

1 10 20 30 40

QUERY	UniRef90_E3GMV6	UniRef90_R2SJ13	UniRef90_F7KEM6	UniRef90_G9RVE2	UniRef90_C0D365	UniRef90_U2F0V4	UniRef90_UPI00047EAEF6	UniRef90_R6US79	UniRef90_F4GKS8	UniRef90_UP10003F52BDB	UniRef90_R5RN07	UniRef90_S0JFR8	UniRef90_R6CJJ3	UniRef90_UP1000477DDFF	UniRef90_A9KRE6	UniRef90_R9MTG6	UniRef90_U5F576	UniRef90_J1H1E3	UniRef90_B51H4	UniRef90_A8MKN9	UniRef90_A3KJF9	UniRef90_M9M3M8	UniRef90_D4W3H6	UniRef90_FORXE7	UniRef90_I2F1S4	UniRef90_UP100047A6F1E	UniRef90_G5IMH6	UniRef90_V9HH63	UniRef90_R9KF15	UniRef90_C0E9F6	UniRef90_F6EE18	UniRef90_L0IXB1	UniRef90_B1C086	UniRef90_L7FF49	UniRef90_R9NAV4	UniRef90_R9KGS2	UniRef90_UP1000479CABC	UniRef90_B9DS82	UniRef90_F5YJE8	UniRef90_F5ZI94	UniRef90_N9Y3H9	UniRef90_C1FKS0	UniRef90_S4D465	UniRef90_I3TZ65	UniRef90_W4T566	UniRef90_W7STS9	UniRef90_W7CD70	UniRef90_UP100037511FD	UniRef90_J3CGA2	UniRef90_C7PEK7	UniRef90_UP10004756787	UniRef90_D9SVU7	UniRef90_N2BBZ0	UniRef90_UP10003B68F7E	UniRef90_R9BUP7	UniRef90_SOJ123	UniRef90_UP10003608D2F	UniRef90_R2QWH6	UniRef90_I2EV46	UniRef90_B0BHB2	UniRef90_I9KY26	UniRef90_W7BF95	UniRef90_UP10001FFDD16	UniRef90_A0A011SUT7	UniRef90_R2SGV5	UniRef90_K2MF11	UniRef90_TOU794	UniRef90_K4AR48	UniRef90_UP10003B6FE5E	UniRef90_E9UYJ3	UniRef90_E2SMJ4	UniRef90_X5K600	UniRef90_H5X2V7	UniRef90_R9JHT1	UniRef90_Q0W5Y3	UniRef90_UP100037FD018	UniRef90_A0A010ZSL2	UniRef90_I6SWA4	UniRef90_UP100034B58CD	UniRef90_UP100035F61EE	UniRef90_UP10003811555	UniRef90_UP1000464DFC4	UniRef90_UP100035C3E15	UniRef90_V718P0	UniRef90_UP100047DD2F8	UniRef90_UP1000248CE3C	UniRef90_UP10003B6AEE4	UniRef90_UP100037E5019	UniRef90_UP100046AA614	UniRef90_E4T249	UniRef90_UP1000477B2F5
S P I E F D A I I R Q V P D M D A A Y V E I P F D V K T V Y G K G R V R V N A T	Y E F F E A E I K K V P D I N G A Y I E I P F D V K E T F G R G R V R V H A T	K T Y E F T A E I K K V T D L D G A Y I E F P Y D V K E E F G K G R V P V T A T	K K Y E F D A I I L K V P D I N G A Y I V E F P Y D V R K E F G K G R V K V H A L	Y R F E A V L Q K V P D I N G A Y I V E F P Y D V R A E F G K G R V K V H A T	F E A E I Q K V P D M D G A Y V E I P F D V R K E F G K G R V K V H A W	Y R F E A V I Q K V P D M D G A Y V E I P F D V R K E F G K G R V K V H A T	Q T Y A F T A V I Q K V P D Q D G A Y I V E F P Y D V K T E F G K G R V K V H A T	Y E F D A V L Q K V D G I D G A Y I E F P P W D V K E E F Q K G R V C V H A T	Y E F F E A V I Q K V D G I D G A F V A F P H D L R A E F G K G R V K V H A T	Y E F F E A V I Q K V D G I D G A F V A F P H D L R Q E F G K G R V K V H A T	Y E F F E A V I Q K V D G I D G A F V A F P H D L R K E F F N K G R V K V I A T	K R Y E F D A I I V K V P D I N G A Y I E F P Y D V R E E F G K G R V K V H A E	F F Q A K I R K V P D I N G A Y I E F P Y D V K K E E F G K G R V K V H A E	K K I H F S A V L Q K V