

1 M G G L L F S S 10 H C Q Q G F V I S N E 20 L R Q Q Q S E L T S T W D L M L Q T R
 UniRef90_H5V5V9
 UniRef90_S1G7X8
 UniRef90_G9Y4Q7
 UniRef90_E7B5E9
 UniRef90_D2TR52
 UniRef90_M4TH20
 UniRef90_U2M7W9
 UniRef90_L0MJU5
 UniRef90_M0Q4I1
 UniRef90_A4TLJ5
 UniRef90_C4UKK8
 UniRef90_M1K5S2
 UniRef90_U1VIB1
 UniRef90_E8XYX8
 UniRef90_J0MLU6
 UniRef90_E1SGM2
 UniRef90_H6P5T1
 UniRef90_C6C349
 UniRef90_D4GGU7
 UniRef90_B7LP13
 UniRef90UPI000468CEBA
 UniRef90UPI000423772C
 UniRef90_D2TMX6
 UniRef90UPI00046554E8
 UniRef90_E3G3J1
 UniRef90_R9VHV3
 UniRef90_A0A014N9N1
 UniRef90_A7MEE5
 UniRef90_B2VJA6
 UniRef90_C4UKK7
 UniRef90_E5YDL5
 UniRef90_P21822
 UniRef90_G9Z8X6
 UniRef90_C6D9B2
 UniRef90_ESF47
 UniRef90_W1J706
 UniRef90_D8MTA8
 UniRef90UPI0004793DEB
 UniRef90_P21823
 UniRef90_A4WBP6
 UniRef90_G7LPU2
 UniRef90UPI000344DFBF
 UniRef90_L0M1E4
 UniRef90_G7LPU3
 UniRef90_R9NHQ8
 UniRef90UPI0004102DD3
 UniRef90_V3T157
 UniRef90_J1GJD3
 UniRef90_D3VC30
 UniRef90_A0A014MDH4
 UniRef90_A7MJ45
 UniRef90_V5AHG1
 UniRef90UPI000360BCC1
 UniRef90_B2VJA7
 UniRef90_I6HAP0
 UniRef90_B2VJA8
 UniRef90_H5UWU7
 UniRef90_A4WBP5
 UniRef90_E7T4F2
 UniRef90_G9YYK9
 UniRef90_D0FRQ7
 UniRef90_Y1KVB5
 UniRef90UPI000467AD0C
 UniRef90_W8TDP7
 UniRef90_S3K661
 UniRef90_H5UWU6
 UniRef90_E8XVD8
 UniRef90_C6C701
 UniRef90_A8AM18
 UniRef90_G7LKI6
 UniRef90_D3V2T4
 UniRef90_D0FRQ5
 UniRef90UPI000464000E
 UniRef90_E8XYX9
 UniRef90UPI0004681BA9
 UniRef90_D8MWV2
 UniRef90_A8AFET
 UniRef90_D0ZGM8
 UniRef90_A0A014NP51
 UniRef90UPI0003FA378C
 UniRef90UPI00046847E6
 UniRef90UPI000463F90D
 UniRef90_L7ZQ63
 UniRef90UPI000468E9EE
 UniRef90_A4TLE2
 UniRef90_D5WEI7
 UniRef90_C6C5U5
 UniRef90_B2JQ81
 UniRef90_L0RRL3
 UniRef90_D4F429
 UniRef90_R9VM25

