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

130 140 150 160
 F L W G S F R D N N G V I G L L E P M K K S M V P V Q V Q L D V P V V K V A S G
 Y G F G L S N Y H Q L G T K N T Q A C Y A P Q N L T S F K N S T K S W G F S G
 L V F G Q G D F G Q L G L G E D V T E K M R P A A I S E Y Q D I I A I A A G
 F A W G A G D G Q L G L G T T E T T V R I P R L V K R L C D H R I S Q V M C G
 F I W G S F R D S H G T M G L L T K D N E R F P V E I Q L Q K K F I K I A S G
 W A F G L N N Y K Q L A Y A K D L A T I I N P V D T K F E N V K Q I A G G
 W A W G A N S S G Q L G D G T T Y S P V P V Q V Q G L S E V V A V D A G
 F A W G D N S Y G Q I G L G S K E K V Q T I P K M L K G L A K M S V V Q I A C
 F T F G A G G S C G Q L G H D S M N D E V N P R R V L E L M G S E V T Q I A C
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QUERY	170	180	190	200
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UniRef90_I3KLK3	A M H N V C L R K T G E V L T F G C N D E G A L	G R D T T K E G S E T V P G A V		
UniRef90_K7J3L1	N Q H C V A L S R D G Q L F T W G Q N T S G Q L	G L G K G E P S K L F P H P L K		
UniRef90_A0A034VHC3	A D H L V L L D S A K H I Y T C G C G E Q G Q L	G R L P E R K T D R H S R Q G V		
UniRef90_S9QFK4	Q H H T L V L L K N D G S C Y S I G R S D Y G R L	G L G T L K G D I T E I Q		
UniRef90_A7SNX9	S S H S L A V R S D G T V W A W G S N A S G Q L	G D E T T I S R S T P V Q V L		
UniRef90_G1SUA5	C N H S M A L T I S G H L F C W G D N S S G Q L	G I G K T H S S M S E P A P V L		
UniRef90_T0S6V6	R Q H T L A F V P S G L I Y A F G C G A R G Q L	G T G H T C N V K C P S P V K G		
UniRef90_F8CC08	N E N T V L L C S N G D V Y A C G Y N D S G Q C	G I G T A Q R V T S F K A		
UniRef90_G3NHN5	S L H T V A L R Q D G T V W A W G Y N D L G Q L	G D G T T T		
UniRef90_G8LW40	R Q H T L A F T P S G K M D S F G L A G N G Q L	G T R S T C N N S E P C C Y V K		
UniRef90_S9PFT8	T M V S A A I K E D G T L W I W G D N T Y G I M	G M G N S R N I N N S S P V Q R K D I		
UniRef90_UPI0003DE98FE	Q Q F S A A L T A Y G E V Y T W G K G E D Y K L	G H G N E D		
UniRef90_H3BE93	E A H T L A L N D K G Q V F A W G L S T D G Q L	G L P G T D E C I R		
UniRef90UPI00035D3048	S H H S L A V T S T G T M L A W G S N L T G Q L	G H G D G T T T T N S N T P V A V D L		
UniRef90UPI00046D5F3A	A Q F S L A L T K Y G E V W T W G K G D Y F R L	G H G N D		
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UniRef90UPI0002590692	S Q F S V A L T R S G S I Y T W G K G D Y H R L	G H G T D D H V R R P R K V A A		
UniRef90_W5MNR1	S Q F S V A L T K S G A V Y T W G K G D Y H R L	G H G S D D H V R R		
UniRef90UPI0004432CF3	G R H A M A L T V D G K V F S W G E G D D G K L	G H F S R M N C D K P R I L E A		
UniRef90_J9JPA7	Q Y C T F L I D T K G C V S A C G K N S Y G R L	G L G N S S N		
UniRef90UPI00042B51EF	V W H T A A N V S S R K L F T W G D G D K H R L	G H G S K E T Y L L P T C V S S		
UniRef90_A8M5U8	G L H S L A L T A A G A V V A W G R N V S G Q L	G N G T T T G S S T P V D V D L		
UniRef90_J4C3U8	S R H S M A L D K E G N V W S W G Y G G N G R L	G L G S T R N Y Y T P N L I R I		
UniRef90UPI00046DFD9E	E Y H V A V L T S R S E V F T W G R G R A N G R L	G H G D A E D R K T P T L V E A		
UniRef90_V9EKS4	V W S C G Q N S Y G E L G H G D T T S R K S F E R I T S			
UniRef90UPI00045755A8	S Q F S V A I T K D G Q I Y T W G K G D N Q R L	G H G T E E		
UniRef90UPI0003C8EDCC	S G Q T L C L T D D D T V W S W G D G D Y G K L	G R G G S D G C K V P M		
UniRef90_U2SQU5	R A H A L L V R A D G S V V A W G A N A S G Q L	G D G G G T T H G A R		
UniRef90_A4X6D4	R S H T L V L T S A G A V L W A W G S N S N G Q L	G D G T T T D R S T P V T V G L		
UniRef90_B4MPR6	N Y C T F L I R S V T H N I W A M G L N N Y S Q L	G D G D K K V D R		
UniRef90_L7UBZ4	F S H S M V L K A D G T V W A W G L N A A G Q L	G D G T P T R R L T P V Q V L		
UniRef90UPI0002ADB8D0	S K S L F A V T V E G K V Y A C G E A T N G R L	G V G C R C R Q R G W E P P Q E		
UniRef90_G3RAQ2	D G H T L A F T T E G E V F S W G D G D Y G K L	G L G I S S G T V P I P R Q I T		
UniRef90_W5NCE0	Y C H S L F L T A K G D V Y S C G C A Y F G Q L	G H G N S S T		
UniRef90_V3ZRX2	G S H S M A L T E S G E E V F S W G D G D Y G K L	G I G D N S K R T T P V K I I R		
UniRef90UPI00042CCB88	G S H S M A L T E S G E E V F S W G D G D Y G K L	G H G N S D R Q R R P		
UniRef90_T0RMX0	L Y H T I V C T A V G E L Y T F F G K N D Y G Q L	G L G H N		
UniRef90_F6SJR5	F K H S A V T A D G K L F T F F G N G D Y G R L	G L G N T S N K K		
UniRef90UPI000440B658	S S H T I A V A Q D G R V W S F G G G D N G K L	G H G D T N R V Y R		
UniRef90_I3KCW2	Y R H S A A V S E D G E L Y T W G E G D F G R L	G H G D S N S R N I P T L V K D		
UniRef90UPI00027FC518	G H H Y L A L A T A T G E V Y S W G C G D G G R L	G H G D T V		
UniRef90_D8QXD9	D S H C L A V T A D G K L F T F F G N G D Y G R L	G L G D T D D		
UniRef90_S9QQN4	Q Y H S L A V R Y D G T V W A W G D N I L Y Q G L	G D G K L E G N S R		
UniRef90_K4BWQ5	N R H A M L V T K Q G E A F S W G E E A G G R L	G H G A E T D V S H P		
UniRef90_L7U7G8	D R F T A A R K S D G T V W A W G D N T Y G Q L	G D G T T L A T R S P A Q V S	V A	
UniRef90UPI0002B47761	G S H T V V L L S C T G V Y V F G N G Q S G Q L			
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UniRef90_Q17IM6	G K H V M V L S S A N E V W S W G A G D G G R L	G H G D T V S K E H P T M I V G		
UniRef90_F7A4S9	S Q F S L A I T K D G Q V Y S W G K G D N Q R L	G H G T E E		
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UniRef90UPI00035A022D	S S H T I A L S K D G R V W S F G G G D N G K L	G H G D T N		
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210 220 230 240

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UniRef90_D7MH28	UniRef90_M0TN18	L K D R P V K Q I S C G S N F T A A I C Q H K W I S G A E Q S Q C S A C R Q A F
UniRef90_V4IHS9	UniRef90_W0RMT8	I P K R V S G P V E G L Q V L S V A C G T W H S A L A T A N G K
UniRef90_D6W9C2	UniRef90_K4IQP4	G T G Y S G I A G G Y Y H T L A L K G D S S
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UniRef90UPI00042B38C8	UniRef90_G0QRI2	L Q T E Q V V Q V A C G F K H S A V V T S D G K
UniRef90UPI000408D3D7	UniRef90_B4I672	S V R V K K P A G T S T D F T Y V Q V S A G A F H S L A L G S D G N
UniRef90_W4GLY2	UniRef90_E9FDW5	G L N D I Q S I A C G Y Y H S L A L K R D G L
UniRef90_F8CKW1	UniRef90_W5AGK7	G L V H C H S C A R L V P T V V Q A L V D N N F H Q V A C G H S M T V A L A T S G H
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UniRef90_A0A022R7J9	UniRef90_A4XHW9	K P V R V N F K D I K G I S Y I Y A G E S Y S L L I D K N G V L W G L G R G Y T
UniRef90_F6QU60	UniRef90_S9QEX8	K R C Q K H G R P A Q I Q A L E T Q D I V V S V C G K E H S L A I C K E G R
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UniRef90_E9FDW5	UniRef90_Q0QRI2	F G G N K I I N I S C G D N F I A A L S N E G K
UniRef90_F4PCY3	UniRef90_B4I672	L S D H M V V D V A L G S G D A H S L A L T S E G L
UniRef90_I1JDG4	UniRef90_E9FDW5	Q V R V C T R P I K Y I A S G E Y H S F A V D R K D N
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250 260 270 280

