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P N G S
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 P G S A

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 G A G S

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L G A D L V P T A T P I V E T R P D S T Q Q A D A D D P A I Y V N S T N S E N S

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QUERY

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D G K K I D I A G A S N R S D G K N T V E I Y A F D G E K N K L K N I V N P Q K				
N G K R M D I A A A T N R T T S N T V D F S I N P E T G A L T D I A A K				
G G K K V D I V G A T N R S T T N T I D I F A M D G A T G K L T D I A A Q				
S G S Q V L V A T L D N V R Q Q A M L T R L D A G R H S W S K				
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A Q Q G A N V L V A S L D S T R Q Q A L L V V S L D P K N R Q W G T				
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K H G L L L A T V D D L D R Q Q A M L T V L N D G A T				
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G D G D G P L A L A L D T S V S Q V N G F V V R D G A L V P T Q Q				
R Q G L L L A T V E R K R Q Q A M L I G L D D N R T W S Q P L Y L P R T				
R Q G L L L A T V E R K R Q Q A M L I G L D D N R T W S Q P L Y L P R T				
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N G V N V D I V V V T T N E K D N Q L E I F A V D P E T R T L M A V T D A N A				
A G E A A T I L V I T S N R S K G G L S I Y R M N E A T R Q L E S I G A R T L				
D G Q L L V V A S L D A A S S Q R P T L V L L D P A T R Q W G R				
D G Q L L V V A S L D A A S S Q R P T L V L L D P A T R Q W G R				
K A G D L I V V A S I N N S T Q Q A T L V V G L D L P A R K W G H				
K A G D L I V V A S I N N S T Q Q A T L V V G L D L P A R K W G H				
G A Q G M L I A T L D R K R Q Q A V L L G L D R L I H R W S Q P L Y I P R T				
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G L I A A S L D N A T Q Q A T L V V S L D T D T H R W G R				
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R G S E L W I A A M A L P E Q Q P A L Y V L D R V T R E L R E Q V R L P L				
R G S E L W I A A M A L P E Q Q P A L Y V L D R V T R E L R E Q V R L P L				
S S N G L T L A T V D S S T G R P M L V R L N R E D L S F G E P L Y				
S S N G L T L A T V D S S T G R P M L V R L N R E D L S F G E P L Y				
N D E L V I A T T Q A S S Q Q P T L L R A A A D L Q V H Q Q L E L P A T T Y				
N D E L V I A T T Q A S S Q Q P T L L R A A A D L Q V H Q Q L E L P A T T Y				
D G K T I D L A V A S N R D R N N S I L H L F A I A P A N G E V A E L G E I A T				
D E Q G L L V A L V D E N R Q Q A L L A R L L N G D N L N W E K R H L P Q D F F				
D E Q G L L V A L V D E N R Q Q A L L A R L L N G D N L N W E K R H L P Q D F F				
K G E A A D I A A A S Q R D R N T I A L F R I N P N S G E M V T T N				
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R V D L L L A S V D A D R Q Q A M V V L L D K N T Q Q W S N P V				
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I I Q T T D L S I Q Q P V I F N F N I K A G T A K P T Y L P V R				
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S D A G L L L A T V E R K R Q Q A M L V G L T R E G Q Q W S A P L F L P K T				
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130 140 150 160

QUERY	A T A I N E V Y G F T L Y H S Q K T G K Y Y A M V T G K E G F E Q Y E L K		
UniRef90_C3AUS4	Q S S M K E V Y G F S L Y H S Q K T G I F Y A L V V G K D G T F E Q Y E L F		
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UniRef90_G4WZU4	P L P E I Y G C C L M F K D Q Q G A I Y A I V N D K S G R F L Q Y R L Q		
UniRef90_B4X4H8	K I D G L C C L H R D A R H N D F L F V V G E E G L G E Q W L V A		
UniRef90_B4X4H8	K I D G L C C L H R D A R H N D F L F V V G E E G L G E Q W L V A		
UniRef90_M5DTW1	E I D T N L D E I Y G C C L M Y K N L E F Y I F N D Q D G R F E Q Y S V T		
UniRef90UPI00046711E0	A V N G Q C C L Y R D A S A N L Y L F L V G E N G Q G E Q W L V G		
UniRef90UPI00046711E0	A V N G Q C C L Y R D A S A N L Y L F L V G E N G Q G E Q W L V G		
UniRef90_11YF50	I I A T I S D D I Y G C C L Y Q N D Q D Q I Y A I A N D K D G R F F Q Y L L S		
UniRef90_11XKQ7	Y L P Q P A F K I D G A C C L Y Q D Q A H N G F L F L V G E E G H G E Q W L V A		
UniRef90_11XKQ7	Y L P Q P A F K I D G A C C L Y Q D Q A H N G F L F L V G E E G H G E Q W L V A		
UniRef90_E0IA93	P I H S N M G E V Y G F S L Y H S Q R T G K F Y A L V L G K A G E F E Q Y E L Y		
UniRef90_H7ETS2	A F A I I E G L C C L Y R D S A R N D F V F L V G E E G V G E Q W L V A		
UniRef90_H7ETS2	A F A I I E G L C C L Y R D S A R N D F V F L V G E E G V G E Q W L V A		
UniRef90UPI00030A2CA4	P M Y L P T R D V N G V C C L Y R D S A S N M Y L F T V G E E G K G E Q W L V A		
UniRef90UPI00030A2CA4	P M Y L P T R D V N G V C C L Y R D S A S N M Y L F T V G E E G K G E Q W L V A		
UniRef90UPI0003150799	P Y S T S S R S A Y G I T M Y R S P I T N D Y Y V F V A N R R T G D V A Q Y K L I		
UniRef90_V2Q899	K F K T E D N C L Y L T S D Q S L Y S F F I G E E G V G E Q W M I Q		
UniRef90_V2Q899	K F K T E D N C L Y L T S D Q S L Y S F F I G E E G V G E Q W M I Q		
UniRef90UPI00037FFF58	P F R E I Y G C C L F K D P Q G A I H A I A N D K D G S F L Q Y R L		
UniRef90_R9B9Z7	L P T T L E D I Y G C C L M Y R D A Q G E I Y A I P N D K N G T F L Q Y R L		
UniRef90_C1DJG6	E I S T P L A E I Y G C C L F Q A P G E L Y A F I A N G K D G S F R Q Y R L		
UniRef90UPI0004793E14	P L G F A A E G I C C L F R S P Q D G A L Q A F I V G D G G E I D Q Q V I H		
UniRef90_Q3M5Y2	P Y S S S S R S A Y G I A L Y R S P F T N D Y Y V F V N R R T G D I A Q L K L I		
UniRef90_F7P085	K V P T S M K E I Y G L C C L M Y K D A K R G S H Y V F V N D K S G L I E Q Y R I N		
UniRef90_K5XAD8	T F A I I E G L C C L F R D A G R N D F L F L V G E E G V G E Q W L V G		
UniRef90_K5XAD8	T F A I I E G L C C L F R D A G R N D F L F L V G E E G V G E Q W L V G		

170 180 190 200

QUERY	UniRef90_C3AUS4	UniRef90_E3DU77	UniRef90_Q65NG0	UniRef90_F5LB1	UniRef90_UP100046F861E	UniRef90_K6CF34	UniRef90_K6CF34	UniRef90_UP10004721430	UniRef90_UP100026C5E9B	UniRef90_I0BBZ9	UniRef90_I8U3B9	UniRef90_W0H471	UniRef90_W0H471	UniRef90_G8Q0X6	UniRef90_G8Q0X6	UniRef90_F3EJD4	UniRef90_F3EJD4	UniRef90_W8PSQ9	UniRef90_W8PSQ9	UniRef90_A0A023CCU2	UniRef90_A0A023CCU2	UniRef90_Q4KAB7	UniRef90_Q4KAB7	UniRef90_U7DGE9	NDAALN P Q P Q R V R G L P L P P S A T D C Q Q V D D G A N Q L V V N E E N V	D K A G K I I D G K I I V R S F K L E T Q A E G M V A D D E Y G R L Y I A E E D E	D N G K G K I V E G K K V V R E L K L S S Q S E G I V A D D E Y G H I Y I G E E D V	D N G K G K Y V T G K K V V R Q F K L N S S Q T E G V A A D D E Y G K M Y I A E E D A	D N G K G K Q V E G K K V V R S F K L N S S Q T E G L A A D D E Y G K M Y I A E E D A	P G S A G V E G R L V R H F K L A S Q A E G L V A D D E Y G T I Y I A E E D A	D N G N G K V S G K L V V R E F K L A T Q S E G M V A D D E Y G K M Y I A E E D A	S G D Q L S D T P R L V R N L P P P N A E F C Q V D D A A H Q L Y V N E E Q N I I	S G D Q L S D T P R L V R N L P P P N A E F C Q V D D A A H Q L Y V N E E Q N I I	D N G Q G A L N G R K V R A F Q L A S Q S E G M V T D D E Y G R L Y I A E E D A	D N G N G K I V A G K L V R Q F K L A T Q S E G M V A D D E Y G T V Y I A E E D H	D N G S G K V V A G K L V R E F T L E S Q S E G L A A D D E Y G T M Y I A E E D A	D N G E G K I I D A K L V V R S L E I G S I S E G L V A D D E Y G C F Y I S E E E N V	S G E H L S E Q P R L V R N L P P P N A E F C Q V D D A A H R L F V N E E E N I I	S G E H L S E Q P R L V R N L P P P N A E F C Q V D D A A H R L F V N E E E N I I	N G E R L L S D T A Q R V R G L P P P D A K T C Q V Q D S A N Q L F V N E E E R V	N G E R L L S D T A Q R V R G L P P P D A K T C Q V Q D S A N Q L F V N E E E R V	A D N R L L N D A P R L V R N L P P P K A E F C Q V D D A A H R L F V N E E Q N I I	A D N R L L N D A P R L V R N L P P P K A E F C Q V D D A A H R L F V N E E Q N I I	N G E R L L N D T A Q R V R G L P P P D A K V C Q V Q D S A H Q L F V N E E Q R V	N G E R L L N D T A Q R V R G L P P P D A K V C Q V Q D S A H Q L F V N E E Q R V	H G A T L L L D Q A Q R V R S V P P L P P P S A Q F C C Q V D D A T G Q L V V N E E D N V	H G A T L L L D Q A Q R V R S V P P L P P P S A Q F C C Q V D D A T G Q L V V N E E D N V	H G A Q L S A E P Q R V R G L P P P E A K F C C Q V D D A A Q Q L L V N E E Q N V	H G A Q L S A E P Q R V R G L P P P E A K F C C Q V D D A A Q Q L L V N E E Q N V	N G E R L L N D T A Q R V R G L P P P D A K V C Q V Q D S A H Q L F V N E E Q R V	N G E R L L N D T A Q R V R G L P P P D A K V C Q V Q D S A H Q L F V N E E Q R V	H G A T L L L D Q A Q R V R S V P P L P P P S A Q F C C Q V D D A T G Q L V V N E E D N V	H G A T L L L D Q A Q R V R S V P P L P P P S A Q F C C Q V D D A T G Q L V V N E E D N V	A G A Q L S A T A Q R V R G V P P L P P P A A Q F C C Q V D D G A N Q L L V N E E N V	A G A Q L S A T A Q R V R G V P P L P P P A A Q F C C Q V D D G A N Q L L V N E E N V	D K A G K I I D G K I I V R S F K L E T Q A E G M V A D D E L G F L Y I V A E E T K	D A T S P I A L P Q L I R H L S T P P D S E Y C Q V D D A Q S R L Y I N E E N V	D A T S P I A L P Q L I R H L S T P P D S E Y C Q V D D A Q S R L Y I N E E N V	N G A T L L L A Q A Q R V R S L P P L P P P S A Q Y C C Q V D D A T E R L V V N E E Q N V	N G A T L L L A Q A Q R V R S L P P L P P P S A Q Y C C Q V D D A T E R L V V N E E Q N V	N G S T L S G E P Q R V R G L P P L P P P S A Q F C C Q V D D A T Q Q L L V N E E E N V	N G S T L S G E P Q R V R G L P P L P P P S A Q F C C Q V D D A T Q Q L L V N E E E N V	N G A N P Q P Q P Q R V R G L P P L P P P S A Q F C C Q V D D A A N Q L L V N E E E N V	N G A N P Q P Q P Q R V R G L P P L P P P S A Q F C C Q V D D A A N Q L L V N E E E N V	A N N R L L N G E P R L V R N L P P P D A E F C C Q V D D A A H R L F V N E E A N I I	A N N R L L N G E P R L V R N L P P P D A E F C C Q V D D A A H R L F V N E E A N I I	A D S Q R L L A S P L R V R S L P P P Q A K F C C Q V D D A A Q N V F V N E E E N V	A D S Q R L L A S P L R V R S L P P P Q A K F C C Q V D D A A Q N V F V N E E E N V	N G A Q L N P Q P Q R V R G L P P P A A Q F C C Q V D D D G A N Q L L V N E E Q H V	N G A Q L N P Q P Q R V R G L P P P A A Q F C C Q V D D D G A N Q L L V N E E Q H V	K G A N G A L K S R L L T R K L Q V G S E P K F C V A D S K R N N L Y V T E E A V	K G A N G A L K S R L L T R K L Q V G S E P K F C V A D S K R N N L Y V T E E A V	S Q G R L L L G E A R R V R G L P P P Q S T F C Q T D D M A G Q L Y V N E E E N V	S Q G R L L L G E A R R V R G L P P P Q S T F C Q T D D M A G Q L Y V N E E E N V	D N G A G K I V A S L I R H F D I G G G T A G G C V A D D E F A A L Y I S D E E D T	D N G A G K I V A S L I R H F D I G G G T A G G C V A D D E F A A L Y I S D E E D T	D N G N G K I I D G R R V R Q W S V G S K S E G C V A D D D Q L G V L Y V A E E E R V	D N G N G K I I D G R R V R Q W S V G S K S E G C V A D D D Q L G V L Y V A E E E R V	T G R E L N T E A L R V R G L P P P Q A E F C Q V D D A A N Q L L V N E E E G V	T G R E L N T E A L R V R G L P P P Q A E F C Q V D D A A N Q L L V N E E E G V	T A N R L S A S A R Q V R R L P P P Q A E Y C C Q A D D S A D R L F V N E E E N L	T A N R L S A S A R Q V R R L P P P Q A E Y C C Q A D D S A D R L F V N E E E N L	A D M R P L A T P Q R V R G L S S P P E S G Y C C Q V D D Q T S E L I V N E E E G V	A D M R P L A T P Q R V R G L S S P P E S G Y C C Q V D D Q T S E L I V N E E E G V	S Q G R L L L G E A R R V R G L S S P P Q S A F C Q T D D A A G Q L Y V N E E E N V	S Q G R L L L G E A R R V R G L S S P P Q S A F C Q T D D A A G Q L Y V N E E E N V	D N G A G K I V A S L I R H F D I G G G T A G G C V A D D E F A A L Y I S D E E D T	D N G A G K I V A S L I R H F D I G G G T A G G C V A D D E F A A L Y I S D E E D T	T A N R L S A S A R Q V R R L P P P Q A E Y C C Q A D D S A D R L F V N E E E N L	T A N R L S A S A R Q V R R L P P P Q A E Y C C Q A D D S A D R L F V N E E E N L	A D M R P L A T P Q R V R G L S S P P E S G Y C C Q V D D Q T S E L I V N E E E G V	A D M R P L A T P Q R V R G L S S P P E S G Y C C Q V D D Q T S E L I V N E E E G V	S Q G R L L L G E A R R V R G L S S P P Q S A F C Q T D D A A G Q L Y V N E E E N V	S Q G R L L L G E A R R V R G L S S P P Q S A F C Q T D D A A G Q L Y V N E E E N V	A G E R L L N A E A R H V R G L A L P P A A E Y C C Q V D D A A N R L F V N E E E N V	A G E R L L N A E A R H V R G L A L P P A A E Y C C Q V D D A A N R L F V N E E E N V	A D G A G R T K P A L I R T L P I P P N S K A C S V E D T T E Q L F V A E E E A V	A D G A G R T K P A L I R T L P I P P N S K A C S V E D T T E Q L F V A E E E A V	A D G A G R T K P A L I R T L P I P P N S K A C S V E D T T E Q L F V A E E E A V	A D G A G R T K P A L I R T L P I P P N S K A C S V E D T T E Q L F V A E E E A V	S N Q R L L E S G G L P V R R L L S S P P E S E F C A V D D D Q Q H L L Y V N E E E S V	S N Q R L L E S G G L P V R R L L S S P P E S E F C A V D D D Q Q H L L Y V N E E E S V	S N Q R L L E S G G L P V R R L L S S P P E S E F C A V D D D Q Q H L L Y V N E E E S V	S N Q R L L E S G G L P V R R L L S S P P E S E F C A V D D D Q Q H L L Y V N E E E S V	N P G L L L D T A A H V R S L R P P E S E E H C C A V D D D Q Q H L L Y V N E E E S V	N P G L L L D T A A H V R S L R P P E S E E H C C A V D D D Q Q H L L Y V N E E E S V	N P G L L L D T A A H V R S L R P P E S E E H C C A V D D D Q Q H L L Y V N E E E S V	N P G L L L D T A A H V R S L R P P E S E E H C C A V D D D Q Q H L L Y V N E E E S V	G E H G A V R G T V V R E F S P S Q P E G C V A D D D Q Q H L L Y V N E E E S V	G E H G A V R G T V V R E F S P S Q P E G C V A D D D Q Q H L L Y V N E E E S V	E N G R I L L K T P N K V V R N L S S P P Q S E Y C C Q V D D D G V V E R L Y V N E E E S V	E N G R I L L K T P N K V V R N L S S P P Q S E Y C C Q V D D D G V V E R L Y V N E E E S V	E N G R I L L K T P N K V V R N L S S P P Q S E Y C C Q V D D D G V V E R L Y V N E E E S V	E N G R I L L K T P N K V V R N L S S P P Q S E Y C C Q V D D D G V V E R L Y V N E E E S V	D D P S G W Q A Q R V R T F S V N S S P E G C V A A D D A K Q R L F V G E E E D V	D D P S G W Q A Q R V R T F S V N S S P E G C V A A D D A K Q R L F V G E E E D V	H G K R L L E R E A R K V R R L A L P P S A E E L C R A D D S D S T L Y V D E P G I	H G K R L L E R E A R K V R R L A L P P S A E E L C R A D D S D S T L Y V D E P G I	H G K R L L E R E A R K V R R L A L P P S A E E L C R A D D S D S T L Y V D E P G I	H G K R L L E R E A R K V R R L A L P P S A E E L C R A D D S D S T L Y V D E P G I	G A Q G T L R G E L K R E F A V T N T Q P E E G C V A D D D R T Q Q L F I G E E E N K	G A Q G T L R G E L K R E F A V T N T Q P E E G C V A D D D R T Q Q L F I G E E E N K	D A T S P L A Q P K L I R S L T P P N S S E Y C C Q V D D K Q S L M Y I N E E E N V	D A T S P L A Q P K L I R S L T P P N S S E Y C C Q V D D K Q S L M Y I N E E E N V	D A T S P L A Q P K L I R S L T P P N S S E Y C C Q V D D K Q S L M Y I N E E E N V	D A T S P L A Q P K L I R S L T P P N S S E Y C C Q V D D K Q S L M Y I N E E E N V	H N G S G K I I N G T L V V R S F Q L G S Q S E G M V A D D E Y G K I Y I A E E D V	H N G S G K I I N G T L V V R S F Q L G S Q S E G M V A D D E Y G K I Y I A E E D V	S Q G R L L L G E A R R V R G L S S P P Q S A F C Q T D D A G G Q L Y V N E E E N V	S Q G R L L L G E A R R V R G L S S P P Q S A F C Q T D D A G G Q L Y V N E E E N V	S Q G R L L L G E A R R V R G L S S P P Q S A F C Q T D D A G G Q L Y V N E E E N V	S Q G R L L L G E A R R V R G L S S P P Q S A F C Q T D D A G G Q L Y V N E E E N V	A D N K R L L A T P H K V V R S L P P P E A K F C C Q V D D A S Q Q L F V N E E Q N V	A D N K R L L A T P H K V V R S L P P P E A K F C C Q V D D A S Q Q L F V N E E Q N V	A D N K R L L A T P H K V V R S L P P P E A K F C C Q V D D A S Q Q L F V N E E Q N V	A D N K R L L A T P H K V V R S L P P P E A K F C C Q V D D A S Q Q L F V N E E Q N V	D K G N G K I I G A E R V R E F T I P S Q T E G M V A D Q E T G F Y I G Q E E D V	D K G N G K I I G A E R V R E F T I P S Q T E G M V A D Q E T G F Y I G Q E E D V	S K D S A Q I I T P R F I I R K M S L P P N S S F C C V V D D H N A K L Y I I N E E N V	S K D S A Q I I T P R F I I R K M S L P P N S S F C C V V D D H N A K L Y I I N E E N V	S K D S A Q I I T P R F I I R K M S L P P N S S F C C V V D D H N A K L Y I I N E E N V	S K D S A Q I I T P R F I I R K M S L P P N S S F C C V V D D H N A K L Y I I N E E N V	D G S S G S P R G E Q V V R E F K L S S Q P E G C V A A D D R N Q R L F V G E E E D A	D G S S G S P R G E Q V V R E F K L S S Q P E G C V A A D D R N Q R L F V G E E E D A	A T Q Q K L Q A Q E V V Q R F S V K T Q P E E G C V V D D A T G R I F L G E E E D V	A T Q Q K L Q A Q E V V Q R F S V K T Q P E E G C V V D D A T G R I F L G E E E D V	D A G G R V A G E P L R G F R V A S Q P E G C V V D D R R Q R L F V G E E E D V	D A G G R V A G E P L R G F R V A S Q P E G C V V D D R R Q R L F V G E E E D V	A T A G G R L D A R Q V V R R L P S P L T T Q C V V A D A A G H H V Y V S E E E A V	A T A G G R L D A R Q V V R R L P S P L T T Q C V V A D A A G H H V Y V S E E E A V	D Q G N G K I G T Q L V V R Q F T I P T Q T E G M V V D Q E T G F Y I G Q E E D V	D Q G N G K I G T Q L V V R Q F T I P T Q T E G M V V D Q E T G F Y I G Q E E D V	S D G T H W Q G T L V V R S L Q V P P S Q P E G C V V D D D K R G L F V G E E E D E	S D G T H W Q G T L V V R S L Q V P P S Q P E G C V V D D D K R G L F V G E E E D E	A D G Q L L L G E A R R V R G L S S P P G S S H C C V V D D A A G R L F V N E E A V	A D G Q L L L G E A R R V R G L S S P P G S S H C C V V D D A A G R L F V N E E A V
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QUERY	210	220	230	240
UniRef90_C3AUS4	A WKFSAE P DGSNGT V I	D RADGRH	T RDI EGL T I YYAAAD	
UniRef90_E3DU77	A WKFNAE P DGGNQPI A V	D GADGNH	L TADIEGLLT IYYGKN	
UniRef90_Q65NG0	A WKFSAE P NGGTQGSI I	D RADGKHC	L TSDIEGLLT IYYAPD	
UniRef90_F5LBI1	A WSFSAE P NGGDKGKLV	D RAGGGP H	L TADIEGLLT IYYGED	
UniRef90_UP100046F861E	A WK □ GAEPDGS L KPYAV	D EAAGKGH	L TADIEGLALYYGADG	
UniRef90_K6CF34	A YKYDAE P DGGTKPLS V	D IAADGRRL	L TADIEGLLT IYYGAG	
UniRef90_K6CF34	G WWAYPA H PEAHVARQPV	D LREPGRD	V KQAAAGAMAI VPPGG	
UniRef90_UP10004721430	G WWAYPA H PEAHVARQPV	D LREPGRD	V KQAAAGAMAI VPPGG	
UniRef90_UP100026C5E9B	G WKYSASEPDGGESRKLV	D ADGKRL	T ADIVEGLT LYYGKKG	
UniRef90_I0BBZ9	A WKYDAE P DGSSEPHR	D ADGRR	L QDDIEGLLT YYGKDD	
UniRef90_I8U3B9	G WKYSASEPEGV P LQ	D ADGRR	L QDDVEGLLT YYGAE	
UniRef90_W0H471	G WKYGAE P NAGT K RQV	D SVGVGH	L IADAVEGLT IYYARN	
UniRef90_W0H471	G WWAYPA H PEAD V ARTPV	D LREPFGAI	R RQAAGMAV VPPGG	
UniRef90_G8Q0X6	G WWAYPA H PEAD V ARTPV	D LREPFGAI	R RQAAGMAV VPPGG	
UniRef90_G8Q0X6	G WWAYPASSEAET V ARTPV	D RAPFGD	Q QSAGAMAV LPPGG	
UniRef90_F3EJD4	G WWAYPASSEAET V ARTPV	D RAPFGD	Q QSAGAMAV LPPGG	
UniRef90_F3EJD4	G WWAYSAHPEAE V ARQPV	D LREPFGD	V KQAAAGAMAI VPPGG	
UniRef90_W8PSQ9	G WWV Y PASAEEAVR V PV	D RAPFGD	V KQAAAGAMAV VPPGG	
UniRef90_W8PSQ9	G WWV Y PASAEEAVR V PV	D RAPFGD	V QAAAGAMAV LPPGG	
UniRef90_A0A023CCU2	G WWAYPA H PEAE V KRTPV	D LFDNPKR	H AGA MAL MPPGG	
UniRef90_A0A023CCU2	G WWAYPA H PEAE V KRTPV	D LFDNPKR	H AGA MAL MPPGG	
UniRef90_Q4KAB7	G WWAYPA H AEADTARQP	D RAPFGD	I RKSAGAMAL VPPGG	
UniRef90_Q4KAB7	G WWAYPA H AEADTARQP	D RAPFGD	I RKSAGAMAL VPPGG	
UniRef90_U7DGE9	G WWV Y PA H PEAE V SRTPV	D AREPFGT	I KKTAGAMAL VPPGG	
UniRef90_U7DGE9	G WWV Y PA H PEAE V SRTPV	D AREPFGT	I KKTAGAMAL VPPGG	
UniRef90_J2YIL8	G WWAYPA H PEAQVERRP	D RAPFGD	I AKAAGAMAL VPPGG	
UniRef90_J2YIL8	G WWAYPA H PEAQVERRP	D RAPFGD	I AKAAGAMAL VPPGG	
UniRef90_A1ZZ13	G WKYNASEP T SQGKL	D LANDQPQL	A EDLEGLTI YYAAN	
UniRef90_F5T0C7	G WAYDAHPEAD L SRYPI	D AMTPQPGQL	K KESAAGMAI VPPGG	
UniRef90_F5T0C7	G WAYDAHPEAD L SRYPI	D AMTPQPGQL	K KESAAGMAI VPPGG	
UniRef90_I2BWA2	G WWAYPA H PEAE V KRTPV	D LFDDPQ	R EAGV MAL VPPGG	
UniRef90_I2BWA2	G WWAYPA H PEAE V KRTPV	D LFDDPQ	R EAGV MAL VPPGG	
UniRef90_U1SZI8	G WWAYPA H PEAE V KRTPV	D LFDDPQ	R EAGV MAL VPPGG	
UniRef90_U1SZI8	G WWAYPA H PEAE V KRTPV	D LFDDPQ	R EAGV MAL VPPGG	
UniRef90_J2SA02	G WWAYPA H AEAD V TRSPV	D AREPFGE	I KQAAAGAMAL VPPGG	
UniRef90_J2SA02	G WWAYPA H AEAD V TRSPV	D AREPFGE	I KQAAAGAMAL VPPGG	
UniRef90_K2T823	G WWAYPA H PEAD V ARQP	D LREPGE	I KQAAAGAMAV VPPGG	
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UniRef90_S6JCH2	G WWAYPA H PEAD V ERV	D AMVEP	G PGN VKKSAGAMAL VPPGG	
UniRef90_S6JCH2	G WWAYPA H PEAD V ERV	D AMVEP	G PGN VKKSAGAMAL VPPGG	
UniRef90_S6IW79	G WWAYPA H PEAD V ERL	D RAPFGD	L KKAAAGAMAL MPPGG	
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UniRef90_UP1000375499A	G WRFDAD V PEELI	D DVVKF H F	T GETVGGGL AL HRTAA	
UniRef90_UP1000375499A	G WRFDAD V PEELI	D DVVKF H F	T GETVGGGL AL HRTAA	
UniRef90_L0GJK1	G FRYPADAE P LQREP	D DLVKP	G ALTKV AGMAL VPPGG	
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UniRef90_I3CL58	AL WRYGA E PED G IARTAV	D ALKPFGNV	T TEL EGLLSI YYGRD	
UniRef90_I3CL58	AL WRYGA E PED G IARTAV	D ALKPFGNV	T TEL EGLLSI YYGRD	
UniRef90_UP100047859AB	G WKYSASEP D AGNV R TQ	D QDV GSGH	L TADIEGLTL YYAAN	
UniRef90_U2ZRM9	G WWAYPA H PEAE A ASRV	D DMVKP	G GGLEQGV GAMAS VPPGG	
UniRef90_U2ZRM9	G WWAYPA H PEAE A ASRV	D DMVKP	G GGLEQGV GAMAS VPPGG	
UniRef90_UP100025573D8	G WWAYPA H PEAGASRV	D DRAPYGR	K KTSAGAMAS VPPGG	
UniRef90_UP100025573D8	G WWAYPA H PEAGASRV	D DRAPYGR	K KTSAGAMAS VPPGG	
UniRef90_W8QWC4	G WRYAA A DAE A P L VRQPV	D IVQPGGI	A EAAAAGMAL VPPGG	
UniRef90_W8QWC4	G WRYAA A DAE A P L VRQPV	D IVQPGGI	A EAAAAGMAL VPPGG	
UniRef90_A0A023WTA0	G FRYPADAE A P L QREP	D DLVKP	G QKAAAGGL LAVV PPGG	
UniRef90_A0A023WTA0	G FRYPADAE A P L QREP	D DLVKP	G QKAAAGGL LAVV PPGG	
UniRef90_U3H5U9	G WAYPA H PEAD S AR	D VLVAP	G GGGLAKSAGAMAV VPPGG	
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UniRef90_B3PKT6	G Wrysasa E APGRV	D VSAIP	G GGGLAKSAGAMAV VPPGG	
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UniRef90_UP0003A1621A	G WAYGA H PEAE L SRTP	D DMVA P GD	T GSSVAGLSS I PPGG	
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UniRef90_A0A031MBH3	G WAYGA H PEAQ S QRQPV	D DMVEP	M VGEVAGLAA VPPGG	
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UniRef90_G4WZU4	A V H A L DARPE Q A Q L QQ	D VIAAGGA	Q ADI EGMA VYQGR	R
UniRef90_B4X4H8	G WAYPA H PEAD L SRE	D PV	K APFGD IEGAA	
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UniRef90_M5DTW1	AV WT L DAE P NASSQ E LE	D VAVS	E KLVAD IEGMD I YRSAN	
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UniRef90_11YF50	AV WA □ A E ADASSEM H	D LAT	G DQDHAD EVGMA LYQAEN	
UniRef90_11XKQ7	GI WAYQA D PEAD L IRE	D PVAL	T QPGKLT ESAMGMA I VPPGG	
UniRef90_11XKQ7	GI WAYQA D PEAD L IRE	D PVAL	T QPGKLT ESAMGMA I VPPGG	
UniRef90_E0IA93	GI WKNAAEP N VNSA V Q	D VAAV	D DNQKL TADVEGL TLYYGED	
UniRef90_H7ETS2	GL WRYPA D AE A P L QRE	D DRQ	P FGFH A EAAAAGMAL VPPGG	
UniRef90_H7ETS2	GL WRYPA D AE A P L QRE	D DRQ	P FGFH A EAAAAGMAL VPPGG	
UniRef90_UP100030A2CA4	G WWTYPA H PEAE T LRV	D IV	E PGNV VKKKAAGAMAL VPPGG	
UniRef90_UP100030A2CA4	G WWTYPA H PEAE T LRV	D IV	E PGNV VKKKAAGAMAL VPPGG	
UniRef90_UP10003150799	G WKFNAE P NGAKT G KLI	D DKV	G GGTHV EGLLSI YYGKN	
UniRef90_V2Q899	GI WSYEAD P ED A DLIRY	D LND	H DHSISGL LSS	
UniRef90_V2Q899	GI WSYEAD P ED A DLIRY	D LND	H DHSISGL LSS	
UniRef90_UP100037FFF58	AV WT L D L RRAA A LE K VI	D VG	G GGP H ADIVEGMA I YSGTA	
UniRef90_R9B9Z7	AV WVKDLNPKT Q L	D PMQV	L YGDV YHADIVEGMGL YHAKD	
UniRef90_C1DJG6	AV WLD D AP V LE Q SV	D V	R GADQAD EGLAL YRGA	
UniRef90_UP10004793E14	AV WRFNA D AE A DT E TE R AV	D APR	G LH EEEVEVSGVAL YDGGD	
UniRef90_UP10004793E14	AV WRFNA D AE A DT E TE R AV	D APR	G LH EEEVEVSGVAL YDGGD	
UniRef90_Q3M5Y2	GI WKEAE P NRGNT G RLI	D R	D RIGGSY T DDDV EGLT I YYGEN	
UniRef90_F7P085	AV WRFAA G AE A ASST G EKI	D S	V DGKRL V DDDI EGLAL A EHN	
UniRef90_K5XAD8	GL WAYPANA E AP L LER	D P	V P DRAFPFGGL AEGAAGMAL VPPGG	
UniRef90_K5XAD8	GL WAYPANA E AP L LER	D P	V P DRAFPFGGL AEGAAGMAL VPPGG	

