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10 20 30 40

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UniRef90_C6DY59	A T Q   V T A G V F Y P A E E Y H Q R Y Y K K N P   R Y	
UniRef90_M7XJV1	V T P   I K F T N F Y P A E D Y H Q D Y Y K K N P D D Y Y A Y F   A A H W	
UniRef90_A0A022GTM7	L V T Q   E P A Q P Y W R A E E S H Q N Y Y Q N H P N Q G Y C S F I S P K L A K	
UniRef90_A4YEN5	V T E   V V P Y T A F Y R A E D Y H F R F Y D R N K D Y P Y C Y V I S P K V K K	
UniRef90_Q5V0S0	V T E   V E P   L E T F Y P A E E Y H Q D Y F E K N P D Q S Y C Q   P P K I E K	
UniRef90_UPI00047302DA	V T Q   L P A K P F Y E A E E Y H Q D Y Y K K N K F R Y S M Y F   K E N W K	
UniRef90_UPI00047CDBA3	A V T E   L S P A V P F F E A E S Y H Q D F Y A K N P T Q G Y C N F   P P K L S K	
UniRef90_D9SGH2	V T E   V V P P F R E F Y R A E E Y H Q Q Y   L K H P G G Y T C H Y I R	
UniRef90_A0A023C0V2	V T E   V T A   G A F Y N A E T Y H Q D Y Y N Q N S S Q G Y C Q F I N P K L N K	
UniRef90_UPI00041D1FF5	V T K   V E A F K M F Y K A D D Y H Q N Y Y A N N K S Q P Y C K V I Q P K I E K	
UniRef90_L0IBNO	V T E   I E Q   D T F Y E A E A H H Q N Y F E K N P N D A Y C Q M H A P K L E K	
UniRef90_I3TW96	V A T E   L V P   L D L F H E A E A Y H Q D Y A A R N P N Q P Y A H V S A P K V A K	
UniRef90_A4CJA1	V T E   V S P   L S N F Y E A D P E H Q D F Y R R N P E   L G Y C R V I D P K M R K	
UniRef90_F7K466	V V T E   L L P   L S N F Y P A E E Y H Q D Y   L D K N P G G Y C H I   L P K L H K	
UniRef90_Q3IHS8	V T E   V S P   A T T F Y P A E H Y H Q D Y Y N E N P E Q G Y C S   I A P K L H K	
UniRef90_UPI0003B3ACC5	V A T R   V I Q F D S F H R A E T Y H Q D Y H R K N P   R Y	
UniRef90_M1RRK0	V V T Q   D V A P V I P A E D Y H Q N Y F R Q H P G Q G Y C A V V A P K L A K	
UniRef90_W9V2W8	V V T E   I V P   F K V F Y E A E E Y H Q D Y Y K K N P   R Y	
UniRef90_F5XB03	V T E   V E N E   P   L K N F Y P A E N Y H Q D Y   L D H N P R G Y C H I   D P S L F E L	
UniRef90_E4TP99	V T E   I K K   F E A F Y P A E E V H Q D F Y N R N E G M P Y C T F I K P K V D K	
UniRef90_UPI00036A1B28	T T V   V E P   L G D Y Y Y A E D Y H Q Q Y   L T K N P N G Y C N H G P N	
UniRef90_Q47A70	V T E   V S P   A S A F F V A E D Y H H Q D Y Y F R R N P Y Q G Y C A V V A P K A M K	
UniRef90_Z5XP83	V T E   L S P   L T H F Y P A E Q Y H Q D Y Y N E N P N Q G Y C S I I A P K L E K	
UniRef90_UPI0003FB46D	V T E   I E P   L A Q F W P A E G Y H Q R Y Y S S H P Q Q G Y C Y V I S P K V Q K	
UniRef90_B4UBF3	G A T E   T R A A P P F Y Y A E E Y H Q Q Y   L A K N P E G Y C	
UniRef90_G7WPC2	V T E   V P   A S G F Y R A E E Y H Q Q Y   F K H G R R S C	
UniRef90_G2PKN5	V T A   S A E K P F Y   L   A E E D H H N Y Y N Q H R Q Q P Y C Q   I   D P K I K K	
UniRef90_UPI00036E4978	V V T E   L A P A S E F Y I   A E A Y H Q D Y Y R G N S Q Q P Y C Q V I S P K L A K	
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UniRef90_UPI0004711805	V V T E   I S A F T D F Y P A E N Y H N D Y F Q A H G E E P Y C Q V V K P K V E E K	
UniRef90_UPI00046F887E	V V T E   L A P   L A N Y S P A E A Y H Q D Y Y F N Q N P N Q G Y C A V V A P K I A K	
UniRef90_UPI000372262C	F V T T   I E P   L D K F W S A E D Y H Q G Y Y N E N P D Q P Y C A V V G P K I A K	
UniRef90_V6HGY9	V T E   I S M E K F F F P A E N Y H Q N Y F R T N P N Q P Y C H Y I R P K I E K	
UniRef90_S9TF20	V T E   V D A A T F W R A E D E H Q N Y F R D H P A Q G Y C A F I S P K V A K	
UniRef90_UPI000288FE1C	V T E   V T R E   F N F Y P A E D Y H S N Y Y F N   L N E R Q G F C Q V I N P K V N K	
UniRef90_A1TZD3	V V I P   E P   L K R F Y P A E E Y H Q D Y Y K K N P   V R Y	
UniRef90_V6IX89	V T P   V P   A A P F Y P A E E V H Q N Y Y R K D P   L S Y G N Y F I A K H W K K	
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UniRef90_D3CWY1	T T E   T A P A G P F Y Y A E E Y H Q Q Y   L S K N P H G Y R C	
UniRef90_M7A13	T T E   T A P L G R F Y Y A E D Y H Q Q Y   L A K N P H G Y R C	
UniRef90_E6WYI9	V T R   E P   L K N F Y P A E E Y H Q N Y F A K N P H H G Y C Q V V A P K V L K	
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UniRef90_G2FIZ7	V T E   L P A G P F Y P A E E Y H Q A Y Y R K N P R H Y Q A Y R I	
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UniRef90_C8NAD0	UniRef90_UPI000478A100	L V V E   N L P   L D N F Y E A E E Y H Q D Y   L A K N P N G Y C H I D I R K A D I
UniRef90_U4K8Z7	I T T E   E P   L R Q F Y Y A E D Y H Q Q Y   L A K N P N G Y C	
UniRef90_Q8TQV6	I V T E   K P F E V F Y K A E G K H Q N Y Y R A N P E G R Y C Q V I S P K L D K	
UniRef90_G7E6N8	I V T E   V P   V S E F Y M A E D Y H Q Q Y F E K	
UniRef90_C9SY18	V V T E   T P A G P   W W D A E D Y H Q K Y   L H N N P G G Y E C H R F R P	
UniRef90_UPI00035F15E5	I V T E   I P A   L G Q Q W W N A E D Y H Q K Y   L H K N P S G Y E C H F   R	
UniRef90_B3QP30	UniRef90_UPI000478A100	I T T E   I A P   L G A F Y Y A E D Y H Q Q Y   L H R   P N G Y C
UniRef90_D4H4E8	V V T E   V E K A G E F W P A E   L Y H Q D Y Y E K T G H R P Y C H   Y Q K R F	
UniRef90_Q18J40	V A T A   L K A A T F Y E A E D Y H Q D F Y K K N P E R Y	
UniRef90_C9Q5J4	I V T E   I E S   L E R F W S A E E Y H Q D Y F E K N P S D A Y C R M H A P K V E K	
UniRef90_M0NR25	UniRef90_I4ENB3	I T T E   I L P A G P   Y Y F A E T Y H Q Q Y   L A K N P N G Y C
UniRef90_C1EID9	UniRef90_UPI0003613ADC	I K T A   I P A R T F W P A E K Y H Q D Y Y R R N A A R Y
UniRef90_UPI0003613ADC	I T T E   I K P   L T T F F Y A E D Y H Q Q Y   L A K N P Y G Y C N H G P N	
UniRef90_B1ZQ77	I T T E   I V P   L E K F W V A E D Y H Q D Y F R K N P N Q G Y C A V I A P K I R K	
UniRef90_G5H9P8	V V T R   L T P A S   V F Y P A E A Y H Q D Y Y E R K G T   P Y C H	
UniRef90_UPI0003B61234	I T T T   I E P   L D E F Y F A E E Y H Q Q Y   L A K N P N G Y C	
UniRef90_N1WQ35	I V T Q   V E A   L K E F Y P A E N Y H Q N Y F R T N P E Q S Y C H Y I K P K I D K	
UniRef90_AOLW60	UniRef90_B6IS04	I V T T E   I A N A G P   F Y Y A E E Y H Q Q Y   L H K N P S G Y C
UniRef90_B6IS04	G A T E   R E A P A F Y Y A E D Y H Q Q Y   L H K K P W G Y C	
UniRef90_A0A241X51	I V T T   I E P   G H A F Y P A E A Y H Q D F   L T N N P T Y P Y I V Y D   L P K L E N	
UniRef90_K2LQB6	UniRef90_UPI0002062DCC	G A T E   D T A   P A F Y Y A E E E H Q Q Y   L A K N P N G Y C
UniRef90_UPI0002062DCC	I T T E   I A P   L P   F Y Y A E D D H Q Q Y   L F K N P E S Y C	
UniRef90_UPI000381CC2D	I V T E   I N G   P E T F Y P A E D Y H Q Y Y F E K N P N Q P Y C A V A A P K K E K	
UniRef90_C7DBH8	I T T E   I T D   V P   V F V A E A Y H Q Q Y   L A K N P A G Y C	
UniRef90_X1FP52	I V T Q   V E P   F A T F F L   A E D Y H Q N F F K R Q S G Q T Y C L V I A P K I K K	
UniRef90_D6Y3K0	I T T E   I V P   A G E F Y F A E D Y H Q Q Y   L H K V   P D G Y C	
UniRef90_A1WWT5	V V T E   V E P   L Y T F Y P A E P E H Q R Y Y D G A P E A P Y C R M I A P K I A R	
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UniRef90_S2XP11	I V T P   I H P A E T F Y   L   A E D Y H Q D F Y Y K K N P E R Y	
UniRef90_UPI000290F90B	I T T E   I A D A P P   F Y Y A E A Y H Q Q Y   L A K N P G G Y C	
UniRef90_J3YYQ7	I V T E   I S P   L Q   F Y E A E N D H Q D Y Y A N N P D A G Y C A V I T P K L T K	
UniRef90_F3YCE3	UniRef90_Q1WU33	I T T Q   I E P   A K T F Y P A E D Y H Q D Y Y K K N S   H Y N M Y F I R K N W K
UniRef90_Q1WU33	I V T Q   I E D A K P   F Y Y A E E Y H Q D F Y Y K K N P E R Y	
UniRef90_H2ID43	I T T E   I Q P A G T Y F Y A E T Y H Q Q Y   L A K N P E G Y C	
UniRef90_X0QB13	V V I E   I V P   A S T F Y P A E E Y H Q D Y Y K K N P   R Y K A Y	
UniRef90_K9QGT6	I T T E   I L D A P A F Y Y A E A Y H Q Q Y   L A K N P N G Y C	
UniRef90_X5PY97	I V T T   I E T G K A F Y P A E D Y H Q D F L   T L N P T Y P Y I V Y D   L P K V E N	
UniRef90_D2SGN2	I T T E   I A P   L G D F Y Y A E D Y H Q Q Y   L Y K V   P N G Y C	

