

1 10 20 30 40  
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QUERY 90 100 110 120  
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250 260 270 280

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QUERY G L S L D Y Y P K L L K A I T G V T Y T W D L Y K A A D R V Y S L I R A Y W V  
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UniRef90\_NOBN87 G A E D F A P M L S A V T G W D F S V E E L M K I G E R I Y N L E R V I N  
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QUERY REF N G K W D R K K M D Y P P K R W F T E G L L K S G P H K G E H L D E K K Y D E 340 350 360  
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QUERY	370	380	390	400
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UniRef90_F8E7Y3	E E Y Y K	L R G W V D G	K P T P E K	L K E L G L E
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UniRef90_F6CKB4	D D Y Y R	L R G W D Q N G	V P P	
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Table with UniRef90 identifiers on the left and a sequence of amino acid single-letter codes on the right. The sequence is organized into four columns, with column indices 130, 140, 150, and 160 marked at the top. Each UniRef90 entry corresponds to a row in the sequence, with some amino acid positions highlighted in yellow (e.g., A, C, Y, M, F, H) or other colors (e.g., R, D, E, G, S, V, L, T, P, Q, N, K, Y, G, L, D, T, I, M, G, A, V, W, F, S, W, A, R, E, L, P, I, V, C, Q, H).

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UniRef90\_C7LNC5 R E G F T A A D D S L P K K L T Q A L R G G P H E G R T L D M D E L E A  
UniRef90\_UPI00046D3022 R E G A T R A D D D L P P E R Y F T E P T P E G A V R G K C I L D R D R F E A  
UniRef90\_G4RLE3 K E G K W V K D E L N P H F R N P I P T G P A K G H T A A K M F D E  
UniRef90\_L0HMP4 R A G I D G S Y D T L P P K I F K G K H A L S R E M I F E N  
UniRef90\_E6NAM2 R E G F S R R D D T L P P E R Y H E E P T S E G K V R G K T I D R E M F E K  
UniRef90\_K4LW47 R F G A T G R D D T L P K K F L V I E P I A E G P C K G S V V R L E P  
UniRef90\_D1CAE3 R E G W T R A D D R L P D R V L T G E A G L T H V R L T H  
UniRef90\_UPI00036F0A8E R C G A S G R D D R L P D K F L R E P V P E G P C R G Q V V R L D F  
UniRef90\_G7V7F7 R E A N I S R K D D Y L P K R M Y H D P I P M P P R G E D K V S L P K F D K  
UniRef90\_A5D4Z7 S C G V G R K D D R L P E R I L K Q K R N A G G A A D N L P P L E A  
UniRef90\_Q29907 K C G V K A E H D T L P E I L V L Q P L E G G S A G N V P D V K K  
UniRef90\_UPI00036B67DF R E G A T A A D D T L P P R I L S E A V A M S S G R E A R L T T E R L Q S  