QUERY	50	60	70	80
UniRef90_H5V5V9	I N L S R S A A R M M M D A S N Q Q S S A K T D L	L Q N A K T T L A Q A A A H Y		
UniRef90_S1G7X8	N T L N R A G I R Y M M D S N Q M G S G A T V P L	M Q I A Q T S L K Q A E E Q W		
UniRef90_G9Y4Q7	N T L N R A G I R Y M M D Q N I G S G S T A E L M Q S A T L S L K Q A E E K N W			
UniRef90_E7B5E9	N T L N R A G I R Y M M D V N H T G S G P T N D L L	A S A K G T L G V A A E R F		
UniRef90_D2TR52	N T L N R A G I R Y M M D Q N D I G S G P T V D L M	H D A A K S L K E A E K F W		
UniRef90_M4TH20	N T L N R A G I R Y M M D L N K T G S G A T V D L M	Q L A S A E L K E A E Q E W		
UniRef90_U2M7W9	N T L N R A G I R Y M M D L N K A G T G A T V D L L	V S A K N T L S M A E Q H Y		
UniRef90_L0MJU5	N T L N R A G I R Y M M D A N K I G S G A V Q D L L	A S A R S A L D D A Q Q R Y		
UniRef90_M0Q4I1	N T L N R A G I R Y M A D Q N N S G S G A T L Q L A	Q S Q L K Q A E E S E W		
UniRef90_A4TLJ5	N T L N R A G I R Y M M D I N H T G S G P T K D L I	S S A K G T L S V A E D R F		
UniRef90_C4UKK8	N T L N R A G I R Y M A D A N G T G S G T L E L V	T L A K E T L V K A Q K S Y		
UniRef90_M1K5S2	I N L S R S S A R M M M D A N N Q Q S S A K T D L L	K G A K A S L A Q A A E H Y		
UniRef90_U1VIB1	N T L N R A G I R Y L L D S Q Q A G S G A T K D L V	A L A N T E L K T A D Q S F		
UniRef90_E8XYX8	N T L N R A G I R F M L D A N Q M G S G A T K E L I	D T A T K D L Q I A D Q H F		
UniRef90_J0MLU6	I N L S R S A A R M M M D P A N S Q S A A K T D L L	N N A K K S L A S A E Q H Y		
UniRef90_E1SGM2	N T L N R A G I R F L Q D A Q M S G S G A V K E L V	A L A G E E L K Q A E I N Y		
UniRef90_H6P5T1	N T L N R A G I R W M M D Q S N I G S G A T A E L M	Q G A T N T L K L T E K N W		
UniRef90_C6C349	N T L N R A G I R Y A L D V S G G K S G S A N D L I	A L A K K Q L V V A N A H F		
UniRef90_D4GGU7	N T L N R A G I R Y L Q D G Q M A G S G A T K E L V	A L A D S E L K R A E E G Y		
UniRef90_B7LP13	I N L S R S A V R M M M D T S H Q Q S S A K T D L L	N N A K A T L A Q A A A V H Y		
UniRef90_UP1000468CEBA	N T L N R A G I R Y L Q D S T Q S G S G T T K E L L	A E A R E E L T R A D K S M		
UniRef90_UP1000423772C	I N L S R S A A R M M M D A S N Q Q S S A K T D L L	N S A K K T L A Q A Q T H Y		
UniRef90_D2TMX6	I N L S R S S A R M M M D V E N Q Q S S A K T E L L	A N A K A T L A Q A A A H Y		
UniRef90_UP100046554E8	I N L S R S S A R M M M D P P N N Q Q S S A K T D L L	N N A K A T L A E A Q Q H Y		
UniRef90_E3G3J1	I N L S R S S A R M M M D A G N Q Q S S A K T T L L	N N A K A T L A D A A K H Y		
UniRef90_R9VHV3	I N L S R S S A R M M L D P S N Q Q S S A K T D L L	N S A K A S L A D A A K H Y		
UniRef90_A0A014N9N1	N T L N R A G I R Y L L D A K Q A G S G A T N E L	T Q A Q Q S L D A A D K S L		
UniRef90_A7MEE5	I N L S R S A A R M M M M A N N Q Q S S A K T D L L	N T A K V L A E A D T H F		
UniRef90_B2VJA6	N T L N R T G I R Y M L D A N R M G S G S V K Q L L	A A A Q D Q L A V A E K N Y		
UniRef90_C4UKK7	N T L N R A G T R S A L N V P Q E K V N E L M G N A R	R S S L Q K A D D L Y F		
UniRef90_E5YDL5	N T L N R A G T R A A L K V P Q E K V N E L M A G A R	R S S L Q K A D D L Y F		
UniRef90_P21822	N S L N R A G I R Y M M D T N K I G S G A T I D L L	A K A K E E L A R A E R N Y		
UniRef90_G9Z8X6	I N L S R S S A R M M M D A A N Q Q S S A K T E L L	K N A R L T L A E A E K H Y		
UniRef90_C6D9B2	N T L N R A G T R F A L D A S G T G A G A G K E L L	V S A Q K Q L V V A N D F F		
UniRef90_ESF47	N T M N R A I A R M I M E T N N I P S G K S A D I	D V A N Q S L T E A D K H F		
UniRef90_W1J706	N N L N R I G I V T L M K E R H A E S E Y T I D I	W K E A K E N M S Q A E Y G F		
UniRef90_D8MTA8	V T L S R A G T R A A L S L P R D Q V T S L M A K A Q E D	L N A A D N A F		
UniRef90_UP10004793DEB	N T L N R A G S R I L A L N Q N G Q S A D S A K E L	I D L A K K Q L Q T A N E H F		
UniRef90_P21823	N T L N R A G T R A A L K V P Q E Q V D A L M G G A R	R S S L Q K A D D L Y F		
UniRef90_A4WBP6	I N L S R S S A R M M M D P P N N Q Q S S A K T D L L	K N A R G T L A D S A K H Y		
UniRef90_G7LPU2	N T L N R A A T R A A R N V A Q E Q V S V L M T S A	R T Y L A Q A D A H F		
UniRef90_UP1000344DFFB	V T L S R A G T R A A L N A P R D K V L T L M S S A	Q K D L D A A A T V S F		
UniRef90_L0M1E4	I N L S R S S A R M M M D T S N L Q Q S S A K T D L L	K N A K S L A Q A Q V H I		
UniRef90_G7LPU3	N T L N R A G I R V A L D A E G R G A G A F D L L	N L A K T Q L D S A G V H F		
UniRef90_R9NHQ8	N T L N R A G T R F L L D A T Y T G S G T T N E L L	T Q A R Q S M D A A D K F F		
UniRef90_UP10004102DD3	V T L N R G M I R L Q S S M A N Q I N G G Q N E L L	V K T A N K L L A E A Q S H Y		
UniRef90_V3T157	N T L N R A G T R F A M E S S G N V T G G T K D L I	E L A K K Q L M T A N A H Y		
UniRef90_J1GJD3	N A L N R A G T L T A L S Y P P D D I K R L M A D A R	R S S L K Q A D M F		
UniRef90_D3VC30	N N L N R I G L L M I M K Q N L D S D S D D I W A E A K V N I S R A E R R F			
UniRef90_A0A014MDH4	V T L S R A G T R A A L G K P R D Q V I S L M T K A Q E D L I N A A D K A Y			
UniRef90_A7MJ45	V T V N R V A I R F L K N Q R D P A S A A I N K L L	A T A S T S L G K A E K H F		
UniRef90_V5AHG1	V T L N R G M L R L Q S S T A S Q N G G Q L E L V Q N A Q Q H Y	N Q A Q Q H Y		
UniRef90_UP1000360BCC1	N T L N R A G I R F M Q D S T Q S G S G A T K E L V A L V A Q G E M K K A D V G M			
UniRef90_B2VJA7	N T L N R A A T R H L L D E K G Q G T G S S V D L V A L A K T Q L N T A E E Q Q F			
UniRef90_J6HAP0	V T V T R V A I R F L K N Q R D P A S A A I N T L L	S D S M K K A E G Y F		
UniRef90_B2VJA8	L T L S R A S T R A A I N R P H D Q V V S L M S K A Q A D M D V A N K A F			
UniRef90_H5UWU7	I N L S R S S A R M L M T P I Q Q S S A K T D L L	N S A K A S L N S A Q E H F		
UniRef90_A4WBP5	T A L N K A G T L T A L S Y P P D D I K A M T T A R D S L K Q A E V Q F			
UniRef90_E7T4F2	I N L S R S A V R M M M D S S N Q Q S N A K V E L L D R A R K T L A Q A A T H Y			
UniRef90_G9YYK9	V T L N R G M L R L Q S S M A N E I N G A Q T E L V N G A N A L L A E A K D H Y			
UniRef90_D0FRQ7	I N L S R A S N R A A L N R P H D Q V L T L M D K A Q T D L A M A E K A F			
UniRef90_Y1KVB5	V T V T R V A I R Y L K N Q R D P A S A A I N T L L	G T A N G S L T K A E D Y Y		
UniRef90_UP1000467AD0C	T A L S R A G T L T A L S Y P P D D I K A M S T A R A S M T Q A D G V F			
UniRef90_W8TDP7	T A L N K A G T L T A L S Y P P A D D I K T L M T T A R A S L T Q S T T L F			
UniRef90_S3K661	V T L N R G M L R I Q S S L A N Q I N G G Q Q E L V T T T N T L L A E A Q N H Y			
UniRef90_H5UWU6	T V L N R A G I L T A L S Y P P E E I K A L M T S A R S S L K Q A D T Q F			
UniRef90_E8XVD8	D K L N R A G I Y Y M Q D K E T G S V G S W N S L M E E S L G S L A A S Q K A F			
UniRef90_C6C701	N T I N R A I A R M I A E T M N N P S S G K S A E L I A V V S Q S L A E A D K K F			
UniRef90_A8AM18	V T L N R G M L R L Q S S M A N E I N G G Q N E L V K T A N A L L A D A Q R H Y			
UniRef90_G7LKI6	D K L N R A G I Y Y L L V D Q E T G S V G S W H S L M E E A E S S L K R A E E A H Y			
UniRef90_D3V2T4	N N L N R V G I I Y Y I M K E R D D G T Y Q I D D V L A E S K V S L A R G E R R F			
UniRef90_D0FRQ5	I T L N R A A T R Y M Q D E K G Q G N G P T V D L L A L A K T Q L N V A G Q Q F			
UniRef90_UP1000464000E	V T V T R V A I R F L K N Q R D P A S A A I N T L L	D K A Q S Q F		
UniRef90_E8XYX9	N T L N R A A T R L A L K Q P Q E N I T Q L M S D A K A S L K K A E D D A Y			
UniRef90_UP10004681BA9	M E L S R A S S R L L R N N D K I T P E S L E F I S S A E K S M A D A A E K Q W			
UniRef90_D8MWV2	V T I N R A A T R I R L K K Q T D P A A L A I T K L L A T A S T T L D D A A F H F			
UniRef90_A8AFET	T A L N K A G T L T A L S Y P P E D I K Q L M T T A R E S L A Q S G V V F			
UniRef90_D0ZGM8	V T I N R V A I R Y L K Q Q N A G V A Q A I G P L L D A A N A S L D S A E G Y F			
UniRef90_A0A014NP51	V T I N R V A I R I L K K Q T D A A A Q A I K L L S D A A A S L Q V A Q Q H Y			
UniRef90_UP10003FA378C	T A L N R A G T L T A L S Y P P E E I K A L M N G A Q E S L K Q A D S L F			
UniRef90_UP100046847E6	L T L S R A G T R A A L S L P R D K V T S L M T K A Q E D L D A A D K A Y			
UniRef90_UP1000463F90D	L T L N R G M L R L Q S S M A G S I N G G D L D V K N A D R L L A Q A Q Q H Y			
UniRef90_L7ZQ63	N T L N R A G T R A A L K L P Q E Q V N E L M S S A R S S L Q K A D D L Y F			
UniRef90_UP1000468E9EE	I T L N R G M L R L Q S E T A N I N S E S L N A I S K Q G R A L L D D A A E K S F			
UniRef90_A4TLE2	D K L N R A G I Y Y M E D K E T G S E G S W Q S L L N E A L L Q S L Q Q S Q D S Y			
UniRef90_D5WEI7	D K L N R A G T R M V R G G G T E P T D I V Q H A R E Q L V A A D Q S F			
UniRef90_C6C5U5	D K L N R A G I Y L M F D K T T G S V G S W N S L M S E A E A S L K R S Q E Y Y			
UniRef90_B2JQ81	I N L S R A G T R M V R G G A E P T E M V Q H A R E Q L A A A A D R S F			
UniRef90_L0RRRL3	D K L N R A G I V Y Y M V D K E T G S E G S W Q S L L S E A T Q S M Q Q S Q D D F			
UniRef90_D4F429	N T L N R A A T R A A L H I P Q E Q I D A L M V R A R A L L K E A D A S M			
UniRef90_R9VM25	T A L N K A G T L T A L S Y P P D D I K A L M T Q A K A S L K Q S A E V E			