P D I D G A Y I E I P F D V K K E E F G K G R V K V H A E	Q F T A V L L K K S P N K G W T Y V W P D S A E F F G T R G L V K V R G T	Y E F D A I I K K V P D I D G A Y I E I P F D V K Q E F Q K G R V P V T A T	L K F R G R I L Q N E N M D A A Y Y E V P P Y D I K E L F G K G R L L V N A T	Y E F D A I I K K V V D I D G A Y I E I P F D V V K K E F G K G R V Y V H A W	K T Y E F D A I I H K V P D I D G A Y I V K F P Y N V K T E F G K G R A K V H A T	E F T A V L S R N P G K G W T Y C V R W P A S V E F F G T R G L V K V R G T	Y E F D A E I K K K E G M D A A F I E F P Y N V E A E F G K G Q V K V S V T	E F T A T L R K S A N K G W T Y L V W P K S A E F F G T R G L V K V R G T	Y E Y D A A I Q P A D N G G A Y V P F P Y D V R E E F G K G R V K V I A S	F N A K I I E A K T K G G A Y I E I P F N V E E V Y G A K R V K V I A S	Y S F T A S Q K V P D Q D G A Y V V V P F D I Q Q V F G K K R V K V H A T	Y E F D A V I R K V P D I D G A Y I E F P Y D I R E E F G R G R V K V H V T	E F T A P L L K S P A G G W T Y V K M P P G S A E Y F G T R G L V K V R G T	Y E F D A V I Q K V P D I D G A Y I E V P F D V K E E F G K G R V P V F A T	L E F D A V I K K K A D M D A A Y V E V P F D I R A L F G K S R L L V H A T	K N Y K F E V E I K K H E G K D A T Y I E V P F D I V E K E F G A K R V K V K V K	K T Y E F C S I I E A V P E K G G A Y V R F P Y D I R T E F G K G R V K A E I T	Y E F D A V I Q K V P D I D G A Y I E V P F D V K E E F G K G R V P V F A T	Q F T A P L T K S P A G G W T Y V V M P P G S A E F F G T R G R V R V R G T	Q F T A K L L K S E N K G W T Y V V M P D S A A F F G T R G L V K V R G T	Y K F N A I I E A V P D V N G A Y V R F P Y D I K K E F G K G R V K V H A T	E F T A V L R K S P A G G W T Y L V W P E S V T Y F G T R G L V K V V G G T	Y E F P A I I E P V P D K G G A F V R F P Y D I R K E F F G K G R V K A Q I T	K T Y K Y E S L Y E A Q G K G G A Y V I I F P Y D I R E E F G K G R V K V H A T	K K I P D K Y A T F V E I P F D V V E K E F G A K R V K V K A K	Y S F Q S K Y P V E G K G G A Y T I I F P Y D I R K E F F G K G R A K V H V T	K T Y E F I A E K K V P D I D G A Y I E F P Y D I K Q E F F G K G R V V S A T	K T Y T Y Q S T Y A V P G K G G A Y T I I F P Y N I R E E F N K G R V K V H V T	K F K S E L K V I E G K D A S Y I K I P F N V E E K Y N A K R V K V K A T	K T Y T F E A E K K I I E G K D A T Y V E I I P F D V V E K E F A A K R V K V L V K	K Q Y S F D S A I Y S S E G K G G A Y V V F P Y D V R E E F S A G R V K V S A T	Y S F E S K Y A S S E G K G G A Y I I I F P Y D I R K E F F G A G R V K V Q A T	Q P I E F T A L K Q H E G M N A A F V E F P F S A E E L F H K G Q V K V K V T	E F T A T L V K S P A K G W T Y V V W P R S A E F F G T H G L V K V R G T	K T Y E F D S K I Y A A E G K G G A Y V I I F P Y D L R E E F G K G R V K V I A S	K F T A T L E K G S A