QUERY	V Y G F G L S N Y H Q	L G T P G T E S C F	I P Q N L T S F K N S T K S W V G F S
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UniRef90_S9PFT8	V W A W G Y N S Y G Q L	G D G T T T P R L S P V Q V P G L	T N V V A L S
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C G E N H T A L I T D T G L I Y T F G D G R H G K L | G L G E E N F T N Q F V P T L
V G S S H S L A I S L D N N L Y G W G E G K Y [P] I | D G D E I L V P T M I S T L
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P G C N H T A A I G S D G N L Y T W G V N G N G Q L | G N G T T T S W N R P G M V
C G G H T V V L T E K V Y A F G L G Q F G Q L | G L G T F E T S E P K I
C G W D H S L A V T G D G S V Y S W G S G S N G K L | G H G D E D N R D V I P T K I
C G A W H T A A I V E V A K L F T W G D G D K G Q L | G H V D R E A R F I I P A C V
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L G L C H G V A L T S E G A V Y A W G
C G E E H T A V V L S K D G S V Y T F G D D T H G Q L | G Q N S G N Q T S V P Q K I
A G A N I S A A L T E D G E L F M W G D N S E G Q I | G L N S I S N V Y V P R Q
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S G S Y H V A V L T S A G S V Y T W G S S K G Q L | G L G D I E D R N M P T L V
A G G Q H A V A L N G D S L Y V W G I N Q Y G Q L | G D G L D G T R N L P F
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C G R Y H T L V L T E R M K A Y S F G C N D H Q Q L | G R D E E S H P S V P L P V
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C G G S H T A L L T K D G G L V F T F G A G Q Y G Q L | G H H N S A Q N E P R P R L V
S G W T H L V A Q T E S G R V F T W G R S N Y Q G L | G Q T D H S M E V R S P V E
C G S Y H S F A V D D G G R V Y A W G L N N F G Q L | N V E Q G A G D T D A T V L
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 Q G F E S E V P T A A H I P E E L L Q Q S I A Q I A G G G N H S I V T S N G R V
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 Q I
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 I G D Q V H R G I P V K V V D A N V T A V T V G E F H T H F I K A D G S L
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 S Y H T L A A E D G S V W C W E E D S H D S L V P C L L S R F L E
 R D H I L A L T S D G K I Y S W G L N A S G Q L G G G N G N P P P T P I P T Q
 D N H T V A V K T D G T V I A F G K N E M G Q L G N G T N A
 A D Y A I G L S T H C N I Y S W G W N S H G Q L G H G D S V P L H E S L F T P R
 E A H T L A L N D K G Q V Y A W G L D S D G Q L G L Q G S E E C I R
 G V V S T A V G D D G S L W V W G R S K R G Q L G L G K G I V E A L V P S K V E
 S D H N I V I T K Q G K A W S W G F S A N Y Q T G Q T D D D
 E N H S F A L T K E G K L Y S W G L N Q Y Q G Q C V G S E E I E D G A L V T V P Q
 Q A T V H V K E D A C D I Y T W G E G T N G M L G H G E D T
 D A H S A V L V A T G T V V T F G L G N N G R L G L G Y P K C G Q S I D N D N D N
 L H T V L L T D A G A V Y C W G S N Q H G Q C G A S L L Q S
 N K H T A V V S E T G E V F T W G C N K E G Q L G Y G T S N S A S N Y T P R L V
 G D H S A A L S A D G H L Y T W G R G F G D T L S A K T P Q H L P T
 G V H S C A V T E G G A L Y A W G G H V G Q L G V G P Q S G L F S C S L N G S
 S D G T F F L T E T G K V L A C G N N E F N K L G L N Q G I S G L K K H H E
 D F H C F A I D H D D K V Y T W G L N Q F G Q C A L T N S D G E L E D G S L I T
 H Y H S A L I N E E G Y A F T W G W S F Y G Q L G I N T R S S F
 D N H V V V L L T R N K E V Y S W G C G E Y G R L G L D S E E D Y Y T P Q K V D V
 E Y H S L A L L E D G T V W A W G G N D Y G Q L G D G I P N N S L V P V K C G
 D N H V A V L T N R E K V Y T W G C G E Y G R L G L D S E E D H S I P P Q K V E I
 G A H V L A L T T D G K V V T W G R G T S G Q L G H G D
 D Q H S A F I S D E K E L Y T W G N Q Y F R L G H G V T T D
 I Y V W G Y N H S G Q T G R Q G K E R Q L R I P K Q L P
 G Y S T L V L T N S G E V Y A T G G N S N G Q L G L G D E T D R T S F T K I S
 A G H N L A L S A N G D V F S C G Y N E H G Q L G L G H A N T M P N F Q Q I L G
 Y Q H V V A I D S K N R S F S W G F G G F G R L G H N E Q R D E L V P R L I K Y
 A D H S F A L H K D G S V Y G W G L N N Y Q G T G I A S K A G E S E A G V L K P
 G Y H T L V V V T E D H R L L V C G T G K N G K L G L R D T R D Q S S L V P V P
 Y G H T V A I T E E G E L L Y S W G F N T K G Q L G M E G T K S
 K Y H T I V L G A G G E V Y T W G H R L V T P R R V V I
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 V D G T M F L T D V G S V Y A C G S N S D N K L G L N N R Q G F I M A M K N I F
 R E N M T D N I M A R L M R D S E R V V Y E S S L M E G M E V P Q E V V Q G N
 G A H V I A L T P G G R V L T W G R G N S G Q L G H G E
 N N H T M A L D E Q G R V F T W G F G G Y G R L G H H
 D S H V L A I V H P G Q V Y A W G C N R W G Q L G T G D Q T N R A T P T P I A I
 S H H V C V V G S E S E V F T W G R G K N G R L G L G S E Q D F C Q P Q E V T V
 G T H T A A I T E T G E V Y T W G R D E G D G R L G L G P G
 A N F T A F I Y E D G S L W T I G R R N D Y G Q L G D G T N L N R S L P V K I V D
 G Y H S S A L S E E G I L Y C W G S N Q Y Q G I G N G D L E D Q V S
 S Y H S L V L T S D G E V F A W G Y N S G Q V G S G S T
 F T V W L S S A E G A S I L T A G L P Q Y G Q L G H G T D N E Y N S K D S S
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 P W H T A A G Q T S G V F T W G N G I C G Q L G Q G K V V H A T S P H M V I L
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 G F H T L A I T D V Q H V L A F G H N K A G Q L G F G H R Q S R T E H G W R S C
 T S H V L A V T L Q G E V Y S W G S N S Y K Q L G R D G V N N R P M K I T A L
 L D H S L V L C R D G T L L S S G G S N V Y G Q L G R S K G S I E S G L H P V D L
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 S S H T L A I N D Q G Q I Y S W G H G M A G Q L G I D Q R Q N S I E P Q L I H I
 V W H T A A I V E S R K L F T W G D G D K H R L G H G S K D T Y L P T C V S S
 A S Y S C V L A S D D G N V Y T F G N G D W G Q L G L G H T P E V E Q H
 S F F A L A L S D D G F L Y S W G L V D C V G L G T P E E V E R R Y R D V L G E
 E R H A L L L T N S S V H S C G E N S R G Q L G R R G A
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 D M H T A V V L L D G S L T C G W S A N G R L G R N
 D S H T L C L T A E G L V F A W G D G D Y G K L G N G S C N G
 F N A S A L L T E E G Q L L A M G N N Q F N K L N L A H R Q G F F T R
 D S C S F V L T D T G L V Y G W G T F R V G D M R F C F
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 A Q H T L V L L T D G R L F A M G D N E F G Q L G
 Y G F T L L S S K T N K I W G M G L N K D S Q I G F H R S K G D R S K G Y E
 W N H S G F V S D S G C L F T C G D G T F G Q L G H G D Y R S H S S P V K V S S
 E S H S L A L T V S G D V F M W G L L P V A K L Y D E N G E A T D A S D R A A V
 E Y H T C A V T Y S G D L Y T W G D H N S G M L G H G N E V S H W
 C Q F A L A L R E D G T V W S W G R N H E G Q L G L G T M T D R N T P Q R I P
 D C S M L L V E P M S T L F C C G S N R Y N K L A L D R E S E H V E E V H S F C
 S H H S M A L A A D G E V F A W G Y N N C G Q V G S G S T A N Q P T
 R T Q K M G V T K S G R L I T W E A P S V V S G E A S L P G
 N K S A F I I K N D N K C Y S T G F N N Q G Q L G L G D K N N R D L F S L V S I
 S G H V L L T T E D G V V Y A W G H N G Y S Q L G N G T T N
 D D H C L A L T S T G G V L A W G Q N D Q G E L G D G T M I D R T T P V A V S L
 S E C C Y Y I D M M N N L F G S G T N S F G Q L G Q C S T G V I A S Y I K I R S
 E A H S M A L S M S G N V Y S W G K N N F G Q L G L G H T K N R A V P C L I E T