UniRef90\_G7V6Y3 G V G L A R E H D T L P E R I L K E P R D S G G S Q G L L P D L E R  
UniRef90\_B5Y6N4 R E G F T R E D D R M P E R I L V K D P L P Y G P S A G Q V F E Q D E  
UniRef90\_G7V8Y1 R F G F T R K D D T L P K R F T E E L G R D G R G A G E K V N L D V  
UniRef90\_M0NRL2 L A G F D A E D D T L P G R F V E G H P D A V P G Q G G S E G E C E L D E  
UniRef90\_K2AM97 R E G I S R K D D T L P R R L L H E A R T C D P E G H T V P R L D A  
UniRef90\_F6CLR9 R Q G L T F D D D R L P E K F F T S M N G G P R D G E P G L D R D K F Y K  
UniRef90\_M1Y5D7 L C G F D G A D D D L P N R F V E G D N A M P G Q G G V E G S L V E L E K  
UniRef90\_E7R022 L V G F D G D D S L P A R F V K G H P D A I P G K G G S E G S A E L D E  
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UniRef90\_K0NCC3 R E G L T I N E D D F L P K R L F K E K L N G K Q G I S E D E L S S  
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UniRef90\_UPI0003680886 R E G A S K A M D T L P E R F F A E S I N N G Q N R L T T R E E L S C  
UniRef90\_E7QSI8 R E G F D R E D D A L P A M L A E P L R G G P N D G A Q L D T R A Q L D G  
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UniRef90\_O30212 K L G M K K E D E K L P E L V R R P L K K G G T G G Y S P N V K R  
UniRef90\_G0HYF1 L A G F D G S D D D L P N R F V E G D E H A M P A Q G G S E G E L A E L S K  
UniRef90\_Q5V2K1 R E G I S R A D D E L P A K L Q E P L D S G P N A G A A I D T E S F D A  
UniRef90\_D1JBA1 R E G F S K A D D T L P Q R F F D E S V N Q R V I D K E E F L K  
UniRef90\_B2A731 K Q G L T K K H E K L P K P D G P A K G H K F T Q E D E K I  
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UniRef90\_UPI00046FC1CF A A G L T R A D D T L P K R F L E T P A P S G T A K G K V S E L P M  
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UniRef90\_N0BK8 R E G V V D E N L P S T F F R P V K H Y D R E L V V R K E D F D R  
UniRef90\_C0Q9H6 R E G I S R K D D T L P K R M L T E K L P E G P K K G V L F S P E E I K K  
UniRef90\_D6SP27 R Q G M D S K D D K L F R R M F E P L P D G V L K G E A I S P D S F Q Q  
UniRef90\_U1NKZ2 L V G F D G S D D D L P G R F V E G H E D A M P G Q G G S E G D A E L D Q  
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UniRef90\_A8MAZ8 Q L G I T R K D D V L P P R M L T P H E K R D D T K I P R I V E K  
UniRef90\_D9Q312 R E G V R R S H D R L P K R F L E E P L R S G P A K G H V I E L D V  
UniRef90\_W9DX04 K A G I K S K D D T L P D I F F E D D G D I E K N E F E K  
UniRef90\_D2RWX2 L V G F D G S D D S L P E R F L E D G I R G Q G A S E G E Y C E L E E  
UniRef90\_UPI00036B962C R E G L I K E D D W L P E R F F D E P L P E T G A S I T R E E L A K  
