

1 10 20 30 40

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

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		W E T P I G N F Q V L		
Q G T R	V V L P T K F V L P D A P R Q S Q R L F Y Y P P R K E G E P Q V V I T H			
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E G T R I L I	P S Q W I H P V G I G R V K W N T P Q G T T R I V A K N E A P A W			
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S G T R A E M R L Y Y P P G S H T V D V L P I G I G Q A G R E T P R N W V T A				
E G A P V T L P T R Y I L P R A E R P E M R L Y Y Y P K P L R E Q T P L V I T H				
A D Y V L T I P T Q I I L P N V Y Y F E P E S N Q V H I F P V G I G R V G R D T				
V G K K P S R Y I L P E V P R E G I V I N L P E M R L Y Y F P E G K S L V Y V Y				
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E N Q V N N R M F Y Y P N G R E V L T Y P V G I G R D G W S T P L G M T K I				
A G S V L T I P R Q M L L P D A P R E G I I V N P T M V T R I I S Q K R E N P T W				
Q R L R I D N P H I A P P L L D D G I V I N P Q R M L F E F D A G K L V A A Y				
E G T E V T I P G Q F I L P D E A R T G I V I Y Y Y P E V I E E G E T P R V E T Y				
K N Q I I I V P F R R I L P I K N F S Y G T I Y I N I N E K R L Y Y P Y I I T F				
Q L L H V R H P H I V P A A L D D G I L V N L P Q R M L F E N G Q G K L V S A Y				
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G K K L K V I R G P F S A H V S L S R F E L T I H L Q S Y F V K K Y S V G I G K				
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UniRef90_UP10003B6A713	P	I	G	V	G	V	D	G	K	L	T	P	L	G	V	Y	T		I	I	R	K	R	N	P	A	W	H	V	G	T	R	A	L	Y	S	R	G	A		
UniRef90_V5C5S1	A	V	K	T	P	N	P	D	W	H	V	P	P	G	H	Y	L		P	S	V	V	R	S	G	P	D	N	P	L	G	F	Y	A	M	R	L	A	I	G	S
UniRef90_E1YAL2	P	V	G	I	G	D	E	G	K	D	T	P	L	G	I	F	S		V	I	E	K	I	K	N	P	A	W	Y	M	G	S	R	A	L	R	L	S	I	W	T
UniRef90_UP10003B4A940	P	I	G	I	G	E	R	G	T	T	P	L	G	S	T	R	I		E	R	K	T	E	N	P	T	W	Y	P	G	T	R	A	L	Y	L	G	W	P	A	
UniRef90_UP100046E8300	P	I	S	I	G	R	V	G	W	E	T	P	L	G	E	T	T		V	T	R	K	A	S	P	N	W	Y	P	G	S	H	A	V	Y	L	G	L	P	A	
UniRef90_UP100045EB6F0	P	I	G	I	G	E	R	G	W	N	T	P	L	G	Q	T	T		V	I	A	K	K	A	N	P	A	W	P	G	K	Y	A	L	S	G	F	N	Q	S	
UniRef90_F9U6R2	P	I	G	I	G	E	R	G	W	R	T	P	L	G	Q	M	R		I	Q	K	T	E	N	P	T	W	T	P	G	A	Y	A	M	R	L	S	R	P	Q	
UniRef90_S7V8P2	D	Y	F	I	T	A	P	I	F	L	T	K	L	G	T	Y	T		V	K	S	T	P	N	P	L	G	D	Y	V	F	R	L	S	Q	M	L				
UniRef90_UP100037327E2	P	V	P	A	S	I	R	K	E	H	A	E	Q	G	D	M	L		P	S	V	V	P	P	G	P	E	N	P	L	G	P	Y	A	M	R	L	S	R	P	H
UniRef90_UP1000466A0CB	A	V	G	K	I	L	T	Q	T		P	Y	G	D	F	Y	I		I	N	R	Q	R	N	P	G	G	P	Y	G	A	Y	W	L	G	L	S	R	P	H	
UniRef90_I3TMG3	P	I	G	I	G	E	R	G	F	A	T	P	V	G	V	T	R		V	T	M	K	R	D	G	P	T	W	T	P	G	T	H	A	M	N	L	G	W	Q	N
UniRef90_UP10002D36247	P	I	G	I	G	E	R	G	R	D	T	P	I	M	T	T	K		I	S	Q	K	R	E	N	P	T	W	T	P	G	S	I	R	E	T	G	T	G	T	
UniRef90_G6FXA9	N	M	T	K	N	P	T	W		H	P	T	G	E	S	I	P		G	G	S	P	K	N	P	L	G	R	Y	W	F	T	W	T	N	G	T	N	W		
