

1 10 20 30 40

QUERY	UniRef90_X1Q9X2	UniRef90_C6A0F3	UniRef90_F4BU98	UniRef90_Q46FS4	UniRef90_A3CXR6	UniRef90_E1RDY2	UniRef90_D5EA18	UniRef90_Q2FTM8	UniRef90_Q0W6G5	UniRef90_M0MG84	UniRef90_D7E8D8	UniRef90_R4WAC6	UniRef90_D8J858	UniRef90_A2BJZ3	UniRef90_UP1000475D826	UniRef90_Q3IMM8	UniRef90_G2MMH0	UniRef90_U3A7J1	UniRef90_B8GFC5	UniRef90_D7DAC2	UniRef90_J1L5H7	UniRef90_Q6L0Q0	UniRef90_E7QNF2	UniRef90_D2RH92	UniRef90_J2ZC60	UniRef90_V4HET2	UniRef90_E1QU20	UniRef90_C7NUL6	UniRef90_Q12TT5	UniRef90_M7TGK6	UniRef90_A8MCP7	UniRef90_E4NM05	UniRef90_Q97BH1	UniRef90_UP100029A3082	UniRef90_V6AU55	UniRef90_F2KS22	UniRef90_K0IBW1	UniRef90_M4YKE3	UniRef90_D9PVR2	UniRef90_U1PQ44	UniRef90_F2L203	UniRef90_E3GY59	UniRef90_E0SNX0	UniRef90_G0LHW4	UniRef90_UP100035D5438	UniRef90_F0TA29	UniRef90_D3S0W1	UniRef90_R9SKH0	UniRef90_D3E470	UniRef90_C7NZV0	UniRef90_TONA78	UniRef90_G0QCL0	UniRef90_I0A0C5	UniRef90_T0ZCB7	UniRef90_L0IFW9	UniRef90_D1JB46	UniRef90_Q97SP1	UniRef90_B8D6D9	UniRef90_G0QHR3	UniRef90_V4XZL8	UniRef90_B1L6K5	UniRef90_E8R7G5	UniRef90_N0BD10	UniRef90_N6UWI0	UniRef90_E6N588	UniRef90_M7T2F6	UniRef90_TON2J2	UniRef90_U1MJU6	UniRef90_I3TDY6	UniRef90_T1AWQ0	UniRef90_W7KZR1	UniRef90_Q2NGN2	UniRef90_A1RX93	UniRef90_H0A9N8	UniRef90_UP1000364FD51	UniRef90_M0NAE6	UniRef90_M7T305	UniRef90_T1B6C8	UniRef90_A2SR74	UniRef90_G0EF82	UniRef90_D5VT17	UniRef90_D6PBS6	UniRef90_S0AQE1	UniRef90_A4FZ60	UniRef90_F8ANF2	UniRef90_D5U3D4	UniRef90_D2EF28	UniRef90_X1BTB9	UniRef90_D6GUH5	UniRef90_N6VNVL3	UniRef90_A5UJM3
H H H E K A C R H C H Y I T S E D R C P V C G S R D L S E E W F D L V I I V D	M T E K A C C R N C N F I T D Q N T C P V C G A A S L S G D W S G Y I I V L D P	M T E K A C C R H C H Y I T N E D R C P A C G S R D L S D E W F D L V I I L D P	M T E Q A C C R E C C R R I V E G Q V C P I C G T S D L A E E W S G L V I I L D P	M A E K V C C R H C M R V L E G Q N C P I C G T S N L S E D W A G Y V I I I D P	K V C C R E C C H R V V E G E S C V I C G T S N L S E D W A G Y V I I I D P	R V C C R V C H R V V E G E S C M T C G S T N L S E D W A G Y V I I I D P	M V E S V C M D C H R L V S G Q E C P V C G T T N L S K D W S G L V I I I D P	K Q H M V C R D C H R V V E G T S C S I C G T S N L T A D W T G Y L V I I I D P	M S E Q V C V C R E C C H S V V D P D V C P T C G S S S L T E D W A G Y V I I A H P	R K V C R D C H R V V D P D T C P S C G S T S F T E D W A G Y V I I A H P	F K A C R R R C K S L V I P R E R C S V C G S T D L T E D W E G V V I I I D P	M R E R A C C R E C C H K A I T T G D R C W N C G S T N L S T T F S G L V I V V V	V C R D C H R V L E G E Q C P S C G S T S M T E D W A G Y V V V A H P	A C C R E C C H Y Y V N D P D S C D Y C G S S S L T E D W A G Y V I I T H P	A C H D C C H R I V E P D V C P H C G S N D L T E D W A G Y V I I T H P	K V C C R E C C H R V V W D G E T C V I C G S T S N L S T D W S G Y L V I I D P	K P F K A C R R K C R A L V D K N E C P H C G S R D L T E D W E G I I I V I D P	K Q M K A C Q S C H K V V E G E A C M T C G S T N L S E D W A G Y L I I V V D	K Q Y L A C K I C K R L T T D Q F C P V H G D E K T T T E E W F G F V I V N D P	M A E L A C R D C C H A V V E E I C P I C N S T S L T E D W S G Y V S I A H P	K V C C R E C C H Y V N E P D T C N S C G S S S L T E D W A G Y V V I I T H P	K K R K A C C R E C C H F V V N D P Q T C E N C G S S S L T E D W A G Y V V I I N H P	A C C R E C C H F V V N D P Q T C E N C G S S S L T E D W A G Y V V I I N H P	G Y K A C R R N C C H R A V P E D V C P V C G G T D F T K D W M G L I V L K	M V D Q V C C R E C C H R I V S G Q T C P V C A S S N L S D D W S G L V I V D P	A C R R N C C H R L T E K D R C P I C C S D Q T V K R W S G Y V I I R D P	G F K A C R R K C K L I V P D E V C P N C G G E F S E E W R G L I I I L N P	K P R L A C C R E C C H N M P D S C E N C G A S S S L T E D W A G Y V V I I T H P	Q Y R A C K K K C K R L T P E K T C P I H P D E K T T T E W F G F L I I T E P	M K E R A C R H C H Y I I T T E D R C P V C G S R D L S E E W F D L V I I I N T	R E M A C R R K C K Y V F V G K V C P L C K S S D L T P D W T G V V L V A D P	M T E L A C R R R C K F I L N S T V C K N C G S T E L T K E W Y G Y L I I I D P	K E K A C R R R C K V I T T G K V C P N C K S T D L S P D W S G I I I L V F D P	Y K A C K D C C Q F I T E D V C P R C G G A T S K D W Q G M V A I A