V Y L D G T E L D F V K	
UniRef90_A4JRL2	L E F V D A P N D D D L L C F A T H G G	G V T V V D P R S L P M L D G T E L D F V R	
UniRef90_UP100037C5D00	I I E F V D D L N Q D D K V F E D H G G	G V K L I V D A K S L L Y I D G T E L D F V K	
UniRef90_D1P3S1	L E F V D A D V I N E E D T V F E D K G G	G V K V I I D G K S M V Y L D G T E L D F V	
UniRef90_C7RCC4	L E F V D E L N E D D V V F E D K G G	G V K V I V D P K S S L Y L D G T R L E F I	
UniRef90_UP10003B7AD17	L E F V D Q P A E D D I S F E C H G G	V T L F T D A K S L V Y I D G T E L D F V R	
UniRef90_D1CC04	M A F E E E V D P E D H V F E Q N G G	V K I L I D S Y S Y P Y V K G S E I D Y D	
UniRef90_UP1000474259E	L E Y V D Q M E A E D I V F E S H G G	V K F V D P K S L S Y I D G T E L D F A R	
UniRef90_A11S12	L E F V D E A D G D D L L F E G H G A R I Y I	G V K F V D P K S L V Y L D G T Q V D Y T K	
UniRef90_W8XA50	F T F D E D V A E D D T T I E R D G G	V Q L L V D P M S F Q Y L V G A E I D Y K D	
UniRef90_A6GT53	L E F V D A V A D E D N V F E A H G G	V K L F V D P K S M P Y L E G I E L D F A R	
UniRef90_A0A014QF03	L E Y V D A P E E D V V F E S H G G	V K M I D P K S L A Y I D G T E L D F V	
UniRef90_UP100035E3329	V E F V A D E L E E S D T V F E V D G G	V K L V V S P K S L V Y L D G T E L D F G K	
UniRef90_A9IR03	L E Y V D D P A P E D M V F E S F G G	V K V F V D P K S F A Y L D G T E L D Y A R	
UniRef90_UP10002F0FAE	F T F D E T I N E D D D T T I D K E G V Q L L I	D P M S F Q Y L F G A E I D Y K D	
UniRef90_UP10003B511DC	M E F A D A V D E H D T V F E D H G G	V S L I V D P K S L V Y L D G T V M D Y T R	
UniRef90_UP10003790347	L E Y V A D A V A P E D E V F E S H G G	V K V L V D P Q S L S Y L D G T E L D F V R	
UniRef90_Q60AU6	F T F D E V V N E D D T V V E K N G V S V I	V L V D P M S L Q Y L Q G A E I D Y T E	
UniRef90_V2TYX7	L E F V D E I E S H D Q I F E Q H G G	V K V F L D P K S L V Y I D G L E M D Y A K	
UniRef90_G2I7Z0	L E F V D V A S D E D V T F Q S H G G	V T V F T D A K S L A Y L D G T E L D Y A K	
UniRef90_UP10003B6B23A	L E F V D E P Q P E D V K F V Q A F G A S I Y V	D P K S L V Y L D G T E L D F V K	
UniRef90_K0IMN0	M G F E E K P D E D D K V I E Q N G V K L L	D S Y S Q R Y L K G A N I D Y Y E	
UniRef90_W0SDW0	L E F F A D A A N A E D I V F I S H G G	V K V L V D P K S L P Y L A G T E L D F V K	
UniRef90_R9PJ4D	L E E F V D Q L A E D D K V F E S H G G	V K V N I D E K S L L Y I D G T E L D F V K	
UniRef90_W8WY55	L E Y V D D P S A E D Q V F E Q F G A R V Y V	S P D S L P Y L Q G T E L D Y A R	
UniRef90_U6I5S5	L S F C T E Q Q K G D E V V E Q G G V K I F I	D R K A Q L T L L G S E M H Y Q K	
UniRef90_A5CWM4	M E F V D Y T F D D D T V F E D N G V K I I	V I D A K S L I Y L D G T Q V D Y V K	
UniRef90_K2KEV2	L E F V F D S V A D E D T V F T D R G I S V V	G V K I I D G K S L V Y L D G T E L D F V K	
UniRef90_A7IP88	M D F T T E I A P F D S V V E D K G V K V V	V V D T K A V L F L D G T E M D Y K T	
UniRef90_Q486Y8	L E F V F D D L N E D D Q L F N I K D V N I I	I I D A K S L V Y L D G I E L D F V K	
UniRef90_V5SEU6	F D L V D G A S G D D A V I E R D G A K V L I	D P V S M A Y Y L A G S E I D F V	
UniRef90_UP100025577CB	L E F V F D Q S E P E D E I F E F G G V K V V	I I D P K S L A Y L D G T E L D F V R	
UniRef90_UP10003622B9B	L E F V F D E L N E D D E V F D I M D V K I V V	D Q K S L V Y I D G T E L D F V V K	
UniRef90_F6D9X2	V D Y V D E A G A D D H V F T H H G I D V Y V	D A K S L P P I D G M E I D Y V V E	
UniRef90_UP10003751ECD	L D F A D E A A N D D V A F E E H G A K V Y V	A P D A L S M L D G S E V D Y V S	
UniRef90_F8FHG8	M G F D D D Q H D E K V F D I H G L K V V V	D V D E S S S K Y L Y G V E I D F Q E	
UniRef90_R7BWR0	L E F A D A V N D D D Q M W E S H G V G V V I	V I D A D A V N D D D Q M W E S H G V G V I D P Q S L P Y L D G T E D Y V K	
UniRef90_D8RRU4	M D F E D Q V R S D D S S V M E Q E G F T M V C	D P K S L L Y L F G M Q D Y S D	
UniRef90_UP1000225C1EE	M E F A D E I S P F D E V I K V D D L T L M I	D P K A I I M F L L G T E M D Y V V	
UniRef90_D3P4Z7	V Q Y A K E K M K F D E V V E D K G V T I L I	D P A A V M F L I G S E M D Y V D	
UniRef90_Q0AND0	F D L D D A V N G D D M I I E R D G A K V V I	D E A S L P F L D G S E I D Y V D	
UniRef90_G8N6V2	M G F D H E R E R E D D I L E F E Q H G I K I L V	R D R D S A P I L R G T V L D Y K Q	
UniRef90_D8JRT1	M T W A D Q I G K F D E V I E D K G A I V L I	D P A A I I M Y L L G T E M D F K T	
UniRef90_V4XZU2	L E Y A D D A S P E D I E F E D H G I K I L I	D P K S L A Y L E G T Q L D F V R	
UniRef90_M7PQ27	L D Y A E S V A D S D V V I E Q D N V K V V	V Q L L V D S D S L P L D G M E L D F V	
UniRef90_UP10002C3652C	M D F K E N A R P D D S I I E Y N G F E I V C	D P D K S L L F Y G M Q L D Y S D	
UniRef90_H5WW24	L E F V D A A T P E D L S F D T E G V Q L L V	D A Q S L P L I D G T Q L D W V R	
UniRef90_D9SJQ2	F T F D E I T N E D D T V L D K N G V Q L L I	D P M S Y Q Y L V G A E I D Y T E	
UniRef90_U1H662	F D V E R T Q A D D L V I E R D S A V V V L I	D P A S V P F L A G S E V D F V D	
UniRef90_X4RAR4	L Y F D E R I I F E D D A V A E F N G V E V L V	D A K S A P Y L D G A T I D F A D	
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 L F F D T D R R E D D K V F S Y D G F D V V V D K M S H P Y I G A S I D Y A D
 Y D M E K T R A E D D L V L A G E G A T V L I D P V S A E Y M A G A E I D Y V E