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UniRef90\_UPI0004261B46 R E G L T K E K D N L P K R L T D E L Q D P D D T P N S R V D T I K K  
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UniRef90\_UPI00047C660C A A G L S A R D D N L P K R I L E E P A P S G A A K G L V A K L P Q  
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UniRef90\_E8N4Y1 A L G Y S P D N E K L P A R L Q A L P D G G Q G G F I P D V Q T  
UniRef90\_UPI00046705B0 R E G L T P A D D R L P A R L H A E A L P D G R S L E A S E M E F  
UniRef90\_M0LEM2 R E G F D R D D R L P P R F T E E V P N G A F K G E S I D E E L Y E R  
UniRef90\_G7V558 K M G L T S G D D V I P E R L H T P L P D G A F K G S T I G K D E F K D  
UniRef90\_G1USJ5 A A G F T R A H D R L P I Y M R R E L L P P H N T T F D V  
UniRef90\_Q3A1K5 R E G V S R K D D T L P P R I L A S P R K G G S G D Y V P D L G Y  
UniRef90\_A8ZV03 R M G A S V K T D T L P K R L L T E S R K G C D K K G R T V P L E E  
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	370	380	390	
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UniRef90_F0JBC6	L L N D Y Y R	L R G W D E E S G V P P		
UniRef90_M1Z8Y4	S K E L Y Y E	L A G W D E S T G N P T	E G T L K R L S L G W V A	
UniRef90_B5B16	A I K D W Y R	A R G W D E S T G R P T	R W K L K E L L G L G L D E Y I G K F	
UniRef90_G7V8P0	M L M E Y Y Q	A R G W D E N S G R P T	R E K L K E L L G L D Y L V	
UniRef90_I0GXJ0	M L D E Y Y M	A R R G W S K D G V P T	K M H L K R L L G L D K E S E D	
UniRef90_I3R6S0	M K E E Y Y A	R R K W V D G V V P	D E R L D E L G I D	
UniRef90_G2MMW1	M L D E Y Y Q	L R G W T A E G V P T	E Q T V E R L D I D D W A E	
UniRef90_L0K192	T L E R Y Y E	R R G W D D G V P T	S G R T L E R L G L E E L	
UniRef90_C8X5A6	A I E L Y Y K	V C G W D Q E G R P S	H A R L V D L D I D W I E D Y M	
UniRef90_R4KRK7	M I D D Y Y Q	L R G W		
UniRef90_D5X9X4	A V K N S Y Y E	L M G W D E T G A P S	P G K L K E L L G L D W L I	
UniRef90_D3T1E9	M L D S Y Y E	Q R G W T E A G E P T	P E T L A R R L E I E S L A P E	
UniRef90_F6CPB3	M L D E Y Y Q	T R G W D E T G V P T	E S T L K K L L G L E E F	
UniRef90_E1QS96	G I K V Y Y K	L R G W V D G V P T	R D T L K R L L G L E E F	
UniRef90_UPI000379F961	L L S D Y Y U	P I D Y R G W N E D G V P T	N E K I K E L D I G L E D V A T D L K E R G	
UniRef90_G8ZG95	M L E E Y Y R	L R K W D P K G I P T	E K R L K E L L G L E D V A T D L K E R G	
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UniRef90_A9A0V0	M L S K Y Y K	L R G F D D N G L P T	E K T L K R L L G I D	
UniRef90_L9VP00	L E E Y Y E	R R G W D E Q G R P T	D E H L A G I G L A E L V	
UniRef90_F6B9F7	M L D E Y Y Q	T R G W D N T G R P T	G T K L R Q L G L T K E A E E L E E R	
