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QUERY	S K S K M V R T K F D R A C H W T V V I C F F L V A L S G S F F F P T Q
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QUERY				
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130 140 150 160

QUERY	S M I F V L L V T G V I I W R P Y F A Q Y F P M Q V V R Y S L L I H A A A G I I		
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UniRef90UPI0003B3BB78	L C M I G L L L S G L V I W R A Y F S I L Y F P I G V I R A A A V L H A I C A F V		
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UniRef90_Q3KCR4	L C M L G L L F T G L V I W R A Y F S H Y F G I T T I R W A M L L H A L A G F V		
UniRef90_A6F9U5	F C G V F I I I F S G F I L D F P L F G Q T R R D M E I S N L V H L S A L V L		
UniRef90UPI000364572F	G A T L V M L G T G L L M M W F T H L T P I M W R T S A T F V H D W L A L T		
UniRef90_A0A0241HV6	F F F G L I V V G S G L F L D K L L P V E F T R A N M Q V A H M I H A S A A A A L		
UniRef90UPI000365D992	W I A G A V L V M M F T G L L M M W F T G L P L I S R T S A I F V H D I L A W A		
UniRef90_L8J477	F F G A F I T V S G F V L D F P L F G Q T R R D M E I S N L V H L S A L I L		
UniRef90_A8UVJ5	V V F I I S A I V F F L T G I V I W F Q E D F S M G L V R W S V V I H E A F I V A		
UniRef90_A8GZN1	V T S I A L T I T G I M M W Q P Y F A P Y F E A S A I Q W A I L I H A I C A V I		
UniRef90UPI000470D0B4	W I A G A T L V M L G T G L I M W F T H L T P I V W R T S A T F V H D W L A L T		
UniRef90_D9WYF5	Y I S G A V L V M A G T G L L M W F T D L A P L V W R I S A T F V H D W L A L A		
UniRef90_D7BSL4	L C M L G L F A S G I V I W R E F F A F Y F P I W V V V R A A S V L H A V C A L V		
UniRef90_V9RPK3	A C L L L L L A S G I V I W R R Y F S F Y F P I E V I R L A A V V H A A S A F V		
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UniRef90_J3CNX3	L L L G S I V I G S G L F L D K L L P G F Y T R G E M Q I A H M V H A V A T L L		
UniRef90UPI0004721CA3	L T S V V L T V T G F I I M W Q P Y F A P H F S P E V V V Q W A I F F H A L C A I V		
UniRef90_C6N6M0	T A G V A L C I F S G L V L D F P N F Q E R E I I I Q I A H L I H L L T G L V		
UniRef90UPI0002E8B96C	I T A L C L I G S G I I I W N T G W F P N W L V D I G Y P V H A I S V G L		
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UniRef90UPI000377BB42	L C M L V L L V T G F I I W R Q Y F S H L F G I E L I R L I A S S L L H A F A A W V		
UniRef90_G5H468	Q L V L S V V I V V S G S G L I L W M G D S I L P A T I T S A A I P V H S I G A A I		
UniRef90UPI000472A944	I S M V G L I I L S G L I I M W R E Y F S S M Y F P V D V L V R A A S V L H A T F A L I		
UniRef90UPI0002895185	L C V P L L L I T G V L I M W Q P L V G E E V P I T L R R L I A S M G H A Y L A F L		
UniRef90_H5WJH7	C V P G L V V V V A S G L I I L D Q L L P G L Y L R G D M Q L I A H M F H A V A A V V		
UniRef90_J0UJX1	I F M I G L L I A T G V V M W R E Y F S A F F P I W A I R L A S V L H A A C A L L		
UniRef90_K4KUL3	I T I L G S V F I T L S G F I I M W S P H V F P D Q L V R I A Y P V H D M S M F M		
UniRef90_J7IXV2	I T I F G T I F V T L S G V V M W W A P H F P P S L V R W A Y P V H D L L S V F I		
UniRef90_A2SEZ5	F A L G I V V V V G S G L V L D K L I P G L Y T R G D M Q I A H M I H A V A T V L		
UniRef90_N6YE96	T F L G L A V V I S G L I I L D F P N I G E W T R S D M Q T A N I V H A I G A I L		
UniRef90_M1SH57	T A P K E G A L W D T D M I V P F M D V Q Y L R G T M Q L A N I I H S S A A I L		
UniRef90UPI00046FD64F			
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UniRef90UPI00037B0AB6	W I A G A T L V M L G T G L I M M W F T H L T P L M W R T S A T F V H D W L A L T		
UniRef90UPI000366B70B	L C M P L L L S G I V I W R V Y F S A Y F P I E V I R V S A V V H A I C A F A		
UniRef90_A0A052J4S0	I C M L G L V L L S G I V I W R A Y F A F Y F P I I D G I R V A S L L H A V F A F V		
UniRef90_V5PV06	L C M I G L L L S G I V I W R A Y F A F Y F P I I W A I R L A S D V H A V C A F V		
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UniRef90_A0A021XH71	G A I G V L L L T G V V M L S T D L A P L S W R T G A T L V H D W T A L A		
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QUERY	170	180	190	200
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UniRef90_L8JCR8	I I C A I I V H Y A A L W V K G S I G A M V R G T V T Y G W A R K H H P K W F			
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UniRef90_M3ESM1	M M A L I C G H I Y M G V G M R G A Y R A M K T G Y V S E G W A R E H H A L W Y			
UniRef90_H0PYJ3	L V C A I V V H Y A A I W I K G S V R A M T Q G K V T Y G W A Y K H H R Q W F			