 F T F E E E V S E G D T E V E K D G V T L L I D P A S Y Q Y I V G A E I D Y S D
 F T F D E N Q E D T D L V V E S G S V K V L V D P T S I N Y L R G A E I D F V E
 L D W V D K A G P F D E T V E Q D G V K V L I D S K A L F S I I G S E M D W I E
 V D Y A D E L G A D D R V F E S H G V K V V V D E T N L S R L D G L E I D F V T
 F Q F E E K P G E D D T E I V R D G V T F L V D S L S F Q Y I V G A E I D Y K D
 L D L T E T Q R D N D E E F E V E G L R V V C D P K S Y L Y I N G T S I D F K D
 V D Y A D E V G P D D V V L E S Q G V K V V I R D E L D D Y I D G G L E I D F R R
 I E Y A K D R K K F E D L V E D K G V S I L I D P T A V M F I I G S E M D Y K E
 F D L V D Q P Q A D D L K V E R D G A A A L V D V V S L A L K G S E I D F V D
 M N Y A T E K K F E E E V N D K G V R V F I E P K A L F H I V G T T M D Y K I
 F D L T D A K S D D D I V L A S E G A T V L I D P I S L Q Y M D G S I I D F V D
 F T F D E S A A D D D T V I E R D G V T M V V D P M S F Q Y I V G S E V D F K E
 L E Q V S A P E P G D L L F E Q Q G A R L W V P L K A M P L I D G T E V D Y V R
 F A F E E Q L A E D D T I V E K D G I K V V V D A M S Y P Y I V G S Q V D Y E E
 F T F D E S I S E D D T V M E R N G V K L L V D P M S F Q Y I I G A E I D Y Q E
 M K L V A E P D P K D E R I E G H G A T V F I D P A A V L Y L G T V M D F E T
 M A L D E N V Y E D D V V V N A H G V K V V V D S F S A P F L E G S E I D Y I E
 T D L A H E A H A D D A V F E Q D G V R I Y V D A A S L Q L V D G T E I I D F A K
 M D F E D V N V R E D D E V F D Y D G F K I I C D P K S L L Y I Y G L Q L D Y S N
 F D I A S N L S D D V V F E K Q G A K I F I D K I S L E Y I K N S E V D F V E
 F T F D D T P A E E D D A V I E R L G V R M L V D A M S Y P Y L A G S D I D Y V E
 F G F A D S A N E D D L V I E R D G A K I I I D E M S L E F F T G S E I D Y T R
 I E Y A D E K K F E E V E V E D K G V K I F I D P A A V M F L I G S E M D Y T E
 L D F A S K K E K F D E E V L Q D G V R I L V D M K A Q L H L G T E M D Y V E
 F S F D E E A A E D D T Q V E K N G V I L L V D P M S F Q Y L M G A E I D Y R E
 M A Y A A E A G A L D E I V E D K G V K V M I D P K A I I L Y L L G T E M D F V T
 L Y F D E R E L D G D V V S D F G G V E V V T D R M S S P Y I I G A T I D F V D
 M G F E H E V I N E D D L Q F E Q H G I Q V L V D K E S A A I L Q G T K I D Y K E
 M D F I E N I Q D T D E V F D H N G F Q V V C D P K S L L Y I Y G M V L D Y S N
 L E F V D G L N P G D E M F D E D G V N I I I D G K S L A Y L D G T E L D F G K
 M A L L D E P R E G D I V Y Q I Q G I Q V A V E K E S E R L I D G G S Q V D F V D
 Y N L V S E S R D D D F V F K K D G A V V F I D T V S Y P F M E G A E I D F V D
 M A L D A A Q E D D D N V Y E F N G I K V V I D P Q S A P Y L E G I E V D Y V N
 F T F D E N T A D D D M V V E K G G V V A V I D S M S F Q Y L V G S E V D Y T E E
 F T F D E E H Q E D D T E I K R N G V T L V V D P L S F Q Y L V G S E V D Y K E
 F D L T R A R A E D D L V I E R D G A T V L V D P V S L E Y M S G S T I D F A N
 T Q W V E T P E S D D R I F T I D G V D V F I K Q E H R P L V N G I E I D F V T
 M S F D E K I T E Q D K V Y D F D G V K V A V D R S L L Y M G T T L D Y T G
 I E Y V D N E S V F D E V T E K G V T V F I D P K A L M Y L V G T E M D Y V E
 L L G F D G E H K E S D T I I E S N G V K L F V D G K S L F Y L S G T E L D F S D D
 L D F A S T P Q A N D M V F E D K G V K I M V D K K S I L Y L A G T E L D F S D D
 V E F A D E L G P L D E V V E D K G V V K L V V D P K A L M F L L G T E M D Y E T
 T Q W V E T P E S D D R I F T I D G V D V F I K Q E H R P L V N G I E I D F V T
 M S F D E K I T E Q D K V Y D F D G V K V A V D R S L L Y M G T T L D Y T G
 I E Y V D N E S V F D E V T E K G V T V F I D P K A L M Y L V G T E M D Y V E
 L L G F D G E H K E S D T I I E S N G V K L F V D G K S L F Y L S G T E L D F S D D
 M D F I E N I Q D T D E V F D H N G F Q V V C D P K S L L Y I K G T I I D F K E
 L Y F D E R V L D G D H V R D F G G V E V I V D K M S V P Y L V G S T I V D F E D D
 M T F D D E V R E G D N E F Y A G N L R V L V D P I S A Q Y L F G A S I D F V D
 F A V D P A P G E E D A L L E H A G A R V A I D P A S I G F L A G A K I D F V D
 M S F D E T V N S G D R T F E C H G I D A V T I D P E S Y R Y T K G L T L D Y S E
 M D L V K E P A A D D L Q F P Y F G A T L Y V P L Q K A M P F V D G T E L D Y V R
 V D Y A D E I T D S D A V F E S H G Q K V V V P Q K S L E L V D G T E L D Y V E
 L E F D D V I E E D D A V R D F G V K L V V D R M S S V P Y L A G A S I D F Q D
 V D Y A D E I T D S D A V F E S H G Q K V V V P Q K S L E L V D G T E L D Y V E
 M G F E T K P E E D D T I I E E A G V K L L V D S Y S Q E H L K G A N I D Y I E
 F D F A E Q A A T D D T V I A I D D V G M V V D P L S Y Q Y L V G S T I V D F E E E
 M A L D G P K P S D L Q Y N I G L V L V D P K A V M Y L I D G S E V D Y V D
 M N Y V D E P P K L D D V V E G D N I K V Y V D P K A V M Y L I D G S V M D F V E
 M G F D D E K H E N D Q E M D I R G L R V V V D S D S M K Y L Y G L E I D Y K E
 M T Y L K E T I P T D E V V K D N N V E V F I D P K A I M Y L L G T K M D Y K E
 F T L D D T K T D D D L V I E R D G A T V L V D S V S L M Y V G G S E L D Y V D
 L D Y A D E R A A D E V V F D Q F D V K V L V K Q A D D L D K L N G I E L D Y A K
 M E M A D E A A P S E E V V E K D G A R V L I A P M A Q M Y L F G T E I D Y E T
