

1 10 20 30 40

QUERY				
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UniRef90_G8DB24	UniRef90_E4NJG0	T L T E P L Y N Y F L K H S V K E H P L Q T K L R E E T S D M V M S R M A		
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UniRef90_G8DB24	UniRef90_K7GE17	G R G S P L R K Y I I S D H S L R E H P V L K K L R L L T N H R C G G G M M		
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50 60 70 80

QUERY				
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UniRef90_D5ZTZ6	V S A E E G Q Q F L L A L L V Q R L T G A V N V L L E I I G T F T G Y S T L L C M A R A L P			
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UniRef90_I5C0S4	S G N L Q G K F L E M L T R F I R P K R V V E I I G T Y T G Y S A I C M A R G L L P			
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UniRef90_S2ECZ2	S G H L Q G K T I E L L V K L H R P K V I I E I I G T Y T G Y S G I C M A R G L S S			
UniRef90_T1C7N2	I A P E E E G Q Q F L L A F L V R L I D A R R C I E I V G V F T G Y S S L W V V S A L L P			
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QUERY	90	100	110	120
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UniRef90_U9VNX3	D D G Q L I I A C C D V S S E D Y T T M A R K Y W E K A G V A H K I D D L R R I A P A L E			
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UniRef90_S5DQS6	H D G K I I T A C C D I S E E D Y T Q I G L P I I E K A G V K H K I D F I E S K A L P			
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UniRef90_13YSM2	E N S E L H T I D I N E E L F D F Q R K Y F D E S P F G K Q I F Q H L G N A L D			
UniRef90_V6JJE7	P G G K L V T C D V T D R W P E I I A A D Y W R R A G V V H E R I D V R I G R A V E			
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UniRef90_A3XGB9	P D G I L H T I D I N E E L V D L Q K K Y F D A S A Y A A N I K Q H L G P A L E			
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UniRef90_S2ECZ2	E G G K L I T L D I N D E L E S M V R G F F E L A G L T D K I E Y R L G N A L D			
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UniRef90_K9Q3U5	E D G K V V A C C D R N P D C T K I A R E Y W Q K A G V A H K I E E L R L A D A L D			
UniRef90_K7F2W0	L G A R L I Y T V E M D P R N A A V A E K V I R A G F D E D T V E L I V G A S E E			
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UniRef90_A9NLL5	D D G K I I L A M D I N R E E N Y D L G P M E K A G V V A H K I D F R E G P A L L P			
UniRef90_A8PKV3	E T G K I I I A C D I N K E T T W T S I K A P P F W K E A K Q D H K I D L K L A P A L E			
UniRef90_UPI00029B1593	H G Q L I I C C D L E G S Y N A V A W R Y W Q E A G V V A E R I E E L R L A P A L Q			
UniRef90_U5XRZ8	L D G R I V T C D V T D K W P S V I G R E Y W K R A G V V A D R I E V R R V G R A T E			
UniRef90_UPI0003A6C266	T E A Q I V A L E R K Q E W A E S I A Q V Y W E K A G F A D R I V D L R I A P A L D			
UniRef90_D1R105	D D G K L I T C D I N T T W T S I K A P P F W K E A K Q D H K I D L R L G R A L D D			
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UniRef90_G8DB24	E N G K L I I A C D N N I K W T D I A K K F W K I E K I N H K I S L H I N D A L L			