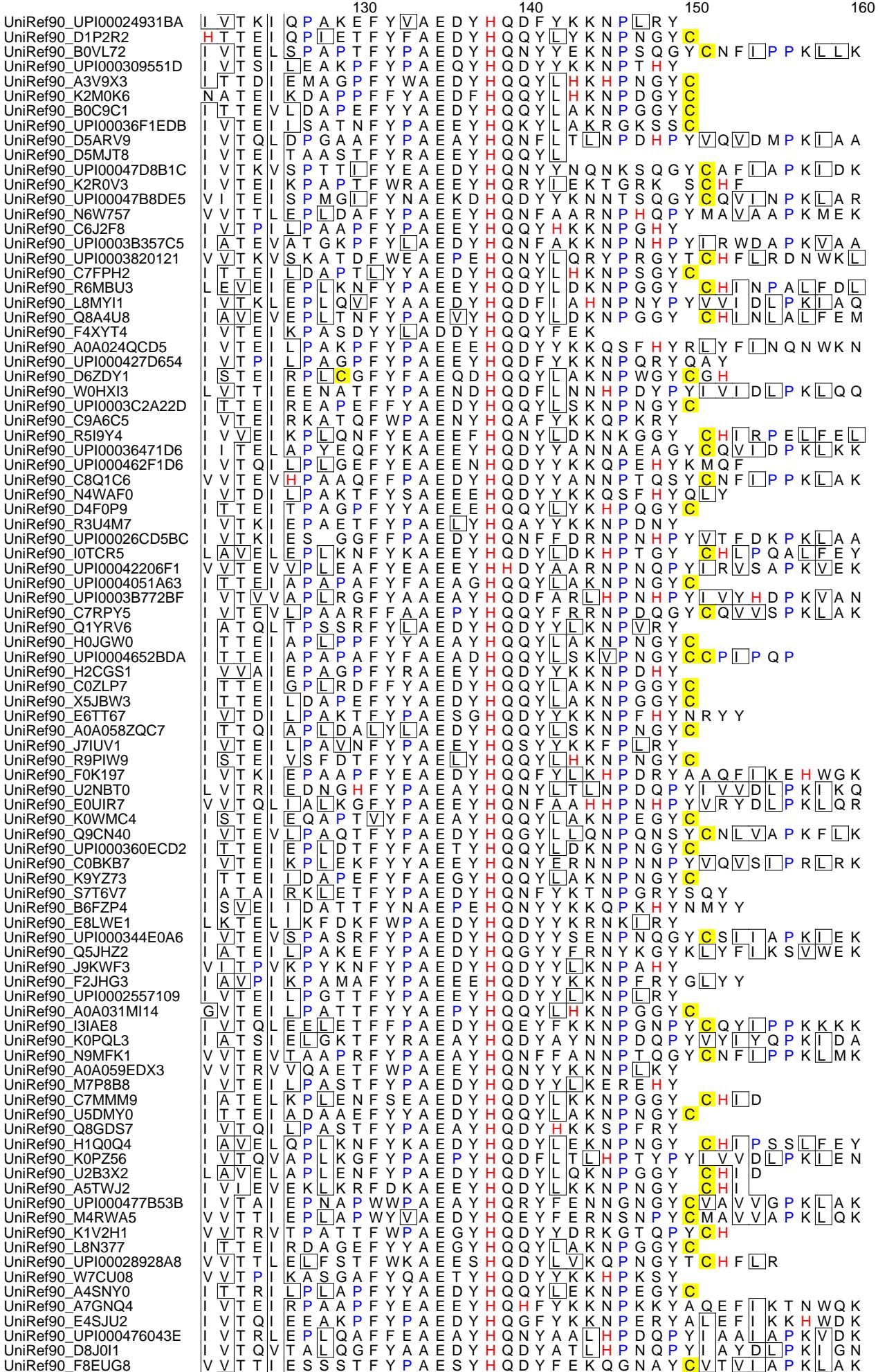
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UniRef90\_UP100046F887E L R  
UniRef90\_UP1000372262C F K  
UniRef90\_V6HGY9 F L K  
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UniRef90\_UP100038046CE A R E A  
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UniRef90\_H2ID43  
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 UniRef90\_UPI000476043E  
 UniRef90\_D8J0I1  
 UniRef90\_F8EUG8

The sequence alignment shows a highly conserved region highlighted in yellow across all entries. This region spans approximately positions 10 to 40 and includes amino acids such as C, F, G, W, M, V, H, P, D, Q, Q, P, G, I, S, V, I, S, G, Y, T, G, G, H, V, P, N, P, T. The alignment is composed of various protein sequences from different organisms, with each entry consisting of a unique identifier followed by its primary sequence. The high conservation of the yellow-highlighted region suggests it is a critical functional or structural element across these diverse proteins.







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UniRef90\_B0VL72  
UniRef90\_UPI000309551D  
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UniRef90\_K2R0V3 [L]R D S  
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UniRef90\_N6W757 [L]R D S  
UniRef90\_C6J2F8 [L]K R  
UniRef90\_UPI0003B357C5 [L]K R  
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UniRef90\_R9PIW9  
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Q G N D Q G T Q Y R S A I | Y Y Q N D A Q K A E A E A S A A A Y S E A L S Q A G K P  
Q E E N V | G T Q Y R S V I | H T F G A Q Q R E A A L R S K A T Y Q Q E L A K Q Q P  
Q G P D | G P Q Y R S A V | F V T G D E Q R T V T E G L I E R L K A R D Y A  
Q G N D R G I Q Y R T G I | Y F L D P A E E A R I I Q N Q L A S L A K D Y A N P  
Q G N D I G S Q Y R S A I | F V L T P Q Q Q A E E A E R F Q K A M R E A N D S R E  
Q G N D L G S Q Y R S A I | Y Y T T D D Q K A E A E R T R D L Y A P V I K P Y G D P  
Q G N D K G P Q Y R S V V | F A H N A E Q I E Q T T A M L T Q L A A A K V F D A P  
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UniRef90\_UPI0003F8FAEB | V T K | L P A D T F Y P A E E Y H Q D F H [K] K N P K H Y  
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UniRef90\_UPI0003B34146 | T T E | A P A G E F Y L A E D Y H Q Q Y L E A N P N G Y C  
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UniRef90\_K7GDZ5 | I T T E | Q E A G E F Y Y A E D Y H Q Q Y L H K T P R G Y C  
UniRef90\_A6GD07 | V V T E | V L P A A T F W P A E E Y H Q N Y Y A R K G D T P Y C  
UniRef90\_F9MRD6 | L Q [V] E | V K A L E N F Y P A E D Y H Q D Y L D K N P [L] G Y C  
UniRef90\_E5YJS2 | I T T E | I S A A K P F Y Y A E D E H Q Q Y L Y K N P H G Y C  
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UniRef90\_A9KYX4 | I V T Q | V S A F E T F Y P A E N Y H N D Y F A L H G E Q P Y C  
UniRef90\_F0TND6 | Y V T E | L A P F K K F W K A E S Y H Q G Y Y K D N P T Q P Y C  
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UniRef90\_Q7NHL9 | T T E | V L D A P E F Y Y A E D Y H Q Q Y L S K N P  
UniRef90\_UPI0004766C53 | V T Q | L R P R E T W Y K A E A Y H Q D Y F A Q H P L Q G Y C  
UniRef90\_X7E0M6 | T T E | I P L D T Y Y F A E E Y H Q Q Y L H K N P N G Y R C  
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UniRef90\_F8JG11 | V V T E | I M P F K A F Y K A E D Y H I N Y Y E R N P N Y P Y C I F I S P K V S K  
UniRef90\_E5WHL8 | I A T T | V E P G R T F F P A E N Y H Q N F L T L N P N Y P Y I V I D L P K V A N  
UniRef90\_S0NH64 | I V T R | I L P A S D F Y P A E D Y H Q H Y Y K K N P D R Y S S Y  
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UniRef90\_C6XL03 | I V T A | I E P A S T F W L A E N F H Q Q F Y Q K N P R R Y K K  
UniRef90\_B3E788 | V V T E | V V P A G T F W Q A E E Y H Q Q Y H R K N G G G  
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UniRef90\_A0A011ADD5 | I A I E | V K P L S C Y Y R A E E Y H Q K Y L N K N P P G G Y C H I G A D K F E K  
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UniRef90\_B2TB2 | I V T K | A E P F K G F Y P A E S Y H Q N Y L T L H P N S A Y I A I D M P K V A N  
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UniRef90\_UPI000477DBCE | E F A P | L R E F S E F Y Y A E D Y H Q Q Y L H K V P N G Y C  
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 UniRef90\_C0VWK6  
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1 10 20 30 40

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UniRef90\_Q3SK11 A E Q  
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UniRef90\_T0R514  
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UniRef90\_I0QVJ8  K Q

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 UniRef90UPI0003506F42  
 UniRef90\_N9XS86  
 UniRef90\_Z9JIC6  
 UniRef90\_R9T3P0

10 20 30 40

The sequence alignment shows a highly conserved motif highlighted by a vertical yellow bar. This motif is present in all sequences from UniRef90 and UniProtKB entries. The motif consists of approximately 15 positions, starting around position 10 and ending around position 25. The amino acids at these positions are mostly polar or charged residues, such as Asp (D), Glu (E), Lys (K), Arg (R), and Cys (C). The alignment also includes several gaps represented by dashes (-) and question marks (?).

