





90 100 110

QUERY	UniRef90_T1DL07	UniRef90_V9L5E2	UniRef90_W5MW68	UniRef90_S4RCK2	UniRef90_M4AKX5	UniRef90_A0A023GF27	UniRef90_C1C4T3	UniRef90_W4XAA9	UniRef90_E1G6W1	UniRef90_R4WDL8	UniRef90_UPI0001CE2F3A	UniRef90_T1J0P8	UniRef90_E9HLU4	UniRef90_J3JX07	UniRef90_A0A016U9B1	UniRef90_A7RJY5	UniRef90_C4WV30	UniRef90_G7NKS8	UniRef90_K7IYD2	UniRef90_Q1HQ41	UniRef90_M0TRX0	UniRef90_Q86QN7	UniRef90_L9LC83	UniRef90_A2QA37	UniRef90_B8LQA1	UniRef90_E3LXK6	UniRef90_T1P8V6	UniRef90_R7V1R5	UniRef90_W2SMC5	UniRef90_U5EUC3	UniRef90_I1IYY1	UniRef90_T1EH97	UniRef90_A9TTK7	UniRef90_R1EHS2	UniRef90_T1DJV8	UniRef90_T2MH64	UniRef90_UPI00042B77D1	UniRef90_V4TZR8	UniRef90_C6SZH5	UniRef90_W5JE95	UniRef90_B0X018	UniRef90_Q0V1U5	UniRef90_R7YK19	UniRef90_E1ZV52	UniRef90_COSEM8	UniRef90_Q29E72	UniRef90_UPI000359A738	UniRef90_B5M0L7	UniRef90_Q1K4M2	UniRef90_M4DC91	UniRef90_F2T094	UniRef90_U6IRW5	UniRef90_P41922	UniRef90_V4AK08	UniRef90_U9T334	UniRef90_W3WUM1	UniRef90_UPI0002657057	UniRef90_B6QBN3	UniRef90_R8BA19	UniRef90_Q8BZ07	UniRef90_B3RS35	UniRef90_G9NJ92	UniRef90_E9DH70	UniRef90_F9X289	UniRef90_G2YJ04	UniRef90_U4LWK4	UniRef90_J3NTJ4	UniRef90_M2MZW6	UniRef90_E9BWJ9	UniRef90_E5A7T4	UniRef90_F9FF88	UniRef90_UPI000224038D	UniRef90_S3D7P3	UniRef90_B9QG82	UniRef90_E9F9A8	UniRef90_UPI0003336EB9	UniRef90_R4XPA2	UniRef90_G1XJQ5	UniRef90_M7SNF9	UniRef90_UPI000394294E	UniRef90_H2WG96	UniRef90_D8UKG5	UniRef90_C5K7K8	UniRef90_G8JPE4	UniRef90_UPI000350949B	UniRef90_D5GN90	UniRef90_T0KIN2	UniRef90_O13475	UniRef90_M4BW27	UniRef90_K1Y321	UniRef90_E4XVM6
L K Q E D G S L C L V Q F P S R K S V M L Y A A E M P K L K T R	Q L K Q E D G H L C Q P Q F P T R K A V M L Y A A E T I P K L K T R	Q L K N E D G T C F E Q F P T R K A V M L Y V A E M I P K L K T R	Q L K N E D G S P V L E A I P T R Q A L F T Y T A D M I P K L K A R	Q L K Q T D G S L C Q D K F R S R K D V M F Y V A E M I P P R L K T R	Q L K R N E D G T P C V E K L Q S R K A I M I R V A E E I P K L K T R	Q L K N A D G T Y V L E Q F K T R Q D V M F Q L T E R I P P M L K S R	Q L W N D D G S L C D E K F P T R M S L M L Y V A C E M V P P K L K T R	Q I K N D N G S P L N P D F P T R E S V M L H A C A M I P P K L K S R	N L K N D D G S F V N P E F N S K T S I L I Y C A D M I P P K L K S R	Q L K N D D G T L C K S S F P T R D S L L H L G D M I P P K L K S R	Q L K N D D G T P K S K D Y P N R A A L F K Y V A S M I P P K L K T R	Q L K N S D G T P V N A D I P N R K A L F C F L G E M I P P