 F S F D E A Q K E D D M V F T N H G V H L L V D A M S F Q Y L I G A D I D Y K E
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 M D F A D T I R E D D D V F D Y E G F K V V C D R K S L L Y I Y G L V L D Y T D S
 F T F D E K S S A D D F V I E K Q G V K L V V D P M S L Q Y L V G G E V D Y T S R
 L D F A K Q V K S E D T I F D H D G V K I L V D K K S L N F I D G T E L D Y R R
 I D L A T E I N P K D D R I E R D G A A V F V A P E A V L Y L G T E M D Y E V
 M D Y A D E I G A E D Q V F E A H G A R L V V K A E H R P V E G L T I D W Q K
 M E Y V E D T D P N D E V V E Q D G A R V M I A P M A Q M F L F G T E I D Y E T
 M D F E D E I T E H D E V F D Y E G F K I V C D R K S L L Y I Y G L V L D Y S N
 M S F E N Q G Q G M M D K V V R F D D L K V F V D A T S A M Y L N G C I V D Y V E
 M E F V D T A D P N D E V V E Q D G A R V M I A P M A Q M F L F G T E I D Y R S
 T E W V T E Q G E D D A V F T V D N V D Y V E R Q H R P L V N G T E I I D F I R
 F E Y A E T K G P I D E V V E D K G V T I L I E P K A V L F L I G T E I I D Y E V
 L E Y V D K P A A F D E V V E Q D G V K V L L I D S K A L F S I I G S E M D W E E
 L F F D E R E L D G D Q V R E F G G V G V V D R M S S P Y L T G A V I D F V D
 V D L A D A V G E G D S L V E V D G L P L I V D D K S L S L V D G T V I D F Q R
 M A V D E R E L E G D T F V E M H G V R L V V D R M S S P Y L I G S Q V D W V E
 F N F A E G A N D D D A S F E N G D V K M L V D S L S Y Q Y L V G S Q V D Y I E
 F D L V E G A D E G D I A I E R D G A R V L I D D I L S R K M L A R L C E I D Y L
 V E Y A D E I K T S D E I V E D K G V K V L V D P K A V L F L I G T E M D F K V
 M G L D D E E T E D D V H M D V H G L K V V V D K E S I R Y L N G L E V D Y K E
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90

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UniRef90_A0L517	D L N G A S F Q I K N P N A Q S
UniRef90_W3X0A1	D K L S Q R F T F K N P N I K E E
UniRef90_D3RPW5	N L L N Q G F E F H N P N A K D H
UniRef90_R7C360	D L E G S Q F V I R N P N A
UniRef90_I0IB44	E V M G R G F V F N N P N A T S
UniRef90_H5SAR8	E G L N A A F Q F R N P K A K A
UniRef90_A8TWP2	D K L F S G F V F N N P N E T G
UniRef90_B4RDJ0	E L A G A E F R I R N P N A R S
UniRef90_T0S0H9	T P V S A E F T F E N P N A K G
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UniRef90_D7B2A6	T I E K Q G F T I D N P N A T G
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UniRef90_UPI000362A547	D L I G Q A F K I E N P Q V T S
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UniRef90_TOMHJ3	D L L G G G F K F V N P N A K
UniRef90_UPI00036F2531	D R F K S G F N F I N P N Q K N
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UniRef90_Q3JAM4	E G L N E S F K F Q N P N V A G
UniRef90_A9D5Z3	T K L R S G F V F N N P N Q T S
UniRef90_I7ZCH1	Q G L N E S F K F L N P N V K A Q
UniRef90_F7ZF34	S L L E S G F K F R N P N V T E
UniRef90_B7JUC7	A M I G G G F Q F T N P N A T
UniRef90_I3ZKN5	T L E A A G F K F E N P Q V K S
UniRef90_D0D1D8	S L L E S G F H F N N P N V A D
UniRef90_N6W7N6	E G L N S M F H F R N P N A T A E
UniRef90_D5VJT1	S K L L S S K F V F H N P N E T D
UniRef90_W2S530	D Q L S A R F V F R N P N I T E Q
UniRef90_UPI0003707CCD	T I E K Q G F T I D N P S A T S
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UniRef90_W3RD22	D K M A A T F V F N N P N Q T S
UniRef90_UPI000371D058	S G M S G G F T I H N P N A
UniRef90_F8IGD1	D L T G Q G F K I N N P N A T
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UniRef90_I0KFW8	G L N G K G F Q F K N P N A S
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1 10 20 30 40

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UniRef90_UPI00034B56D9	V I L T E G A A D K V R A L L D Q E G D D L R L R I V F V Q P G G C S S G L R Y Q
UniRef90_A3UD18	A V T L T E A A A T R V K K L M A D R D L G Y L R I V F V Q R Q G G C S S G M S Y M
UniRef90_U9VNBO	I L M T E S A L N H V L A L K E K Q G D E L C L R I V F V R Q G G C S S G F Q Y G
UniRef90_G1XXB6	A M S L S A S A A K R V R K L A E M E G P D V M M R M L S V V S Q G G C S S G F Q Y G
UniRef90_E7C857	L E I T T S A V S R L S D L I A S K G K E L R L R I V F V Q R Q G G C S S G F Q Y G
UniRef90_S6EHX4	I S L S P R A L T H L R S L L D Q P E P K M I R I V F V Q R Q G G C S S G L T Y D
UniRef90_UPI00036A2865	A I N I T D K A A D H I R A L L A K S D N A V G I R I V F G V K N R G C S S G L T Y D
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UniRef90_A1USU5	T V S V S D F A A E R I A K I L S N E P N K I A L R I V F G V K N R G C S S G L T Y D
UniRef90_UPI00034BACD9	T V T L T D K A K S R I E E L R Q T E G P E H N I R I V F G V K N R G C S S G L T Y D
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UniRef90_L0B4L0	L I F T E S A V S K V K G L L E E N N P N L N L R I V F V Q G G C S S G F Q Y G
UniRef90_C7NIK4	V T L T P V A A E K V K S S L D Q E G D L R L R I V F G V Q P G G C S S G Y E Y Q
UniRef90_X5JNQ5	T V T L T E K A E S R I Q A F L A N S A N G K G I R I V F V Q P G G C S S G F T Y T
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UniRef90_Q1QSB5	M Y L T D A A A Q R L G A L V E E E G P G L K L R I V F V Q G G G C S S G F Q Y G
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UniRef90_C5BP46	V T V T Q N A V S K V K D L I D E E G P E L L K L R I V F V T G G G C S S G A G F S Y G