D F	M T E K A C T R C H C R I T S D E R C P V C N V P A S T N W S G L L I I I D P	A C C R E C C H Y V N D P Q T C D S C G S S S L T E D W A G Y V V I V P H P	G Y K A C K K N C C K L I V P E D Q C P N C G S T E F V N N W R G M L A V L D P	M I E K A C T K K C K R I T S E D Q C P V C K K A P T S E N W S G L L I I V I D P	K A F K A C Q C R C R A L V E T Q V C P V C G S T E F S T E W S G I I I V V D P	C R E C C H Y Y I N H A D T C P L C S N P T S K D W Q G Y V V I I V D H	K V Q R A C K H C S Y I I T E E D T C P L C S N P T S K D W Q G Y V V I I V D H	M V L K A C T R C H R L M E E D R C A I I C C N I A S S K N W S G F L I I V I D P	M T E V I A C K S C K Y I I T S E D T V C K N C G G R D F T K N W Y G Y L V V I D P	M T E K A C C P K C K R I T H N D L C P V C G K V A T S D N W S G L L I I V L N	M A L Q A C T H C N L L T E K Q C P E C K N P T S T N W S G L L I I I T D P	Y R A C K K C C H L I T T E K N C P I H G E E E K T S T E W F G F V I V T E P	M T E K A C K E C C G R I I T E E N E C P V C R R N N D L A D S W G G T V L V M N P	Y K A C Q C K R C G R I V E P E V C P V C G S K E F T N D W E G I L V I V L D V	T Q R A C R N C N F I S D Q M K C P R C G G E T S K E W Q G Y L I I V V D P	V C R E C C H L V N E A D T C A S C C A S S S L T E D W A G Y V V I I A H P	E K A C C R D C C H R I V E V E S C C V C G G S N S V S G D W S G Y V A I I D V	N K E F K A C K K N C C H R I V E V P Q D T C P V C G S S D D W S G I V I I I L D P	K P F K A C R R R C R S L V P K E T C P V C G S Q D F T F E W S G V V I I V N P	M T E K A C C S E C C H R I L V E E E E C P I C D K N N D L R G N W S G L A V I Y D P	M R Y K A C R R N C C H R I N G P D T C E Q C G S S R L T T D W A G Y V V I T H P	E K A C C R D C C H R I V E V E S C C V C G G S N D F T Y N W E G I V A I V D P	K A F K A C K K C C K Y I S H E S V C K N C G S S D L T K E W Y G Y V V I I D P	M V D Y A C K K C C K Y I L T T E C T P I C C G S Q D F T M E W S G V V I I I N P	R A C K K C C K Y I L T T E C T P I C C G S S D D W S G I V I I I L D V	R A C R N C C K R I V V G K T C D V C G S S N L S T S Y S G L V I I I L D V	R A C R N C C K I I I E N N C P I C R G T D L S D D Y S G L L V V L E P	K R T M A C K I C K K I Y M D S P C P Q H G D S H H M S D E W F G F L I I I N D T	A C R E C C H R I V Q E A E C A E C A C G S T S L T E D W A G Y V V I I A H P	K P F K V C R R K C K L T V D K E V C P V C G S K D F S E E W E G V V V V I D P	M K E R A C K K C C K L L T T E K N C P I H G D E K T T T E E W S G F V L V S E P	F K A C K N C C K A L V P E E D V C P V C G G S S F T D E W E G M V I V I I D	M A E R A C P R C C R Y V T F D K V C P L C K T E T S S D W T G L I I V V L N P	M S E K A C T D C C K R I V V E D D E C P V C G S R E F T D D W D G F V A V I I D	Y G Y K A C Q C R N C C K M L V P E E K I C P N C C K G K D F S D E W S G I F I L F K P	K A C K T C N T I T D Q P K C P K C G G E V S R E W Q G Y L V V I I D P	Q A C C R N C C H K I L E A D V C P E C Q G N A L T P R E W F G Y L V I I I D S	F R A C C R S C C H A L V P K D R C P Y C G G S T D L T E E W A G V A I I L D T	R A C K K C C K Y I L T E E K C P I C K S P T S E K W G L L I I L D P	A C G E C C H L V L A D D Q C P R H P S A Q V S S D W T G Y V I I M Q P	K A Y K A C K I C K R L T T E D V C P V H G E E R T K V D W F G F L I I I N D I	A C R E C C H S I L Y E A S V C P V C G G S S R L T D D W A G C I I V A H P	K A C K T C N T I T D Q P K C P K C G G E V S R E W Q G Y L V V I I D P	Q A C C R N C C H K I L E A D V C P E C Q G N A L T P R E W F G Y L V I I I D S	F R A C C R S C C H A L V P K D R C P Y C G G S T D L T E E W A G V A I I L D T	R A C K K C C K Y I L T E E K C P I C K S P T S E K W G L L I I L D P	A C G E C C H L V L A D D Q C P R H P S A Q V S S D W T G Y V I I M Q P	K A Y K A C K I C K R L T T E D V C P V H G E E R T K V D W F G F L I I I N D I	A C L R C C K Y I T T R E D T C P I C C G F D T S D N V R G L L I I V L D P	K A C L R C C K Y I L T K E D K C P L C G S T E S E N W R G F L I I L D P	F K A C R N C C K A L V P E E D V C P K C G G S R S F T D E W E N G V I I V L N P	M A L Q A C K V C N Y L T E E R K C P M C G S E D L S L K W K G V V I I S D K	E K A C K N C C H L M T K N Q T C P K C K T H S L S E D Y T G E V I I I D P	M A V K A C K V C N Y L S D E K K C P A C G S D D L S L R W K G V V I I A D S			