K G A T Y L V W P E S V T Y F G T R G L V K V K G T	K P I Q F S A P I Q Q N G E M D A A F V D F P S T E E L F G K G Q V K I K A L	R K V T F D A V I R Q H G G G M N A A G Y V V F P Y N V Q E L F G K G Q V K V K A L	M Y P V P D K G G A Y L I I F P Y D I R K E F F S K G R V K V H A T	K T Y E F D A I I K K G Q E L I D G A F I E F P Y V V E E F G K G R V V A V T	K R Y E Y D T K I C E A E R K G G A Y V A F P Y N V R E E F H A G R A K V H V E	V F T F D A V L E Q S P A K G W T Y V I W P E A A E F F G T R G L V K V S G T	Y T F K A E I K K I E N K D A S Y I E V P I D I E K E F G A K R I V K V K A K	L K F K S A V I L Q N K D T D T A Y V E V P Y D I K K F G K D R L P V N A A	Q F T A R L Q K S P N K G W T Y V V M P G S A E Y F G T R G L V K V R G T	Q E Y K F E S E I Y A S D G K G G A Y I I I F P Y D L R T E F N K G R V K V Q A T	T K I E Y E A I I E K D Q D H N G S Y C D I P F D V F E T F G K K R V K I K A M	F K A T M Q R S P N K G W T Y V V M P G S A E Y F K T R G L V K V K G T	Y R F E A Q I Q A A T G K G G A Y V A C P F D I R A V F G K G R L V K V H A T	Y E Y D S E I F E A E G K G G A Y T V F P Y D V R E E F G K G R I V K V K A S	F T G T L R K S D A G G G W V H L R T G W S A E F F G T R G L V K V R G T	K S Y S F Q S M Y A S S E G K G G A Y V I I F P Y N V K E E F G M G R V K V H A T	Y E F D A I I L Q Y A S D G K G G A Y V I I F P Y D L R A E W N K G R L K V Q A T	Q P I Q F K A I I K Q H G T M N A A F V E F P F S A E E L F N K G Q V K I K A L	Y E F D A I I L Q Y E V P K K G G C A Y I I I F P W N I K E E F G K G R L V M A W	T P I T F T A T L T R S E A K G W T Y V V T D W T A E F F G T R G L V R V A G T	K Y E F K T A I I E P V P D K G G A F V R V P I D I R A E F F G K G R L V K V H A E	K I N F D A I I L Q H Q D M N A A Y V E F P F S T E E L F G K G Q V K I K A V	T F F A A T L R K S P N G G W T Y V V L P G S V E F F G T R G L P V K V R G R	E F E A I I L V K D D D S G G A G V K I I P F D V Q Q A F G K G Q V K V R C T	K T Y T Y T S K I Y P A D R G G A Y T I I F P Y N V R Q E F G K G R A K V H V T	L T F T A V L G R V P G D T W I C V Q M P D S A T V F G T R G L V K V R G D	K K Y S F Q S K I Y A S E G K G G A Y I I I F P Y D L R E E F G V G R V K V Q A T	T F T Q K I K E D N S G W A C V I V P D S G E F F F G T R K A V K V A G T	K N Y R F K A N I E S A P G G G A Y V L F P Y D T E K E F G K G K V P V K A T	K F I T E K K R E G L D G A Y V E I P F D V V E T A F G A R R V K V K A T	P S T F K A K L Q R P A K P G W T F L V L P K A V S D T L R R G R T S V Y G T	E F D A P I E M D G A D N G V F V A V P F D V V A A E Y G K G P L P V Q G T	E F T T V L R K E S G K G W I H V V M P G S A E F F G T R G L V R V R A S	Q F E A V L H R P E G T G W T Y F T L P F S V E T V F G K G Q V K V K G T	I T F T A I L G K V E G D T W T C V Q L P D S A T V F G T R G L V K V E G T	P Y T F T S T I T A A T G K G G A Y V V F P Y D I R T E F Q Q G R V K V H A I	D Y V L Q K Y P G K G W T F A A I P Q D K H A W F G W V K V R G S	T F K A K L M R P A K P G W A F L V L P K N A S E V L R R G R T S V Q G T			