210 220 230 240

<p>UniRef90_A9V7W1 UniRef90_F1PB99 UniRef90_I1GUQ3 UniRef90_G0UPH5 UniRef90_S3C126 UniRef90_V2X5Q7 UniRef90_M7TDK2 UniRef90_UPI0003AFCAD6 UniRef90_T2XB98 UniRef90_K5W4B5 UniRef90_K0SC62 UniRef90_A0DG67 UniRef90_UPI000382C320 UniRef90_G7J3F9 UniRef90_G7QNF9 UniRef90_UPI00047EA3CA UniRef90_K2MU03 UniRef90_Q6PAV2-3 UniRef90_M4EM38 UniRef90_M3AIP2 UniRef90_S6EPU3 UniRef90_A7RI68 UniRef90_I7J5C8 UniRef90_A7SX86 UniRef90_W9QLV8 UniRef90_M5XEU7 UniRef90_K4AM6 UniRef90_G3NXQ5 UniRef90_A3LSA8 UniRef90_J9FHZ3 UniRef90_UPI0003F19C40 UniRef90_Q0W3S6 UniRef90_V8NZ10 UniRef90_F6HPF8 UniRef90_Q22RV4 UniRef90_W9R9Q6 UniRef90_L8K715 UniRef90_W4GJB3 UniRef90_K7J6W1 UniRef90_B6QUH4 UniRef90_F2U2X8 UniRef90_I7M4K0 UniRef90_U5FRN0 UniRef90_S7XU72 UniRef90_D5GN97 UniRef90_V4NQU2 UniRef90_X0C8L3 UniRef90_E9FGV8 UniRef90_K1QS0 UniRef90_K3WC71 UniRef90_M1BHP8 UniRef90_A7RL61 UniRef90_F4QCF2 UniRef90_R7TLT0 UniRef90_B9R8I6 UniRef90_UPI00035D92AB UniRef90_F4PHS1 UniRef90_H2Q7K2 UniRef90_E0CPK0 UniRef90_M7ZZV8 UniRef90_UPI0003D0EF76 UniRef90_A0A024UR15 UniRef90_A0A024UUK7 UniRef90_W4GBV8 UniRef90_A9US05 UniRef90_S8E6K7 UniRef90_K1WSM0 UniRef90_J9I947 UniRef90_M5XWG4 UniRef90_C9ZTW2 UniRef90_E9BD50 UniRef90_F7GBT7 UniRef90_M0RBP0 UniRef90_K3WLR5 UniRef90_A0A034V6Z6 UniRef90_A0A016SRL9 UniRef90_G9MF6 UniRef90_M0TJD5 UniRef90_W2JKQ6 UniRef90_UPI0004423BB9 UniRef90_V4SV98 UniRef90_D0NEQ9 UniRef90_K7MRJ9 UniRef90_UPI00037D4F9E UniRef90_X1YV76 UniRef90_Q8NDN9 UniRef90_M4ABR6 UniRef90_T3V7Z7 UniRef90_Q6NXM2 UniRef90_UPI0003606A22 UniRef90_T3DLT7 UniRef90_I3MQC5</p>	<p>L D N Q K V E F L S N Q N L T G V A C A V A A S Y A F S N R G K A C G G S H T A L L T K D G L</p> <p>E V K W L A D K M I V Q C G C F F A L A L S A S G C V Y S W G C I E C C G L G D A T L V E G F P E G A K V A S I D G G E H H S V A C T E D G K L F T W G R I D G E R R K I H G T I P E K V T L G N R M R K G K V I G A G S F H S F A V D D S G D R D D R G L P R I C L R P I P V T N I G T A A H V S C A T G H T I F I N T E G Q E V L Y F T P C K S L L G C A Q Q V A C G C W D F T I I L T E N G Q R K V F T K I D I D N I K K I I C G I Y H T F I I K N D N T</p> <p>N P D G D D G Q V Q G V A A Q A P E M Q P Q E M D A V V Q A A A E D G V P F P V K V H S I Q N F Y A V Y A K C G G N T T F I T T L E R L P A G T T V T A V A V A A G E F H S V A L T S A G T L Q P H N S S T D P S E A E D K A S L E M C T V K A G G M M S L A I D N R G T L I L N I Q D M V A S I W A P S N V P V E V V G L T N K E V A L G Q D D H S L A L G E N G L E I Q A L H S R E V T Q V A C G G T F A V A L T Q D G E V P R N I K S L S D I Q I V Q V A C G Y Y H S L A L S K A S E A L C Q E H I V K V V S L G W G H V K V F G W G Y V A D G R V G N V G L P L E A S</p> <p>E V I L P E D V V N V K W V S A G E H H S L L L T Q D G D I Y S F G R L D M H Q E A H P H V V E A L L G K D I R K V A C G A T H T L A L S K D G E A N V F R D D Q N E K S N G T I H T D I M D D K N N I S S K N N P K K I Q L N R V P V P M R V R G P L N D A C V R E H S G W S H V V V A T D Q G R E S L K G K V F T G V A A A K C H T V L L G G D G E V Y T W G H R L V T P K R V S F C F T K I A L G W N H A L V L T G G E V F M F G G N H H G V D M I L L R N I P V L V I P S G V R L A T C G H S H T L V S M K D G R D Y Q G I P Y I T T L T L V K Q L A R F T Q V I A P G K S H T A A I D D H G R K P T L V P S L S G K G I V E I S A G E H H T E G D V L S W G R Y D M K E V G I T D E L V P S L V K S L N G R V I S V A C G Y A H T L F L M E S G V P K A L I I V A V Q C G C D G T F L L T Q S V N N L R N V K T I A A S D R Y S L A L K Y D G T Q K T S N I V S V Q C G S D G T F L L T Q A G K V L A C G L N E F N K M V S S L Q P K H V K L L E S F V M T H V S A G W S H S G F V S D T G C E L L Y P K K V V V L E D V Y V T H V S C G M T H T L A I T N E G F P E L F G C P A G A N S C W L D I A C G R E H T A A V A S D G S T V T N A K N I S M G V F H A L V L T N S G E L Q G L F V H H I V C G H Q H N L A Q V E D G V S R L E P P N R G A K A V F C G S T F S L V L N V H G T M L L F G Q A K R T G T V I P S L K G Q N K I T Q I S A G N F N T L A I T D K N E C L V W G R I D N Y G L R D V L R V A C G R R H S A A V T A T G Q</p> <p>A R N L K K S G N T P W K S H R L E R L H V A A I A A G M V H S L A L T D D G T R F K K Q G L N V K T A A H S R G K V K A I K D I G C G A F Q S F L I N R K D E</p> <p>Q E L G M S P V G I T G S P I S V A A G L G H S L A I C N I Q S D S N T R G V C L P R G K I S K I A C G S Y H S F A L D T D G Q D H E P F V Q V S A G L R H A A A V T N T G C L Q I W G I E K Y V K Q L T D V S T K T E V E G S N V P T P V R A L A R H R V L G I S M G A C H T A V I V E P G H V Q T V R H P C F V P R P C P S L S K V T I V N A A G F A H S L A S S S C G A M V N C L H P K S V E S L E G A F I T H A S A G W N H S G F V S D T G C Q Q P K D E H V P R L L T F F N T K G N P S V I F A G S T Y S M A V C M G Q L A T P T V F T S V S C G A Q H S M A L S N Y G E P D N L S I K E C H C G R D G T L L L T D V G S M L A C G N E G N K L G L N H R G P N E G G G L S I P S K V K A L T V P V A A V F C G G F T A V L T E E G Q S G V E A L E A G D S H L L Y K T T N G A</p> <p>P V K I K V D V E D K K V K K V A M G S N H T V L V T I T G E V N Q P I P R R V T G C L Q N K V V V T I A C G Q M C C M A V V D T G E V R L A Y E P Q P R P K A I A S L S G E T I V K V A C G T N H T V A V D S S G H F T T K H V E K L A F G M R H S L V L L K D N S</p> <p>E M H P Y V V T S V A C C H P P M K R A S E P L E D V K Q M A C G M H H T A A L T E N G S V P S R V E S L V D H A I H Q V L K G K L C S W V A C G G A H T M C L T D Q Y E A A G V H H S A C I S T H G D E G E E V V V Q V C A G G H H S A A V S K A G N P S F Q P V K I A S G L G H S L A L C H P R P S E A N D A G S S I V S W G W N D V V A R T A A G A L V P R E F G L G R K K I V Q V G C G D Y H S F A V D D K G D N K R I Y F K K I S A G V A H S A I S V T Q Q L F M W G S N T G C Q L G Y F K L I D Y N F H Q L A C G H T M T V A L T T S G H P E D T T T V V T V P Q R I S M F E R E P A V H V A A G Y A F A V A L T A D H H S L S N E R R A V V L T P Q L V T V K G R R R V A P G G A A V T P R G D L P E P V Q A L K T L K F N L V S C G K E H S L A V C H K G R L G I P D K V I Q V A C G G G H T V V L T E K V V C P K K S E F S S V F E L V D M K T R L C A F V V C G G A H T L V L T E C N S S Q L P Q L I E T L P L I K R V Y A G S Q F S M A L S C D G K E R S D T F N N I L L P T M L K P F P A R I I D V H L G E F H S G V L L E S G Q D R N G A L V K T Q D K P M I P D L K G I T Q I V C G A N H V L A L D R S G T L R G M R A V R A A C G V W H T A A I V E L D A S S D S G S S S T G K</p> <p>Y V L E P S P V P L P L A K P Q Q S R V L Q V S C G R A H S L V L T D A E G F V I N K N V H Q I A C G M R H S L V L L K D C L G N Q E L A G L S S E E M E R A Q R A R S R G D L R R H M D D T L I M A R L V R D S M Q I P K K V G G N L E G L R V L Y V S C G P W H T A L V T S A G Q G L E N I V A V K A G C R H A L A L T A D H T P V Q S L P L A S Q A I A M V A M G T S H A A A I M S N G E L V D Q M Q P L F I S R F L E G Q S G V T L K S V S C G D L F T T C M T D R G I L N D V K T I A C G C S E H T V L M T Y N N D Q G I A P V Q V C T N L L I K Q V I E V A C G S H H S M A L A A D G E P V D N K K V E F L A C G G S H A A L L T Q D G L</p>
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250 260 270 280