QUERY	90	100	110	120
UniRef90_H5V5V9	A N F K N M T P [P] A M A E A S A N	V D E K Y Q R Y Q A A L	L A E L I Q F [L] D N G	
UniRef90_S1G7X8	K A Y E A L P R D H R Q D D T A Q E V	V K R T Y D I Y H N A L	L A E L I Q [L] L G S G	
UniRef90_G9Y4Q7	A D Y E A L P R N S R Q S T A A A E I	I K R N Y D I Y H N A L	L A E L I Q [L] L S A G	
UniRef90_E7B5E9	G E Y E A L P I D P R Q S E S V E Q L	K R N Y D I L H G A L	S E L I Q [L] L S T G	
UniRef90_D2TR52	K S Y E Q I P L D S Q Q D E S A K K L	K Q T Y E Q Y F G A L	T T E L I Q [L] L M E A G	
UniRef90_M4TH20	A D Y E A L P H D P R Q S E A A A E I	K R N Y D I T F H N A L	T K L I N Q [L] V G A G	
UniRef90_U2M7W9	E R Y Q G L P R D P R Q D E A V Q A M	S Q Y D T L H S A L	G E L I Q M L T A G	
UniRef90_L0MJU5	T A Y E K I V P D A R Q D A A A D E L	K Q R Y T T L H T A L	S S E L V T L G D G	
UniRef90_M0Q4I1	A A Y E K I V P L G E R Q D Q D A E K L	K Q Q Y G V L Y G A L	S E L I Q L L S D G	
UniRef90_A4TLJ5	A H Y H N L P R V T D Q D D A A Q Q V	D Q R Y D T L H N A L	T T E L I N L L M E T	
UniRef90_C4UKK8	K R Y E K I P Q N S S Q D E G A K K L	K Q S Y E E Y F S A L	T E L I N L L M E A G	
UniRef90_M1K5S2	A N F E K I S L D S Q G P E S T Q R M	M K Q T Y D A Y V G A L	N T E L I Q L L G N G	
UniRef90_U1VIB1	A R F K S I D P L P E M A E V S S N V	D E K Y Q K Y F A G L	T T E L I V Q F L L E N	
UniRef90_E8XYX8	A E F F N A N S E K G K S A E N V L T	Q A N Y N A F R G A L	A E E L I D F F L S A G	
UniRef90_J0MLU6	A S Y Q K I P A D A S Q N Q F A A D A	K K Q Y Q V L H D A L	S E L I E L I D I G L L	
UniRef90_E1SGM2	N S F K Q V P L S A E M N T V V K D I	D G D Y Q T Y H Q A L	A E L I G Y L E S G	
UniRef90_H6P5T1	Q I F N N L S E Q G K T A E N V V A L	Q A N Y K A Y H D A L	M V F F T T G A G	
UniRef90_C6C349	A Q Y E A L P R D P R Q S E A A F E I	K R T Y D I Y H D A L	A E L I Q L L G A G	
UniRef90_D4GGU7	A N Y E K I P Y V E Q Q D A V A Q A I	K E N Y N A L N S A L	N E L I V F I S N G	
UniRef90_B7LP13	A M F N A N S E K G K T A E N V L T	Q A N Y K Q F H D G L	A T E L I V F L G N G	
UniRef90_UPI000468CEBA	K N F K N D S L P E M V T A S R N I	D E K Y K N Y Y A A L	D F F L D Y G G	
UniRef90_UPI000423772C	V I F D A N S E K G K T A E N V K A L	H N D Y N Q L H T A L	T T E L I G M M E S	
UniRef90_D2TMX6	A A F K A V P V D P E I Q A M N G Q L	E A A Y Q Q D Y Y Q A L	G E L L V Q Y L L E S	
UniRef90_UPI00046554E8	N N F K A I A P H P D M A E A S K D V	D E K Y R T Y Y T A L	G E L L V Q F L L E N	
UniRef90_E3G3J1	T A F R N V T P U A G M E A V S A A V	D S D Y Q N Y A R A L	V Q Y L L E T G	
UniRef90_R9VH3	A T F S Q I A P A A E L V D A S S A V	D A S Y Q K Y S A G L	T T E L I G F L D N G	
UniRef90_A0A014N9N1	D A F R A L P S L P E T D A A R Q T L	D E K Y R T Y N A A L	A E E L V Q F L L E A	
UniRef90_A7MEE5	A V F N A S S E E K G R N A E N V K A L	Q A G Y Q Q F H D A L	S S E L I V M L Q N G	
UniRef90_B2VJA6	N A F K A V T D V P E I N A A G D V	E Q S Y R D Y Y Q A L	S S E L I V Q Y L E T	
UniRef90_C4UKK7	Q L W N S H S E A G K T S A N V Q A V	Q K N Y A L L H D A L	S S E L I P L I G S G	
UniRef90_E5YDL5	N Q F L A I P R V N D N D E L I A A T	Q A S Y Q N L R T S L	R E E L I V L L E Q G	
UniRef90_P21822	N Q F L A V P R V T R E V E T E T	T K Q S Y E K L R T T L	R E E L I V L L E Q G	
UniRef90_G9Z8X6	T A Y E K I P Q D P R Q D Q A T E K L	K Q Y G I L Y Y G A L	S S E L I Q L L G E G	
UniRef90_C6D9B2	D A F S K A A Q P E S M N E V T Q V	V N S R Y Q Q Y H A A L	T T E L I A F L D G G	
UniRef90_ESF47	S R Y E K I V P Q D A R Q D E A V T R	V K E N Y V A L N G A L	T T E L I Q F L N A G	
UniRef90_W1J706	A A Y S Q I P P L P V Q D A A L K N I	N D N Y Q A L R S V L	T T E L I V E L I K T	
UniRef90_D8MTA8	E Q F E A Q P K L P I H D E R L Q L L	R Q T H R D Y L N A L	Q R E E L I V F L L E	
UniRef90_UPI0004793DEB	K R F N A I P T T P A G G A L K K S M	N E A Y D V Y A H E L	Q R E E L I A Y Y L Q N Y	
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130 140 150