250 260 270 280

QUERY	G K G Y	L M A S S Q G N S S Y A I	Y D R Q G K N K Y	V A D F R	I T D G P E T D G
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UniRef90_E3DU77	G K G Y	I M A S S Q G N N S Y A I	Y E R Q G S N K Y I	A N F E I	T D G E K I D G
UniRef90_Q65NG0	G E G Y	L I A S S Q G D N R Y A I	Y D R R G K N D Y V	A D F S I	D D G K E I D G
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UniRef90_UP100046F861E	G H G Y	L I A S S Q G S D S Y A I	Y D R E G N N A Y L	T S F K I	A D G P L T D G
UniRef90_K6CF34		L L A L D P K G K A L H L	Y Q Q Q A		
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UniRef90_UP100026C5E9B	G K G Y	L M A S S Q G N S S Y A I	Y E R Q S D N A Y I	I S N F T I	I S A S P T V D G
UniRef90_I0BBZ9	G Q G Y	L I A S S Q G S N S Y A V	Y K R E G A N E Y V	V S S F T I	E D G E S V D G
UniRef90_I8U3B9	G K G H	L I A S S Q G N N S Y N I	Y D R S G I N S Y I	G S F S I	D D G K V D G
UniRef90_W0H471		L L A L D P K G K A L H L	Y Q Q Q S D S E		
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UniRef90_G8Q0X6		L L G L D P E T A Q L H V	Y Q R Q E A G		W S A K A N L P L A G
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UniRef90_F3EJD4		L L A L D P K G K A L H L	Y Q Q Q D S L E	S W T P V A D L S L M S	
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UniRef90_W8PSQ9					
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UniRef90_Q4KAB7					
UniRef90_Q4KAB7					
UniRef90_U7DGE9		L V A L D P K A A Q L H V	Y Q Q Q G E H	W S A Q A T L A L P G	
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UniRef90_I2BWA2					
UniRef90_U1SZI8					
UniRef90_U1SZI8					
UniRef90_J2SA02		I V A L D P K A A Q L H L	Y Q Q Q G		
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UniRef90_K2T823		L L A L D P K G K S L H L	Y		
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UniRef90_S6IW79		V L G L D P K A A Q L H L	Y Q Q Q G E	R W Q T V A A L P L P G	
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UniRef90_I3CL58	G D G Y	L I A A N Q G S S N F L V	Y K R T T G N V F V G S F K L	V A S N G V G A	
UniRef90_I3CL58	G D G Y	L I A A N Q G S S N F L V	Y K R T T G N V F V G S F K L	V A S N G V G A	
UniRef90_UP100047859AB	G T G Y	L I A S S Q G D D S F A V	Y G R E G A N V Y L G S F V V H	A G N G I D G	
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UniRef90_UP100025573D8		L L V L D P S A R A L H L	Y Q Q Q G E H	W R S V G P V Q L P G	
UniRef90_UP100025573D8		L L V L D P S A R A L H L	Y Q Q Q G E H	W R S V G P V Q L P G	
UniRef90_W8QWC4		L L A L D P E A G A L H L	Y G R D A D		
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UniRef90_A0A023WTA0		L L A L D P E A P A L H L	Y R Q G E S G W Q A D G V I A L D G Q V S A		
UniRef90_U3H5U9		L L A L D P A A A R L H L	Y Q Q Q G V	T W N A V A V A S L P L P G	
UniRef90_U3H5U9		L L A L D P A A A R L H L	Y Q Q Q G V	T W N A V A V A S L P L P G	
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UniRef90_B4X4H8					
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UniRef90_UP100046711E0	G S Y	L F V L D S E A K Q L H T F D T D G K W Q H	Q A E F R L N D K N L T I M		
UniRef90_I1YF50	G E G Y	L F V L D S E A K Q L H T F D T D G K W Q H	Q A E F R L N D K N L T I M		
UniRef90_I1XKQ7		L I A S S Q G S N S Y A I F D R E N S N P Y L G S F M I	G D G D D T D G		
UniRef90_I1XKQ7		L L A L D P E A P A L H L Y R Q T Q D G W K A D G V V A D E P E Q I S			
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UniRef90_V2Q899					
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290 300 310 320

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

QUERY F K I V P W E R I A D Q I G F R P L A N E Q V D P R K L T D R S
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 UniRef90_E3DU77 F K I V P W E R I A K P I G A A L D V K K Q A D P R R L K D R S
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 330 340 350
 F K [I] V P W E R I A D Q I G F R P L A N E Q V D P R K L T D R S
 F K M I D W K R I A K G F D S K L Q I E N N V D P R K L K F R
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 330 340 350
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 UniRef90_A0A023CCU2 F K L V S M T T L A D A F G F K L K A S A G E D P

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 UniRef90_I3CL58 F K L V S W Q S V A N Y L S L Q V D S S F D P R

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 UniRef90_K5XAD8

 Y K Y L P W S A I A E A L Q L

 F K Y V S W Q E I Q S S L N

 Y K Y L P W S A V T E A L N L K

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

 F K F V P W E N I A N A F P A P L T I D T T Y N P R N P V

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

1 10 20 30 40

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 UniRef90_D4NYD6
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A Q S S P S V G V L R A T A P T A Q G G A N G V A L L R D P K D P A R S
 A Q S S P S V G V L R A T A P T A Q G G A N G V A L L R D P K D P A R S
 K D E H F Q F I V Q A K V Q T T P V P N V G D A A D D P A I W Y N E E I P T A S
 V L V P A T A Q T E A T A S G E T N A A V L R D A T D P A S A
 V L V P A T A Q T E A T A S G E T N A A V L R D A T D P A S A
 L S A D L V P T A T P R V E T R P P T D Q Q A D A D D P A I Y L H P T D S A R S
 A H W I E I D G L N A
 A H W I E I D G L N A
 P A H P I V T V T A D V Q T E S M L R F G D A A D D P A I W V N K K R P Q K S

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

 A Q V T V A P V G A T T P A A Q G G G A N A A A L L Y N A A D P T K S
 A Q V T V A P V G A T T P A A Q G G G A N A A A L L Y N A A D P T K S

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

 G R W
 G R W

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

 A E I L P T V A P T V E T R P T L L N N D D A D D P A I Y V H P D D A A N S

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

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

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

W L S N N N W
 W L S N N N W
 H K G S Q A Q P
 H K G S Q A Q P
 N Q W
 N Q W

V Y Y S N S N P
 V Y Y S N S N P
 T S E A E S D W T A V Y Y S S R K P
 T S E A E S D W T A V Y Y S S R K P
 T A R S R S
 T A R S R S

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

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

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

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

This figure displays a sequence alignment of UniRef90 proteins, showing the conservation of amino acids across different positions. The alignment is color-coded by position:

- Position 50:** Light blue background.
- Position 60:** Light green background.
- Position 70:** Light red background.
- Position 80:** Light orange background.

Conservation is indicated by the following color scheme:

- Red:** Conservative substitutions (e.g., Ile/Ile, Val/Val).
- Blue:** Semi-conservative substitutions (e.g., Asp/Glu, Gln/Glu).
- Black:** Non-conservative substitutions or gaps.

The alignment shows a high degree of conservation across the UniRef90 database, with many positions showing identical amino acids (black) or conservative substitutions (red). The semi-conservative substitutions (blue) are less frequent but appear at specific positions like 50, 60, 70, and 80.

This figure displays a multiple sequence alignment of UniRef90 protein sequences, focusing on specific domains and motifs. The alignment is color-coded to highlight conservation and divergence. Key features include:

- Conservation:** Conserved residues are shown in black, while divergent or unique residues are highlighted in red, blue, yellow, or green.
- Motif Regions:** Specific domains and motifs are highlighted with colored boxes. Notable examples include the N-terminal domain (residues 1-100), the C-terminal domain (residues 110-120), and various internal motifs such as the GxGxxG box and the P-loop motif.
- UniProt IDs:** Several UniProt IDs are listed along the left side of the alignment, including UniRef90_A4XZP4, UniRef90_D5VH79, UniRef90_V2TRH3, UniRef90_UPI0004657838, UniRef90_K9QTP5, UniRef90_N9L314, UniRef90_13I5K5, UniRef90_L1LZP7, UniRef90_B2J0G2, UniRef90_A0A031GK21, UniRef90_J2GSE1, UniRef90_B1WZU4, UniRef90_K9UGH4, UniRef90_K6Y583, UniRef90_K9GGJ8, UniRef90_B5JT97, UniRef90_W8TPH5, UniRef90_K9XC55, UniRef90_E3QKG4, UniRef90_Q21DH5, UniRef90_L2GAU9, UniRef90_R4YKX4, UniRef90_J3P700, UniRef90_K6YYV8, UniRef90_E5A9A0, UniRef90_K2K3K7, UniRef90_E3SAY2, UniRef90_G7FXY9, UniRef90_A0A016Q262, UniRef90_B6HRY4, UniRef90_C7Z624, UniRef90_Q5B5P0, UniRef90_K9E4K5, UniRef90_FOU5X4, UniRef90_UP10002DC50F9, UniRef90_F4KZR0, UniRef90_G1XN29, UniRef90_F4AH81, UniRef90_D4NYD6, UniRef90_UP10003FEE555, UniRef90_UP10003FFEE555, and UniRef90_UP10004765775.

130 140 150 160

R W G E P V Y L P R G L L C L S R D A A D N Q F L F L V G E E G I | G E Q W L V A
R W G E P V Y L P R G L L C L S R D A A D N Q F L F L V G E E G I | G E Q W L V A
P L L L G Y S G E G L L C L H R S A R D N S L Y A F A M G R E G Q L D Q W L L F
P L L L G Y S G E G L L C L H R S A R D N S L Y A F A M G R E G Q L D Q W L L F
T S L K D I Y G L C L Y Q N K Q G D I Y A I P N D K D G T F I Q Y H L S
P L P L G F A A E G I C C L Y Q H P L D R S L H A F I V G D G G E V D Q Q V I F
P L P L G F A A E G I C C L Y Q H P L D R S L H A F I V G D G G E V D Q Q V I F
P T F P N S I E A Y G L A L Y R S P I T N D Y Y V F V N R R N G D V A Q L K L V
S F K T E D N C C L Y L T P D Q S L Y S F L V G E E G I | G E Q W M I Q
S F K T E D N C C L Y L T P D Q S L Y S F L V G E E G I | G E Q W M I Q
S V A T D M K E I Y G F C C M Y Q A P A S G A L Y A I P N D K S G E F Q Q I Q L S
D F P V E G L C C L Y R D S A R N S F V F L M G A E G V G E Q W L V A
D F P V E G L C C L Y R D S A R N S F V F L M G A E G V G E Q W L V A
P N F L V E G L C C L A P E A D G S V S L F M L D E R G S A E Q W V V Y Y
P N F L V E G L C C L A P E A D G S V S L F M L D E R G S A E Q W V V Y Y
K V A T N M V D I Y G L C C M Y Q A P A S G A L Y A I P N D K S G L I Q Q Y R I D
P Y S S D E R S A Y G L A L Y R S P I T N D Y Y V F V S R R E G D V A Q L R L I
P Y E P S E L S A Y G L A I Y R S P F T N D Y Y V F V S R R E D G D V A Q F K L I
Q L G Y S G E G V V C L H R S G R D G A L Y A F A L G D E G Q L D Q W L L Y
Q L G Y S G E G V V C L H R S G R D G A L Y A F A L G D E G Q L D Q W L L Y
P Y S A S T R S S Y G L T L Y R S P I T N D Y Y V F T S R R T G D I A Q F K L I
P V P T F S V E A S C L Y R D A Q Q L D H L F L I G K D G Q A E Q W V M Q
P V P T F S V E A S C L Y R D A Q Q L D H L F L I G K D G Q A E Q W V M Q
G Y A G E G L C C L H R S A R D G A L Y A F A L G D E G Q L D Q W L L F
G Y A G E G L C C L H R S A R D G A L Y A F A L G D E G Q L D Q W L L F
P G F G V E A S C L Y R D A Q Q V A H L F L I G K D G Q S E Q W L M H
P G F G V E A S C L Y R D A Q Q V A H L F L I G K D G Q S E Q W L M H
P Y S S S R S A Y G I T I Y S L A T K D Y Y V F A S R R T G D V A Q F K L I
Q V S N G T T T A Y G L A T Y T D L S T G K N Y V F V S Q R E E G N V A Q L E L F
P Y S P S E R S A Y G V A L Y R S P V T N D Y Y V F T N R R E G D V A Q L K L V
R Y A I E G L C C L Y R D S A A N D F L F L V G E E G I | G E Q W L V A
R Y A I E G L C C L Y R D S A A N D F L F L V G E E G I | G E Q W L V A
P G M C A D M Q Q G K G D L L V L M E N G N G L I H F H L D
G M C A D M Q Q G K G D L L V L M E N G N G L I H F H L D
P V S F A L Q S Q C L Y R D A Q Q L S H L F M I A K D G Q A E Q W L L S
U n i R e f 9 0 _ U P I 0 0 0 4 6 F B 2 D A P V S F A L Q S Q C L Y R D A Q Q L S H L F M I A K D G Q A E Q W L L S
U n i R e f 9 0 _ D 4 T J Z 6 R V P A P E Y E I T G F C C L Y Q D S Q S Q L S H L F M I A K D G Q A E Q W L L S
U n i R e f 9 0 _ B 7 K 6 7 5 R V P A P E Y E I T G F C C L Y Q D S Q S Q L S H L F M I A K D G Q A E Q W L L S
U n i R e f 9 0 _ U P I 0 0 0 3 4 7 2 3 2 4 P F P A P A F G I E A A C C L Y R D A Q Q L D H L F L V A K D G Q A E Q W V V
U n i R e f 9 0 _ T 2 H 7 J 8 P F P A P A F G I E A A C C L Y R D A Q Q L D H L F L V A K D G Q A E Q W V V
U n i R e f 9 0 _ T 2 H 7 J 8 R Y A I E G L C C L Y R D S A A N D F L F L V G E E G I | G E Q W L V A
U n i R e f 9 0 _ Q 1 N 3 F 8 R Y A I E G L C C L Y R D S A A N D F L F L V G E E G I | G E Q W L V A
U n i R e f 9 0 _ Q 1 N 3 F 8 G M C A D M Q Q G K G D L L V L M E N G N G L I H F H L D
G M C A D M Q Q G K G D L L V L M E N G N G L I H F H L D
P V S P L S S P N G L C L Q N S H D G E L Y L W L L D G D G R A E Q W W I Q
V S V S P L S S P N G L C L Q N S H D G E L Y L W L L D G D G R A E Q W W I Q
V P T P L K D I Y G L C C M Y Q P Q G Q I Q V F V N D K N G R V L Q Y R L D
P I D D G E Q T A Y G L A T Y T S S S G K S Y V F V S Q R E E N Q V A Q L E L I
R V P A P E Y E I T G F C C L Y Q D S Q S Q L S H L F M I A K D G Q A E Q W L L S
R V P A P E Y E I T G F C C L Y Q D S Q S Q L S H L F M I A K D G Q A E Q W L L S
P F P A P A F G I E A A C C L Y R D A Q Q L D H L F L V A K D G Q A E Q W V V
P F P A P A F G I E A A C C L Y R D A Q Q L D H L F L V A K D G Q A E Q W V V
G V D D G E A T A Y G L A T Y T S P V T G E V Y T F V S Q A D G Q I A Q L K L I
P F S A S A T S A Y G L A L Y R S P V S N D Y Y A F A T R R T G D V A Q L K L I
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T L P K T D A Q I E A L C C W Y Q M P Q G H L S V F I I A D T V G S I I Q Q R I V V V
P Y S T S T R S A Y G I A A Y S S P V T G E D Y V F V N R R T G D V V V Q L K L I
V S V S P L S S P N G L C L Q N S H D G E L Y L W L L D G D G R A E Q W W I Q
V S V S P L S S P N G L C L Q N S H D G E L Y L W L L D G D G R A E Q W W I Q
V P T P L K D I Y G L C C M Y Q P Q G Q I Q V F V N D K N G R V L Q Y R L D
P I D D G E Q T A Y G L A T Y T S S S G K S Y V F V S Q R E E N Q V A Q L E L I
A Q T T M L G D W S A L C C S W R S K S L N D Y V Y F F G K T R A V Q Y L I
A Q T T M L G D W S A L C C S W R S K S L N D Y V Y F F G K T R A V Q Y L I
I A T G L N D V Y G V C C L Y A P N K Q A L Y A F I I N D K D G R F K Q Y Q L I
P V V E D Y K V Y G S C V Y R S P K T G K Q Y L F V N E K S A R Y L Q Y E L T
E I I T G L D E V Y G L C C M Y R G L E S K V Y V I I N D Q D G R Y E Q Y E L S
P T I L T S P T V T L G I C C P W Q S S S G N H Y F F L F G K G G R A F Q Y L I R
P T I L T S P T V T L G I C C P W Q S S S G N H Y F F L F G K G G R A F Q Y L I R
P S A Q I E S C L C W Y Q M P Q G H L S L F T T D A L G Q V A Q R I V V V
P S A Q I E S C L C W Y Q M P Q G H L S L F T T D A L G Q V A Q R I V V V
K Q V D S L G D W S T A C C V W R S Q K S G E N Y L F V F G K Q M V V Q F L I
K Q V D S L G D W S T A C C V W R S Q K S G E N Y L F V F G K Q M V V Q F L I
I P T P L S E I Y G L C C M Y Q P Q G Q M Q V I V N D Q S G R V L Q Y G L K
I P T P L S E I Y G L C C M Y Q P Q G Q M Q V I V N D Q S G R V L Q Y G L K
L L G D W S S A C C V W R S L T S G E S Y I F L F G K N M V V Q F L I R
L L G D W S S A C C V W R S L T S G E S Y I F L F G K N M V V Q F L I R
R I I S P Q A Q P D T V C C L F A N N I T Q T V T A F I I A D V R G L I T E T A I F
R I I S P Q A Q P D T V C C L F A N N I T Q T V T A F I I A D V R G L I T E T A I F
L L P M G H F E I N W I C C I Q P R T Q D G N I I Y A W F G G E S G N S E Q W L L
L L P M G H F E I N W I C C I Q P R T Q D G N I I Y A W F G G E S G N S E Q W L L
P Q A Q P D A V C C L F K N A D N K T I I S A F V P D V R G L I S E T I I I Y
P Q A Q P D A V C C L F K N A D N K T I I S A F V P D V R G L I S E T I I I Y
K V L L G D W S A L C C S W K S P A G N D Y V Y L F G K G Q A V Q L L L R
K V L L G D W S A L C C S W K S P A G N D Y V Y L F G K G Q A V Q L L L R
Q I K A L L G D W S S L C C T W R S P S S G G H Y F Y L L G K K Q G I Q F L V R
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K V L L G D W S A L C C S W K S D A G N D Y V Y L F G K G Q A V Q L L L R
T R K K A L L G D W S C C T W T S S S G G K Y F Y L L G K K Q G I Q F L V R
T R K K A L L G D W S C C T W T S S S G G K Y F Y L L G K K Q G I Q F L V R
R L P T G L D I Y G T C C L Y R T P E G G I D A F V N D K D G R Y E H W Q I T
R L P T G L D I Y G T C C L Y R T P E G G I D A F V N D K D G R Y E H W Q I T
N R K V M L G D W S A L C C P W R S P K T G N Q Y F Y L F G K K R A V Q F I I R
N R K V M L G D W S A L C C P W R S P K T G N Q Y F Y L F G K K R A V Q F I I R
I T P Q A K P E A V C C L F N N L T N G S I I S A F V A D V R G L M T E T L V Y Y
I T P Q A K P E A V C C L F N N L T N G S I I S A F V A D V R G L M T E T L V Y Y
P L K S S V D E V Y G F C C F Y R S S I D S A H Y A F V N G K N G Q V E Q W L L Q
T S G P G S T E V Y G F S L Y H S C T G R F Y A V C G L Y D G T V E Q W E L V
R G D F S A M C T W K S K V G E Y V Y V L G K R W G Y R F I L V R E
R G D F S A M C T W K S K V G E Y V Y V L G K R W G Y R F I L V R E
P S S I I E A L C C L Q T L P H T P N V A V I L A D D Q G K L T Q R I M V
P S S I I E A L C C L Q T L P H T P N V A V I L A D D Q G K L T Q R I M V
P I A S A I D E V Y G F S L Y H S Q K T G R Y Y A M V T G K E G E F E Q Y E L N
Q P D T V C C L F N N K N N N T V S A F V P D V R G L I T E T V I I Y
Q P D T V C C L F N N K N N N T V S A F V P D V R G L I T E T V I I Y
A T T L T D I Y G L C C M Y Q P S E D E L Y V F A N E K S G L V K Q I A L K