K L K S R	Q L K N D D G T P F N Q T F P S R E S L M K H C G V Q I P P K L K S R	Q L R Q E D G G L C L A Q F L S C K S V M L Y A A E I T P K L K R R	Q L K N N D G T P F N P D F P S R D S L S F L G T N I P P K L K S R	Q L K R E D G S L W N S E I D S K K Q L M L R I A E L I P K H H G R	Q L K N D D G S A V N D K Y P N R K S V Y L Y V A E T I P P K L K T R	Q L K Q G D G S L C L V Q F P S L K A H P T	Q L K R E D G S L V N S R I K N K H H L Y I L V A Q Y L K A H P T	Q L K N D D G T P K H A Q K T R D E V F K L A A E M I P P K L K T R	Q L R N D D G S F C N P E F T S R E A F M L H V A S R I P Q L K S R	Q L K N E D G S P V N D K F P T R Q S I L L Y L G E T I P P K L K G R	Q L K N D D G T A F N K D Y P T R A A L L K Y V A S M I P P K L K T R	Q L R N D D G S L Y N P E F P T R D S L F F Y C G K M I P P Q L K V R	Q L Q N E D G S P V N P A I R T K K Q L M I Q I A E L V P P K H Q G R	Q L K N E D G S P V N P L N P Q F T N K Y G V L E H V C Q M I P P K L K T R	Q L K R D D G T L V N S A I P S R K T L F L K V A E L V P P K H H G R	Q L V K K E D G T L V N S K V K N K H H L Y N L V A A Y L K E H P T	Q L K N T D G S P I L K E Y P S R D S L F Y L G K T I P P Q L K T R	Q L Q K A D G T P V S L Q Y P T R K A L M L L A E M I P P K L K G R	Q L R K E D G T L Y N P A I S S R K Q L M L H V A E L V P P R H P G R	M L K R E D G T F V N P A I S S R K Q L M L H V A E L V P P R H P N R	L L K K E D G T L F N S T I S S R K Q L M V K V A E M V P P R H H G R	Q L R D D G G N P L N P E Y P T R D S L L V H V G K T I P P M L K S R	Q L R Q D D G E P V L E E Y S T R D S V L L Y L G D T I P P Q L K T R	L L K Q D G K L M D V T I K N K H H L Y V H I A K Y L Q A N P T Q	L L K E H G Q V R A R N V K N K H H L Y N M V S E Y L K A H P T K	Q L K N D D G T P L R P D F P T R D S L L A Y I G I T I P P K L K T R	Q L K M E D G T P L T N A V K N K H H L Y I K V A Q Y L R A H P	Q L R N A D G T L C S K D F P S R E S I M Q Y I A G K I P P Q L K T R	Q L K N E D G T P A L S Q F P D R T T L L Y L A D T I P P K L K T R	Q L K N D D G S P F S K D F P T R D N L L V H I A T T I P P Q L K S R	N L K G E N G K L I K N K H H L Y I L V A E H L K K H P T	Q L K R E D G T F V N P A I A S R K Q L M Q K I A E L V P P R H P E R	M L K D E D G R P A H S S I K N K H H L Y T H V A Q Y L Q S H P T	Q L K N D D G T P C L P E Y P T R M S L L H L G K T I P P L K T R	Q L K D D P A L G L P P S V K N K H H L F R L I A Q Y M K E H P T K	Q L K N D D G S I M N E K F P D R K S I L L Y L