QUERY	50	60	70	80
UniRef90_E3GMV6	F D G Y P Y T G Y I V R M G L P C H I L G L R Q D I R R A I G K Q P G D S V Y V			
UniRef90_R2SJ13	F D G E T Y D G S L V R M K T P C H I L G I R K D I R E K I G K Q P G D T V H V			
UniRef90_F7KEM6	F D G L A Y D G S L V R M K T P C H I I G L R K D I R A G I G K Q P G D T I Q V			
UniRef90_G9RVE2	F D G Q P Y D G S L V R M G T P G H I L G V R R D I R A K I G K Q P G D V V S V			
UniRef90_C0D365	F D G A A Y D G S L V R M K T P G H I L G V R K D I R A A I G K Q P G D M V R V			
UniRef90_U2F0V4	F D G Y P Y Q G S L V R M G T P G H I L G L R K D I R A A I G K Q P G D R V T V			
UniRef90UPI00047EAEF6	F D G E P Y E G S L V K M N T P C H I I G I R K E I R R K I G K Q A G D T I Q V			
UniRef90_R6US79	F D N V A Y D G S L V R M Q T V R H I L G I V R K D I R A K I G K Q P G D S V H V			
UniRef90_F4GKS8	F D G V G Y D G S I V N M G V K C Y I I G L R K D I R A K I G K Q A G D T V C V			
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UniRef90_R5RN07	F D G I E Y L G S L V K M K T P N H I I G L R K D I R K I I N K Q P G D I V H V			
UniRef90_S0JFR8	F D G Y P Y D G S L V R M K T P G H I I G I R K D I R E A I G K Q P G D V I E V			
UniRef90_R6CJJ3	F D G V P Y D G S I L R M G T P C H I I G V R K D I R Q K L Q K V P G D T I S V			
UniRef90UPI000477DDFF	V D G H P F R S S F M A L G D G T H K I P I K A D V R K A I G K E V G D T V T I			
UniRef90_A9KRE6	F D G V V Y E G S L V R M G T P C H I I G I Q K K I R A E I Q K Q P G D M V K V			
UniRef90_R9MTG6	F D G I P Y R G Q V V K M E T S C Y I I G V T K Q I R K Q I G K S F G D M V E V			
UniRef90_U5F576	F D D V P Y D G S L V K M K T P C H I I G L R K D I R A I I N K Q P S D S V H V			
UniRef90_J1H1E3	F D G I P Y D G S I V V N M G S V C Y I I G L R K D I R T K I G K Q S G D S V H V			
UniRef90_B51H4	I D G H P F Q S S F M A L G D G T H M L P V K A E V R K A I G K K D A G D T V T V			
UniRef90_A8MKN9	F D G Y G Y R G S L A K M G H H C Y H L G I T K N I R D A I G K Q P G D V V H I			
UniRef90_A3KJF9	L D G H A F R G S F M A L G D G T H K I P V K A A L R R A L G K E E G D T V R V			
UniRef90_M9M3M8	F D G E P Y D G S I V N M G V K C Y V I G V L K D I R A K I G K Q P G D S I H V			
UniRef90_D4W3H6	F D G V Q Y R G S L V K M G T D C H I I G L K K E I R E Q I G K T I G D T V T V			
UniRef90_FORXE7	F D G Y P Y D G S V V N M G S I C Y I I G M R K D I R S K S I G K G P G D S I A V			
UniRef90_I2F1S4	F D G E P Y D G S V V N M G M K C Y V I G I R K D I R S R I G K K P G D S V K V			
UniRef90UPI00047A6F1E	I D G H P F R S S F M A L G D G T H K I P V K A D V R K I L G K N P G D D V T V			