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290 300 310 320

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UniRef90_UP10003D0EF76 UniRef90_A0A024UR15 UniRef90_A0A024UUK7 UniRef90_W4GBV8 UniRef90_A9US05 UniRef90_S8E6K7 UniRef90_K1WSM0 UniRef90_J9I947 UniRef90_M5WXG4 UniRef90_C9ZTW2 UniRef90_E9BD50 UniRef90_F7GBT7 UniRef90_M0RBP0 UniRef90_K3WLR5 UniRef90_A0A034V6Z6 UniRef90_A0A016SR9 UniRef90_G9MF6 UniRef90_M0TJD5 UniRef90_W2JKQ6 UniRef90_UP10004423BB9 UniRef90_V4SV98 UniRef90_D0NEQ9 UniRef90_K7MR9 UniRef90_UP100037D4F9E UniRef90_X1YV76 UniRef90_Q8NDN9 UniRef90_M4ABR6 UniRef90_T3V7Z7 UniRef90_Q6NXM2 UniRef90_UP10003606A22 UniRef90_T3DLT7 UniRef90_I3MQC5	G G G Q H T V M L C G R W H T L A V S D G K V F S F G S G K E G Q G N G G T H N Q L I P T G A W H S L A L D A A G D Y A W G I G A C G R G Y G G E E D R S T P V K A G T D N S F A L T R D G K V Y S W G F S A N Y Q T G Q G T I E D I E T P G G E H H T F L T S A G K V Y A C G R S N A G Q G L P D F Y P E P V L V K F T G Q F S L V A G L R H A L A A T A S G T V F Q W G T G L A S S G R R L C P G Q T C G Y T H T F I I K N D N T I W S C G S N T Y G H L G L G D T T D R N V F T K V A G H R H S M V L D E H G G Y T F G S G A G G A G H G D L F G Q E F P V R V L S Y H Y G L A L L Q S G S I S F G L P F K G L L G R D L Q A E P K N Y L T N A G K F H S V A V T S A G T M L A W G N N T T S G Q L G D G T T T D R S T P V A V C G N E H V V A L D E D L L C Y S W G Y N S H G Q L G L G D R Q S R L H P E V V C G A T H N F A L L G N G E Y Y G W G W N F K G S L G R T D L Q N N W A G F A H S L A M T G D G H V Y W G W F N V K G Q V G N G T T N D Q Y S P V S V A G V S H A V A V L S Y D H R I Y A W G R G P L G N G G S Y N T L E C T P V A L K A G G A H S F V L T T L S G A I F G W G R N K F Q G L G L N D E N G R C C G S D H S L V L C R D G T L L I S S G S N V Y G Q L G R R C K Q E L G M P A G S H H S L A V A Q N G I A Y S W G F G E T Y A I G L G P A G E D V E V P T R C N E F H S A A V C A C G A L F S F G E N D Y G Q L G I P E D K L L T S Y I Q C C G S A H T L V I C E D S S L W S W G R G N F G V L G L G S N C D V F E P T K V C G A E H S I A I S G D Q G V R T W G W N E H G M C G T G D E S N V L S P V L V A G M V H S S A L T E D G A L F Y W V I S S D P D L R C Q Q L Y A G A E H S A I V T E N G V L K T W G W G E H G Q L G L G N I S D Q T S P Q E V A G G G H S A V L T D A C S L C G D G F T I A A T L D N H F A W G N A G N G R L G M P A D K G P A M P R P T G S H S N F S A V T D D G F V Y S W G F A D T Y A P G L G P L D E D V E I P T R S K Y F H C L A V S E G Q K I Y C W G A N P Q A L K M K M F V K R R L R I E T D P G K T H T T A A I D E R G R L L T F G C N K C G Q L L G V G N Y K K R L G I N L L A A P T G C M A I D T Y G N V W W G M N Q F G Q L G D G T K T D R Y S P V P W P G K T H T T A A I D E R G R L L T F G S N K C G Q L L G V G D Y K K H L G I N L L C G M R H S L V L L S G D Q V Y G F G S G K R G Q L G V S M D N T R V P Q A T V A G G L H S M A L T D Q G I L Y S W G S S K G G V L G I G F Q R D N K D C Y S L C G A H C T A A I E S C R L W W G Q N Q G S D F P R L F W G A V G K D H S L L I N S M G K I Y G A G S N L Y G Q L G L A G S H H S V A V D E D G A V F T W G H S E Y G Q H G V A T A G H D P R R Q M T Q T S V V V G A D E S V I A W G C S T F G E L G F G E M R K S S T T P M E Y G T E H A I A V T T D G K A Y S W G F N S S N Q T G C G D R H T L V L T Q R G G V Y S F G G D Q G R L G I P E A P H K L R P A K L T G K Y W A A V V T A T G D V Y M W D G K K G S I D E P E P M L G G E H T L F L T N K G D L Y A A G T N L F G Q L G I E Q K E S E I P A K I D A G R V H S L C V T E K G E A W V W G C G K N G R L G L G S I D E P E P M L G G G H H S L A C S A N G D I F T W G R V D G Y Q V G F E F D K L S E F R P T V C G Q R H V H V A L T T K N K L L A W G G N N H G Q C G Q N K H I K E P L S I E W C G N H Y T V C S T T S N E L Y Y W G C G Q Q H S L A C S H S G V C F S W G L G I L G Q L G S G I N S W L P M S C G M R H S L V L D T E D L I Y G F G S G K R G Q L G I S D D K Q S T P Q V T L A D D S V V S W G P S P T Y G E L G Y G L K K G G Q K S S T N P K I V E G G M L H S A A T D L R G S V Y T W G W N K Y G Q L G N N T A K K H L S P N K L L G P H H S A V V V E P G H V Y T F G K N S K G Q L G T G N S K E Q D A P I Q V S G G Y H S L A L T D E G K V L S W G F G H G Q L G H P S I Q N Q K I P M V I C S S N H N L F I K S D G S L W G I G D G A Q G R L G H G S E T D H Y L P V K L A G D C S A L F V E D S S S V C G Y A H T L V L T D E G Q V Y A W G A N S Y G Q L G T G N K S N Q S Y P T P V A G S V N S S C T A G G Q L Y M W G K I K I T G D D W M Y P K P A N G D H S A A L D E S G Q L Y I W G R A L V G E H D D D Q P R A A
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[] P L F L T A K E P S T [] V T D A G E [] Y V W G S N K H G Q L A S
A V D N V K N I V [] C G G N H T F I I K N D N T I L F A G S N [] N G Q I G C Q
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N S M N D D Y K Q G D D E G E E M A Q N K [] N E V L N T I K P D L L Q F G M H
V P A G T T [] V T A L A A G S F H S L A K T S T G T V L A W G F N D F G Q L G D G
E E S P W T I Y E V A C G A F H T A L L T [] E S M C W T F G L G E N G Q L G H G
V D Y D P P S T
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V D I T G S P V S I A A G L G H S L A I C N R R V V S S W G W N R S Q Q L G R G
[] I K N N H N [] V E I G G G G Q F S V
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S A V Q R S L V M V G C G S G H S F A V
S L C G Q N I V N I S A G K Y W T A A V T A T G D V Y M W D G K K G K D
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F G S [] H H V P D L S C R G W H T I I I M
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V T E L E H M V Q I D A G Y S H S A V I N E Y K N [] Y T W G K S [] D M Q L G H G
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L H G V K K A T S V S V G E T H L L I V
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| L V E K G I G A I A H | L A C G S L H T A V V T R K G R V Y T F G C N D M G A L G
Q L V E F L A Q V I S V A C G T W H S A L T T S N G K L F T F G D G T F G V L G
D A Q N I A C G S K H A V L V T K Q G A I F S W G E G Y G G R L G
K L S T K V V A V A A G E A H T L A L T G D G R I Y S W G R G M F G R L G