UniRef90_D5X7U7	L I A L S L G H I Y M G I G V Q G A Y Q S M R T G Y V D E T W A K E H H E S W Y			
UniRef90_UPI0003720254	T F S A A L G H A Y M A C G L P A T R H G M L S G Y V K E E W A R H H Y P L W V			
UniRef90_J3CVJ4	S L F I F I A H V Y A A I W T R G T I S A M T R G T V T G G W A F R H H R K W F			
UniRef90_K0I359	M M C L F L G H I Y L G V G M Q G A Y K A M R T G Y V D E T W A K E H H E Y W Y			
UniRef90_Q21TD6	M M V M F M G H I Y M G V G M Q G A Y K A M R T G Y V D E T W A K E H H E L W Y			
UniRef90_J6U9N1	M I C M F L G H I Y M G I G T K D A Y E G M R T G Y V D E G W A K E H H A L W L			
UniRef90_C5CWR6	M I C I V I V H V Y G A L W A R G T M T A M L K G R V T G G W A W R H H R K W L			
UniRef90_A1VKH6	M M A M L M G H I Y I G L G M T G A Y K A M R T G Y V D E T W A R E H H E L W Y			
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UniRef90_D0YZN8	M I C M S L G H I Y I G I G M E G A Y R A M R D G Y V D E A W A R E H H V L W Y			
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UniRef90_A6F9U5	I C G F I F H I Y V G L V G L E A S L E G M V T G E V D E T W A K E H H D I W Y			
UniRef90_UPI000364572F	I G I V L V G G H I G M A I L G D P E A R A G L R T G S V S R E W A K R E H P L W			
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UniRef90_UPI000365D992	I T F V V L V G H I L R K A F E D P E A R L G M R T G Y V S P S W A R R H H S R W L			
UniRef90_L8J477	I C G F I F H I Y I G L F G M E A A L D G M I T G E V D E T W A K E H H D L W Y			
UniRef90_A8UVJ5	G A F T I I H Y M G T I L G V P G S L W G M I G G K V S A T W A R F H H P R W Y			
UniRef90_A8GZN1	M L I F V I V H F W M A T W V E G S V A G M L Y G Y V S R A W C K K H H P N M L			
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UniRef90_D7BSL4	V G I V L V L G H I G M A L L G D P E A R R G L R T G T V D R R W A A R E H P L W R			
UniRef90_V9RPK3	L I C A I I V H I Y A A I W V K G S I T A M L R G Y V T A G W A W K H H R A W F			
UniRef90_UPI000346B626	L I I G I V V H V Y A A L W V K G S I L G A M V R G T V T G W A R K H H P R W F			
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UniRef90_C6N6M0	L I S F S F G H I Y I G I G T E G A L E G M T T G Q V D V A W A E Q H H D L W L			
UniRef90_UPI0002E8B96C	A V A V V V G H I Y L G T L A K E A L G G M I K G D V P E E W A K E H H G R W Y			
UniRef90_V6JKY4	V G L V L V G H I G M A F A D P E A R R G M R T G S V E R P W A E R E H P L W K			
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UniRef90_UPI0002895185	A I I T L I I H I Y S G I W V K G S F Q A M V R G R V S K A W A R H H D L W Y			
UniRef90_H5WJH7	M M V A L T G H I Y M G V V G V K G A L E G M K T G W V D E A W A Q E H H V L W Y			
UniRef90_J0UJX1	M I C A I I V H I Y A A G I W V K G S V K A M T R G T V T R A W A W K H H R A W F			
UniRef90_K4KUL3	M V A A L M G H I Y L S L L H P E S R A G M L K G Y V S E K F A K A H H A A W Y			
UniRef90_J7IXV2	M T A A A I I G H I Y L G L L H P D S R S G M L N G Y V S K R F A K A H H A Q W Y			
UniRef90_A2SEZ5	M M A M F L G H I Y L G L T G M K G A Y R A M R D G Q V D A A W A R E H H E L W Y			
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UniRef90_UPI0002F5D3E7	A L L I F I V H V Y A A I W T R G T I R A M T R G T V T G G W A F R H H R K W L			
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210

QUERY	R E I E K A E A K K E S E E G I
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UniRef90_Q1QW89	E E V K A N A G Q P Q Q S D P
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UniRef90_L8JCR8	R E L F A K K A P N K K T Q
UniRef90UPI0002377E66	A D V Q A G K I P R Q R
UniRef90_M3ESM1	R D I L R G R R E E
UniRef90_H0PYJ3	D E V K A G R S S H P
UniRef90_D5X7U7	K K V K G D Q A
UniRef90UPI0003720254	K E L A R R K R K D E P S
UniRef90_J3CVJ4	D D I K A G N I P A Q R S
UniRef90_K0I359	D D I Q A G K I P K Q R S
UniRef90_Q21TD6	D D I K S G K I P A Q R S
UniRef90_J6U9N1	R E L A A D K A D R G S T T P
UniRef90_C5CWR6	D D I A A G K I P A Q R R
UniRef90_A1VKH6	D D I K A G R I P A Q R S E P
UniRef90UPI00047B3424	D D V A A G K I P A Q R S T P
UniRef90_F7VDE8	D E V K V P A P D A P V K
UniRef90_F6FZ87	D D I Q A G K I P A Q R S R
UniRef90_D0YZN8	R E L E A G K K
UniRef90_S6ESI8	R E
UniRef90UPI00047B559E	D D V K A G R I S A Q R S E P V
UniRef90_H0BTQ8	D D V Q A G K I P R Q R S
UniRef90_F4L8S1	D D I K A G K I P A Q R R
UniRef90_A0KX02	E E H E E K
UniRef90UPI00047E37F	E D I K A G K I P A Q R T R P
UniRef90_B1Y5T3	D D I K A G R I P A Q R S R G G
UniRef90_F4HDF7	R E E I K P I L E R E E Q Q
UniRef90_E8UOP9	D D V R S G K I P A Q R S