UniRef90_F8I4A8	I T L T D A D A V E K V R E F M T M K N E D L A R I V F V T G G G C S S G A G F S Y G
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UniRef90_UPI00018511F3	V I I T T E A A S F Q I K D M M K Q E E E G A F L R R I V F V N G G G C S S G L S Y G
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 S T M T P A A S A R M R A F L D K S P A A P G I R F G V K R T G G C S G Y A Y V
 T L T E S A V K A V G R F I S S S D K P T G L R I E V T D G G C S G L S Y G
 T M S D G V I A K V S E M L A E E N P N L R L R I V M I E A G G C N G F K Y K G
 H L S P A A T S E I K R L Q S N K L Q P L W F R V A I K A G G C S G L F Y D
 V E L T E A A A Y Q V K E M M N N E E E G S F L R I V R V G V T G G G C S G F S Y G
 I V F S D S A A N R V A Q L I K E E N P S L R L R I V R V Y I T G G G C S G F S Y G
 A L T L T P A A E Q R I A D L M A A A P D D I G V K L S T P R R G C S G L A Y S
 V T L S E K A A V E V P K K L V T E Q P E E T V L R I G V Q G G G C S G F S Y S
 I N L T D S A V N A I K S A I S S E R R A G G L R I V M I E A G G C N G F K Y K G
 V V L T P V A A G E V V K F M E A E G E K G G L R I V S V M P G G G C S G F K Y G
 N I T L T A S A A K H I N R L S A D A G H P V M L R I V M V E G G G C S S G F Q Y V
 L R I S D A V I S K V G A M I A E E G P N L K L R I V F V T G G G C S S G F Q Y V
 I V I S E P A A S K I K E M L A Q E E P E L F L R I V G V N E G G G C S S G F Q Y V
 S L H L T P A A V T R V K A L M A R A D Q P V G L R I V V A Q K G C S S G L S Y R
 T E V T P S A R E Q V K L K I M E K Q G P D S A R L Y V Q G G G C S S G L S Y R
 I V L T D S A A K H I C Q L V E E K N P E S Q G L R I V S I K P S G C T G Y G Y V
 A I T L T P E A L V Q L R K L R A E Q S E A M L L R I V R V G V K Q G G C S S G M S Y V
 A I Q L L S Q S A V I E Q L R F L S S S R G E G K L L R I V R V G V K N K G C S S G M S Y H
 M Q L S D T A A E R L Q K I Y A S G Q G E G K L L R I V R A V S T K G C S S G M S Y D
 M Q L T E A A A A R V R W L A E K Q G K P A I L R I V R E G G G C S S G F Q Y K
 V T L L A P A A L A R V Q H F L T E T P T A L G L R I V R F G V T R T G C S S G W Q H T
 T V A I I S E K A A E K I K Y F A S K D G E N V G L R I V A V V K G G G C S S G L T Y D
 I N L T D S A L N A V R T A I G S A G G P V G L R I V I Q V E A G G C A G G Y K Y Q
 A V T L L M E D A V E K I R S L L E E D E N G R D L K L R I V V F V G G G C S S G F Q Y G
 L T F T D S A A D K I K Q L I D E E N P K L K L R I V R V F V Q G G G C S S G F Q Y G
 L Q I T T E R A A L A R I R E I I A A N E G V D L G L R I V A V V P G G G C S S G L T Y E
 I T I T D K D A K E R I H S I M K S E D D S Y F V R I V A V E S G G G C S S G L S Y K
 T V T L L T E K A A F F R L R A F L Q G S E P E K G I R I S V K D G G G C S S G Y E Y A
 T V T L L T E K A A F H L R A L L R G S E P E K G I R I S V K D G G G C S S G L Q Y Q
 N I Q V T E K A A L K R I R A A M A K E G E Q G G G L R I V R V G I T G G G C S S G L S Y N
 V E V T L P E A A E Q A L S L M G G G E G M D T G L R I V R V F Q Q G G C A G G L S Y G
 V A V T L T E Q A A G E A L D L L E S E G D E S G L R I V R V F V T G G G C S S G F N Y T
 A I Y F S V S A A D K V A S L I E E E N P A L N L R I V R V F V T G G G C S S G L Q Y Q
 A I K L T E R A A E E V V K R F R K E H N D S M L L R I V R V A G G G C S S G F N Y T
 A I T L P S A R K A V S R F I K G N A D P A G V R I V A V T G G G C S S G L Q Y Q
 I Q F S E S A A L K V K D M I V E E G N N K L L R I V R V Y V T G G G C S S G F Q Y Q
 M T L T D R A A K R I V S L Y A N A H A G Q L L R I V R I G I S T K G C S S G H A Y D
 I T L L S P R A A D Q I R L M Q R E N D A K V L R I V L V E S G G G C S S G F Q Y G
 I N I L S E T A A G Q I K A M L A E E P D M F L R I V R L G V K S G G C S S G M S Y H
 T E L L S E R A A C H K I K E M L K E E P E E Q F L R I V R V G V K G G G C S S G F T Y S
 T L E N L T E G A V N K I H S L S S D K S K E I N L R I V R V Y V T G G G C S S G F Q Y G
 L K L T D S A A Q I I A L S A S D P H V K G L R I V K L Q S G G C A G F G Y V
 A I T L T E A A A L K N K R L R E D T G D E K V L R I V R L R M G V K S G G C S S G M S Y H
 A M E L L T E A A A S R I R E L L T K R E K Q Y L I K I G V R T R G C N G M T Y T
 T I T L L T E K A A E F R L R A F L A T Q E N Q S G V R I S V K N G G C S S G Y E Y G
 L T I T D A A A N H I L Q L I K N D S T M L G L R I L S I V K Q S G G C A G F N Y L
 I H T E S A A L Q V Q E M M K Q R P D A Q Y L R I V R V K Q G G G C T G L S Y Q
 I T L L T D N A A E E K V V Q Q L I E A E G D G L A L R I V R V A V R P G G G C S S G F S Y E
 I T L L T D A A A T R V N E I V A N S G P D A G I R I V R V S I V K K G G G C S S G F Q Y A
 V I I T E A A S H Q I K D M M K E H G E G S Y L R I V R V G V K G G G C S S G L S Y G
 A V T V L T E K A A N E I K R V L G E Q P E T T V L R I V R I G V R A G G G C S S G F Q Y N
 A I A I S E Q A A K R I R E I I N L D Q T D M A L R I V R V G V K S G G G C H G F Q Y K
 A L N L T P A A V L R L R S L L E S D S G P K L I R I V R V G V K N K G C S S G F Q Y H
 A V T L L S E K A A A E V K K I I I A E N G E K T I L R I V R V E V K K G G G C S S G F Q Y
 I T V T E K A K A R I D D L I K N Y D E S Y F L R I V R V S Q V G G G C S S G L S Y K
 I V L L A E S G A R R L A K L S E A E G K P V L L R I V R V A V D G G G C S S G F Q Y K
 I K V S D T A K K K V V E L M T D D G T S D Y V R I V R V G V K S G G G C S S G L S Y D