170 180 190 200

UniRef90_A4XZP4	Q A L Q P L A E P R L V R R M S L P P A S E H C R V D D D A E L L Y I N E E N V
UniRef90_A4XZP4	Q A L Q P L A E P R L V R R M S L P P A S E H C R V D D D A E L L Y I N E E N V
UniRef90_D5VH79	E T A D G K L D G R V V R R R L H S S E A K F C V A D D A S G A L Y V A Q K A V
UniRef90_D5VH79	E T A D G K L D G R V V R R R L H S S E A K F C V A D D A S G A L Y V A Q K A V
UniRef90_V2TRH3	A L K N K V N A K E I Q K F S V K T Q P E G C C V V D D K N D Q I F L G E E D R
UniRef90_UP10004657838	A A A D G K L D A R Q V V R R R L H S P S P L K Q C C V V D D G E G R V F A S E E A V
UniRef90_UP10004657838	A A A D G K L D A R Q V V R R R L H S P S P L K Q C C V V D D G E G R V F A S E E A V
UniRef90_K9QTP5	D N G S G K I S T E F V T R G F T V T P Q T E G M V V D D Q E T G Y L Y I G Q E N V
UniRef90_N9L314	S G G S N Q I S P R F I R N M S L P P N S G F C C V V D D H H D K L Y I N E E D V
UniRef90_N9L314	S G G S N Q I S P R F I R N M S L P P N S G F C C V V D D H H D K L Y I N E E D V
UniRef90_I3I5K5	D K N A V Q W Q G Q V K R R F S V E S Q P E G C V A D D K N Q R L F V G E E D V
UniRef90_L1LZP7	T A D Q P L S E A R R V R V R G L S L P P L S E H C Q G D D S G D S L F V D E E Q N V
UniRef90_L1LZP7	T A D Q P L S E A R R V R V R G L S L P P L S E H C Q G D D S G D S L F V D E E Q N V
UniRef90_UP10004766835	S D K Q S L T P A Q L R T L P I A P N A T A C A A D G N G G L F I A E E E M
UniRef90_UP10004766835	S D K Q S L T P A Q L R T L P I A P N A T A C A A D G N G G L F I A E E E M
UniRef90_I1E1V2	T N G H A W Q G S L V R S L Q P S Q P E G C V A D D Q S G V L F V G E E D A
UniRef90_K9Q8D9	D R G N G Q I G A E L V R E F T I P T Q T E G M V V D D Q E T G Y L Y I G Q E D V
UniRef90_K9WRZ5	N K G N G K I G A E R V R E F T I P T Q T E G M V V D D Q E T G F L Y I A Q E D V
UniRef90_Q9A8Q8	P T A D G K L D G R V V R R R L H S S E A K F C V A D D A S G A L Y V A Q E A V
UniRef90_Q9A8Q8	P T A D G K L D G R V V R R R L H S S E A K F C V A D D A S G A L Y V A Q E A V
UniRef90_B2J0G2	D K G N G K I G A E L V R E F T I P P S Q T E G M V V D D Q E T G F L Y I A Q E D V
UniRef90_A0A031GK21	G E Q R S S L V R R K L A L P P P H A K H C R A D D G A Q R L L V S E A N M
UniRef90_A0A031GK21	G E Q R S S L V R R K L A L P P P H A K H C R A D D G A Q R L L V S E A N M
UniRef90_J2GSE1	Q A A D G K L D G R I V V R R R L H S S E A K Y C V A D D A S G A L Y V A Q Q A V
UniRef90_J2GSE1	Q A A D G K L D G R I V V R R R L H S S E A K Y C V A D D A S G A L Y V A Q Q A V
UniRef90_UP100034752AA	G D Q R Q L V R R K L A L P P P H A K H C R A D D A S H T L L V S E S G V V
UniRef90_UP100034752AA	G D Q R Q L V R R K L A L P P P H A K H C R A D D A S H T L L V S E S G V V
UniRef90_D4TJZ6	D K G N G K V G Y E R V R E F T I P T Q T E G M V V D D Q E M G F V Y I G Q E D V
UniRef90_B7K675	D D G T G K V V N Y T Q V R S L T P A Q V E G M V V D D S A R E L G Y Y V Y V G Q E N R
UniRef90_UP10003472324	D K G N G K I G T E L V R N F T V P T Q L E G M V V D D Q E L G Y Y L Y I G Q E D V
UniRef90_T2H7J8	E H G Q P L A E A R Q V V R A L S L P P Q S A F C Q A D D A S H S L Y V N E E N V
UniRef90_T2H7J8	E H G Q P L A E A R Q V V R A L S L P P Q S A F C Q A D D A S H S L Y V N E E N V
UniRef90_Q1N3F8	V D E S K E L K I H N L R T I T L P P L S E Y C V M D L T H D R V L V S E E G I I
UniRef90_Q1N3F8	V D E S K E L K I H N L R T I T L P P L S E Y C V M D L T H D R V L V S E E G I I
UniRef90_UP100046FB2DA	G K T P V K L R N L A L P P E V E S C R V D D R Q Q A L Y V V S E A S F
UniRef90_UP100046FB2DA	G K T P V K L R N L A L P P E V E S C R V D D R Q Q A L Y V V S E A S F
UniRef90_U7FX28	A A D K A L P V V R H L V L P P P G V E S C A V V D D D S A S L Y V A E E S V
UniRef90_U7FX28	A A D K A L P V V R H L V L P P P G V E S C A V V D D D S A S L Y V A E E S V
UniRef90_UP10003828584	M Q G D K R L P V V R K L A L P P P H S K H C R A D D A S H Q L L V S E D G T
UniRef90_UP10003828584	M Q G D K R L P V V R K L A L P P P H S K H C R A D D A S H Q L L V S E D G T
UniRef90_B1WZU4	S D G Q G N I T A E I V R T L S V P A Q V E G M V V D R E L G Y L Y V G Q E E G F
UniRef90_K9UGH4	D K G N G K I G Y E L V R N F T V P S Q T E G I V A D Q E T G L L Y I G Q E D V
UniRef90_K6Y583	D G K H Q T L V D V P V H E F I G A P Q T K A C A V V D D E T G A L Y V V V I E E N I V
UniRef90_K6Y583	D G K H Q T L V D V P V H E F I G A P Q T K A C A V V D D E T G A L Y V V V I E E N I V
UniRef90_K8GGJ8	D A G N G K V G I E A I R N F T V P P Q L E G M V V D D K E T G I L Y I G Q E N V
UniRef90_B5JT97	T D A D Q T I R S L P V V R Q L S V P P E T S Q C A V V D D E R E S L L L V I E E G L
UniRef90_B5JT97	T D A D Q T I R S L P V V R Q L S V P P E T S Q C A V V D D E R E S L L L V I E E G L
UniRef90_W8TPH5	D N H G A I K G T L V R D F R V N T Q P E G C V A D D K R G R F F L G Q E K V
UniRef90_K9XC55	D N G F G K V T A K T V R T L P A Q I E G M V A D R E L G Y L Y V G Q E N R
UniRef90_E3QKG4	R Q G K D S V E L V E V Q S F A I P T E F S G C A V V R S R S K M I I A N A D D
UniRef90_E3QKG4	R Q G K D S V E L V E V Q S F A I P T E F S G C A V V R S R S K M I I A N A D D
UniRef90_Q21DH5	E N T A G I D A N L V R E F H L D S Q P E A C V V A N D A T G E L F I G E E D A S
UniRef90_L2GAU9	S T P N G T L Q T A L V R D F Q G G S Q V E G C V T D E E N G W I F L G E E E P S
UniRef90_R4YKX4	D S A A G W S G T R V R E F S V G S Q P E G C A A D D D K N Q R L F V G E E N V
UniRef90_J3P700	K V N D A V E I L E V R S I P V S A S F V G C A V S Q K H S T L F L T E E E V
UniRef90_J3P700	K V N D A V E I L E V R S I P V S A S F V G C A V S Q K H S T L F L T E E E V
UniRef90_K6YYV8	D A T Q H V L T D L V V Q T F I G A P Q T K S C A V V D D D R S Q S L Y I A E E N I
UniRef90_K6YYV8	D A T Q H V L T D L V V Q T F I G A P Q T K S C A V V D D D R S Q S L Y I A E E N I
UniRef90_E5A9A0	R S Q K K H A E I L E V Q T F S V P I E G E S C S V F P S S G R I F F S A E D R
UniRef90_E5A9A0	R S Q K K H A E I L E V Q T F S V P I E G E S C S V F P S S G R I F F S A E D R
UniRef90_K2K3K7	A K G A K V T G E L L R D F A V P S Q P E G C V A D D Q R L F L G E E D V
UniRef90_E3SAY2	D T T K R V E V L E V Q T F A A P I E A E T C T V F S A G Q V F F S A E D R
UniRef90_E3SAY2	D T T K R V E V L E V Q T F A A P I E A E T C T V F S A G Q V F F S A E D R
UniRef90_G7FXY9	D T A K N Q P V N V S I R E F F P G V S E A A G C A V S D I T S T L F I S S E S N V
UniRef90_G7FXY9	D T A K N Q P V N V S I R E F F P G V S E A A G C A V S D I T S T L F I S S E S N V
UniRef90_B8EAE1	D L A T K Q A K N I A V R E F S A V T E A S G C A V N D E T K T L L Y V V G E A E E L
UniRef90_B8EAE1	D L A T K Q A K N I A V R E F S A V T E A S G C A V N D E T K T L L Y V V G E A E E L
UniRef90_W1YUA7	G N A E H F S P K L M R S Q S I P V N S T D C A I D G D M L Y V V S E P E A A
UniRef90_W1YUA7	G N A E H F S P K L M R S Q S I P V N S T D C A I D G D M L Y V V S E P E A A
UniRef90_A0A016Q262	A T K N S F V E Y Q I Q T F P T D F E T S G C A A S R S E S R M Y I S D D D D K
UniRef90_A0A016Q262	A T K N S F V E Y Q I Q T F P T D F E T S G C A A S R S E S R M Y I S D D D D K
UniRef90_B6HRY4	L V R E K D S D I E I L E V S P K I I Q R P C D S S
UniRef90_B6HRY4	L V R E K D S D I E I L E V S P K I I Q R P C D S S
UniRef90_C7Z624	K T K K S V E L L E V G I S Q K N E R A S V S R S E S K M Y L S D D D K
UniRef90_C7Z624	K T K K S V E L L E V G I S Q K N E R A S V S R S E S K M Y L S D D D K
UniRef90_Q5B5P0	E K G S K V E V L E V Q T F P L P V E P S S C A V S P E D N V V Y F A A E D K
UniRef90_Q5B5P0	E K G S K V E V L E V Q T F P L P V E P S S C A V S P E D N V V Y F A A E D K
UniRef90_K9E4K5	R S G G K Y G A R L R A Q F V V A T Q P E G C V A D D R S G L L F V G E E D K
UniRef90_FOU5X4	R E G S K F E I L E V Q T F D L P V E P N S C A V S P R E G T V Y F A D D D K
UniRef90_FOU5X4	R E G S K F E I L E V Q T F D L P V E P N S C A V S P R E G T V Y F A D D D K
UniRef90_UP10002DC50F9	N F V T G K A P N I A V R E F A V V N E A A G C T V N D K N Q L F I S E E E E L
UniRef90_UP10002DC50F9	N F V T G K A P N I A V R E F A V V N E A A G C T V N D K N Q L F I S E E E E L
UniRef90_F4KZR0	P S G S D R I S A K M I R T F K V S S Q P E G M V A D P T Y G V L Y V G E E D K
UniRef90_UP10004765775	D N G M G M K V S G R K V K T Y A F G G V C E G I A A D D Q K D E L Y I A E E N V
UniRef90_G1XN29	K K G G R G G V E V V Q T Q E F G I P I E P N S C T V S P E G K V F L A G D S G K
UniRef90_G1XN29	K K G G R G G V E V V Q T Q E F G I P I E P N S C T V S P E G K V F L A G D S G K
UniRef90_F4AH81	D G Q Q K S L S N V L L R E F F V G P Q V K D C A V S D D A S Q S L Y L A E E N I
UniRef90_F4AH81	D G Q Q K S L S N V L L R E F F V G P Q V K D C A V S D D A S Q S L Y L A E E N I
UniRef90_D4NY6	A D K N G Y I S G K K V R A F K M N S Q T E G M A A D D E Y G S L Y I A D E D E
UniRef90_UP10003FEE555	D T S N N E T I N V S M R E F A G V S E A A G C A V S E Q S N T L F V S E G E V V
UniRef90_UP10003FEE555	D T S N N E T I N V S M R E F A G V S E A A G C A V S E Q S N T L F V S E G E V V
UniRef90_B8CGU9	W Q D N H L K A T E V R E F S V P S Q P E G C V A D D L N K Q L F L G E E N V

210 220 230 240

UniRef90_A4XZP4	G L W A Y A A G A E D D L I R Q P V G L R Q P F G D I G G M A V V P G G
UniRef90_A4XZP4	G L W A Y A A G A E D D L I R Q P V G L R Q P F G D I G G M A V V P G G
UniRef90_D5VH79	G I W R Y D A D P E A E P V P A V D I N R L Q G Q I A G E V E G L A V I N G G K
UniRef90_D5VH79	G I W R Y D A D P E A E P V P A V D I N R L Q G Q I A G E V E G L A V I N G G K
UniRef90_V2TRH3	A V W Q K S L Q N N S N L Q E V A T V G K N Q I Q D D I E G M G L Y H G K
UniRef90_UP10004657838	G I W R F N A D P E A E V A A T L V D A P R L G H T T G E V S G L A V H D G G E
UniRef90_UP10004657838	G I W R F N A D P E A E V A A T L V D A P R L G H T T G E V S G L A V H D G G E
UniRef90_K9QTP5	G L W K F F E A E P T G N N Q G K L I D R F G G S N L V D D V E G L S I Y Y G A D
UniRef90_N9L314	G I W A Y E A D P E A D L L I R Y P V D L N P Y G S I L G N V S G L S L Y Q G K N
UniRef90_N9L314	G I W A Y E A D P E A D L L I R Y P V D L N P Y G S I L G N V S G L S L Y Q G K N
UniRef90_I3IK5	A L W T I A E P D S G T R L E K V L G A G E L L V A D I E G V G V Y Q G K N
UniRef90_L1LZP7	G W W R Y G A A A A P L Q R R P V D R A P F G A A K R A A G M A V V P G G
UniRef90_L1LZP7	G W W R Y G A A A A P L Q R R P V D R A P F G A A K R A A G M A V V P G G
UniRef90_UP10004766835	G V W R Y S S N N A E K P V S R E V V G L A
UniRef90_UP10004766835	G V W R Y S S N N A E K P V S R E V V G L A
UniRef90_I1E1V2	G I W R F F A A E P D A V A G E Q I L V D G E T L V D D V E G L A L A T H G D
UniRef90_K9Q8D9	G I W K F F D A E P F G S N T G T L I D R V G G T N L T N D V E G L T I Y Y G S D
UniRef90_K9WRZ5	G I W K F F D A E P N G G K T G K L I D K V G G S Y T T N D V E G L T I Y Y G K N
UniRef90_Q9A8Q8	G V W R Y D A D P E A D P V P T I V D I N R L G H L A G E V A G L A L I N G G K
UniRef90_Q9A8Q8	G V W R Y D A D P E A D P V P T I V D I N R L G H L A G E V A G L A L I N G G K
UniRef90_B2J0G2	G I W K F F Q A E P D G G T T G K L I D R V G G S H L D D D A G A G L A V L P G G
UniRef90_A0A031GK21	G V W S Y E A D S E G M G K R E V V A R K P Y G Q L D D G A G A L A V L P G G
UniRef90_A0A031GK21	G V W S Y E A D S E G M G K R E V V A R K P Y G Q L D D G A G A L A V L P G G
UniRef90_J2GSE1	G I W R Y D A D P E A E A V A T V I D I N R L G R I Q G E V V G G L A V L N G G A
UniRef90_J2GSE1	G I W R Y D A D P E A E A V A T V I D I N R L G R I Q G E V V G G L A V L N G G A
UniRef90_UP100034752AA	G L W A Y E A D A E S A G R R E P V A D G G A G A L A V L P D G V A V L D A K G
UniRef90_UP100034752AA	G L W A Y E A D A E S A G R R E P V A D G G A G A L A V L P D G V A V L D A K G
UniRef90_D4TJZ6	G I W K F F D A E P N G S N V G K L I D K V G G Q N T T D D A E G L T I Y Y G K N
UniRef90_B7K675	G I W K F F S A S P N G S T L G Q L I D A V E G T H L E A D V E G L T I Y Y S D N N
UniRef90_UP10003472324	G I W K Y Q A E P N S N T T G V L I D K V G G K Y L E D D V E G L T I Y Y G N Q
UniRef90_T2H7J8	G L W R Y E A A A A E P L V R E P V D L V A P G G L A K A A A G V A L V P G G
UniRef90_T2H7J8	G L W R Y E A A A A E P L V R E P V D L V A P G G L A K A A A G V A L V P G G
UniRef90_Q1N3F8	G V W A L P L D M E K Q M Q R T L V D T V Q Q G H L Q H T A T A M V L L K
UniRef90_Q1N3F8	G V W A L P L D M E K Q M Q R T L V D T V Q Q G H L Q H T A T A M V L L K
UniRef90_UP100046FB2DA	G V W R Y A A A N G E G I P E R T L V A R Q P R G E I T G E V G A L A V L P Q G
UniRef90_UP100046FB2DA	G V W R Y A A A N G E G I P E R T L V A R Q P R G E I T G E V G A L A V L P Q G
UniRef90_U7FX28	G L W R Y H A D P E R D A E R Q L L D R A P H G N I A E N A S A V A V L P G
UniRef90_U7FX28	G L W R Y H A D P E R D A E R Q L L D R A P H G N I A E N A S A V A V L P G
UniRef90_UP10003828584	G L W S Y N A D A E G P S R A A V V L L K K P Y G T L D K G A G A L A I L P G G
UniRef90_UP10003828584	G L W S Y N A D A E G P S R A A V V L L K K P Y G T L D K G A G A L A I L P G G
UniRef90_B1WZU4	G I W K F F Y A E P N S S E L G T I V D T V P D S N L T A D V E G L T I Y Y G E D
UniRef90_K9UGH4	G I W K Y N A E P T G G K F G T L I E K V G G Q N L T N D V E G L T I Y Y G K N
UniRef90_K6Y583	G L W R Y S A E T E S E L A R E L V I A V E G E I T G V D V N G D I L V A A P E
UniRef90_K6Y583	G L W R Y S A E T E S E L A R E L V I A V E G E I T G V D V N G D I L V A A P E
UniRef90_K8GGJ8	G I W R Y R A E P N G G T T G I L I D T V G G K N L T D D V E G L T I Y Y G A D
UniRef90_B5JT97	G I W A Y P A H P E D D F K R Q L L A A T Q P W G G S L E K P M D
UniRef90_B5JT97	G I W A Y P A H P E D D F K R Q L L A A T Q P W G G S L E K P M D
UniRef90_W8TPH5	G I W F A N A D D T Q A P A G T L I A K V G P M L H A D V E G L A L W Q G E
UniRef90_K9XC55	G I W K F F A A E V T G K D E G V L V D A V E G S N L T A D V E G L T I Y Y A G N
UniRef90_E3QKG4	G K D L Y I F D L K E S T V A P E I T K L G E A P D D V T G I A V Y S N T T
UniRef90_E3QKG4	G K D L Y I F D L K E S T V A P E I T K L G E A P D D V T G I A V Y S N T T
UniRef90_Q21DH5	G V W L F D A N P T A S I S G R L A A V G D V L V A D V E G L G L I N N A L
UniRef90_L2GAU9	A L W R Y D A E P D S T P G L R I A Y V G D G H T Y A D V E G V T L V Y G T K
UniRef90_R4YKX4	A L W T L G A E P D A N K R N D M T S A I T D Y L H A D I E G M D L Y Q T E
UniRef90_J3P700	D Q D V Y T M E L V E N T A A P A I V K V A N V T G A T G V S I Y E T S A
UniRef90_J3P700	D Q D V Y T M E L V E N T A A P A I T V K V A N V T G A T G V S I Y E T S A
UniRef90_K6YYV8	G V W R Y I A D H E S E L A R E L V I A T P H G P I N S E V S G D L L V S A P E
UniRef90_K6YYV8	G V W R Y I A D H E S E L A R E L V I A T P H G P I N S E V S G D L L V S A P E
UniRef90_E5A9A0	P L Y S F H A V E S T S A P A I T E V S K D I K V T S L A T Y H G E S
UniRef90_E5A9A0	P L Y S F H A V E S T S A P A I T E V S K D I K V T S L A T Y H G E S
UniRef90_K2K3K7	G I W V F D A D P Q Q A P K G Q L I A K V G D K L H A D V E G L A L W Q G
UniRef90_E3SAY2	G L L Y S F Q A S E S I Q T P A I Q T V D E K L K V E G L A T Y H G N S
UniRef90_E3SAY2	G L L Y S F Q A S E S I Q T P A I Q T V D E K L K V E G L A T Y H G N S
UniRef90_G7FXY9	G I W A L N A N A E S Q A D K K P I A L V A E I G A L S V S D D
UniRef90_G7FXY9	G I W A L N A N A E S Q A D K K P I A L V A E I G A L S V S D D
UniRef90_B8EAE1	G V W Q F D A S P F A D T S A K L I F P A I D N Q I T E I G A L S V S D D
UniRef90_B8EAE1	G V W Q F D A S P F A D T S A K L I F P A I D N Q I T E I G A L S V S D D
UniRef90_W1YUA7	G V W A L N A D A E S D A N K Q P V A L V P Y G E L K A E I G A L S V S D D
UniRef90_W1YUA7	G V W A L N A D A E S D A N K Q P V A L V P Y G E L K A E D V T G L A V Y V P N K
UniRef90_A0A016Q262	N V Y S F S L K E S T G A P K I T K V G K A E D D V T G L A V Y V P N K
UniRef90_A0A016Q262	N V Y S F S L K E S T G A P K I T K V G K A E D D V T G L A V Y V P N K
UniRef90_B6HRY4	S V Y T F K A T E S T K A P K I Q V L G Q V D D E V T G L A V Y V A P E
UniRef90_B6HRY4	S V Y T F K A T E S T K A P K I Q V L G Q V D D E V T G L A V Y V A P E
UniRef90_C7Z624	D V Y V F P L K E S T K A P E I T K F G E A E D D V T G V A T Y V P K K
UniRef90_C7Z624	D V Y V F P L K E S T K A P E I T K F G E A E D D V T G V A T Y V P K K
UniRef90_Q5B5P0	T I Y S F A A E S T T A P D I Q T L G Q V S D E I S G L A V Y V S A
UniRef90_Q5B5P0	T I Y S F A A E S T T A P D I Q T L G Q V S D E I S G L A V Y V S A
UniRef90_K9E4K5	A L W V T S A R A D Q P A K L E M V M P V G E W H D D I T G L A T Y V T E
UniRef90_FOU5X4	T I Y S F T A K D S T T A P E I T V L G K A E D D I T G L A T Y V T E
UniRef90_FOU5X4	T I Y S F T A K D S T T A P E I T V L G K A E D D I T G L A T Y V T E
UniRef90_UP10002DC50F9	G I W Q M N A N A E S T A A K H P V A M V T P G E L L A S G I G G L T T S A D
UniRef90_UP10002DC50F9	G I W Q M N A N A E S T A A K H P V A M V T P G E L L A S G I G G L T T S A D
UniRef90_F4KZR0	G I W R V E L E N K T T K V S Y I T Q S G N P N I T F D V E G L C L Y A T S D
UniRef90_UP10004765775	G L W K V D A A P D A S N E P K S I Q K I E N P Y I H K D L E G V A L Y V G D N
UniRef90_G1XN29	V F S F L A V D E T A A P K I V E V G E L G G G D E V K G L K I Y H G K K
UniRef90_G1XN29	V F S F L A V D E T A A P K I V E V G E L G G G D E V K G L K I Y H G K K
UniRef90_F4AH81	G I W R Y A A E P E A E L V R E L V A V S G H G R L K G E V T S V D T L A D G
UniRef90_F4AH81	G I W R Y A A E P E A E L V R E L V A V S G H G R L K G E V T S V D T L A D G
UniRef90_D4NY6	AI W K F S A E P D G G S N G T V I D R A D G R H L T P D I E G L T I Y Y A A D
UniRef90_UP10003FEE555	G V W S I N A N A E S Q A D K K P I A L V A P F G S L N S E I G S L F T S T D
UniRef90_UP10003FEE555	G V W S I N A N A E S Q A D K K P I A L V A P F G S L N S E I G S L F T S T D
UniRef90_B8CGU9	G I W A F N L D R T T K L N G E M I Q A G G P L V A D I E G I S L Y Q A N S