UniRef90_U3QUD2	D D I K S G K I P A Q R S T G
UniRef90_H1SAI2	D D I K A G K I P V Q R
UniRef90_C6CEI2	R E L Q S K G Q D N Q
UniRef90_Q3ADY5	N E V K Q E K Q V R G K E K
UniRef90_Q609M5	R E L V T R S T G K K S
UniRef90_W6RMP1	K Q V T E G E K
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UniRef90_UP1000361D34B	W L T N L F G G G A W T R I I L H P F I G V A M F L F F I L A L R F M H H N I L	
UniRef90_M7PJ46	A K W A H N I L P V F S V A L L V I L V K W F K E N L F	
UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G Q S E L A K Y M H N F V S F S F V V G L G L I V V M F I K D N F P	
UniRef90_I4AD73	P V M A I V G G I E N A R M I H R V V G L K F F I G D T K H H W Q W I R S V F W	
UniRef90_C9KL28	F L Y E A F G A E T L Q T M H I L G V I F I L N P I V A L L I T I R E V L R F	
UniRef90_W7WTE5	I G T T L F L G W L T F A K N A H N F M G P L F A V S L L I V V V T F I K D N I A	
UniRef90_C6CDL8	E T F G T P Q M G R I M H P F F G I L I V V C L I P M F F R F V G H N I P	
UniRef90_X4IT31	W L T Q T F G T P Q M G R I L H P F F G I A X X X X X M F M F V R F V H H N I P	
UniRef90_P44451	W L T E I L G T P Q I A R A I H P F T G I L M F F A F I Y L L A L Y W D H N I P	
UniRef90_D5RKZ1	L L L P L I G P E A W G K V A H N F L A F P F T L G L V L L L L W A K D N I P	
UniRef90_C7PVL9	L A Q A V G R R H L M V T V H E W S G I L L P A P V L L G L L D L R R L N R F	
UniRef90_UP1000361D34B	W L T N L F G G G A W T R I I L H P F I G V A M F L F F I L A L R F M H H N I L	
UniRef90_M7PJ46	A K W A H N I L P V F S V A L L V I L V K W F K E N L F	
UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G Q S E L A K Y M H N F V S F S F V V G L G L I V V M F I K D N F P	
UniRef90_I4AD73	P V M A I V G G I E N A R M I H R V V G L K F F I G D T K H H W Q W I R S V F W	
UniRef90_C9KL28	F L Y E A F G A E T L Q T M H I L G V I F I L N P I V A L L I T I R E V L R F	
UniRef90_W7WTE5	I G T T L F L G W L T F A K N A H N F M G P L F A V S L L I V V V T F I K D N I A	
UniRef90_C6CDL8	E T F G T P Q M G R I M H P F F G I L I V V C L I P M F F R F V G H N I P	
UniRef90_X4IT31	W L T Q T F G T P Q M G R I L H P F F G I A X X X X X M F M F V R F V H H N I P	
UniRef90_P44451	W L T E I L G T P Q I A R A I H P F T G I L M F F A F I Y L L A L Y W D H N I P	
UniRef90_D5RKZ1	L L L P L I G P E A W G K V A H N F L A F P F T L G L V L L L L W A K D N I P	
UniRef90_C7PVL9	L A Q A V G R R H L M V T V H E W S G I L L P A P V L L G L L D L R R L N R F	
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UniRef90_M7PJ46	A K W A H N I L P V F S V A L L V I L V K W F K E N L F	
UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G Q S E L A K Y M H N F V S F S F V V G L G L I V V M F I K D N F P	
UniRef90_I4AD73	P V M A I V G G I E N A R M I H R V V G L K F F I G D T K H H W Q W I R S V F W	
UniRef90_C9KL28	F L Y E A F G A E T L Q T M H I L G V I F I L N P I V A L L I T I R E V L R F	
UniRef90_W7WTE5	I G T T L F L G W L T F A K N A H N F M G P L F A V S L L I V V V T F I K D N I A	
UniRef90_C6CDL8	E T F G T P Q M G R I M H P F F G I L I V V C L I P M F F R F V G H N I P	
UniRef90_X4IT31	W L T Q T F G T P Q M G R I L H P F F G I A X X X X X M F M F V R F V H H N I P	
UniRef90_P44451	W L T E I L G T P Q I A R A I H P F T G I L M F F A F I Y L L A L Y W D H N I P	
UniRef90_D5RKZ1	L L L P L I G P E A W G K V A H N F L A F P F T L G L V L L L L W A K D N I P	
UniRef90_C7PVL9	L A Q A V G R R H L M V T V H E W S G I L L P A P V L L G L L D L R R L N R F	
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UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G Q S E L A K Y M H N F V S F S F V V G L G L I V V M F I K D N F P	
UniRef90_I4AD73	P V M A I V G G I E N A R M I H R V V G L K F F I G D T K H H W Q W I R S V F W	
UniRef90_C9KL28	F L Y E A F G A E T L Q T M H I L G V I F I L N P I V A L L I T I R E V L R F	
UniRef90_W7WTE5	I G T T L F L G W L T F A K N A H N F M G P L F A V S L L I V V V T F I K D N I A	
UniRef90_C6CDL8	E T F G T P Q M G R I M H P F F G I L I V V C L I P M F F R F V G H N I P	
UniRef90_X4IT31	W L T Q T F G T P Q M G R I L H P F F G I A X X X X X M F M F V R F V H H N I P	
UniRef90_P44451	W L T E I L G T P Q I A R A I H P F T G I L M F F A F I Y L L A L Y W D H N I P	
UniRef90_D5RKZ1	L L L P L I G P E A W G K V A H N F L A F P F T L G L V L L L L W A K D N I P	
UniRef90_C7PVL9	L A Q A V G R R H L M V T V H E W S G I L L P A P V L L G L L D L R R L N R F	
UniRef90_UP1000361D34B	W L T N L F G G G A W T R I I L H P F I G V A M F L F F I L A L R F M H H N I L	