UniRef90_UP1000374C5A6	P	I	G	I	G	E	R	G	W	R	T	P	L	G	Q	S	P		R	V	A	Q	K	E	N	P	V	W	R	V	G	A	Y	M	R	L	S	R	P	S	
UniRef90_I3YCZ3	V	R	I	Y	T	I	S	V	M	G	T	P	L	G	T	F	K		V	I	E	K	R	D	P	T	W	T	P	G	P	Y	A	M	R	L	S	N	P	D	
UniRef90_E1VQS1	R	P	T	A	A	L	K	E	H	A	E	M	G	D	P	L	P		A	V	V	P	V	P	G	D	N	P	L	G	R	Y	W	L	G	P	A	G	D		
UniRef90_R4V7G2	P	I	S	V	G	R	M	D	W	S	T	P	L	G	K	S	Q		I	T	E	K	R	P	N	T	P	W	T	P	G	H	L	R	D	I	P	G	G		
UniRef90_J7GEJ9	V	E	R	K	Q	E	G	T	W	S	P	T	P	N	T	R	R		V	T	E	A	E	G	K	P	D	N	M	G	L	Y	A	I	Y	G	R	L			
UniRef90_A0A011PXK7	P	V	S	V	G	R	M	D	W	V	T	P	L	G	K	T	I		V	A	K	E	R	D	P	S	W	R	P	G	R	F	A	M	R	L	S	N	P	D	
UniRef90_F9T4Z3	P	I	E	M	E	T	S	V	G	W	T	P	L	G	V	H	T		V	I	T	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G	
UniRef90_A5EY49	P	I	E	M	E	T	S	V	G	W	T	P	L	G	V	H	T		V	I	T	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G	
UniRef90_UP100036AA4A2	A	I	G	I	G	E	R	G	W	T	P	L	G	V	H	T	I		V	I	T	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G	
UniRef90_G0A675	P	V	A	K	K	A	N	P	A	W	T	V	P	E	G	D	P		L	P	K	V	I	P	S	G	P	D	N	P	L	G	Y	A	M	P	G	F	T		
UniRef90_UP1000465A562	T	P	T	A	A	I	R	A	Y	R	Y	L	P	A	Q	G	V		P	P	G	V	V	P	A	G	P	N	M	H	A	I	R	A	Y	G	G	V			
UniRef90_UP100031572EB	P	V	G	L	K	G	P	S	W	T	P	L	G	K	T	W	H		P	Q	G	F	V	T	R	H	N	K	T	D	T	L	I	P	G	P	S				
UniRef90_G4F7E1	P	I	G	I	G	E	R	G	W	T	P	L	G	V	H	T	I		V	I	T	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G	
UniRef90_C1DWG2	V	E	R	K	Q	E	G	T	W	S	P	T	P	N	T	R	R		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_UP1000369B308	P	V	A	K	K	A	N	P	A	W	T	V	P	E	G	D	P		L	P	K	V	I	P	S	G	P	D	N	P	L	G	Y	A	M	P	G	F	T		
UniRef90_U2FH07	P	P	W	R	P	E	M	D	W	V	T	P	L	G	V	H	T		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_UP1000360BA16	A	L	A	V	G	K	S	D	W	Q	T	P	L	G	T	Y	I		V	N	K	P	T	W	P	I	V	G	A	Y	W	M	A	T	S	A	P	G			
UniRef90_D5SN48	P	I	G	I	G	E	R	G	W	T	P	L	G	K	A	K	L		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_V4JQ57	P	V	S	A	G	T	R	E	Y	Y	Y	T	P	L	G	V	Y		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_UP100036878A6	P	T	P	P	S	E	M	L	R	R	P	D	L	P	R	Y	M	K		E	N	P	L	G	A	R	M	Y	L	G	N	T	I	L	R	E	H	N	P	S	
UniRef90_N0B6F2	A	L	A	V	G	K	S	D	W	Q	T	P	L	G	T	Y	I		V	N	K	P	T	W	P	I	V	G	A	Y	W	M	A	T	S	A	P	G			
UniRef90_F2NDL2	P	P	W	R	P	E	M	D	W	V	T	P	L	G	K	A	K		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_F5SV70	A	D	R	S	S	P	Q	G	K	L	A	V	E	K	D	P	Y		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_A9L2N7	P	S	A	G	T	R	E	Y	Y	Y	T	P	L	G	V	Y	I		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_C6DK92	P	I	G	I	G	E	R	G	W	T	P	L	G	K	Q	D	M		V	N	A	Y	Y	D	E	H	P	K	Y	T	P	W	V	Y	F	H	G	Y			
UniRef90_G2E675	V	R	E	R	K	Q	E	G	T	W	S	P	T	P	N	T	R		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_S3J724	P	I	N	W	T	T	K	V	E	R	K	Q	N	G	P	T	W		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_A9W633	P	W	D	P	W	P	S	E	M	L	R	R	P	D	L	P	R		V	I	E	K	R	P	N	T	P	W	T	P	G	H	A	G	D	L	I	P	G		
UniRef90_E2QII6	P	V</td																																							