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G V S F M A I R S D S D N Y A R V Q L S N A Q R E R L G Q T W V A L L Q A R
A L K S D K A N F T L T E Q L R E Q T N L T A S W I A L I Q T R
S A V N N D R V N F Q N T G V L N A Q Q E N L G D S V N T L I K T R
G L G F W S L S R T H D D V S L S D I A L K Q V N A V N K T T Q H L M D A R
G L S L G I Y T D Q S Y I E R I D L G T Q R R D T L G L S W A A L L Q T R
F G C W A L S R T H A D V A L S N I A I Q Q S N A A S A A T Q L L M D A R
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K R N L N T L N N I Y N E Q S L L N T W E N L L Q T R
S A V D S D R Q N F Q S S G V L N A Q Q Q N L S D S V H T L I K T R
G L S L G I H T D Q S Y I E R I D L G T Q R R D T L G L S W A A L L L Q T R
N I L R D T R Q S V L E S G Q L H Q Q Q V V M E K A R T S L L L M T S
A L N N D K E A F A L S Q I S T R N V A A M T D A Y M A L N Q S R
N I L R D A K I N L V T G D A L H R Q Q A A M D R A R L S L L L T A S S
Q H N E G R N Q L A L I Q Q A K V D E A R V A L L L S A S S
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G L S L G I H T D Q S Y I E R I D L G T Q R R D T L G L S W A A L L L Q T R
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G L S F W A F R D G Q K N M Q V I E Q S N Q Q L H A L M Q T R A V M L Q A S S
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G L S F W A F R D G Q Q N L A G L E Q S N R Q L S N L T E A R T L L Q A S S
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UniRef90_UPI000346EF0E	N T L N R A G M R Y M L D S N Q I G T G A G M K E L L D L A K T Q L A T A E E Q Q
UniRef90_R9VPP1	V T V T R V A I R F L K N Q R D P A S A I E K L L T T A A D S L G K S E G Y F
UniRef90_G8MCV6	I N L S R A G T R M V R G G T E P T E I V Q H A R E E I A A A D K S F
UniRef90_W1J8Y2	N T L N K I A I A H K V G Q P R E Q I D E M E A L L K S S L N E A E R S F
UniRef90_C5AJ0	I N L S R A G T R M V K G G E E P V P I V Q H A R E S L A A S D R S F
UniRef90_J2V6T1	V V L T R I Q L R M A T S K L T G N E A D I I A G L Y D D S K A F Q K D A A D N Y
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UniRef90_D3VC29	N T L N K I A I A Q K V G Q P Q T Q I D S M E A L L K S S L N E A E R S F
UniRef90_W1JBE0	N N L N R I G I Y F I M K E H G G E G D Y K I E D I L A E A K V N L A R A E R R
UniRef90_U3TU11	V I L T R I Q L R I A T S K L T G T E A D I I G T L F E Q S R N L Q Q T A Q D N F
UniRef90_B6VN84	N S L N R A G I R Y M M K K D E G V D N Y Y T Q L L T D A R S N L S I A E Q R F
UniRef90_UPI00016A291C	I N L S R A G T R M V R G G P K P D D I I R H A S D S L A E A D K A F
UniRef90_E1SGM3	T T L N R A M L R L Q T S M A S Q M N G G Q D D L M N K A N A Q L V E A D R H F
UniRef90_UPI000365C830	I T L S R A S L R L M M Q Q N N I A T D S V T E L V N S A Y S T L K V A Q D G I
UniRef90_E6WCF9	V L L T R I M L R M A N S K L S G E T A D I T S L Y Q Q S K G F Q D K A A D N Y
UniRef90_H3RDK8	D N S H R A G I Y L L M E D Q K S G S V D S W K S L A E T A K S S L V H A E Q L F
UniRef90_E3G3J2	T A L N K A G T L T A L S Y P A D E I K A L M A T A R Q S F R Q A D A Q F
UniRef90_E6WCG0	T V L N R A M L R M Q G S M A A Q T N G G Q A A L I A Q T E K Q L K A A D G Y F
UniRef90_J3DF36	V I I N R V A I R I L K K Q T D A S A A I I N K L L I S A N A S L D E A K Q H Y
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UniRef90_A0A014M340	U N I S N R A V I W L M Q D N Q T G S V D S W K S L A E T A R A S L D K A R T L F
UniRef90_UPI0004691B52	D N S N R A V I W L M Q D N Q T G S V D S W K S L A E T A R A S L D K A R T L F
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UniRef90_UPI00032A1B75	A S L N K A G T L T A L G Y P P G D I K A L M V N A R R S L G Q A D G A F
UniRef90_L0MG13	N S L N R A G T R T A L R L P A E Q V I N A L L E D A R R S L Q S A E R D F
UniRef90_S5UUN2	N N I N R A A I S Y L L D L N V D S S L S V E Y L T G L A R K N M S R A D D D K F
UniRef90_UPI00046929A2	V S L N R A L L I D V I T N D N K L N E S T Q L L L N D A I K N L K Q A E H Y W
UniRef90_I0DPB1	N T L N R A S S R H L L N K M Q T A N T D I D S L L V Q Q F Q E K M N K T E S Q W
UniRef90_V0G027	N T L N R A G R R W M M D Q S N I I G S G A T A E L M Q G A T N T L K L T E K S M
UniRef90_F2LPZ8	I N L S R A G T R M V K G G V E P T D I V Q H A R E Q L G A A E Q S F
UniRef90_UPI0003783CFD	I I L N R G M L R M Q S N D T S S L A A L A E Q G N K Q L E Q G K Q Y F
UniRef90_H5V2J7	D L L N R S G V Y F M Q D A A T G S E G S W Q S L M Q E A Q A A L K H S H E A F
UniRef90_UPI000466901C	D L L N R A G I Y F M Q D K E T G S V G S W N S L M D E A Q Q A L K R S H Q A F
UniRef90_H3RJC6	V T V S R V A I R F L K N Q K D P A S A S I A T L D T A K Q S A E K A D E Y F
UniRef90_H8DSQ0	V L L T R V Q L R F A T S K L E G K T A D V A G L F E E S K G F Q Q S A E G F Y
UniRef90_B2VJA5	I V L N R G M L R I Q S E A A N A G T S A S L T S N R A K Q L L N E A Q A F H
UniRef90_Q6D4S3	D K L N R A G I Y L L V D K E T G S E G S W H S L M D E A E E V S L K Q A K E H Y
UniRef90_UPI00016A63F1	T N L S R A S T R M V K G D P M P T E T L Q H V R D Q L V L A D R A Y
UniRef90_UPI00046850A3	D N S H G A G I Y L M Q D Q Q T G S V D S W Q S L A E S A R Q S L A N A R D F
UniRef90_K8W937	N T L N R A S S R H L L N K M K T S N T D I D S L I E F Y H K K M A E T G N Y W
UniRef90_E1SBS4	V T I N R V A I R F L K N Q Q D P K S A A M A A L L E Q A G Q S A E K A D A D F
UniRef90_F9I5R5	T A L N K A G T L T A L S Y P A D D I K T L M T T A R A S L T Q S T T L F
UniRef90_K8X1A4	A N L N R A V N A F L L E G R S Y Q D D A S Q D L I E A A N R H F Q A A D N A Y
UniRef90_M1K1P2	D L L N R A G V Y F M Q D A A T G S E G S W Q P L I D E A Q Q A L L T Q S T T A W
UniRef90_A4WAF2	D L L N R S G V Y F M Q D K E T G S D G S W H S L M D D A Q K A L N A S Q Q A W
UniRef90_C4SKM0	D K L N R A G I Y Y M E D K E T G S E G S W H S L M S E A L L Q S L L R S Q D D F
UniRef90_J3GZ12	L S L S R A N T R I V I F N K I P H E M V Q H A R E A L L T L A N K S F
UniRef90_D2TY14	I I Q L N R A G V S Y L L T K K K V P I D E P V Q I I E A A R L N L V K A R E Y F
UniRef90_X2MIW4	V T I N R V A I R M L K N Q R D P A S D A M N T L L T N A G A S L N E A E K H F
UniRef90_D1NZM3	S D L N R S I N A Y L L E E N I K D D A S A D L I K S A H D K F T A A D D A Y
UniRef90_W0HPC6	N T L N R A T R Y V Y H S P L T M I T P L M D S A K Q T L A E A E K Q F
UniRef90_V3TLN7	D K L N R A G I Y L M V D K E T G S V G S W H S L M S E A E T S L Q Q A E K H Y
UniRef90_B4EYQ0	N A I N R V A I I G M K T E Q S T D Y I Q S I E S I A L S R L E T A N T H F
UniRef90_V5Z9H6	D N S H R A G I F L M Q D N Q T G S V D S W K S L A E A A Q Q L S L N R A R Q L F
UniRef90_W1FG98	V T V T R V A I R Y L K N Q R D P A S A A I N T L L G T A N G S L A K A E D Y Y
UniRef90_K8WUE2	N S L N R A S S R Q L L T I N K M Q N T D V D S L V I E F D E K I K K A D E K W
UniRef90_D8MSH5	A D S N R V L I W L Q K D G P S S S K I L E G M V Q H G K E Q I A L A D R W F
UniRef90_B2VC26	S N I N R T V I W L Q E G G P N S E K A I A T I N A A D E E L E K T Q K W Y
UniRef90_F5VR38	D L L N R A G I Y F M Q D K E T G S V G S W N S L M D E A Q Q A L K R S H H A A F
UniRef90_U1V760	V T I N R V A I R I L K N Q T D E Q S A A I N K L L A A G A S L E A A Q Q H F
UniRef90_C6DBU0	I A I I G S I I Q N M M M G N A D K E A M Q A L L Q Q A K T Q L A A S E S S Y
UniRef90_F5MNF5	I N L S R S A V R R M M D S S N S Q N Q S N A K V E L L D S A R K T L A Q A A T H Y
UniRef90_B1KCF3	I T L S R A A T R W V L S G T V P S F V Q H A R E E I D A A G R S F
UniRef90_D4HVV5	D A L N Q A V I L F L Q G Q P H T K S D Y K N K L T L A K N H I N A E A S L
UniRef90_H8DRJ6	D N S H R A G I Y L M Q D Q Q S G S V D S W K S L A T A S R D S L T K A Q S L F
UniRef90_V1J5P3	I A Q N R A Y I Q V L R N G E K L N D K A I E L I D A T A R N L E K A E S S W
UniRef90_UPI000422015B	A N L N R A A N G F L L R E H T F K D D A P D E L I K Q A T R Q L A D A D A A Y
UniRef90_J7TP86	S T L N R L T L R M Q T N Y P A D K L A I L S S R I D N Q L A D T E K Y F
UniRef90_D2TY13	