QUERY

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	130	140	150	160
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UniRef90_L9KQP4	P Q L K K K Y D V D T L D M V F L	D H W K D R Y L P D T L L E E C G L L R		
UniRef90_UPI0003F0BA93	P Q L K K K Q H D V D T L D M V F L	D H W K D R Y L P D T L L E E C G L L R		
UniRef90_UPI000350D66B	P Q L K K K A D D T L D F V F L	D H W K D R Y V P D T K L L E E C G L L R		
UniRef90_K4FTV2	P Q L K K K A D D T L D F V F L	D H W K D R Y V P D T K L L E E C G L L R		
UniRef90_K9R5M8	T L D K L I A E G E T D T F D V F L	D A D K S S Y L P D T K L L E E C G L L R		
UniRef90_H2ZWG7	T L D K L I A E G E T D T F D V F L	D A D K S S Y L P D T K L L E E C G L L R		
UniRef90_K8GPR8	T L E T L I T S G H S N T F D F V F L	D A D K S H Y N D Y Y E R S L Q L I R		
UniRef90_W5LBQ6	M I P K M K E R F G I T T F D F V F L	D H W K D R Y V P D T K L L E E C G L L R		
UniRef90_A9UMU1	V I P N L R T Q H G V K H F D F V F L	D H F K N R Y S P D T M L L E E Y G L L R		
UniRef90_Q7SZX0	W I P R M K E H F G L E T F D V F L	D H W K D H Y L P D T K L M E G W G L L R		
UniRef90_UPI000374DAA6	T L V D T L S N G G A G M F D M A F I	D A D K E N Y M V Y Y E K C L E L L R		
UniRef90_UPI000364AB64	T L R T L I I E A G E T G R F D F A F I	D A D K A G Y A T Y Y E L C C L R L L R		
UniRef90_K7W6L4	T L D K L L T A G E A G T F D F A F I	D A D K G N Y D N Y Y E Q C L L E L I R		
UniRef90_UPI00037613BF	S L Q A L E A A G E A G T F D F A F I	D A D K T G Y S G Y F E H C L R L L V		
UniRef90_Q1MYD9	T L D E L L K S G E Q G S Y D L A F I	D A D K A N Y D D Y F E K C L R L L L		
UniRef90_C3YS29	V I P Q L K K K Y D V D T F D M V F I	D H W K D V Y V R D I K L L E T N N L L R		
UniRef90_B7KFU6	T L E Q L L E Q G E E E S F D F A F I	D A D K S N Y D N Y Y E Q T L K L V L V		
UniRef90_K9VFM3	T L D R L L E D G Q A E T F D F A F I	D A D K R N Y P N Y Y E K S L Q L L V		
UniRef90_UPI000346168B	T L D K L I A E G Q A G T F D F A F I	D A D K E N Y E A Y F E R S L Q L L V		
UniRef90_U3B141	T L S A L E R G G Q S E S F D L I F	D A D K A N Y R V E H A L V L V		
UniRef90_A3IVP7	T L D Q L I A K G E N N T F D F A F I	D A D K S N Y N N Y Y E K A L W L V		
UniRef90_Q3JBN1	T L E Q L I E G G E A G T F D F A F I	D A Q K E E Y E D Y Y Q R S L E L L V		
UniRef90_UPI000414DC92	T Q A L R E E D P A V E P F D L A F I	D A D K T G Y R E Y Y E H C L L A L L A R		
UniRef90_UPI00030C4957	T L E Q L L A A G E E E T F D F A F I	D A D K S N Y E N Y Y E L A L Q L L V		
UniRef90_K9XB33	T L K Q L L A T D G A N T F D F A F I	D A D K S N Y D T Y Y E L A L Q L L I R		
UniRef90_K9WK54	T L D E L L S N G Q A G T F D F A F I	D A D K A N Y E K Y Y E R S L E L L I R		
UniRef90_UPI00036F15AB	S L A A L L G E G Q A E R F D L I F	D A D K A N Y P R Y L E L G Q L L V		
UniRef90_UPI0002557074	T L A D L E E A G L A E A V D M I F I	D A D K A N Y P A Y F E Q G L R Q L L V		
UniRef90_F7BB11	L I P Q L K E K C G L D T L D L V F L	D H W K E Q Y L P D T K L L E E C R R L L R		
UniRef90_S9XRA4	I I P Q L K K Y D V D T L D M V F L	D H W K D R Y L P D T L L E E C G L L R		
UniRef90_UPI00037A12C7	T L D K L I A E H S N T F D F A F I	D A D K S N Y S N Y Y E K A L Q L V		
UniRef90_W4ZOC9	V I P N L K D E F D I A S F D Y V F I	D H V K S L Y K P D L I L L E E H Q L L V		
UniRef90_K9TXA7	T L D R L L A S G Q S E S F D F A F I	D A D K E N Y D C Y Y Q R S L Q L V		
UniRef90_D4TVC6	T L D K L L A A G E A E T F D F A F I	D A D K A N Y E N Y Y E R S L E L L V		
UniRef90_UPI0002E7728E	T L A E L L D E G A A G T F D L A F I	D A D K A N Y P R Y L E I A L H Q L L V		
UniRef90_D0MFD2	T L E A L L D E G A A G T F D L A F I	D A D K A S Y D A Y Y E R A L Q L V		
UniRef90_L9PCC7	T L D A R L L K D G E A G L Y D F A F I	D A D K V N Y D G Y Y E R C F Q L L V		
UniRef90_UPI000402A193	T L A Q L L E Q G A A E S F D F A F I	D A D K G N Y L N Y F E K C F A L V		
UniRef90_C4RFW7	T L A A L L R A E N G P S S F D L A F I	D A D K T N Y R A Y Y E G G C D L L V		
UniRef90_K9XFS6	T L D Q L L D G Q A E T F D F V F I	D A D K V E Y K D Y Y E K S L Q L I R		
UniRef90_K9TB51	T L D R L I E S G E A G T F D F A F I	D A D K Q N Y D N Y Y E R A L Q L V		
UniRef90_F9ZWR2	T L D S L L A D G L A G S Y D L A F I	D A D K A N Y D G Y Y E R S L S L L V		
UniRef90_U9VNX3	T L D Q L I A E G H G N S F D F A F I	D A D K S N Y D N Y Y E R A L Q L V		
UniRef90_B4WPJ2	T L D N L I A N R E S D T F D F A F I	D A D K S N Y D S Y Y E K S L Q L V		