A E T I P P K L K	Q L F N E D K T P F K S E I P T R K E L I K R V V A S S L P E I Q	Q L K D P N N P Y L K D I K N K H H L Y I L V A E H L R K N P T	H F K D D N G K P I N S E F P N R K R L F K M I C E F I S G L D Y R	L L K D E D G N L L L N P R V K N K H H L Q T L V A Q F L Q A H P T	Q L K N A K S S A A A A V K N K H H L Y V L V A R H L Q E N P T	Q L K Q E D G S L C L V Q F P S R K S V M L Y V A E M I P P K L K T R	R M F N N D Q T L L A N P K F K T R K Q L L V F I G E M I P P K L K S R	A L K K E K G S P A S A A I A N K H H L Y V L V A K H L R E N P T	H L K R E D G Q P V N E K V K N K H H L Y I F I A N Y L Q V N P T	L I K K D G K P I S G K I Q N K H H L Y K M I A K Y L K A H P T	N I R G G N T T I K N K H H L Y T M I A K H L K E N P T	L L K E D G E P L V K G I P N K F V L Y Q K V A L Y L I A H P T Q	L L L G P D G A R P A G V V K N K H H L Y R L V S E H L R A N P T	E V K R D G R S L N N S K I A N K H H L Y K L V A G Y L K D H P T	Q L F D A N K K P L N S S G I P N R Q T L L K Y I A L Q I N K I P N R	L L K H E G K M M D A D V K N K H H L Y I L I S Q Y L K A N P T Q	U R F K T P G H P V P K N K H H L Y R L V A E H L R E N P T	G L K R D D G S L C F P Q F P S R K S V M L Y A A E M I P P K L K T R	K V K G G N N R N I K K N H H L F I L I S Q Y L K A N P T	Q L K D E N D Q L H N Q E I P N K K I L M R R M C E L I P P Q L K S R	Q L K Q T P Q N P S I K S K H H L Y I L I A K H L Q Q N P T	Q L K Q E D G S L C L V Q F P S R K S V M L Y A A E M I P P K L K T R	E F K D D D G R P T H H S I R T K G Q L N A A V A K Y L R A N P T Q	L L K E D G E P V H P T V K T K R Q M F D L V A K W L Q D H P T	P L K K Q Q Q K T N S N I K N K H H L F L Q I A E Y L R E N P T	Q I K Q A D G S P C Q D K F S S R K D V M I Y V A E M I P P K L K T R	Q L K N D D G T P K F E Q K K S M L I	Q L K G E D G K P I N P E I P D R R T L M V K L A E L I P K H P G R	K L S D D N G K P L V S E I P G K R Q L L E K M G E V I P T L K S R	L L K E D K K P I S F S Y T T K R F L M R R V S E Y L Q A H P T	Q L K G D E G S P V N P E I T R K K Q L M L Q V A E L V P K H L G R	Q L F K A D G K P T G N I K N K H H L L R T I G E F L K A N P T R	G G E A G R G K P G M P D I K N K H H L Y I L V A K H L K E N P T	L I K E N G K P F V S G I D N K R V L M K R I G E Y L K S H P T	R L V R E D G S L E N P E L P N R K A L I L K M A D L I P K L Q S R	K L K G G R N G R V K H H L Y I L I S A H L K A N P T	Q Y K K E D G T L C N P K F E N K L K L Y T H V A Q M I P P K L K S R						