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

QUERY

UniRef90_X1Q9X2
UniRef90_C6A0F3
UniRef90_F4BU98
UniRef90_Q46FS4
UniRef90_A3CXR6
UniRef90_E1RDY2
UniRef90_D5EA18
UniRef90_Q2FTM8
UniRef90_Q0W6G5
UniRef90_M0MG84
UniRef90_D7E8D8
UniRef90_R4WAC6
UniRef90_D8J858
UniRef90_A2BJZ3
UniRef90_UP1000475D826
UniRef90_Q3IMM8
UniRef90_G2MMH0
UniRef90_U3A7J1
UniRef90_B8GFC5
UniRef90_D7DAC2
UniRef90_J1L5H7
UniRef90_Q6L0Q0
UniRef90_E7QNF2
UniRef90_D2RH92
UniRef90_J2ZC60
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UniRef90_E1QU20
UniRef90_C7NUL6
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UniRef90_V6AU55
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UniRef90_UP100035D5438
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UniRef90_D3S0W1
UniRef90_R9SKH0
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UniRef90_TONA78
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UniRef90_E8R7G5
UniRef90_N0BD10
UniRef90_N6UWI0
UniRef90_E6N588
UniRef90_M7T2F6
UniRef90_T0N2J2
UniRef90_U1MJU6
UniRef90_I3TDY6
UniRef90_T1AWQ0
UniRef90_W7KZR1
UniRef90_Q2NGN2
UniRef90_A1RX93
UniRef90_H0A9N8
UniRef90_UP1000364FD51
UniRef90_M0NAE6
UniRef90_M7T305
UniRef90_T1B6C8
UniRef90_A2SR74
UniRef90_G0EF82
UniRef90_D5VT17
UniRef90_D6PBS6
UniRef90_S0AQE1
UniRef90_A4FZ60
UniRef90_F8ANF2
UniRef90_D5U3D4
UniRef90_D2EF28
UniRef90_X1BTB9
UniRef90_D6GUH5
UniRef90_N6VNVL3
UniRef90_A5UJM3

50 60

The alignment shows two protein sequences. The top sequence is aligned with the bottom sequence. A vertical line marks position 50, and another vertical line marks position 60. Colored boxes highlight specific amino acid residues at these positions across the alignment.