UniRef90_K2C305	T L E K L L E N N E Q D S F D F I F I	D A D K E N Y S L Y Y E K S L K L L V		
UniRef90_G2EBS0	I I P T L N K T F D L V F I	D A D K E N Y V K Y F E L I E R E L N		
UniRef90_L0DYLO	T L E R L R A Q G E S G R F D L A F I	D A D K T A Y E D Y F E L C C D L L R		
UniRef90_Q2SE70	T L N K L L D E G H A R T F D F A F I	D A D K T N Y D N Y Y E A C C C D L L R		
UniRef90_UPI000360EFA9	T L Q G L L D Q G Q A R T F D F A F I	D A D K E N Y D G Y Y E A C C C D L L R		
UniRef90_UPI000410115A	T L T A L L A E L G P D S V D L A F I	D A D K T N Y L T Y Y E R T L P L V		
UniRef90_UPI000312781A	T L D K L I Q T E L E T F D F A F I	D A D K S A Y D D Y Y E R S L Q L V		
UniRef90_S5DQS6	A L D H L L K D E N K E S F D F V F I	D A D K V N Y A N Y H E R V E L L E L L		
UniRef90_C3Z9J1	V I R E L K T K Y D V T K L D L V F I	D H W K Y L Y I R D I K L I E E E K L L K		
UniRef90_A0A022Q270	T L K S M I Q N D E G G S Y D F A F I	D A E K K M Y Q D Y F D L L Q L L V		
UniRef90_Q3S882	T L E K L L A D E G P G V F D L V F I	D A D K A N Y P R Y Y E L C C L L Q L L V		
UniRef90_UPI0003713626	T L D M L L I L N G E N E S F D F I F I	D A D K E S Y A A Y F E R C C L L Q L L V		
UniRef90_M0S8X8	S L R S L I Q N G E S C S F D F A F I	D A E K R M Y S E Y F E L L Q L L V		
UniRef90_D9WG18	T L S G L L A D G G P G A F D F V F I	D A D K A N Y R R Y Y E S A L E E L V		
UniRef90_M4A7Y0	T L D E L T A A G E A G T Y D F V F I	D A D K S N Y D R Y Y E K S L E L I R		
UniRef90_G2NVR6	T L K T L L A E E G P G T F D F V F I	D A D K Q G Y Y P H Y Y E M A L T L L G		
UniRef90_A0A024FI95	T L P K L L N Q T F D L V F I	D A D K P N Y C N Y F H L I I D K L N		
UniRef90_UPI000399F3D6	T L K Q L L E Q G E Q N Q F D M A F I	D A D K T G Y N T Y Y E Q C C Q L L I R		
UniRef90_13YSM2	I I P K L E K T F D L V F I	D A D K S N Y P N Y F E I P K L I R		
UniRef90_V6JJE7	T L E E M V S D G C A D R F G L V F I	D A D K A N Y P A Y Y E L A R R L V		
UniRef90_R6E226	E A P K L G I T F D M A F I	D G D K R H Y V E T Y E M A L G I L R		
UniRef90_D5ZTZ6	T L D A L L R L E R G A G H F D L V F I	D A D K S G Y L G Y Y E K S L D L L R		
UniRef90_A3XGB9	I I P Q L D E D F D L V F I	D A D K P N Y P A Y F D M I V D R I R		
UniRef90_I5C0S4	T L P A L L D G I D M V F I	D A D K E N Y G R Y Y D L I F D K L A		
UniRef90_I3KJ07	V I P Q L R S D Y N L E R L D F V F I	D H W K K C Y L P D L Q M L E G S G L L G		
UniRef90_S2ECZ2	L I P N L P G T F D F V F I	D A D K A N Y I N Y Y N L V V D R V		
UniRef90_T1C7N2	A L L K M I Q E G E G G S Y D F A F I	D A D K V N Y L H Y Y E S T L E L L R		
UniRef90_Q00719	T L A E L L R E D G D G A F D V F I	D A D K A G Y L H Y Y E Q A L L V		
UniRef90_UPI00036495AA	T L A A L V G E A G V G S F D F A F I	D A D K E G Y P E Y F D Q A L T L L R		
UniRef90_K9Q3U5	T L D K L I A N G E A G T F D F S F I	D A D K R N Y I N Y F E K S L T L L R		
UniRef90_K7F2W0	T L P Q L K E K Y G L L K A D F V F I	D H W K R C Y L R D L Q L L E A H G L L L R		
UniRef90_UPI0002EC5875	T A A G L S Q E P F V D F A F I	D A D K V G Y Y P A Y Y E A L V P L L R		
UniRef90_UPI0003FA35D2	I I P N I D E H F D L V F I	D A D K P N Y P A Y F E L I I N K M N		
UniRef90_A9NLL5	L L D Q M I Q N E E H G S F D F V F I	D A D K D N Y L N Y H K R L I D L V		
UniRef90_A8PKV3	T L D N L I Q Q G Q S N R F D F I F I	D A D K L N Y L N Y Y E R S F L L L R		
UniRef90_UPI00029B1593	T L A T L P S E R Y D L I F I	D A D K A N Y P Q Y L E E S L R L L R		
UniRef90_U5XRZ8	T L D A A D T G F G P D S F D L V F I	D A D K A N Y P A Y Y E Q A L R L L V		
UniRef90_UPI0003A6C266	S L N E L L L Q E G A A G T F D L A F I	D A D K P H Y P E Y F E I C C Q L L V		
UniRef90_D1R105	T L H E L V H E G W Q H K F D F I F I	D A D K T N Y I N Y Y E M A L P K M N		
UniRef90_UPI0003F833E3	I I P T I E T K F D L V F I	D A D K E N Y L N Y Y E L I V P K M N		
UniRef90_B9SC99	V L D Q L I Q D K H H G T F D F I F I	D A D K D N Y L N Y H K R T I E L V		
UniRef90_E4NJK0	T L D A L L A E R G P E G F D L V F I	D A D K A N Y V R Y Y E A S L A L L R		
UniRef90_T2KPS9	T I P T L E P V F D L V F I	D A D K E N Y P N Y F N L I V P M M N		
UniRef90_UPI0003B69CF6	I I P T L E P V F D L V F I	D A D K E N Y L N Y D L I V P M M N		
UniRef90_K7GE17	T L D E L L A A G E A E T Y D F A F I	D A D K E S Y D D Y Y E K C L R L I R		
UniRef90_G8DB24	T L K K L L H K K E Y F D F I F I	D A D K E N Y I N Y Y E S L K L L K		