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





1 10 20 30 40

D E D S S G W N I I Y P T Y L D K D C T T S Q G R K K V N L S V A V S K P P N Y K K F T V V Y P Q Y M N S S L K R D Q G R K K V P K D K G V K N P P K T W T T L Y P I Y I D A K R P L H K N R R I P R A K S V W W P P S E E K L N E K T Y Q I L Y P C Y F D K N R S H K E G R R V P K E L A V E N P P H F Q C I Y P I Y F D A T R S R A E G R R V T K K L A V R N P P T D T T P Y K K W T T V Y P I Y I D A K R P Y G T Q R R V A R S K A V W W P P E L K H F T I F Y P C Y F D K K R S H K Q G R R V P I D L A V E N P P Q T R A A V K S H C T L Y P L Y F D S T R T R S G G R R V T R S L A I P P E S K T W K T I Y P P Y I D S T L T T A Q G R R L G K S N C V P Y P P S D T D H S N W N I I Y P T Y L D K D S T S Q G R R V N L S I A V S K P P D A S V Y K S W H T V Y P L Y F D A K V S I N N G R R V G R K D S L W W P P E H D K R V I V Y P N Y L D N R K T V A Q G R R I P K E L G P S A P P T T N D A K Q Y A D F Q C L Y P V Y F D A R R T R A E G R R V P K S L A V E N P P K D D S L N K R W T S L Y P I Y F D A A R P R K G G R R V P L N S A V W Y P P V V V Y P Y F D A A R S V A K G R R I A R E D A V E H P P E V K G F Q V L Y P C Y F D R R R S H K N G R R V T R D E G V E N P P E K N W L T V Y P A Y I I N S N R S R Q R G R M V P K E K G V S D P P M Y P S Y I I D S S M S M S V K D G R K V R A D L S C E N P P UniRef90\_UPI0003BBBD1BF A C T A A G Q D R F I C I Y P A Y I I N N K K I I S E G R Q I P K S K F K K W Y I V Y P N H I I N S E L T K E G R K V S K E H G V K N P P A N D D S K D Y S R W K I I Y P N Y L I N R K K K V K E G R K I N L D Y C V A D P P H D E R V V V C A P Y I I D A E T R T R A E G R R I P T E D A V A R P P UniRef90\_C1MJG8 W V C V P Y A F F D S N C T S R E G R R I A R S A C C D A P P UniRef90\_A0A058Z033 F K Q W V I Y P P Y I I N S E C T K D R G R K I S K E N A V K N P P T T D R S Q F K D W L Q Y P I Y I I D A K Q P F K S G R R I S V E H A C E D P P N R S R T K K W E T I V Y P R Y L I D S K A P C K T G R R V A L K Y S L R W P P I V W P A Y I I D A E L T R G E G R R I V P Q E S A V E D P P D 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D L A V E D P P N V I W P A Y L I D V N L T R S E G R R V P A E L A V E E P P D R T R W K N W E T I Y P I Y L I D A K V P Y K T G R R V S L K Y S L R W P P N V I W P A A L I D A S C T R S E G R R V A R D L A V P E P P I S T W T I L Y P T Y F D K K A T V S S G G R R V N K T L A V E D P P N I V Y P A Y F D A A Y S R S D G R R V P E S A A V E E P P S Y K Q F S A I Y P N Y L I D S N K T S K L G R R I I A A K Y A V S E P P V L Y P I Y F D K K R S K E F R R V S K K D A I E N P P N V Y P A Y F D A E L S R S E G R R V P T D L A V E A P P N V L W P A Y F D A A L S R R D G R R V P M E L A V E E P P N V I W P A Y L I D A E L S R A E G R R V A E E L A V E E E P P N V I W P R Y V D A A V T R S E G R R V V A K S E A L E E E P P R G R K I V L Y P S Y I I D S T F S R G E G R R V P S A L A V P S S P S S K D G R R W V I W P A Y L I D A G R S R S Q G Q R A V S R R D A V E E E P P N V I W P A Y F D A A L S R R D G R R V P M E L A V E E E P P N V I W P A Y L I D A E L S R A E G R R V A E E L A V E E E P P 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K K T I A E G R R I P V A L D Q S I E D P P E N R I I W P V Y L I D A D R S R S E G R R V P R K D S V K A P P V I W P V Y L I D R T R T R S D G R R I I S K K K S V R E P P I I W P T Y L I D S R K S R S E G R R V P L E Y A V E S P P P A Y L I D A E L S R N D G R R V G R E L A V R D P P K N E F T V I W P V Y I I D S N R T L S E G R K I A K D E S V D D P P N R I F I Y P C Y I I D N E M T F Q G R K I P K E Q C V Q N P P D A D K A W V L W P E Y F D I S R T R A Q G R R V K K G L A V P E P P N K G R R I V V Y P A Y I I D S K K S R S E G R K I S L G K A V P N P P E Y K N W I T L Y P V Y F D A K A N Q S Q R K I P R N K C V W W P P I I W S A Y L I D A E K S R K E G R K I P K E L C V N N P P S Q P S Y D K R A Y Q T I Y P Q Y L I D A E L T P H D G R R L T R T Q A V D D P P T I I W P T Y I I N S E H S R G E G R K I S L E E S V V E E P P V I W P P V Y L I D Q T K S R S S G R R I I S R K N A I K E P P E N K Y F C I Y P A Y M D S S R A L S E G R K Y R K E L C I E K P P W K R W K V I Y P E Y L I D S R L T C R E G R R L Q Q E A C V P D V