UniRef90_M7PJ46	A K W A H N I L P V F S V A L L V I L V K W F K E N L F	
UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G Q S E L A K Y M H N F V S F S F V V G L G L I V V M F I K D N F P	
UniRef90_I4AD73	P V M A I V G G I E N A R M I H R V V G L K F F I G D T K H H W Q W I R S V F W	
UniRef90_C9KL28	F L Y E A F G A E T L Q T M H I L G V I F I L N P I V A L L I T I R E V L R F	
UniRef90_W7WTE5	I G T T L F L G W L T F A K N A H N F M G P L F A V S L L I V V V T F I K D N I A	
UniRef90_C6CDL8	E T F G T P Q M G R I M H P F F G I L I V V C L I P M F F R F V G H N I P	
UniRef90_X4IT31	W L T Q T F G T P Q M G R I L H P F F G I A X X X X X M F M F V R F V H H N I P	
UniRef90_P44451	W L T E I L G T P Q I A R A I H P F T G I L M F F A F I Y L L A L Y W D H N I P	
UniRef90_D5RKZ1	L L L P L I G P E A W G K V A H N F L A F P F T L G L V L L L L W A K D N I P	
UniRef90_C7PVL9	L A Q A V G R R H L M V T V H E W S G I L L P A P V L L G L L D L R R L N R F	
UniRef90_UP1000361D34B	W L T N L F G G G A W T R I I L H P F I G V A M F L F F I L A L R F M H H N I L	
UniRef90_M7PJ46	A K W A H N I L P V F S V A L L V I L V K W F K E N L F	
UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G Q S E L A K Y M H N F V S F S F V V G L G L I V V M F I K D N F P	
UniRef90_I4AD73	P V M A I V G G I E N A R M I H R V V G L K F F I G D T K H H W Q W I R S V F W	
UniRef90_C9KL28	F L Y E A F G A E T L Q T M H I L G V I F I L N P I V A L L I T I R E V L R F	
UniRef90_W7WTE5	I G T T L F L G W L T F A K N A H N F M G P L F A V S L L I V V V T F I K D N I A	
UniRef90_C6CDL8	E T F G T P Q M G R I M H P F F G I L I V V C L I P M F F R F V G H N I P	
UniRef90_X4IT31	W L T Q T F G T P Q M G R I L H P F F G I A X X X X X M F M F V R F V H H N I P	
UniRef90_P44451	W L T E I L G T P Q I A R A I H P F T G I L M F F A F I Y L L A L Y W D H N I P	
UniRef90_D5RKZ1	L L L P L I G P E A W G K V A H N F L A F P F T L G L V L L L L W A K D N I P	
UniRef90_C7PVL9	L A Q A V G R R H L M V T V H E W S G I L L P A P V L L G L L D L R R L N R F	
UniRef90_UP1000361D34B	W L T N L F G G G A W T R I I L H P F I G V A M F L F F I L A L R F M H H N I L	
UniRef90_M7PJ46	A K W A H N I L P V F S V A L L V I L V K W F K E N L F	
UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G Q S E L A K Y M H N F V S F S F V V G L G L I V V M F I K D N F P	
UniRef90_I4AD73	P V M A I V G G I E N A R M I H R V V G L K F F I G D T K H H W Q W I R S V F W	
UniRef90_C9KL28	F L Y E A F G A E T L Q T M H I L G V I F I L N P I V A L L I T I R E V L R F	
UniRef90_W7WTE5	I G T T L F L G W L T F A K N A H N F M G P L F A V S L L I V V V T F I K D N I A	
UniRef90_C6CDL8	E T F G T P Q M G R I M H P F F G I L I V V C L I P M F F R F V G H N I P	
UniRef90_X4IT31	W L T Q T F G T P Q M G R I L H P F F G I A X X X X X M F M F V R F V H H N I P	
UniRef90_P44451	W L T E I L G T P Q I A R A I H P F T G I L M F F A F I Y L L A L Y W D H N I P	
UniRef90_D5RKZ1	L L L P L I G P E A W G K V A H N F L A F P F T L G L V L L L L W A K D N I P	
UniRef90_C7PVL9	L A Q A V G R R H L M V T V H E W S G I L L P A P V L L G L L D L R R L N R F	
UniRef90_UP1000361D34B	W L T N L F G G G A W T R I I L H P F I G V A M F L F F I L A L R F M H H N I L	
UniRef90_M7PJ46	A K W A H N I L P V F S V A L L V I L V K W F K E N L F	
UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G Q S E L A K Y M H N F V S F S F V V G L G L I V V M F I K D N F P	
UniRef90_I4AD73	P V M A I V G G I E N A R M I H R V V G L K F F I G D T K H H W Q W I R S V F W	
UniRef90_C9KL28	F L Y E A F G A E T L Q T M H I L G V I F I L N P I V A L L I T I R E V L R F	
UniRef90_W7WTE5	I G T T L F L G W L T F A K N A H N F M G P L F A V S L L I V V V T F I K D N I A	
UniRef90_C6CDL8	E T F G T P Q M G R I M H P F F G I L I V V C L I P M F F R F V G H N I P	
UniRef90_X4IT31	W L T Q T F G T P Q M G R I L H P F F G I A X X X X X M F M F V R F V H H N I P	
UniRef90_P44451	W L T E I L G T P Q I A R A I H P F T G I L M F F A F I Y L L A L Y W D H N I P	
UniRef90_D5RKZ1	L L L P L I G P E A W G K V A H N F L A F P F T L G L V L L L L W A K D N I P	
UniRef90_C7PVL9	L A Q A V G R R H L M V T V H E W S G I L L P A P V L L G L L D L R R L N R F	
UniRef90_UP1000361D34B	W L T N L F G G G A W T R I I L H P F I G V A M F L F F I L A L R F M H H N I L	
UniRef90_M7PJ46	A K W A H N I L P V F S V A L L V I L V K W F K E N L F	
UniRef90_UP10004027A79		
UniRef90_E7RXY5	T Q L F G G G P W T R I I L H P Y F G V G M A F F F I I M A A R F W K L N Y I	
UniRef90_X6EWJ4	P L M P I I G	

	90	100	110	120