UniRef90_A6UTP8
 UniRef90_UP1000381271C
 UniRef90_D9PM38
 UniRef90_C7DHS3
 UniRef90_B5I9Y9
 UniRef90_B3T547
 UniRef90_U3TEB9
 UniRef90_T0ZM17
 UniRef90_M1IU86
 UniRef90_L0KVX6
 UniRef90_F6BDL0
 UniRef90_T1A7I3
 UniRef90_R1G9R4
 UniRef90_D7DRA2
 UniRef90_C3MR00
 UniRef90_L0A9U4
 UniRef90_A0A031LMK4
 UniRef90_A4YIX6
 UniRef90_UP100035D331C
 UniRef90_Q8TVE0
 UniRef90_UP1000369458E
 UniRef90_V4LRW7
 UniRef90_UP100035F454B
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 UniRef90_TOLBM1
 UniRef90_A8A8L5
 UniRef90_X1VRH5
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 UniRef90_C4R0E6
 UniRef90_J9J598
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 UniRef90_A0A023BD16
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 UniRef90_K0KHB0
 UniRef90_J4C2N5
 UniRef90_Q54NF2
 UniRef90_G4MFN7
 UniRef90_M2QL4
 UniRef90_B2B7U3
 UniRef90_M4FV29
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 UniRef90_B9PK14
 UniRef90_W6MY05
 UniRef90_A8Q344
 UniRef90_L0B000
 UniRef90_B5RSL5
 UniRef90_N4VCU0
 UniRef90_L2GNE3
 UniRef90_M7U0W1
 UniRef90_D5GCT6
 UniRef90_Q4N8C8
 UniRef90_H6BYJ6
 UniRef90_K2S2K8
 UniRef90_Q6FMX1
 UniRef90_R1CP98
 UniRef90_K1VRT3
 UniRef90_D2VP11
 UniRef90_D8QLM5
 UniRef90_Q4YU95
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 UniRef90_D7G3E5
 UniRef90_W3X366
 UniRef90_B6AHA6
 UniRef90_A0A024JB86
 UniRef90_F4S3T6
 UniRef90_A7AWE9
 UniRef90_U6HWK5
 UniRef90_C4YOR1
 UniRef90_N1Q1C6
 UniRef90_A0A058ZBA0
 UniRef90_W7TQJ1
 UniRef90_N1J121
 UniRef90_B6HND1
 UniRef90_M7XJG0
 UniRef90_C1E040
 UniRef90_P81205
 UniRef90_C5KBW4
 UniRef90_C5MJ24
 UniRef90_A8NG15
 UniRef90_F9XKP8
 UniRef90_U6KNA6
 UniRef90_U5H3C6
 UniRef90_B3S4E4
 UniRef90_L1JF52
 UniRef90_B6JVR7
 UniRef90_A9UT62
 UniRef90_L8WPD0
 UniRef90_F4PUM7
 UniRef90_W7IFC1
 UniRef90_UP1000441084A