UniRef90_F8DC92	M L E R Y Y E	Y R G W D E Q G R P T	T T E T L E R L G L A E L A V D	
UniRef90_UPI0004785DE4	M L N A Y Y A	L R G W D D S G L P T	A E T L C A L G L	
UniRef90_I0I214	M L E E Y Y A	E R G W V N G V V P	E S K L R E L E I	
UniRef90_UPI00035D1D7F	M L N E Y Y E	A R G W D K T G K P P	E K L H D I L I	
UniRef90_K4MCQ7	T L T D Y Y H	F R G W D E T G V P L	S K E K L Q E L G I W E E K A G K	
UniRef90_K8DXR2	M V Q R Y Y Q	L R G W D D K G I P G E		
UniRef90_A7NKD4	M L A E Y Y A	A R G W E N G V V P	P E S K L R E L G I	
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UniRef90_UPI00046D3022	M L D E Y Y D	L H G W D R E G R P T	P E T L A R L G L D	
UniRef90_G4RLE3	G I K I Y Y K	L R G W V D G K P T	Y D T L K R L L G L E E F	
UniRef90_L0HMP4	M L R E Y Y E	F R G W E N G V P T	R E K L R S L G I E	
UniRef90_E6NAM2	M L D E Y Y Q	L H G W G L D G K P L P	E T L K R L L G L A E M L E	
UniRef90_K4LW47	M L K E F Y A	L M G W Q E D G S I P L	S K Q R E L G L E E L A	
UniRef90_D1CAE3	L I D A Y Y R	V R G W D A D G R I P E A	H L T R L G L T D L	
UniRef90_UPI00036F0A8E	M L Q E F Y A	L M G W E A D G T V G P	A R Q R E L G L	
UniRef90_G7V7F7	M L D E Y Y M	L R G W N E D G I P E E	G T L G R L G L S W	
UniRef90_A5D4Z7	M L K E Y Y S	Y R G W S D E G V P L P	F K I K E L L G L E W V	
UniRef90_Q29907	Q V S E L Y E	F R K W P E G V P S	R E K L E E L G L E W V	
UniRef90_UPI00036B67DF	M V A A Y Y T	A R G W D A E G R P P		
UniRef90_G7V6Y3	Q L D E Y Y N	F R G W K A N G V I P	G K E N L D K L G L I G E F A	
UniRef90_B5Y6N4	L L D Q Y Y E	A R G W D K T G V I P	K A E K L R E L G L D F T L D	
UniRef90_G7V8Y1	A L D S Y Y A	S M G W D E T G L P T	K E T L C G L D W I	
UniRef90_M0NRL2	M K A E Y Y E	T R G W V D G V P D	E K L E D L G I E	
UniRef90_K2AM97	M L P I Y Y K	V R G Y D E N G L P K K A	V L E K M G I	
UniRef90_F6CLR9	A V R L F Y E	M A G W E D T G R P A	K A K L Y E L G L D W L V E E	
UniRef90_M1Y5D7	M K D E Y Y E	V R G W V D G V I P	D E K L D E L D I D	
UniRef90_E7R022	M K E E Y Y E	V R G W E D G V V P	D E K L E E L G I D	
UniRef90_C0QBC6	M L K D Y Y R	L R G W D E Q G R L A P E		
UniRef90_D3PCB9	M L K R Y Y K	A R G Y D E N G V V S K S	K L K	
UniRef90_K0NCC3	M I Q D Y Y R	L R G W D K N G V P Q E K		
UniRef90_A5CY57	A V R L F Y E	M A G W D D T G R P L A A	K L Y E L D L D W L V E K	
UniRef90_UPI0003680886	M V D E Y Y S	L R G W D D D G Y P L D	Q D L M E	
UniRef90_E7QSI8	L L S V Y Y E	K R G W D E T G R P T R S	L S R L G L D S V V D D E T P V G K	
UniRef90_A0A017T7H6	M K R A Y H A	V R G L S E D G S V P E E	A L D A L G L D W	
UniRef90_O30212	M L E I Y Y R	L R G L D D N G H P T	K E K L E D L G L T E F	