Sequence logo showing conservation across 160 positions. The logo uses four colors (red, blue, green, yellow) to represent amino acid preferences at each position. A vertical yellow bar highlights positions 130-140. Positions 130, 140, and 150 are explicitly labeled.

QUERY	V T I N R
UniRef90_E6UTL8	V T I
UniRef90_L5NEE4	V D H R
UniRef90_UPI00047AF111	V T I R
UniRef90_I0JNM5	V L H R
UniRef90_R7ZK55	V S H R
UniRef90_E5WDL1	V R Q R
UniRef90_F8CZ74	V F R
UniRef90_M5PEC2	V S T R
UniRef90_UPI0002F00CF1	V Y I H
UniRef90_F9ZJY5	V H V
UniRef90_A5G8V1	V T I
UniRef90_UPI0003B4A9C2	V T
UniRef90_UPI0003B6A713	V F I
UniRef90_V5C5S1	V R I
UniRef90_E1YAL2	V N I
UniRef90_UPI0003B4A940	V Q V
UniRef90_UPI00046E8300	V
UniRef90_UPI00045EB6F0	V R I
UniRef90_F9U6R2	V T V
UniRef90_S7V8P2	V R V
UniRef90_UPI00037327E2	V
UniRef90_UPI000466A0CB	V T I N R
UniRef90_I3TMG3	V T V
UniRef90_UPI0002D36247	V R V
UniRef90_G6FXA9	V T V V Q
UniRef90_UPI000374C5A6	V R I
UniRef90_I3YCZ3	V A
UniRef90_E1VQS1	V A V
UniRef90_R4V7G2	V E
UniRef90_J7GEJ9	V Q I
UniRef90_A0A011PXK7	V Q V
UniRef90_F9T4Z3	V T V
UniRef90_A5EY49	V N V
UniRef90_UPI00036AA4A2	V R I
UniRef90_G0A675	V R I
UniRef90_UPI000465A562	V T I
UniRef90_UPI00037152EB	V N I
UniRef90_G4F7E1	V V
UniRef90_C1DWG2	V
UniRef90_UPI000369B308	V T V R
UniRef90_U2FH07	V V V R
UniRef90_UPI000360BA16	V V I E
UniRef90_D5SN48	V K I
UniRef90_V4JQ57	V V V
UniRef90_UPI00036878A6	V T V T
UniRef90_N0BF62	V K I
UniRef90_F2NDL2	V E I
UniRef90_F5SV70	V
UniRef90_A9L2N7	V Q I
UniRef90_C6DK92	V A I
UniRef90_G2E675	V
UniRef90_S3J724	V
UniRef90_A9W633	V V V Q R
UniRef90_E2QII6	V
UniRef90_F9ZRV4	V Q I
UniRef90_UPI000468D65C	V R I
UniRef90_UPI00047734EA	V T I
UniRef90_UPI0003687C50	T V V H R
UniRef90_UPI00026C707F	V E F
UniRef90_UPI0004756B68	V T V K
UniRef90_K9W8C8	V R I
UniRef90_UPI00037C2576	V V V R
UniRef90_UPI00047C5EDB	V R I
UniRef90_B1KHE8	V V V
UniRef90_D7A2F7	V V V
UniRef90_Q2IR05	V V V R Q
UniRef90_A0A031MAZ9	V T I
UniRef90_R9PNS1	V R I
UniRef90_E0MQ72	V K V
UniRef90_A5G3I0	V V I
UniRef90_K5Y525	V R I
UniRef90_A0A023VF38	V
UniRef90_UPI0003764F40	V R I
UniRef90_A1SXX6	V R I
UniRef90_M7P232	V E
UniRef90_A6CVF7	V R I
UniRef90_Q1NNH5	V I
UniRef90_F7QGU6	V I R Q
UniRef90_W11KS1	V Q
UniRef90_W8KGJ1	V N
UniRef90_J1QNR8	V N
UniRef90_W3RRA0	V V V
UniRef90_K8GN4	V K V V K
UniRef90_UPI0001D2F1BA	V V V R
UniRef90_I5BUC8	V V V K
UniRef90_W0HZC0	V
UniRef90_E8ND11	V S V H
UniRef90_F9ZRJ1	V
UniRef90_B8FY47	V I I T E
UniRef90_C0N521	V E I
UniRef90_UPI000474B582	V E I