 L T L T D E A A A R V I R N I V A A R E G A A G I R I V R V G I K K G G G C A G M E Y T Q
 I S V S P G A A A R I T E I I S Q P D G L A L R I V R V A V L P G G G C S S G F Q Y Q
 N F T V T E T A A N E I K K I I A D E Q G E K G E P I L R I V R V P G G G C S S G F Q Y A
 I H L S P A A T C E I G R L K A K R Q L N V F L R I V R L E I K P G G G C S S G W I Y E
 I E L L T V T A E D K I R D L L A E E D E E L C L R I V R V F V T G G G C S S G F Q Y G
 I T L L T E S A K A S I N R F I S N A D K P A G L R I V R V E G G G C T G F H L D
 I T Q V T P A A A D R I I K T L L K D K P D A V G L R I V R V S V K D R G C T G F H L D
 I T V T S E K A K A D R I I L E I N R A D Q E N R R I V R V S V K G G G C S S G L M Y D
 I A L T P S A A A R V I A M I A G K Q G K P P I L R I V R V D G G G C S S G F Q Y K
 V T M T A R A A A Q I I K L M K K N E K I K G L R I V R V K P S G G C A G F A Y V
 I N L S A T A V Q E I Q R L Q S K Q N P N I L F R I V R V K P G G G C C S L C Y T
 T A T A I E R L I R S L L Q S P T P T H L R I V R V Q K G C A G M S Y H
 T V T L L T E R A E L R I R A F L A N P T D T K G I R I V R V S D G G C S S G Y Q Y T
 I T L L T D S A V Q A I I G R F I K G A D T S A G L R I V R V M I T G G G C S S G F Q Y G
 I T L L S Q A A I A E I I R R L Q K R Q P Q Q A R L R I V R V K P G G G C A D L Y Y T
 I T L L T H G A V K Q I R I K A E Q P E H Y G L R I V R V G K G G G C S S G F S Y M
 I S I S D R A A K R I H Q I R E E Q P R D A F L R I V R V V S G G G C S S G L T Y D
 T V I L T E K A E F R L I R A F L A N P S P D K G I R I V R V D G G C S S G Y Q Y T
 I T L L T E G A V K E I K K L R E Q P E D F G L R I V R V E G G G C A G M N Y I
 I E F S Q G A A A K V R A L M L E G D D S L L R I V R V F V T G G G C S S G F S Y G
 T V T L L T D A A A A K A K A I I D Q E G D D L R L R I V R V P G G G C S S G L R Y Q
 I T V T L T K S A A A Y E V K D M L Q Q D P G Y L K I V R V F V T G G G C T G L T Y G
 A I T L T P I A H Q R V I Q H F V Q T T P G A L G L R I V R V K T G G G C S S G W G H Y V
 N I A L T D A A Q E R I I L D L R D N M H K P A M I R I V R V Q G G G C S S G F E Y K

	50	60	70	80
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UniRef90_E0XTI0	F S F D E D I Q E D D T V I K N K G A S	L L V D S L S I Q Y L	V G A K V D Y L E E	
UniRef90_Q2J1H1	I G L D P A P R S D D A V V E A G G V K	V F V D P D S Q P L L	E N A V I D F T E D	
UniRef90_A8LLU4	I K L D D P A E D D L V L E G K G Q K V	V V V D A V S L I P F L	D F V E D F T E D	
UniRef90_UP1000478BB9E	M G F D D E K H A D D T E M E I Q G L	K V V V D D Y S L K F L	N G V E I D W K D	
UniRef90_FONY80	L S F D K E T K D E D K I F E D N G V R	V V V D K K S Y L Y L	V G G M T L E Y S G E	
UniRef90_G4QJK0	F T F D E K V N E G D M T I E K E S V T	L V I D P M S L Q Y L	V G G I V D Y T E	
UniRef90_H8L0X6	V D L A P E L A Q D D T L V E V E G V P	L V I R N D S L A L V	D G T C D F Q R	
UniRef90_UP100034B93F5	L R L E E K E G Q D D T V I D C G E	V K V F V D P L S L P K L	D G M S I D F V D	
UniRef90_H5WW25	F A F D D E N K P D D M L V T R G P V	T L V V D V D A M S L Q Y L	M G A Q I D Y E D	
UniRef90_UP10003653D0E	M S F E Q D I N H D D T T F E V C G I	Q V A I D R Q S E T Y I	N G L T L D Y S E	
UniRef90_M7ND04	L N F T R E R N E E D E Y L E L H G I	P I V V A K E D A G I L	N G T K I D Y K Q	
UniRef90_UP100014CBF04	F T F D E N L K E G D S G V N K Q G V E	L V I D P M S Y Q Y L	M G S T V D Y L E	
UniRef90_UP10003B42461	V D Y I S E A A K F D E V I E T A G G T	F I D G A S V L Y L	V G S V M D W K E	
UniRef90_L0DGM5	L N F D T A V S E R D R V I D V H G V	K L A V D K K F D P Y L	D G T V V D F Y D	
UniRef90_P37029	M G I I A D E P K P D D T V I D C D G L	K V F V D S K S R E H L	A G T T I D F V L	
UniRef90_C1A966	L V I E D A Q A E D D I L T V D V G G I	K I F V D P F S A Q Y L	S G T T I D Y V S	
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UniRef90_UP100036952A5	M G F D D E L R D N D R E L Q I E G L	K V V V D E D S A K Y L	N G L Q I D F K E	
UniRef90_H6SRZ1	V D Y A E D P R P L E E V V S Q D G A	T V F I E P G A V L Y L	I G S E M D Y Q E	
UniRef90_T1D2B8	M S F D T L Q T G D E V A Y R E H G L	T V V V D H A S A P L	E G L K V D F L M	
UniRef90_S5UTP3	I E L A A G P S E D D L V Y E H N G A K	L F V I A L K A M P F I	D G L V V D Y V R	
UniRef90_A8INX6	M D F E S Q T D D D H V I S Y D D G F	R L V V D P K S L L Y L	F G M Q L G Y S T	
UniRef90_R9ADM8	L E Y V E K P A R F D E V V E Q D G	G V K V L V D S K A L F S I	I G S T M D W V D	
UniRef90_H0A7B6	L S W A D E A G P T D E V V T D K G	V G V T L V D R K A T L F L	I G T T M D Y E V	
UniRef90_Q2N6L0	F E L A D A P E D D D L Q S E T E G V	A L V V D P V S L E L V	E G S T V D F V E	
UniRef90_A0A021WAM5	A D L A R E Q R E G D T V F E Q D G	G V R I Y V D P I S L P L	V E G T R I I D F L K	
UniRef90_UP10003801759	L K I T G D V V I E S E T I V E Q H G	V K V I V D K K S Y I Y L	V G T E I I D F S D	
UniRef90_A8III1	M G L V V D A E P P D D T V I E R E	E G V K V F V D N K S H E Y L	A G T T I D F V V	
UniRef90_UP10004632883	F A F D E R E E D D F F S I E S G G	G V T V V I D S R S L I P F L	A G A Q I R Y E E	
UniRef90_G2JB11	F T F E D E P V G D Y V F T A K N G V	Q L L I D S M S Y Q Y L	V G A E I D Y K D	
UniRef90_D0MKJ0	L G W D T T L Q E Q D L T A Q F D G	V Q V V I D R R S Y L Y L	K G T T L D F T D	