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

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

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

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  H G N R E S I P Y P K E V Q L L S G L K T I Q V C S G V W H T A A I V E S R K L
  H G V E A D V S Q P K L I D A L S G L N I E L V A C G E Y H T C A V T L S G D L
  T G K E A D E L T P V E V K F E N S E K F V G V A S G A Y H S L A V A D D G S V
  
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  F [L] R D E I K I Q K T P L K I K E L K N V V Q L A A G K D H L L A L D S K G I V
  D G T L Q P R T T P H A V E E L G E E V A E A A M G G A H A C A R K [D] G T L
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  N I N I E Q E N I L I F Q R I Y A L E H V I D I C C G W D S S M A L T R N D E L
  H S Q S D T F L L P R V V R S L R V E E V V S I S C S R A H V V A L N S S G Q C
  V D K G P E V L E P M Q L N F F L N N P V E Q V S C G D N H V V V L T R N K E V
  S C E W Y D Q T T P V Q V P I E N V T A I S S G T D H S V A L K K S D G T V
  L G D Q V D R F E P H K V T L S E K V V D I A I G A Q H T L L L T E S G K V
  H G E M V N C L H P K L V N A F Q D S V T H V S A G W N H S G F V L E N G A V
  L G D N S E R L T F E P V E L N E D D E I Q E I S C G K K H T L I V T K K G V V
  R S S S D D Q N T F G L V L I P E D E V I V D V A V R D H H V Y A L T E N G D V
  S E D S S N S W L P R R L S G S L N G V Y I T S V A C G A W H T A I V S N S G E L
  D G S N T Q R N T P V K V P G L T N V T A V S T G S Y T T C A V A D G E A
  L A E D D V A V G S N E F T Q I T Q V G G S G I H S I L I D G N G N V
  Q G T R D K T I P D L I N E W D N V S Q A V A G S Y C S Y L V H C D G S V
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  G G V E E T R L Y P S P V A N L A V P K S V G L S C G L F H S S L I V D G A L
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90 100 110 120

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  N I V F L T H T T V E A P T L V T D L R G T Y M S S V A C G E Y H S L G L S S D G Q V
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90 100 110 120

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  L G S T V I S S P H P I P T N D R A A T C V K A I A C G G R H S A V V T D S G T L
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90 100 110 120

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  N G T T N Q G I A P I Q V C T N L L I K V V I E V A C G S H H S M A L A A D G E V
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90 100 110 120

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  N G T N Q N V Y E P T P I F L E P H S V V I H C S A G S K H S L A C N H G D I
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90 100 110 120

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  R D T N W N G S T P T A V S F A P G T K F V Q V V A S D S A T F A L T E D G R V
  I E F D L D N I E D I D C N G N H Y I M K R N D G K L
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90 100 110 120

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  V A G G L F H T C A V L S D L S L
  N P T T G E E K Q H V P V R I P G L Q G I T Q I A A G A N H A L A L T R A G T L
  S M S A D L R A L A T K E K C V Q V S C G Q T Y S A L L F E S G K V
  N A N S T S W N E D C R D S G S N P K V M V E A G G G M M S S A V D D E G G L
  I G R S I D D E K V Y K I E K F N D N I I S I V S G Y E H S L V V T K D D G I
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  G A L L P P Q F V S R F L E G Q S G V T I K H V A C G D L F T A C L T D R G I I
  A V E E R S R N Q W L P C K I P N G I K V S S V S C G I W H T A I I T T S R Q L
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90 100 110 120

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

170 180 190 200

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

210 220 230 240

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

250 260 270 280

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

170 180 190 200

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UniRef90_K7LGI4	H T M T V A L T T S G H I F T M G S N E N G Q L G		
UniRef90_F6GT91	P W H T A A V T S A G Q L F T F G D G T F G A L G H G D R N S S G T		
UniRef90_W9RTM4	F F C T Y F L D F E M D G Q L G F D G E N S A K P C E Q F L N		
UniRef90_H9FFW7	R N H T L V S T E G G N V Y A T G G N D E G Q L G L G D T E E R N T F R V I S F		
UniRef90_W7AGR2	D M H T L A I C T R G F L Y G W G S N A F G C V G N G T N T N V Y E P V R I F L		
UniRef90_B3RZN5	S A F T L A L T T S G S L Y S W G H G S H Y H S		
UniRef90_A5E5X5	D F H C F A I D H S D N V Y S W G L N Q F G Q C A L T G Q N G E L E D G S I L T		
UniRef90_D0LH53	E S H T C A V K T D G A A Q C W G N N S L G Q L G I E G G S S S L V R A P T P V V		
UniRef90UPI00042C63AF	S D H S A S L T D A G E L F V W G S N K H Q G L A S Q A A F L P V P Q K I E A H		
UniRef90_M4AA49	A N E A I Y I T N D D E E V F V F G L N C S N C L G T G D S Q S T		
UniRef90_M4B472	Y F H T T V V T D S G E L Y A C G C N E Y G Q L G S S D S D G Q L V P R P V G Y		
UniRef90_W4X4U5	L R H T A I V T E N H E L Y V C G S S N N R G Q L G L I N P E T M K P Y T F L G I		
UniRef90_TOSC76	H C H T V V S T N T N G G H V Y A F G A A W G Q L G V G S T K R E G I K D Q H L Q		
UniRef90_L8Y4M3	C D G T F L L T Q S G K V L A C G L N E F N K L G L N Q C M S G I I N H E A Y H		
UniRef90_H817R1	N G Y T I A L K N D G T V W A W G M N N I G Q L G D G T R E N R Y T P V M V K G		
UniRef90_K0SVB9	K E H S L M K T S D A L Y V F G S N E F G Q L G C T D E A L N Y T P H P L P K		
UniRef90_A0A022QIZ8	M R H S L V G N S E N R V Y G F G L G K R G Q L G I S T E K V K S T S L P Q I T		
UniRef90_G9EP03	A A H T L M V T E K S V Y A T G Y N A F G Q L G T G D K L N K L V F T P V T I		
UniRef90UPI0003F53B77	A A F G L A V D N A G T V Y G W G Y N G F G A L A Q G T P T V S G T I Y K I S D		
UniRef90_A0A022QUA3	P W H T A A I I E N K L F T W G D S D K G K L G H S		
UniRef90_L7L9C9	G T S C A V I T E A E Q E V Y C W G Y G S F G Q I G D G T E E		
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UniRef90UPI00021A521C	E F G A F A L A L T E E G E V Y S W G R G S K H R L G H S N T D N V K S P K L I E G		
UniRef90_I1KYX5	E G T I Y V V R P D G S L W T S G V N S D G R L G D G T T V H R S S L I K A I D		
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UniRef90_I3K6I3	G G H S V V V T D G G G L F V C G L N K D G Q L G L G H T E E V L R F T I C K P		
UniRef90UPI00042B4219	Q D H S L F L T E T G K V F A C G W G A D G Q T G L G H V Y H R		
UniRef90_B0G136	G L H S V A V L T S L G E V F T W G Y G G F G A L G H		
UniRef90_K3WQV9	Q N F S L I L T D T G A V Y S S G L C S Y G K T G H		
UniRef90_I7LZX3	K D H S L A I S W D G A V F T W G R G D S G Q L G H G C F M D I A		
UniRef90_T4UVS7	G T D Y T C Y Q W T Y K L I R C S I F D S P Q N I I G N S K N I L Y L S K N N S		
UniRef90UPI0004657EC8	W G H S L A L G S D G N A Y A W G L N S N G Q L G D G G T S T K R N T P V M V R		
UniRef90UPI0003D0C247	S R H T M A L A A S G A V Y S W G W G S M G Q L G H G D L K S V N		
UniRef90_H6S4A2	E V H S M T V V S S N G D V Y S W G H C N R F W K L G R L T E G D M D A S P T R I S		
UniRef90_F0WZN8	N W H C L A L N N Q N Q L Y V T G H N K Y G A C G I S G		
UniRef90_I7LVS4	L W H T V C Y T S A D G D V Y S F G N Q F G Q L G T G S D Q A E I V P K L V E A		
UniRef90_I1PWA1	T E H V L A L S A D G S I I Y V W G T S A H G A L G L G K		
UniRef90_A0A034VWU3	N R L S L F L T D D N R I F Q S G R L F M K Q D G C		
UniRef90_V9EWZ5	D G S T Y V L K K N G E L Y V A G L N D F G Q L G I G T R K D		
UniRef90_L8K3H8	R D W T A C L T D A G L Y T W G S N A Y N Q L G H H H Q R E L F T L M R E L K		
UniRef90_L8H7P1	A R M E A P L F V I G Q S T V A V D V A S P A I A G S A N Q V T A T V S T Q T N		
UniRef90_E8NAX3	D S I C A A L S T D G D E L R V W G S F N E G S L G F S N G L K H Q F K P V P I L		
UniRef90_B0CXX9	Q T S S M A V L D N G E V Y G W G Y N G N G Q L G L G N N G N Q L T P V R V A A		
UniRef90_G5B9Z2	S S H A L A L T Q L G N V F V W G N N N F G Q L G L N D K R G I N A Y K P E K L E		
UniRef90_R5VYT3	Y G F T L L S S N T T D V W G M G L N K D S Q L G F Q R S I R D R T K G Y E Y V		
UniRef90_U3IAU5	Q D H S L F R T E R G E V Y S C G W G A D G Q T G L G		
UniRef90UPI000388BDD4	T A Q S F A I G Q D G T L W A W G S N I L G Q L G D G T H E D R L S P V K I G S		
UniRef90_E7RW4	T S H S G C I D S N Y N V Y T W G N G K F Y K L G H G N D D I D I Y Y P K L V E		
UniRef90_A0A024VC83	E A Y T I V L T D D G K L Y G W G K N R G G Q L G D H S S E A Q M		
UniRef90_D3HXD4	T T C S L F L A T D K S R L Y G C G N N A Y G Q L I I G N G K I P L L E T I Q P I		
UniRef90_D3BJW4	A E H A C G L T T T G K I W C W G N N D F G Q L G D G T A N S R E E A V A V A V S G		
UniRef90_A0A024F3N6	L S H S A C V T A D G Q D A F T W G C A R L G R L G Y F A E P E S A R S E T D E E		
UniRef90_Q00TW0	T L H T I A L S N K N R L F S T G Y G E T Y A L G H A N N V T Q C E F S Q I Q M		
UniRef90_G0QLS4	K L H T I M I V K K D G T L W A T G L N D S G Q L G D D T T E N		
UniRef90_F4GHB4	S N H I L A L D D K G N V F A W G C G Q Q N Q L G R R I I E R H K M S C L S P R		
UniRef90_XOBLC7	K N H T V V L A N N D L Y A C G S S N N H K Q L G I D D		
UniRef90_D2VCM8	L D N T I F A T D K N A L Y G M G W S A D G Q L G Q G K E D		
UniRef90_S2JFE6	UniRef90_E2R5W9		
UniRef90_A0A024EZW3	S K H A C G I T L T L N N L K C W G T T N N Y G Q V G D N G V T T R T T P V A V S G		
UniRef90_Q01FT6	E S H V A A I A S T G E L Y T W G S N T F G Q L G H G D R V D		
UniRef90_D7FKP6	Q S H T C V L L A S G N V A C W G F N E Y G Q L G L G D T E H R G N S S S D M G		
UniRef90_S3BT51	E Y H A F A V G A S G R V W A W G L N T F G E T G A A P T E L Q R R		
UniRef90_L8GLW0	Q M Y S A A V T T D G G L W T F G I G P L G H A I S V K Q D P E Q V E A L		
UniRef90_A9SJ9L	N E H I L V L V D G P D C Y S W G S N A Y G Q L G L S D F E A R D V P T Q		
UniRef90_Q54YF9	Q S D H N L L L G N D G S L Y S W G N G Y F G A L G H G V G S N D K E N I Y T P K		
UniRef90UPI00038C5FA5	Q D H S L F L T D R G E V Y S C G W G A D G Q T G L G		
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UniRef90_A0A059BTP1	H H W T A A I V E S G K L F T W G D G D R G R L G H G D Q		
UniRef90_Q5CXZ1	H W H C V A V T I E N E V L V W G R G D D L G L E D V H D S L F I P M Q L R S P		
UniRef90UPI000350E323	A F H C V A V T I E N E V L V W G D N T N F T L G H G S Q N S K H		
UniRef90_R7F033	E S Y S L A A V G I D G T L Y A W G R D V V D W P		
UniRef90_A0A024U663	S R H T L A L T T D G D V Y S W G W G Q M G Q L G L G H H K S T N L P T K V P F		
UniRef90_X0R5A4	G N S S Y A L L D D K G Q V W G W G S D A Y A N L G K G K V C O N T T N C I N V N		
UniRef90UPI0004407758	P S N S I V I D R Q K M Y Y M A G K W K N S G E G		
UniRef90_E1ZQF7	V D F T M W L C D G K L W S A G C P Q Y G Q L G H G T D H S Y N A A D S S		
UniRef90_G3NAH1	K A H T C V L T K S G E V W T F G V N N K G Q C G R E T G S M T Q A G K A F G V		
UniRef90_C1N6D1	UniRef90_U3K935		
UniRef90_Q00TW0	G N V K I K Q V A C G G M H S F A V A D G T G E V Y Q W G		
UniRef90_Q5CXZ1	W D F T L I L V G S S G L V L S C G S N S F G Q L G L P Q I S S P C L I P Q K I E		
UniRef90UPI0004407758	H R C S M L L M E S R K I Y Q F G S N S		
UniRef90_E1ZQF7	N Y F S V V C C D R G T L M T I G T A K N L G L G K E A K D S A K P V L L E Q L		
UniRef90_G3NAH1	Y N Y V L C V S D V G L V Y G W G K N D K S Q L G I G V I K D F Y E P V H V K		
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UniRef90_U3K935	T R A V Y V H N R A G S V D V T A D L S G Y F T L A P A D C Q A G C V S T W G S		
UniRef90_Q23DP4	G D T V L A L T E S N K L F A W G N N E Y G Q I W P L D Q D I Q V P E P V H L N		
UniRef90_A8WVV3	UniRef90_W4I93		
UniRef90_W4I93	UniRef90_V9F4S9		
UniRef90UPI0003654F34	UniRef90_A0A059L88		
UniRef90UPI0001A61DBE	UniRef90_A0A059LR88		
UniRef90UPI000454AF18	UniRef90_F2SMJ3		
UniRef90_F2SMJ3	R H H S I G I T Q D G Q C L V W G R M D G A Q M G I D Y S T L H L D D P Q I V I		