UniRef90_A5F821	N K V D V Q W F M K L G G M V G K Y K G T H P S A G F S N A G E K			
UniRef90_M1E900	T P E D K K W M K V F G G Y L S P K A K E I P P Q G K I N A G Q K L L G W			
UniRef90_X2H7R8	N K A D I V W I K N F K H V I M G K E E G I P I G K Y N V G Q K F L F W C I M			
UniRef90_UP1000467914A	V P A D W D W L K R S D R R A V Q Q G G R G I L P V G K F N A G Q K L N A A F T A			
UniRef90_W5IPS1	D R S D V Q W L K Q W R D V V G N H E E N L P A V G R Y N A G Q K L L F W T L L			
UniRef90_U7P356	K K H D L E W F A K G G G L V G K G H P D A G F A N A G E K V W Y W L L A			
UniRef90_F7SM96	K K H D W V W F K K A G G L T G K H H P D A G F A N A G E K V A W Y W L L A			
UniRef90_H0J14	G R E D A Q W L K Q I N D V L N N R E E K L P P L D K Y N P G Q V I R F W R H N			
UniRef90_D9XT26	G P H D R I W L R A A L R R D K R P S S R P A G K F N A G Q K L Y A A			
UniRef90_F1W3D0	A K E D L Q W L F R L L G G M F G G K H A S S G R F N A G E K L W F W T G V			
UniRef90_C7Q9Q5	T E T D R E W L R S H A W R R E R A R E L A L P V G K F N A G Q K L N A A F Q C			
UniRef90_S9RT35	R G I D L Q W I L K G G G L F G D G H A P P S H R F N A G E K L W F W G G L			
UniRef90_A1WBF0	N R A D F V W L S K A G G M F T N K E V P S H R F N A G E K G M F W W G I			
UniRef90_UP1000315AA00	N K T D I S W F M K M G G M V G K H K G T H P S A G F S N G G E			
UniRef90_H1RNN7	V R E D R I W V E N V K T V V A G D H S Q R L R G K Y N A G Q K L L F W G I M			
UniRef90_Q47F19	T P A D K E W L S K A K Q M V D G D D H N M P E Q G K Y N G G Q K V M F W V M A			
UniRef90_K1Y606	D A D D L G W F M V A G G Y L S H K V T V P P M G K Y N P G Q K L Y Y			
UniRef90_UP1000303D59B	D K N D R Q W L K Q F D D V V N N R E D R L P P E V G R Y N A G Q K V L Y F A L I			
UniRef90_UP1000471D99D	N R Y D L P W M K A I V W V L L Q K E E N P P V G H Y N P G Q K M L F R S F V			
UniRef90_D7A9Z3	A R E D A A W V A H S A D L L A G R E E K M P E V G K Y N A G Q K F V F W S M S			
UniRef90_B7VNS0	K M V D I Q W F M K L G G M V G K H K G S H P S A E F S N A G E			
UniRef90_UP100037DFCB5	T A T D W Q W I R R V R E M V D G D D H N M P E Q G K Y N G G Q K I L F W L			
UniRef90_Q1ITC7	D E D D R L R W L K N V K Y Y I K N E D E K L P P P Q G K Y D A G Q K			
UniRef90_J2KAW4	D K Q D I P W L K G I V E V L K G N E H K V A R V G K Y N A G Q K M M F W T M			
UniRef90_UP10002E87EFE	R K V D V T W F M K F G G M A G K H K G S H P S A E F S N A G E			
UniRef90_UP10003B4B823	K W V D L K W I V K G G G L L G G H A P A G R Y N A G E K G W Y W I A V			
UniRef90_UP10004746C59	H K D D V I E W M E S I R Y V V E N D E E H V P P V G R N N A G Q K F V F W S M T			
UniRef90_UP100035C1E31	N Q N D R K W L G Q L G D V I S N R E D R L P P A G R Y N A G Q			
UniRef90_N2IXW5	E E K R D M Q W V K Q I G D V L N N R E D K L P E L G K Y N P G Q K V L F W V L L			
UniRef90_F3NLH9	G P H D G T W L R E A L R R R R G P A G K F N A G Q K I Y A S			
UniRef90_UP1000289D1AF	G P H D R V W L R A A L R R D R R Q S S R P A A K F N A G Q K V Y A A			
UniRef90_G2P8A7	G P H D R R W L R A A L R R D R R Q E R P A G K F N A G Q K L Y A G			
UniRef90_UP1000363E598	A V Y D R Q W L R A V R R R R T S P E A R P A G K F N A G Q K L Y A G			
UniRef90_B2JQU2	D A D D R Q W L R Q M N D V L A N R E D R L P E G G R Y N A G Q K			
UniRef90_E8XSK5	E K D D I V W A K N I G K V L T N H E V G D T G R Y N F G Q K			
UniRef90_E1W527	E K N D I R W L K G M L E V L K G N E H A V A Y N G K Y N L Q G K M L F W T L N			
UniRef90_W9V168	N L V D L K W F I K G G G I V G K G H P S A G Y L N G G E K V W F W M I V			
UniRef90_A0A023XU97	K R V D I D W V K Q G G G F I K S K H A P A G R F N L G E K			
UniRef90_F4DDF7	N M V D I V Q W F M K F G G G M L G K H K G S H P S A G F S N G G E			
UniRef90_19KJU2	T A A D R A W L R A S L R F A A R A R I A P G V G K F N A G Q K F A A F V A G			
UniRef90_UP10004645EAF	R R E D A Q W W A A H I G D V L K G D E E K L P E V G K Y N A G Q K F V F W A M S			
UniRef90_D0ZGK0	E R Q D I P W F K G I I E V L K G N E H L V A R V G K Y N P G Q K A M F W S I M			
UniRef90_UP1000475C95B	A R E D G T W L A R I L S D V L R G R E E R L P E I I G K Y N A G Q K F V F W G M S			
UniRef90_A8HRB0	K R E D V T W V A R S G D V L M G H E E R L P E L G K Y N A G Q K V V F W G M S			
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UniRef90_L8ERF6	G P H D R R W L R S A L R R G S D R P A G K F N A G Q K L Y A A			
UniRef90_A4SYSP5	E K G D L Q W M L T F G G M F S G K H V P A G F F N M G E K P M A P L P S			
UniRef90_UP100036A5735	S R V D A Q W F A Q G G G L I G S A H P P A R K F N A G Q K I N S L			