UniRef90_C2G2X3	L D F D N E E K K Q D F S E D K G	I K I C L D Q K S Y L Y L	A G T E L D Y S D D	
UniRef90_K8GH76	I D I A N A P R P D D I I E Q Q G K V	R L Y I D P R S A S L L	D G V V V D F V D	
UniRef90_UP100034A0F98	M E I T S K P Q P D D V V S Q E G K	V R I Y V D A K S A S L L	E G M I V D F V D	
UniRef90_UP10004669CFC	M D L V D R L R E K D I L I E A G E	A R L I V D P R S A L F L	A G S I L D Y S E	
UniRef90_I3ZM98	I R F D D S Q P R E R D R V Y D G D K	V Q I V F D P K S F L Y L	S G M T L D F E E	
UniRef90_V4Y6N0	M R F D D D P E E D D T I V T I Q G L	R V F V D D A S I D Y I	E G S T L D Y E G	
UniRef90_V5TJC4	M R F E H A P E E D D E V F E R N G L	R V F V D D A S I D Y I	E G S V L D Y E G	
UniRef90_UP10003194A3E	F T F F D E T I K E C D D T V I E Q H C	S D G Q V D S M S Y Q Y L	S E A E I D Y V E	
UniRef90_M5U781	L N F D D N F D E K S D K Y E H H G	V H G V A V V V D K K S A L Y	D G T E I V D W F D	
UniRef90_UP1000368CA40	V T L E G Q A R T D D L V V D C E G L	T I V L I D P A S A P M	A G V T V D F Q D	
UniRef90_E6QRS6	F A F D E S L N D D D T R I E K H G	V M L V V D A V S F Q Y Y L	A G A E I D Y E D	
UniRef90_D5QHF2	M S F V N E A G P G D E V V R D H G	V Q V V I D R K A T L F L	I G S V M D Y E V	
UniRef90_W0J633	M S F D E P K P D D A R F E S E G V	P M L V D P T S L A Y L	D G S V I I E F D D	
UniRef90_W4EF85	M G F D D T T E T Q D I Y M D V	G K V V V S K D D I R Y L	N G L E I D F F E E	
UniRef90_F5SKJ3	M G F D E N K S D K D T E L D L N G	G L V V I D R E S E P L	R G L Q I D Y K E E	
UniRef90_Q6SHR8	F S F D Q E V D E E D T C V S R D G	A N L V V I D P L S L Q Y L	A G S T I D Y A E E R	
UniRef90_UP100034A458B	M E L V K E P A E D D L Q F T H Q G A S	L F V P L Q A M P F V	D G T E I V D F V R	
UniRef90_10YVG2	M D F E K E R A E D D A V M E Y E D	G F K L V C D P K S L L Y L	F G M R I D Y S A	
UniRef90_C1MSB2	M N Y A D E K F D E V V T H E E S G	V K V I I D P G A S L M H V	G T K M D F V E	
UniRef90_D4TK1	I E I T S Q P Q P D D V T K Q G N V	V L L Y I D A K S A P L L	E G V E I D F I E	
UniRef90_J3Z5C4	L J E K A T N I N H N D Y V Y E K N G	A K L Y V P S Q A M P F L	D G T E I I D Y Q Q	
UniRef90_C4L4W0	M G F D E E K T D K D V Q F D H G	G V R V I V A E A D H G V	V D G L E I D Y K Q Q	
UniRef90_R4YWYC3	M F F D S E T D A E D V V S K A Y G	S I V V D P P S S A E M L	D G A T L D Y K	
UniRef90_UP100046393B5	V D L V E N I A D K D D H V E L N G A	T V W V D P A A S L Y L	I G T V M D F E V	
UniRef90_UP100030F8FC9	M G F E E A A P T E A D E Q L E Q H G	I K V I V A K E D A A I L L	N G T I I D F K E	
UniRef90_F0SGX9	L A L D D Q F D A K D E V V S E Q H G	V G V K I V A D K K S M L Y	D G T V V D Y Y D	
UniRef90_F4P7M2	L E L T Q E S Q P D D I L F E K D G	A V V L D A M S L D M L	N G S T V D F V D	
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UniRef90_E8QZ90	L G W D E S Y T E K D R V Q N F H G	V T V A V E K K F D P Y L	D G T V I D F Y E	
UniRef90_R9GQ93	M D F D N I A K S D D Q F F E D G	K G L K I A L D M K S F L Y	A G T E L D F T D	
UniRef90_F4QUZ4	F E L V D G P E A D D L V V R R D G	Q A V V I D P V S I P F L	K D S E I I A F V D	
UniRef90_A8UFF4	L K F D N D Q V E G D K V F E D N G	G V K I I V D K K S F L Y	L I G T T L E Y S G	
UniRef90_UP10004671D4E	V D L V T A A N P K D D H V E R D G A	H V Y V A P E A A L F L	L G T E M G F E T	
UniRef90_UP100046E6B98	F K L D T D R A A D D V V I E Q D G	A T V L V D P V S L D L L	D G A Q L D F I D	
UniRef90_C0QU17	M G F D E E I T E N D K V V E E N G	V K I V I D P Q S A P Y I I	G G A V L D Y V Q	
UniRef90_K9PLF6	M S F D E T V A A S D R I F N L N G	I Q L V V V D A K S S L D Y A D G L S V	D Y S E E	
UniRef90_M5DNM7	F T F D D D R A E D D T L I E K S G	V G V R V L L I D S L S Y G Y L	V G S V L D Y K E E	
UniRef90_A4VJ93	L K L E E Q G L D Q Q V D C G A F	T V V I I D D A S A P L L	D G V T M D F V D	
UniRef90_F2UF13	Y A Y D K D A K K F D E V I E Q H G	V K V I I D D S G A I L I R V	L H S T M D F S E	
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UniRef90_C4K8J7	M N M V E S T A N D D L L F E Q K E	A K L Y V P L K A M P F V	D G T E M D Y V S E	
UniRef90_Q118Z6	M Q F D T Q Q D S N D R V Y D Y G Q	V K V V V D S L Q N Y Y L	N G L I L D Y S E	
UniRef90_M5FSS1	L E Y V A K P G S F D E V V E Q E	G V Q V L I I D S K A L F S I	I G S E M D W R E	
UniRef90_P46053	L D I A N E P K P D D V I E Q Q G	R V K I I I D P Q A A A L I	N G V V V D F V E	
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UniRef90_B4VX06	L E F F D D A V R A S D R V Y D C Q	G V V V D E A S I K H T T L T L	R G A A V D Y S E	
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UniRef90_UP10003774FBDB	L D F A K D P Q E N D K T F E I N D	L K I I V D M R S F L Y L	A G T E L D Y T D	
UniRef90_B8HMA0	L D L T S A P G N E D L I E Q Q G R	V R L Y I I D A N S A P L L	N G V V I D F V D	
UniRef90_F4CDV3	L G F D Q R K E G D T E Y L I S G I	K V F M N K A H G L Y	A G M E I D F Q N	
UniRef90_D7CVH6	M A I D D R T L E G D S I L F E D R	G R V K I I V D K M S S L P L	A G S E I D Y I E	
UniRef90_E0XR52	F T F D T D V A E D D A V V K R G	D E T M V V D S M S Y P Y L	E G A S I E F V E	
UniRef90_C2GKH8	L F F D D R E L D G D T V D E F G G	G V K I I V D R M S A P Y L	A G S T I D Y A D	
UniRef90_H0DIB1	M S A E E E P G E N D E V L E F Y G	G L V K I I V D N Y D K P V	E G T T I D F K Q	