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 C L I P S L L P S V P I A A G G N H T V L L F P S G E C F A A G D N T G N Q C C
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UniRef90_K4DR84	Y H F G K M G N G D G Q L T P I I A A P A T I N R I G A G G		
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170 180 190 200

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UniRef90_U6DDE4	D A F T V A I G T E G E V Y S W G K G A R G R L G R R D E D A G L P R P V Q L Q
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UniRef90_D5GHT7	M A H T L L L T A S G D V W G W G A G R K G Q L G E P T Q S I V S R P R K V E V
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UniRef90_E2A4G4	P D F V V V C I S K A C V Y T W G V H L T D P S A A A S A
UniRef90_M3K3D6	F K F N M I I T D K N K L Y G W G T N K R G R I S F D Q T Q K Y Y K Y P R K I T
UniRef90_G5EEZ1	K I H S V V T K N E L Y F W G L N V Q M G F C T H G D I E V K L Q D E S
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210 220 230 240

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UniRef90_S8G708
UniRef90_K4DR84
UniRef90_S4PRX1
UniRef90_D5G4Z6
UniRef90_D5GHT7
UniRef90_S2JFA4
UniRef90_U61107
UniRef90_D2VZ58
UniRef90_A0A017TJF5
UniRef90_UP100006CA84D
UniRef90_Q47HB5
UniRef90_Q54NH2
UniRef90_A0A059LJ48
UniRef90_C4XYP5
UniRef90_UP10003C88287
UniRef90_W5GTA1
UniRef90_O42645
UniRef90_V5BEU8
UniRef90_E2A4G4
UniRef90_M3K3D6
UniRef90_G5EEZ1
UniRef90_G8ZQX7
UniRef90_UP1000383871C
UniRef90_W7T9T9
UniRef90_UP100046D5E28
UniRef90_R1DAG1
UniRef90_A0A059LG30
UniRef90_M8CC81
UniRef90_UP100029D6AE9
UniRef90_W0F4F3
UniRef90_C3X3M8
UniRef90_D8LWV5
UniRef90_A0A024U955
UniRef90_A8NST5
UniRef90_Q7R8W9
UniRef90_C5PGZ5
UniRef90_B8PKB1
UniRef90_J4DPL9
UniRef90_V5B6P7
UniRef90_H2WEC6
UniRef90_C5DX56
UniRef90_G8UTQ6
UniRef90_B5JQB1
UniRef90_L1IGG1
UniRef90_A4HPC6
UniRef90_L1JH66
UniRef90_J0KDI5

T

S

Sequence alignment showing conservation across 40 positions for the UniRef90 entries listed on the left. The alignment highlights identical residues in black boxes and similar residues in colored boxes (e.g., red for H, yellow for C, blue for P, green for G, etc.). The x-axis at the top indicates positions 1, 10, 20, 30, and 40.

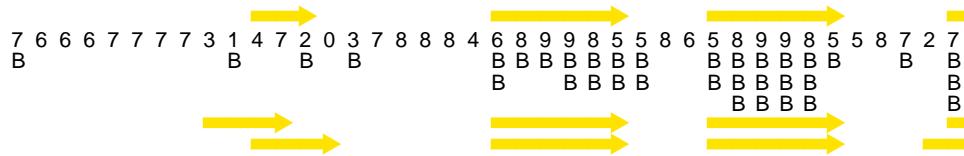
lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm

Sequence alignment of UniRef90_00CNLU0 and UniRef90_W9XFB5. The UniRef90_00CNLU0 sequence is shown in blue, and UniRef90_W9XFB5 is shown in red. Yellow boxes highlight conserved residues. The alignment shows significant conservation between the two sequences, particularly in the first half of the protein.