UniRef90_E6PT60
 UniRef90_Q5X4W7
 UniRef90_B6JJA6
 UniRef90_UPI000329FE15
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 UniRef90_E6WDG3
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 UniRef90_Q98T4
 UniRef90_I5BQ17
 UniRef90_UPI0004771C73
 UniRef90_C5AYW8
 UniRef90_S3IXX3
 UniRef90_UPI00046798D9
 UniRef90_D6DT28
 UniRef90_C5BGU2
 UniRef90_R1H7V8
 UniRef90_UPI00034991A5
 UniRef90_G8M1Y6
 UniRef90_A4YN67
 UniRef90_R8BON7
 UniRef90_M3KDG6
 UniRef90_A4J7Z7
 UniRef90_N6U587
 UniRef90_Q07IK9
 UniRef90_M1K5N4
 UniRef90_M7D1P2
 UniRef90_UPI000347701F
 UniRef90_I1XIG7
 UniRef90_B8CJF7
 UniRef90_A8HV50
 UniRef90_M4JWR4
 UniRef90_Q1YK17
 UniRef90_C5ASB3
 UniRef90_W6RDP7
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 UniRef90_B8EKR4
 UniRef90_UPI0003637E01
 UniRef90_L0KJB0
 UniRef90_UPI0003780D09
 UniRef90_UPI00046766F4
 UniRef90_F4DFP4
 UniRef90_UPI00046B0A59
 UniRef90_D3V1T6
 UniRef90_C7LE90
 UniRef90_UPI0002EC9AEA
 UniRef90_UPI0004026C17
 UniRef90_V5V2L7
 UniRef90_A6F325
 UniRef90_A7II74
 UniRef90_C6CDE2
 UniRef90_K9QJ19
 UniRef90_W5YPT5
 UniRef90_K6VIN0
 UniRef90_G9YE43
 UniRef90_G4RAD0
 UniRef90_G4T2V5
 UniRef90_N9GKC6
 UniRef90_C9TVW7
 UniRef90_I4N014
 UniRef90_R4KSC9
 UniRef90_A0ZHN7
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 UniRef90_T1A751
 UniRef90_UPI000470C4B7
 UniRef90_A0A017RVG7
 UniRef90_UPI00047D9DCE
 UniRef90_H0NYC8
 UniRef90_X5JCJ0
 UniRef90_H8Z007
 UniRef90_UPI0003805708
 UniRef90_UPI00046B0A40
 UniRef90_A5Z6Y5
 UniRef90_G1WI72
 UniRef90_UPI000411B404
 UniRef90_A1UTH6
 UniRef90_J1HK71
 UniRef90_UPI00041FCE75
 UniRef90_UPI00047705CB

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

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

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

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

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

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

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

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

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

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

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

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

 N K G T Y S | L | I Q A R D Y N N | L K | I | K

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

50 60 70 80

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

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

W | S | G | E | A | M | I | K | S | K | Q | E | W | P | D | W | Y | P | P | K | E | M | F | E | R | Q | W | K | R | K | W | P | T