1 10 20 30 40

K K S C R C K Y L T D D E K C P I C G F E T S D N W R G L L I I L D P
 M K K K V C R N C K I F V K G E Q C P I C K N S N F S E S W N G R I N I L D A
 M K K Q A C K H C K L F Y G E E C C P N C K S T Q T V T N W K G R I N I L D I
 M E G L A C K K C K I I S G S K C P L C G S T E L T N K W S G Y I I V F N P
 K A C R N C R R I T T E D C P T C G G E T T T E W H G Y V F I L D K
 A C G E C C N R I L P D P Q C A N C C P S A P V T T D W Q G Y V V I L H P
 A C K N C G A L V P R K V C P E C G S T Q F T E N W S G M L V V V D P
 Y K A C K V C K R L T S E K L C P Y H G D S K M S S E W F G F I I V S E R
 S F K A C K N C R A L V P P E T C P L C H S S S F S D E W N G M V I I V D P
 M A E Q V C R E C H R I V T G Q T C L V C S S S N L S S D W S G M V I I V D P
 R A C L K C K Y L T N E E R C P L C M G E T T E N W R G L L I V L D P
 M E E K A C K K G F V I S G D A C P I C G S K E L T T K W S S Y A I I V N A
 K R K V C R N C K A I I D K D V C P Y C G S T D L S E D Y S G F I I V N Q
 K G L K A C T K C N Y I T H D D F C P I C Q H E T S E N I R G L L I I L D P
 F K A C K N C C K A L V E K E T C P V C G S S S F T E E W D G M I I I I D S
 K A C K N C C K A L V E Q D I C P V C G G N S N F T E D W E G M V I I V S
 K T L K A C R S C K A L V S K E V C P I C N G N T T F S D E W E G M V I I L L S
 K L R A C R V C K R V T E E Q K C H G D T V L E W K G Y I Y I L N P
 K L K A C V R C G Y L V E E D T C P A C H G D E F T E N W R G I A V I L D T
 K E F V A C R N C R A L V K G E P C P V C G K V D Y S E E W E G M V V I L D T
 K A C K S C C K A L V P R N V C P V C G G T A F V D E W E G V A I I L D
 K E L A C R K C K C H I T I G K V C P A C K S S D L T P D W E G V V I I A N P
 K R K V C L K C K A I I L P M D V C P Y C G G T E F T E T F E G I I I I V N K
 K L R S C R N C K V T E M K C E K C G G D T V L E W K G Y L F V L D P
 M K R K A C M N C C R F L V P R T R C P R C G S T D L T E N W E G M I I I I I K T
 K Q S R A C V D C G L V F D E N G C E N C G T N S T T Q N F E G V I A I M N P
 R E R A C M L C G I V L P G R V C P N C D S E C T S S S F E G L V A V G D N
 G Q Q A C T G C C G L I L T S S Q C P N C K D E E T T N D F G G V V A L M H P
 M K L R A C L R C Q F V Q S P K G C P N C G S Q D T T S N F D G M I I S M L R P
 K S A A C T G C G L V F D E N G C E N C G S T T T P N F E G V I A V L K P
 K L R A C I R C R L I M T E D Q C G N C G D R R T S S N F S G F L S I M D P
 K H A R A C T E C G L V F V D E N G C E N C G S S S T T Q N F E G V I A I M N P
 R A C M V C C S I V V L P Q E G C P N C G S D T T S P V F E G L I T L A D P
 R A C M V C C S I V M T D E G C P N C G S S E T T S S V F E G L I A I A D P
 R A C M V C C S I V M T D E G C P N C E D S C T S Q V F E G V I T L A D P
 R A C M V C S V V M P Q E G C P N C G N N D T S Q V F E G L I S I I D E P
 R A C L V C G L V F E G T G C E N C G N R D T S K N F D G I I V V V T D P
 R A C O I S C R L I M S E Q C P N C G F S V T S E D F E G L V A V M K P
 R A C O I L L C G I V Q R N E G C P N C G S Q E T T S N F D G L I C M L R P
 K L R A C O I L R C H F A Q T A K G C P N C G F D C T S A N F S G L I A I M E P
 K L R A C O I S C R L I L T E T Q C G N C G F D C T S A N F S G L I A I L C D P
 T E R A C O M L C G I V Q P S K G C P N C D S D C T S P S F E G Q V A L C D P
 R A C M V C S I V V M T D E G C P N C G S Q D T S Q V F E G L I T M A Q
 Q M R Y R A C M V C S I V L T Q T R C P N C P D Q C T S Q V F E G L I S I A D P
 N P K L R A C I S C R L I M S E D Q C G N C G D H R T S A N F N G F I S I M D P
 R Q R A C M V C S I V L N K N G C P N C E S E C T S Q V F E G L I M L G D P
 R A C M V C S F V Q P A S K C P N C G A D E T S A V F E G L I A L A D P
 S E R A C M L C G I V Q T T N E C P N C Q G E C T S P S F E G L V G M C K P
 R A C L V C S I L Q S Q K G C P N C G S A E T S I Y D G M I A M M E P
 R A C L T C G L V K T T D Q C E N C P K S N T T S F E G L I T L M N P
 R A C M L C S L I Q T R H G C P N C G S L D T T N Q F E G V I A V I D P
 K L R A C L S C R L L R T E N G C S N C K Q D C T T T Y F S G L I A I T T P
 R A C L R C R L V K T E N G C E N C P N E G T T P N F N G I I S V M D P
 K G L R A C K R C S L V K G N D Q C E N C P Q D C T T T Y F S G L I A M M D P
 R A C M V C S I V M T Q E G C P N C G D T D T S Q V F E G L I T L A N P
 M R L R S C L S C R I I L S D Q C P N C T N S C T T T S Y K G M I S M L K P
 R A C M I C G I V Q K S N G C P N C D S D C T S P S F E G I V A I C D S
 K L R A C M L C S F V Q T A Q Q C P N C G N S E T A G T F D G T A I I L D P
 K L R A C L L S C C R L I M S E D Q C P N C M D G D R R T T A N F S G L L I S I M D P
 R A C L L C G L I F E M N G C E N C G D R E T S N N F D G M V A M M N P
 K T E R A C M L C C G I I Q T E Q G C P N C E S D C T S P S F E G L V A L G D D
 R A C L V C S F V Q T Q S K C P N C G S T D T S E T F E G L I T V N D T
 R A C T G C K F L N S L D G C P N C G G V P I T R T Y T G T L A I T N P
 K G L R A C R K C R L I K E E S G C D N C M Q F E T S P H Y T G M M A L V I H P
 R A C M V C S I V M T Q N R C P N C G N M D T S Q V F E G L I A L A D P
 K K L R A C L M C S F L A T P Q G C P N C E E D S C T T G Q F D G V I A A I N P
 K H T R A C F R C K L V K T E E G C D N C A A E C T T P S Y S G V V S V I D P
 T D R A C M L C S F V Q S R N G C P N C Q S E C T S P S F E G L V G M C K P
 N H Q L R C L R C H I I L S V S Q C P N C Q D I D T T K N F S G G V S V M N P
 S E R A C M L C G I I Q P D E E G C P N C E S D C T S P S F E G L V A L G D N
 K Q L R A C L L C S I I Q R R R N G C P N C E S T C T T T Y F E G V I A V I D P
 R A C C L I C S F V Q P K N G C P N C N S S D T S P N F S G F V A V I K P
 K K L R A C L M C S F V A M P D G C P N C G S S D T T T K F D G A I A L I N P
 R A C L V C S L V F E L D G C E N C G D R Q T S P N F S G M I S L T D P
 R A C L K C H V L P R Q G C A N C G T R E C T V N F T G I S A I T Q P
 R S R A C L V C G I I L P A K G C P N C P D D G L D D T S P V F E G V M A M V A P
 N K H L R A C L S C G L V K T S D Q C E N C A D S C T T A R F Y G I V S V I D P
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 UniRef90_F4PUM7
 UniRef90_W7IFC1
 UniRef90_UP1000441084A