UniRef90_G5IMH6	F D G E P Y D G Q I V V K M G T P C H I I G I R K D I R S K I G K Q P G D M V H V			
UniRef90_V9HH63	F D G V D Y R G S I V V N M G L P C Y M I I G I T K E I R N K I G K K Y G D I V N V			
UniRef90_R9KFI5	F D G E P Y C G S I V V N M G V K C Y I I G I R K D I R S K I G K Q P G D T V L V			
UniRef90_C0E9F6	F D G E T Y K G S L V R M G T P G H I I G V R K K I R K K I G K Q P G D T V H V			
UniRef90_F6EE18	V D G H P F E S S F M A L G D G T H K I P V K A S V R K A I G K E A G T V V V V			
UniRef90_L0IXB1	V D G Q P F A S S F M A L G D G T H K I P V K T D L R Q R I G K Q P G D E V T V			
UniRef90_B1C086	F D G I A Y D G S I V V N M G L K C Y I I G I V R K D I R K K I I N K E C G D S I F V			
UniRef90_L7FF49	I D G H P F R S S F M A L G D G T H K I P V K S E I R K A I G K E E G A T V T V			
UniRef90_R9NAV4	F D G E P Y S G S I V V N M G V K C Y I I G I R K D I R S K I G K Q P G D T V L V			
UniRef90_R9KGS2	F D G E P Y D G S I V V N M G S I C Y I I G I R K D I R S K I G K Q P G E R V A V			
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UniRef90_F5YJE8	F N G E S Y N G S L V V N M G L K C Y I I G I R K D I R Q K I N K Q V G E K I K V			
UniRef90_I3TZ65	F D N V P Y E G S I V V N M G V K C Y I I G I R K D I R K N I G K E I G D I V A V			
UniRef90_W4T566	F D N V E Y R G S L V V K M N S D C H I I G I L T Q D V R K K I G K N F G N Q V F I			
UniRef90_W7STS9	V D G V P F E S S F M A L G D G T H K I P V K S A V R K A I G K D V G D E V R I V			
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UniRef90UPI00037511FD	I D G Q E F Q S S F M A L G D G R H K I P V K A E V R K A I G K E A G D T V T V			
UniRef90_J3CGA2	F D G T E Y R G S L V V K M K S D C H I I G I L T K E I R K E I L G K T F G D E I I S V			
UniRef90_C7PEK7	I D G V T Y R G S L T K M N M P E H W L I G I T Q T I R Q Q L G K E L G D T I H V			
UniRef90UPI0004756787	F D G H P Y D G S I V V N M G N I C Y I I G I Q K T I R A K I G K D V G D E V R V			
UniRef90_D9SVU7	F D G Y E Y R G S L V V K M G H T C H I I G I L T Q K I R K E I G K Q P G E I V H V			
UniRef90_N2BBZ0	F D G E P Y D G S I V V N M G V K C Y I I G I R K D I R Q K I G K Q P G D L V H V			
UniRef90UPI0003B68F7E	V D D V P F S G S F M A L G D G R H K I A M T A E V R S V I G K H A G E T V R V			
UniRef90_R9BUP7	F N N V E Y I G S I V V V K M G L P C Y I I G I T K E I R N K I G K T Y G D I I S V			
UniRef90_S0J23	F D G I P Y R G Q V I K T C T P C Y I I G I V T Q G I R R Q T G K N F G D I V E V			
UniRef90UPI0003608D2F	V E G H P F R T S F M A L G D G T H K I P I K K D I L R I L G K A V G D N V T I			
UniRef90_R2QWH6	F D G I D Y Q G S I V V N M G V K C Y I I G I R K D I R K K I N K D I G D R V S M			
UniRef90_I2EV46	I D A V E Y R G L I P M G G K Y G L F M N K E V R D K V G K T Y G D T V H I			