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UniRef90_E6WDG3	P V M V T S I S Q K I P N P T W T P T P N I R K R Y A K E G I M R L A R G T G Q			
UniRef90_H0JCX2	F T Y P G R E G W G S P I G V T K V V D K I K D P S W Y P G P Y K I R L T L P G			
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UniRef90_I1XIIG7	P I G I G R E G R D T P L G K L S I I Q K R E N P S W T P G T R A M R L S N P S S			
UniRef90_B8CJF7	P V G I G R I G R E T P E M V T R I K S R I P N P S W T P P A S I R K E H D G S			
UniRef90_A8HV50	N M I A K Q P E R Y K P Y A A G L P G G E T N P L G P R A L Y L Y D G D R D T M			
UniRef90_M4JWR4	I A K T P N P T W T P P N G D P L P N V V P A G P D N P L G P F K F T L G T P G			
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UniRef90_A6F325	Y P M P L E S P A W Y P P G E Y L P R M I P P G P G N P L G S H A L M L S E K G			
UniRef90_A7II74	T P T P E I H Q R I A G L P S Y V A P G P H N P M G A R A L Y L Y Q G N Q D T L			
UniRef90_C6CDE2	T P T A A M H A E Y A A R G E F L P K I Y P A G P D D N P M G L Y A L Y I G N L			
UniRef90_K9QJ19	M M M Q H D P I W R H P I T G K V F P P G T D S P L G E R W I G F W T D G R N E			
UniRef90_W5YPT5	Y P P A S I R A E Y E R D G D Y L P R M I P P G P S N P L G S H A L L L S E K G			
UniRef90_K6VIN0	S P E L A A Q F P Q R D W I T R I L W L H G L E P G F G N Q G E G R D T F Q R Y			
UniRef90_G9YE43	W V T S V Q R K K A G T W T P T K K M H E E Y A A N G E L L P Q V F P A G P D			
UniRef90_G4RAD0	W P S W T P P A E M H A R Q P G L P Q F M P G G P N P M G A R A L Y L G S T L			
UniRef90_G4T2V5	T V P E S I R R E H A K K G D P L P R V V P A G P N N P L G D Y A L R L G F P G			
UniRef90_N9GKC6	F P P A T I G S T S P P T G T Y K V T G V A K N P W Y S Y G N I W I G L S K K S Y			
UniRef90_C9TVW7	P T K E M I E R D P A H Y G R F K N G M D G G P G N P R A M Y L F Q G N K D T Y			
UniRef90_I4N014	T G K L P N P T W T P P D G D P L P N V V P A G P D N P L P G F K F T L G I P G			
UniRef90_R4KSC9	P A S G G R P D A P T P L G Y F Y T Q D H G Y S F W F G E G A T Y W V R L V G Q			
UniRef90_A0ZHN7	T D K Q K Y P I W Q H P I T G K V F P S G A D S P L G E R W I G F W S D G R N E			
UniRef90_W6S9K5	H P E W R P T A G M R H K N P K L P A V V K P G P S N P L G T R A I Y L A D G L			
UniRef90_A0A011UK50	P A T I G S S A T P S P G V H A V T R I A V N P N Y T Y G S I W I A L D K P T			
UniRef90_Q1QAF6	P T T V G S T A T P S P T G T H T V A V K V H E P N Y T Y G S V W I G L S K P S			
UniRef90_A0NT26	T P P S Q M R A R E R A K G R I L P A Y M P G G P N N P M G A R A M Y I G S T L			
UniRef90_G8WJR1	P E M T T R I G Q K I P N P T W T P T A G I R A R S L E K G I K L P P Y G N G E			
UniRef90_D2XN84	I V F P I G I G E I G N N T P F N W T S V S Q R K K H N P V W I P T K Y I G K L			
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UniRef90_J9YSE5	P K G T F V I V E P E R G D F F F Y N A S S K E G A Y Y W V S			
UniRef90_H0HV78	P T L D M Q K R E P R Y G Q Y K D G M P G G P D N P L G A R A I Y L Y Q G T H			
UniRef90_W0LGH0	P L D W I T S V Q R K K D G P T W T P T A K M R E E Y N P M G L Y A L Y V G R L			