UniRef90_G0HYF1	M K D E Y Y E	V R D W E N G V V P	D E K L D E L G I D	
UniRef90_Q5V2K1	M L D E Y Y R	Q R G W D A D G H P T	P E T I E R L G L A D A V D Q	
UniRef90_D1JBA1	T L D E Y Y R	M R G W D D N G V P T	E G K L K R L G I E	
UniRef90_B2A731	M L Q E Y Y Y	H R G W D E E G R P T	E E K L A Q L G L K D	
UniRef90_B9L4E7	L I R A Y Y R	V R G W A A D G S I P P	E R L R D L G L E S L L D S V	
UniRef90_UPI00046FC1CF	M L P A Y Y K	E R G W T E E G L P T	N E T L D R L R L	
UniRef90_D3L2B5	A L E M F Y K	V A G W D P N G N P	M E G A L R R L S L G W L	
UniRef90_N0BKB8	M V E K Y R S	L R G		
UniRef90_C0Q9H6	V Q D E Y Y A	Y F G W D A N G V I P T	E A T L K S L G L E F A I D S V K K	
UniRef90_UPI00046D6SP27	A V D L Y Y A	M M G W D E K N G V P S	K G T L Y R L S L G L D W L A	
UniRef90_U1NKZ2	M K D E Y Y D	V R G W V D G V V P	D E K L A S L D I D	
UniRef90_E3GI66	M L P V Y Y K	V R G W D E R G V P T	W P T L K R L G L G S L	
UniRef90_UPI00046D2PS74	M L A R Y Y A	E R G L D A D G R P T		
UniRef90_C0Q9G1	M K S L L Y H	L R G W D T D G Q P S		
UniRef90_M0LVK4	M L D R Y Y E	R R G W D E Q G R P T	R A S L E R L G L A D L A	
UniRef90_A8MAZ8	W L P L Y Y R	K R G L T E D G I V	K E L D I	
UniRef90_D9Q312	M L D E Y Y D	V R G W T R D G V P R	R S T L L R L G L K E V A M D L E A R G I	
UniRef90_W9DX04	T L L D Y Y H	F R G W N V E G I P E E	E E K L K E L D I C E E K D	
UniRef90_D2RWX2	M K E E Y Y D	H R G W V D G V V P	D E K L D D L G I D	
UniRef90_UPI00036B962C	M R S D Y Y Y	E R G W N E E G V P		
UniRef90_W0JRX7	M L E S Y Y E	Y R G W D Q E E G R P T	E S M V R R L G I D G D L E D V	
UniRef90_Q2LYI2	A R A Y R R I	R G L N E E G R P T	R E K A A E M A I D W	
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UniRef90_UPI0004261B46	M M P I Y Y T	L R G W D E N G V P T	E K N L K R L G L	
UniRef90_H9ZZR0	M L R H Y Y A	M R K I D P T G K P	M K E K L E L G L K Q A K D L	
UniRef90_UPI00047C660C	M L P E Y Y Q	L R G W T A D G K P K	G E T L S R L G L	
UniRef90_D9Q110	L V D E A Y D	A F G W D R T G Y I R	R S T L E R L G M K D V E E Q L Q K L G K L	
UniRef90_E8N4Y1	L K K E Y Y E	A C G W D Q K G M P G	K E V I D R L N L G F T K D K F	
UniRef90_UPI00046705B0	M L A D Y Y R	L R G W G P G G I P		
UniRef90_M0LEM2	E L D R Y Y T	A R G W N A D G V P L T	E T L G E L D L E D V A G E V G V A N E L	
UniRef90_G7V558	A V A L C Y S	M M G W D G Q G I P	K R E K L A E L G L E E F I	
UniRef90_G1USJ5				
UniRef90_Q3A1K5	M L R D Y Y R	A R G W D E W G L P T	P E T L K R L S L D	
UniRef90_A8ZV03	M R D Q Y Y R	L R G F T P E G K P	P E L L K K L E I	
UniRef90_Q3IMT3	L L D R Y Y R	Q R G W D Q R G R P T	A E L L R R L D I A D L P D S A T P V	