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm

UniRef90_Q0CNU0	P D S K E S V I K T P R R L A Y F D G Q V R D L K L T D K S G A A I D E K G D L	90	100	110	120
UniRef90_W9XFB5	L G P S V T S T N G Q V K E L F E V D S V S N I E G C V A H V I V L L S N G R V				
UniRef90_N1PG88	E K L T S K S W F P K P A N L G W G E K V V D V K S G L E H C L L L T S S G R V				
UniRef90_G2R7U1	F G S A I Q Y A L A P L K E L S S E A Q I V D V A L G Q D H T L A L T K T G G V				
UniRef90_Q17GC4	H R D E N M R Q H P E L				
UniRef90_UP10004407C0E	W T P Q P Q R I C L P P N V K S I A A G G A A H C V A L T S S G C L				
UniRef90_A7SW32	R E V D E S N P A D V P G L V D I G E P I K M V A A G G Y T L A A L T E G G G L				
UniRef90_F0V887	P M H F E T D T H V R F V K V A A G K H H F A A L S S H G I L				
UniRef90_C7YZN1	G W K P F E S S R P L Q P Q L G L G E K V T A I S S G L E H L L L L T T S G R V				
UniRef90_U6MMY2	N G K W T H Q D S P S K M K A L S G I R P V Q I S V G A T H A A A V L G N N A H				
UniRef90_B6Q5P4	T L D T T T Y V A K K V K L P D K S N C E E I T C G K A H C M V L T K S N K V				
UniRef90_J4CCN0	S G T T N H D F S T N L S N K I E V A Y G S H H S L V L I S D G E V				
UniRef90_F6YQF6	V P G L T W S T R P K E I S T L K G F E I E K I A T G D N H S L V L D N Q G R V				
UniRef90_S3DC46	N V H D W H N I V S V A A G W R R T I G L K L D G T V				
UniRef90_K0FLS7	U P D K I Q M A A A Y G K N L G I K Q I E A S N Q F S A A V T E D G E L V				
UniRef90_R5ISL8					
UniRef90_N4ULN1					
UniRef90_A7TFN1					
UniRef90_A0A016PM90	D P S S S E K Y V P R R I S Y F N D Q I L R D L K T S I F G A A V T E K G D L				
UniRef90_J8BLJ6	I N D W				
UniRef90_UP10004414AFC	I G N I D D V H R F T P C I F S L P E H V V Q I A C G G G N H T L A L T D D D G K T				
UniRef90_S8F853	G G G I A V T L S V C R P V P R R I K D F D N Q I L R D M K L T E N F G A A I D E T G D L				
UniRef90_M1W129	F E K I L I I I P R E V T W E G C Q G N K M K E M A C G H F H L V I L T E Q K E I				
UniRef90_D2VCL6	D Q G E A I H R E T M H V H T L E G L R A R S I H A S G R S T C A L D D A G V A				
UniRef90_A6GIX2	V S D W C H I V A V A G N V H M A T N				
UniRef90_W4BWQ3	S K D G K C T Y N W T Q I P G E F Q				
UniRef90_G8JWG7	D V A C G W D Y S V V I D I H G N V				
UniRef90_UP10002003BF5	H G D T R S P S Q P L V I Y A P F Q T H L R F I F A G P N T S F L V I N D D A V				
UniRef90_C5KCF9	R P G S P P T I E P A A V N L G L G E F I K Q L V C G K V H A M V L T N K R I				
UniRef90_A5K634	T G A W E G V V A L A A G N V H S A R N				
UniRef90_D2VHZ5	E T E A L V L E V Y Q E V M N I E I V Y L Q C G S N D H F I L A L D K N K A V				
UniRef90_UP10002FB4A49	H P L P L P F G E A S K L R R C T T S G G W L H T C G I L L A N G T M				
UniRef90_UP10002B41235	D L P A S I T D P F P A A H A L E G S N I K Q L E A G W S F S A V L T H T A E V				
UniRef90_L1IWG6	S M P S D D I F V Q V S A G N R H T C G I K I D Q T V				
UniRef90_M9LXJ5					
UniRef90_D8LE65					

lupas_21
 lupas_14
 lupas_28
 jnet
 conf
 sol25
 sol5
 sol0
 jhmm
 jpssm



	130	140	150
UniRef90_Q0CNU0	V Q W G K G	Y S E S H Y K P T K T	L T G K N L L A S L C M S
UniRef90_W9XFB5	Y G W G N C R K G Q L G E Q P R T E T E K I V W A P R		
UniRef90_N1PG88	Y A W G S T N T G R V V A P D S T E N V I N K T P R R I	K F F D N K K L L R D I K L D	
UniRef90_G2R7U1	F S A A S S S Q D F G Q L G V P G L T W Q Q P H E	V T G L R G F K I K E I A A G	
UniRef90_Q17GC4	N G S M S P T S L K S P K E Q Q R Q Q Q S Y F F I K	I K N D P V I K I V C G	
UniRef90_UPI0004407C0E	L S W G L A R F S Q L G L D A S Q T M Q T A P R R I	V G P L K K E H V I G I A A	
UniRef90_A7SW32	L T C G H R G G R L G H G D E K T Q L A P C M L S G	G D D K C I S I A A A	
UniRef90_FOV887	Y T W G S N A A G Q C G V S S L P R N K T R R R S Q R	H P A D V V R	
UniRef90_C7YZN1	Y L W G M Q S P G Q S R H Q A F A D L S G P N Y V I E	V D G E K D V Q D I A L G	
UniRef90_U6MMY2	Y T W G W G A G S P L G Q Q G D R K N R S R P T P V	G Q V R A G E F I V V D V A C G	
UniRef90_F0UAT8	F S A A V S S E H F G Q L G V P G L T W S N R P K V	R E L R G I H I T N I A A G	
UniRef90_B6Q5P4	L A W G W G G N E S L Q V G T G K R S N V P T P T H I	L P P	
UniRef90_J4CCN0	W A W G N N Q E D Q I Y P M K K N I V H T P E S V K V	T H T G E R V E Y I K C S	
UniRef90_F6YQF6	F A W G Y N N S R H V K Y G S T V N Q P I A Q R V T	G C L R N K E A V N T A C G	
UniRef90_S3DC46	F A F G D N S T Q G L Q G F D P D S E S P F I D A P	S L L P I E K L Y K G T N	
UniRef90_K0FLS7	V A V G R N K E G E C N V S S W C D I E A	V A A G N V H M A T N T G	
UniRef90_R5ISL8	F L W G N G N Q A D	I K I K K E Y Q G N I E K V A L T	
UniRef90_N4ULN1	Y A W G S N V G K V I D P Q S N Q S V V K L P K R I	P Y F D G Q L L R D I K L T	
UniRef90_A7TFN1	Y S C S N N S K S R G Q F G I P A F S Q F D T L P E	P H K L Y E K I E Q V C C G	
UniRef90_A0A016PM90	V Q W G L G Y N	Q K D P S P V S T L T G K D I I K I D V	
UniRef90_J8BLJ6	V A V G R N K E G E C N V S G W R D M V A	V A A G	
UniRef90_UPI0004414AFC	K L W G C G D G R K G Q L G P S Y T S E R A G I L S G I	S E E Y D T R L I A A G	
UniRef90_S8F853	V G W G A A R H G Q L G S A M S G T Q T V P A I Q N L P R		
UniRef90_M1W129	V Q W G L G F S K D D P T P S T T L K G K D L V K I	Q V S T D R I I S L A R N G	
UniRef90_D2VCL6	L V G G N N N Y Q Q L G D N F E K K S S Y	D E E D V E E S S D S E E E D G	
UniRef90_A6GIX2	R C W G S D A A S Q H G V V L S S T P A A L A G V D L G K G L A G M L A		
UniRef90_W4WBQ3	T A I G W N K H D Q C N V S E W R D	I V T V S A G	
UniRef90_G8JWG7	L T C G A G G L N G E L G L G H I K C S S S W R R V T T C L N N S R A V H		
UniRef90_UPI0002003BF5	V A V G A D D A G E C R V S Q W R G V V S V A A G S V H V A A N T G		
UniRef90_C5KCF9	Y A C G D N E K G Q C G R S L Q Y S Q Q T F M R V R L P K R I Q V Q M V Q C S		
UniRef90_A5K634	F T F G C N K K A Q L I G L P N G Y H R K V S H T S R P F L L P H P V I S I N C		
UniRef90_D2VHZ5	I G W G E N S D G R L G I P P P S G T N K F S L P L T I Y H D N T F A Y M N A		
UniRef90_UPI0003FB4A49	L S T G W N T D G Q C	D V H E W D T F R I S A A	
UniRef90_UPI0002B41235	Y T W R H K S K F E H L T S V P I H C K N G I S N V F A G		
UniRef90_L1IWG6	L C W G N N A N G E L G T P Y W N A S D G I T C Q G Q S Q S D N C I	V R V S A G	
UniRef90_M9LXJ5	W L W Y S G Y G D Q K V F P L R E V P V O L P R I P G E D A Q H V Q I A A G C		
UniRef90_D9F655	S C W G C H G E E O O L S V C C H T C P R F C T A C W C D D I A C S T S C		