UniRef90_UPI0003B511E9	D A E L A R Q H P K R D W I L S R I L W L S G L E I G F N R L G K Q D T F R R Y			
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UniRef90_T1A751	S I L A S H A R R G T P L P R M V A A G P D N P L G S Y A L H L S Y P E			
UniRef90_UPI000470C4B7	I P T A E I Q A R L P G Y P K Y I A G G P E N P L G A R A I Y L F K G Q R D T L			
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UniRef90_UPI00047D9DCE	R P P A E M R Q R D P R L P E M M P P G P Y N P L G A R A I Y L F K G Q R D T L			
UniRef90_H0NYC8	M V E W P V W E P N W N G K K V V A A S L D G P I G R I W I G F W S D G K N T			
UniRef90_X5JCJ0	UniRef90_H8Z007	S P E L A A S Y P N R D W I L T R I L W L S G Q E P G R N R G D C D T L R R E		
UniRef90_UPI0003805708	W P E W R P P A D M R A R R P E L P A Y M A G G V D N P L G A R A I Y L G D T L			
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UniRef90_G1WI72	UniRef90_H8Z007	S T G K P S T P T V V G E F T V T G K G Y S F G E N H G Y S C Y Y Y T Q F Y G D		
UniRef90_UPI000411B404	UniRef90_A1UTH6	T G T F F I N V R Y T V Q T M R G P G Y V S P N V R W V S Y Y N G S E G F H T A		
UniRef90_A1UTH6	UniRef90_J1HK71	A M M A R E P E R Y G H L G E G M P A G P E N P L G A R A I Y L F Q D G K D T L		
UniRef90_UPI00041FCE75	UniRef90_UPI00047705CB	F H V Y L K Y E T Q T M R G P G Y V S P N V R W V S Y Y N G S E G F H T A		
UniRef90_UPI00047705CB	UniRef90_UPI00047705CB	P Q D L L K H M A E L Q S G T G M H G G P E N P L G A R A I Y L F Q D G K D T L		
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		130	140	150	160
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UniRef90_B6JJA6	Y RI	H G T N D P S T I	G K F V S S G C I	R L T N A D V T D L F S R V K L G A K	
UniRef90_UPI000329FE15	Y LL	H G T N A D F G I	G M R V S S G C I	R L R D A D I E T L F R K V T P G T K	
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UniRef90_C5AYW8	Y RI	H G S N E P E T M G A A	V S S S G C I	R M T N K D V V I D L Y D R V K V G T K	
UniRef90_S3IXX3	Y LI	H G T S A P D S V	G L R V S S S G C I	R M N A P D I K A L F E Q T R T G T P	
UniRef90_UPI00046798D9	Y RI	H G T N D P T T I	G K F V S S S G C I	R L T N E D V I D L F N R V S I G A K	
UniRef90_D6DT28	Y LI	H G T S A P D S V	G L R V S S S G C I	R M N A P D I K A L F E Q V R V G T R	
UniRef90_C5BGU2	N PM	H G T N A D F G I	G M R V S S S G C I	R L R P D D I E A L F R S V P G G T R	
UniRef90_R1H7V8	Y LI	H G T N K D F G V	G L R V S A G C I	R L R P A D I E S L F K Q V P P L G T Q	
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UniRef90_M3KDG6	Y RI	H G T N Q P W T I	G K A M S S S G C F	R M R N E D V T D L Y Y G R V P V G T H	
UniRef90_A4J7Z7	Y GI	H G T N P F S I	G S Y A S H G C I	R M H N S S V E K L Y P W I P K G T P	
UniRef90_N6U587	Y GI	H G T P D P S R I	G K T Q S H G C I	R L T N W D A T E L A K M V K P G V V	
UniRef90_Q07IK9	Y RI	H G S N E P E T I	G Q A V S S S G C F	R M T N E D V T D L Y D R V R V G T P	
UniRef90_M1K5N4	Y AI	H G T N A N F G I	G L R V S Q G C I	I R L R N D D I E H F Q N V P V G T R	
UniRef90_M7D1P2	Y LI	H G T N K K F G V	G T P V S H G C F	R M Y N E D I S R F V Y Q V D K G T P	