1 10 20 30 40

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

50 60

UniRef90_A6UTP8	K E S E A K K A R D L K G K Y S S V K
UniRef90_UP1000381271C	E K S E I A K K E I K S K G E Y C K V R
UniRef90_D9PM38	K N S D I A K K G V E K E G E Y A I K V
UniRef90_C7DHS3	E N S E V A K K L G K S S T Y A L N K
UniRef90_B5I9Y9	D K S K I A E A M G A D N G E Y A L R V R
UniRef90_B3T547	R R S E I A Q R N I S Q P G S Y A L K V
UniRef90_U3TEB9	E N S E V I A R E L G I D K P V R K A I
UniRef90_T0ZM17	K N S I A K R A A L N D Q G I Y A K V R
UniRef90_M1IU86	E K S E V G Q M F G A T T P W R Y A I V K
UniRef90_L0KVX6	E N S E I A Q K M E I K V A D R Y A L K V R
UniRef90_F6BDL0	L K S E I A K K A K I D V K G K F A L S A K
UniRef90_T1A7I3	E N S E I A K K L G V S I N S T F A I D I K
UniRef90_R1G9R4	E N S E F S K K L N L K E G K W A I R V
UniRef90_D7DRA2	V N S E V A K I A Q K D L K G K Y A L S V K
UniRef90_C3MR00	E S E V A K I T E A P K P W K Y A I I K
UniRef90_L0A9U4	D S E I A K E L K F N K K G T Y A I K V
UniRef90_A0A031LMK4	E K S E L A N L I E A K K P W R Y A I N L K
UniRef90_A4YIX6	E K S E L A E T I G E S K P W R Y A I N V K
UniRef90_UP100035D331C	E K S I A K K A G I N Q V G E Y A I K V R
UniRef90_Q8TVE0	E S Q T A D R L N A K I P G K Y A L R V
UniRef90_UP1000369458E	K S Y V A Q L M G V Q K P W R Y A V K V K
UniRef90_V4LRW7	N S E L A K R L K I S Y K G T F A I K V
UniRef90_UP100035F454B	K E S R I A Q T L K I S E N P K Y A L K V
UniRef90_Q74NE2	E K S E V A K V A G I D K E G K F A I K I
UniRef90_TOLBM1	T R S M I G K K A G I S T S G E Y A I K V R
UniRef90_A8A8L5	D S E L V G K V E Y L K E P G R Y A V E V
UniRef90_X1VRH5	E K S E I A K K L N I K D K G N F A I K T R
UniRef90_F1A3F8	G Q S W I A R R M E K K V P G L Y A L S
UniRef90_C4R0E6	E H S W V A K W L R V D Q P G L Y A V R V
UniRef90_J9J598	K E S W V A K W N N F T K P G L Y A I
UniRef90_R9P1B3	E E S W V A K W Q R T I E K P G L Y A V K V
UniRef90_A0A023BD16	E I S W V A R Y N D I S V P G A Y A I N
UniRef90_D3BN00	N E S W I A R K Q G L D V P G C Y A L N
UniRef90_K0KHB0	D K S W V A K W L R V N T P G L Y A V K V
UniRef90_J4C2N5	E K S W S A K Y N N L L I P G C Y A I S V
UniRef90_Q54NF2	K E S W I A R R L Q F E V P P G L Y A L S
UniRef90_G4MF7	T K S W V A K R L D G Y V R G V Y A I K V
UniRef90_M2LQL4	E A S W V A K R L Q G Y V P G T Y A V K V
UniRef90_B2B7U3	T K S W I A K R L D G Y V R G T Y A N K V
UniRef90_M4FV29	A K S W V A K R L D G Y V K G V Y A I K V
UniRef90_Q415W5	T K S W I A K R L D S Y V P G M Y A I K V
UniRef90_B8MBS0	R Q S W V A Q R L E G Y V P G T Y A I K V
UniRef90_U6IJ92	S Q S W V A K W I N T D K P G V Y A M S V
UniRef90_B9PK14	M S S W V A R H N K L T E P G C Y A V S V
UniRef90_W6MY05	G E S W V A K W L R I E T P G L Y A V K V