UniRef90_A4XZP4
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 UniRef90_K9WRZ5
 UniRef90_Q9A8Q8
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	250	260	270	280
V L A [L] D P E A G [V L] H R Y A R Q G				
V L A [L] D P E A G V L H R Y A R Q G				
G A D Y L I I A A N P G R G D Y N V Y D R S A D D R F V G G F R I E A N G A A A				
G A D Y L I I A A N P G R G D Y N V Y D R S A D D R F V G G F R I E A n g a a a				
K Q S Y L V V S S Q G N N S Y A V M E A H A P Y R Y R G S F K I V M N S V I D A				
G H R W L L A S D A S A G R I N V Y D R D R D G A Y L G S F R V A A G Q G G E P				
G H R W L L A S D A S A G R I N V Y D R D R D G A Y L G S F R V A A G Q G G E P				
G K G Y L L V S S Q G D N T F A V Y R R E G D N E F I G R F A V G N N G S I D S				
Q S F L V I S S Q G N N S F V I L D A A A P Y A L R G I V R I A A T K N I D G				
L L A L D P L A G N L H L Y R Q T G				
L L A L D P L A G N L H L Y R Q T G				
N Q Y V I A S S Q G N D S Y V V Y D A V A P Y A L R L R F R I T T N P A I D G				
G Q G Y L L A S S Q G D N T F V A Y N R A G N N E Y I G S F A V G N N G S I D S				
G T G Y L L A S S Q G D N T F A A Y T R E G N N D F L G R F G V G N N G A I D S				
G A D Y L I I A A N A E A G D Y N V Y D R S A G D R F I G A F K V E T N G A P A				
G A D Y L I I A A N A E A G D Y N V Y D R S A G D R F I G A F K V E T N G A P A				
G T G Y L L A S S Q G D S T F V A Y T R E G N N E Y V G N F A V G N N G S I D R				
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130 140 150 160

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UniRef90_Q0UBI4	L G D W S T A C V	V W R S Q K S G A S Y L	T G K T Y A F S Q R E R T V A Q L E L L	R R	R R
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UniRef90_A3WK29	Q V S T D L D E I Y G L	C M G Y E E H T D R L S V Y V N G K S G R I Q Q F W I	L D	L D	
UniRef90_UPI000301CA62	R V V A A G A G E A Y G L	C L W A T P	G A L T A F I V L K D G A I R Q I E L D	L D	L D
UniRef90_A8P5M1	K P D F S V Y G S C	V Y H S R S S G K Y Y I F V N S K T A E Y L Q Y E	L T	L T	
UniRef90_S5C1H3	I D T T L T D I Y G M C	F V E N G V T Q V F A N D T S G L F E R R Y E	V S	V S	
UniRef90_UPI00036593E7	K D A D L E S V C	M G R N	N Q A F D V V A T D A R G R L H Q Y	L R	L R
UniRef90_UPI00036593E7	K D A D L E S V C	M G R N	N Q A F D V V A T D A R G R L H Q Y	L R	L R
UniRef90_U5DNR8	G V D D G E A T A Y G L	C L Y T S P V	S G T D Y A F T T Q A D G N V A Q L E L V	L T	L T
UniRef90_K9RD49	G V D D G E A T A Y G L	C L Y T S P V	S G T D Y A F T T Q A D G N V A Q L E L V	L T	L T
UniRef90_D9USA7	E V T A H R P Y G F C	C L G R D A A G	L S A F I V L K D G T I I N Q L L	L L	L L
UniRef90_G2IPZ8	R Y P V G A G E A Y G M C L	G M G R R Q D G	V Y L V A N N K A G Q I R I W R	V R	V R
UniRef90_S3GIZ1	F V H T D M G E P Y G F C	C A F S N N H T Q V L V N S T D G R Y L H Y Q L	L T	L T	
UniRef90_M2U638	P I P T P L T D I Y G L	C L G R D A A G	V Y L V A N N K A G Q I R I W R	V R	V R
UniRef90_F5Z928	I P F T P L T D I Y G L	C A F S N N H T Q V L V N S T D G R Y L H Y Q L	L T	L T	
UniRef90_UPI00040A981B	P V F E G E R D P M G V S L Y T P S D K A I F A I V G R K S G P L W Q Y E L L K	V A	V A		
UniRef90_S3AMS3	P A L F S S R T A Y G L T A W T D P S S G R S Y A V V S R R E S T A L L L E	L L	L L		
UniRef90_UPI000468F490	P V F E G E K D P M G I A I Y T R P S D K A I F A I V G R K S G P L W Q Y E L L K	V S S	V S S		
UniRef90_W0AG29	T V P S I E G E A Y G M C L Y R D A G A L Y A H V F A M V T K E G G I G G Q V A L D	L D	L D		
UniRef90_K0CPI1	I S T T L N D I Y G M C L Y R D A G A L Y A H V F A M V T K E G G I G G Q V A L D	V S S	V S S		
UniRef90_A0A010QAZ2	I S T T L N D I Y G M C F V S G G I A H V F A M V T K E G G I G G Q V A L D	S R F E R Y S	S R F E R Y S		
UniRef90_D7W501	F E G E T A R G P M G I S M Y K N P Q T E E I F V I V G R K D G Y L W Q Y E L L S	V S S	V S S		
UniRef90_F9YVW2	P V F E G L R D P M G I A T Y S D A E N G K I Y V I V G R K E G P L W Q Y E L L S	V S S	V S S		
UniRef90_Q0C5T3	I P T G M I E P Y G I C Q G R E N G R D L A G V T Y K D G T L Q I W E M S	V S S	V S S		
UniRef90_C7PM19	P V F E G E K E P M G V A M Y T R P E D A I F A I V G R K S G P L W Q Y R L V	V S S	V S S		
UniRef90_A5FK69	P V F E G E R D P M G I A L Y T R P S D G K I F A I V G R K T G P L W Q Y E L L S	V S S	V S S		

170 180 190 200

UniRef90_L7INP0	P A D G G S F E V L E V R A L P A P V V F V G C A V S P R D A K L Y L T E D D Q		
UniRef90_L7INP0	P A D G G S F E V L E V R A L P A P V V F V G C A V S P R D A K L Y L T E D D Q		
UniRef90_K2K3B9	A A A Q G W Q A K L V R E L R V P S Q P E G C V V D D Q Q W L Y V G E E D V		
UniRef90_UPI0003B70C98	V Q D T E V H G Q P V R Q F S L P S Q P E G C T A D D Q S G Q L F M G E E D A		
UniRef90_F2JWW1	L D G D T V K S A E P V R H A N V G G E L S G C I V D D Q S G T L Y V A E Q N I		
UniRef90_F2JWW1	L D G D T V K S A E P V R H A N V G G E L S G C I V D D Q S G T L Y V A E Q N I		
UniRef90_E6RN13	D L A T N Q A K N I A V R E F S A V T E A S G C A V N D D T K T L Y V G E A E L		
UniRef90_E6RN13	D L A T N Q A K N I A V R E F S A V T E A S G C A V N D D T K T L Y V G E A E L		
UniRef90_U4LK71	S T P D G Q L N T T L V R Q F G N G G Q V E G C V S D D E N G F I F V G E E P Y		
UniRef90_C9SJ19	R E A G E S V V E F V E V Q S F D V P T E F A G C A V S S K Q S K L I L G D E		
UniRef90_C9SJ19	R E A G E S V V E F V E V Q S F D V P T E F A G C A V S S K Q S K L I L G D E		
UniRef90_UPI00047A9F34	L T G E A P S A T L A R R F R V E S Q P E G C V A D E V I T G Q L F V G E E D Q		
UniRef90_L0DFQ9	D N D R Q A I G A T R V R A F R V G S Q S E G I V A D R E R A R L Y V A E E K V		
UniRef90_C5JGK5	R H G T K F E I L E V Q S F D I P V E P N A C A V S P S E G T V Y F A D D D K		
UniRef90_C5JGK5	R H G T K F E I L E V Q S F D I P V E P N A C A V S P S E G T V Y F A D D D K		
UniRef90_N4VKU4	R K G K A D I E L V Q V Q T F P A P A E F S G C A V S A A Q S R M M L A D D D R		
UniRef90_N4VKU4	R K G K A D I E L V Q V Q T F P A P A E F S G C A V S A A Q S R M M L A D D D R		
UniRef90_A0A016XKM5	P D A Q G A P R L L R H L A L P P N A E S C R G D D D Q R G L L I L I T E T G R		
UniRef90_A0A016XKM5	P D A Q G A P R L L R H L A L P P N A E S C R G D D D Q R G L L I L I T E T G R		
UniRef90_Q3IFS5	N A K Q Q H D I Q P I R S F V G V P V E V Q G C A V D D S R E E Q L Y L V E G N I		
UniRef90_Q3IFS5	N A K Q Q H D I Q P I R S F V G V P V E V Q G C A V D D S R E E Q L Y L V E G N I		
UniRef90_F6CVU0	H R N G Q I E S A V V R H A Q V G G K L S A C V A D D E T G S L Y V A E Q D V		
UniRef90_F6CVU0	H R N G Q I E S A V V R H A Q V G G K L S A C V A D D E T G S L Y V A E Q D V		
UniRef90_M2TD10	D S K D E A I L E V I Q T F P I D I E G E S C S V F S N G Q V F F S A E D R		
UniRef90_M2TD10	D S K D E A I L E V I Q T F P I D I E G E S C S V F S N G Q V F F S A E D R		
UniRef90_C0SI59	R E K N N A I D V L E V Q T F G I P V E P N S C A I S P D D S T V Y A A D D D K		
UniRef90_C0SI59	R E K N N A I D V L E V Q T F G I P V E P N S C A I S P D D S T V Y A A A D D D K		
UniRef90_J2DIB9	A S G A A P T G R I V R S M K L G T Q S E G C A V D D R T G L Y V A E E D V		
UniRef90_U1K9D9	A N T G K I A A A K V R Q S L N S Q P E G C V A D D E R G R L F I G E E D V		
UniRef90_L8LQT0	A T D I G T I D A E I V R T F T V P A Q V E G M V A D R E L G Y L Y V G Q E N F		
UniRef90_UPI000374DFA2	D L S N E K I V T A N L V R E F A V V S S Q P E G C V A D T G T Q T L Y L G E E E N K		
UniRef90_B2WM13	R D T K K R V E V L E V Q T F A P I E P A T C A V F S A G Q V F F S A E D R		
UniRef90_B2WM13	R D T K K R V E V L E V Q T F A P I E P A T C A V F S A G Q V F F S A E D R		
UniRef90_UPI0002558385	V V D N K L K G N L T Q R I Q V G S I T E G M V A D D E T G A I Y I A E E N V		
UniRef90_Z5XUP6	G N A T S V N A K L V R E F N V P S Q P E G C S A D D K T G E L F L G E E E D E		
UniRef90_I8T5U9	V S A A Q P A A S V V R E L Q L A S Q S E E G C V D D R T G M L Y V G E E D V		
UniRef90_W7Y8Q2	N D N D S I K G E L A R S F W V S S S Q P E G C M V V D D R T G M L Y V G V E E D		
UniRef90_G2E7J1	D A G D G T V S A E V A R M I E L P S Q S E E G M V V A D R E L G V L Y V A M E D V		
UniRef90_F3LN6	A D G R P V F S G R V V Q R F K L E S Q P E E G C V A D D D S G R L F I G E E D R		
UniRef90_UPI000255BA4B	P T G N V D W S L R K L A T L E V A S A Q V E G M V D D E M Q M L F F G E E D G		
UniRef90_B8HQM4	D A G Q G K V S Y R K I R E L V L P S Q V E G M V D E E T K Q L Y M G Q E D V		
UniRef90_Q0UBI4	D K K K D V E I V E T F P V P I E G E T C T V F L N G Q V F F S A E D R		
UniRef90_Q0UBI4	D K K K D V E I V E T F P V P I E G E T C T V F L N G Q V F F S A E D R		
UniRef90_10HTL4	G A Q G A R L V R R L A L P P Q T Q A C R C V D D A A G W L Y A Q E E D A		
UniRef90_10HTL4	G A Q G A R L V R R L A L P P Q T Q A C R C V D D A A G W L Y A Q E E D A		
UniRef90_Q0CTZ5	G N R K E L E I L E V Q A F P L P V I E P S S C A V D P E G V V Y F A A E N T		
UniRef90_Q0CTZ5	G N R K E L E I L E V Q A F P L P V I E P S S C A V D P E G V V Y F A A E N T		
UniRef90_UPI0002E44ED5	F S A S Q V T G K L V R E F K V E S Q P E G C V A D A Q T Q T L Y L G E E E D W		
UniRef90_S8CEA4	K R R R K S D K L E I V Q E F A L P V E P N S C T V T D G K V F F G G A N G		
UniRef90_S8CEA4	K R R R K S D K L E I V Q E F A L P V E P N S C T V T D G K V F F G G A N G		
UniRef90_UPI0003796BA6	P G P S T W E L L V E I R P L Y F G E Q V N A C A V A P F N E K L L F S Q P P I		
UniRef90_UPI0003796BA6	P G P S T W E L L V E I R P L Y F G E Q V N A C A V A P F N E K L L F S Q P P I		
UniRef90_U7QBF4	D N G L G Q V D A N L V R T L E L P S Q S E A I V V D Q E L S F V Y L A M E N V		
UniRef90_K6ZV69	□ D S S D I S A K K I D Y F R A N S Q P E G C V D D D T K R L Y I A Q E D I		
UniRef90_UPI000365313E	D G S T G S V T G K L V R S W T V P A H T E G L V A D D E M K R L Y I A Q E D I		
UniRef90_W1S814	A S G A T P T G R T V R T M K L G T Q A E G C A V D D R T G T L Y V A E E D V		
UniRef90_UPI0004057190	A D G A T F A R E M T V P S Q P E E G C V V D D A T Q R L F V G E E D V		
UniRef90_Q7NIT3	D I G G G Q V G Y R K I A E F T L P N Q V E G M V V D D Q E L G L Y A G Q E D V		
UniRef90_UPI0003A35A09	G F A D G A V S A T A G E G W K L E T Q L E G C A A D E E N G Q F Y I G E E M R		
UniRef90_Q0AM33	W D G T V V T T Q E V R R V T L G T I A E G C V A D D R T G Q L Y M N E E N V		
UniRef90_U5QIM4	D V G G G R I G Y Q K V Q G I E L P S Q S E G L V V D Q E L G L Y A A Q E D V		
UniRef90_R4UQ44	N D G K M E K V R E L S V P S Q P E G C V V D D K T Q R L F V G E E D V		
UniRef90_UPI00036F84A5	F D G E T M Q G Q E I R R I N V G S K S E G C A V D D R T G L L Y I A E E E V		
UniRef90_A0A059G6Y3	G E A D G V T G K L L R S V K L A T Q L E G C V F D E V N G Q L V I G E E E G H		
UniRef90_W3WTE0	A V D E N E F E L V E V Q T F E T A F E A S S C A V S P V D G L V F F G D D D S		
UniRef90_W3WTE0	A V D E N E F E L V E V Q T F E T A F E A S S C A V S P V D G L V F F G D D D S		
UniRef90_UPI0003619F55	Y D G S N I I S A V P V R R F T V G G E I S A C I T D D E N G I L F I A E Q D L		
UniRef90_UPI0003619F55	Y D G S N I I S A V P V R R F T V G G E I S A C I T D D E N G I L F I A E Q D L		
UniRef90_A3WK29	K G A D D V K K V R E M S V P S Q P E G C V V D D K T Q R L F V G E E D V		
UniRef90_UPI000301CA62	P A K A T G R I V R T M K L A T Q S E G C V V D A R T A R L L Y V A E E E D V		
UniRef90_A8P5M1	P S □ E A V L V R E F G N G G Q V E G C V G D D E N G F V Y I G E E P Y		
UniRef90_S5C1H3	F N K N K K A K G T L T Q S F S L P S Q P E G C V V D T H T N T A Y F G E E G A		
UniRef90_UPI00036593E7	Y F F N G K S Q L Q V K T M N T G A G I T S C Q I N E S E K Q L V L A D E N L		
UniRef90_UPI00036593E7	Y F F N G K S Q L Q V K T M N T G A G I T S C Q I N E S E K Q L V L A D E N L		
UniRef90_U5DNR8	A T S G G L V D A R V V B C T L E L P S Q S E G L V I D R E T G T G Y V A E E E V		
UniRef90_K9RD49	P A D E Q L I E A E V V R T L E L P S Q S E G V V I D Q E L G F L Y V A L E D V		
UniRef90_D9USA7	V S G T G V T A T S V R L F D V G D E I E G C Y A D E R T G A L Y V G E E D K		
UniRef90_G2IPZ8	D A G A A P T G R I V R T M K L G T Q A E G C A V D D R T G R L Y V A E E E D V		
UniRef90_S3GIZ1	L S G D P T P R V E T V R S M K L G T Q A E G C V V D D R T G L L Y V A E E E D V		
UniRef90_M2U638	S E S S G A P A T E L V R S L K V G S Q P E G C V V D D E A D R L Y V G E E E D V		
UniRef90_F5Z928	□ E D A S R V S A T L I H D F E L P S Q P E G C V V D D T D Q I A Y L G E E E G A		
UniRef90_UPI00040A981B	D G S G T V K A E L V R K F G K F S E I E A I A V D N E L G Y I Y Y S D E Q S		
UniRef90_S3AMS3	G S D D D G T V S Y R K V T L Q L P S Q V E G M V V D T E N G I L Y A G Q E D V		
UniRef90_UPI000468F490	G T N N T K V E G T L V R K F G A Y S E I E A I A V D N E L G A V Y Y S D E Q F		
UniRef90_W0AG29	L T G A Q P V G R L V R L K V G S Q A E G C V V D D E R T H R L Y V A E E E D V		
UniRef90_K0CPI1	I S P D K S I D G H T Q S F S L P S Q P E G C V V D D T K T S T A Y L G E E E G A		
UniRef90_A0A010QAZ2	I D T A K T I N G H L T Q S F S L P S Q P E G C V V D D T K T N T A Y L G E E E G A		
UniRef90_D7W501	E K N G S I T G E V V R K F G K Y S E I E S I A V D D E M G Y I Y Y S D E Q F		
UniRef90_F9YVW2	A N E L V T A Y K V R E F G K Y S E I E A I A V D N Q L G Y I Y Y C D E T V		
UniRef90_Q0C5T3	A A P E G V A G D L L K T V K L E T Q L E G C V F D E A N G L M F V G E E N R		
UniRef90_C7PM19	D E N G V V K G R L V R K F G A Y S E I E S I A V D N K L G Y V Y Y S D E T V		
UniRef90_A5FK69	G N G K F A A K V V R K F G T Y S E I E A I A V D N E L G F V Y Y C D E Q A		

210 220 230 240

UniRef90_L7INP0	D V Y V M D V G D M A G Q P T L K K V K G V K D A T G I A L Y S S G D
UniRef90_L7INP0	D V Y V M D V G D M A G Q P T L K K V K G V K D A T G I A L Y S S G D
UniRef90_K2K3B9	A W R F A A A A D S D G E A I I K V A E A E L E A D I E G L A L Y S S G D
UniRef90_UPI0003B70C98	G I W F I G A E P D A G T R A Q R I Q Q L D S H L V A D V E G M E I Y H R D D
UniRef90_F2JWW1	G V W K Y G A D A E N V K D R A F L D V V E P H G K L E E I E N I D L A I Q E G G
UniRef90_F2JWW1	G V W K Y G A D A E N V K D R A F L D V V E P H G K L E E I E N I D L A I Q E G G
UniRef90_E6RN13	G V W A I N A D A E S D A N K Q P V A L V Q P Y G E L N S E I G A L S V S Q D
UniRef90_E6RN13	G V W A I N A D A E S D A N K Q P V A L V Q P Y G E L N S E I G A L S V S Q D
UniRef90_U4LK71	G L W R F G A E P N S S P E G F L V D S V N G T L F A D V E G V T L V P G K T
UniRef90_C9SJ19	G I H Q I D L A E S T S T P G L S V L G K T E D T A T G I A V Y T Q G T
UniRef90_C9SJ19	G I H Q I D L A E S T S T P G L S V L G K T E D T A T G I A V Y T Q G T
UniRef90_UPI00047A9F34	A V W T L P A D P E P V P A T L T K V M A V G E K L V A D I E G L A I Y A G E D
UniRef90_L0DFQ9	G I W E Y G A E P G D G A D R R A V A R V G E H G L T A D V E G I A L Y Y A P E
UniRef90_C5JGK5	S V Y T F K A E D S T T T P E I T V L G K A E D D V T G L A I Y V T E
UniRef90_C5JGK5	S V Y T F K A E D S T T T P E I T V L G K A E D D V T G L A I Y V T E
UniRef90_N4VKU4	G V Y A F N L T E S T A A P E V V K M G E A A A D V T G V A V Y S L N T
UniRef90_N4VKU4	G V Y A F N L T E S T A A P E V V K M G E A A A D V T G V A V Y S L N T
UniRef90_A0A016XKM5	G F W A Y A A D G E G
UniRef90_A0A016XKM5	G F W A Y A A D G E G
UniRef90_Q3IFS5	G V W Q Y D A N P E S D P M R T L I V A A N P G Q L Q G D I S D I S V T A E
UniRef90_Q3IFS5	G V W Q Y D A N P E S D P M R T L I V A A N P G Q L Q G D I S D I S V T A E
UniRef90_F6CVU0	G I W V Y G A D A E N V K D R R L M D V V A P L G H L E E I E S M D M V Y Q A N
UniRef90_F6CVU0	G I W V Y G A D A E N V K D R R L M D V V A P L G H L E E I E S M D M V Y Q A N
UniRef90_M2TD10	P L Y S F Q A S E T T E A P A I Q T V A S D V K V A G L A T Y H G I
UniRef90_M2TD10	P L Y S F Q A S E T T E A P A I Q T V A S D V K V A G L A T Y H G I
UniRef90_C0SI59	S I Y S F K A E D S T S A P K V D M V G K V E D D I N G L A V Y V A V S S
UniRef90_C0SI59	S I Y S F K A E D S T S A P K V D M V G K V E D D I N G L A V Y V A V S S
UniRef90_J2DIB9	G L W R F D A R A T G A T P T K I A A D G K N L V M D A E G V A I A P I G A
UniRef90_U1K9D9	G I W A T S L N P A D N S Q P V S V A K V G E H L V D D V E G L A L S F G
UniRef90_L8LQT0	G I W K F L A E P E T D T T P I L V D Q V G D N L T P D V E G L T I Y Y G D S
UniRef90_UPI000374DFA2	A I W S I S A E P D G K A L S L F Y Q V D N E V L F A D V E G L S I Y K S Q S
UniRef90_B2WM13	P L Y S F Q A S E S T Q A P E I Q V S P V S G K
UniRef90_B2WM13	P L Y S F Q A S E S T Q A P E I Q V S P V S G K
UniRef90_UPI0002558385	A L W K Y N A N D L N Q K R T L I A K T N D T N L K D D F E G V T L Y K K E K
UniRef90_Z5XUP6	G I W F I G A E P T A G T Q P V M L Q T I N D M L V D D I E G M E I Y H A T D
UniRef90_I8T5U9	G I W R F D A S P T G A T R G E P F A K V D K R V L V D D V E G L A L A P V G E
UniRef90_W7Y8Q2	A I Y K F K A Q A Q A D T S S I R L T A A N A H I S Y D I E G L T I Y R I S D G
UniRef90_G2E7J1	G V L K F S A E V D G G N D Y S L V Q S I D A H F L K P D I E G L T L Y Y G P G
UniRef90_F3LN6	G V W M L D L N A A E P K P Q L V L K V G G L L Q A D V E G L A L Y H D R D D
UniRef90_UPI000255BA4B	G I W R L D A Y L A G E A K P Q I A P V D G E R L A A D V E G M G F Y H A A D
UniRef90_B8HQM4	G I W K V S L A R F Q G N S P I L D R V G S R Y L Q A D V E G L T I Y Y A A G
UniRef90_Q0UBI4	P L Y S F Q A T E S T R A P E V K T V S D K I E V A G L A T Y H S N N
UniRef90_Q0UBI4	P L Y S F Q A T E S T R A P E V K T V S D K I E V A G L A T Y H S N N
UniRef90_I0HTL4	G V W Y R A E A E G A P R R R A V A L A G P G P L R G G V Q A M A V V P G G D
UniRef90_I0HTL4	G V W Y R A E A E G A P R R R A V A L A G P G P L R G G V Q A M A V V P G G D
UniRef90_Q0CTZ5	M L Y S F Q A E S T V A P E I K A F G E V G D D I S G L A V Y V S H
UniRef90_Q0CTZ5	M L Y S F Q A E S T V A P E I K A F G E V G D D I S G L A V Y V S H
UniRef90_UPI0002E44ED5	G I W T I G A E P D A G T K I E P F Y Q V D G D V L V D D V E G L S Y P N N R
UniRef90_S8CEA4	K L Y S F P A A D S T A I P K I T D I G P A G G D E I N G L K S Y H G K D
UniRef90_S8CEA4	K L Y S F P A A D S T A I P K I T D I G P A G G D E I N G L K S Y H G K D
UniRef90_UPI0003796BA6	G I I S M N A D A E K D E E R K L L M Q A D Q L G E D F G G L W I D H S G N
UniRef90_UPI0003796BA6	G I I S M N A D A E K D E E R K L L M Q A D Q L G E D F G G L W I D H S G N
UniRef90_U7QBF4	G I L K F Q A E P D A G D N F E V Y N V E D D L V P D I E G L L Y Y G D N
UniRef90_K6ZV69	G I W K M Q L D N N E Q P V L I A K A H A P V P D I E G M G I Y S D D
UniRef90_UPI000365313E	G I W R Y G A E P G D S T A G T K V V S T N G G D I V Q D I K G I S I Y Y G S G
UniRef90_W1S814	G L W R F D A R A T G S T T P V Q I A A A D G K N L V M D A E G V A L A P I G E
UniRef90_UPI0004057190	A V W Q F D A R A S A T T Q G Q A V I H V A D A E L V D D I E G L A Y A V V D
UniRef90_Q7NIT3	G I W R I S A A F E A A S P V L V D K V G G K H I S A D V E G L T I Y Y T A S
UniRef90_UPI0003A35A09	G F W R A P L S G G E A V L V D E I S G E G L T G D V E G I D I Y E G D A
UniRef90_Q0AM33	G V W T M G A E P T D P A E P Q P I A V T D G R E I A A D A E G G A A L L P Q G E
UniRef90_U5QIM4	G I W R I P P S F N R T Q A V L I D R V S G K H I S A D A E G L T L Y T A G
UniRef90_R4UQ44	A V W L F D A A D G S T S G E A I N V D Q E E V L V D D I E G V T F A R V N
UniRef90_UPI00036F84A5	G L W R Y S A A P E A N E D R I L I A P T D G Q H I L T A D I E G V A I M E T G E
UniRef90_A0A059G6Y3	G I W T L A Y E E A D S Q P I E L D T I A A G N G L V A D V E G V S M W R G K D
UniRef90_W3WTE0	T V Y T F N A S E S T A P E I T I L G K A S D D I T G L T V Y V S L
UniRef90_W3WTE0	T V Y T F N A S E S T A P E I T I L G K A S D D I T G L T V Y V S L
UniRef90_UPI0003619F55	G V W A Y G A D A E N I K T R Q L V D A I A P L G K L E E I E G L D L I Y A Q N
UniRef90_UPI0003619F55	G V W A Y G A D A E N I K T R Q L V D A I A P L G K L E E I E G L D L I Y A Q N
UniRef90_A3WK29	G I W L F D A A V N S A E Q G E L I I K T D A E I V P D I E G L L A F A Q Y N N
UniRef90_UPI000301CA62	G I W R F D A R A S G S S T P V K L A A A D G K R L V A D V E G L A I A A E G A
UniRef90_A8P5M1	G L W R Y G A E P D A G T D R V L V D S I Q G N L F P D V E G V T L V H G P T
UniRef90_S5C1H3	G I W S M D I S S T K H E P T F V I S A I A P P V E A D M E G L V A L F T V D
UniRef90_UPI00036593E7	G L L F Y S S Q W E A D S R A L Y R P E D I T G F E G V A T Y
UniRef90_UPI00036593E7	G L L F Y S S Q W E A D S R A L Y R P E D I T G F E G V A T Y
UniRef90_U5DNR8	G I L K F A A E P N G G D D F T L V Q P I D T S P V V P D I E G L T I Y Y G E D
UniRef90_K9RD49	G I L K F S A E P D A G S D F T V V Q S V D A D Y L T P P D I E G L S I Y Y G D N
UniRef90_D9USA7	G I W K Y G A E P G A D T S R L F D T A S G G H I L T A D V E G I T A L V P E G E
UniRef90_G2IPZ8	G L W R F G A S P T A P V E P V K V A A A D G R Q I V A D A E G L V A L A S K G A
UniRef90_S3GIZ1	G L W R F A A D P A A P T T A P I A R V D G R T L V A D A E G L V A L A S K G A
UniRef90_M2U638	A I W R F D F A P D G N G K A T R I A G V D G Q R I V A D A E G L V T I M R D A
UniRef90_F5Z928	G I W A L D V S E A T M P S S T L S K T F N K T V T A D I E G L V S L F D V D
UniRef90_UPI00040A981B	G M R K Y V A D P D A K N N N E L A F F G Q K D F K A D N E G I A I Y K K T A
UniRef90_S3AMS3	G I W R I D A G L R G T P V L I D K V G G K R L S A D V E G L T L H Q K D
UniRef90_UPI000468F490	G I R K Y K A D P S L N D N Q E I A L F G Q K D C K A D H E G I T A I Y K A S A
UniRef90_W0AG29	G L W R F D A R P T G A A E V S I A K V D K Q R L F D D V E G L A I A S G S E
UniRef90_K0CPI1	G I W A L D I T S N S N Q P Q F I A E I E A P V E A D V E G L A L F F E V D
UniRef90_A0A010QAZ2	G I W A L N V S K N N E V P R F I A E I A P V E A D V E G L A L F F E V D
UniRef90_D7W501	G I W H K Y Y A D P E K G N E E L S V F G K G D F T S D V E G I S I Y P T S K
UniRef90_F9YVW2	G I W K Y Y A D P K K G N Q E L A F T E G F K R D H E G I A I Y H Q T D
UniRef90_Q0C5T3	G L W T V A Y R E D A P T P A L I D T I D G P N L V A D V E G V S I W K G A N
UniRef90_C7PM19	G V R K Y L A D P A K W E N K L A L F A K E G F V S D H E G I S I Y P T S D
UniRef90_A5FK69	G I R K Y K A D P A L N D N K E L A F F G Q K D F K A D H E G I A I Y K K T D