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UniRef90_I1XIG7	Y LI	H G T S K P Y G V	G L R V S S S G C I	R R L Y P E D I E H L Y S V V S L N T Q	
UniRef90_B8CJF7	Y LI	H G T N K D F G I	G M R V S A G C I	R L N P D D I E W L F N E V K Y G D S R	
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UniRef90_B8EKR4	Y RI	H G T N E P A T I	G Q S V S S S G C I	R M V N Q D V M D L Y Q R T S V G T K	
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UniRef90_D3V1T6	Y LI	H G T N A N F G I	G M R V S S S G C I	R L R P D D I E N L F Y S S V P R G T R	
UniRef90_C7LE90	Y GI	H G T P A P S R I	G K T S S H G C I	R L T N W D A E E L A K L V K P G V T	
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UniRef90_A6F325	V GL	H G T P N P D S I	G H A V S H G C V	R M Y N R D I E E L F E K V Q L G V P	
UniRef90_A7II74	Y LI	H G T N K F G V	G M Q V S H G C F	R M Y N E D I S R F V Y E V S K G T P	
UniRef90_C6CDE2	F RI	H G T N Q P E Y I	G Q A V S S S G C I	R M L N E D V I D L Y S R V P T G T E	
UniRef90_K9QJ19	Y AI	H G T N A N F G I	G L R V S H G C V	R L R D K D I K F L F S N V P V G T R	
UniRef90_W5YPT5	I GF	H G T P D I H L L	G T A I S H G C I	R M R N S D V R L L Y D Q V K V G T L	
UniRef90_K6VIN0	Y LI	H G T N K K F G V	G M A V S H G C F	R M Y N E D I S R F V Y Q V D K G T S	
UniRef90_G9YE43	N PM	H G T N A N F G I	G L R V S S S G C I	R M R N E E I E L F D L I P E Q A L	
UniRef90_G4RAD0	Y RI	H G T N E P W S I	G R S V S S S G C I	R M T N Q D V I D L Y G R V P V G A K	
UniRef90_G4T2V5	Y LI	H G T N K P Y G V	G M E V S H G C I	R L Y P E D I A K L F R H V A V G S Q	
UniRef90_N9GKC6	F GI	H G T P N P S M I	S K N A S S H G C I	R L T N W D A N D L G N K V R A G V T	
UniRef90_C9TVW7	I RI	H G T V Q P W T I	G S S A S S N G C F	R M I N E D V V M D L Y D R V T L G T E	
UniRef90_I4N014	Y LI	H G S N K F G I	G M R T S H G C V	R L R Y N F V L E S K M V P V G T P	
UniRef90_R4KSC9	I LV	H S V P K D S Q W G L P A S H G C I	I R L D E S D A K W F Y E N I P R G T L		
UniRef90_A0ZHN7	I GF	H G T P D T H L L	G A A I S H G C I	R M R N R D D V R L L Y E Q V N V G T L	
UniRef90_W6S9K5	L RI	H G T N D P S S I	G T N A S S S G C F	R M Y R E D V E E L Y D M V G P G T R	
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UniRef90_A0NTZ6	Y RI	H G T T E P W T I	G S A V S S S G C I	R L A N E D I V I H Y N N V A V G S K	
UniRef90_G8WJR1	Y LI	H G T S A P D S V	G L R V S S S G C M	R M M N A A D I Q S L F N Q V K S G T P	
UniRef90_D2XN84	Y AI	H G T N A N F G I	G L R I S H G C I	R L R A D D I K Y F Q N V P L G T R	
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UniRef90_J9YSE5	F KE	H G I Y E A K Q L	G K A A S H G C V	R M S R A D A K W F Y E N I P Q G T T	
UniRef90_H0HV78	I RI	H G T N Q P Q T I	G T N S S N G C F	R M V N E H V M D L Y G R V K M G T Q	
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UniRef90_A1UTH6	F RI	H G S H E T W S	G Q A I S S S G C I	R L L N Q D I D L Y D R V P N G S H	
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UniRef90_UPI00047705CB	Y RI	H G S P E W K S I	G K S A S A G C V	R M F N Q D V M D L Y D R V P S K T P	