50 60 70 80

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T V D E I K I V C E K I N I P Y V V E E K K R Y P R N W M V P G R V R V
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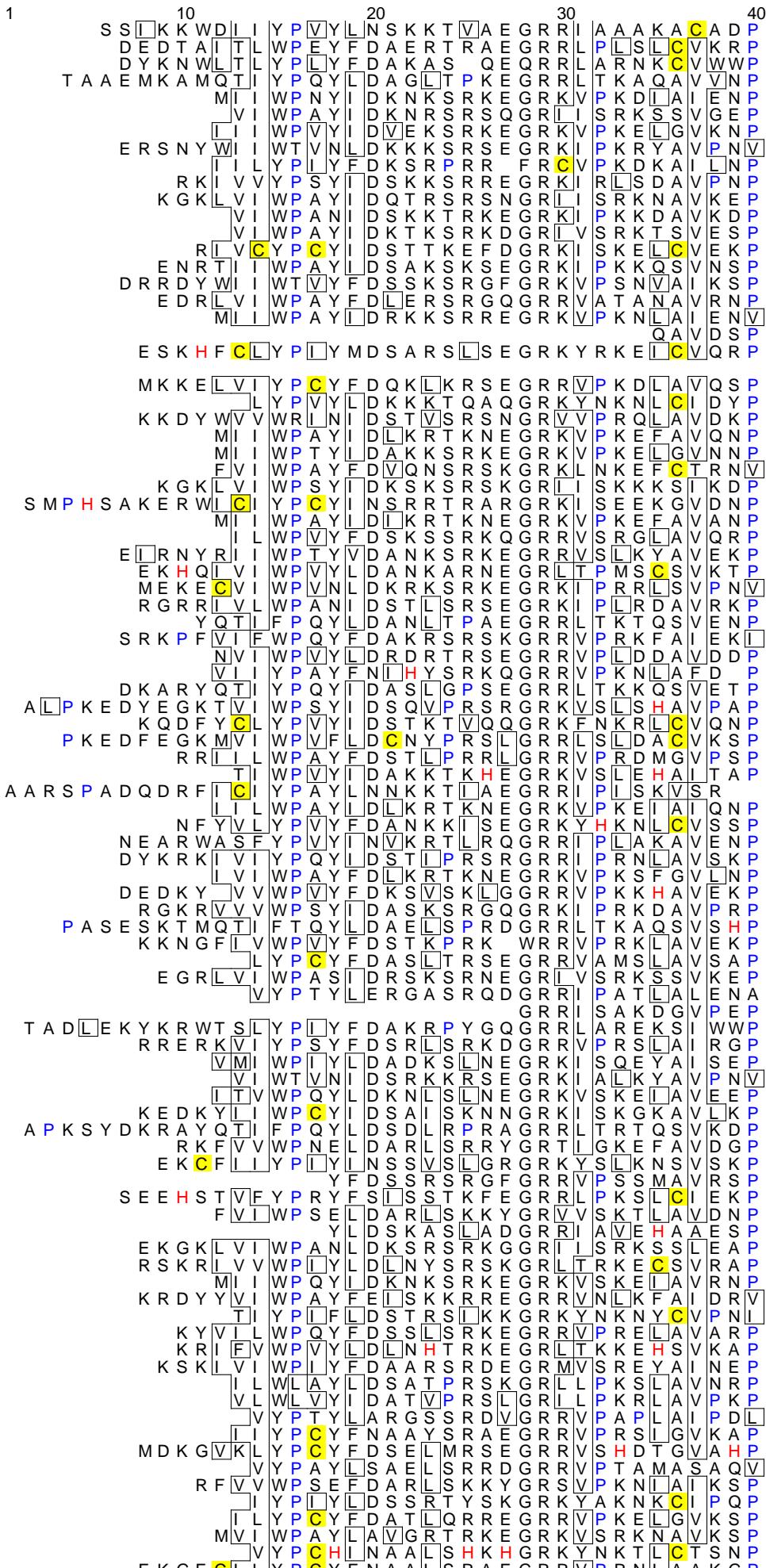
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 R I R