250 260 270 280

UniRef90_L7INP0	Q E Y V F V A Q E S Q L S V Y G P D W T L L G T V Q L A G L D D I
UniRef90_L7INP0	Q E Y V F V A Q E S Q L S V Y G P D W T L L G T V Q L A G L D D I
UniRef90_K2K3B9	D G Y L V V S S Q G N D S Y I L F Q Q P P Y A L I K H F R I R T N L G I D G
UniRef90_UPI0003B70C98	G T R L L V V S S Q G D N S Y V L Y R I E G K R S E P A K F A V T A D I G I D G
UniRef90_F2JWW1	G K G V V L I A D E G K G F N L Y D R N S G E F L A K F D V
UniRef90_F2JWW1	G K G V V L I A D E G K G F N L Y D R N S G E F L A K F D V
UniRef90_E6RN13	G T L W L S A T D G N K V Y A Y Q A Q T D W S L A G E H T I
UniRef90_E6RN13	G T L W L S A T D G N K V Y A Y Q A Q T D W S L A G E H T I
UniRef90_U4LK71	K D G F I L V S C Q G V S A Y N V Y Q R K L P H K F V M T F T I S E D G K V D G
UniRef90_C9SJ19	D A D Y L F I A Q E G T V A V Y R Y P F E L V G T L A L T G L E D I
UniRef90_C9SJ19	D A D Y L F I A Q E G T V A V Y R Y P F E L V G T L A L T G L E D I
UniRef90_UPI00047A9F34	H R Y L V I S S Q G N D S Y V V L D A L P P Y A Y R G R F R I A L D S G V D G
UniRef90_L0DFQ9	G K G Y I L A S S Q G N S T V N V Y E R S G D H A Y V L T I D P K A S G N G D
UniRef90_C5JGK5	S S T Y L F I A S E Y T I G I Y S P K L E L Q G T V E L T G L E D I
UniRef90_C5JGK5	S S T Y L F I A S E Y T I G I Y S P K L E L Q G T V E L T G L E D I
UniRef90_N4VKU4	T D D Y L L V A Q E S A V A V Y R S S F F E L V G T L R L T G L E K V
UniRef90_N4VKU4	T D D Y L L V A Q E S A V A V Y R S S F F E L V G T L R L T G L E K V
UniRef90_A0A016XKM5	
UniRef90_A0A016XKM5	
UniRef90_Q3IFS5	G S V W
UniRef90_Q3IFS5	G S V W
UniRef90_F6CVU0	G K G Y L L I I A D E G A G F L V Y D R E G E Q S F K A K F D V V E E A K I L A
UniRef90_F6CVU0	G K G Y L L I I A D E G A G F L V Y D R E G E Q S F K A K F D V V E E A K I L A
UniRef90_M2TD10	S E D Y L F V A H D T T L D V Y D A T V K L R G S I A L S G I S E
UniRef90_M2TD10	S E D Y L F V A H D T T L D V Y D A T V K L R G S I A L S G I S E
UniRef90_C0SI59	S I H F L I V S A N T I G V Y S P R L E L Q G S L K L T G F E E L
UniRef90_C0SI59	S I H F L I V S A N T I G V Y S P R L E L Q G S L K L T G F E E L
UniRef90_J2DIB9	K D G Y L V L V S S Q G D N A Y V A Y R M S D D S Y V G R F R I V D G A I G G
UniRef90_U1K9D9	K S P V L V V S S Q G N N S Y Q L Y E A T P P Y R H L A G F R V G L D G G I D G G
UniRef90_L8LQT0	G K G Y L F A S S Q G D S T Y A I Y E R S G D N N Y L G N F A I G N S R D I D G G
UniRef90_UPI000374DFA2	A P D Y L V V S S Q G N N S Y L V F D L S T G Q L A A R F K I G A D N G I D G
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UniRef90_B2WM13	
UniRef90_UPI0002558385	G Q G Y L I L S S Q G N N S Y A V F D R A S H K Y L K S F T L V D G R V D G
UniRef90_Z5XUP6	T R Y L V V S S Q G D N S Y V L Y K I V P S L E F A G K F A I S N N L A I D G
UniRef90_I8T5U9	R G G Y L V A S S Q G D S S Y A V Y A L E D G A P V G R F R I T D N G G V D G G
UniRef90_W7Y8Q2	T K G Y L L A S I Q G N F S Y A I F D L S E K N N Y T I S F I K D G V F D G
UniRef90_G2E7J1	G T G Y L L V V S S Q G D S T Y A V F E R S G D N A Y V G S F V V A D T D G I D Q
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UniRef90_UPI000255BA4B	U N Q Y L L V V S S Q G N N S Y A L F N R D G S E F V G H F K V D I N K G L D G G
UniRef90_B8HQM4	N R G Y L L V V S S Q G N N T F A I Y D R R S T N R Y L G S F G L V N A G R V D G
UniRef90_Q0UBI4	S S D Y L F V F H V Y D S K I A P K G T V E F N G V A D L S I E G
UniRef90_Q0UBI4	S S D Y L F V F H V Y D S K I A P K G T V E F N G V A D L S I E G
UniRef90_I0HTL4	G R G R L
UniRef90_I0HTL4	G R G R L
UniRef90_Q0CTZ5	R S H Y L F V A Q T D V I E I Y S P S L E L K G S L A V T G A E D I E I
UniRef90_Q0CTZ5	R S H Y L F V A Q T D V I E I Y S P S L E L K G S L A V T G A E D I E I
UniRef90_UPI0002E44ED5	S E K Y L V A S S Q G D D S Y V V F D L A K N G Q V V A K F N I V A D V G I D G
UniRef90_S8CEA4	N T Y L L V G I E D A I E V F D V K K L D K S I G T I K F A D E E
UniRef90_S8CEA4	N T Y L L V G I E D A I E V F D V K K L D K S I G T I K F A D E E
UniRef90_UPI0003796BA6	
UniRef90_UPI0003796BA6	
UniRef90_U7QBF4	G N G Y L I A S S Q G D S S Y G L F E R A G N N E F L G Q F I I A G N G D I D Q
UniRef90_K6ZV69	G E K F L V V S S Q G N N R F A I Y R I D A D N E L L G V F A I S A N K G I D G
UniRef90_UPI000365313E	G A G Y L L A A S Q G S N R F H V Y S R D D N R P L G A F A I P A G N G I D A
UniRef90_W1S814	K D G Y L V I V S S Q G D N A Y V V Y K M S D D S Y V G R F R I V D G A I G G
UniRef90_UPI0004057190	G E P L L F V S S Q G N D N T F A V Y D L E D G E A P W A L R S H F R I R T N P G I D G G
UniRef90_Q7NIT3	N Q G Y L I A S S Q G D N T Y A V Y D L E S H A F V T R L Q I V D A V I D G
UniRef90_UPI0003A35A09	G T G W I V V V S S Q G S S T F N V Y D R A A P N A Y L G R F A L T L G E D M
UniRef90_Q0AM33	R G G W L V V V S S Q G D N T Y A V Y D L E S H A F V T R L Q I V D A V I D G
UniRef90_U5QIM4	N Q G Y L L A S S Q G D S T F V L Y D R R G R N R F L K S H F R I R T N P G I D G G
UniRef90_R4UQ44	G R D L L F V S S Q G N D N S Y L V F E Q Q A P W S L L S H F R I R T N L A I D G
UniRef90_UPI00036F84A5	T G G W L F V S S Q G D D A Y A V F D L E T G A F I D R F R V T E G V V D A
UniRef90_A0A059G6Y3	G K G W I V A S A Q E A N R Y V V Y E R Q A P H T P M G A F M L V E N A G V D G
UniRef90_W3WTE0	E T D Y L L V A Q T D I V E Y D T S L N L L G T L T L S S D D D I
UniRef90_W3WTE0	E T D Y L L V A Q T D I V E Y D T S L N L L G T L T L S S D D D I
UniRef90_UPI0003619F55	G K G Y L V V A D E G A G F L L Y R R D G D Y A Y E T K L S I K D
UniRef90_UPI0003619F55	G K G Y L V V A D E G A G F L L Y R R D G D Y A Y E T K L S I K D
UniRef90_A3WK29	E T L L F V S S Q G S D S Y V I F D A E A P Y T L R H H F R I R T N V G I D G
UniRef90_UPI000301CA62	G N G W L V A S S Q G D N A Y T T L Y R L A D E R F T L R H H F R I R T N V G I D G
UniRef90_A8P5M1	D K G L L I V S A Q G V S A F N I Y R R G T H E F V G T F T V Q A G Q V D K
UniRef90_S5C1H3	A Q T Y L I A S S Q G N N S Y A I Y N I N S K N A L M G L I T A N N S I D G
UniRef90_UPI00036593E7	N D G T V A A A S P Q S S S I W L Y S
UniRef90_UPI00036593E7	N D G T V A A A S P Q S S S I W L Y S
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UniRef90_K9RD49	G T G Y L I A I A N S Q G D S S Y A V F S R E G N N E Y L G S F V V G D N N G I D Q
UniRef90_D9USA7	A G T H L F A S S Q G S D D Y T V Y D R S S G A Y Q G R F S V A S G S A A D G
UniRef90_G2IPZ8	E G G Y V I V S S Q G D N A Y T T L Y R L A D M A Y A G R F R I V D G T V G G
UniRef90_S3GIZ1	R G G Y L I V S S Q G D N A Y T T L Y R L A D M A Y A G R F R I V D G T V G G
UniRef90_M2U638	G S K Y L I A S S Q G D S T Y P V F R V E G D E A Y V G R F A V T A R G D I D G G
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UniRef90_UPI00040A981B	T T G Y I L V S N Q Q D N T F N V Y P R E G A N G N P N E Y P L L A V I P T
UniRef90_S3AMS3	G D G Y L V A S S Q G D N S F A A Y D R E D D N E Y E G G F R V I A A S G T D G S
UniRef90_UPI000468F490	T T G Y I L V S N Q Q A N S F M V Y A R E G S N G N P N E H K L L A E V P T
UniRef90_W0AG29	G D G Y L V V S S Q G D N A Y A L Y R L A D D A Y V G R F R I A K G R F G S
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UniRef90_A0A010QAZ2	G K T Y L I A S S Q G N D S Y A I Y Q I K N E N P L T G L I K T A D K A I D G G
UniRef90_D7W501	G K G Y I L V S N Q Q N D T F N V Y P R E D Q S K G R I A E I P V
UniRef90_F9YVW2	T T G Y I L V S N Q Q K N T F M V Y P R E G I L A G N P H Q Y P L L A Q I V P L
UniRef90_Q0C5T3	G A G W V V A S A Q E D D R F V V Y E R Q A P H A P R G S F S I I A N V G I D E S S
UniRef90_C7PM9	S T G Y I L V S N Q Q N N S F M I Y R R E G E N G A A N E H K L M A E V P V
UniRef90_A5FK69	S T G Y I L V S N Q Q A N S F M V Y P R E G A N G N P N N H P L L A E V P T

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UniRef90_UPI000462D7D3	V V I A D N K S G G I G V F D M G G K L Q F R P D G M I G N V D L R A G F P L	
UniRef90_J7L0X6	I V I G T L K K A G L D V Y G L D G E R I Q H I P A G R F N N V D V L Y G F E L	
UniRef90_D9VL69	L V V A T A K Q G G G L R V Y D L D A R Q V Q S I P A G R F N N V D L V Q G L R L L	
UniRef90_UPI0001DD0666	L I I G T D K K A G G L H V V Y D L K G E D L F F L D A G L L N V D L V D L R D L T L	
UniRef90_UPI0002F133F8	L I V G T D K D G G G L Y A F D L Q G K I L K S I P L Q R P N N V D I A Y G L I I	
UniRef90_D9X389	L V I A T A K E G G G L Q V Y D L G A R L V Q S I P A G R Y N N V D L V T G L R T	
UniRef90_UPI00047DD4B0	I I V G T D K D G G G L Y A F D L Q G K I L K S I P L Q R P N N V D I A Y G L I I	
UniRef90_E8U4Z1	L V I G T R K D A G G L T V F D L Q G R T L Q D V A P T R Y N N V D V V Y G F N L	
UniRef90_W5W786	L V I G T A K Q G G G L Y A Y R L S G E L V Q H I P P S R F N N V D V L Q G V A L	
UniRef90_V5F743	L L F V T L E G D G G L A V Y N P A G D E V E R L E N I E V T G A D I R Y G I K A	
UniRef90_V5F743	L L F V T L E G D G G L A V Y N P A G D E V E R L E N I E V T G A D I R Y G I K A	
UniRef90_E1SW12	R I I G T N K R W G L L S F D M A G N T V Q A L A V G R V N N V D I R Q G V K L	
UniRef90_UPI00047D1D71	L I L G T D K N G A L Y V F D L K G K I I A N K N L K R P N N V D I E Y G L K L	
UniRef90_N0CNN4	L V I A T A K E G G L R V Y D L K A R T L Q S I P L Q R P N N V D L V H R L R L	
UniRef90_TONU46	L V I G T D K N G G L R V Y D L E G K I Q K D L S V Q R P N N V D I A Y G L M L	
UniRef90_UPI0003B557C4	R I L G T D K K S G G L Y V Y T L D G E T A Q Y L A A G R M N N V D V R Y G F E A	
UniRef90_E4TCX8	L I I G T D K D G G G L F V F N L D G V I V N K V T D K R P N N V D I E Y G F K L	
UniRef90_B7U1A1	L I I G T D K N G G G L Y V Y F D L Q G K I I K E K T V K R P N N V D V A Y G L K L	
UniRef90_D2BFE8	L V I A T A K E G G G L Y V Y F D L Q H I L P A G R F N N V D I V Y G F E L	
UniRef90_UPI0004638E28	I V I G T L K E A G G G L D V Y G L D G R R L Q H I A A G R F N N V D I V Y G F E L	
UniRef90_V6UEV3	I V I G T L K E A G G G L D V Y G L D G K R L Q H I A A G R F N N V D V I Y G F E L	
UniRef90_C6XMH5	L I L G T N K D E G G G L H V Y S L A G K E L Q F L D V G A V N N V D V R G N	
UniRef90_F0P303	L I I G T D K T G G G G L Y V Y A N L Q G Q I V K V Y P M D R P N N V D V A Y N F D L	
UniRef90_UPI0003C7458C	L V I A T A K E G G G L R V Y D L D A R Q V Q S I P L P A G R F N N V D L V H G T A L	
UniRef90_UPI0003623BB6	L I I G T D K D G G G L Y V Y F D L K G K I I V K E V H D K R P N N V D I A Y G L K L	
UniRef90_E0TE92	L V L G T D K Q S G G L Y A Y R L D G G V A Y L P V G R L N V N V D V R P L	
UniRef90_A3J4K5	L I I G T D K D G G G L Y V Y G L D G K I I N G K I I K S I P L K R P N N V D V A Y K L K V	
UniRef90_T0IFM8	L I I G T D K K A G G G L Y V Y G L D G K V R D F A A A G A L N A D L R E V R M A	
UniRef90_UPI00037FE5D4	L V I A T A K E G G G L R V Y G L A A E E L Q A V P A G R F N N V D L V P R M A L	
UniRef90_UPI00047D565B	L I I G T D K N G A L Y A F D L D G K I I V K S I P L P K R P N N V D I A Y N F N Y	
UniRef90_C2G3A4	L V L G T D K N G A L Y V F D L Q G K I I V K S I P L K R P N N V D L A Y G L M L	
UniRef90_UPI00036753A5	L V I A T A K E G G G L R V Y D L E A R L V Q S I P L P A P R F N N V D L V H G L R L	
UniRef90_A6ECW0	L I V G T D K N G G G L Y V Y N L D G K I I N K V K D K R P N N V D I A Y G L K L	
UniRef90_UPI000367682D	L V I A T A K E G G G L R V Y D L D A R P L Q S I A A G R F N N V D L V H G L R L	
UniRef90_UPI000418873B	L I I G T D K D G G G L Y V Y N L E G K I I V K S I T L K R P N N V D I A Y G L L V	
UniRef90_J4V1V1	L V F G T D K R S G I Y T F D L L G N E I S Y T K I G K I N N I D L R S I D L E	
UniRef90_M4SIK6	V I F A T D K T D G G L Y V H D M D G R V R Q F L R S G P L D N V D V R D G F R V	
UniRef90_M3DM04	L V V A T A K E G G G L R V Y D L D A R P V Q S I P L P A G R Y N N V D L V T G L R T	
UniRef90_A4BD29	L I V T A E G D G V L V Y D E Q G R E V A S A D D E A L S A D L V Y D L L	
UniRef90_A4BD29	L I V T A E G D G V L V Y D E Q G R E V A S A D D E A L S A D L V Y D L L	
UniRef90_UPI0003698CD3	L L I G T D K Q G G G L Y A Y N L K G E I I N K I P L N R P N N V D V A Y G F E F	
UniRef90_A0A059EEY2	L V L G T N K D E G G L H V Y N L A G E E L Q F L D V G R V N N V D L R L	
UniRef90_D2PPX8	L V I T T A K E G G G L K V Y N L S G A Q V Q A L E T G R F N N V D L L S G V R F	
UniRef90_F4C9Q4	L I I G T D K D G G G L Y A F N L Q G K I I V K R V G I K R P N N V D I A Y G F Q L	
UniRef90_K2EJY3	L I L A T N K E G G G L Y V Y S L D G K I I K E S Y Q I G P I N N V D I R A N F S Y	
UniRef90_UPI0003FB61E2	L I I G T D K N G G G L Y V F D L D G K I I K M L K D K T V H R P D N V D I E Y G L M L	
UniRef90_UPI000248A06B	V L F G T D K S D G G L Y V H D M D G K V R Q F F A D G P L N P N V D L R P G F M V	
UniRef90_Q1YSY6	L I F G T D K K S G G L Y S Y N L Q G E T V G Y T E L G K I N N I D T R S V L	
UniRef90_V4PEC6	L I Y A T D K K A G G L Y V Y D L K G K Q V Q F L A V G P M N N V D L R S G L N I	
UniRef90_U2YY7	V M F G T D K T D G G L Y V H N L D G S V R Q F L P S G Q L N V N V D L R T G F Q V	
UniRef90_UPI000366A30F	L V A L T L K E G G G L G V Y D L R G R L V Q H I P A G R F N N V D V V Y G F V L	
UniRef90_I2GMK9	L I I G T D K D G G G L Y V F D L N G K I I Q A D K V V K R P D N V D V E Y G L R L	
UniRef90_E8WBG1	L V V A T A K E G G G L R V Y D L D A S L V Q T I I P A G R F N N V D L V S G L R T	
UniRef90_UPI00036AC16A	L I F G T D K R S G G L Y V T Y N L N G E K V N Y T E L G N I N I D T R T I N I T	
UniRef90_FORMG0	F V I A T R K E G G G L T V F D L K G Q T I Q D L N P G R Y N N V D L V R G F R L	
UniRef90_S4A7N7	V V V G T D K K G A L E V Y D L K G A R I I Q R I S G D Y G N N V D V R G N V	
UniRef90_Q1K024	L I V G T D K N G G G L Y V F D L K G H M L K T V A L K R P N N V D I E Y G L M L	
UniRef90_K6YBB6	I V V T T L K K G G G L D V Y D L A G K I I Q F V K G G R F N N A D I I Y D F K L	
UniRef90_UPI00030E8364	L V V G T D K K G G G L Y V Y D L K G A Q K S F L P A P G L N V N V D L V E	
UniRef90_W6TL34	L I I G T D K N G G G L Y V F D L K G K I I K N K G K L K R P N N V D I A Y G L V L	
UniRef90_S1TAG5	L V V V A T A K E G G G L R V Y D L D A R Q V Q S V P A G R F N N V D L V H G M S L	
UniRef90_Q2SG22	L V V I A T L K E G G G L V V L N M Q Q G T L Q R I I D A G R F N N V D V V Y G L K A	
UniRef90_UPI0003B46890	W V V G T D K K R G G L A V Y S A D G E L R H F L P E G R E N N V D A L P L	
UniRef90_J4X626	L V V F G T D K K S G G L Y V Y T Y D L N A K K I I G Y T K L G N I N I D L R S V N L D	
UniRef90_F6IFH8	L I V G T D K K A G G L Y V Y G L D G K V R D F L A A G A I N N V D L R E V R M A	
UniRef90_UPI000403500C	L I G T D K D G G G L Y V F D L T G K T I D S L D I Q R P N N V D I G Y G L I H	
UniRef90_M4FTL4	T G G F H I F N L D S S E V T S I V T G R T K L V T T L Y G L G G	
UniRef90_M4FTL4	T G G F H I F N L D S S E V T S I V T G R T K L V T T L Y G L G G	
UniRef90_B6IQK7	L I I T A V K D A G G L Y V Y D L Q G R L V Q R V E A G R Y N N V D V A Y G L A L	
UniRef90_I0K2J5	L I I G T D K D G G G L Y V F D L D G K L Q P D K G L K R P D N V D V E Y G L M L	
UniRef90_UPI000473AB61	L V F G T D K R S G I Y T Y N L K A E K I G Y T E I G D I N N V D V R T M N V T	
UniRef90_UPI0003683354	R V V G T L K N G G L A V F D L R G N Q V Q H L E P G R F N N V D I V Q G A R I	
UniRef90_UPI00037E1505	L I L G T D K N A A L M V Y D L E G K I V K D K S V T R V N N V D I A Y G F Q V	
UniRef90_X1SU07	UniRef90_E8RML6	V I Y G T D K K A G G L Y S Y D L N G K V I D F L T V G P M N N V D L R N D A L
UniRef90_UPI0003B3F6F2	L I L G T N K D E G G G L H V Y D L S G A E T Q F L D V G A V N N V D V R A N	
UniRef90_UPI00039D4582	L V V V A T A K E G G G L R V Y D L Q A R P V Q S I A P G R F N N V D I V E D V R L	
UniRef90_H1ZBMO	L I I G T D K E G G G L Y V Y D L Q G K I V Q Y V D M A R P N N V D I A Y D F P Y	
UniRef90_UPI000375B002	L I L G T D K D G G G L Y V F D L E G K T I D S L V V R R P N N V D I G Y G L Q L	
UniRef90_H1H5G9	L I I G T D K E G G G L Y V F D L Q G K I V H F I D M A R P N N V D I A Y G F L Y	
UniRef90_U2ZY21	L L V V G T D K K A G G L Y V Y D L D G A V R S F V P A G Q L N V N V A L V E	
UniRef90_H0B107	L V I A T A K E G G G L R V Y D L D A R L V Q S I P L P A G R F N N V D L V H G L R L	
UniRef90_LOG3A3	L I V G T D K D G G G L Y V F D L K G K A I D S L T V R R P N N V D I S Y G L S L	
UniRef90_W9BUV8	L I V G T D K K A G G L Y V Y G M D G V R G S S L T G R Y N N V T L F	
UniRef90_UPI00046F017F	L V L G T D K N G A L Y V Y F D L E G K V Q E S K G L K R P N N V D V A Y G L N L	
UniRef90_UPI000478B8F5	L I V G T D K D G G G L Y V F D L K G N I I D S L D S L G I Q R P N N V D I G Y G L Q A	
UniRef90_K2Q6T6	I V F G T D K D G G G L Y A F D L Q G K V I E N K G L K R P N N V D I R Y D F K L	
UniRef90_UPI00036F9256	V I L G T D K N D G G L H V H D L S G A E L Q F L D V Q G L N V N V D V R G N	
UniRef90_U5C5H1	L I I G T D K D G G G L Y V F D L E G K I I D S L N L Q R P N N V D V G Y G L S I	
UniRef90_V4Q690	L I L G T D K K A G G L Y V Y D L D G S V R D F V A H G P L N V D L R T I Y G E	