	90	100	110	120
UniRef90_G9Z024	K W Q S L P P V A G Q N E Q A A A M A K S W Q Q M H D V L R Q S I D F L K A D			
UniRef90_D0FRQ4	Q R W D S S S E L S K N S D E A R E E M E K G Y V A L H G A L A E H Q F I K V G			
UniRef90_C5BFD1	Q Q Y M V Y S D G N D E R A L Q D T Q Q H Y R A L R T A L L Q L I D L V E K G			
UniRef90_UPI000346EF0E	Y A L Y N A P D D V K A L S H V K A V A D N Y V I L H D A L T E L I Q M L S S G			
UniRef90_R9VPP1	N N Y K S T P R V A G Q D A A L A D V A Q N I T K M H D V L Q Q S I A F L R A G			
UniRef90_G8MCV6	T A F L N A P K T G D E N A R M T A L K A K Y A E Y S K A L S E V Q Y L D A G			
UniRef90_W1J8Y2	A R F S A L P Q S D N G A E L L S A V E H S Y Q E Y I N A L K E L K T F L Y E G			
UniRef90_C5AJ0	A S F M A A A T L N D E N V R A A A L N E R Y Q A Y H K A L G E L A Q Y L D A G			
UniRef90_J2V6T1	Q L F K A T P D T P G Q D A A L K R V D E T Y T A Y A S A L G Q L H D A L V A K			
UniRef90_W6J6C3	E K Y K T I P D T P G L D K L S K D L E T Q Y G Y H A T L T E M N R L L L A G			
UniRef90_UPI000344CE8B	A N Y Q A L P L V A G Q S D V A S D V E K K Y Q A M Y D V M K M S G E Y I L K A N G			
UniRef90_K8WTK9	R Q F I A L S H H M N Q Q A A F T D L K T S Y E L F M G G I I E E A D G L K K G			
UniRef90_E3G7C0	Q A W L A M S P P K D E A L I N S Y Q L F Y G A I K E Q A D G L K S Q			
UniRef90_V6MKQ2	E S F K H F P H N V E N Q S Y I Q Q L E E Q K Y T E L N A A L I E F L A F L E Q G			
UniRef90_N117V3	A Q Y E S L P R D P R Q S E A A F E I K R T Y D Y H G A L A E L I Q L G A G			
UniRef90_E3G3Q7	A S Y R E L P P V E G Q S P A L A D M E K N W R Q M H D V L Q Q S I A Y L R A D			
UniRef90_W1J5Y6	A K F F S S L P Q S N R R D A L L T E I E Q S Y K E Y H S A I I E L R D Y L D E G			
UniRef90_S3JA21	S A W Q K L H P A S S D A L A S S Y Q L F F S G L K E Q L E G M Q K H			
UniRef90_D4GGU8	A E F N A I P E T P G A D E M R D R L Q N D F K A Y L T G L R G M I A S L K A K			
UniRef90_A2XAW6	A R F E R L S A T A P E A A D A L K G S Y R L F Y D G L K E Q A Q G L Q R S G			
UniRef90_X7IC90	D A W R D M K P Q P D P D L T E S Y Q R F Y S G I Q E Q A D L M Q S G			
UniRef90_E6WB26	A Q Y K S L P R I K G Q S D A A A A L E A K F S A M A D L L Q Q S A A F L K A N			
UniRef90_B2MWG3	A D Y E A L P R D P R Q S A A A A E I I K R N Y D Y H N A L A E L I Q L L G A G			
UniRef90_D8MTB0	A R Y Q A I P N T K G V D K V V D D L E Q N Y V S Y S N A L S T M L D L M Q S K			
UniRef90_L0M4R2	A A F K S I E Q R S T E S R Q L G E T E A S F S A W R N G L E H Q A T W L E T N			
UniRef90_E1SGM4	K E F K A I P D T P G Q D A T L D Q L D Q R F S A Y D G A L N Q L Q T A L E A N			
UniRef90_G9Z8X5	K T F V A V P A M P E G Q H L M D E T Q K T Y S A W H D D L T H Q L T T W L E N N			
UniRef90_S3IKR5	S N Y M D S D D V P D Q E K A I D D A A S F K Q M H D V L L Q S I E F L K A D			
UniRef90_UPI0003000C39	A R L N A V P T V D E N R A V A A L G E R Y Q K F H A A L A E L V Q F L Q A D			
UniRef90_B6VN85	A E F I S L P K L N E E D V L L A S V E T S Y K E Y I K A L R E L S V F L E K G			
UniRef90_D3VC29	A R F I I S L P Q I G D N Q K L L V E V E Q A H R E Y F H A L K E L L K D F L Y G G			
UniRef90_W1JBE0	F Q Q F E Q S I V I R E P E R M Q S L R Q T H D Y L N A L K E L D V L L A K K			
UniRef90_U3TU11	T L F K K T P D T P G Q N Q L N Q L E Q T Y K A Y A S A L A E M Q Q V L Q H			
UniRef90_B6VN84	E Q Y E Q T A K L P H E T E S L N R L R K A Y D V Y I S A L H D L I V L I E H D			
UniRef90_UPI00016A291C	A A L A A A Q P V D E E N R R V A A L T E R Y R K I H A A L A E L V Q F L D G D			
UniRef90_E1SGM3	K I Y Y D L P A T P G E V A L R D K L E A D Y A Q Y E K G L K G M V T S L Q A R			
UniRef90_UPI000365C830	V R F N Q M E R N P R H A E I V E K M L S E F R H Y D L V L K e f g q m l v d g			
UniRef90_E6WCF9	Q L F K N T P D T P G Q D Q L N K H L D E T Y A A Y A S A L N Q M Q A A L Q A N			
UniRef90_H3RDK8	A Q Y H A V P K G E L E Q G F M M L T Q G L E E Q L K G L E A N			
UniRef90_E3G3J2	A A F A S V A A E D D S A R G L Q D A T K T Y A A W R D A L D H Q A T W L E N N			
UniRef90_E6WCG0	Q R Y Y N L P A T P G F P E L R D R L E A D Y A A Y N N G L K A M L A R L K A D			
UniRef90_J3DF36	D L Y K S M P R L P G Q S A D S A S V D A K F I A F T E L L Q S A A F L K A N			
UniRef90_D0FRQ2	A T Y K V T P D M P G F D K V T K E L D D A Y L L N Y S S A L Q T M T Q Q M D N R			
UniRef90_A0A014M340	T A W Q A D S G S P L L K Q N F D L L A D G L D E Q L K G L N A R			
UniRef90_UPI0004691B52	E K F N S T P N H G Q I R T N L E D S Y N T Y Y T T I I E L I Q L I R N R			