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

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K Q L V I T N Q A C K Y G C T I A  
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D C L P V R N F R Y G F H P E G K N I S S G E V Y E H I F D K D G C W R G C C T V A  
G M S P S Y N F Q K P Y I E L A M K I S S G E E I K K Y E V E Y I H G K S C C P V K  
G G L P T R N F T S G Q C E H H D K I S S G E H M Y D T L Y A R G G E P G C C V I Q  
Y L L S A K N F T D V S P P E F A V I G M S K F Y K P A C F S C P I A  
G A L P T K N F S G G R F E F A A D I S S G E A I A E T K T K H G C C H P G C C V I Q  
G G Y P T Y N F K E G Q Y K G A A N I S S G E L Q A E I E Q K H G C C H R G C C I Q  
G D S P I K N W G S G C K D V K A I G P D A V L Q F Q K K Y G C C Y S C P I Q  
D A L A T N G W R E R T F D G I E D I G V E A A R D A S V G R E Y P D E P V P  
D C L P V H N F K F G S H P Q G K V I G E E T Y E H I F D K D G C W K G C C V A  
G G L P A N N F T G R I D H N D N F S S G E T L N A T K V S H G C C H K G C C V I R  
G S L I T K N F Q T T W Y P D I V K I G G E A M R F W K R H V A C N A C C P V H  
G A M P T K N F R Y G Q C E H A A E I S S G E K I A D L K T T E G C C H T G C C V I Q  
G A L A S R G W H S G Q F D D T D Q I G I E A A R E A A I G R E N P E A V P  
N I L A T K N F K Y G Q Y Q D F Q K I S S G E R L R K F L I R N K G C V T C P I Q  
D C L P V H N F K F G S H P P E S K V I G E E V Y E H I F D K D G C W R G C C V A  
S M C P G W H W R P W L P Q E E R E A P E K S L Y R E H A B T I L W G W G C C P V K  
H L L P T H N Y K F G Q H P E A D K I H S K V Y E K L F T Q G I C W Y G C C T L A  
G L L P T R N Y A K G Q F E D F E L V N G E T F A E I N I V N K T C C L S C C P M K  
R A V S S G E T L Y E Y V T E D T C A N C A V K  
G G Y P T Y N F K E G R Y E G A A D L S S G E T Q A T E L E D E H G C C H R G C C A I Q  
S S E P I R N W K E E Y S H N N E E S V V N F E D R A W L K K Y W A D Y G C C P I N  
D L L P T H N F K F G S H P E A K K I D S E P F K F N Q D L P D G C W L G C C A M S  
G V L P T R G W Q S S R F D G A D E I G I E T A T E R A S G R E R P G D P V P  
W H T E N F M W K G F W T E E T K Q W T E T M E K A R K R L S C Y N C P M K  
D L L P V H N F Q Y G S H A D T H K I D S A Y W Q R C T U P I Q A T C W Y G C C S M A  
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W H T T N F A W K D F W T K E I E S W K E T Q E K A V T R L V G C Y N C P V R  
W H C E N F S W D Y W T D E I A E K W K E T L E G A R T R L L S C Y N C P M K  
E A L P T R Y F S E L S Y E H I D D I S G D R V E E K K Y K K G T C S A C A F A  
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A K E E A F P P E G L T P S E K V V V K Q E N T R A L E D C G L V C C R F M S R D V M  
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V E D W P Q L P D E K F K E E I V D W M E M L H N I D D A L C L C C A G M S S F C  
C K D P Q G Q T E I S K K L Q I S M V C D L G V C C L F V G P V E  
A R P D R S P A D R V R D I V V G E Q N A R S V L W S L V V D D F V G V W T  
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V L P F N H S T S N T K I E R Y Q Y F A A A G Q E I N S T G M C C M F S T N I W  
L D P Q G T L D K A D A L V A R E N N S A F Q D S G I V C C V F G S  
Y E G E L V N A F Y D S A V V C C M F T A K P  
G K D D A F P Q G G F E K P E A V V I Q E N T R A L E D C G I V C C R F S R G I  
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A E K A F E K E G F D G K P P K V I V E K E N I N A I L D S A V I C C K F S R  
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L E Q E G L D G K P A L V R A E N W R A F Q D S A I I C S H S A S S G  
P E A E A V D A D G V G K S E K L V E L I E N K N A I H D S G V L C C K F A S S N L  
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90 100 110 120

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UniRef90\_W0SEJ2 F Y P P Y E G M S M G K A R I V A I T Q N L G S I F N S T N I C S L L G I S F