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
inssm

	170	180	190
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UniRef90_W9XFB5	S L G P V V D G E D L M P W M P E R V M L G R E Y T V F V K T G R R P V V		
UniRef90_N1PG88	R N F G A A I D E Q G N N L Q W G I G Y A P D V K E P V I T M K M G K		
UniRef90_G2R7U1	D F H S L A L D R E G R V F S F G D N A A G Q L G F E P D M E A T Y		
UniRef90_Q17GC4	N K Q S A V I C E S G R V F V W G Q N Q Y S Q L G L G S T E L C Q K P S C V R T		
UniRef90_UPI0004407C0E	C R T A S A C W T H N E L F T W G T N G Q G L G Y D R T G T P V Q V L P R R V		
UniRef90_A7SW32	Q D H T L L V M E S G V V F S F G L N N M H Q L G H S P P S		
UniRef90_FOV887			
UniRef90_C7YZN1	E S H A I A L T T D G C Y V V V G D N T N G Q L G L G S D S K S P V E S W L K V		
UniRef90_U6MMY2	A T S T C V A T S S G R V F S S G A A D Y G V N G S G M L I S S R V F R E L E F		
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lupas_21
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jnet
conf
sol25
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jhmm
ipssm

	210	220	230
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UniRef90_W9XFB5	W G D I R F F D Q K D L K W T A E E E D M M A S G W S S I Y I L S R R L L D Q S		
UniRef90_N1PG88	N L V S L S I S K D R I L G L A G N G K V Y S I P V S Q E D Q Q		
UniRef90_G2R7U1	V D R P S L L P V G K I Y K G T N L V P K V T S I A A G G L N S F F T V D A T K		
UniRef90_Q17GC4	L K R L K Q R V R D I R F G G N G Y G L I L T E E G K V F Y S G K N V F P F N A		
UniRef90_UPI0004407C0E	T Q I T L P V P V D V A L S D G A M A V L L A N H D P S L P V R V D V Y G E S		
UniRef90_A7SW32	M Q S L V P K M V Q A R V W K G K Q V I G V A A G K Y H S A F Y T H T E L		
UniRef90_FOV887	P S S N E D E G E D E R E E S Q D A E I V R V A G A F L S L P V R V D V Y G E S		
UniRef90_C7YZN1	P F N S P Q G W N I		
UniRef90_U6MMY2	F R G L L I S P K L L E A Q R L M E E G Q L K E L A L R E R F D Q E G V N L S		
UniRef90_F0UAT8	I D T P Q I L P L A S L Y P A D G C E I N T S S I A A G G A N S F F T V N A K R		
UniRef90_B6Q5P4			
UniRef90_J4CCN0			
UniRef90_F6YQF6	E K D R I I E I A V C H S S H T S A A K T Q G G H V Y M W		
UniRef90_S3DC46	P R G L G R V T A D T W S C G Q G I W G G L G N G R W T H V Q G		
UniRef90_K0FLS7	V S V A A G W R R T I G L K L D G T V V A V G R N K E G E C N V S G W R D I V A		
UniRef90_R5ISL8	S S N A V A A V K E D G T V V W G T C T N G E N N V P A F E S K P V E L Y G G		
UniRef90_N4ULN1	D I S K I A V S N D R I I A L S T G S V Y S L P A A R N D Q D T G A K L Q P Q		
UniRef90_A7TFN1	V G K L Q P Y F S R D E Y Y R A T N I E A T A E A F L T V G S Q T M E K H F Q		
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UniRef90_M1W129	L T P D G L A R G E K V T D I S S G L E H C L I L T S K G R V F T A A S S S Q S		
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UniRef90_A6GIX2	V R D F A A G P P P M C A L M G A N K T A L R C A A A T A E L P N A N M R A C V		
UniRef90_W4WBQ3	H T V G L K I D G T V T A V G N N K Y N Q C N V N D W G D I L A V S		
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UniRef90_UPI0002003BF5	V A I A A G W R F S A G L R S D G T L V T T G R D A E G Q R Q V G H W R E L T G		
UniRef90_C5KCF9			
UniRef90_A5K634	E A H V C K T C R I H V G M M N L K R I S E M V Q R G G E H I K K K L T S K E R		
UniRef90_D2VHZ5	S N I R M E K V C L Q D K D A F G I G Y D G N I Y T W G S A S S V S P T P I S R		
UniRef90_UPI0003FB4A49	G D W H T V G L C Y D G S V R A V G N N R Y R Q C D V G A W R D I I E V S A G Y Y		
UniRef90_UPI0002B41235	Q N N K Q I V P L T F S E F G N S R V V D V T F S Q Y		
UniRef90_L1IWG6	T Q G V V K C W G D D T F Y Q A Q K G V D E L F K N E Q Y D D F I S V C T A T A		
UniRef90_M9LXJ5	T H A R W Q A L A A F E R P E D F D P T W L T A R G V A G R I T H S A H F		
UniRef90_D9L655	V O E P O L S A S N S P H C C L T I E P D C W G C D M P M C G E T O E P C P		

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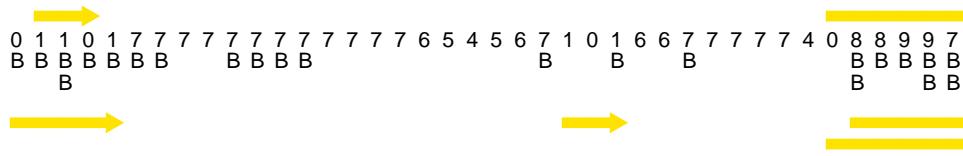
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 UniRef90_D2VHZ5
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 UniRef90_UP10002B41235
 UniRef90_L1IWG6
 UniRef90_M9LXJ5
 UniRef90_D8LE65

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

250 260 270 280
 T P T K [I] K A L S G L F E Y D E A A N R V I P I R L A H L S V G A T N V V H L A
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 R Y H F T A L M D D G E V I S W G D N T H G Q A S V P A S F N E K E I V T V Y
 S S S S S W I [P] F W S S S G A E A V N S R I L T P S S L S R G E K V V D V S S
 N N S E F V K T K Y F A F G N F K N S Q S G P I P L K V L N D T Q D K V A N W S
 V F S A E F P S K G Q M G V A G L S W H N R P Q P H E V T T L Q G F E V T Q I A
 V I A A G S N H T V G L K S D G I V T A V G N N K H G Q C D V S D W R D I V A I A
 F A G W G T S R H G Q L G P I L D S S A R P V P T C P T P A T P T D V C A S I A
 V A T G S N S H G Q L G Q A T A E P C G D L R R V D F P S S T G P R R I I L K L A
 F P S K G Q M G I A G L T W D N R P K G P Y D Q P H E L K F L Q G C E V K A I A
 V Y G F S L L E P E T I T T Q K P S H F S Q I E Y F L D E H Q T S V M E F
 I I H S G G K V S C F G E V H Y W N D N G R P P R E I A K I D A V R G A K A L A
 A G Y L H T V G L K S D G T V L A V G R N N N D G E C D V S S W R D I V A V A
 I I A A M W S S L H I W T K G D I F S Y G N G N Y G Q M F T W D R P S N M T H F T
 I I S C G D W H T V A V R S D G S V C A A G N N T A G Q C E V Q D W H R V H A V S

250 260 270 280
 L H V K G E D G H K D K R G R H K K S N K L V N V P R N V K I K D K S V L Q V S
 S S F P D W I E G V F V K D I Q
 L H T A G L Q A N G Q V I L A G Q I F G S K A C M E W H N I I R I A
 Q S E V I I V T E G G Y I L W S W Q N D T V D L L T K E S I E I S K V Y
 H S C A V R R E G S L I Y C W G Y D G N T R T T I P A A Y A A Q K W I A V R
 R R F V V I V P V V H D V R E D T G T P D S V Q P E M V P E L Q A R G V I K V V
 W Y Q V T C G Q W T T C G I R K H D G G V E C W G V K T L N K T G A F Y E E V S

lupas_21
 lupas_14
 lupas_28
 jnet
 conf
 sol25
 sol5
 sol0
 jhmm
 jpssm



Sequence alignment of UniRef90 proteins showing conservation across 320 positions. The alignment highlights identical residues in black, similar residues in grey, and divergent residues in colored boxes. A color key at the bottom indicates the similarity groups: black (identical), grey (similar), red (acidic), blue (basic), green (polar), yellow (hydrophobic), orange (hydrophilic), purple (amide), and cyan (amide).

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lupas_14
lupas_28
jnet
conf
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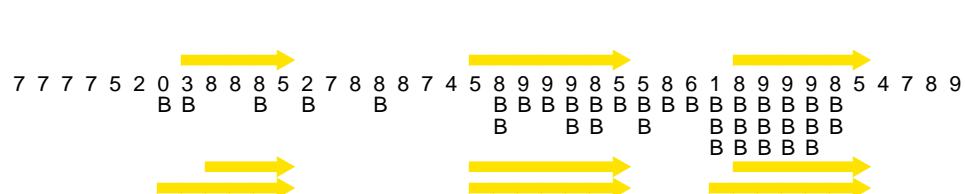
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 UniRef90_D9L5E65

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

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