QUERY		170	180	190	200
UniRef90_P21964	K G T	V L L A D N V I V P G T P D F	L A Y V R G S S S F E C T H Y S S Y L E Y M		
UniRef90_L9KPQ4	K G T	V L L A D N V I C P G A P D F	L A H V R G S S C F E C T H Y Q S S F L E Y R		
UniRef90_UPI0003F0BA93	K G T	V L L A D N V I Y P G A P D F	L A Y V R G N R F E C T H Y S S H L E Y S		
UniRef90_UPI000350D66B	K G S	V L L A D N V I Y P G A P E F	I R N N P R F Q C T H Y P S H L E Y M		
UniRef90_K4FTV2	K G T	V L L A D N V I S P G A P E F	I R G S S R Y D C T H Y P S H L E Y S		
UniRef90_H2ZWG7	P G G L	I A I D N V L W Y G K V A D T K K	I R A L N E K I H Q D E R V T I S M V		
UniRef90_K8GPR8	K G T	V L L A D N V I F P G A P E Y	I R N S P R Y R S E Y Y Q S Y L E Y T		
UniRef90_W5LBQ6	P G G L	I A I D N V L W S G D V A D L	I R A L N Q K L H Q D Q R I T L S L V		
UniRef90_A9UMU1	K G T	V L L A D N V I C P G A P E F	I R K S P R Y E S R Y Y P A H L E Y T		
UniRef90_Q7SZX0	K G T	V L L A D N V I C P G V P D Y	I R N S R S Y K S C Y F K S H L E Y T		
UniRef90_UPI000374DAA6	P G G L	I L V D N V L W S G K P A D T V A	I R E F N I A I H K D E R V D I L S L L		
UniRef90_UPI000364AB64	T G G L	I A V D N T L W D G R V A D P T A	I R E F N R M L R D D P R V D I L S L V		
UniRef90_K7W6L4	P G G L	I A I D N V L W S G K V A D T E	I R A L N R K L H E D S R I D L S L T		
UniRef90_UPI00037613BF	P G G L	I L V D N T L W Y G T V A D P D A	I R A F N E A L H H D D R I D L S L T		
UniRef90_Q1MYD9	P G G L	I L V D N T L W G G S V I D H Q A	I R A F N K K R Q Q D N R Q L S H L		
UniRef90_C3YS29	K G T	V V V A D N I I N P G A P E Y A D Y	I R T C G K Y D S T F H E S N F E Y S		
UniRef90_B7KFU6	P G G L	I A I D N V L W G G R V A D R K A	I R A L N E K L H Q D P R I N L S L I		
UniRef90_K9VFM3	N G G L	I V D N V L W S G R V A D P Q A	I R T F N D K L R N D P R V T L L S V V		
UniRef90_UPI000346168B	R G G L	I A I D N V L W S G R V A D S E A	I R D F N Q K L Y E D D R V T L L S L L		
UniRef90_U3B141	Q G G L	I L F D N V L W S G R V A D T R A	I Q A L N R G L L R D S R I D L S L L		
UniRef90_A3IVP7	P G G L	I I I D N V L W G G K V A N P E	I R T F N K K L H Q D P R I A L S L V		
UniRef90_Q3JBN1	P G G L	I A V D N V L R N G R V E D T G A	I R D F N L A R L E D E R V T L L S M V		
UniRef90_UPI000414DC92	P G G L	V M I D N T L W H G T V A D R S A	I R E F N R F V H R D D R V D L L S L V		
UniRef90_UPI00030C4957	P K G L	I A I D N V L W S G R V A D R H V	I R G L N Q K L H Q D Q R V T I S M V		
UniRef90_K9XB33	P G G L	I A V D N V L W S G R V A D P Q V	I R A F N Q K L H Q D T R V A I S L V		
UniRef90_K9WK54	P G G L	I A I D N V L W S G R V A D S Q V	I R A F N Q K L Y Q D Q R V T L L S L V		
UniRef90_UPI00036F15AB	P G G L	L F D N T L W S G R V E D T R A	I Q R L N R Q L K S D D A R I V E L L S L L		
UniRef90_UPI0002557074	P G G L	L F D N T L W S G R V A D T R A	I Q A L N Q Q L K S D R R I V E L L S M L		
UniRef90_F7BB11	E G S	V L L A D N V I C P G A P E Y	I R S N S Q Y R S Q F F P S T L E Y V		
UniRef90_S9XRA4	K G T	V L L A D N V I C P G T P E F	I R G N S R F E C T H F S S Y L E Y S		
UniRef90_UPI00037A12C7	P G G V	I A I D N V L W S G R V A D P E V	I R E F N Q N L A Q D S R V K I S L L		
UniRef90_W4ZOC9	A G T	V V V A D N I V I P G S P A Y	I R N S P K Y E S E Y F A S V L A Y T		
UniRef90_K9TXA7	P G G L	I A I D N V L W G G D V A N F Q A	I R A L N E K L Y H D E R I A L S L V		
UniRef90_D4TVC6	S G G L	I A V D N V L W S G R V A D P E V	I R A F N Q K L H R D S R I T L S L L		
UniRef90_UPI0002E7728E	R G G L	I A M F D N T L W S G R V E D T R A	I Q A L N L A L K D D S R V R D L L S L L		
UniRef90_D0MFD2	P G G L	I L L D N L M G G R V A D V E A	I R R L N E K L C R D L R V D Y A L L		
UniRef90_L9PCC7	P G G L	I A I D N T L W S G R V V D D T A A	I Q A L N I K L H H D E R I D L S L L		
UniRef90_UPI000402A193	P G G V	I A I D N V L W S G R V A D P H K	I R A F N E F L H Q D S R I S L T V L L		
UniRef90_C4RFW7	P G G L	I V I D N T L F F G G R V L D A D A	I R E L N A F L L T D T R V D L L S V L		
UniRef90_K9XFS6	P G G L	I A I D N V L W C G R V I D P D F	I R E L N Q F L H R D Q R V A L L S L V		
UniRef90_K9TB51	V G G L	I A I D N V L W G G Q V A D P E A	I R A F L N A K L V Q D E R V S L S M V		
UniRef90_F9ZWR2	Q G G L	I L I D N V L W S G Q V A D P A F	I R A L N A K I H A D S R V T I S L L		
UniRef90_U9VNX3	P G G L	I A V D N V L W S G R V A D P A K	I R A L N Q K I H S D E R V S M S L L		
UniRef90_B4WPJ2	P G G L	I A I D N M W Y G R V A D L D R	I R A L N E K V R N D E R V T M S L L		
UniRef90_K2C305	K G G I	I A I D N V L W D G A V A D H S A	I R A L N E K V L H D D R V D I S L L		
UniRef90_G2EB50	P G G V	I S D N V L W S G K V L D T T F K K	I R K E D P R V E T V L L		
UniRef90_L0DYL0	P G G S	V L I D N T L W S G Q V A D P E A	I R G L N R K L H R D E R I E L S L V		
UniRef90_Q2SE70	P G G L	I A V D N V L W G G K V A D D P R A	I R A L N E K L M R D K R I D Y S M V		
UniRef90_UPI000360EFA9	P G G L	I A V D N V L W G G K V A D D P R A	I R A L N K K M Q S D K R I D Y A M V		
UniRef90_UPI000401115A	P G G L	I V D N T L S G Q V P E V Q A	I R E F N A F L R D D D R V E L S M L		
UniRef90_UPI000312781A	P G G L	I A I D N V L W F G R V A D T K K	I R A L N A K L H Q D A R V N I S L V		
UniRef90_S5DQS6	P G G I	V V Y D N T L W G G T V A Y R N A A	I R E F N F N A L K A D S R V Q Q S Q L		
UniRef90_C3Z9J1	K G S	V F A D N V I P G A P G Y	I R G S K N Y K S T F Y S V H F E Y M		
UniRef90_A0A022Q270	V G G V	I V I D N V L W H G K V A D P R S	I R N F N K E L M D D D R V S I S M V		
UniRef90_Q3S882	P G G L	V V V D N T L F F G G R V T D P Q F	I R E L N A R L R A D E R V D L S M L		
UniRef90_UPI0003713626	R G G L	M V I D N V L W G G S V I D V D A	I R A F N Q A L K S D Q R V E I N M L		
UniRef90_M0S8X8	I G G L	I V I D N V L W H G K V A D P Q V	I R N F N R K I L E D K R I S T S M V		
UniRef90_D9WG18	P G G L	I A V D N T L F F G G R V A D T V A	I R E L N A S L R D D D H R V E L S L L		
UniRef90_M4A7Y0	N G G I	I A I D N V L W S G K V V N P A L	I R A F N R K I H K D Q R V E E L S M L		
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 V P P S Q G R L L E L L V R I H G A A K V L L E E I G T l G G Y S T I W M A R A L P
 S G H F Q G R F L S M M S K L V R P K N I L L E I G T F T G Y A T L S l A E G L A P
 T G H F Q G R F L S L L S K I L A P K K I V L L E I G T Y T G Y S A L C l A E G L S
 S A E E Q G P L L A F L V R L T G A R Q V V E E V G T F T G F S A L S M A Q A M P
 I A P E Q G T F M T M L A R T L R A R D A V V E E V G T F T G Y S S I C l A R G D P
 S G H L Q G R V L L R M L V R M I R P N I L L E I V G T F S G Y S A I C M A E G L P
 I A P E Q G Q F M A L L V R V L V G A R R I V V E E V G T F T G Y S A I C l A D A M G
 S G N M Q G Q F L K L I C R M T G A K R V V L L E I G T Y T G Y A A I S M A L A L P
 S G H L Q G Q V L T M L A K M I R P K T I I L L E I G T F T G Y S A I C l A K G L P
 S G H V Q G R V L L A A F S H M I R P K H N V L L E I G T Y T G Y S A I C l A E G L P
 S G H M Q G I L L R M I A Q M V R P Q T V V L L E I G T Y S G Y S A L C l A S G M E
 S G H F Q G R V L S I L S K L I S P K T I T I L L E I G T Y T G Y S A I C l A E G L H
 V A A N Q G Q K L L A L L V R I T G A R Q V V L L E I G T l G G Y S T V W M A R E L P
 V Q A E E G Q F L E F L V R L T G A R Q V V L L E I G T Y T G Y S T I C l A R G L A P
 S G H L Q G R F L S M I S R M I R P D R I L L E I G T Y T G Y S G I C l C E G L N
 I S P D Q G Q F M G W L A R L I G A R R Y L E I G V F T G Y S A L T V A L A M P
 S G H L Q G R V L L K M L V H M V R P K N I L L E I V G T F S G Y S A I C M A E G L P
 V A A N Q G K L L H L L A R T V G A R R V V L L E I G T l A G Y S T V W l A R A L P
 V G P D K G R I V E R V L L E R A P L R V L L E I G T Y C I S M A E A L P
 T G R I E G Q L L K M L A G L V E A R R I V V E E V G T F G G Y S A I S M A E G M V
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50 60 70 80