UniRef90_G7UV72	T D L A R E Q R P G D T V F E D R G	V K I I F V D A D S L A L V	D G T Q I D F G K	
UniRef90_A6GLW6	I D L A K E T D E D D I L V Q I N P	Y V I I Y V D Q V S A P Y L	E G T T I D Y E A	

90

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UniRef90_UPI00014CBF04	D L Q G A R F I V S N P N A K
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UniRef90_T1D2B8	G L E E S G F K I Y N P N A K E
UniRef90_S5UTP3	E G L N Q M F K F N N P K A Q N
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PP	D	A	V	D	P	D	D	Q	H	P	F	D	G	F	E	T	L	D	P	L	S	A	P	F	L	E	E	A	S	I	D	F	V	T						
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 L V L T R P A I A I E L R N S A K Q Q M E G M P L R V A A R Q D T D G S L Q Y A
 I N C T Q T A I E E L K R L K N N Y D D T S Y V R I K I E K G G C K D Y V Y Q
 I D I S E R A Q Q H F L R L L S Q Q G D D L S I R R V T A P G T P A A N C E
 I T I T D I A V K H F E K H L A K D S N I N G I V Y G T K L M G C S G L A Y D
 L V L T R P A I A I E L R N S A K Q Q M E G M P L R V A A R Q D T D G S L Q Y A
 S V T L S D S A R T F L I S Q K I E N K Q A D G L C F S V K S G C N G F R Y V
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 I E I T P P R A A K R L S E I M K D K N P Q L A L R I Q V E S S G G C H G F Q Y L
 N F Q M T P A A E R F I R L M L R A D G N A A G F R L V L S S P G G C S G L S A D
 I A V S A A L A F Q K F V E L I D E R K P T L G I R K L L S K G C G G N E Y G
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 L A Y C D E V N E T D E I L N L P K L K V Y I E K N S V N F L D E A F V D Y A T E
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50 60 70 80

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90

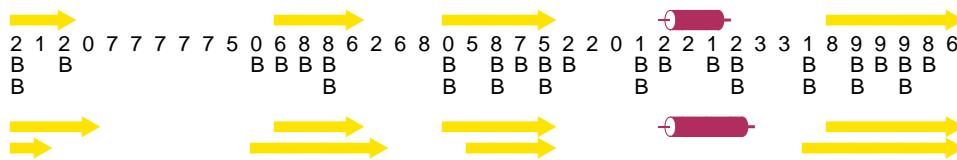
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UniRef90_E0WTU5	E [L] I G S Q F K V	
UniRef90_G3B3B5	N L I I S K K F T I E N Q N I S S K	
UniRef90_O96161	I P E E G F V V T N P	
UniRef90_U4WHK8	L P E E G F V I T N P	
UniRef90_U1WQX7	D D L R T Q I T I Q S P N [L] T N	
UniRef90_E8Q614	D I R G R G L A I D N P N A	
UniRef90_G2LTE8	D L M	
UniRef90_H3FSC0	UniRef90_UP100042BC979	D K [L] S S E F V F N N P N I K G
UniRef90_UP10004712203	[L] E S G E R F I F L N P N	
UniRef90_I2EUZ6	T E S G M G F T I E	
UniRef90_I5BXK8	G T D A R G F T F V N P D I	
UniRef90_F0YDS2	E M I R S A F V V H N P N S E S	
UniRef90_R7W3F6	D P L R S E F V F I N P N S K G E	
UniRef90_X4ZXC8	F P Q E G F V I T N P	
UniRef90_F4NOB2	UniRef90_UP100037D1BF4	D D R G T G F I I R G P
UniRef90_Q7RQ45	D D L T E N F I I F T N P N I T S	
UniRef90_E1X462	D [L] V N E G F V I T N	
UniRef90_UP1000287D583	F P Q E E G F V I T N P	
UniRef90_UP100036A69FE	[L] P E E E G F A I T N P	
UniRef90_H8Z014	D D G N Q H F I F L N P	
UniRef90_G0USF0	R N V E E K F T F R N P N Q K	
UniRef90_I3Z9Q5	G N D A R G F T F I N P D I	
UniRef90_K4CQX5	D K I L R S E F I F I N P N S K G Q	
UniRef90_F1SYT0	N [L] I S K K F T I	
UniRef90_Q4Z0F5	N L I I S K K F V I E N	
UniRef90_M1W570	E [L] I G S Q F K I D N P Y A T S	
UniRef90_E1QMC2	N G W Q Q G F M V S	
UniRef90_A0A017TFT5	G D A G A G F R L E S P N	
UniRef90_D8PEG2	D K G F T F V H P	
UniRef90_Q7X194	N M M S T S I V F K N P N A T S	
UniRef90_T0SR47	N F E E G G F V I T N K N	
UniRef90_K6VAC3	D D L T E R F I I F T N P N V T S	
UniRef90_C6IV32	F P E E G F V I T N P	
UniRef90_E0Y395	D [L] Q G A Q F I I I R N P N A	
UniRef90_W8YXV1	T P E E G F V V T N P A K G	
UniRef90_I3Y554	E P G Q F H F I F L N P	
UniRef90_UP100037EFD72	D G T N K K L T I T A P N A K G E	
UniRef90_UP100040E249C	R Q E A A G F V F N	
UniRef90_R5EFW3	N E Q G E D L T F H A P N	
UniRef90_I4W1R8	T V Q G E G L S L K F P G A	
UniRef90_UP100016C50E5	V D G N R G F I V T F P N A A G K	
UniRef90_F5LRX4	I P Q E E G F M I T N P	
UniRef90_Q89A55	E E C N S Q [L] T I A P Y A	
UniRef90_G8ZS96	E [L] I G S T F K I G G G N L K S	
UniRef90_UP100047A41EB	E Q G F V V	
UniRef90_U6MSY2	E D V Q T G F V F N N P N Q K	
UniRef90_L0P0Y9	E [L] I R S A F V V T N P S A V G	
UniRef90_UP1000376831F	E A G M F Q L K S P N	
UniRef90_E4TG64	N E Y G E G F A I I P E N A	
UniRef90_L5MRA6	D P V T G R F S I L H P	

Sequence alignment of UniRef90_0003FAF274 with various UniRef90 entries. The UniRef90_0003FAF274 sequence is shown in bold black at the top. The UniRef90 entries are listed on the left, and their positions are indicated by numbers 1, 10, 20, 30, and 40 along the top axis.

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
inssm

UniRef90_UPI0003FAF274 |L|D|L| D T P K E D D |V|V|V|S T D K G|I|D|V|L|L|K|S|G|E|D|M|L|D|G|I|I|I|D|Y|L|Y
 UniRef90_I0K753 |L|G|F| D|L|P|G|P|A|D|E|V|Y|L|I|D|D|V|R|V|I|I|D|K|R|H|L|L|Y|V|L|D|A|T|I|G|Y|E|E
 UniRef90_W0TQU1 M|G|F| D|E|P|A|D|T|D|K|R|I|Q|T|E|G|V|E|V|I|M|D|P|S|F|D|K|Y|L|D|E|C|V|L|D|F|V|E|Q
 UniRef90_N0AUD0 |I|K|F|D|E|P|T|E|H|D|E|I|V|K|T|D|K|G|I|D|I|L|L|D|K|R|E|E|Y|L|D|G|V|W|Q|Y|F|Q
 UniRef90_S9UDG3 F|S|F|T|E|L|T|A|D|D|L|L|V|K|E|T|D|V|V|K|V|V|V|D|S|S|V|E|K|L|E|N|A|V|L|D|Y|H|S
 UniRef90_B6AJT8 L|L|F|D|D|T|K|N|K|E|C|L|I|N|F|K|D|D|V|P|I|I|I|E|S|N|S|L|T|T|F|G|T|K|L|D|F|S|E
 UniRef90_UPI00042700B0 I|G|V|K|E|K|P|E|A|D|A|Y|V|L|Q|E|Q|G|I|Y|F|F|V|N|P|Q|D|Q|W|Y|L|D|G|M|I|S|Y|K|I
 UniRef90_UPI0004718A8A |L|T|L|A|K|G|E|E|N|D|I|T|E|I|V|N|G|I|E|V|A|M|D|P|K|V|V|E|V|R|T|L|T|L|D|Y|E|E