UniRef90_A8Q344	E E S W V A K W Q R I E K V G L Y A V K V
UniRef90_L0B000	Q K S W S A R Y N N L S I P G C Y A I S V
UniRef90_B5RSL5	S S S W V W V S K W L R I D Q P G L Y A V K V
UniRef90_N4VCU0	N R S W V A K W Q R L D V K G V Y A I K V
UniRef90_L2GNE3	R S S W V A K W Q R V N Q P G V Y A M T V
UniRef90_M7U0W1	K K S W I A K W Q R V D V R G C Y A T K V
UniRef90_D5GCT6	K N S W V A K R L D G Y R K G V Y A V K V
UniRef90_Q4N8C8	Q K S W S A R Y N N L S I P G C Y A I S V
UniRef90_H6BYJ6	K K S W V A K W Q R L T V P G L Y A V K V
UniRef90_K2S2K8	S Q S W V A K R L D A Y V P G M Y A T K V
UniRef90_Q6FMX1	T K S W V A K W L S V D I P G M Y A V K V
UniRef90_R1CP98	D E S W V A R W Q G I T V P G C Y A L R V R
UniRef90_K1VRT3	E E S W V A R W Q R I D K K G L Y A V R V
UniRef90_D2VP11	Q K S W V A R Y Q N L K V E G V Y A I T V
UniRef90_D8QLM5	E Q S W V A R W Q R T A K Q G M Y A V R V K
UniRef90_Q4YU95	T K S W I A Q Y N D L S K P G F Y A L Q V
UniRef90_UP10002C2E54D	D K S W A A K W L R I S V P G C Y T L A V
UniRef90_D7G3E5	E S S W V G K W Q R I S E P G M Y A I E V
UniRef90_W3X366	A K S W V A K R L D T Y V Q G V Y A T K V
UniRef90_B6AHA6	E L S W V A R Y N R I T T P G C Y A V S V
UniRef90_A0A024JB86	K N S W V A K W L R V D E D G L Y A V K V
UniRef90_F4S3T6	D Q S W V A K W Q R I N E P G V Y A I R I
UniRef90_A7AWE9	Q K S W A A R Y N S L V I P G C Y A I S V
UniRef90_U6HKW5	P E S W V A R W L R I D K P G V Y A M S V
UniRef90_C4YOR1	N K S W V A R W L R I D V A G L Y A V K V
UniRef90_N1Q1C6	T T S W V A R W Q R V Y V P G I Y A V Q V
UniRef90_A0A058ZBA0	N V S W V A K W K N L P A N G L Y A L E I
UniRef90_W7TQJ1	E D S W S A K W Q G A R R P G L Y A L Q V
UniRef90_N1JI21	S K S W V A K W Q R L D V K G V Y A T K V
UniRef90_B6HND1	A A S W V A R W Q R L D V P G T Y A T K V
UniRef90_M7XJG0	E E S W V A K R N D K H V P G V Y A V R V
UniRef90_C1E040	K S S W T A K R L G K M V P G C Y A L E I
UniRef90_P81205	S R S W V A R W W M S I D L P G M Y A V K I
UniRef90_C5KBW4	S R S W V A R Q L K L S T A G M Y A V
UniRef90_C5MJ24	K G S W V A R W L R I E Q P G L Y A V K V
UniRef90_A8NG15	D N S W V A R W Q R T S K R G M Y A V R V K
UniRef90_F9XKP8	N T S W V A K R L E G Y V P G M Y A V K V
UniRef90_U6KNA6	Q G S W V A R H N K L T E P G C Y A I K V
UniRef90_U5H3C6	R E S W V A K W Q R N D K P G V Y A V R V
UniRef90_B3S4E4	K N S W V A R W Q G I D T R G C Y A I S V
UniRef90_L1JF52	Q H S W V S R W L D K Q K P G C Y A L E V
UniRef90_B6JVR7	T E S W V A R W Q R I D T P G M Y A T R V
UniRef90_A9UT62	S D S W V A K W Q G N D V P G C Y A L R
UniRef90_L8WPD0	E D S W V G R W Q R V H K K G M Y A V R V
UniRef90_F4PUM7	N E S W V A R K Q H I K V P G C Y A L S I K
UniRef90_W7IFC1	T E S W V A K W L R L D K P G V Y A T K V
UniRef90_UP1000441084A	D Q S W V A R W Q R T A K P G M Y A I Q V