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

50 60 70 80

	90	100	110	120
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UniRef90_G8X5A5	K N G T L D T I D N N E E L Y D F Q K K Y F D Q S V W A N Q Q Q H L G N A L E			
UniRef90_K4IJ7	K E G R I H T L D R N E E L C D L Q R K Y F D I S G F G P Q I Q Q Y T G D A R G			
UniRef90_Q5X305	D D G Q V I T C D I N E G W T K H A H P Y W R E A K Q E H K I K L R L G P A L D			
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UniRef90_UPI00047E7F58	S E G K I I T I D K N E E L E T L Q N K Y F E K S G F R H Q I Q K V G N A L E			
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UniRef90_E4RY83	E G G K L Y T I E A E E E F E D R I R K N I E A A G K T D Q I E L I I G Q A L D			
UniRef90_D7TBB5	D D G K I I T A D V D R Q A Y E M G L P V I R K A G V E H K I N F I E S Q A L P			
UniRef90_I0HC38	P G G R L I A C D V S E E W T S I A R T Y W A K A G L A D K I E L R L G P A I E			
UniRef90_R6B3U4	E G G K L Y T F E I N D E M E D F T R P W E E S S V A D K I D F R I G D A N V			
UniRef90_W9H1L8	P E G R V I A C D V S V E W T D V A R R Y W D E A G V A D K I D L R L A P A T E			
UniRef90_UPI0003780756	A H G R V I A C C D V S A E E W A D I I G R P F W A R A G V A D R I Q L E L G P A A D			
UniRef90_S4RFH2	D D G K I V A C C D I T E S E F P N I G K P Y W K E A G V E H K I D L R I K P A S A			
UniRef90_W5MB81	E D G R V V A C C D I C E D Y A N I G R P F W K E A G V E H K I D L R I Q P A L L R			
UniRef90_K7U827	A D G K V I A F D V S R E E Y Y D I G R P F E R A G V A G K V D F R E G P A E Q			
UniRef90_T2DPE8	P D G K I L A L D V N R E E Y Y E L G L P I I E K A G V A H K I D F K E G P A P F			
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UniRef90_I1QFQ9	E S G R L V A C E R D E R C L E V A K K Y Y Q R A G V A H K V D V K H A L A A D			
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UniRef90_UPI000427BF69	E G G T L D T V D I N N E E L V D F Q K K Y F D Q S A W K G I F Q H L G N A L E			
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UniRef90_E4TP06	E N G K L I T D V N E E L A E R V T D Y F Q S S E Y C T K I E M K I G K A L E			
UniRef90_S8DF33	H D A K I T A I D P D L E A F E T G L P F I K K K A N V A H K I N F I Q S N A M K			
UniRef90_H5XFT4	A D G R L V T I E A D P A H A D V A R S N I I E R A G L A D R V E V R V G Q A L D			
UniRef90_F2IKG0	E N G K I T L L D I N A Q L E D F V R Y S Y I E E S D Y A S K I D Y R I C N A M E			
UniRef90_R0GNK5	E D G H V T G L D I K D E A Y E M G L E F I K K A G V D H K I T F I Q S D G V Q			
UniRef90_UPI00042927DB	P E A R L L C C D V S A E E W T G I A R R Y W Q E A G V A D R I E L R L Q P A L D			
UniRef90_UPI00036D761E	K E G I L H T I D I K E E L Q D L Q R E F F D K S G K G N Q I I Q H L G Q A I D			
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UniRef90_UPI0002FFEC8A	A D G L L V T I L E A Q P H H A D V A R R N I E R R A D A P R V E V R T G P A S E			
UniRef90_UPI000288C9EC	E D G C I D T I D V N E E L T D F Q R K Y F D E S P Y G K Q I I Q H L G N A L D			
UniRef90_C0BNE1	K D G T L H T I E V N P E E L A A I Q K K Y F D K S N Y T T Q I K T Y I G D A L D			
UniRef90_UPI00036187D5	A D G T L I A C D D V S E E W T A Y G R E A W A K A G V A D R I D L R I A P A L E			
UniRef90_UPI00034B38DC	R N G S L L L A C D V S E E W T G V A R R Y W D L A G V V S D K I E L R L G A A L E			
UniRef90_V8BTJ5	E G G K V W T Y E I I D D V M E E F T R P W E G S T V A D K N F I I G D A N V			
UniRef90_U1Z9N4	P Q G Q L I I C C D L P G D Y N A T T A R R Y F A E A G L V E R Q W R L G P A L D			
UniRef90_R5UXY2	E G G K L Y T D I N D E I E D F T R A Y E K S G L G E K C F L L G D A C T			
UniRef90_X5DAN9	E D G K L I T I E V D D E L L A K K Y F E K A G V A H K I E Q K I G A A T E			
UniRef90_L8JSG4	K D G K L Y T D I N E E L E E M V K D Y F V K A G V S D K I E Y L I G N A V D			
UniRef90_G5GCN0	K G T K I Y T F E V N D E Q E D F T K P W F D N S P Y P A D I E M I I G D V L K			
UniRef90_I0WH71	Q D G I L H T I D I N E E L S D M Q R R Y F D K S G F G Q Q I Q H T G D A L L K			
UniRef90_UPI0003297B8F	E D G R L I T I E Y S P H H A A V A R D N I R L A G V A V E V I V E G P A L D			
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UniRef90_C6W4L1	P G G K L V T I D V N E E L E T F T R S Y F D Q T P F K E H I D Y R I G N A L D			
UniRef90_U0YSE1	E D G Q V V A C D V S E A F T A I A R E Y W A K A G V A D R I D L R L Q P A L S			
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UniRef90_UPI00040798CD	S D G R V V T I I E A E P S Y A E L A R A N V E R A G L G E R I D I R V G A A L D			
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UniRef90_UPI00035D647A	E D G Y L I T C E V D P V A I K F A K R F F N E S L H G K K I I L K E G P A L D			
UniRef90_R7HT44	P G A E L H T I E I D D E L E D F I R E H L C Q A Q Q G K N I H L H I G D A R D			
UniRef90_H1HL41	G D G K V Y T F E I I D D E M E D F T R P W I E Q S H V S E R I V F T I G D A N L			
UniRef90_R7P8K3	S D D T V Y T I E V N D E L E D L I H E N L A E S A Y G K R V R P L I G			
UniRef90_C0IN68	A D G R V I A C D V S D E W T A I I G R P F W R E A G V V E S R I I D L R I K P A L Q			
UniRef90_UPI00034C6D7D	D A P G A L L C C D I S E E W T G I A R R Y W E R A G L S G R I D L R I G P A L			
UniRef90_G9P5X9	R S N P S Q Q I I V F V S E F S S I A R Q L I E L A G L S D I V T V V T G T A E E			
UniRef90_K4CVP2	E D G K V I A I D P D K D A Y E V G L P F I K K A G V E H K I Q F I Q S Q A L P			
UniRef90_F2NQR8	P E G R L V T I D I D P E R Q A F A R E R W Q E A G V V S E R I V E T R L G P A L E			
UniRef90_UPI000381CAF0	U n i f e r 9 0 _ U p i 0 0 0 3 4 C 6 D 7 D			
UniRef90_M0U3D0	A D G R L I A C D V S E E W T A V A R E A W A K A G V V A D R I D L R I G P A L			
UniRef90_UPI0004679322	D D I P I L A M D T N R K Y Y E V G L P T I Q K A A V A H K I D F R E G P A L			
UniRef90_UPI0003B4D3C5	P A G R L I T C D L S A E W A R I A Q Q D A W R D A G V V A D R I E L R L G P A A E			
UniRef90_F8WXA9	P D G Q L V T I L E L N P K H A V V A A S N L Q R A G L S S L V E I R V G P A L			
UniRef90_F2K2P4	D D A E L H T I E V N D E L E D F I L K H L H K S K L K D K I H L H I G D A M E			
UniRef90_F2K2P4	K D A T M L A V D K K Q M W L D I A N R Y L E Q A E I K K A D V K T V C A N A V E			
UniRef90_F8EH83	D E G L L I T D I N E E L E L A F T R S F F E R S P L G H K I D F R I A N A A T			
UniRef90_G9N980	R N S K P G Q Q P R V W E F S A I A R E L I M L A G L S D I V K V V T G P A E E			
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UniRef90_UPI000427DEC0	Q D G I L H T I D N N A E L V D F Q N H F F E Q S G K R A Q I K N H L G D A Q S			
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UniRef90_A0A022QB62	D D G K I I A I D P D R E A Y E T G L P F I Q K A N M T H K I V V V V G T L G D			
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UniRef90_UPI0001CBC382	D D G K I V I A C D V C E K F T N F A E Q Y W S K E I N H K I T L L E G D A E E			
UniRef90_D6DKT4	E D C H I T T E K Y E K R L P V A R D N F R K A G M E D R I D F M E S E A L P			
UniRef90_B9RKC3	E D G K I T A I D V N R E T Y D I G L P I I R K A G V E H K I D F M E S E A L P			
UniRef90_R5BTG1	E D G I I D A L E I N D E L E D M M H Q G W I M A G V V D N K I R L H I G D A I Q			
UniRef90_R9VKG6	T G G E L L T L E A D P L H A A I A R E N L Q L A G V A H Q V T V A E G P A L			
UniRef90_W0ESP8	E G G E V H T I I D D E I D F T R S H L A R S P Y G N R I K L L I G D A V D			
UniRef90_H2K1N0	E D G R L I S L E Y S A K H A E V A V R N I A R A G L D R I A E V R V G P A L			