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290 300 310 320

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

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

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

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

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

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

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UniRef90\_X1CMJ8                                    R M Q M F Y E E A G W D E T G [L] V P T G A T Y R R [L] G [L] S D V E E K [L] A K K R L  
UniRef90\_UPI0004633456                            A R A G Y Y R [L] R G [L] D A D G R P D P A R A A A L E L S D V A D Q L A E L K L L  
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UniRef90\_E7H0G5                                    S F D [L] F Y G [L] M D F D K T G A P T E K S L K E Y G L D F A L P T M K Q E G L L  
UniRef90\_B6GDF3                                    A [L] K M [L] Y K R F G W D E K G [L] C P T K E [L] C L N D L G M S D V A E D L E S R G L L  
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UniRef90\_K1YME7                                    A [L] K E Y Y Q [L]  
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UniRef90\_X1ECW3  
UniRef90\_UPI000311FF89                            E [L] D M F Y E E M G W D K T G [L] P T R A T [L] E R V [L] G L G Y M A D D [L] A A R G L L  
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D E E K A L E N H K Q W A Q H L H A H P I T E L L P K R G S I G F V E R L Q E V
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K K P Y M T V V L E H T K K Y R Y N E K T K T G G T F G N N Y H Y T L
K R Y I D V V Q E K T I K Y R F D P K L G T G G T F G V N Y L H Y R
K P L S K V I L E H T S K Y R Y N K E T N T G G T F G N N W L L Y K
E S F K K P F I Q V M E K T I K Y R Y D P S M G T G G T F G V N Y P H Y R
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 C P V R  
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 D L L P L F G Y K S I Y M P R E E R I W R P F Q R E V F E K G K S W Y N C G E P  
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 E F I P L M N W K M I Y M P R D E R I Y W K P F N K E S M E P R N W T T C G E P  
 G K I L A F N Y R T I F W S E A E R L Y L K Q F N A E T I Q A K Q Q A T C G E P  
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 C K P W M D I K D G I Y K L Q G E G W W N S Y C T K I D N T N L E A A I Y A H L  
 C P V L C K K H R N K N K V D Y E P Y A A N G T L L G I F D L Y E V D R V V K  
 C Y A E Y D V K V S N T C M P I S V G N W Y A G N I G V D E N D G S F V N N V  
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 V C V E Q G M D P V S A G G M L G W V R H G M E A G A F H D A P F I S A G E S F  
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E Q I P I K L G V L N P I Y I M W A T G E K W I Q V P K E E F K E F V L N W E  
V G L R F E D L L V Y A A F G D T G Y F T P N Y Y W S P G V L A P L Y V L G  
L T K T G Y N S R L Y I T T G L I Y A M E P R L P I Q Q L H E I L S V L N M L W A  
L P L P P F D Y R A L P V Q A L L A S L G D E R L V Y G E L L W



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UniRef90\_A8MA55 P L C F D W S E E G I Y S D A R V R E I H W N R A W L Q S L G M C C D W V W P T Y

UniRef90\_X0SAJ9 H Y Q C G V F L E P E E L A K L S V K N T L E E I M L E N L G I C C C R F H R K W I

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UniRef90\_G8QRX9 D Y A S H N M Y S E V L J A R Q V Q W I N H Y G R F W K N S A L M C C D F R W P A T

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UniRef90\_A3MTX3 Y Y Q F G F D P E T L A E E C F K K A V Y E L Y S E N T G M C C R F H R N W A

UniRef90\_V4J446 Y D F I P P R T L G R M C A E R M K K E L I L D N L G T C C R F H R

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UniRef90\_X0VAN7

UniRef90\_F0RRZ0

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UniRef90\_X0SGT1 G Q T V D D W I E L F S S A T G R V L S

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UniRef90\_F7V4J6 V S G R E D E Y K L V G L V T G E K M T Q E K L N E Q A A R T W T L H R L L T V

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UniRef90\_D5U0S7 K S M F S F F A E L V S V T E G Y T V T G K Q V A S Y G R D A W A L Q R K I D K

UniRef90\_G8QRX9 G M T P D G E P K F L N A C G W N K S F E D V I W L G K K V Y D L D R A I W Q

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UniRef90\_X0WF68 G W A E P V L S D L Y K L I G L T P P S P A L Y R E F A Y Y A K

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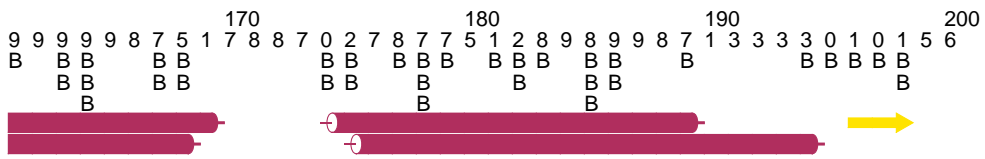








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sol0  
jhmm  
jpssm









conf  
sol25  
sol5  
sol0  
jhmm  
jpssm

8 6 0 3 6 7 7 7 7 7 6 5 2 1 1 1 2 3 2 5 7 7 8 8 7 6 3 2 1 1 4 5 1 0 2 2 8 9  
B B