	90	100	110	120
UniRef90_L8ERM7	S S G R A D L A V V S D R	G N D R L R F Y R I D R D G G P L T D V T D P A A		
UniRef90_UPI00036BDAED	N G D E R H I A A A S N R T A	N T I T V M E I D A E T T E V K T I G E F		
UniRef90_UPI000462D7D3	S G S S L L V V G G N N R S D	N T V A L W A L D T A T R T L S P V Q A R S I		
UniRef90_J7L0X6	D G E K T D L A I V S D R	G R D R I R A F A I D P E R P P L T D V T A P D V		
UniRef90_D9VL69	A G G P A D V A V V V S D R	G N D R I R V Y R I D R D G G P L T D V T D P G A		
UniRef90_UPI0001DD0666	A D G T V L V A A S D R T	D P D N S I A L F F R L D T Q S A R L E P L G S		
UniRef90_D9X389	G A A G I L V A A S D R N D P	P A N A L L F F R L D P A T A T L L T P L G		
UniRef90_UPI00047DD4B0	P T G R A D V A V V V S D R	G N D R I R I Y R I D P S G G P L T D V T D P A A		
UniRef90_E8U4Z1	N G K K V D D V A V T T E R E T	N S I R I F S L P D E P I D N G G I		
UniRef90_W5W786	G G R A V D D L A V V A S D R	K N D R L A V Y A I D P V T R T L T D V S S A T M		
UniRef90_V5F743	G A G E Q D D L A I V S D R	G L D Q V R I Y R I A G D G K P L T D L T A P D V		
UniRef90_V5F743	N G D S I D L L A V A V L P	P E D N S I G F Y S V S N K D G V L N D I G T L T T		
UniRef90_E1SW12	N G D S I D L L A V A V L P	E D P E D N S I G F Y S V S N K D G V L N D I G T L T T		
UniRef90_UPI00047D1D71	G G Q L R D V G V A S N R D	G D T L T P F L I D A E G E L A L L P D		
UniRef90_N0CNN4	N G K P T D I A V T T E R I	T H K L R F F A L P E M K P I D N G G I		
UniRef90_T0NU46	A S V R T D L A V V V S D R	G H D R L R F Y R I D R D G G P L T D V T D P A A		
UniRef90_UPI0003B557C4	N G R K T D I A V T T E R Y T H	T H K L R I F S L P D E M K P I D N G G I		
UniRef90_E4TCX8	G D E T V D I A V V A S D R T	N I A L A V F F I D R E T G A L S A A P G G		
UniRef90_B7U1A1	G N Q T I D I A L L T T E R E	R N Q V R I F S L P S M K E V G A F S V		
UniRef90_D2BFE8	G G K Q V D I A V A T E R M T H	K K L R V F V S L P P D D N G G L L P M F E G E T G		
UniRef90_UPI0004638E28	A G R K T D L A L V V S D R	G R D R R V A Y A I D P V R P P L R D V T A A D V		
UniRef90_V6UEV3	G G K K T D L A L V V S D R	G R D R R V A Y A I D P A E P P L K D V T A P N V		
UniRef90_C6XMH5	L L A V A V A S N D E T G	G I S W F S I D P A T S N V Q H L N D		
UniRef90_FOP303	N G T R D I A V V V T E R K Q	N K I R I F S L P N L E P V D N G G L		
UniRef90_UPI0003C7458C	T G T R S D L A V V V S D R	G H D R L R V Y R I D R D N G P L T D V T D P Q A		
UniRef90_UPI0003623BB6	A G K P T D I A V T T E R F T H	K K L R I F S L P D M Q P V D N G G L D M F V G		
UniRef90_E0TE92	A D G A V V A T T E R S D E	T T V V F T V Q D E G I L E P I D N G G I		
UniRef90_A3J4K5	G N T T D I A V T T E R E T	N K I R V F S L P N L E P I D N G G I		
UniRef90_T0IFM8	D G S K R I L V G A S D R T	D A E P R I A L F N L D E A S G K L L T A L G A E A F		
UniRef90_UPI00037FE5D4	S G G R A D I A V V V T D R	G N D R L R F Y R I D R D R G P L T D V T D P A A		
UniRef90_UPI00047D565B	N N S K I A V V T T E R E T	N K I R I F S L P D M K A D N G G I P V F E G		
UniRef90_C2G3A4	N G K P T D I A V T T D R G H	D R L R F Y R I D P G R T A A P L R D V T D P A A		
UniRef90_UPI00036753A5	P T G P A D L A V V T D R G H D R L R H R D P R P G G P L T D V T D P A A			
UniRef90_A6ECW0	S G K K V D I A V A T E R E T	N K I R V Y S M P D L K A V D N G G I E V		
UniRef90_UPI000367682D	P S G R A D L A V V T S D R	G H D R L R I H R D P R P G G P L T D V T D P A A		
UniRef90_UPI000418873B	N G K K T D I A V V T T E R E T	N K I R I F S L P D M V A I L D N G G I D V		
UniRef90_J4V1V1	N K G S F S I F A S N R S K	H S L W Y E S K A I D L L I N N P K N S N		
UniRef90_M4SIK6	G G K D Y V L V A A M E R	K R F G I M T F L F D P D T L E T R P Y G		
UniRef90_M3DM04	P A G R T D V A V V V S D R	G N D R L R I Y R I D P A R R P L T D V T D P A A		
UniRef90_A4BD29	A G S D V V L V F A Q E	D A E A L S F Y R F N P A A D E L L Q A A G D W P L		
UniRef90_A4BD29	A G S D V V L V F A Q E E	D A E A L S F Y R F N P A A D E L L Q A A G D W P L		
UniRef90_UPI0003698CD3	N G Q K I D L A I T T E R	A N Q K I R V S L P D F K L I D N G G I D V		
UniRef90_A0A059EEY2	G D V V A V A S N D E T N S I	G R D R R S W F A I D P A T A T I G H V G D		
UniRef90_D2PPX8	A D G L A D V A V V V S D R	G R D R R T Y R I P N N A T L T D V T A A S V		
UniRef90_F4C9Q4	N G K S V D I A V V L T E R E T	N K I R V F T L P D L S P V D N G G I D V		
UniRef90_K2EJY3	D H T V M D A A A T Y K K D K	G L A F F A V H P E T G K L A Y L G L G D H		
UniRef90_UPI0003FB61E2	N G K K T D I A V V T T E R F T H	L R I Y A L D M K P L D G G G I A V F E G		
UniRef90_UPI000248A06B	D G R E Y V L V A A A E R	K R F G I M T Y L F D P A T L E Q R Y G		
UniRef90_Q1YSY6	D A D T Y I V A S N R T Q	Q S V D L W R F D S A M G E A A A K G D F S L		
UniRef90_V4PEC6	A G L P E T I V A A S D R V K G	G A A L F K L D P A T L Q T T P W G		
UniRef90_U2YYG7	N G R E M V L V G A T N D T P G G A G I	N F Y L F D P D T L Q T V D Y G		
UniRef90_UPI000366A30F	A G R R T D L F V V V S D R	G R D R R R A Y A V A D R P G P L T D V T A A D A		
UniRef90_I2GMK9	N G K P T D I A V V T T E R F T H	K L R I Y S L D M K P V D G G G L A M F V G		
UniRef90_E8WBG1	P A G R A D F A V V S S D R	G N D R L R V Y R V D P S G G P L K D V T D P A A		
UniRef90_UPI00036AC16A	D D D G L L I F A S N R T	L N S L D I W A F S D T N M L A N F N L P K K		
UniRef90_FORMG0	G G E T V D L A V T S D R	G K G D R V A F V D P Q T R T L R E V T S P A T		
UniRef90_S4A7N7	V V V S A D D E A A G G D G	M R V Y R I D P A T R R L K H K D		
UniRef90_Q1K024	G G K S V D I A V A T E R L T S K	L R V F S L P D M T A D N G G L D M F V G		
UniRef90_K6YBB6	N G K N T D I V V V S D R	G L D K L A I Y S I D A K G T R L V D V T A A N G		
UniRef90_UPI00030E8364	P D G R V L V A A S D R S D A T A S I	H L S L L D T A T G T L R F I G R Q		
UniRef90_W6TL34	A S K K T D I A V V T T E R M T H	K L R I Y S L P D M K P L D N G G V		
UniRef90_S1TAG5	G T G A T D L A V V V S D R	G S D K L R V Y R V D G D H A P L T D V T D P S A		
UniRef90_Q2SG22	R R H E N D F A V V I D R	G S D K L R F Y R I N P D I D P L T D V T S P D A		
UniRef90_UPI0003B46890	G D D R F L L A S N R T H	K S I D L F M A D M Q A D S I A L T Q		
UniRef90_J4X626	D F G S F T F I F A S N R T T S T L D L W I Y E D E A M D A L A K S K N F N I			
UniRef90_F6IFH8	D G G T R I L V A A S D R T D K A Q R I A L F W L D G A T G K L T E I G S D T F			
UniRef90_UPI000403500C	G K D T I D F A V T G E R L T S K I R F F S L D M K E L N P G G L E V Y Q G			
UniRef90_M4FTL4	K A G S S D V V T I A Q T D S I R V F D T A S F K E I P T L A S			
UniRef90_M4FTL4	K A G S S D V V T I A Q T D S I R V F D T A S F K E I P T L A S			
UniRef90_B6IQK7	G G G V M D V A V A S D R G R D R R M W R I D P N S A P L A D V T D P E Q			
UniRef90_I0K2J5	K G K P T D I A V A T E R L T H K R I Y A L P A M T P D N G G L D M F V G			
UniRef90_UPI000473AB61	D D D N K D I F A S N R T T N T L D I R V Y K D T N D K A V K D I S K E P Y			
UniRef90_UPI0003683354	G R R T D L L A V V V S D R G R D R R R V Y A I D R R G A L T D V T T A N P			
UniRef90_UPI00037E1505	N G N P T D I A L V T E R G R D L L R I F S I P E M D S I D N G G I			
UniRef90_X1SU07	G L P V V V A A S D R I G N G V R F F K L D P A T L K T T D W G			
UniRef90_E8RML6		P Q T R E L E N V A A R P L		
UniRef90_UPI0003B3F6F2				
UniRef90_UPI00039D4582				
UniRef90_H1ZBM0	G R E P A N L A V V V S D R G R D R I R Y R V D P H E G P L V D V T A A G V			
UniRef90_UPI000375B002	Q N Q K I D V A I V T E R N A N I R I F K L P E L T P I D G G G G L			
UniRef90_H1H5G9	G D R T V D F A V T G E R L T S K L R F F S L P D M P G G L E V Y E G E T G			
UniRef90_U2ZY21	G R H G L L V A A S D R T D P L N S V A F F A L D R N T G A L T S L G			
UniRef90_H0B107	S G G T A D V A V T S D R G H D R L R I H R I D P S G G P L T D V T D P A A			
UniRef90_LOG3A3	G D S L V D F A V T G E R L T S K L R F Y A L P M Q E I A P G G I E I Y Q G Q			
UniRef90_W9BUV8	A G E H G I V V A A S D R T D P V H S L A L F L L D P V T G S L S S L A S			
UniRef90_UPI00046F017F	G G H K T D I A V V T E R E A N K I R V F S L P E M K A I D N G G I			
UniRef90_UPI000478B8F5	G D R K V D F A V T G E R L T S R L R F Y S L P D M T G G E V Y L G E T G			
UniRef90_K2Q6T6	N D S T V D V M V F T E R E L Q Q F R M F S V P D M K P I D G G G F			
UniRef90_UPI00036F9256				
UniRef90_U5C5H1	G D K T V D F A V T G E R L T S K L R F Y S L P D M A G G I E I Y Q D E T G			
UniRef90_V4Q690	T G S F T L I A A S D R A R N G A A L F T L T D D L K L K V A G			

	130	140	150	160
UniRef90_L8ERM7	P P V F S A R T A Y G L	A T W T D Q A T G R S Y A L V	S R R E T T L A L L E E L T	
UniRef90_UPI00036BDAED	P V N D P E V Y G Y C L G L	G Q D G S L L S F V N T K S A K V	F V H R I H	
UniRef90_UPI000462D7D3	G T E A P N Y G F C M Y H	S R A S G K F Y A F V T S G P G S I	Q Q F E L A	
UniRef90_J7L0X6	Q P V F F A A D E A Y G L	H D D D A F V V V S Q R E E T R L R L L E L		
UniRef90_D9VL69	R P V F S A G Q A Y G L	C L W T P P A G D A V V A F A V L K	D G T I N Q V R I R	
UniRef90_UPI0001DD0666	V A S G A G E A Y G L	C L W T P P A G D A V V A F A V L K	D G T I R Q V A L L D	
UniRef90_UPI0002F133F8	K V S A G P G E A Y G A C L Y R	T D Q A L Y A F N V L K	D G T I R Q V A L L D	
UniRef90_D9X389	A P V F S T R T A Y G L	A T W Q D K S T G R A Y A L V S R R E T R L A L M E L L K		
UniRef90_UPI00047DD4B0	P V F E G L R A P M G I	A L Y T R S S D K K I F A V V G R K E G T L W Q Y E L L T		
UniRef90_E8U4Z1	P M V F G A N T A Y G L	A A Y R T A D G S A R V F V S Q R K H A R V A E V R L V		
UniRef90_W5W786	P L V F S A D Q A Y G L	A A A W Y D R A Q G A A Y V L V T Q R H S T R L A L L R L		
UniRef90_V5F743	D Y A A E G V C L H K N T T N G A L L L T G V T D D G V A V Q Y K L K			
UniRef90_V5F743	D Y A A E G V C L H K N T T N G A L L L T G V T D D G V A V Q Y K L K			
UniRef90_E1SW12	L P T D I E E I Y G L	C L Y Q P A N D E L H V I A N G K S G E M V Q Y R L		
UniRef90_UPI00047D1D71	P V F E G F R D L M G I	A L Y K N P E G K I Y A I V G R K N G P L W Q Y L L A		
UniRef90_N0CNN4	P S V F S K R T A Y G L	A T W T D P T S G K S F A L V S R R E R T I T L L E L R		
UniRef90_TONU46	P T G E G E R D L M G I	A L Y T D P K G N I Y A I T G R K T P G L W Q Y L L S		
UniRef90_UPI0003B557C4	V L P L D F V D P Y G L	C L Y Q R P S D N A L F A F V T E D D T G R L M Q Q R L		
UniRef90_E4TCX8	F D G E E H R S P P M G I	S I Y K N P S T G I M Y A I V G R K S G P L W Q Y K L		
UniRef90_B7U1A1	E L Y R D L M G I	A M Y T D P Q G Q I Y A I V G R K S G P L W Q Y L L E		
UniRef90_D2BFE8	P F V F N T T Q P Y G L	T T W K D S T G T Y A L V S R R H T T I G L V K L L		
UniRef90_UPI0004638E28	A P V F A A S E A Y G L	A A Y S D D D D A Y V V V S R R E E T S L R L L E L		
UniRef90_V6UEV3	T P V F A S S E S Y G L	A A F S D D D D A Y V V V S Q R N E S R L R L L E L		
UniRef90_C6XMH5	T P V D I V E P Y G I	C M G N L D N S Y Q A G V T Y K D G T V Q I W T G T		
UniRef90_F0P303	A V F E D S D D P M G I	A L Y T Q S E T G K V Y A M V G R K N G P I Y Q Y E L K		
UniRef90_UPI0003C7458C	A P I F S A D T A Y G L	A T W T D P S T R R S Y A L V S R R N T T V A L L E L V		
UniRef90_UPI0003623BB6	D T A S G F R D L M G I	A L Y K A P S G I L Y A M V G R K T G P I G Q Y A L Q		
UniRef90_E0TE92	R I P T P R E P Y G V	C L G I A G G A F T A F V T H K T G E V D L Y L L T		
UniRef90_A3J4K5	E V F E G E T E P M G I	A L Y T R P S D G E I F V I V G R K N G P L W Q Y Q L E		
UniRef90_T0IFM8	P A G H A P A E A Y G F	C M G N A R A R D E L R A Y V V L K D G S V A E S R L		
UniRef90_UPI00037FE5D4	P P V F S K R T A Y G L	A T W T D R A T R R S Y A L V S R R D T S V A L L E L T		
UniRef90_UPI00047D565B	S V F E G E T D P M G I	A I Y T R E D G K F F V I V G R K T G P L W Q Y E L Y		
UniRef90_C2G3A4	E T G T D Y R D L M G I	A I Y T A P T G K M Y A I V G R K D G Y L W Q Y L L E		
UniRef90_UPI00036753A5	P R V F S S R T A Y G L	A T W T D P R S G R A Y A V V S R R E R T L A L L E L L		
UniRef90_A6ECW0	F A G E S T R D P M G I	A L Y T A A D S S I Y A I V G R K S G P L W Q Y K L T		
UniRef90_UPI000367682D	P P V F S R D Q A Y G L	A T W T D R G S G R S Y A L V S R R S T E I A L V E L R		
UniRef90_UPI000418873B	F T G D L E R D P M G V	A L Y T R P D D G A I F A V V V G R K T G P L W Q Y E L T		
UniRef90_J4V1V1	F S I N S K M I V Y G V	C A G Y D I K Y G V V V A F L T E D E G H V E M Y Q Y Y		
UniRef90_M4SIK6	F I P T D M G E P Y G S C	M G K R G G G N F Y V V A N N K A G G I F Q Y R I T		
UniRef90_M3DM04	A P V F S A D Q A Y G L	A T W T D K A T G R S Y A L V S R R E T R L A L L E L L		
UniRef90_A4BD29	P F A P S G V C Y F K N	P T T Q S A T V T A I S E A G D V A Q F K L I		
UniRef90_A4BD29	F E N E E I R D P M G V	A T A T Y K K D H K I Y V I V G R K D G P S E G Y L L L		
UniRef90_UPI0003698CD3	T P T Q K D E P Y G I	C I C A G Q V G T T Y Y A M P T Y K D G M A Q V W S V Q		
UniRef90_A0A059EEY2	P R V F S A T E A Y G L	A S Y T D P E T G R H Y A I A S R R N H T S L K L V E L		
UniRef90_D2PPX8	F V G E E E R A P M G I	A L Y T R P R D K Q V F A V V V G R K S G P L W Q Y R L R		
UniRef90_F4C9Q4	T F E K T P Y G I	C L Q K Q E D A F Y A I V T F K Y T G A E K W Q F		
UniRef90_K2EJY3	Q Q G E N Q R D L M G I	A L Y K N V S G K I Y A I V G R K S G P L W Q Y L L E		
UniRef90_UPI0003FB61E2	F I P T D M G E P Y G F	C M G K Q G D T T Y L I P N N K Q G E I R L I Y A V S		
UniRef90_UPI000248A06B	P Q G Q S E I D I Y G C	M G L D K R L G L L A F V T E D E G R V E V I W K Y T		
UniRef90_Q1YSY6	F V A M P T S E A Y G F	C V G V T K A N Q L T F I M V G K T G D V T Q S L I		
UniRef90_V4PEC6	P L L F G K R T A Y G L	R G M D E P Y G F C M G R R G D E V Y A V V T T K L G T T H Q W P V S		
UniRef90_U2YY7	V P T E V T A H G I	C L Y T S P E S G K L Y A Y P N S T S G R V E Q W E L A		
UniRef90_UPI000366A30F	E Q G E D Q R A L M G I	S L Y K R P S D G A I F A I V G R K N G P L W Q Y L L H		
UniRef90_J2GMK9	P L I F A T N Q A Y G L	A A V K T D K S M A F V S Q N S T T I E Q L E L F		
UniRef90_E8WBG1	P V Y E G Y R D L M G I	C F G A L A A D G Q V K V Y T A T K G G L I Y E N T F		
UniRef90_UPI00036AC16A	R I P V S L E D P Y G I	C M G R A T G Q P L V F I G D S E G R V E Y W R L E		
UniRef90_FORMG0	E K D P S F K G V Y G V	C A G Y D Q E F F G V I A F I T E D E G S R V I Q M W S		
UniRef90_S4A7N7	P A G H A P A E A Y G F	C L G G A L G P N E L R A Y V V L K D G T V A E S G L Y		
UniRef90_Q1K024	E T G E D Y R D L M G I	A L Y Q S P K G S G K T Y V I A G R K N G P L W Q Y E V K		
UniRef90_K6YBB6	P H V T L G D W N A I	C P W Q S S S G N H Y F F L F G K G G R A L Q Y L V R		
UniRef90_UPI00030E8364	P H V T L G D W N A I	C P W Q S S S G N H Y F F L F G K G G R A L Q Y L V R		
UniRef90_W6TL34	P L L F G K R T A Y G L	A A Y R T A A G E D R V L V L S Q N G F P V V G E F E L Y		
UniRef90_S1TAG5	P V Y E G Y R D L M G I	C F G A L A A D G Q V K V Y T A T K G G L I Y E N T F		
UniRef90_Q2SG22	P W I F S E S T A Y G L	A T Y T D S V T G R S Y A L V S N A T T H I A L L E L T		
UniRef90_UPI0003B46890	P W I F S D D Q G Y G I	A V S K R K K H K D G Y A V I S R E D T D L A V I A E F K		
UniRef90_J4X626	R I P V S L E D P Y G I	C M G R A T G Q P L V F I G D S E G R V E Y W R L E		
UniRef90_F6IFH8	E K D P S F K G V Y G V	C A G Y D Q E F F G V I A F I T E D E G S R V I Q M W S		
UniRef90_UPI000403500C	P A G H A P A E A Y G F	C L G G A L G P N E L R A Y V V L K D G T V A E S G L Y		
UniRef90_M4FTL4	E T G E D Y R D L M G I	A L Y Q S P K G S G K T Y V I A G R K N G P L W Q Y E V K		
UniRef90_M4FTL4	P H V T L G D W N A I	C P W Q S S S G N H Y F F L F G K G G R A L Q Y L V R		
UniRef90_B6IQK7	P H V T L G D W N A I	C P W Q S S S G N H Y F F L F G K G G R A L Q Y L V R		
UniRef90_I0K2J5	P R V F D Q R S A Y G L	T T W K G P D G H R V I V I A Q R K E A R L V E H R L V		
UniRef90_UPI000473AB61	E T G D Q F Q R D L M G I	A L Y R D P K G V I Y A I V G R K S G P L W Q Y R L Y		
UniRef90_UPI0003683354	I N A K A N M V V Y G V	C A G I D S R F G L I A F L T E D E G S K V Q		
UniRef90_UPI00037E1505	P R A F S A T E A Y G L	C M G R A T G Q V K V Y T A T K G G L I Y E N T F		
UniRef90_X1SU07	P V F E G E D S P M G I	A S Y R S P E S G K F Y A I V S R K G G E L W Q Y E L K F		
UniRef90_E8RML6	E V I G E I Y G S C	M Y R S P V T G D Y Y A F I N D K D G T I E Q W R L L F		
UniRef90_UPI0003B3F6F2	F A S L A T S E A Y G F	C L G K T T A G D L V A I M V G K N G D V A Q A T V S		
UniRef90_UPI00039D4582	T P T Q K D E P Y G I	C A G L V G S T Y Y A M P T Y K D G K A Q I W A Q D		
UniRef90_H1ZBM0	P A I F T D S Q A Y G L	T T W T D R R S G R S Y A L V S R S G T R V T L L E L T		
UniRef90_UPI000375B002	K V F E G Y N E P M G I	A L Y E G K E G G A F Y A I V G R K N G P L W Q Y R Y Q		
UniRef90_H1H5G9	P E F R D L M G V	V A I Y T Q P E T G K H Y V I A G R K N G P L W Q Y E I I		
UniRef90_U2ZY21	E V E D G Y S E P M G I	A L Y K E D D N K V I Q Y A I V G R K N G P L W Q Y A L Q		
UniRef90_H0B107	Q V A S G P G E A Y G L	C M G G D G A D G A R V Y A A L K D G S V R E I A V S		
UniRef90_LOG3A3	P R V F S A D Q A Y G L	A T W T D R R S G R S Y A L V S R R N R T V A L L E L L		
UniRef90_W9BUV8	E T G N E Y R D L M G V	A V Y H S P K N D Q V Y V I A G R K N G P L W Q Y E I I K		
UniRef90_UPI00046F017F	V P S G M G E G Y G V	C V A P A P D A M T A Y A I K D G T V R E I R I T		
UniRef90_UPI000478B8F5	S V F D G E T E P M G I	A L Y E T R P T D Q A I F A I V S R S G P L W T Y Q L R		
UniRef90_K2Q6T6	P V F T D S T E P M G I	S L Y H S P K D G A M Y A I V G R K E G Y L H Q Y L L K		
UniRef90_UPI00036F9256	V Q T G K D E P Y G F	C M G M E V D D T T L M I P T Y K D G S I Q I W T S S		
UniRef90_U5C5H1	P E F R D L M G V	V A V Y H D Q V V N K K H Y V I A G R K N G P L W Q Y E I I		
UniRef90_V4Q690	F L P M T T S E A Y G L	C M G T I E A G I T I V I I G K N G D V V Q A I Y S		