UniRef90_UP1000478A839	T K E D L Q F F T E F V K E L F G F N F K H I R Q S F F N A G E K I N S L			
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UniRef90_UP10003624044	U N R D D T Q W V S Q I G D V V K G D E E K L P E L E K Y N A G Q K G V F W G Q S			
UniRef90_G8MCZ1	D Q S D V Q W Q M K Q V N D V L A N R E E R L P E I I G K Y N A G Q			
UniRef90_W1J2D1	D R D D I V W A K N I H K V L Q N E E A G D I G Q Y N L Q G K G I Y W S V S			
UniRef90_B7V1M1	Q K S D I Q W L K Q W R D V V S N R E E N L P E V G R Y N A G Q K L L F W V L L			
UniRef90_J1ZN18	G R H D R R W L S A A L R R R G G R P A G K F N A G Q K L Y A A W I A			
UniRef90_E6PMH6	S R Q D L J A W L A K G G G M F G G A E V P A A R F N A G E K I W F W L G V			
UniRef90_K9DTK8	N R A D W Q W V K Q G G G L I S H K H V P A G F F N A G E K Q S E S G R V			
UniRef90_R9VGX5	D K K D L P W L K N I V I E V L K G N E H K V A D V G K Y N A G Q K L H W L T Q T			
UniRef90_UP100035F344A	N K E D R K W L T S V G E V L K G R A V G D V G K Y N A G Q K K A M F W L M S			
UniRef90_E7RXY5	E K R D I R W L M D L K K M V D G N D H D M P E Q G K Y N G G Q K I M A A R			
UniRef90_X6EWJ4	Q R V D L D W V R Q G G G F I K S K H A P A G R F N L G E K I N S L			
UniRef90_I4AD73	T K A D V M H V K A F A T E F F F G G H G N Y P P Q A K Y N G G E K I N S L			
UniRef90_C9KL28	D K D D V K F L V K F P A E L I G R E P K M P K Q G F Y N G G E R M N I L L			
UniRef90_W7WTE5	S A A D F V W L S K L G G M L G D K E V P S H R F N A G E K G L F W W G V			
UniRef90_C6CDL8	K L R D L P W F L N I I E V L K G N E H E V S D V G K Y N P G Q K L M F W S I M			
UniRef90_X4IT31	D K K D I P W L K N I V E V L K G N E H K V A D V G K Y N A G Q K			
UniRef90_P44451	E K N D I R W A K G V I E V L K G N E H A V A D N G K Y N L Q G Q K M L F W T N			
UniRef90_D5RKZ1	N R L D L Q W V L Q Q G G G L I G N K H P Q A G R F N A G Q K			
UniRef90_C7PVL9	A P A D R H W L R A V R R R L M E P P D R P A G K F N A G Q K L Y A G			
UniRef90_UP1000361D34B	K S Q D R L Q W L K Q I K Q V I A N E D E H L P P V G R Y N A G Q K			
UniRef90_M7PJ46	S R V D L E W F K G F G G I I G D Q H P P A G K F N G G E K L W Y W T A			
UniRef90_UP10004027A79	G P H D R T W L R S V L R D R R P G S R P A G K F N A G Q K L Y A A			
UniRef90_D7CNB0	G V I N D I I F L V L F P L E F F G F K V K M P P Q T R F N G G E K G N S I I T P			
UniRef90_Q2BNU4	N R T D L L M W F L K G G G I I G K A H P S A G Y M N G G E K V W F W L L T			
UniRef90_A6SZG0	G K G D L Q W L K N L G G A R G H A S A G R F N A G E K L W F W G G M			
UniRef90_B6JC78	K R T D S V W L S R L R D V L A G D E G K L P E V G K Y N A G Q K M V F W S M S			
UniRef90_W0V5S8	E E G D T Q W L K Q I G D V L N N R E E K L P K I G R Y N A G Q K			
UniRef90_UP1000474E5F6	N K T D M Q W F M K M G G M F G K H K G S H P S A G F S N G G E K I I Y W M L I			
UniRef90_D3NSJ2	S R H D L T W F L K K A G G L F S K G V H P P A H K F N G G Q K V I F W S T V			
UniRef90_A6VNS5	E K N D I R W A K G V I E V L K G N E H N V A Y N G K Y N L Q G Q K M L F W T L I			
UniRef90_V2QBM2	S K R D F Q F L A V V F P L E I G K A K N L P K Q D Y F N G G Q K L N S V			
UniRef90_I9W394	R A V D W Q W V R S F G G L A S G R H V P S H R F N A G E L W F W G G L V			
UniRef90_W9A8A8	E K G D L Q W M L K V K D V L T E N E E N V P E A G Q Y N A G Q K			
UniRef90_C1DIE6	E R E D L A W F A N V K D V L L G K H D K P L L I G K Y N A G Q			
UniRef90_UP1000466AE59	N R A D F V W L S K G G G L L G S G D H Q V P S H R F N A G E K G L F W W G I			
UniRef90_R4RH69	E R Q D A I W F R N L K T V L S G D H S Q P L Q I G K Y N A G Q			
UniRef90_UP1000380C31D	T S S D W S W L R S R S R R G G T I P V G K F N A G Q K I N A W			
UniRef90_10HN94	E P V D V D W L R N V G K M V D G D D H D M P A Q G K Y N G Q K			
UniRef90_T0PLI9	T R I D W E W F R Q G G G I L P N G K H P D A A F C N G G E K V W F W L L C			
UniRef90_UP10003730511	G P H D K V W L R A A L R D K R Y S S R P A A K F N A G Q K I Y A N			

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 UniRef90_UP1000466AE59
 UniRef90_R4RH69
 UniRef90_UP1000380C31D
 UniRef90_10HN94
 UniRef90_TOPLI9
 UniRef90_UP10003730511

Sequence alignment showing positions 130, 140, 150, and 160. The sequence is color-coded by residue type: C (yellow), G (green), A (light blue), T (light green), D (red), E (dark red), S (light orange), F (orange), I (light purple), L (purple), V (pink), P (blue), H (red), N (dark blue), Q (dark purple), R (dark red), M (brown), K (dark brown), W (black), Y (yellow-orange). Positions 130, 140, 150, and 160 are highlighted in black boxes.