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 T G A E D T K N D L V Q

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





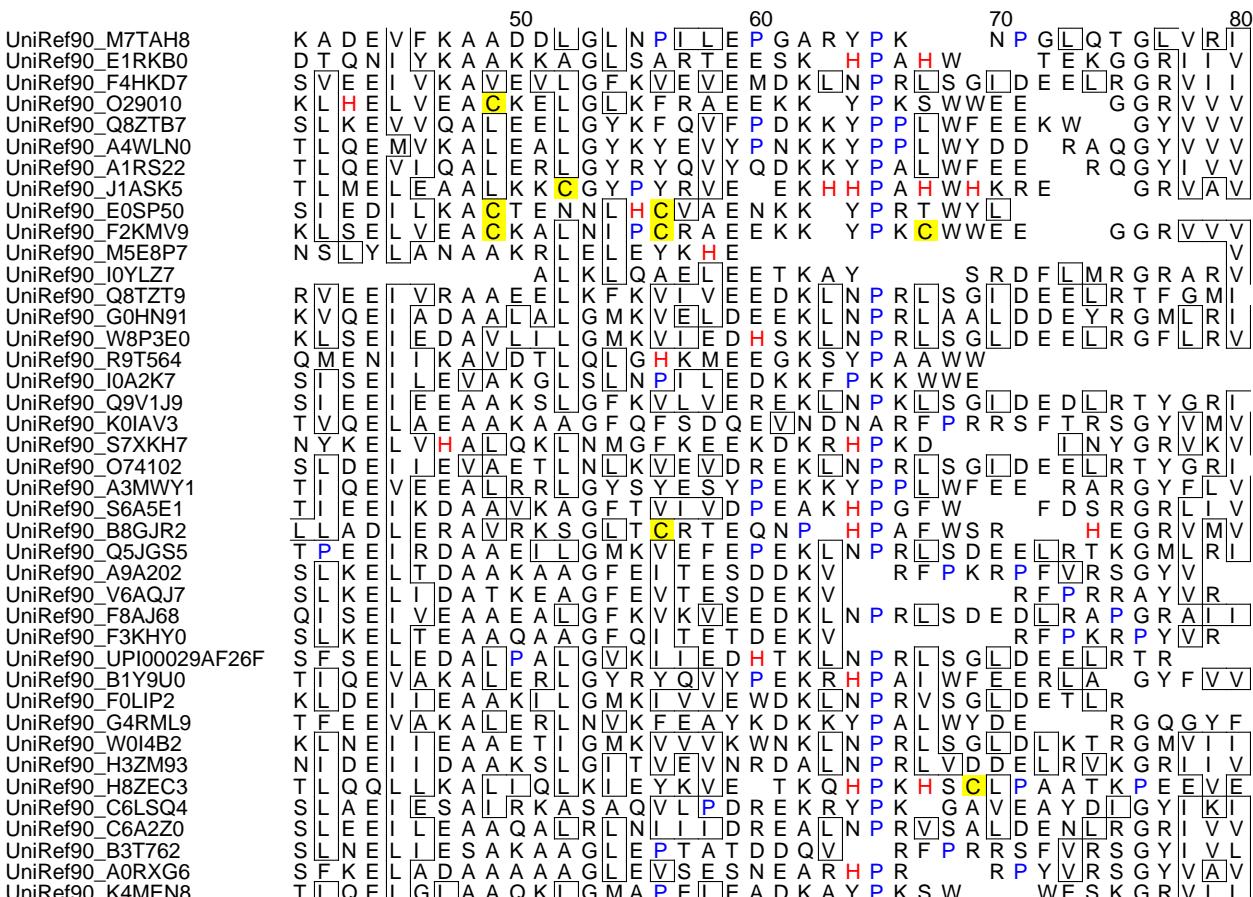
90                    100                    110