UniRef90\_UPI0003B36F94 Y E D V C R H A E S V L V R Y N P S R V G Y E Q I L R R F F E L H D P T T Q L N R  
UniRef90\_C6VQU1 Y E D V T G H T E A V K I T F D P D I S Y T E L L V N I Y W H Q T D P T T D A M G  
UniRef90\_K9GYL7 Y E Q V C S H A E A V R V D D P E K I S Y E D L L L E V F W K A H D P T T Q K D R  
UniRef90\_S6BRJ3 Y E Q V T G H V E A V E I I F D T R K M S Y Q Q L L D I F W N I H D P T T P N R  
UniRef90\_D5EBF9 Y K E V C T H A E A V E V T Y D P Q I V S Y E Q M L D I F F F E I H D P T T Q V N R  
UniRef90\_KOZDW8 Y E D V C S H A E E T V R V V Y S T E K T S V A Q L I S L F F S V H D P T E L N R  
UniRef90\_UP100030EDFB2 Y D N V T G H A E S V A V T F D P T Q V S Y G A L L Q I F F S V H D P T T E L N R  
UniRef90\_J2KIT3 Y E E V T G F A E T V K V K Y D A T Q V D L K L I L D L Y F K T I D P T S L N K  
UniRef90\_Q6Q903 Y E D V C Y H A E V V K V I Y D P N I I E L K K L K V F W E C H D P T T Q G M R  
UniRef90\_J3P630 Y R A V C S H A E E A T Q V E F D P A K V S Y R Q L L E F F Y K T H D P T T T K N Q  
UniRef90\_Q5WG30 Y E Q V T G H Y E E V V E I T Y D S E Q F P Y S K L L E L Y W P Q I D P T D D G G  
UniRef90\_C0N617 Y K L V C T H A E A I I Q F D P E V I S Y R Q L L E A F W Q M H N P T T L N R  
UniRef90\_UP100046E823F Y K E K T G H A E T L H I Y D E S V I S L D E I I L R H Y F R I I D P T S L N K  
UniRef90\_E1W286 L L H A T D H A E E T V K V T Y D P N K I S L D K L L Q Y Y F R V I D P T S I N K  
UniRef90\_I3D293 Y E E V C T H A E A V E V E P D K E I S Y Q E L L D V F W N N H N P T T L N R  
UniRef90\_UP100046638A7 Y E E V C S H N E V V L V F D P T V A P L S S I L K T F W E N H D P T T Q G M R  
UniRef90\_UP10037TBA5C Y E E V S G H Y E A V Q I T Y D P E R F S Y E E Q L L N L Y W P Q I D P T D D G G  
UniRef90\_G8PRJ8 Y K Q V T G H I E A L E V K F D P A K V S Y E E L L T A F W H S V D P T D A G G  
UniRef90\_UP100046D1F17 Y G E V C S H A E E A V K V V V D P S I V S Y A E L L R L F W E N H D P T T Q G H R  
UniRef90\_Q3J9F6 UniRef90\_F2F4U8 Y E Q V C S T H A E A V K V V V D P S I V S Y A E L L R L F W E N H D P T T Q G M R  
UniRef90\_D5DE27 Y K K E N E Y V E A V Q I V W D S S H I T F E E L L N L Y W Q Q I D P T D S A G  
UniRef90\_F2E2G1 Y E D V C T H N E E V V R V Q Y D P A A C K F D D D L L D T F W A R H D P T T P N R  
UniRef90\_B1LSI7 Y R T V T G H A E A V S V T Y D P A A I R Y D E L L R I F F S V L D P T Q V D R  
UniRef90\_W7TD02 Y K E V C T H A E E A V E I K F D P S I V T Y P E L L T V L W D R H D P T Q K D R  
UniRef90\_UP100041338F1 Y E E I C S H A E V V A V T F D E E I I P E D V I I L D M F F S L H D P T T T L N R  
UniRef90\_Q1QBT4 Y E Q V V S G H A E E A V V K V T Y D A D K T D L D T I I L K Y Y F R V V D P T T S L N K  
UniRef90\_E0UAC5 Y L D V C G H A E E V V Q V E Y D P Q Q I S Y E E L L E V F W K L H D P T T S L N H  
UniRef90\_UP10003726B23 Y E G R T G H A E E A V E I I Y D P N V V S F E T T L V D V Y F A S Q N V T Q V N G  
UniRef90\_V6AS96 Y E E V C T H A E E V V Q V E Y D P D Q I S Y E Q I L L D V F W G C H D P T T L N R  
UniRef90\_Q6L2S4 UniRef90\_G2Z4Q4 Y E E V C S H A E E T V R I R Y D P E K I S S F D D D I L E I Y F S V I D P T T L N R  
UniRef90\_UP10004285537 Y E E V C T G T E V V A I T F N P A E T N L N D I F K V F F T V H D P T T L N R  
UniRef90\_A9C270 Y S A V T G H A E S V E I T Y D P A Q V S Y G Q L L Q I Y F S V H D P T T Q L N R  
UniRef90\_W2UE57 Y E E A C S H A E V V V L V V F D P T I I S F A K L L A V F W E S H D P T T Q G M R  
UniRef90\_C3XJ28 UniRef90\_V4MXR2 Y E L V C S G T E A L R L E Y D E S V L S S L R E I M E R F L S I D P C A L N Y  
UniRef90\_G8U0D7 Y K E V C V C S H R E A V D I V F D P D Q V S Y E T T L L D I Y W R Q I D P L D P G G  
UniRef90\_Q747V4 Y E E V C S H A E E V V E V T F D P A A V T Y D H L L R V F W D C H D P T T Q L N R  
UniRef90\_UP1000361608F Y E N V C T H A E E V V V H D P R V L P L A A L K L F W E R H D P T E G M R  
UniRef90\_UP1000299DFB7 Y E S R T G H A E E A V E I I Y D P E V V S S F E T T L V K V Y Y G S Q N P T Q V N G  
UniRef90\_E7GME1 C K G E T G F R E A V R V E Y D P G Q V S S L D A L L L A Y F Y V I D P T V E N R  
UniRef90\_T2G6M9 Y T D V T G H L E A V Q V V Y D P Q Q L S Y A D L L V E H F W R T I D P T D A G G  
UniRef90\_B2TDY6 Y E P V T G H A E E S V Q I T Y D P T Q I T Y G R L L Q I F F S V H N P T E L D Y  
UniRef90\_UP10003793AD4 Y E D V R N H A E E V V R V F F D P E A V S S L E R V L A G F W E N H D P T Q K N R  
UniRef90\_C6VPA4 Y E Q V T G H V E A V E I I R Y D S R K I S Y Q N L V D I Y W Q L I D P T D R F G  
UniRef90\_U4KNJ2 Y E E V V C N H A E A T L V V Y D E S K T N L V T L L E H F F R I I N P H T I N R  
UniRef90\_E1L873 Y E E D V C H V E A L K V I V Y D T D I L S L D H L L Q Y F L R A I D P F S I N K  
UniRef90\_F8L712 Y E E E V C E H A E E A I E I L Y D P Q K I S Y E S L L K V F W T M H D P T T L N R  
UniRef90\_A0A024PF72 Y E Q V T G H A E S V K V D Y D P T V I T Y A E L L I N I F F E A H D P T S K N R  
UniRef90\_UP100047514EA Y Q E V C T H A E E T V L V A Y N P V V A G R E A L L R A F W E N H D S T Q L N R  
UniRef90\_E4XN68 Y E N K G R H A E V V R V F D P L K I N Y Y N E L L Q L F F E N H D P T T Q G D R  
UniRef90\_R5BV61 Y Q D V C H R H E T V K V T Y Q P E V L S L E V L K A F F R V V D P T S E N R  
UniRef90\_H1HKh9 Y E E V C T F P A E T V H K Y D P K V I S L A F F L D L Y F K A I D P T S L N K  
UniRef90\_UP10003A2983B Y E A V R N H A E E V I K V T F D P K T V G L E Q V L A R F W E S H D P T T Q G D R  
UniRef90\_UP10002002C88 Y E E V C S H T E V V R V M V W D V N A I D F F S D L L K L F W E C H D P T T Q G M A  
UniRef90\_A9SML9 Y R D V C S H V E A V K Q M E Y D P S Q V S Y K Q L L D V F W K K H D P T O K N R  
UniRef90\_S0NRP6 Y D Q V G G H V E A V K I I F D P T Q L S Y R K L V E L Y F D V T D P T D A F G  
UniRef90\_H0AF32 Y R E V C S H A E E V V K I E Y S K E E L G L E E I L E F F F R I H D P T T E D R  
UniRef90\_E5YBB3 Y E E V C T H A E E A V R V T Y D P A K V S F F E E L A R L F F E I H D P T T Q I N R  
UniRef90\_H7F8P2 Y E Q V C S G H T E A V E I I F D T R I Q Y L D L V T L Y F Q L T D P T T D A L G  
UniRef90\_TORFN6 Y K D V S N H A E E V V R V K Y D P T K V S Y E K L L D L F W H N I D P T T K D K  
UniRef90\_R7ZFG3 Y E Q V C S H V E A V Q I M F D D E L Y S Y E Q I L L S T F W T L I D P T T D A G G S  
UniRef90\_A5DPK2 Y E K V C C E F V E A V Q L S Y E P E N L Q L E A I I L D I F F F R M H D P T T T V N S  
UniRef90\_V7I4Z2 Y N E E V C T H A E E T V L V K Y D E A V I G L T D V L E K F F K V I D P T I L N R  
UniRef90\_R9H0G0 Y E E V C T H A E E T V L V Y F N P K I S Y S Q L L D A F F Q S H D P T T L N Q  
UniRef90\_F4GLN8 Y E D V C R H L E T V R V T Y D I D R L S Y K D L I H W F F E I H D P T Q D G  
UniRef90\_W7TQD7 Y D Y V C S H T E A V Q V F F D P K E V S Y E Y L C K L L L T R I N P T T L K N Q  
UniRef90\_E1JZV7 Y E E V T G H Y E A V V Q F V Y D P A R V S Y R R I L L D A F L R H D P T D P G G  
UniRef90\_Q9KCX1 Y K E V C S H Y E E A V Q I S F D P E V F P Y E K L L E I Y W T Q L D P T D P G G  
UniRef90\_A4C1W1 Y K K I I T G H A E T V A V Y Y N P K K V S F E T L L V T V F F G G S H D P T T V N G  
UniRef90\_UP100034D19AD Y D E V C T H T E A V R V V F D P E K I S Y T D L L R V F W E N H D P T T Q G M R  
UniRef90\_UP10003678A0D Y E Q V C C Y H V E V K V I Y D A K Q V S S Y D L L K V F W E C H D P T T Q G M R  
UniRef90\_H3NC86 Y E E V C S H T E A V E I T Y D P S K M S Y E E L V N I Y W Q Q T D P T D A S G  
UniRef90\_A5VC80 Y E T V T G H A E A V K I T Y D P R R I S Y G T L L R I Y F A V V D P T T T L N R  
UniRef90\_J1LNH1 Y R Q V C S H S E T V R V V F D T S A T S A A D L I R L F F E I H D P T T Q V G G  
UniRef90\_D8RBX9 Y R D V C C D H C E V R V V F D S S V C S Y E K L L E V F W K M H D P T S M Y R  
UniRef90\_A7FUJX9 Y E E V C S H A E A A C Y K Y D E S I S E E L N K F W S I D P T V L N K  
UniRef90\_F8GVU9 Y E K V T G H A E S V E I I R Y D P A Q V S Y G K L L Q V F F S V H N P T T Q L N Y  
UniRef90\_UP100047AFA36 Y E S V C G H A E E V V V A V T F D E T V V P T E V I L L G I F F F A A H D P T T L N R  
UniRef90\_V2XL31 Y R H T S G H A E E T V K V I Y K P E I I S L E D I L T H Y L R V V N P V S V N K  
UniRef90\_A3WGM3 Y K Q V C T H A E E G I R V T F D P D V T S L A E I Y D M F L G T H D P T Q L N R  
UniRef90\_C5GDB3 Y K S Q V C S H A E A L R I I F D P S I V T Y R Q L L E F F Y R M H D P T T L N R  
UniRef90\_W8AY86 Y E E T C S H T E S V I V V F D P R V I E F D G I L R Q F W E N H D P T T Q G M R  
UniRef90\_W0DLX3 Y R E V C S H N E I L V R V V Y D P E Q I D L E A I L L K V F W E G H D P T T Q G M R  
UniRef90\_B8GQK2 Y R E V C T H A E E V V R V V Y D P A K I R F A E L L K V F W E S H D P T T Q G M R  
UniRef90\_UP100037F4A82 Y W Q V T G H V E A V R I L F D P G R I G F S E I L E A F W R S I D P L D P H G  
UniRef90\_B2GJM9 Y E S V C S H A E E A V E V T F D P D V V P A E V V L D L F F T G H D P T T L N R  
UniRef90\_UP10003506F42 Y K E V C S H T E V V R V V Y Q P E N I S F E K L L K V F W E N H D P T T Q G M R  
UniRef90\_N9XS86 Y E Q V C T G T E T V K L I Y R P E E T E L S T L E A Y F A V I D P T I L N R  
UniRef90\_Z9JIC6 Y R E V C S H A E E V V L V V Y D H T V I S F E R L L Q A F W E C H D P T T Q G M R  
UniRef90\_R9T3P0 Y R E V C S G R E T V R I E Y D G S V L P L Q G I L E L Y F K A V D P T V K D R