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UniRef90_A5F821	L G S A I I V H F Y L G A I N P S S R K E L G T G M I D E E Y V M K H N A L W Y		
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UniRef90_X2H7R8	I V V V T A G H L W E A L R D R G A L N G M L T G R V D P G W A A R H H S R W A		
UniRef90_UP1000467914A	L I S S I I V H I Y A G I W V K G S M G A M L Y G W V V S R A W A R K H H A A W L		
UniRef90_W5IPS1	L T A V A L G H I Y I G L G T E G S L E G M T T G Y V D E T W A K E H H N L W Y		
UniRef90_U7P356	L T A V A L G H I Y I G V G T E G S L E G M T T G Y V D E T W A K E H H N L W Y		
UniRef90_F7SM96	L T A V A L G H I Y I G V G T E G S L E G M T T G Y V D E T W A K E H H N L W Y		
UniRef90_H0J14	L L A C M L V L L V S G V V I W G S V T A M M T G W V V S R A W A K K H H S L W Y		
UniRef90_D9XT26	V G I V L A G H I G T A L A D P E A R R G M R T G S V G R D W A E R E H P L W		
UniRef90_F1W3D0	V S T M A M G H I Y I G S G M E G A Y K A M S T G Y V D D A W A K E H H D L W Y		
UniRef90_C7Q9Q5	I G F V V V G H I V W F A L N D R Q A R T G M R T G W V V T R G W A E R E H P A W A		
UniRef90_S9RT35	M I C M S L G H I Y M G I G M E G A Y R A M R D G Y V D E A W A K E H H E L W Y		
UniRef90_A1WBF0	M A L L L G H I Y M G T I G M R G A Y K A M K T G Y V V S E A W A R E H H E L W A		
UniRef90_UP1000315AA00	L I L L I L G H I Y L A F W V K G S I R G M V T G Y V S H A W A R A H H D R W H		
UniRef90_H1RNN7	M I G M I F V H V Y A A I W V K G T I R A M W Y G T V T R G W A K Q H H R G W Y		
UniRef90_Q47F19	F V I A V P V H I Y L S L A N P G T F Q I M V T G M L P L S D A K K Y P K W I		
UniRef90_K1Y606	M I C A I I V H I Y A G F W V K G S V R A M T R G T V T P G W A W K H H R A W F		
UniRef90_UP1000303D59B	M L I A L M V H V W M A C W I E G S I T G M L Y G K V S K A W A R K H H P A M L		
UniRef90_UP1000471D99D	I I C V W I I H V Y A A I W V K G T I G A M T R G R V T T G G W A W R H H R K W L		
UniRef90_D7A9Z3	M I G L I M V H V Y A A I W T K G T I R A M W Y G T V T R A W A K Q H H R A W Y		
UniRef90_B7VNS0	L I H A I L I H M Y M A F W V K G S I K G M I E G K V S R R W A K K H H P R W Y		
UniRef90_UP100037DFCB5	I M A G S L G H I Y M G I A M E G A F E A M Q T G S C D A N W A K E H H D L W Y		
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UniRef90_J2KAW4	UniRef90_UP10002E87EFE	L I L S I I V H I Y A G I W K G S I G A M L H G K V S L L W A K K H H S L W Y	
UniRef90_UP10003B4B823	L G V V L A G H I G M A L R D P E S R T G L R T G T V D R A W A E R E H E L W		
UniRef90_UP10004746C59	I G V V L A G H I G M A F A D P E A R H G M R T G S V V S R N W A K R E H P L W R		
UniRef90_UP100035C1E31	I G L V L I G H I G K A F A D P E A R R G M R T G R V V E R A W A A R Q H P L W		
UniRef90_N2IXW5	I T L V V L G H M R K A L Q D P E A L L G M R T G Y V S R T W V Q R Y H A K W L		
UniRef90_F3NLH9	UniRef90_UP1000289D1AF	L F T G I L V H M Y M A F W V K G S I R G I V E G W V T V R W A K K H H P K W Y	
UniRef90_G2P8A7	L M A A A F G H I Y I G L G T E G A F E G M K T G Y V D E S W A K Q H H D L W Y		
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UniRef90_AOA023XU97	UniRef90_W9V168	UniRef90_A1VWI	UniRef90_W9V168
UniRef90_F4DDF7	UniRef90_19KJU2	UniRef90_UP10004645EAF	UniRef90_UP10004645EAF
UniRef90_D0ZGK0	UniRef90_UP1000475C95B	UniRef90_D0ZGK0	UniRef90_UP1000475C95B
UniRef90_A8HRB0	UniRef90_UP10003780040	UniRef90_A8HRB0	UniRef90_UP10003780040
UniRef90_K4RD07	UniRef90_K4RD07	UniRef90_A4SYSP5	UniRef90_A4SYSP5
UniRef90_UP100036A5735	UniRef90_UP100036A5735	UniRef90_UP100036A5735	UniRef90_UP100036A5735
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UniRef90_UP10003624044	UniRef90_W1J2D1	UniRef90_B7V1M1	UniRef90_B7V1M1
UniRef90_G8MCZ1	UniRef90_I1ZN18	UniRef90_E6PMH6	UniRef90_E6PMH6
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UniRef90_W0V5S8	UniRef90_D3NSJ2	UniRef90_D3NSJ2	UniRef90_D3NSJ2
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UniRef90_A6VNS5	UniRef90_I9W394	UniRef90_I9W394	UniRef90_I9W394
UniRef90_V2QBM2	UniRef90_W9AAA8	UniRef90_W9AAA8	UniRef90_W9AAA8
UniRef90_I9W394	UniRef90_C1DIE6	UniRef90_C1DIE6	UniRef90_C1DIE6
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UniRef90_UP1000466AE59	UniRef90_UP1000380C31D	UniRef90_UP1000380C31D	UniRef90_UP1000380C31D
UniRef90_R4RH69	UniRef90_I0HN94	UniRef90_I0HN94	UniRef90_I0HN94
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 K S V **D** K G E
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 P E D K R
 R E E
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 K E V G K G E
 D G E R D G T R D R E R R E P
 D D I K A G K **I** P V Q R S
 E Q M K T G **V** P P G M D K D G
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 D S L E K E G K **L** E T V E R
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 K D L V
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H

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H

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

The figure displays a sequence alignment of UniRef90 proteins, organized into groups by species. Each group shows a multiple sequence alignment with color-coded conservation. Blue indicates identical amino acids, and red indicates similar amino acids. The x-axis represents the sequence position, ranging from approximately 100 to 1600.