UniRef90_A0A014PZ06	A F Y Q A I P D T K G V D A T T K T M E D D Y V A Y S Q A L A Q M L Q L M D S R			
UniRef90_UPI00032A1B75	G K F T A M A A A G D E A K G L K N R R A T Y G E W R A A L D H Q V T W L E N N			
UniRef90_L0MG13	R R F Q A L V P A G E R S R S L T L R Y Q Q L H A A L L E L S G F L A S G			
UniRef90_S5UUN2	K F E Q H A Y Q L H S E E E I R N L K G R F I E Y F S A L N Q L E I L L Q D K			
UniRef90_UPI00046929A2	A L F D S L P S H S G T K I Q E L E D A Y N Q Y H T T L T Q L I Q L I R N G			
UniRef90_I0DPB1	A T F T E L T Q N K N E L A F N E L Q Q S Y T Q L H S A L M E L S L F L V Q G			
UniRef90_V0GQ27	S R Y R A			
UniRef90_F2LPZ8	A R F A E A S R G E H A A P G A A E L V D R Y G K Y H A A L G E L A Q F L D A G			
UniRef90_UPI0003783CFD	A A Y K A T P D T P G L D K H L L E L E K N Y A D Y S G T L L E Q M L A M M T N N			
UniRef90_H5V2J7	T H Y Q G S G V G T D E N L M A G Y Q A F Y Q A L K E Q A D G L T A N			
UniRef90_UPI000466901C	E R Y S A L A P E K K D P L K G S Y Q N F Y S A L K E Q A D G L Q T N			
UniRef90_H3RJC6	S A Y K A A P P L P G Q A E L T Q N V Q T A Y S K M H D T M L A S V E F L R R N			
UniRef90_H8DSQ0	R L F K E T P D T P G Q N Q L N S Q L D Q R Y A D Y A G A L L G A M Q T A L Q A G			
UniRef90_B2VJA5	A A Y K A T P D T P G I D K L S E E L E Q N Y E Q F S S A L Q E M T Q Q M E N K			
UniRef90_Q6D4S3	Q L L E T T T T A E A D T T A F V D L K K G Y N Q L Y S G L V E L A E G I K T N			
UniRef90_UPI00016A63F1	A G F T A A P T I S A E N E R A A A L T D R Y R K Y H A A L V D L V Q F L E S N			
UniRef90_UPI00046850A3	A A Q Y P V A G D D P L K A S F G M L A D G L S E Q L D G L N A R			
UniRef90_K8W937	D A F T A T S L Y K N S D K F A E L E K S Y K A L Y A A L N E L S A F L V Q G			
UniRef90_E1SBS4	K A W Q A M P R K A G Q S E A S T Q V Q T A Y Q H M R D T M L A S V T F F L K Q G			
UniRef90_F9I5R5	K S F M A M T A G N E H V R A L Q K R D E K F A R W H N D L E H Q A T W L E S N			
UniRef90_K8X1A4	E Q Y N Q L M G S T Y Y D K F A E K F L F S A Y E T Y R N A L I Q L A E Y A K K G			
UniRef90_M1K1P2	Q A W R E M S P Q A D D G L V D S Y Q R F S D G I Q E Q V T G L K T Q			
UniRef90_A4WAF2	N A W L A L S P P K D E A L L V N S Y Q L F F G A I N E Q A E G L K T N			
UniRef90_C4SKM0	H Q L E R L S A Q D K R P E L V A L K E S Y Q Q L Y Q G L T E V G Q G L E K N			
UniRef90_J3GZ12	I N F Y S T L P A G D S R E Q L L E R T V Q A F N G L T E N L Q G L I D F L D N G			
UniRef90_D2TY14	D R F L T H T K V D E E N H R V Q A L K D V Y S R Y V E V L N Q L L V K Y T G A G			
UniRef90_X2MIW4	D K Y Q R T A K L S H D P K I L A D S K N Y T R Y M E S L H S L I F L L E N D			
UniRef90_D1NZM3	N N Y N S E A L A G K D P A L D A Q A E A S F K Q M Y D V L Q Q S I H Y L K A D			
UniRef90_W0HPC6	G R Y R K M M E N T S I D K D F D R L K S K Y E D Y R V A L T K L A E Y A E K G			
UniRef90_V3TLN7	C T Y S T L P A G D S R E Q L L E R T V Q A F N G L T E N L Q G L I D F L D N G			
UniRef90_B4EYQ0	Q Q L N T R T A A Q K D P A F A A L L K V S Y Q Q L Y A G L R E V A E S I K K N G			
UniRef90_V5Z9H6	Q N F L T D I N Q E V I P Q E E K E I K N D Y H V L Y S A L V E L H G M L K K G			
UniRef90_W1FG98	E Q Y P V A A D S P T Q N F M L L A D G L Q E Q L K G L N A K			
UniRef90_K8WUE2	K N W L V I P Q V K G Q N A A L E E M Q K A W K Q M H E V M R L S I E Y L R A D			
UniRef90_D8MSH5	T I F A K F T Q N K N D L V F S E L A E S Y S G L K I A L M E L S N Y L V Q G			
UniRef90_B2VC26	K E Y Q S G P A I P G L D P A L N D L A A T Y Q V Y S T Q L S T L I G I A A N R			
UniRef90_F5VR38	A L F K N K A G E I E G L D Q L S T D L D K S F D D F H Q Q L Q Q L I T V A K G K			
UniRef90_U1V760	E R Y G K L N P A K D D P L K A S Y E N Y G A L K E Q A D G L L S T N			
UniRef90_C6DBU0	N Q Y R S Y P R L D D G Q S A S T A D L D N K F K A F A A L L Q Q S A V F L K A N G			
UniRef90_F5MNF5	K K F K S M A P L P E M V A T S R N F D E K Y K N Y Y T A L T Q L V E Y L Q S G			
UniRef90_B1KCF3	L I F L N A L R K H G S N D R S R S L I D A D Y Y R Y S R A L T Q L V E Y L Q S G			
UniRef90_D4HVV5	V A F H G L L S D K Q K V E K I V A L Q E S N Q G Y K A A L L L G Q I T K L L E T G			
UniRef90_H8DRJ6	T A Y H A K A D S P L A Q D F A M L A E G L Q E Q L K G L A A N			
UniRef90_V1J5P3	A N F K N M T P L P A M A E A S A N V D E K Y Q R Y Q A A L T E L I Q F L D N G			
UniRef90_UPI000422015B	A L F S S L P N D M S K E S L I E L E K S Y R S F Y E G A L T R L M S Y V R E D			
UniRef90_J7TP86	A R Y M K M M E G T S Y D K F E K L L S T Y E T Y R N A L T R L M S Y V R E D			
UniRef90_D2TY13	H Q F S Q L S Q Q Y Y Q E K S T A D I E R D Y Q A L N H A L H M I K K L L D K R			