170 180 190 200

P G A G G T	V G Y R K V	R T L D	L P P Q V	E G M V V	D A H N G T L	Y A G Q E D V
L D	T F R A E E V A I	W S F G S Q M E G C A N D D	D T N I L F L G E E E H			
D N G A G G K V	D A T L V R S L P I S S I T E S C V A D D E L G Q L Y V G Q E D A					
K D E D G L V	G Y E T E D T L E L P P Q V E G M A V D E E E H V L Y A G Q E T V					
P T P A G T	V D Y R Q V R T L D L P S Q V E G M V V D P A D G T L Y A G Q E D V					
D D	W T G R I E H T M S V P S Q A E G C V V D A R N F G L Y V G E E N G					
L T G A	A P K S T L V R T M K L A T Q S E G C V V D P R T H R L Y V A E E D V					
P T A S G T	V A Y R K V R S D L P P Q V E G M V V D P A T G T L Y A G Q E D V					
D A G N G K A G A T V V R K F G N Y S E I E A I V V D N E S G T V Y Y C D E Q F						
A D G D D R V	T F A P V R T V D L P P Q V E G M V V D A E L G F A Y L G Q E Q V					
V A E Q D K I	G Y Q V W R T L D L P P Q A E G M V V D A Q T G V L Y A G Q E D V					
Y Q D G E I	K S V L V R E L E V V G G E L S A C I V D D E T S T L Y I A E Q D L					
Y Q D G E I	K S V L V R E L E V V G G E L S A C I V D D E T S T L Y I A E Q D L					
D W R D E V L	R A T E L R R L W L P S Q P E G C V A D D R A H R L F A G E E D A					
D N G K G Q I	Q A T L V R K F G E Y S E I E S I A V A D D A L G Y I Y Y S D E G V					
P T R A G K V	N T Y R T V R T L N L P S Q V E G M V V D P V N G T L Y A G Q E N V					
D S G K G F L	E A K L V R K F G N Y S E I E S I A V A D N E N G Y V Y Y S D E Q F					
R F E D G A M R S E T	T V R S F S L G T I T E G C A V A D D Q T G T L Y I A E E N V					
V E K N G K I	T G E L V R K F G K Y S E I E A I A V A D D E L G Y I Y Y S D E Q Y					
UniRef90_B7U1A1	D N G K G Q L K A T L K R K F G K Y S E I E S I A V A D N E L G Y I Y Y S D E Q F					
UniRef90_D2BFE8	P K P N G K V G Y Q V V R T L D L P P Q V E G M V V D D Q Q T D V L Y A A Q E D V					
UniRef90_UPI0004638E28	E D R G G R V G Y R T E D T L D L P P Q V E G M A V D Q E E H V L Y A A Q E A V					
UniRef90_V6UEV3	K D R G G K V G Y R L P G T F G L L P P Q V E G M A V D T E E G V L Y A A Q E A V					
UniRef90_C6XMH5	L Q E D G T V S A K F E R S A K L E T Q L E G C V F D D E Q S L L F I G E E T K S					
UniRef90_F0P303	A I S G S I Q A K L V R K F G A Y S E I E A I A V M D N E L G Y I Y Y A D E T S					
UniRef90_UPI0003C7458C	A R P G G T V G Y R T V R T L D L P P Q V E G M V V D P A N G T L Y A G Q E D V					
UniRef90_UPI0003623BB6	D D G S G H V K A T L V R K F G T Y S E I E S I A V A D N E L G Y I Y Y S D E G V					
UniRef90_E0TE92	V E G Q A T P S I M P W T E L G E Q L E G C V F D E Q S V F V G R E E E G					
UniRef90_A3J4K5	S I N G V V Q A K I I R K F G K Y S E I E A I A I D N E L G Y I Y Y S D E Q T					
UniRef90_T0IFM8	V E K D G R I A A D Y V R L V K F A T Q S E G C V V D D A G K V L F V A E E D V					
UniRef90_UPI00037FE5D4	A G A G G T V G Y R T V R T L D L P S Q V E G M V V D P A N G M L Y A G Q E D V					
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G	I	W	R	K	Y	Y	A	D	P	E	K	G	N	Q	E	L	A	L	F	A	T	G	F	T	D	H	E	G	I	S	I	Y	Q	L	S	S					
G	I	W	R	K	Y	Y	A	D	P	E	K	G	N	Q	E	L	A	L	F	A	T	G	F	T	D	H	E	G	I	S	I	Y	Q	L	S	S					
G	I	W	R	K	Y	Y	A	D	P	E	K	G	N	Q	E	L	A	L	F	A	T	G	F	T	D	H	E	G	I	S	I	Y	Q	L	S	S					
G	I	W	R	K	Y	Y	A	D	P	E	K	G	N	Q	E	L	A	L	F	A	T	G	F	T	D	H	E	G	I	S	I</										

250 260 270 280

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UniRef90_D9VL69	G D G Y L L A S S Q G D D T F V A Y D R E R G N E F E G A F R I T A A S A L D G
UniRef90_UPI0001DD0666	R G G Y L I A S S Q G D N A Y A V Y F R L P G M E P V G R F R I A Q G A V G A
UniRef90_UPI0002F133F8	D G G Y L V V S S Q G D D T F A V Y E R G D N D Y V G S F A I V D G P A T D G
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UniRef90_V5F743	G K G Y L V V G D E G K G M M L Y N R D D W S L K A N I Q L D G
UniRef90_E1SW12	K G Y L V V S S Q G N D S Y V L Y D S E P P Y A Y R G R M R I G N K A G I D G
UniRef90_UPI00047D1D71	T T G Y I L V S D Q G A N K F H I F S R E G S V S N P H E H Q L K V V I T V K
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UniRef90_B7U1A1	S T G Y I L V S D Q A A N H F Q V N R E G T K Q D P N K H V L I T S L P T
UniRef90_D2BFE8	Q K G Y L L A S S Q G D N T F A A Y R K E G S N A Y L G Q F R I G T H N S V D G
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330 340 350

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UniRef90_UPI0002F133F8	F K L T A W G D I K A A L G L R
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UniRef90_UPI00047DD4B0	F H Y Y S W D S I Q Q L I D
UniRef90_E8U4Z1	F K L V A W E D V A A P L G L R A A T D A
UniRef90_W5W786	F K F V G W E H V A E S F P S P L L V D T T
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UniRef90_UPI00047D1D71	F H F Y R W E D I A G K
UniRef90_N0CNN4	F K F V D L G T V M D A L N
UniRef90_TONU46	F H Y Y R W E D I A
UniRef90_UPI0003B557C4	F K L A D L A A I R A A L
UniRef90_E4TCX8	F H I Y D W R D I E E R I L Q K D I
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UniRef90_D2BFE8	F K F V G W E G I A D G L D I D T D G W D P R
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UniRef90_FOP303	F H Y Y D W N I Q T E I D
UniRef90_UPI0003C7458C	F K F V D L A Q V M D A L D
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UniRef90_C2G3A4	F H F Y R W E D I A K E L L K V K K
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UniRef90_A6ECW0	F H F Y D W R A I Q E K I N
UniRef90_UPI000367682D	F T F V D L G A V K K R A G L
UniRef90_UPI000418873B	F H L Y D W N L V Q A R I D
UniRef90_J4V1V1	F K Y V S F E D V I K V L N L
UniRef90_M4SIK6	F K V V D W R D V R R A L G L
UniRef90_M3DM04	F K F V D L G D L V D A T G
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UniRef90_D2PPX8	F K F V S W D D V A D E T G L
UniRef90_F4C9Q4	F H V F D W R K V N E R I
UniRef90_K2EJY3	F K L V P W D E I Q R G L N
UniRef90_UPI0003FB61E2	F H L Y R W E D I A G S T L L K
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UniRef90_Q1YSY6	F K L I S F S D V I E A L Q L K
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UniRef90_UPI00036AC16A	F K L V S F D E I L K S L D L
UniRef90_FORMG0	F K L V S W A D V E R A L N P
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UniRef90_K6YBB6	F K Y V A W R D I A S K L N L P V D T K D M T R K
UniRef90_UPI00030E8364	F K F V R W D E V L A A L G
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UniRef90_UPI0003683354	F K F V P W E R A A A A I D
UniRef90_UPI00037E1505	F H F Y N W A D I A
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UniRef90_E8RML6	F K I V D W K E I E A K L S L K
UniRef90_UPI0003B3F6F2	F K V V D W T A I E A A L G L
UniRef90_UPI00039D4582	L K F V D L G E L T D E L D
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UniRef90_H1H5G9	F H Y Y D W K D I Q E R I N
UniRef90_U2ZY21	F K L V A W D D I A A A L G L
UniRef90_H0B107	F K F V D L R K V
UniRef90_LOG3A3	F Q I Y T W E D M A D T L K L K K
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Sequence logo showing the conservation of amino acids at each position of the protein sequence. The x-axis represents positions 1 to 40. The y-axis lists UniProt IDs. Colored boxes indicate the presence of specific amino acids at each position: blue for A, red for C, green for D, orange for E, purple for F, grey for G, yellow for H, brown for I, pink for K, light blue for M, dark blue for N, magenta for P, cyan for R, black for S, and white for T. The height of each box corresponds to the frequency of that amino acid at that position.

50 60 70 80

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UniRef90_T2KR38	I V F G T D K N G G V Y A F D L D G K I I K E K G V N Y P N N V D I E Y D F A L
UniRef90_G0L3R2	I V F G T D K N G A I Y A F D L N G K I L E E K S I S R P N N V D I A Y G F A I
UniRef90_S6WEE4	R V L G T N K K Q G L L A Y D L S G K Q L Q E L P V G R L N N V D I R P G F M L
UniRef90_D3Q053	L V V T T A K E A G M N V Y D L D G E L T Q H I N P G R Y N N V D L L D D F A L
UniRef90_J9DE28	R I L G T N K V N G L L F V Y D T A G N T V A H L K V G M V N N V D L V E I
UniRef90_I0GX85	L V I G T A K N G G L R V Y D L T G R E V Q A I A G G R F N N V D V L T G F K L
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UniRef90_Q1GEN5	L I V A T D K K A G L H V Y D L A G K D V A F I E A G L V N N V D M A
UniRef90_B3EJU3	L V L A T D K D G D L H V Y F D L E G K A I H K K T I K R P N N V D V G Y G F P L
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UniRef90_UPI000478AD85	F V V G T D K K A G L V Y V Y G F D G A I L Q F M P E G L L N N V D V V E G L S L
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UniRef90_UPI00036E2459	L F I T A D P T L G V V T Y Q L D G G E R E V I N S G V A Y A V D V I D G F P L
UniRef90_UPI0004799CCD	I I F G T D K D Y N G V Y S Y N L K G E I I G F S E S G S I N N I D L R T
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UniRef90_D9QK6N	L V I G V L K E A G L Q V Y D L S G R V V Q T V T F G R F N N V D I Q Y G F P L
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UniRef90_UPI0004762D53	M I L G T D K N G A V Y V F D L Q G R I I A N K G L Q R P N N V D V E Y G L L L
UniRef90_UPI0003626ACE	V V L G T L K E G G L A V F D L R G R Q L Q Q L A A P R F N N V D V V T G V K V
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UniRef90_UPI00046FB54A	I V F G T D K N G A I Y A F D L Q G R I I K E K T I K R P N N V D V E Y D F C I
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UniRef90_K0JTN8	V V L G A L K E G G L A A F D L K G R T L G L Y P A G R F N N V D V L S K V L V
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UniRef90_UPI00037EEC64	U N I F R O U 0 0 0 3 7 E E C 6 4 L V L L A T A K E G G L R V Y G V A A T E L Q S V A A G R F N N V D I A Y G L R V
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UniRef90_R4TBM0	U N I F R O R 4 T B M 0
UniRef90_UPI00036F3662	U N I F R O U 0 0 0 3 6 F 3 6 6 2
UniRef90_H1VM17	U N I F R O H 1 V M 1 7
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UniRef90_Q1D1J7	L F L T A S P N A G L V T F G L R G E P L D S E T D G P M T A V A V R D G F P L
UniRef90_U2U7H6	L F L T A N A N G G L A T F G L R G E P L D S E T D G P M T A V A V R D G F R V
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UniRef90_M7T831	I V G N D A S G G F R I F R L N G E E A K H E T P G R T K L V T T V Y D I
UniRef90_M7T831	I V G N D A S G G F R I F R L N G E E A K H E T P G R T K L V T T V Y D I
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P	W	I	F	S	D	S	Q	A	Y	G	L	T	T	W	T	D	P	E	T	G	R	S	Y	A	V	T	A	T	T	L	A	L	L	E	L	L				
R	V	A	G	P	E	Y	G	I	C	L	G	I	R	D	G	G	Y	V	S	A	V	T	Y	K	D	G	T	I	Q	I	W	E	I	P						
I	S	S	G	F	H	S	T	Y	G	I	C	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S					
S	I	A	T	D	V	V	E	P	Y	G	I	C	F	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S			
P	V	F	D	G	T	R	A	P	M	G	I	S	L	Y	K	N	P	E	T	G	R	S	Y	A	V	T	K	H	P	R	V	L	W	K	F	S				
R	L	P	N	F	D	P	R	T	V	N	L	R	S	S	A	S	G	K	V	Y	A	F	T	N	P	G	R	L	H	Q	Y	E	L	I	V	E				
E	T	P	H	Y	S	D	E	A	Y	G	I	C	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S				
L	V	F	E	D	E	T	D	P	M	G	I	S	L	Y	K	N	P	E	T	G	R	S	Y	A	V	T	K	H	P	R	V	L	W	K	F	S				
E	T	P	H	Y	S	D	E	A	Y	G	I	C	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S				
A	I	T	T	D	V	V	E	P	Y	G	I	C	F	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S			
K	V	F	E	D	E	T	D	P	M	G	I	A	F	Y	K	N	P	E	T	G	R	S	Y	A	V	T	K	H	P	R	V	L	W	K	F	S				
P	V	F	E	D	E	T	D	P	M	G	I	A	F	Y	K	N	P	E	T	G	R	S	Y	A	V	T	K	H	P	R	V	L	W	K	F	S				
E	T	P	H	Y	S	D	E	A	Y	G	I	C	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S				
A	I	T	T	D	V	V	E	P	Y	G	I	C	F	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S			
K	V	F	E	D	E	T	D	P	M	G	I	A	F	Y	K	N	P	E	T	G	R	S	Y	A	V	T	K	H	P	R	V	L	W	K	F	S				
P	V	F	E	D	E	T	D	P	M	G	I	A	F	Y	K	N	P	E	T	G	R	S	Y	A	V	T	K	H	P	R	V	L	W	K	F	S				
E	T	P	H	Y	S	D	E	A	Y	G	I	C	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S				
A	I	T	T	D	V	V	E	P	Y	G	I	C	F	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S			
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P	V	F	E	D	E	T	D	P	M	G	I	A	F	Y	K	N	P	E	T	G	R	S	Y	A	V	T	K	H	P	R	V	L	W	K	F	S				
E	T	P	H	Y	S	D	E	A	Y	G	I	C	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S				
A	I	T	T	D	V	V	E	P	Y	G	I	C	F	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S			
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P	V	F	E	D	E	T	D	P	M	G	I	A	F	Y	K	N	P	E	T	G	R	S	Y	A	V	T	K	H	P	R	V	L	W	K	F	S				
E	T	P	H	Y	S	D	E	A	Y	G	I	C	M	A	R	L	H	N	G	L	R	V	W	V	S	D	S	H	R	V	Q	E	W	R	I	S				
A	I	T	T	D	V	V	E	P	Y	G	I	C	F	M	A	R	L	H	N	G	L	R	V	W	V</															

	170								180								190								200																	
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UniRef90_T2KR38	T	N	N	S	K	V	S	A	K	L	V	R	K	F	G	T	F	S	E	I	E	A	I	V	V	D	D	A	L	G	H	V	Y	F	S	D	E	G	V			
UniRef90_G0L3R2	A	N	D	K	G	Q	V	N	A	E	L	V	R	S	F	K	V	E	T	Q	P	E	G	C	V	A	D	D	Q	R	Q	R	L	F	L	G	E	E	D	V		
UniRef90_S6WEE4	A	P	D	G	R	A	Q	G	E	L	V	R	S	F	K	V	E	T	Q	P	E	G	C	V	A	D	D	Q	R	Q	R	L	F	L	G	E	E	D	V			
UniRef90_D3Q053	E	T	D	A	G	T	V	G	Y	E	T	V	R	V	L	Q	L	P	A	Q	V	E	G	M	T	V	D	T	T	R	G	V	A	Y	L	G	Q	E	E	V		
UniRef90_J9DE28	A	N	F	D	E	A	S	A	Y	K	P	A	R	I	F	K	I	G	G	K	I	E	G	C	V	I	D	R	E	G	K	E	L	F	V	Y	Y	S	D	E	Q	H
UniRef90_I0GX85	E	E	K	N	G	K	V	T	Y	R	L	P	R	Q	F	R	L	P	P	Q	V	E	G	M	V	V	D	A	E	A	G	V	L	Y	A	A	Q	E	D	V		
UniRef90_UPI000405FD63	A	D	T	L	G	V	V	K	S	S	L	V	R	K	F	G	K	F	S	E	I	E	A	I	A	V	D	S	E	L	G	F	V	Y	Y	S	D	E	G	V		
UniRef90_UPI00035F18F2	V	T	P	A	G	T	V	T	Y	R	K	V	R	T	L	P	S	Q	I	E	E	G	L	T	V	D	A	A	R	G	V	A	Y	L	G	Q	E	D	V			
UniRef90_A4BZB5	R	E	A	N	G	I	Q	A	K	L	V	R	K	F	G	D	F	S	E	I	E	A	I	A	V	D	A	E	M	G	F	I	Y	Y	A	D	E	G	H			
UniRef90_UPI000255AF26	A	S	S	G	E	V	T	M	E	L	V	R	K	F	G	V	F	S	E	I	E	A	I	A	V	D	S	E	L	G	Y	V	Y	Y	S	D	E	G	V			
UniRef90_FORE83	T	D	T	G	V	V	Q	S	T	L	V	R	K	F	G	V	F	S	E	I	E	A	I	A	V	D	S	E	L	G	Y	V	Y	Y	S	D	E	G	V			
UniRef90_UPI00047B73E4	A	D	S	L	G	V	S	S	N	Y	V	R	K	F	G	K	F	S	E	I	E	A	I	A	V	D	D	E	N	G	F	V	Y	Y	F	S	D	E	G	V		
UniRef90_M7YE22	T	S	D	S	T	L	D	L	A	L	V	R	K	F	G	K	Y	S	E	I	E	A	I	A	V	D	N	E	L	G	Y	V	Y	Y	S	D	E	G	V			
UniRef90_A0A059FG14	W	E	T	V	N	K	L	T	P	S	L	D	R	V	V	K	L	P	S	K	L	E	G	C	V	F	D	D	A	N	E	R	L	F	V	G	E	E	A	F		
UniRef90_S6UNQ5	A	P	N	G	R	A	Q	G	E	L	V	R	S	F	K	V	E	T	P	Q	E	E	G	C	V	A	D	D	Q	R	Q	R	L	F	L	G	E	E	D	V		
UniRef90_G8R7W3	A	N	S	P	E	S	V	S	A	E	L	V	R	K	F	G	A	Y	S	E	I	E	A	I	A	V	D	D	E	L	G	Y	I	Y	Y	C	D	E	N	V		
UniRef90_Q1GNE5	L	P	A	G	A	P	T	F	T	I	E	W	E	H	K	I	P	T	Q	S	E	G	C	V	F	D	G	T	L	Y	V	G	E	E	V	G						
UniRef90_B3EJU3	D	S	G	N	G	Y	I	T	A	H	K	A	R	F	G	Q	W	S	E	I	E	A	V	A	V	D	N	E	L	G	Y	V	Y	Y	S	D	E	G	F			
UniRef90_B4S367	D	D	G	S	G	Q	V	I	A	T	K	V	R	E	F	G	A	W	S	E	I	E	A	V	A	V	D	D	N	E	A	G	R	I	V	Y	Y	S	D	E	G	F
UniRef90_UPI000477CA37	P	T	P	E	G	T	V	T	Y	R	E	V	R	T	I	E	L	P	P	Q	A	E	G	L	A	V	D	P	E	S	G	T	L	F	A	A	Q	E	T	V		
UniRef90_UPI000372E0A8	R	D	Y	Q	G	H	M	T	R	D	W	Q	F	D	G	Q	V	E	G	C	V	A	D	T	A	K	Q	Q	L	Y	L	G	E	E	D	R						
UniRef90_D5BCF0	P	S	E	K	G	F	T	P	K	L	V	R	E	F	G	D	F	S	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	C	S	D	E	G	D		
UniRef90_UPI00046F3571	S	D	S	T	G	V	R	A	K	Y	I	R	K	F	G	K	F	S	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	S	D	E	G	V			
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UniRef90_S7VT11	A	D	S	L	G	V	R	A	N	L	L	R	K	F	G	S	T	G	T	K	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	C	D	E	N	V	
UniRef90_F8L721	D	N	G	T	R	G	F	Q	T	L	V	R	K	F	G	V	T	H	Q	V	E	G	M	V	A	D	D	E	L	G	F	V	Y	Y	C	D	E	N	V			
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UniRef90_W2UMC4	A	D	S	L	G	V	H	A	K	L	E	R	K	F	G	D	F	S	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	S	D	E	G	V			
UniRef90_Q08T31	P	Y	E	D	G	G	I	G	G	S	V	R	S	F	E	V	G	G	S	I	S	E	G	C	A	I	V	A	D	N	K	L	F	I	S	E	N	R				
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UniRef90_S9QGY3	S	D	S	L	G	V	Q	A	K	L	R	K	F	G	K	F	S	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	S	D	E	G	V				
UniRef90_D9QKN6	U	N	E	G	D	T	P	V	S	R	E	V	R	R	F	E	I	G	S	I	S	E	G	C	A	D	P	A	T	D	A	L	Y	T	E	E	N	V				
UniRef90_A0A024FGL4	A	D	S	L	G	V	H	A	K	L	E	R	K	F	G	D	F	S	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	S	D	E	G	V			
UniRef90_B3ECB6	D	S	G	N	F	V	R	A	S	L	V	R	K	F	G	I	W	S	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	S	D	E	G	V			
UniRef90_UPI0004762D53	A	G	A	G	D	S	V	S	V	N	H	A	T	V	D	L	S	S	Q	V	E	G	M	V	I	D	S	D	H	G	V	V	Y	A	A	Q	E	A	V			
UniRef90_UPI0003626ACE	R	D	N	L	K	L	L	H	T	F	Q	D	A	T	S	Q	E	G	C	V	Y	D	S	D	N	S	T	L	F	I	S	E	E	D	R							
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UniRef90_W6K1Y0	S	S	A	N	G	I	Y	G	T	D	S	R	H	L	P	L	P	P	Q	L	E	G	M	A	V	V	D	N	A	R	N	V	L	Y	A	A	Q	E	D	V		
UniRef90_A3XQ67	T	Q	S	D	S	L	V	G	F	E	V	R	R	K	F	G	N	F	S	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	S	D	E	G	V		
UniRef90_D2Q2G1	T	D	G	P	N	I	S	Y	R	P	V	T	H	W	D	F	P	P	Q	F	E	G	M	V	F	D	R	T	T	R	T	L	Y	A	A	Q	E	D	V			
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UniRef90_K0JTN8	U	N	E	N	G	F	Y	T	G	K	K	V	R	H	L	D	V	G	K	A	G	V	A	V	D	D	E	L	G	F	V	Y	Y	S	D	E	G	V				
UniRef90_M5RHP0	T	E	S	G	G	A	V	G	Y	H	E	V	D	T	V	D	L	P	S	H	V	E	G	M	V	D	A	E	A	G	G	A	Y	Q	E	A	V	E	V			
UniRef90_UPI000346645	D	N	G	K	E	I	D	A	R	Q	V	R	E	F	N	V	G	S	Q	T	E	G	C	V	A	D	D	Q	H	G	Q	L	Y	I	G	E	E	D	V			
UniRef90_A7BYM2	S	F	N	G	Q	F	G	L	S	L	V	R	K	F	G	R	S	E	I	E	A	I	A	V	D	D	E	L	G	F	V	Y	Y	S	D	E	G	V				
UniRef90_UPI00037B21AF	S	T	S	K	G	E	L	Q	T	K	L	V	R	E	F	Q	G	G	S	Q	V	E	G	C	V	T	D	E	N	G	W	I	F	L	G	E	E	P				
UniRef90_J9N0E1	U	N	E	N	G	F	Y	T	G	K	K	V	R	H	L	D	V	G	S	Q	V	E	G	C	V	T	D	E	N	G	W	I	F	L	G	E	E	P				
UniRef90_R4TBM0	D	K	A	D	G	T	V	G	A	P	I	G	T	I	D	L	P	S	Q	L	E	G	S	I	S	L	D	N														