130 140 150 160

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

170 180 190 200

UniRef90_J4WNN2	V G G V I L S D N V L	WS G K V K H T Q V L	M A Y N E R L A T D P R L	E T V L L
UniRef90_E2Q512	P G G L V V I D N T L	F F G R V P D S R A I	R G L N A A L L H D E R R V	D L S L L
UniRef90_G8X5A5	P G G V L S D N V L	W S G K V E D T K A L	K A Y N Q L L K E D P R V	E T V L L
UniRef90_K4IJ7	P G G L L S D N V L	W S G K V E D T K A L	L E E V K A Y N Q L L K E D P R V	E T V L L
UniRef90_Q5X305	P K G L A I D N I F	W D G K V I D P R E I	I K K L N Q V I K N D S R V F	V S L L
UniRef90_UPI00029A07B2	P G G I L L T D N V L	W S G K V E S T K A L	L E Y N K M V A T D A R L E T V M L	
UniRef90_UPI00047E7F58	P G G I L L S D N V L	W S G K V P K D I D V L	L E Y N K M V A T D A R L E T V M L	
UniRef90_UPI000349928A	A G G L L L A D N T L	S H G R V V D P E I	R D F N D H L V N D D R V E Q V L L	
UniRef90_UPI000404EEAB	Q G G F L L A D N T L	W S G K V K N T A A L L	L D F N R K I Q E D P R V E N S L L	
UniRef90_E4RY83	I G G V L T D N V L	W S G K V A T T E L L	R E F N A Y V S R D P R T E K V L L	
UniRef90_D7TBB5	M G G I V V Y D N T L	R G G T V A M P E E L	L A A D P R V Q I C L A	
UniRef90_I0HC38	P G G L L V V D N V L	R H G Q V L D P A A V	G D E R V E S V M L	
UniRef90_R6B3U4	P G G Y L A D N T L	W D G H V I D P A Y I	R K F N D F I A Q D P R V E V V I L	
UniRef90_W9H1L8	P G G V A I D N T L	W R G T V A D P D A F	R E F N A F V H A D E R V T Q V L L	
UniRef90_UPI0003780756	P G G L M V L D N V L	W S G K V P E T D S L	R A L N S A L H A D E R I E L S M L	
UniRef90_S4RFH2	K G G I V A I D N V L	W G G S V D D E E S I	C R L N D K L K D D Q R V D I S M L	
UniRef90_W5MB81	K G G I L A I D N V L	W S G K V V N P A E I	D R L N K K I H K D V R V N V S M L	
UniRef90_K7U827	V G G T V V Y D N T L	W A G T R R F S A A I	R E L N V R L S Q D P R V E V C Q L	
UniRef90_T2DPE8	V G G L I G Y D N T L	W A G S V P F M D Y I	K E L N K Y L A Q D S R I E I C Q L	
UniRef90_A0A022QTM1	P G G V V V Y D N T L	W G G S V A L P E E L	V E F N K Y L A A D I R V Q I S S Q V	
UniRef90_I1QFQ9	V G G L I V I D N T L	W G G S V A L P E E L	R N F N K K L L E D N R V S I S M V	
UniRef90_UPI00036B4D24	P D G L I V I D N T L	F L G K V A D P D A I	R K L N S M R D D D R V E L S L I	
UniRef90_UPI000367953F	P G G L V L V D N T L	W S G K V V A D T E A L	R A F F N D A V L A D E R V E A V L L	
UniRef90_V6JPM0	P G G L A L D N T L	Q G G R V V D P A A I	R A V N D T I T A D Q R V E E S V L L	
UniRef90_Q11QP2	A G G F M V D N T L	W N G K V A L P E V V	H S F N A F I A Q D A R I E K I I L	
UniRef90_D6CY52	E G G Y I A D N T L	W D G Q P R N T D A L	K A F N D L V A Q D V R V E K V I L	
UniRef90_UPI00042B6E5C	V G G V V Y D N T L	W G G T V A L P E A M	R D V N K L L A A D S R V Q I S L A	
UniRef90_D1VZ43	P G G F I L A D N T L	W D G H V I D P H Y I	A Q F N D F I A Q D A R V E E K V I L	
UniRef90_L1MJQ5	V G G F L A D N T L	W D G H V V E T E R I	R A F K M A T T D P R V E T L I L	
UniRef90_R5NGE5	P G G Y L A D N T L	W D G H V A Q T R G	M D F N N R I A A D S R V E K V I L	
UniRef90_I2MXP2	P G S V V V D N V R	R R G T R E M F E L	V A R E P R L D G T A F Q T V I G T	
UniRef90_M1YV2V	S G G L V V D N V L	W S G R V E S D H A I	D D F R R S V H A D D R V E G V L L	
UniRef90_UPI000255B88A	P G S V L S D N V L	W S G K V K A T T A L	L A Y N K K L A T D K R V E T V L L	
UniRef90_UPI000427BF69	K G G I L S D N V L	W S G K V K S T K I L L	E Y N R M V K E D P R V E T V L L	
UniRef90_UPI0004756E9A	P G T V I G D N V V	R H G L K T F F E M M R N	H P Q L D A T A I Q T V I G A	
UniRef90_Q2J8K4	P N G V I V D N V L	Q Y G H V P A V V A V	V K Q F N E L L A G D S R V Q V V M L	
UniRef90_E4TP06	K G G Y L V D N V L	W S G K V K G K D T E S M	M L E F N L K G C R R F L A K D N R I E L A Q L	
UniRef90_S8DF33	V G G I A Y D N T L	W A G T V E M L E F L K	G C R R F L A K D N R I E L A Q L	
UniRef90_H5XFT4	P G G V V V D N V V	R R G T R E A I E L L R S E P R L D A T A L Q T V I G V		
UniRef90_F2IKG0	S G G Y L S D N V L	W S G K V V K D T Q L L	K D F N D L I Q N D S R V E N I L L	
UniRef90_R0GNK5	V G G I A F D N T L	W F G M G M R M Y R E I L M D L N K Q L K A D H R I E L S Q V		
UniRef90_UPI00042927DB	P G G L L V D N A L	W S G R V A D P E A I R R V N A M L R D D P R V D F S L V		
UniRef90_UPI00036D761E	S G G I L S D N V L	W S G K V V K Q T K A L L	L A Y N Q K L K E D S R V E T V L L	
UniRef90_UPI00036C1F0C	P G G L L A D N T L	W G G A A A D R A A I	R A F N A H V R A D D R V E S V L L	
UniRef90_UPI0002FFEC8A	P G S V V V D N V V	R D G A V A D L E I G A E P R L A A T A V Q T V G G		
UniRef90_UPI000288C9EC	K G G I L S D N V L	W S G K V V V D T I E D N Y N K K L K D D P R I E T I L L		
UniRef90_C0BNE1	P G T V L S D N V L	W T G K V K T T Q V L D Y N K K L A E D P R V Q T S L L		
UniRef90_UPI00036187D5	P G G L I V A D N V Y	Y H G E V A D P A A I R A F N D H V L A D P R M E A V I L		
UniRef90_UPI00034B38DC	P G G L L V D N T L	S H G R V P A V Q Q G R D F N E A A L A D E R T E V V L L		
UniRef90_V8BTJ5	Q G G F L A D N T L	W D G H V V D H S Y E A F N D F V A T D T R V E R V I L		
UniRef90_U1Z9N4	Q G G L L F D N T L	W S G R V A D T R A I Q A L N R A L K D D A R V E L S L L		
UniRef90_R5UXY2	P G G I A A D D V L	W E G K V A Q T K G L D F N E R V A A D E R V E K V I L		
UniRef90_X5DAN9	P G A Y I A D N T L	W S G K V V L D K P I L E F N K L V K N D D R V E E K V I L		
UniRef90_L8JSG4	A G G F V A D N V L	W S G K V V K D T Q A L L D F N R K V H N D T R V E N V L F		
UniRef90_G5GCN0	P G G V L V D N T L	W D N H V V D P A Y I K D F N D Y V V Q D S R V E E K I I L		
UniRef90_I0WH71	P G G I L S D N V L	W S G K V V E P V K A Y N Q K L K D D P R V E T V L L		
UniRef90_UPI0003297B8F	P G T L I G D N V V	R R G V Q A F L A M M G S D P R L T A L Q T V G		
UniRef90_Q9KIE7	R G G L I V D N T L	F F G R V A D E A V R E L N A A L R D D D R V D L A M L		
UniRef90_C6W4L1	T G G F I A D N V L	W S G K V V K D T Q A L L D F N R M V H E D P R V S N I L L		
UniRef90_U0YSE1	P G G V A I D N I F L	S G D P P G V H L V H A F N A S L K A D P R V H M C V L		
UniRef90_D1XZN2	Q G G Y I A D N T L	W D G H V A D A A Y I R R F N D M V A K D E R V E K V I L		
UniRef90_UPI00040798CD	P G S L V D N V V	R R G V Q A F L A M M G S D P R L T A L Q T V G		
UniRef90_U3JUV7	E G A T L A D N V L	F P G A P H L Q Y A K T C G K Y H C V H R A S L E Y F		