130                  140                  150                  160

UniRef90_UPI0003B36F94	M V T Q  A P A G P F Y E E A Y H Q D F A R R T G R G V C H M S V P R F
UniRef90_C6VQU1	I V T A   E D A K P F Y P A E A R H Q R F Y K N N P
UniRef90_K9GYL7	I I T E   T E A G A F Y P A E D Y H Q Q Y M A K R G R G
UniRef90_S6BRJ3	I V T A   E P A A T F W L A E N Y H Q D F Y K K N P K R Y R M
UniRef90_D5EBF9	
UniRef90_K0ZDW8	I A T E   A P A S E F W Y A E D Y H Q K Y L F K N P N G Y E C H
UniRef90_UP100030EDFB2	L M T R   E S N A H F Y S A E A Y H Q N F L T D H P D A P Y I R I D L P K I K Q
UniRef90_J2KIT3	V V V E T   P L K N F Y K A E D Y H Q E Y L D K N P G G Y C H E P G L F E M
UniRef90_Q6Q903	I T T E   D I V K N Y F L A E E Y H Q Q Y L A K N P N G Y C
UniRef90_J3P630	I V T E   L A A G K W W D A E D Y H Q L Y L H N N P D G Y Q C
UniRef90_Q5WG30	V T A   L P A S T F Y R A E E E H Q D F Y K K Q P K A Y
UniRef90_C0N617	V T E   T A A S I F Y P A E D Y H Q C Y L E K R G Q G S C H
UniRef90_UP100046E823F	V V E   V M E L K K N F I N A E E Y H Q D Y L D K N P N G Y C H V D L S L A K V
UniRef90_E1W286	Q I E   V E P L K N Y V E A E E Y H Q D Y L K K N P N G Y C H I D L K K A D E
UniRef90_I3D293	I V T E   V P A P L F Y K A E E Y H Q K Y F K K H G
UniRef90_UP100046638A7	T T E   Q P A G P F Y Y A E P Y H Q Q Y L A K N P
UniRef90_UP100037BBA5C	V T E   L P A S R F Y E A E E E H Q Q F Y K K Q P N E Y
UniRef90_G8PRJ8	V T P   R T A S T F Y D A E D Y H Q N Y Y E K N P I R Y K Y Y R Y R
UniRef90_UP100046D1F17	T T Y   D T A G D F W L A E D Y H Q Q Y L H K N P L G Y
UniRef90_Q3J9F6	I T T E   G P A P E F Y Y A E S Y H Q Q Y L A K N P
UniRef90_F2F4U8	I A V K   L E A K P F Y Y A A E D Y H Q H Y Y K K N P A H Y
UniRef90_D5DE27	V T P   L P F S S F Y E A E E Q Q Q D Y Y R K N T F H Y
UniRef90_F2E2G1	I V T E   L P A K R F Y R A E E Y H Q Q Y L A K
UniRef90_B1LSI7	V A T R   E P G A A F Y P A E G Y H Q D F M M V L H P G H P Y I A A D A P K L E A
UniRef90_W7TD02	I V T Q   V P A T T F Y E A E T Y H Q Q Y L E K
UniRef90_UP100041338F1	I V T E   V T R L G N F Y E A E E Y H Q N F Y A R R P E Q G Y C Q I I N P K L A K
UniRef90_Q1QBT4	V V V E N K I L D N F Y L A E M Y H Q D Y L A K N P N G Y C H V D
UniRef90_E0UAC5	V T E   I K A A S D Y Y L A A E Y H Q Q Y Y S R R G K K
UniRef90_UP10003726B23	I A A E   V Y P F Q K F W V A E D Y H Q D Y E K R N R P N H P Y I Q V S I P R L N R
UniRef90_V6AS96	V T E   I K P A P A F Y R A E E Y H Q Q Y Y A K
UniRef90_Q6L2S4	I V V S   V E P Y K N F Y P A E D Y H K N Y F E R R H P E Q G Y C R V I K P K V E K
UniRef90_G2Z4Q4	V T T   L P F K Q F Y K A K K E H Q N Y Y N N N Q M P Y C S V I Q P K I E K
UniRef90_UP10004285537	I T T E   V D R P N F Y F A E T Y H Q Q Y L A K N P D G Y C
UniRef90_A9C270	V T R   L E D K P S F F P A E N Y H Q D F M T E N P R H P Y I V I D L P K V E Q
UniRef90_W2UE57	I T T E   I R M A P T F F Y A E D Y H Q Q Y L A K N P G G Y C
UniRef90_C3XJ28	A V T E   L P L V N F Y E A E S Y H Q K Y L E K N P N G Y C H I D
UniRef90_V4MXR2	G V T E   F T A K P F F F A E D Y H Q G Y L H K N P D G Y C
UniRef90_G8U0D7	I A T E   L P A A P F Y P A E T Y H Q D Y Y R K N P V H Y Q R Y R I
UniRef90_Q747V4	I V T E   V P A A T F W W A E E Y H Q H Y L E K R G G G S C C
UniRef90_UP1000361608F	I T T E   I T A T G V P F Y F A E D Y H Q Q Y L A K N P N G Y C
UniRef90_UP1000299DFB7	L A A E   V P F Q K F W V G E D Y H Q N Y E K L H P E N P Y I Q V S I P R Y N K
UniRef90_E7GME1	F F V E   I G P L K N Y Y P A E E Y H Q N Y L E K N P N G Y C H I P R A E M E L
UniRef90_T2G6M9	I V T A   I L P L D R F W P A E A Y H Q N F H V A N P V R Y C A Y
UniRef90_B2TDY6	V V T R   V E D F K G F Y P A E S Y H Q N F L A L H P D Y P Y I A I D L P K V S D
UniRef90_UP10003793AD4	I Q T E   V A P L K N Y I T A E D Y H Q N Y L A K N P D G Y C
UniRef90_C6VPA4	I V V A   I E P L Q Q F W P A E N Y H Q D F Y R K Q P R R Y K A H D H Y L N W L K
UniRef90_U4KNJ2	I T V S   V E P L R H F D L A E D Y H Q D Y L V K K P N G Y C H I P
UniRef90_E1L873	U A I E   V L P L D N Y Y S A E E Y H Q D Y L D K N P N G Y C H I P
UniRef90_F8L712	I V T E   I T S A C P F Y E A E A Y H Q K Y F R K
UniRef90_A0A024PF72	I V T E   V E A A T T F Y E A E E H Q K Y L Q K H G S A A C
UniRef90_UP100047514EA	S T T   D P A G P Y Y L A E D Y H Q G Y L E K N P G G Y C N H G P N
UniRef90_E4XN68	I T T E   I K L E K T F Y Y A A E D Y H Q Q Y L S K N P D G F C
UniRef90_R5BV61	I V T E   V K P L Q N F Y A A E E Y H Q E Y L E K N P R G Y C H I H
UniRef90_H1HKH9	I R V E   V K P L K N F Y T A E E Y H Q D Y L D K H P S G Y C H I L P Q K L F E E
UniRef90_UP10003A2983B	G A I T   I A P L K V Y F S A E D Y H Q D Y L K K N P D G Y C
UniRef90_UP10002002C88	A A T E   I A T G K P F F F A E T Y H Q Q Y L A R P G S R P Y C
UniRef90_A9SML9	I A T E   I P A T T Y Y L A E E Y H Q K Y L E K
UniRef90_S0NRP6	I V T K   I P S G P F Y E A E A M H Q D F Y K K P K R Y
UniRef90_H0AF32	I V T Q   V K E L E N F Y V A E E K H Q D Y F E K N P E D A Y C R M H A P K V E K
UniRef90_E5YBB3	V A T E   I L P A S T F Y P A E A Y H Q D F T A R T G R G G C