130 140 150

UniRef90_G9Z024	N Y Q A Y G D [■] D A Q Q A Q D D A E A A Y S Q W R S T N N T L [■] K A A A D
UniRef90_D0FRQ4	K [■] S D Y Y A Q P T Q A F [■] D A F T G S Y T A W Q Q K R D A L [■] M D A G A E E
UniRef90_C5BFD1	D L Q G F M D H P T Q C I Q D Q F E A S V A K [■] T Q H [■] V E G E L K E G A E
UniRef90_UPI000346EF0E	N I L K G F [■] V D Q P T Q G Y Q N G F E A A Y S S W L [■] N N T A D [■] F A Q G
UniRef90_R9VPP1	N Y E A Y G N [■] D A Q Q A Q D D M D A S Y A K W R A E N N
UniRef90_G8MCV6	N I [■] Q A F [■] L D Q P T Q G F Q D R Y L A E Q Q K F [■] V D F G D E
UniRef90_W1J8Y2	H F Q E F F L D Q P T E S Y Q S K L E V A Y N N Y M H Y [■] G A H [■] S K A [■] V S D
UniRef90_C5AJ0	N I [■] Q A F [■] L G Q P T Q S F Q D A Y L A E [■] R N F T Q F G D R A N H A S I [■] D
UniRef90_J2V6T1	D L D Q A A K A P V A P S Q N A F L K E Y R Q W R A D Q D R L T A A G V E
UniRef90_W6J6C3	N L E D M F M R Q N A E A K Q V A M Q K S Y R A W R D A Q T V L A S E G I
UniRef90_UPI000344CE8B	N Y A A Y G N [■] E A Q E A Q D N L E A S Y E K W R A Q N E L [■] I D A G I [■] A N
UniRef90_K8WTK9	N I [■] D A F F E F V P I Q A F Q S D F F N D K Y F Q F Q A I S A K N S D D
UniRef90_E3G7C0	S I [■] D A F F A V P V Q A F Q S D F F N D N Y A R F Q Q A S E Q R A E Q G
UniRef90_V6MKQ2	K T Y E E Y [■] N Q P T Q T Y Q D N F E Q A Y T N Y H Q Q L E N Y Y T A S [■] N E
UniRef90_N117V3	K I [■] N E F F D Q P T Q S Y Q D A F E K Q Y M A Y M Q Q N D R L Y D I A V I E D
UniRef90_E3G3Q7	N Y Q A Y G N [■] D A Q Q A Q D D M E A A Y S H W R E K N I [■] L L K A A A E
UniRef90_W1J5Y6	H F Q A F [■] L D Q P T E S H Q R R M E V A Y N N Y M H Y [■] L N N N I S E T M T D
UniRef90_S3JA21	S I [■] D A F F E V P I Q A F Q S D F F N E Q Y A R Y Q S E G E K Q T V Q A
UniRef90_D4GGU8	D L E G M F K Q N I E Q K Q Q A M Q A T Y S A W R L [■] K Q S E L S A H G A E
UniRef90_A2XAW6	D I [■] D A F F A V P I L A F Q A D F N E K Y [■] A Y Q A L N E R
UniRef90_X7IC90	S I [■] D A F F A V P V Q A F Q T D F F N A N Y A R F Q Q N S G R H A E A G
UniRef90_E6WB26	D Y P S Y G N [■] D A Q Q A Q D D L E D A Y K Q W R A Q N V E L L A Q G S A E
UniRef90_B2MWG3	K I [■] N E F F D Q P T Q G Y Q D G F E K Q Y V I A Y M E Q N D R L Y D I A V S D
UniRef90_D8MTB0	Q L P E M F K L N I E Q K Q N D M Q Q A Y T L W R T A L N E I T V Q G V Q
UniRef90_L0M4R2	Q L A D F [■] L G S P V Q V K Q M Q A R F D A D Y Q G W Q R H L D A Y L D D A R A E
UniRef90_E1SGM4	D P I A A A K A P V A P S Q S A F L T L Y R E W R A D Q S R L T T L G V A E
UniRef90_G9Z8X5	Q L S D F M S A P V E K S Q Q Q F D D N F S A W Q Q H [■] N L F V D N A G R E
UniRef90_S3IKR5	N Y Q A Y G N [■] D A Q Q A Q D D F K A V Y G Q W L T Q N T H H L K A A S E
UniRef90_UPI0003000C39	N I [■] Q A F [■] L D Q P T Q G F Q D T Y L T E L H R F V D Y G S A S S R S A [■] D
UniRef90_B6VN85	N Y D A F [■] L D Q P T E K Y Q Q Q L E S D F N H Y M Q Y I G E E I T T A V Q D
UniRef90_D3VC29	D F Q A F [■] L D Q P T E D H Q R R M E I A Y N N Y M Q Y L N S N I V E V I R A D
UniRef90_W1JBE0	Q F K E F F A Q P T T T Y Q N A F D A E Y A F Y [■] D Q N E K L Y Q Q L S D E
UniRef90_U3TU11	D T T A A A G A K V P V A P T Q S A F L E N Y T Q W R A D Q D R L T A A G V I A
UniRef90_B6VN84	R A V E F F F N Q P T S K Y Q S A F E E E Y N F Y L T Q N D H L Y S D V V F D
UniRef90_UPI00016A291C	N I [■] Q A F [■] L D Q P T Q S I Q D A Y L A E [■] H R F V E Y G S A S S R T A L
UniRef90_E1SGM3	D L E G M F K Q N I E Q K Q V A M Q G S Y G E W R A R Q T E L S D Q G M A
UniRef90_UPI000365C830	D M E G V I A Q P T Q R H Q N A L E E S Y N A F Q E D I E N V Y Q L A
UniRef90_E6WCF9	E I E K A G Q L P V A P S Q S A F L L D Y T Q W R A D Q D R L T E A G V A
UniRef90_H3RDK8	N I [■] D A F F M V P M Q A Y Q Q Q F N S A W F N E [■] T Q A N K Q L S A
UniRef90_E3G3J2	Q L S D F M T A P V Q Q A Q D D F D R S Y R Q W Q Q N [■] N R Y V D S A
UniRef90_E6WCG0	D L Q G M F M A Q N I E A K Q V A M K G T Y E T W R T K Q G E L A A A G V A
UniRef90_J3DF36	D Y A A Y G N [■] D A Q Q A Q D D L E A A Y K Q W R E Q N V Q L L A E
UniRef90_D0FRQ2	Q L D A M F R Q N I E Q K Q M A T Q V A Y T K W R D L M N Q M V K D G A K
UniRef90_A0A014M340	D I D A V F M V P M Q A Y Q Q Q F N D A Y Y Q S I N S A N A R A A A
UniRef90_UPI0004691B52	D L N T A I L L Q D T Q T S Q D A Y L K H Y D T Y S H K N N D I I A Q T I K E
UniRef90_A0A014PZ06	Q L D Q M F K L N V E Q N Q N Q N K L K A S Y T A W R S A Q N V V T L Q G V A D
UniRef90_UPI00032A1B75	Q L S D F M T S P V E Q T Q A R F D A V W Q R W Q K V T G G A V D A A
UniRef90_L0MG13	N L Q A F M D Q P T Q C I Q T Q F E T E L T H Y L Q R L G G E M T Q A
UniRef90_S5UUN2	N L K D F F E P Q T T S Y Q D G F Y K E Y L A Y V M R N E K F N N Q
UniRef90_UPI00046929A2	D F A A A I S Q D T Q A S Q D I Y Q K Q Y T I L Y N Q S N N H F [■] E G V V K E
UniRef90_I0DPB1	K T Y E F L N Q P T Q G F Q D T F E Q N F N Y Y H Q Q L N Q G Y H D
UniRef90_V0G027	
UniRef90_F2LPZ8	N [■] Q A F [■] L D Q P T Q S F Q D N Y [■] K E V R G F E A Y A G S S G R A S L D
UniRef90_UPI0003783CFD	Q L K E M F G L [■] N V E Q K Q N D M T A I Y G K W R E A Q A L L T A A G V E
UniRef90_H5V2J7	S I [■] D A F F S V P V Q A F Q G D F N Q R W A E Y Q S R T D A L N A E
UniRef90_UPI000466901C	S I [■] D A F F A V P V Q A F Q A D F N D N F A T W Q K G N Q Q R A D A
UniRef90_H3RJC6	N Y Q A Y G N [■] D A Q E A Q D Q L D K A Y Q A W R S A N Y Q L M K E I A A E
UniRef90_H8DSQ0	D L T A A G K L P V A P S Q S A F L T L Y R E W R A D Q N R L A S L G A E
UniRef90_B2VJA5	Q L D A M F A Q N I E Q K Q V A M Q A V Y T K W R G Q Q N R L I E Q G I K D
UniRef90_Q6D4S3	Q I D I F F A V P V Q A Y Q S D F T Q K Y S H Y L Q D T D A L Q K Q
UniRef90_UPI00016A63F1	N M Q A F [■] L D Q P T Q E I Q D A Y L G E L R T F S E F S N K T S Q H A L
UniRef90_UPI00046850A3	D I D A F F M V P M Q A F Q Q Q F N T A Y Y Q T L A E S N A
UniRef90_K8W937	K T Y D F [■] N Q P T Q G F Q D T F E K N Y V S Y H Q Q L N S S Y H D
UniRef90_E1SBS4	N Y P A Y G N [■] E A Q Q A Q D Q L D T A Y E A W R A V N I Q L M K D
UniRef90_F9I5R5	Q L E K F Y A H R T S G H Q V K F E E Q F N A Y F A N I A T D F Q N E V K
UniRef90_K8X1A4	S I [■] D A F F A V P I Q A F Q A D F N D N Y A R V Q K V T A Q A R E S G
UniRef90_M1K1P2	S I [■] D S F F A V P I Q A Q A F Q T D F N D N F A R Y Q L A S E E
UniRef90_A4WAF2	N I [■] D A F F E V P I Q G F Q S D F T E K Y H Y L Q E S E K
UniRef90_C4SKM0	D V Q W A L A Q P V Q D I Q E Q L L I E Q K N F I K Y G N S I S Q T S L Q
UniRef90_J3GZ12	Q I K D F S D Q P T S I Y Q Q E F S Q A L D H Y L N E S L V V Y D E I I
UniRef90_D2TY14	N Y A A Y G N [■] D A Q K A Q D D M E Q V Y D Q W L S Q N A Q L
UniRef90_X2MIW4	D L N G F Y A H R T S G L Q A K F E E Q F S A Y F A D I A A D F Q A E I D N
UniRef90_D1NZM3	N V D A F I D S P T Q G S Q D V F E N A L K A N L S S L D A R I D V A G K E
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UniRef90_V3TLN7	D F Q G F L D Q P T E R Y Q T A M E N S F N T Y M N Y V Q H E V A D S I E
UniRef90_B4EYQ0	N I D A F F M V P M Q A F S Q Q F N E A Y Y Q T L A Q A N Q Q S A D
UniRef90_V5Z9H6	N Y Q
UniRef90_W1FG98	K T Y A F L N Q P T Q G F Q N T F E Q K L N L Y H Q Q L N T S Y H K
UniRef90_K8WUE2	D M P G L F G L N I A N D Q L A M E A D Y N H W R D A I S K L S K Q A
UniRef90_D8MSH5	D L E Q I L S Y N L E S S F Q Q M L H S Y D A W R S A A N D I S S K T Y A E
UniRef90_B2VC26	S I [■] D A F F
UniRef90_F5VR38	N Y A A Y
UniRef90_U1V760	N A G A A M K L S A T P L N V A M Q D A Y I T W R A A Q N Q L S D D G L K E
UniRef90_C6DBU0	D L H G F L E Q P T Q D V Q A A F L N E E R Q F L Q Y
UniRef90_F5MNF5	S F N P D F I S D I K S Q R E V L L K S Y V A W Q D A N N Q L I A R G V
UniRef90_B1KCF3	D I N A F F I V P M Q A F Q Q Q F N D A W F S E L E Q A N H
UniRef90_D4HVV5	N M D A Y F A Q P T Q G M Q N A L G E A L G N Y A R V S E N L Y R Q T F D
UniRef90_H8DRJ6	Q F D K Y G S Y P M Q D L E A A Y E K Q Y K N Y V D I T G N K Y E K I V K E
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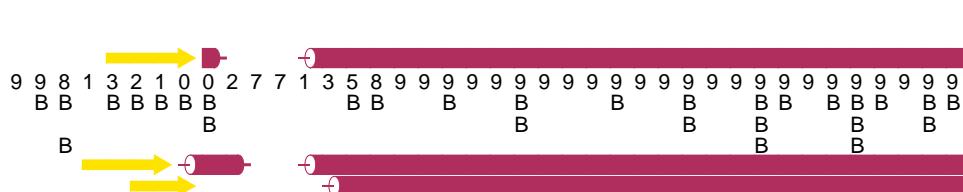
This figure displays a multiple sequence alignment of UniRef90 proteins, organized into four main sections labeled 1, 10, 20, and 30. The sequences are represented by boxes containing amino acid residues, with some positions highlighted in red. The alignment shows high conservation of certain motifs, such as the NLS (Nuclear Localization Signal) motif (L-x-L-x-L-x-L) and various kinase activation loops.