UniRef90_UPI00035D647A	P G G I V V D N V L	W S G R V P S D H A H R F N Q R V M H D H R V E K V M L		
UniRef90_R7HT44	P D G F I A D N T L	W D G K V V D T A G L E F N D F V A A D E R V E E K V I I		
UniRef90_H1HL41	R G G Y I V A D N T L	W D G H V V D S A Y I R A F N D H V M A D D K R V E E K V I L		
UniRef90_R7P8K3	P G G F L A D N T L	W Y G H V I D P A Y I R A F N D M V A N D K S V E T V I L		
UniRef90_C0IN68	P G G L A I D N T L	R H D S V A T R A L R A F N E H V H R D E R V D I S M L		
UniRef90_UPI00034C6D7D	P G G V L A D N T L	S H G R V V D P A Q I R D F N D H V L A D G R V E V V L L		
UniRef90_G9P5X9	K G A V I A D N V V	R P G A P E Y R K L V R S H P R L Q S T G V R G L I Q P G		
UniRef90_K4CVP2	V G G V V G Y D N T L	W F G T V A L S E V R E L N T F L A N D P R I E M S Q L		
UniRef90_F2NQR8	P G A V V L A D N V L	W K G R I A E T E A L R A F N A F V T R H P R L T A L L L		
UniRef90_UPI000381CAF0	P G G I I A A D N T L Y	Y H G R V V D P R A I R A F N D R V A S D E R V E A L L L		
UniRef90_M0U3D0	V G G L I A Y D N T L	W G G A V A Y D F V L Q L N Q E L A A D P R I E I C Q L		
UniRef90_UPI0004679322	P G G V L A D N V F Y	Y Y G E A A D D E A I D A F N R H V R A D D R V D S V M L		
UniRef90_UPI0003B4D3C5	P G T V L T D N V V	I R D G A R A L F D K I A A H P R L D A T A I Q T V G		
UniRef90_F8WXA9	P G G L I I A D N T L	W D G H V K Q T I G Q Q F N D M I A K D D R V E K V I L		
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UniRef90_F8EH83	P G G V I A D N V L	W S G K I K D T Q A L L D F N Q K L H H D P R V S N V L L		
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 V T P T Q G R L L Q L L A Q I Q G S R R I L E I G T L G G Y S T I W L G R A L P
 S G H L Q G Q L L K M L T G M I R P K T V V E I G T Y S G Y S A L C M A A G M T
 V P V D E G L F L S M L L K L M N A K K T I E V G V Y T G Y S L L T T A L A L P
 I S P E Q G S L L T L L A K I L R A G T A V V E V G T F T G Y S A L A I A R G L L D
 S P P D E G A L I I A F L L R L I G A K R T L E L G V F T G I S A L A T A L A L P
 V G D V K G D L L D A E L E K V K P K I L L V E E L G G H L G Y S A I R F A S K M R
 I R K E T G A L L K T L V A L K Q P R A I L E E V G T A V G Y S A L L M G R A M P
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 T G H F Q G R V L V L S L S K I I N P T N I L L E I G T Y T G Y S A I C L A E G L K
 V S A M Q G K M L A L L V P L T G A R R V L L E I G T L G G Y S T I W M A R A L P
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 I P H E Q G V V L L T L L C R I A A A R I L V V E V G T F T G Y S T I A L A L L G L P
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 V A P T Q G K Q L L Y L L A K I K G A K N V L L E I I G T L G G Y S T I W L A R A L P
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 V P P E Q G Q Q L M A L L I E L M G A K R V I I E E V G T Y T G Y S S I A M A L A L P
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 A D P E V T Q Q L L T N I I A R V I G A R R A I I E E V G V F T G Y S L L L T A L T I P
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 I R E T A S L L R T I L V A A L K P S Q I I L L E I I G T A V G Y S A L L M C Q T M P
 I I R K E M Q S F L K V L L M I Q K P M C I I L L E I I V G T A V G F S A L L M S E A A P
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 V S P S S G K I L T M L V S I I A G A K N I I L L E I I G A L L G G Y S G I C L A R G F G
 V A A N Q G A F I L L A R I L I R G A R R I I L L E I I G T L G G Y S T I W L G R A V G
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 V A A D E Q A F L N M M L K L M N A K R T L L E I I G V F T G Y S L L A T A L A L P
 A G H L Q G R A L K M C C R M M R P K R L L E I I G T Y T G Y A T F C L A E G T D
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UniRef90_TON9T1	G S N K I T T I E R D E T M I E I A K K N L E K Y N F Q E N I E I L Q G D C L E			
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UniRef90_UPI00047E013F	P G G K L I T I E A D P K H A R V A T E N I J A R A G L S A K V E V R Q G K A L A			
UniRef90_G4TD21	A D G Y I I T H E L Y A E H A A V A T E N F K Q A G L S S K I R V V Q G P A			
UniRef90_A4GK48	D D A H I Y S I D V N E E F L N I A K Q H L E F S G G L T E K V S F F N G K A S E			
UniRef90_UPI0002C37144	A D G K I T A I D P N K E A Y E V G L P F I Q K A G V E H K I D F F H S D A F S			
UniRef90_M0SC85	E D G K V V L A I D I N R K Y F D L G F P M I Q K A G V E H K I D F R E G L A P I			
UniRef90_UPI00036EF904	E G G V V H T I D V N D E L E D F T R G F I I E K S G L E E H V F H V G D A C E			
UniRef90_A0A022RNN8	N D G K I V A I D P D R E A Y E T G L P F I K K K A G V D H K I Q F I D S D A M T			
UniRef90_G5IK37	E G G H I T T V E K Y E P R I E K A K E N F R K A G V E E R I S L I E G D A E D			
UniRef90_G3WF17	A T G R V V A C V A C I D A H R E Y D Q I G L P I I K K A G V E H K I D L L Q V K P A M K			
UniRef90_UPI0002C35173	E D G K I V A I D A H R E Y D Q I G L P I I K K A G V E H K I E L I E S E A L P			
UniRef90_C6XXP5	A N G L I Y T L D I N E E L E E M V R R N F E A S G Y N D K I K Y I L G D A T E			
UniRef90_F2I1E2	K E G K I F T V D K D M K T T N Y A K F F W D K A K V T N Q I T M I N T D A			
UniRef90_UPI0003631481	K E G K L T S L E E K Y A D L A H S N I L K A G F N D Q V S Y M T G P A L D			
UniRef90_Q0RCF4	P T G R V V T L E V D P H H A E V A R A N L E R A G L G A V A Q V V L G P A V D			
UniRef90_Q26G10	A G S E L I T I D I N E E L E D L A G R Y F T R F C Y E S A N H N I T I T Q K V			
UniRef90_M0TT06	E D G Q I L A I D P N R K N Y E L G L P V I E K A G V A H K I D F R E S Q A L P			
UniRef90_W2D0G2	P D A E I H T V E I N D E M E P F F R T Y W Q E H P D R M K I H P H W D D I R R			
UniRef90_UPI00046FA1F2	V D G R L V T L E L D P R H A E V A R A N V S L A Q V G E V G V E I L R V G N A L E			
UniRef90_UPI00046DF038	H D G K I I A I D P D K E A Y E F G L P F I R K A G V D H K I N F F H S D A L S			
UniRef90_B6YQW1	E S G E I H T I E K N D E M E D F I M Q Q F N Q S S F K K N I Y L Y I G D A L E			
UniRef90_C1F18	A D G R L V T L E L D P S P L H F E V A L V N I E Y A G L S D R V D Q R L G P A L			
UniRef90_R9B6Q4	Q D G Y I L T I E G R D T H A A L Q G E N I D R A N L P Q T I E L K V G R A A D			
UniRef90_R6L3K1	P D M H I T T I E N Y E K R I P I A R E N F R K A G K E H R I I T F L T G D A G E			