UniRef90_H7F8P2	I V T A   I E P A S T F W P A E N F H Q Q F Y K N N P K R Y A K I K R
UniRef90_TORFN6	I L T E   I V A A T D F F E A E E Y H Q D F Y K K S P V R Y
UniRef90_R7ZFG3	T V R   L P A S T F Y A A E D Y H Q Q Y Y K K N P M H Y
UniRef90_A5DPK2	I V T I   I E P I K V W H D A E N Y H Q Q Y L A K N P G G Y D C H F I R T K
UniRef90_V7I4Z2	V T E   V L P L K N F Y D A E E Y H Q D Y L K K N P R G Y C H I D
UniRef90_R9H0G0	I V T E   V A P L T T F Y R A E E Y H Q Q Y T S E N P N S Y V R A V S L P R F D K
UniRef90_F4GLN8	A T R   L P A A P F W E A E D Y H Q D Y Y E R T G S R P Y C H A H V K R F
UniRef90_W7TQD7	I V T E   C L P A T V Y W P A E E Y H Q K Y L E K
UniRef90_E1JZV7	L V T A   V L P F T F F T D A E A Y H Q N Y Y K T H K L Q Y Q T Y
UniRef90_Q9KXC1	I V T R   I L P A K P F Y P A E E Y H Q K Y H K K N P F H Y K M Y
UniRef90_A4C1W1	I A T E   V T A F T K F Y K A E D Y H Q D F E R K N P N Q G Y V A V S V P R L N K
UniRef90_UP100034D19AD	G A T E   I L P A G E F Y F A E V Y H Q Q Y L T K N P H G Y C
UniRef90_UP10003678A0D	I T T E   I L P A T Y Y L A E E Y H Q K Y L A K N P N G Y C
UniRef90_H3NC86	I V V S   I E E K T F Y P A E D Y H Q D F Y K K N N A H Y T R Y
UniRef90_A5VC80	I V T K   V E L Y R G F F P A E K Y H Q D F L T R K P D Y P Y I V Y D L P K V E A
UniRef90_J1LNH1	I Q T V   I S P A P R F W L A E E Y H Q Q Y L A K N P G G Y E C H
UniRef90_D8RBX9	I V T E   I L P A K K F Y K A E P Y H Q Q Y L S K
UniRef90_A7FUX9	I V T E   V E P L K C F Y E A E E Y H Q K Y L K K N P G G Y C H I H
UniRef90_F8GVU9	I V T R   L E D Y K G F Y P A E A Y H Q D F L T K N P R H P Y I V I D L P K I G N
UniRef90_UP100047AFA36	I V T E   V V R   L P K F F V A E E Y H Q N F Y A K H P E Q G Y C Q I I N P K L A K
UniRef90_V2XL31	A A T E   V L P L K H F F E A E E Y H Q D Y L E K N P G G Y C H I D L S L A E K
UniRef90_A3WGM3	A V T T   E G L E A W Y P A E D Y H Q E Y W E R N P Y C L A V I P P K L M K
UniRef90_C5GDB3	V T T   L V V P A G K W W E A E D Y H Q L Y L D R N P P G G Y E C
UniRef90_W8AY86	I T T E   I A P L P D F F F Y A E S Y H Q Q Y L A K N P G G Y C
UniRef90_W0DLX3	I T T E   I V A L N D F Y F A E D Y H Q Q Y L E K N P
UniRef90_B8GQK2	I T T E   I L D A P P F Y Y A E D Y H Q Q Y L A K N P
UniRef90_UP100037F4A82	V V T R   I R D A A P F Y R A E D K H Q N Y Y R N H P E R Y A N Y V
UniRef90_B2GJM9	V V T V   V E P L G P L H E A E D F H Q D F Y G N Q P F N G Y C Q I I N P K L A K
UniRef90_UP10003506F42	I T T E   I R E A P E F Y Y A E D Y H Q Q Y L S K N P P G G Y C
UniRef90_N9XS86	V V T E   V L P L D N F Y P A E Q Y H Q D Y L K K N P G G Y C H I D V R K A D V
UniRef90_Z9JIC6	D A I I L   H P A P P F Y Y A E D E H Q Q Y L A K H P N G Y C H I D L S L A E K
UniRef90_R9T3P0	I V T E   V L P L E N F Y P A E E Y H Q K Y L D K N P H G Y C H I L G S D A F E T

UniRef90\_UPI0003B36F94  
UniRef90\_C6VQU1  
UniRef90\_K9GYL7  
UniRef90\_S6BRJ3 T R R  
UniRef90\_D5EBF9  
UniRef90\_K0ZDW8  
UniRef90\_UPI00030EDFB2  E Q  
UniRef90\_J2KIT3 A R N A  
UniRef90\_Q6Q903  
UniRef90\_J3P630  
UniRef90\_Q5WG30  
UniRef90\_C0N617  
UniRef90\_UPI00046E823F P  K  
UniRef90\_E1W286 P  
UniRef90\_I3D293  
UniRef90\_UPI00046638A7  
UniRef90\_UPI00037BBA5C  
UniRef90\_G8PRJ8  
UniRef90\_UPI00046D1F17  
UniRef90\_Q3J9F6  
UniRef90\_F2F4U8  
UniRef90\_D5DE27  
UniRef90\_F2E2G1  
UniRef90\_B1LSI7  K  
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UniRef90\_UPI00041338F1 A R K  
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UniRef90\_E0UAC5  
UniRef90\_UPI0003726B23 F K A N  
UniRef90\_V6AS96  
UniRef90\_Q6L2S4  R Q  
UniRef90\_G2Z4Q4 F E K  
UniRef90\_UPI0004285537  
UniRef90\_A9C270  K Q  
UniRef90\_W2UE57  
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UniRef90\_V4MXR2  
UniRef90\_G8U0D7  
UniRef90\_Q747V4  
UniRef90\_UPI000361608F  
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UniRef90\_E7GME1 F S K  
UniRef90\_T2G6M9  
UniRef90\_B2TDY6  K R  
UniRef90\_UPI0003793AD4  
UniRef90\_C6VPA4 F K  
UniRef90\_U4KNJ2  
UniRef90\_E1L873  
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UniRef90\_E4XN68  
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UniRef90\_UPI0002002C88  
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UniRef90\_S0NRP6  
UniRef90\_H0AF32 A K  
UniRef90\_E5YBB3  
UniRef90\_H7F8P2 A R K  
UniRef90\_T0RFN6  
UniRef90\_R7ZFG3  
UniRef90\_A5DPK2  
UniRef90\_V7I4Z2  
UniRef90\_R9H0G0 F Q R A  
UniRef90\_F4GLN8  
UniRef90\_W7TQD7  
UniRef90\_E1JZV7  
UniRef90\_Q9KCX1  
UniRef90\_A4C1W1 F K K  
UniRef90\_UPI00034D19AD  
UniRef90\_UPI0003678A0D  
UniRef90\_H3NC86  
UniRef90\_A5VC80  K  
UniRef90\_J1LNH1  
UniRef90\_D8RBX9  
UniRef90\_A7FUX9  
UniRef90\_F8GVU9  K Q  
UniRef90\_UPI00047AFA36 A R K  
UniRef90\_V2XL31 P  
UniRef90\_A3WGM3  R K S  
UniRef90\_C5GDB3  
UniRef90\_W8AY86  
UniRef90\_W0DLX3  
UniRef90\_B8GQK2  
UniRef90\_UPI00037F4A82  R K  
UniRef90\_B2GJM9  
UniRef90\_UPI0003506F42 F  
UniRef90\_N9XS86  
UniRef90\_Z9JIC6  
UniRef90\_R9T3P0 A K