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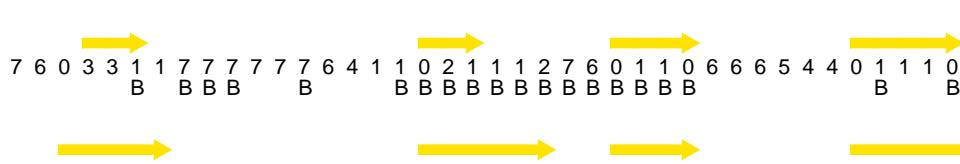
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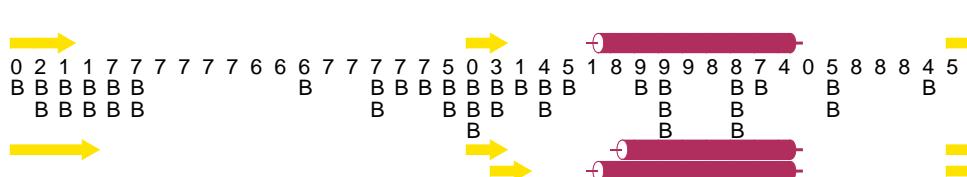
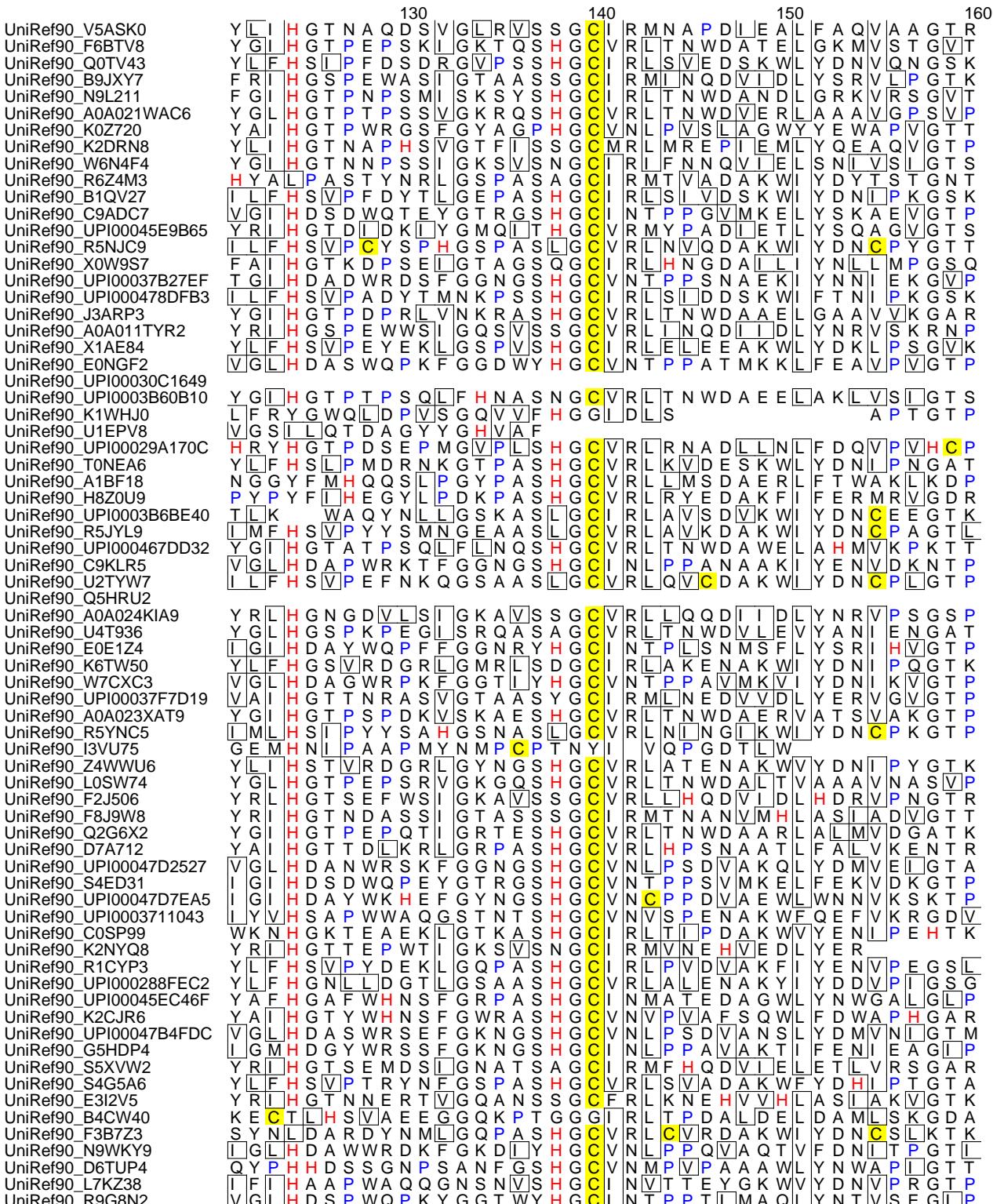
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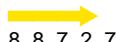
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UniRef90_C9KLR5	V I V
UniRef90_U2TYW7	V V F
UniRef90_Q5HRU2	V
UniRef90_A0A024KIA9	V L V
UniRef90_U4T936	V E I L Q
UniRef90_E0E1Z4	V I V H K
UniRef90_K6TW50	V V I
UniRef90_W7CXC3	V V V
UniRef90UPI00037F7D19	V V M T
UniRef90_A0A023XAT9	I
UniRef90_R5YNC5	V T I
UniRef90_I3VU75	V
UniRef90_Z4WWU6	I V I
UniRef90_L0SW74	V T M Q E
UniRef90_F2J506	I V V L Q
UniRef90_F8J9W8	V Y V L K
UniRef90_Q2G6X2	V S F V R
UniRef90_D7A712	I I V T R
UniRef90UPI00047D2527	V V V H
UniRef90_S4ED31	V L V
UniRef90UPI00047D7EA5	V I V
UniRef90UPI0003711043	V K V K
UniRef90_C0SP99	V V I S
UniRef90_K2NYQ8	V
UniRef90_R1CYP3	V L I
UniRef90UPI000288FEC2	I W I S
UniRef90UPI00045EC46F	V T V
UniRef90_K2CJR6	V V V
UniRef90UPI00047B4FDC	V I V H
UniRef90_G5HPD4	V
UniRef90_S5XVW2	V I V
UniRef90_S4G5A6	V H I
UniRef90_E3I2V5	V K V L Q
UniRef90_B4CW40	V T L E Q
UniRef90_F3B7Z3	V T I
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UniRef90_R9G8N2	V V V

lupas_21
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 solo
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