Sequence logo showing the conservation of amino acids at each position of the UniRef90 database. The x-axis represents positions 1 to 40, and the y-axis lists UniProt IDs. Positions 1-10, 11-20, 21-30, and 31-40 are highlighted in yellow, green, blue, and red respectively. The height of each bar indicates the frequency of a specific amino acid at that position.

lupas_21
lupas_14
lupas_28

DNA sequence diagram illustrating a recombination event. The sequence starts at position 1 with a red segment (labeled B) followed by a blue segment (labeled B). At position 3, a blue segment (labeled B) is inserted, replacing the red segment. This is followed by a blue segment (labeled B) at position 5. The sequence continues with various blue segments (labeled B) and yellow segments (labeled 1-8). Yellow arrows above the sequence indicate the movement of segments: one arrow points right from position 1 to 3, another from 3 to 5, and a third from 5 to 8.

UniRef90_K0TRL8	Q D S W T A K W L R V D L P G V Y A I S I
UniRef90_G8BGN1	K E S W V A R W L R I D V P G L Y A V K I
UniRef90_I0YXV3	A S S W C A K W L H L S K P G C Y A L S V
UniRef90_S3DAA5	S K S W V A K R L D G Y V K G V Y A T K V
UniRef90_V9D976	K T S W V A R W Q R L T E Q G I Y A V K V
UniRef90_UP10002658DBC	E D S W V A K W Q R L T L P G M Y A I S V
UniRef90_F2SPT1	R A S W V A Q R L D G Y V P G T Y A V K V
UniRef90_I4Y5U1	K G S W V G K W Q R V N E K G L Y A V R V
UniRef90_W9XG8	K T S W V A R W Q R L T V P G V Y A V K V
UniRef90_A0A059ELE5	N K S W V A K W Q R I K V N G R Y A I I V
UniRef90_M2Y229	L D S W V A K W Q R V S V P G C Y A I A V R
UniRef90_UP10003F48F97	E E S W V A K W Q R I D K K G L Y A V R V
UniRef90_L0PF16	T E S W V A K W Q R I N V G G I Y A V R V
UniRef90_B8BTE9	S E S W T A K W I R I D L P G V Y A I S V
UniRef90_E3L9Q2	K E S W V A K W Q R I S C P G L Y A I R I
UniRef90_S8B652	A V S W V A R W Q R L D V A G T Y A T K V
UniRef90_Q4D6U3	E K S W V A R M I G
UniRef90_G3ASH1	K E S W V A R W L R I D A P G L Y A V K V
UniRef90_D8QX48	T G S W A A R W L R I T V P G C Y A L A V
UniRef90_W4KEX8	E T S W V A R W Q R T S K R G I Y A V R V K
UniRef90_J9JBA2	L K S W V A Q W M R N C I P G I Y A M A V R
UniRef90_G1XDC1	T E S W I A K W L R L D K P G V Y A T K V
UniRef90_E0V9I1	E D S W V A K W Q R I N V K G V Y A I S V
UniRef90_R0MHD6	E K S W V A K R I N E N K K G L Y A M T V
UniRef90_V2XHB0	E N S W V A K W Q R T S V R G M Y A V R V K
UniRef90_M3B8X8	N T S W V A K W L R I Q V A G I Y A V K V
UniRef90_A4VDJ6	A K S W I V K R K D V K V P G A Y A V N I
UniRef90_G4TR62	K E S W V A K R V D I S V R G I Y A V R
UniRef90_E4X6W5	D Q S W V A K W Q R I D K P G M Y A I S V
UniRef90_T1JY11	D E S W A A K W I R I P K P G I Y A V S V
UniRef90_J9JZA6	E D S W V A R W Q K I N T K G I Y A I S V
UniRef90_U4LJH0	V K S W V A R W Q R V E E K G V Y A V K V
UniRef90_H2ZEU0	D E S W V A K W Q R I K K P G C Y A I S V
UniRef90_B7XH90	K K S W I A R W Q K N T E N G F Y A I S V
UniRef90_M0RRS4	S R S W A A R W L R I Y I P G C Y T L A V
UniRef90_G7E5P1	Q E S W V A K F S R I E I P G A Y A I L R
UniRef90_R4FMM6	E D S W V A K W Q R V S T K G I Y A I S V
UniRef90_G0U3J1	E K S W I A R L I G K T D N G V F A
UniRef90_U5EZE9	E D S W V C K W Q R I T V K G I Y A I S V
UniRef90_R7YIC0	Q D S W V A K W Q R V Y V P G V Y A T K V
UniRef90_E5A0C8	K R S W V A Q R L E G Y V P G V Y A T Q V
UniRef90_U1LYD3	E D S W V C K W Q K I S R K G M Y A I S V
UniRef90_S8DRJ1	E R S W V A T W Q R I K V R G M Y G V R V K
UniRef90_B7FXW7	R D S W A A K W I R V D L P G V Y A I T V
UniRef90_A0A024UTR3	K E S W V A K R I G K F V P G I Y A V A V
UniRef90_W1QAC6	Q G S W V A R W L R I E V P G L Y A V R V
UniRef90_M7NTY2	T E S W V A K W Q R I N V G G V Y A I R V
UniRef90_M5GC06	D E S W V A Q R T E K Y V K G V Y A I R V
UniRef90_M5X4B4	T R S W A G R W L R I G K P G V Y T L A V
UniRef90_B3L262	T K S W M A Q Y N D L S K P G F Y A L Q V
UniRef90_M4CP69	R R S W A A R W L R I G K P G C Y A L A V
UniRef90_A0E5Y1	S Q S W V I R K L G N P K P G L Y A I D V
UniRef90_E5SAC8	D D S W V G R W Q M I S K K G I Y A I S V
UniRef90_E3RX25	S R S W V A Q R L E G Y R P G V Y A T Q V
UniRef90_A4RSX5	R A S W V G K W L R L D V P G C Y A I S
UniRef90_C3YDJ1	D D S W V A K W Q R I N K P G C Y A I S
UniRef90_J3PNQ6	K E S W V A K W Q R I N C P G L Y A I R I
UniRef90_A9P049	T R S W S A R W L R I S V P G C Y T L A V
UniRef90_K3WRG9	K E S W V A K W Q R I V P G I Y A V S V
UniRef90_W5JFX8	D D S W V C K W Q R I N T K G I Y A I S V
UniRef90_M3DBK1	S T G W V S R W L R I Q V P G V Y A T K V
UniRef90_W1P6X7	T K S W A A R W L R I S K P G C Y T L A V
UniRef90_Q0CAD0	A T S W V A Q R L D S Y V P G T Y A V K V
UniRef90_I1GSC7	S R S W A A R W L R I A K P G C Y T L A V
UniRef90_S4AA79	D V S W T G R W Q S I S K P G L Y A V G V
UniRef90_W2RVV9	A T S W V A K R L S G Y K P G I Y A T K V
UniRef90_E1ZI13	K T S W C A K W H L R K P G C Y A I S V
UniRef90_T0L673	D K S W V A K W Q R I N K K G L Y A L T V
UniRef90_F6VDP4	E D S W V S K W Q R V S K P G V Y A V S V
UniRef90_T0Q1V9	R E S W V A K W R R I G V P G I Y A V S V
UniRef90_A8I2N9	K S S W A C K W L G K Y V P G S Y A M A V
UniRef90_UP10004408E8A	E A S W V A R W Q R T S K R G M Y A V R V K
UniRef90_F0Y7M1	E E S W I A R W E G I N L P G C Y A M K



lupas_21
 lupas_14
 lupas_28
 jnet
 conf
 sol25
 sol5
 sol0
 jhmm
 jpssm