1 10 20 30 40

M E K A T F A G G C F W C M V K P F D Q W E G I E K V T S G Y M G G H V E N P T  
 UniRef90\_F2F5L0  
 UniRef90\_R610R4  
 UniRef90\_K9H2U6  
 UniRef90\_UP100046C3EA  
 UniRef90\_W5XF26  
 UniRef90\_S0FIX2  
 UniRef90\_B1KEH9  
 UniRef90\_W6TU66  
 UniRef90\_D9VVR4  
 UniRef90\_G4D3H3  
 UniRef90\_Q46L82  
 UniRef90\_A0A031JLQ7  
 UniRef90\_L0E1T5  
 UniRef90\_D8FW80  
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 UniRef90\_A6W6Z0  
 UniRef90\_R7GAQ7  
 UniRef90\_A9E007  
 UniRef90\_X2H860  
 UniRef90\_A0A024PR50  
 UniRef90\_K8EE57  
 UniRef90\_H8GIJ6  
 UniRef90\_F0M02  
 UniRef90\_J9VX1  
 UniRef90\_W4F1E9  
 UniRef90\_U7D8T4  
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 UniRef90\_A9TSA4  
 UniRef90\_UP100038243F6  
 UniRef90\_K5CZK9  
 UniRef90\_B6B606  
 UniRef90\_K0D768  
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 UniRef90\_UP10003B6CFA6  
 UniRef90\_UP1000373DCD9  
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 UniRef90\_R7DJH9  
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 UniRef90\_M2TPK4  
 UniRef90\_D8LJZ0  
 UniRef90\_E3C6J1  
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 UniRef90\_G5ZWS6  
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 UniRef90\_Q09859  
 UniRef90\_UP10002654298  
 UniRef90\_Q9LY14  
 UniRef90\_K4MA94  
 UniRef90\_G0UQZ1  
 UniRef90\_UP1000370C5CD  
 UniRef90\_UP10002E12FA0  
 UniRef90\_UP100036E8087  
 UniRef90\_D2UBG6  
 UniRef90\_UP1000344DB1D  
 UniRef90\_UP100047A185E

The sequence alignment shows a highly conserved region from positions 1 to 40. A vertical yellow bar highlights a segment from approximately position 8 to 28. This segment contains several invariant amino acids (e.g., C, M, V, K, P, F, D, Q, S, T, H, Y, F, R, L, W, Q, K) and some variable ones (e.g., G, A, E, I, T, N, S, V, D, Y, E, L, R, M, G, N, P, H, C, F, G, C, F, W, C, M, V, K, P, F, D, Q, W, E, G, I, E, K, V, T, S, G, Y, M, G, G, H, V, E, N, P, T). The alignment includes many UniRef90 entries, indicating a large dataset of homologous proteins.

Y E D V S G H V E V V E I E F N P E L F S Y E K L L D I Y W M Q I D P T D A G G  
UniRef90\_F2F5L0  
UniRef90\_R60R4  
UniRef90\_K9H2U6  
UniRef90\_UP1000465C3EA  
UniRef90\_W5XF26  
UniRef90\_S0FIX2  
UniRef90\_B1KEH9  
UniRef90\_W6TU66  
UniRef90\_D9VVR4  
UniRef90\_G4D3H3  
UniRef90\_Q46L82  
UniRef90\_A0A031JLQ7  
UniRef90\_L0E1T5  
UniRef90\_D8FW80  
UniRef90\_UP100034940A9  
UniRef90\_A6W6Z0  
UniRef90\_R7GQA7  
UniRef90\_A9E007  
UniRef90\_X2H860  
UniRef90\_A0A024PR50  
UniRef90\_K8EE57  
UniRef90\_H8GI6  
UniRef90\_F0M02  
UniRef90\_J9VXD1  
UniRef90\_W4F1E9  
UniRef90\_U7D8T4  
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N G Y C H   D F E L I N S H V T E   V P P L L T F H R A E E Y H Q D Y L E K N E L P S C H   V A V T   V I P F K V I Y P A E T E H Q D Y Y R R R S W E P Y I R V S R P K V L K I T T A   V L P A R P F W P A E P Y H Q Q Y L D K N P I V V E   V E P L K H F V L A E E Y H Q D Y L Q K N P T G Y C H   I T T E   I E N D I K F Y F A E D Y H Q Q Y L A K P G S R P Y C S A M P T K V V T S   V E P F K G F Y P A E G Y H Q D Y L T L P H P D S A Y I R R D L P K V A A V T P   I L E F E N F Y A A E D Y H Q G Y Y R K N P V R Y V T K   Q P A N E F W L A E D Y H Q Q Y L Y K K R H G I A T G L   P A D T F W D A E D Y H Q D Y A D K N P V R Y I T T E   I R E A G P F W Y A E D Y H Q Q Y L E K V P N G Y C N H G P N I A V E   A L P L Q S F Y L A E E Y H Q K Y L D K N P N G Y C H I P Q F H F E Q I T T E   V T K Y T A F Y D A E A Y H Q D Y E A K H P N G Y I R N V S I P R L K R E V S   I P V L T F Y P A E D Y H Q N Y Y T K K P L H Y N E Y Y Q R V T E   A Q P L E N F Y K A E E F H Q D Y L E K N P N G Y C H   E I L   T S E I P E D P Y F Y F A E D Y H Q Q Y L A K P G S R P Y C I T T E   I A P L R N Y A A A E D Y H Q D Y L E K N P L G Y C L K T E   L I A F K Q F W P A E E Y H Q D F Y K K S A L R Y I V T Q   I A K A G T F Y Q A E D Y H Q N Y L D N N P G G Y E C P T H R F Y W I V T E   I R E A S I F Y P A E D Y H Q D Y Y K K S A K H Y V V T E   I R R S A P F W P A E K H H Q K F C R T H P R R Y A A Y A D Q R L W K K V T T E   S M A Q P F Y Y A E E Y H Q Q Y M A K N K E A I C I A T L   L E A K P F Y P A E T Y H Q D Y Y K K N A F H Y I T T E   I R E E H L F Y Y A E E Y H Q Q Y L A K P G S R P Y C I V T E   V L P A K K F Y K A E S Y H Q Q Y L S K I G A E   I L L D F E A F Y P A E D Y H Q D Y Y E K N P V R Y I V T E   V Y Q E L K E F Y Q A E L Y H Q N F I K S N P N Q S Y V Q I V T P   V L P L A K T F F K A E D Y H Q D Y Y K K I V V E   K S A T V F W P A E N F H Q N F Y K K N T Q R Y P A I V L   V E P L R N F Y P A E A H H Q D Y L I A N P G G F C H I P L A A I A N I T T S   I E D A G P F W Q A E D Y H Q Q Y L I L K V P N G Y E C H   I V V E   V E P L K N F I K A E D Y H Q D Y L K K N P N G Y C H   I V V E   V E P L K D F T K A E D Y H Q D Y L V K N P T G Y C H   D L N K V A T R   L L P V S T F W P A E N Y H Q D Y Y E N K G T T P Y C E T V   K P L Q G F V S A E E Y H Q N Y L E K N P N G Y C I V T R   V E G F T G F Q A A D A Y H Q N F L T R N P R H P Y I Q W D A P K L A A I V T E   I L P A K K F Y R A E E Y H Q Q Y L A K G G R G G N A Q S P A K I V T E   I A A N R T F F S A E A Y H Q Q Y L A K P G S R P Y C V T T E   I P A G T W W D A E D Y H Q L L Y F K N P N G Y Q C P S H K L H W V I T P   K P Y K N F Y P A E T Y H Q D Y Y K K N P L H Y E Q Y F I E K H W G K I A T L   L P F E G F Y D A E D Y H Q R Y F E K Y P K H Y K Q Y Y D I V T K   L L P F K H F Y P A Q E Y H Q D Y Y Q K N P L R Y I A T Q   V K L A K R F Y P A E E Y H Q G Y S E K E A S R Y I V T Q   V V P Y K V L Y P A E V Y H Q G G Y Y R A H P E G Y I A S V S V P K V M K I V T E   I V K A E T F Y P A E D Y H Q N Y Y N K S K N G Y C R F V I E P K M K K I L T E   V L P L D N F Y K A E D Y H Q E Y L D K N P N G Y C H   D V A T E   V S T R H F Y P A E P Y H Q D Y Y R K N P L R Y I V T E   I K E A T E F Y R A E D Y H Q K Y L E K I V T R   E D A Q P F Y P A E D C H Q D F Y K K N P F R Y I V T R   E R F T G F Q D A D D Y H Q D F L R K N P R H P Y V Q W D I P K L T A I T T E   I T I A R Q F F Y A E N Y H Q Q Y L H K V P N G Y C V H Y P D P I V T E   V L P L N N F Y P A E K Y H Q K Y L E K N P T G Y C H   D L T Q L P N V A T E   I T K A G E F Y P M D D H Q D Y Y D K K G T T P Y C H A Y K K R F I T T E   I K N N I N F Y F A E T Y H Q Q Y L Y K N P N G Y C I T T E   V A C P T F Y Y A E D Y H Q Q Y L D K P G N R Q Y C I T T E   I T P A G E Y Y L A E D E H Q Q Y L D K N P D G Y C I V T Q   I M P I G K F Y P A E E Y H Q E Y I Y H P E N P Y V H V S I P D F V R V A I E   V K P I V N F Y R A E E E H Q E Y L E K N P N G Y C H I S P A L I A Q I V T T   I E D A Q T F W D A E D Y H Q D F Y K Y H Q A R M A L H F I K Q H W D T I T T E   I L P M P P F Y Y A E A Y H Q Q Y L A K N P I V T E   I P E P A G T F Y H A E D Y H Q R Y L E K UniRef90_UPI0004635441 P A V E   E E L R D F T P A E P E H Q D Y L L V N P N G Y C H   P I A I E   V E P L K N Y V R A E E Y H Q D Y L K K H P G G Y C H   D L K K V I E   V E P L R N Y V L A E N Y H Q K Y L E K N P N G Y C H   D V T S   I P I E N F W D A E E Y H Q L L Y L E K N P N G K H C H F L R V T E   V L P L A H F Y E A E E Y H Q D Y L V K N P H G Y I R T E   I L P A T T F W P A E E C H Q Q F Y A K I T T E   I R P A G T F Y F Y A E G Y H Q Q Y L D K N P N G Y C I T T E   I T A P A G Q F W I A E D Y H Q Q W D E K H G I V V E   V N K I L E N Y Y P A E E Y H Q K Y L Q K N P G G Y C H V D V A T Q   L G A K P F H R A E D V H Q D Y Y R K H P E R Y A D Y V I V T Q   L P P A T F Y P A E E Y H Q S Y Y T K N P I R Y I T T E   V A P L G E Y Y R A E D Y H Q Q Y L D K N P Q G Y C P H I T T Q   E T N I D F Y Y A E D Y H Q Q Y L A K P G S R P Y C I T T E   I L K A R D F Y Y A E D Y H Q Q Y L A K N P H G Y C V T T E   I A P A G S Y F L A E T D H Q Q Y L H K N P Q G Y C I V T Q   L P A G K W W D A E D Y H Q L Y L E K N P D G Y R C H F L R W N V L V T K   L P A G Q F Y S A E D Y H Q K Y F L R I M T E   I L P A K K F Y R A E E H H Q Q Y L S K I V T E   I L P V T R F Y R A K E Y H Q Q Y Y E K M D S G G H F I K V V T T   V E S A S R Y P A E E Y H Q N Y L E L N P A G Y C V H I T T E   I A R A G A F Y F A D A D H Q Q Y L A K N P N G Y C I A T K   I L P A S T F Y E A E E H Q N F Y K K N P E R Y V A T T   I R D F S V F W P A E A Y H Q D Y Y D R R N G K R P Y C H I T T E   I R P A P F Y Y A E E D E H Q Q Y L A K N P L A V E   T A A L N K Y I L A E E H H Q D Y L K K N P N G Y C H   V V T E   L S P L P R F Y P A E E I H N D F Y G Q R P E V G Y C Q I I S P K L A K
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50            60            70            80