Section 1: Contains sequences from UniRef90_H8DRJ5 to UniRef90_I6ZZX4.

Section 10: Contains sequences from UniRef90_I6ZZX4 to UniRef90_G9ECW1.

Section 20: Contains sequences from UniRef90_G9ECW1 to UniRef90_R4XSD8.

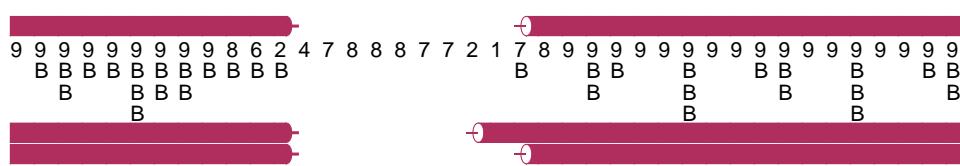
Section 30: Contains sequences from UniRef90_R4XSD8 to UniRef90_UPI00036DB51D.



50 60 70 80

UniRef90_H8DRJ5	A D T N R I A L W L I K D G P	G S E K V N Y F I A H G E K I	L S Q A R K D F
UniRef90_I0DYL6	S T I L T Q I V V H M K V D S D T	A S I N N A K A V F E Q F	L Q Q A A D D Y
UniRef90_J7TDC2	N L L T Q V V V H I K V G S E E R	R Q V K A A F D L L	L D K A A E D Y
UniRef90_UPI000468A610	A E I N K A Q K Y I F Y A G R K D L	G E S K L A S A E K Q L	E K S K V N F
UniRef90_D1NZM2	N S L T Q I A L L L K E G G H N D	L I E E T R K I F D D Y	L V E A N N D Y
UniRef90_UPI0004683368	S L L N I I S K G V M K G V Y E N	D E Q K N K K R L D Y A E E Q V	E K T K S D W
UniRef90_B4TLW2	T K I L L A I G A T V L S D R N S	E E N N V K K Q L A H I A K T I	L Q L T S K K W
UniRef90_K8WDL0	N S L T Q I A L L H K V G G N E P	L I E E T R V T F D K L L E E A E K D Y	
UniRef90_UPI0004692FF4	T S V Y A A L V L L S Y N K D A E A	L E F I S K A E T S L E K A R E H F	
UniRef90_W0HU18	D G F N Q A R I S V L N G A S P E D	L R R Q T T A A L E A L G N A Q K T F	
UniRef90_UPI0003296D12	V G I N Y A L N H D S T G S P D I	A T L L D R A E K S L L Q A R Q Q W	
UniRef90_B6XB11	N S L T Q I A L L M K V G D H V P L I E E T R G V F D N Y L V A A N K S Y		
UniRef90_H0FC0	T D L S R F A T R V A Q G S A S D T S S L Q Q A R Q R I V A A D R A F		
UniRef90_UPI00046AB75F	L D A S R A A A R F D N N R I A Q G E A I L N T A M A A L K K S K E E W		
UniRef90_W1G777	D L L N R A G V Y F M Q D A A T G S D G S W R P L M E E A H R A L A Q S K S A W		
UniRef90_D4F7F9	S S L R E A L N Q V T A A K F D Q E K V Q G L S D R A E R R I V E A R R N Y		
UniRef90_UPI000399867A	D L L N R S G V W F M Q D K E T G S E G S W H S L M D D A Q K A L A V S Q Q A W		
UniRef90_K8WNV7	N T I L T Q I A L L I K V N S D T S S I E E A K N Q Y D H F V L K A T E D Y		
UniRef90_C4U152	D K L N R A G I Y Y M E D K E T G S E G S W Q S L L S E A M L S M Q Q S Q D N Y		
UniRef90_C5BG27	S T L N Q A A A V T V D R E R L Q G L F S R A G G R I A E A R S N Y		
UniRef90_V9S114	T D L S R Y A T R V A Q G N A S D T T A L R L A R Q R I A A G D R A F		
UniRef90_V9CH73	L N I V V S S M M D L Q E G R L K E S A D T L A H A Q R Q A G E A R E R F		
UniRef90_K0FC2	V A M D R A A E L I R V P S F D E P E P V I D E A E S L M K D A R Q A F		
UniRef90_UPI0004704849	N L M N A S I G E L M E G R I Q R S Q D M A K L A S D R L A R A V A E F		
UniRef90_UPI000468D24D	L S L N I A S R V F D N E D K S E V N S R L S A A A E E L K K A K S F W		
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UniRef90_UPI000465A51A	Q R A L A H S Q Q A F		
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UniRef90_UPI000360F009	V E M D R A A E L I R V P S F D Q P G P V I K H A E S L M Q S A D A A F		
UniRef90_S2KF12	V E M N R A A E L I R V P S F D Q P G P V I E Q A K S L L A S A D E A F		
UniRef90_UPI00046A155D	L L L S T S A R V P S F D Q P G P V I E Q A K S L L A S A D E A F		
UniRef90_C0AV02	L M D M Q Q G K T E Q A T Q Q A K R S E G L M Q D A F K M M		
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UniRef90_G4FB58	L L L A T S L M D M Q Q G K T E Q S T A Q A K R A E A L M Q E G A K S L		
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UniRef90_UPI00046844A3	L L L A A A G I A D L Q A G A N D Q A A A E A T A A E Q L Q L A R E R F		
UniRef90_Q2L1A6	I Q L S N A I A E L Q D G R L R Q S E E Q A K Q G L L S L N E A V K R F		
UniRef90_R4XSD8	L A L G A G I A D L Q A G A A D Q A A T A E S A A A S Q L Q Q A R E R F		
UniRef90_UPI00036DB51D	N F L N R A R F V I D R G V F H P D S P D L D K T L A R A E G F I L D G D K A W		
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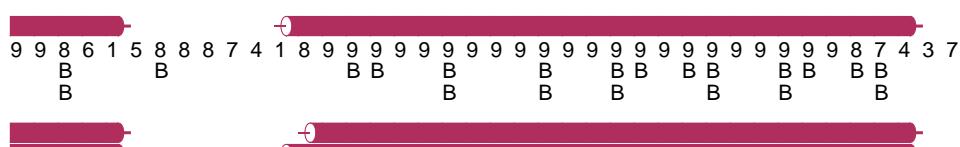
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130 140 150

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

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 lupas_14
 lupas_28
 jnet
 conf
 sol25
 sol5
 sol0
 jhmm
 jpssm