UniRef90_B0BHB2	V D G R P F Q S S F M A L G D G T H K I P I K A D L R A S L G K E A G E S V T I			
UniRef90_I9KY26	F D D V P Y D G S I V V N M G V K C Y I I G I M R K D I R Q T L H K E I G D I V T V			
UniRef90_W7BF95	F D G E P Y E G S I V V N M G V K C Y I I G I R K D I R T K I G K T I G D T V H I			
UniRef90UPI0001FFDD16	I D G H P F R G S F M A L G D G T H K I P V T A A V R A A I G K Q V G D T V T V			
UniRef90_A0A011SUT7	V D G V D F E S S F M A L G D G T H K I P I K A D L L K R I A K S A G D S V T V			
UniRef90_R2SGV5	F D G V P Y D G S I V V N M G T V C Y I I G I R K D I R K R I N K E I G D M V T I			
UniRef90_K2MF11	A D G T P F Q S S F M A L G E G R H K I P I K A D L L K R A G D G V T I			
UniRef90_TOU794	F D G V D Y Q G S I V V N M G L K C Y I I G I K K E I R K Q I K K D I G D T V K V			
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UniRef90_W8F341	I N G H P V R L G L P L P G G G R Y I M V N K D L C R L I G I Q L G Q R V H		
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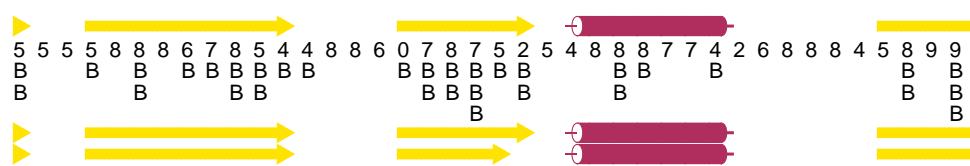
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UniRef90_G7H4F0	R I E P
UniRef90_G4RAE5	
UniRef90_D5UKK8	T V T
UniRef90_D7BGU3	W L E
UniRef90_UP10003B59FE5	T L E
UniRef90_K2C2U8	S L
UniRef90_W6VYR9	E M A
UniRef90_UP1000410C8ED	R L T
UniRef90_D9UM02	E L T
UniRef90_C7MIB6	T L T P
UniRef90_UP100037E5350	T I A P
UniRef90_F6EF09	E V E P
UniRef90_UP100038239EB	E L T
UniRef90_UP10004103641	K L E
UniRef90_Q11TZ3	E I A
UniRef90_N9XC64	S F E
UniRef90_R2RLF6	
UniRef90_X5Q979	T I E
UniRef90_D9SR92	L I
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UniRef90_UP1000366CBDE	L L
UniRef90_UP10001E2C232	H L K
UniRef90_C2G150	T V K
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UniRef90_UP100039C980C	E M T
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UniRef90_UP10002F71D3A	R L A
UniRef90_UP10003B6FA66	Q I A P
UniRef90_W8F341	V L A P
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UniRef90_UP100036690CF	E L T
UniRef90_W5XA85	R L E
UniRef90_UP100046AC3A4	T I A
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UniRef90_M7NIJ0	R L W
UniRef90_M3V068	S L S P
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UniRef90_UP1000364EDCD	E V Y
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UniRef90_Q1GX74	S L R

Sequence alignment of UniRef90 proteins showing conservation across 40 positions. The alignment uses a color-coded scheme where blue indicates conservation at position 1, red at position 10, green at position 20, and yellow at position 30. Positions 40 and 50 are also indicated.

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
incsm

	N	G	L	T	E	K	R	V	I	P	D	G	R	K	G	H	W	L	P	V	D	T	D	50	60	70	80														
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