This figure displays a sequence logo for a protein alignment across 80 positions. The x-axis marks positions 50, 60, 70, and 80. The y-axis lists 20 amino acids. The height of each bar at a given position indicates the probability of that amino acid appearing at that position. Yellow boxes highlight specific motifs or positions across the sequences.



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UniRef90_F4L4T5	I S V E V P L T M F W V A E D Y H Q D Y	V Q H N P G S S Y V Q Y		
UniRef90_UPI00037D7161	I Q T L I K S L D K F Y D A E E Y H Q D Y	I Q K N P N G Y C		
UniRef90_I3DI42	I Q V E V E P L K N Y V L A E E Y H Q D Y	L K K N P N G Y C H I D		
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UniRef90_A4QHY3	T E I G V I S P S E Y F L A E D Y H Q Q Y	L D K N P D G Y C P H		
UniRef90_X8BIW2	V V T E V			
UniRef90_Q1N2Q8	I T T E I N K A R E F Y F A E D E H Q Q Y	L H K V P N G Y C		
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UniRef90_R4X9S5	I T T Q I A D G R N W Y T A E D Y H Q E Y	L H K E P N G Y Q C		
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UniRef90_F5Y9R7	V V V E T K K L E N F Y P A E E Y H Q K Y	L D K N P G G Y C H I D S Y L F K K		
UniRef90_F0W5R9	I V T E I E E A S T F W P A E A E H Q R Y	L E K		
UniRef90_D1NS84	L A I E S G P L R N F T A A E E Y H Q D Y	L N K N P G G Y C H V		
UniRef90_D7FRP8	I A T E I E G A K V Y W P A E L Y H Q Q Y	L P K G P N G		
UniRef90_G5AMH0	I T T D I R E G Q T F Y Y A E D Y H Q Q Y	L S K N P D G Y C		
UniRef90_E3PXPO	V A I K L L P Q A D F Y E A E E Y H Q E Y	Y K K N K L H Y K A Y		
UniRef90_UPI000219179E	I V T T I E D A T T F W E A E E Y H Q E F	Y R K N V E R Y		
UniRef90_G9EJN9	V A T N L L P V Q A F W P A E D C H Q D Y	Y G K H R K A P Y C H Q P		
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UniRef90_C4R3G0	I V T Q V E K L T S Y W D A E D Y H Q E Y	L I K N A D G Y H C		
UniRef90_I4XVK2	V A T V V V P L G R F E L A D E A H Q R Y	L E K N G L S C H I		
UniRef90_U7V9B8	N V K L L P F N K F Y A A E K Y H Q D Y	Y K K N P I R Y K Y Y R Y R		
UniRef90_R1D5C7	V V T E M L P A R I V F Y P A E N Y H Q R Y	L Q K		
UniRef90_B9R056	V V T P I E D A A I F W P A E D Y H Q G Y	Y K S N		
UniRef90_G7G0P5	V V T P V L N A S T F Y P I E S F H Q D Y	Y K K N N P I R Y		
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UniRef90_D8TC2D	I V T E I L A A K K F Y R A E A F H Q Q Y	L A K		
UniRef90_UPI0003B355CE	T E Q V D A S Q H T F W P A E V E H Q D Y	Y A N H P W Q P Y C A V I R P K V D K		
UniRef90_C5ZYB7	I V T E V M E L E N F Y P A E S Y H Q K Y	L A K N P N G Y C H I D L S K		
UniRef90_Q2W5W8	I T T E I A P A G R F Y W A E G Y H Q Q Y	L A K E P		
UniRef90_D0BNV5	V A I E R E N L R N F V V A E D Y H Q D Y	L K K H P N G Y C H I D V N K		
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UniRef90_UPI0003B4A26A	V N T K I L P V S E F Y E A E E Y H Q K Y	Y L K Y P K E Y N Y Y Y		
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 UniRef90\_Q1GWY1  
 UniRef90\_J5KVU5  
 UniRef90\_Q3IKR6  
 UniRef90\_E8ZL66  
 UniRef90\_A0A011AZG6

Sequence alignment showing conservation across UniProt entries. A vertical yellow bar highlights a specific sequence motif. Red boxes highlight specific amino acids (e.g., H, C, D) at certain positions. Blue boxes highlight other specific amino acids or motifs.

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50            60            70            80