210 220 230 240

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UniRef90_G0L3R2	C I R K Y Y A E P S M G D V E L S C F G G E N F K S D I E E G I A I A Q Y P N	
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UniRef90_UP100035F18F2	G I W K I S A N L T G T P A L V D R T G G D H L V A D A E E G I L T L F R A P S	
UniRef90_A4BZB5	G I R K Y Y A E P S K G N K E I S C F G A E Y F K N D I E E G I A I A K F D D	
UniRef90_UP1000255AF26	C I R K Y Y A E P T M G N K E I S C F G G E R F L E D I E E G I A I A T Y P N	
UniRef90_FORE83	G I R K Y Y A E P T K G D K E I S C F G G E L F L S D I E E G I A I A K Q A K	
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UniRef90_UP100046F3571	G I R K Y Y A E P D P S K G N Q E I A F F G G E Y F L D D I E E G I A I A T K P N	
UniRef90_I3C519	G I H K Y Y A E P S K G N E E I A F F G G E Y F L D D I E E G I C I A D L P N	
UniRef90_S7VT11	G I R K F Y A D P K M G N E E I S M F G G E D F K D D I E E G I A I A T Y S N N	
UniRef90_F8L721	A L L K F Y A D P D V K K D P F I K A F G L A D G I K G D R E G I G L Y K M A N	
UniRef90_F4QY51	G L W R Y G L D P A S G G T R S L V Q P V A P G L L V A D A E G I L T T L T D G A	
UniRef90_UP1000478AD85	G I R K Y H A D P V H P D A A R E L A L F A T T G F V Q D H E G I A I Y P T S D A	
UniRef90_W2UMC4	A I R K Y H A D P E M G T T E L A S F G G E Y F K D D I E E G I A I A K H E D	
UniRef90_Q08T31	G I W R F P A E P T D T S P G T I A V G V G G T N P P A G L Y T V N A	
UniRef90_UP100036E2459	G V L R Y S L T K D L E L R N K I R I D D R G G N I V G D P E G I A I L K T S P	
UniRef90_UP10004799CDD	C I H K Y Y A D P S K G S E E I S C F G R D Y F K R D I E E G I A I A R Y P D	
UniRef90_S9QGY3	G L W K I P L E A P A P A P E G T I A A V G G K H L E A D A E G I G L T T I T D G D	
UniRef90_D9QKN6	G L W R Y G L G A G S G D A T L V Q P I A P G V L V A D A E G I L T T I A K Y P N	
UniRef90_A0A024FGL4	C I R K Y Y A D P T K G D E E I T C F G S D N F R E D I E E G I A I A K Y P N	
UniRef90_B3ECB6	G V R K Y H A D P D M K G G E K E I A L F A T D G F T K D H E G I A V F S T T D G	
UniRef90_UP10004762D53	G I W R I P V S R H G F G T P V L I D R V G G R W T A D A E G I L T I A G N G G	
UniRef90_UP10003626ACE	G I R A Y K I N K N L D F S A P I I D R T S G N I V G D P E G V T I Y K S N T	
UniRef90_UP100029AAE9A	C V R K Y F A E P S Y G N E E I L A C F G L D H F K G D N E G I A I L P R K N	
UniRef90_UP100046FB54A	G I R K Y Y A D P A K G N E E I L A V F G G E Y F K D D I E E G I A I A A A K P N	
UniRef90_W6K1Y0	G L W R I P L P L Y S G Q P K L I D K V A G H L L T A D A E G I G V A I A H A G A	
UniRef90_A3XQ67	S V K K Y Y A E P S K G N E E I E Q L A A F Q G E D F L E D I E E G I A I A A Y E D	
UniRef90_D2Q2G1	G I W R P A E P Y D E S T E E C V P A L D A Q G H L S A D A E G I G L T I A Y R H	
UniRef90_UP10003760A07	G L W R F S A D P T A P A T A P I A Q V D G K T L V A D A E S L A L A P Q G T	
UniRef90_K0JTN8	G I W R I P L Q A D G F G P P V L I D R V G G R H L T A D A E G I G L T L L R G G D	
UniRef90_A6WC06	G I W R I T V D G D R A T S R Q L V D T V G G T H L S A D A E G I G V T L L W Y G P G	
UniRef90_UP100037EEC64	G L W R V P L P L G S G A P R L V D K V G G K N L T A D A E G I G V D I L W Y G P G	
UniRef90_J5KE18	G I Y K L T N E F E L K D M F K I D D R Q R N I V G D P E G I G V T L Y K T S K	
UniRef90_M5RHP0	G I W R F A A E P G A G K Q G T L M L E V G E N G I R G D L E G V V A L H Y D D N D	
UniRef90_UP1000346645	G L W R I G L T G A G F G F G E A E Q V D R V G G D V L T A D V E G V T L Q R D G D	
UniRef90_A7BYM2	G I W Q Y N A E P E G G T T R R S V D T T G D G H L T A D V E G V T L T I Y N G G E	
UniRef90_UP100037B21AF	C I H K Y H A E P S S M G D E E I L S C F G R E Y F R S D I E E G I A I A K D V G C	
UniRef90_J9N0E1	A L W R Y D A E P D S K D K G V V V G K V G D G K L Y G D V E G V T L V Y G S K	
UniRef90_R4TBM0	G I W R I P V D G A G F G P P V L I D K V G G K W L T A D A E G I G V T L A A A	
UniRef90_UP100036F3662	G I W R I P L T P G G F G R P E L I D R V G G R W T A D A E G I G L A L A A	
UniRef90_H1VM17	A L W R Y G A E P D S K D K G A L Q V G D G R T Y A D V E G V T L V Y G A R	
UniRef90_UP100036AC291	G L W R Y N P E T E E C D H D W S Q D P G E G G R I S A D V E G L A I Y R T G L	
UniRef90_C4RE25	G L W R F D P A E D D C V T D H S A D P G F G G R I A Q D V E G L T I Y R T G R	
UniRef90_J2P055	G V W R Y D A D P E A E A V T V V D I N R L G H I A G E V G G R V A L L N G G A	
UniRef90_Q1D1J7	G L W R Y P A A D A G A T Q G Q L S I Q G S G G L S A N V G G R V A L Y R A R N G	
UniRef90_U2U7H6	G L W R Y G A A A D A D L T G Q Q L A V Q G T G G L S S N V G R V A V Y R A R N G	
UniRef90_H8MLP5	G L Y R Y G V D A D A G V T G T Q V V G L G D G G L T S V V G R I A L Y E A S G	
UniRef90_M7T831	A V Y A F G A A E S T T V P R I S V L G E A A D D V T S L A V Y Y G N G N	
UniRef90_M7T831	A V Y A F G A A E S T T V P R I S V L G E A A D D V T S L A V Y Y G N G N	
UniRef90_K9YSJ8	G I I A Q D A L E V P Q G T D Q L V S G E P S P L V P D I E E G L D L Y Y G A D	
UniRef90_K9YSJ8	G I I A Q D A L E V P Q G T D Q L V S G E P S P L V P D I E E G L D L Y Y G A D	
UniRef90_L7UH05	A I W R Y A A E P D G G A T T Q V V T A T D S K L S R N V N L A L Y R A A G	
UniRef90_Q2H29	D V Y V F D L V E S T A A P I A S K I G E A E D D V T G V A V Y S A T T	
UniRef90_J5K822	G I Y K I N N E L D F S N P I I I D N R S G N I D D D P E G V T V Y K S S E	
UniRef90_W7ISX4	G I W R I P L R A G G F G E P K L V D R V G G R W E A D A E G I G L T I	
UniRef90_K9YE45	G I L K F S A E P D A G N D F Q I I Q P I V P S S S L P R T V	
UniRef90_G8S690	A L W R I P L T G G T F S S I P R I V P S S S L P R T V	
UniRef90_G2LWJ7	A V G T Q L R D Y G M D G R Y R G R V G A G L F K A Q A E G I S L F A C S D	
UniRef90_H1VMZ5	D L Y I F D L K E S T T A P D V T K L G E A S E D V T G V A V Y A S N T	
UniRef90_UP100028872B8	E I K R H T A S P D E K S N V T L I D K F D F E I G N M K F V N R	
UniRef90_B3QZ52	D L K V Y T L D G K F T G T I L G K G I F K Q E P E G I A L Y A A D D	
UniRef90_UP10003B4D25C	A V R E Y G L D G R Y R G R D L T I G Q D L F K A Q A E G I A L W Q C E D G	
UniRef90_A0A021VZZ7	A V R D Y T L D G R Y R G Q T G T I T F G R D V F K A Q A E G I V T L R T C G	
UniRef90_B2FLX4	T I Y S F T A E D S T T A P E I T V L G K V E D G I T G L A T Y V T E	
UniRef90_A6R7A7	UniRef90_UP10003102E44	E F K V Y T L A G R F T G T F G R D A F K A Q A E G I V M L R T C G
UniRef90_E6WSA0	R L R E Y D L Q G R Y R R G R D V G A G Q Y V A Q A E G I A L M A C C A D	
UniRef90_UP10004161D9C	E F K V Y D L E G D F S G Q V F G G D T F A A Q A E G I S L Y T C G D	
UniRef90_UP1000405EF92	T L R E Y T F D G R Y T G R S T P A G T F A A Q A E G I V M L W S C D A	
UniRef90_G7URQ0	R L R E Y T L D G R Y A G R S D V F G Q G I F Q F V E G I A L M R C R D	
UniRef90_B5JDS5	Q V K V Y D Y E G N F S G R T I G G D V F R A Q S E G I A L Y Q T S E	
UniRef90_UP100047AAA09	E L K V Y D L E G N F S G R T I G G D V F R A Q S E G I A L W S C G A D	
UniRef90_UP1000237C4C3	N I K I Y T T E G E F G T G T I G G D V F R A Q S E G I A L W S C G A D	
UniRef90_A0A021VWQ9	R L R E Y T L D G R Y T G R S T P A G T F A A Q A E G I V M L K E C A D	
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		250	260	270	280
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UniRef90_G0L3R2	G E G Y I I V S D Q Q R Q G F N I Y S R K T N A F V R A V N L S				
UniRef90_S6WEE4					
UniRef90_D3Q053	G K G Y L L A S S Q G D D S F A V Y S I S G G N D Y L G S F S I A D G S K T D G				
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UniRef90UPI000405FD63	G T G Y I I V S D Q Q K G Q F N I F S R T T N E F I K A V N L S G				
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UniRef90UPI00047B73E4	G H G Y L I V S N Q Q K G E F N I F D R E T N A Y I N A V N L L T S S S				
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UniRef90_Q1GNE5	G Q R Y L I A S S Q G D N A Y A V F R L P G V D Y I G R F A V A A G A F G A				
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UniRef90_J3C519	G E S Y I I V S N Q Q N H S F V I F N K N T H E F V K E L N L				
UniRef90_S7VT11	G E G F I I V S N Q Q D H S F N F Y K R S D N S Y V K T L N L				
UniRef90_F8L721	G K G Y L L V S S Q Q G D S T F K I Y E R T G S N K F V K S I H A E G				
UniRef90_F4QY51	A R Y L I A S S Q G D S T F P V W R I D G A E Q F K G R F V V V D G T V D G V				
UniRef90UPI000478AD85	S T G F L I A S D Q Q G Q R I Q L F R R E G S A G K P H D H V S I A T L P V				
UniRef90_W2UMC4	G G G Y I I V S D Q Q K G Q F N I F S R K E N R F V K A I N L				
UniRef90_Q08T31	Q D G Y L L A T S G G G S D E I A V Y D R Q P P Y S Q V G S F T V S E T N T T D R				
UniRef90UPI00036E2459	T N G Y L I A S S Q G N N T F N I Y D R T E P H A Y V G S F Q I K E N N S I D G				
UniRef90UPI0004799CCD	G S G A I I V S N Q Q A H T F S V F D R E T N A F I K E I N L				
UniRef90_S9QGY3	E K G Y L I V S S Q Q G D D T F H L Y D R E G G N R H L G T F Q V E G				
UniRef90_D9QKN6	A R Y L I G S S Q Q G D S T F P V W R I D G A A P Y V V G R F V V K D G A I D G				
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UniRef90UPI0004762D53	R G G R I I A S S Q G D S T F V V Y E R T G A N Q V L G G F T V A A G N G N D S S				
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UniRef90UPI00029AAE9A	G K G Y I I V S N Q Q N T F S V F S R T D N R Y L K E L H L S S				
UniRef90UPI00046FB54A	G E G I I I V S D Q Q K G Q F N L F S R K E N S F I K A V N L R G I D G A D N				
UniRef90_W6K1Y0	G G Q I I V V S S Q Q G D D R F A V Y N L T G A N R P L G S F R I T				
UniRef90_A3XQ67	G S G M I I V S D Q Q Q G Q F N I Y D R K T N E L I N V L N T				
UniRef90_D2Q2G1	G T R T L Y A S S Q Q G D S T F A V Y R L D A G L S H R A G F Q V A D G P A T D G				
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UniRef90_A7BMY2	G N G Y L I A S S Q G N N T F T I Y K R T G N N D Y I G T F K I K V N L K I D K				
UniRef90UPI00037B21AF	G E G F L I V S D Q Q R Q G F N V F S A T D N R F V K A V N L				
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UniRef90UPI00036F3662	D G T L F A S S Q Q G D S R F V Y G H R T R D L R I V A G R G T D S S				
UniRef90_H1VM17	D Q G Y V I V V S N Q G V S A Y N V Y R R A E P H D Y V T T F T I T A D G R V D A				
UniRef90UPI00036AC291	L S G T L I V V S S Q Q G S D E F F T Y D R L T N R H K G G F V I A				
UniRef90_C4RE25	S A G T L V V V S S Q Q G D D T F H T Y D R R T G R P T G R F A V V D G A V D G				
UniRef90_J2P055	Q G D Y L V A A N A D A G D Y N V Y D R N A D D R F L G R F R I Q A N G A D A				
UniRef90_Q1D1J7	G E G Y I I L V A D T G A D A F A V Y E R R A R T L V G S F R L I A D D G G V I Q				
UniRef90_U2U7H6	L D G Y L V A S D P S A N T F V V F D R R T L G R V G Q D G G T D A				
UniRef90_H8MLP5	S S D Y L L A V A Q T D V V A L Y D V S F T L L G S W R L T G D E D I I				
UniRef90_M7T831	S S D Y L L A V A Q T D V V A L Y D V S F T L L G S W R L T G D E D I I				
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UniRef90_K9YSJ8	G K G Y L L A S S Q G D S S Y A V Y S R E G N N E Y L G S F V I I G D N G E I I D Q				
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UniRef90_K9YE45					
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UniRef90_G2LWJ7	G S G Y W I A T D Q F K D R F Q V F D R K T L A H V G A F A G R V				
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UniRef90_K6H468 T S E T D G I | D V T N Y N L | R G K F S K G | L M | V | A Q D G Y N Y D G E E M K N Q N
 UniRef90_UP1000479EC28 V Q H S D G G A V T S T P L | G R D F P H G | L L V L | H D G E N T P D D G R V S T N
 UniRef90_T2KR38 T I E T D G C D V T T E A L G P K Y P N G | L F V S M N D E K D
 UniRef90_G0L3R2 T L E T D G C E V V T V P L | N D T F K S G | L F V A M N D E K
 UniRef90_S6WEE4
 UniRef90_D3Q053 T Q H S D G A D V V N T E V G | D F E A G G | L L V V | Q D G D N T P E G D E S S T N
 UniRef90_J9DE28 V T H T D G I A V T Y L P | V M P D Y P E G | L F V A Q D D K N E G V S G R I | Q N
 UniRef90_I0GX85 V Q H S D G A A A T A V V S L | P G Y P K G | L L V L | H D G E N K P D D G R V S T N
 UniRef90_UP1000405FD63 T L E T D G C D V V T V P L | N A T F K N G | L F V A M N D E K D
 UniRef90_UP100035F18F2 S E E T D G I A A T G Q A | L G T A F P H G | L F V A Q D G Y N A P A G D R T D T N
 UniRef90_A4BZB5 T L G T D G C E V V T V I P L | N E K F K S G | L F V A M N D E K D
 UniRef90_UP1000255AF26 T T E T D G C C D V V T V P L | N N T F K N G | L F V A M N D A K D
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 UniRef90_UP100047B73E4 T T E T D G C E A V T V P L | N D T F K N G | L F V A M N D E K
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 UniRef90_S6UNQ5 T S E T D G I E V I T S M N L | G G P W S K G M | L V V Q D D G R K
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 UniRef90_Q1GNE5 T S E T D G I E A V A G N F G P | P A Y P D G | F I A Q D D G D N | G A K A Q N
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 UniRef90_UP1000346645 V E H T D G L E V V S R P V G | D Y D E G | L I V V Q D G E A E P P G R G D A T G
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 UniRef90_J9N0E1 V S N T D G I T A V G T A L | N K D F P H G | L V V V H D D A N P N G K T S A E A S
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 UniRef90_H1VM17 V S N T D G I L A A V G T H | G R D F P H G | L L V V H D D A N P N G S T S A E A S
 UniRef90_UP100036AC291 V Q E C D G A A V V N T R L | P G Y P N G | L L V V H D G D A L P G Q E R A A T N
 UniRef90_C4RE25 A Q E C D G A A V T A T P L | P G F P G G | L L V V H D G R N T P D T P R P D T D
 UniRef90_J2P055 I E G P A G L F G V R A P L | G A D L P A G | A L L V T D D R K V G A | N
 UniRef90_Q1D1J7 A N D P V I A L A V T A S S L | G T T P D G | L F V G S D | A F S N P Q R
 UniRef90_U2U7H6 A N D P V I A L A V T S A S L | D T A F P N G | V F A G S D | A L A N P Q N
 UniRef90_H8MLP5 V E Q S R G L V A F S G A L | G T A F P E G | L F V A H D G V S S T L S D | N
 UniRef90_M7T831 E V Q G Q L S F Y Q E T | T P A Y P A G | V M
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 UniRef90_W7ISX4 V E H S D G A A I V T G R | N | L L V V H D G E R P D G | T G
 UniRef90_K9YE45
 UniRef90_G8S690 T A S V S L P G Y P K G | L L V L P H G E N I T T N D R A S T D
 UniRef90_G2LWJ7 T A N T D G V W L D Q R S | D T R F P G G | V F Y A H D D Q A V A A
 UniRef90_H1VMZ5 E V Q G Q L S L Y Q G S | T A K Y P S G A L | G F A V E A | D N D V A G
 UniRef90_UP100028872B8 T K Q S N D F A I S L K L N F G G K F S R G | L F I | G K G D D R K
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 UniRef90_UP1000405EF92 T S H T D G I A L H A A A | T P S F P Y G M Y A V | H D D R A V V A A
 UniRef90_G7URQ0 V L N T D G I W L D E R G | D A R F P Q G | V F Y A | S H L D V A V S A
 UniRef90_B5JDS5 T L N T D G I W I S Q T P M | P R F P Y G A L Y T C D N D K A | S A
 UniRef90_UP100047AAA09 V A N T D G I W L H Q A A | S A R F P Q G | V L A V H | H D D Q G V V A
 UniRef90_UP1000237C4C3 T R N T D G V A L T Q H S F G | N F K N G V F Y V H | H D D G S I T A
 UniRef90_A0A021VWQ9 T A H T D G I A L H A A G | T S A F P T G L Y A V H | H D D R S V T A
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330

340

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UniRef90_J9DE28	Y K I I G W P K I A E G I S
UniRef90_I0GX85	F K F V D W R S L
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UniRef90_S6UNQ5	F K F V P W A E V T K T L K L P
UniRef90_G8R7W3	F H L Y S M K D I L E A L K
UniRef90_Q1GNE5	F K L V R W D Q I A A A L G L
UniRef90_B3EJU3	Y H Y Y S L K D I
UniRef90_B4S367	F Q Y Y S L E D I
UniRef90_UPI000477CA37	F K F V
UniRef90_UPI000372E0A8	F K L V D W R E V T A L L
UniRef90_D5BCF0	F F Y H D L S R L K K
UniRef90_UPI00046F3571	F Y F Y D V E K L
UniRef90_I3C519	
UniRef90_S7VT11	Y A I F D W
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UniRef90_F4QY51	F H I F D W R E V R K R L P
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UniRef90_W2UMC4	Y K F V S W A D V S K A F S P P L R V
UniRef90_Q08T31	F K L L S L S E I K Q Y L
UniRef90_UPI00036E2459	
UniRef90_UPI0004799CDD	F K L V R W D D I A E A V P P G F K V D T D Y H P R D P H D
UniRef90_S9QGY3	F K Y I D W R D I R A A L A L
UniRef90_D9QKN6	
UniRef90_A0A024FGL4	F Q Y Y S L K D L
UniRef90_B3ECB6	F A F V S W E D V A K K V G
UniRef90_UPI0004762D53	F K F V S I K D V L D K I D
UniRef90_UPI0003626ACE	F Y F Y D L K K L D L P
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UniRef90_UPI00046FB54A	F S Y V Q W G A V V D A L A L P
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UniRef90_UPI0003466645	F K I
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UniRef90_UPI00037B21AF	F K L V S L E K I L K V L G K K G L V D K N W D P R K
UniRef90_J9N0E1	F A F V R L E
UniRef90_R4TBM0	F A F V R L E D V
UniRef90_UPI00036F3662	F K L V S L E K I L G A L N L L D D V D A K W D P R S
UniRef90_H1VM17	V K Y V D
UniRef90_UPI00036AC291	F K F V D
UniRef90_C4RE25	T K L L S W R D V A V A L K V S P
UniRef90_J2P055	F L Y A R W P A V A E A F D P A L R I D T R F
UniRef90_Q1D1J7	L K F A S W A A V A E A F D P A L R I D T R F
UniRef90_U2U7H6	L K L T S W G N V A R A F T P P L V I A Q Q P
UniRef90_H8MLP5	
UniRef90_M7T831	
UniRef90_M7T831	
UniRef90_K9YSJ8	F K F V P W D N I A N R F E N P L D I D T S F D P R N P E A N T
UniRef90_K9YSJ8	F K F V P W D N I A N R F E N P L D I D T S F D P R N P E A N T
UniRef90_L7UH05	L K L V R W E T V A Q A F N P P L R I D T R P T P
UniRef90_Q2H2H9	F G V S S L D G A I Q E L G L E G N T K Y D P
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UniRef90_K9YE45	
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UniRef90_G2LWJ7	F D W R D I A R T L R L K
UniRef90_H1VMZ5	F G L L S L D G A L G E L G D L L N T A Y D P R S
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UniRef90_UPI0003B4D25C	F D W R D V V R A L R L K
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UniRef90_B2FLX4	F D W E S I A K Q L A L P L E
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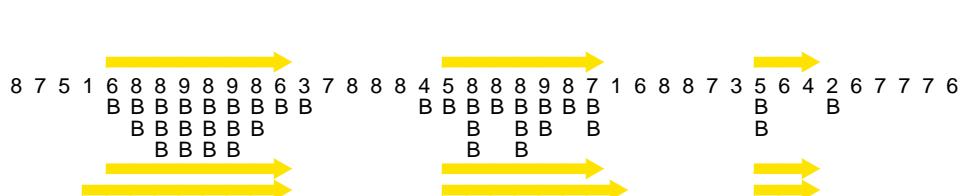
This figure displays a multiple sequence alignment of UniRef90 protein entries, focusing on specific domains and motifs. The alignment is color-coded to highlight conservation and divergence. Key features include:

- Conservation:** Conserved residues are shown in black boxes, while divergent residues are shown in colored boxes (e.g., red for hydrophobic, blue for polar).
- Motifs:** Specific motifs are highlighted with yellow boxes, such as the NHR motif at the top and the C3ZU22 motif at the bottom.
- Domain Labels:** Domains are labeled with their respective domain names above the alignment, such as UniRef90_C3ZU22, UniRef90_E0VVK3, and UniRef90_R1DP49.
- Sequence Length:** The alignment spans approximately 500 amino acids, with labels at positions 50, 60, 70, and 80.

The alignment shows significant conservation of the NHR motif (residues 1-10) and the C3ZU22 motif (residues 450-480), while other regions show varying degrees of divergence and domain-specific variations.

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
inssm

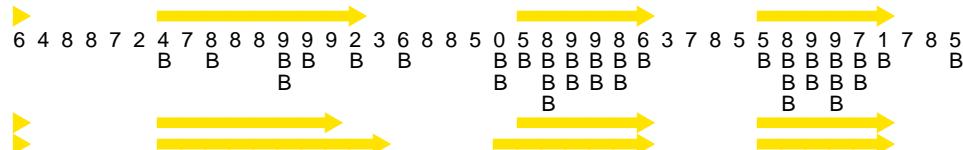
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 UniRef90_F4WIS7 D G T F V G K F G G R G Q L E Y I I A V S N T N R V I V S
 UniRef90_W8BM30 D G T F V G K F G K L G P L E G I I A V S N T N R V I V S D N N H
 UniRef90_C3ZU72 G T A M A R F D M K K G Y H F R G I I A V D M R T N H I L V T D A D G
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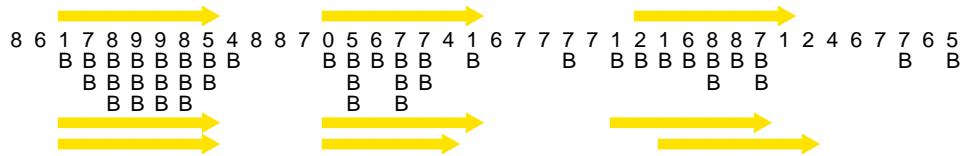
Sequence logo showing the conservation of amino acids at positions 210, 220, 230, and 240 across UniRef90 entries. The logo uses a color scheme where blue indicates low conservation, red indicates intermediate conservation, and yellow indicates high conservation.

Position	Conservation Pattern
210	Highly conserved (Yellow)
220	Highly conserved (Yellow)
230	Highly conserved (Yellow)
240	Highly conserved (Yellow)

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lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
ipssm

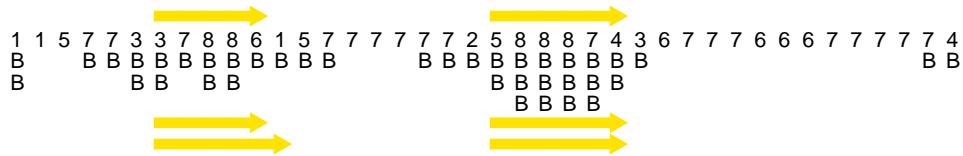
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G R P V V I T S V T D T P L L T V Y N A E D L S E L S S L R T V D G L N A P M G T R L V L A A D G N G E T V D T F D A A T L E A G I S I D I V D G L S T P G G S D Y L F V A Q T D K I T V Y D R S S F K L K G T L S L T G Q K D I G E R R L V V T D Q L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

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