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UniRef90_Q9YDZ7	N K M Y G K K N L I	
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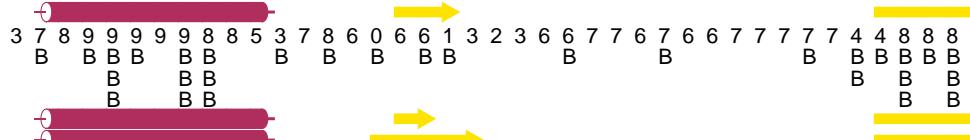
This figure displays a sequence alignment of UniRef90 entries, focusing on a specific region of the protein. The alignment is presented in two panels. The top panel shows the first 40 positions, and the bottom panel shows positions 41 to 80. Conserved residues are highlighted in yellow. In the top panel, positions 10, 20, 30, and 40 are labeled. In the bottom panel, positions 41, 50, 60, 70, and 80 are labeled. The UniRef90 identifiers for each sequence are listed on the left side of the alignment.

**UniRef90\_ M7TAH8**  
**UniRef90\_ E1RKB0**  
**UniRef90\_ F4HKD7**  
**UniRef90\_ O29010**  
**UniRef90\_ Q8ZTB7**  
**UniRef90\_ A4WLNO**  
**UniRef90\_ A1RS22**  
**UniRef90\_ J1ASK5**  
**UniRef90\_ E0SP50**  
**UniRef90\_ F2KVM9**  
**UniRef90\_ M5E8P7**  
**UniRef90\_ I0YLZ7**  
**UniRef90\_ Q8TZT9**  
**UniRef90\_ G0HN91**  
**UniRef90\_ W8P3E0**  
**UniRef90\_ R9T564**  
**UniRef90\_ I0A2K7**  
**UniRef90\_ Q9V1J9**  
**UniRef90\_ K0IAV3**  
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**UniRef90\_ B1Y9U0**  
**UniRef90\_ F0LIP2**  
**UniRef90\_ G4RML9**  
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**UniRef90\_ H3ZM93**  
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**UniRef90\_ C6LSQ4**  
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**UniRef90\_ B3T762**  
**UniRef90\_ A0RXG6**  
**UniRef90\_ K4MEN8**

lupas\_21  
lupas\_14  
lupas\_28  
jnet  
conf  
sol25  
sol5  
sol0  
jhmm  
inssm



lupas\_21  
 lupas\_14  
 lupas\_28  
 jnet  
 conf  
 sol25  
 sol5  
 sol0  
 jhmm  
 jpssm



The figure displays a sequence alignment of UniRef90\_100 and UniRef90\_110 proteins. The UniRef90\_100 protein is shown at the top, and the UniRef90\_110 protein is shown at the bottom. A vertical scale bar on the left indicates the position of residue 90. The UniRef90\_100 sequence is highly conserved, with most positions being identical or having very similar amino acids. The UniRef90\_110 sequence shows more variation, particularly in the N-terminal region and around residue 100. Several residues are highlighted in yellow, indicating specific mutations or features of the UniRef90\_110 protein. The alignment is color-coded by residue type, with hydrophobic residues in grey, polar uncharged in light blue, acidic in red, basic in green, and aromatic in purple.