- Group 1 (Top):** UniRef90_Q0AYT6, UniRef90_T2L9A0, UniRef90_E9CKZ9, UniRef90_A0A023XQX6, UniRef90_A7ML44, UniRef90_UPI000417C1A4, UniRef90_B5E8K6, UniRef90_W7VRT6, UniRef90_W7SVA9, UniRef90_W0E4S3, UniRef90_K8WL96, UniRef90_S2KV50, UniRef90_Q67T96, UniRef90_Q2LQE6, UniRef90_W0S9Z2, UniRef90_E6QSV7, UniRef90_N0B011, UniRef90_D5C1W6, UniRef90_UPI00046F8164, UniRef90_N6XXP6, UniRef90_K6DJQ2, UniRef90_UPI000372E6C2, UniRef90_A8KY63, UniRef90_B1M6U5, UniRef90_F2J1C8, UniRef90_A3DA40, UniRef90_J4TZL5, UniRef90_Q89J09, UniRef90_C4GHP8, UniRef90_A1KB89, UniRef90_UPI0003A9A390, UniRef90_UPI0003135DF3, UniRef90_K8PHE5, UniRef90_C5AS22, UniRef90_B4F0S2, UniRef90_UPI0002E1365D, UniRef90_D7CNL0, UniRef90_R8ARK5, UniRef90_Q65TS5, UniRef90_UPI0003614DEB, UniRef90_S6AJ74, UniRef90_L0FBR3, UniRef90_F4DQ65, UniRef90_W5FK86, UniRef90_W4RL35, UniRef90_G7Z989, UniRef90_UPI000374BE81, UniRef90_B9M622, UniRef90_K9QDR6, UniRef90_I5CX53, UniRef90_D3D0A4, UniRef90_G8AJK9, UniRef90_A0A059KMX0, UniRef90_D6XSE7, UniRef90_UPI0003498EB3, UniRef90_UPI00037409FE, UniRef90_K4QUF9, UniRef90_J4D5Y9, UniRef90_A5G6W1, UniRef90_UPI0003022397, UniRef90_A8LNU6, UniRef90_A7I449, UniRef90_UPI00037DF3BB, UniRef90_UPI0004672424, UniRef90_UPI000401818, UniRef90_J7U0Z9, UniRef90_A4GIG3, UniRef90_X2KEU6, UniRef90_W7Q5T5, UniRef90_L8DH14, UniRef90_Q5P4J1, UniRef90_Q2RLA6, UniRef90_L7VSN8, UniRef90_S5XYZ1, UniRef90_UPI0003708BFB, UniRef90_H0A6V7, UniRef90_X0MU8J, UniRef90_UPI000373BD9F, UniRef90_J3CCR6, UniRef90_Q4JIU8, UniRef90_UPI0002556D24, UniRef90_UPI0002E7A43E, UniRef90_UPI0003723611, UniRef90_A1HP71, UniRef90_D3RNK1, UniRef90_V8R4X7, UniRef90_UPI00036A0FC0, UniRef90_F5RIB1, UniRef90_UPI000379A593, UniRef90_A6X2W9, UniRef90_W0DFV4, UniRef90_UPI00036B8D69.

UniRef90_Q0AYT6 170 180 190 200
 UniRef90_T2L9A0 A T F M V C M H G Y L G S F H P G S F W G M W K G T V R A D W A Q H H H A I W Y
 UniRef90_E9CKZ9 L T A V S L G H Y I G L G T E G A E G M T T G Y V D E T W A K E H H N L W Y
 UniRef90_A0A023XQX6 F V A V M L A H Y I G T I G E G A F E A M G N G T V D V N W A K E H H S L W L
 UniRef90_A7ML44 L I A G I I V H V Y A A I W V Q G T I R A M A E G V V T H A W A K K H H P R W F
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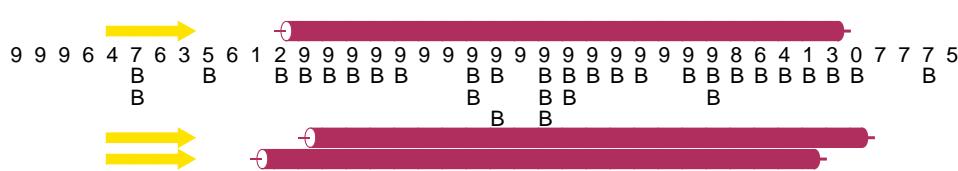
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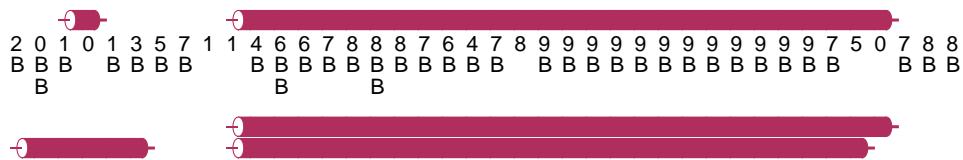
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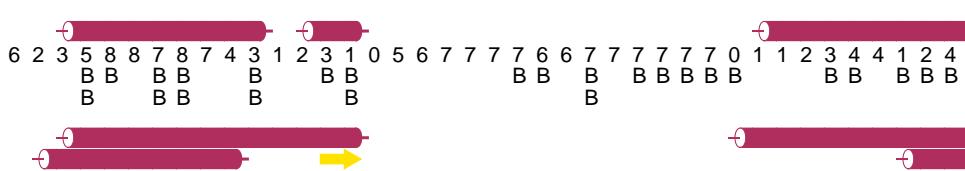
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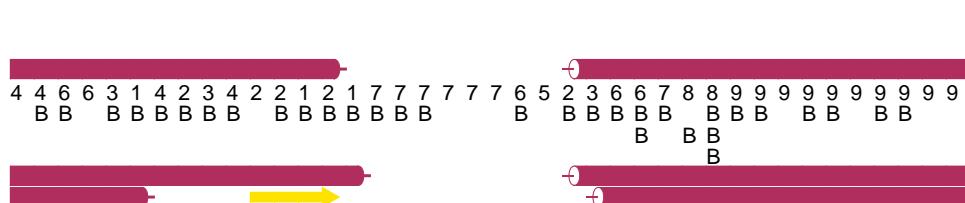
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