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 K I K S T D H A E V I Y L K Y D N E I L S N D V R H Y F R I I D P V S V N K  
 S E Y D G Y A E R V K T Q F D P E Q V S V E T L M G Y L F E I I D P H S V N K  
 Y N S H E G H Y E E A V E I E Y D P R V V V S Y Q D L L E Y Y W V N D P F D A R G  
 Y E Q V C S H V E A V Q I T F D P D I F P Y E K L L D V F W T Q D P T D A G G  
 Y M Q V T G H R E A V E I V Y D P E V F P Y R R L L D I F W T Q D P T D D K G  
 Y E Q V C S H T E A V Q L T Y R P S E V T Y D Q L C D A F F K K I N P M Q K N G  
 Y K R H D G H F E A I E V T Y D P A I V S Y Q E L L D R F W V N V D P F D N K G  
 Y K E V T R H Y E E A V Q I M F D P A Q V S R A Q L L N M F L R S V D P T D A D G  
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 N A P Y D G Y A E C V R T Q F D P S V I S □ E Q L M D C L F E I I D P Y S V N K  
 Y K E V C E H V E A V R V I Y D N S K I T E E D L W K L Y L R I I N P Y S L N K  
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 Y R N L G D H A E C V K V E Y D P R L I H Y N K L L D V F W A S H D P R E V F G  
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 Y R E V C S H A E V V R V V F Q P E R V S F E E L L K V F W E N H D P T T Q G M R  
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 G G Y D G Y A E C V K T F D P A V I S I R L M E Y L F E I I D P Y S L N Q  
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 S T P Y D G Y A E C V R T R F D P L Q V S I A Q L M D F F F E I I D P Y S L N K  
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 Y K Q V T R H Y E A V R I D Y D P A Q V S A R Q L Y D L F F R S V D P □ D A G G  
 Y H D L L G D H T E V F Q V E Y N P T V L S Y Q E L L S R A F E N H R P N Y Q T S  
 G E Y D G Y A E C V R T R F D P A V V S T E Q L V A Y L F E I I D P Y S L N R  
 Y H A L L G D H T E V F Q V D Y D P E V V S Y T G L L D R V F Q R H D P H S Q T R  
 Q G N Y D G Y A E C V R L E F D P T L L S □ E Q L L E H L F E I I D P Y S V N K  
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 Y E Q V C Y H A E V V Q V E F D P E Q V A Y A E L T T F W Q C H N P T T K N R  
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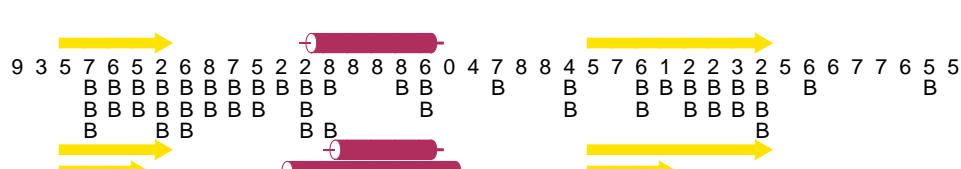
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UniRef90_X5A1Q1	Q F H D R G S S Y R T A I	F Y H N E E Q R K E A E A S K L A I Q Q S G R F S G P		
UniRef90_H2ESC5	Q G D V G A Q Y R S G I	Y Y Y N E T Q A R L A Q E S K E A K Q L E L K D K K		
UniRef90_E5V155	Q G G D I G R Q Y R T G I	Y Y V D E E T Y R E V S D F I T L L Q K E F S K K		
UniRef90_A7N4H6	Q G E D V G E K Y R T G V	Y S Q N E Q H L A I A K A F I A A R P D A E K		
UniRef90_Q1K2F5	Q F C D K G T S Y R S A I	F V A N D K Q R T L A E I S R Q R V V Q Q F P D R K		
UniRef90_I4X0B6	Q F F D R G E S Y Y Q T A I	F Y H S E E Q Q L A A E K S K Q E L N N S G R F K N P		
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UniRef90_B7G1V2	Q G G D R G K Q Y R T G V	Y F H T P E Q E Q V A Q A R F A A E Q P K Y N R P		
UniRef90_Q6CFU0	Q G P N I G T Q Y L S G L	F T H N E D Q Q A R A L A V K K K L E D Q W F A K P		
UniRef90_E2CF75	Q G N D V G T Q Y R S L V	L V D R Q D D L E A A A A A K E R Y Q R T L N E K S T		
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UniRef90_D0DA49	Q F C C D R G N S Y R T A I	F V S N A A E K A A A E K A K A E A Q S A L G R N		
UniRef90_U1MUR6	Q G E D V G E K Y R T G V	Y S A D P R H L E V A R T L I D N R S D A D R		
UniRef90_K7A0A8	Q F C C D K G F S Y L S A I	F V A D E K E R K I A E L S R Q K V V T Q F P D K K		
UniRef90_B8LMW8	Q G P D V G E Q Y R S I	F P L N G S D E A K L A A V S K E R E Q T K L M D N L		
UniRef90_UPI00036BE5CE	Q G F D I G N Q Y R S V I	F Y Y N E K Q K N I A V L S K E N Y Q K K L S N Q		
UniRef90_T2KP26	Q G P D Y G S Q Y R S I	I F Y Q N D V Q K Q L I L K K K S L L E K T L G K K		
UniRef90_UPI00035C5FE1	Q F C C D Q G P S Y R S A V	F A T A A A Q R T D A V A S R D A A M R V L R K T		
UniRef90_UPI0003B45550	Q F I D K G F S Y T L A I	F Y Y G D E E E K A L A K S K L D K I A A D S G K E		
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UniRef90_UPI000429D498	Q G P D I G E K Y R T G F Y S E K Q E H L E A A A G F L K R R A D R E R			
UniRef90_M5ECG2	Y S R Q Y A S L I L Y N N S K Q D L A L E M K R K L E A E S G R E I K			
UniRef90_W8C9F0	L T N P I K R Q Y M S L I L Y H D D D E Q K K I A E E S I V E E Q K K R V P E K			
UniRef90_X1DZQ8	Q F A D R G E Q Y K T A V	F Y H N D D E Q K R L A A E E S K E K L Q A S G K F		
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UniRef90_R1CG08	V G N D Y G S Q Y R H G I	Y Y H S D K Q R G V A E A A I A D A Q A R A G R R K		
UniRef90_UPI00030A7974	Q G V D V G L Q Y R T G I	Y Y S E Q S E H L E A A R Q F K N R S D A E K		
UniRef90_UPI00037904F5	Q G P D I G E K Y R T G I	Y S H S E K Q L Q E A K T W I E S R K D S D R		
UniRef90_D6WWX6	L T N V L K R Q Y M S L I L Y H D D D Q K R I A E I S L K K E A H K H N T K			
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UniRef90_F2I216	Q F C C D K G Y S Y R S G I	L Y Q D L K Q K K I I D R K I L E I E T K F K R K P		
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UniRef90_F4ANJ3	Q F C D K G H S Y L S A I	F V A N E Q E R A L A E K T K K A V E A Q F P E K T		
UniRef90_G4ENQ8	Q G N D V G R Q Y R T G F Y	S D D S N D L K Y A N D Y I E K I K H N Y S K P		
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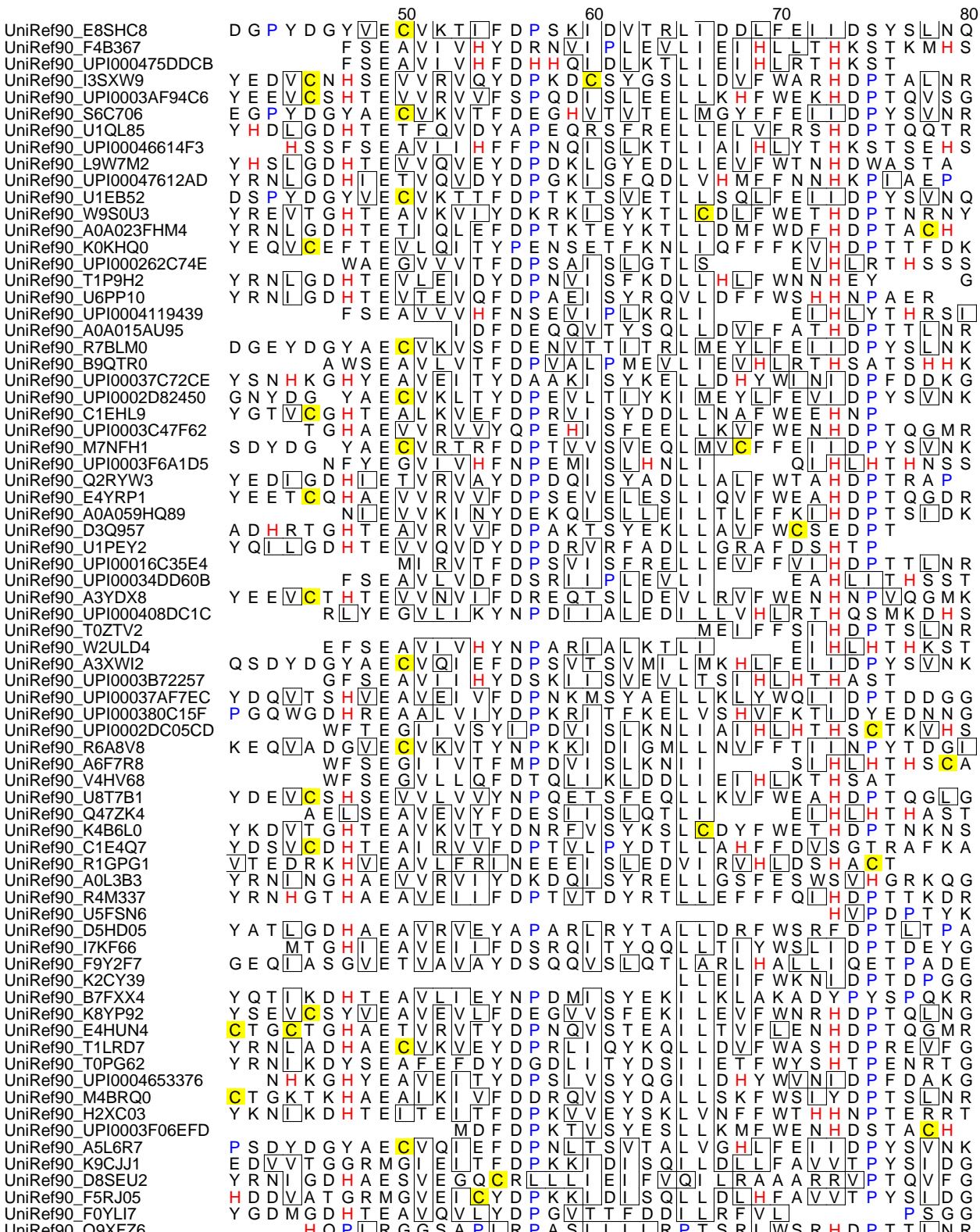
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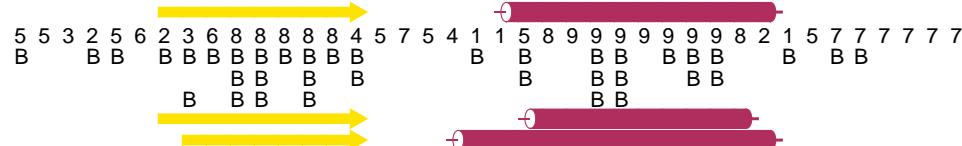
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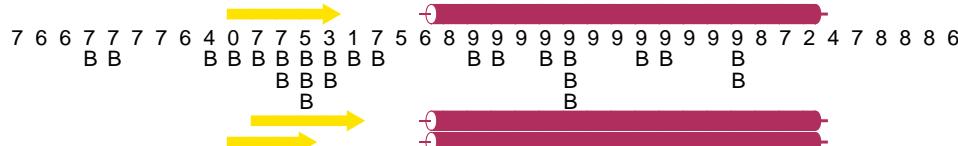


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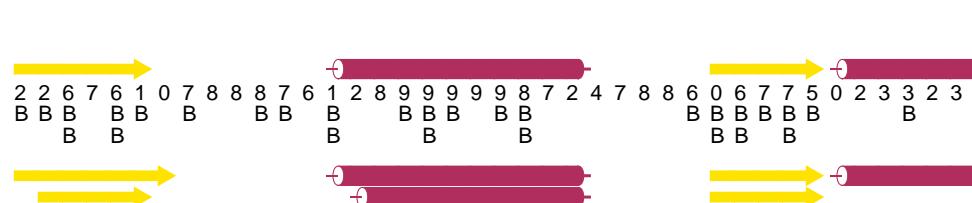
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