 UniRef90_K0J2P8 M|M|L|D|T|P|T|E|H|D|E|I|V|K|T|D|K|D|I|D|I|L|L|D|S|R|V|D|F|L|D|G|V|W|Q|Y|F|Y
 UniRef90_D0LZC3 |L|D|L|G|P|K|T|E|H|G|I|E|V|A|S|N|G|V|L|L|E|V|N|R|M|S|A|R|L|A|D|G|L|T|I|D|F|V|E
 UniRef90_S3DBZ8 T|Q|I|D|E|E|D|V|V|F|M|S|D|D|G|K|V|V|M|D|K|A|S|L|D|L|L|N|G|S|K|V|D|F|T|N|Y
 UniRef90_J3DZS0 |I|K|L|D|T|P|T|E|H|D|E|I|V|K|T|D|K|D|I|D|I|L|L|D|K|R|E|D|F|L|D|G|V|W|Q|Y|F|Y
 UniRef90_A4IB28 F|S|F|E|K|N|P|S|D|E|A|F|T|G|A|Q|P|S|P|R|V|V|V|D|T|L|S|A|S|K|L|E|N|A|T|L|D|Y|H|S
 UniRef90_Q0IB72 V|S|A|S|G|N|L|E|T|P|I|S|R|S|N|G|L|T|L|F|T|E|K|A|Q|A|N|N|L|K|N|I|T|M|D|Y|I|E
 UniRef90_UPI0002D90CDE P|E|A|V|P|G|D|D|V|V|S|A|D|G|A|T|V|Y|L|D|A|S|S|S|L|A|L|A|G|Q|C|L|D|V|E|P
 UniRef90_UPI0002627A93 |L|S|V|A|P|A|P|E|D|G|D|Q|V|V|G|A|D|G|G|K|V|F|L|E|P|Q|A|A|F|L|D|D|K|V|L|D|V|Q|Q
 UniRef90_E0TI0 R|F|N|K|R|K|Y|K|N|Y|D|L|L|K|I|K|N|L|I|I|I|D|F|I|S|Y|Q|Y|L|Y|K|S|Y|L|K|Y|K|N
 UniRef90_W4RS24 L|W|F|E|S|E|R|F|E|E|E|N|K|I|E|T|G|G|I|P|I|Y|M|E|K|K|E|V|F|F|A|E|E|M|T|I|D|Y|K|D
 UniRef90_UPI00046E846A |I|A|L|D|T|P|K|E|H|D|E|I|V|K|T|D|K|D|I|D|I|L|V|D|A|R|E|E|F|L|D|G|V|W|Q|Y|F|Y
 UniRef90_K0D6R1 Y|K|L|T|D|K|D|I|K|I|N|L|T|K|I|N|V|F|L|E|K|D|S|L|P|F|I|K|N|A|V|I|D|Y|I|I
 UniRef90_K1VOE2 M|E|L|T|E|E|K|G|T|D|D|Y|D|V|Y|D|A|D|R|N|D|A|I|E|E|I|A|P|G|I|T|V|V|I|P|S|K|S|I|A|S|L|R|G|S|R|M|E|V|G|E
 UniRef90_TOYI77 Y|D|V|Y|D|A|D|R|N|D|A|I|E|E|I|A|P|G|I|T|V|V|I|P|S|K|S|I|A|S|L|R|G|S|R|M|E|V|G|E
 UniRef90_C9R956 L|A|L|E|E|S|T|G|E|N|D|A|V|F|T|V|S|S|L|K|F|V|V|D|K|S|L|L|P|Y|V|K|E|A|V|V|D|Y|E|T
 UniRef90_W0GUP9 |L|R|R|I|R|A|G|H|L|A|G|V|A|I|A|R|A|D|G|V|T|V|H|A|P|A|E|Q|L|K|L|L|E|G|L|C|L|D|Y|R|G
 UniRef90_Q0TU4 E|V|V|L|D|E|Q|R|E|N|D|D|V|V|M|D|G|G|L|K|I|V|T|D|K|K|I|S|H|F|F|T|D|A|T|L|E|Y|K|N
 UniRef90_D3F3H1 |V|T|V|A|E|V|P|A|D|S|D|Q|V|L|D|E|A|G|A|R|V|F|V|E|R|A|A|A|L|L|D|K|M|D|A|Q|I
 UniRef90_Q75BA0 L|A|L|Q|P|R|P|E|S|Q|P|S|G|A|D|A|S|E|F|D|E|F|E|D|R|K|D|I|V|Y|V|L|E|V|V|I|D|H|A|S
 UniRef90_UPI00041BF085 L|T|L|D|Y|P|Q|E|H|D|K|I|V|K|T|D|K|E|I|D|V|L|M|D|S|R|E|D|F|L|D|G|V|W|Q|Y|F|Y
 UniRef90_UPI0004742E60 |I|N|L|G|E|A|Q|E|N|D|V|T|E|T|V|N|G|I|F|E|F|A|M|D|S|K|A|F|D|I|A|N|T|L|I|D|Y|V|E
 UniRef90_C5D420 L|W|L|V|D|E|A|D|E|D|D|I|A|V|E|T|N|F|V|P|V|F|V|E|K|S|R|L|V|F|Y|D|D|M|T|I|D|V|V|E
 UniRef90_UPI0003704F9F Y|L|F|F|D|Q|A|R|K|N|D|T|I|Y|H|S|H|G|V|S|I|R|V|D|P|F|T|K|R|Y|L|E|G|N|T|V|D|Y|S|D
 UniRef90_T2GCN0 |L|A|L|D|E|A|S|D|A|D|E|V|V|T|Q|G|D|Y|T|L|V|M|E|K|Q|L|Y|A|Q|A|K|P|L|T|D
 UniRef90_C9XJH4 |L|A|L|D|E|K|K|E|D|D|L|T|Y|E|V|G|E|L|Q|F|V|M|S|S|D|E|Y|S|Q|Y|G|D|I|I|I
 UniRef90_E1YC11 |M|A|L|D|E|K|G|D|N|D|S|T|F|K|V|D|G|I|Q|Y|L|I|D|K|N|L|F|I|K|A|Q|P|I|S|V|D|Y|G|T
 UniRef90_C7MPU6 |L|S|I|A|S|A|P|E|E|G|D|Q|V|L|G|T|D|G|A|R|V|F|L|E|P|Q|A|A|L|F|L|D|D|K|V|L|D|V|Q|Q
 UniRef90_E8Nb3 |L|S|V|V|D|G|P|Q|P|Q|D|A|V|V|E|H|A|G|A|R|V|F|L|D|T|D|A|A|A|V|L|D|D|R|V|L|D|A|Q|I
 UniRef90_W9VFG1 M|G|F|D|E|L|T|E|D|D|I|R|M|T|C|E|G|I|E|V|I|M|T|P|E|Q|V|P|L|L|D|Q|A|T|M|D|Y|V|E
 UniRef90_Q4XKX1 |P|I|K|K|E|E|I|E|D|D|D|Y|I|Q|Q|F|D|E|L|K|F|I|S|L|D|S|T|S|V|I
 UniRef90_F4F7B1 |V|E|L|V|A|E|P|V|E|G|D|Q|V|V|D|T|Q|G|A|R|I|F|L|D|S|D|A|A|D|L|L|G|D|A|S|V|D|A|S|V
 UniRef90_E5YAC0 |L|A|L|D|E|P|G|E|D|D|E|T|S|E|D|N|G|L|T|L|C|I|N|K|E|L|A|E|K|V|G|A|V|T|V|D|F|S|E
 UniRef90_UPI000369FAAE V|A|V|S|E|K|D|E|R|D|V|D|I|A|S|N|K|F|Q|F|I|A|D|R|T|K|L|V|F|M|D|D|N|L|T|V|D|F|S|E
 UniRef90_B8IZ89 |L|A|L|D|A|A|T|E|D|D|Q|S|E|E|Q|G|G|F|T|F|C|I|N|K|D|L|L|G|Q|I|E|G|V|K|I|D
 UniRef90_S6EJ75 |I|Y|C|D|Y|K|S|E|D|D|I|E|V|L|I|N|D|V|N|F|V|I|S|K|K|D|E|R|L|C|N|D|I|E|I|K|Y|D|K

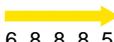
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 lupas_14
 lupas_28
 jnet
 conf
 sol25
 sol5
 sol0
 jhmm
 jpssm



90

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UniRef90_W0TQU1	L D D G S Q F V F L N P
UniRef90_N0AUD0	V P K E E F I I T N P
UniRef90_S9UDG3	E L K G S A F V V
UniRef90_B6AJT8	N E L D S Q F T F Y N
UniRef90_UPI00042700B0	D L L H F E N P N I
UniRef90_UPI0004718A8A	D E H G A G L F I S
UniRef90_K0J2P8	V G D N P G F Q I V N N T K G
UniRef90_D0LZC3	E G L Q R G F R M D N P N
UniRef90_S3DBZ8	E L I G S Q F K I D N P L A T S
UniRef90_J3DZS0	V P E E G F V I T N P
UniRef90_A4IB28	E L K G S A F V V
UniRef90_Q0IB72	N L A G G S F V F S
UniRef90_UPI0002D90CDE	T P T G S S F T L S P Q A
UniRef90_UPI0002627A93	D E Q G Q
UniRef90_E0TIRO	T F E K S N F I I F N P E V K
UniRef90_W4RS24	T A G C F Q L K S P N
UniRef90_UPI00046E846A	V P Q E E F V I T N P A K D
UniRef90_K0DGR1	D R L G G K L T I Q I P K I
UniRef90_K1V0E2	
UniRef90_TOYI77	D G G L V I V N P N
UniRef90_C9R956	T W W G S T F T I S S P R A S S
UniRef90_W0GUP9	D L S G G G F L R N
UniRef90_Q0TUU4	T I L G K K F K I
UniRef90_D3F3H1	D G S R V G F Y I
UniRef90_Q75BA0	E L I G S T F R I I G G K M T S
UniRef90_UPI00041BF085	I P T E G F K I T N
UniRef90_UPI0004742E60	D Q Q G A G L V I S
UniRef90_C5D420	G T S S F L L K S P
UniRef90_UPI0003704F9F	T D G F Q V I N
UniRef90_T2GCN0	
UniRef90_C9XJH4	E D T G F G F R V I P E N M K D Q
UniRef90_E1YC11	N G F L S G L K F D
UniRef90_C7MPU6	D E E G Q
UniRef90_E8N9B3	D P Q G S Q F A V T
UniRef90_W9VFG1	E P G Q F H F I F L N P
UniRef90_Q4XKX1	
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UniRef90_E5YAC0	G M T H M G F V V E
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UniRef90_S6EJ75	E L Y N N G F Y I R

lupas_21
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 4 8 8 8 4 6 8 8 8 5 3 6 7 8 8 9 9
 B B B B B