130 140 150 160

UniRef90_Q9M266	S M S M I L Q N G E E S S Y D F A F	L D D K A M Y Q	E Y F E S L L R V R
UniRef90_R6C192	I V P D M D V T F D L A F V	D G N K R F Y V	E Y Y E M I L L K K M N
UniRef90_L8ETU3	S L A Q L A A E D T E P F D L V F	I D A D K D N N P H Y L E R V L	G L T R
UniRef90_J9BNE8	L L P T T M N L Q I D M A F I	D A D K R D Y S D Y D L I M	Q Y L N
UniRef90_UPI0002B481B1	V A L N N L L N D G K K D F D F A F	V D A M K S E Y I E Y H E L	L L K L V K
UniRef90_UPI000374A43F	T L R A L L D P E P T I D L S F V	V D A D K E S Y I A Y W N E L L V P R T R	P R T R
UniRef90_L8H6V4	T L D E L L K E G Q Q G T F D F A F	V D A D K V N Y P H Y Y E R L L	K L V R
UniRef90_V9F7X6	D N Y E K K L K E Q H V D V F F I	D H D K K K Y K S D L E I E Q C G	L L R
UniRef90_R6Z8Z4	I L A G L T G T W D F I F M	M D A A K G Q Y L H W P M L L R L M P	R L M P
UniRef90_I0KEQ5	L I P A L D D E V F D L V F I	D A D K E N Y A L Y Y D L V F D K V R	R L M P
UniRef90_W5AMV0	H L N E L L A A D P L A Q Y D F A F	V D A D K Q N Y G R Y H E Q L M R L V R	S R
UniRef90_A4ATE8	I I P E E M N E T F N L V F I	D A D K R E Y P E Y F E A V M E K T S	S R
UniRef90_S5Y0N8	V L P E L E G H F D L I F I	D A D K P N N P A Y L E W A M T L S R	S R
UniRef90_R9MMU1	V M K T L D G F Y D F I F M	D A A K G Q Y I Q Y M P E A V R L L A	S R
UniRef90_UPI00037D3EFE	L L E S L R A M P A E P H V D L V Y L	D A D K S G Y I A Y W E E L V P R L R	S R
UniRef90_G8R0H1	I I P G L N E T W D M V F I	D A D K A N Y S N Y F D L V I E H T R	S R
UniRef90_D5SLM7	A E R L R E L P E E P M I D L V F L	D A D K P G Y D T Y W E L L V P R V R	S R
UniRef90_K6U086	V L E K L D D E P Y D L I F M D A G K G H Y N H F L P H C L R L L K	R L L K	
UniRef90_F0RAP0	I I P T L E G T F D L V F I D A E K K S Y P K Y F E A A L A K T R	R L L K	
UniRef90_UPI0003F689AC	I L E G L N E E F D L I F M D A G K G H Y N H F L P H C L R L L K	R L L K	
UniRef90_Q5AZ78	S L A R L Y E S A A L T H G L F L D H Y K P A Y T T D L K C L I T	C L I T	
UniRef90_W8VX11	G D A T E I I P Q L E G T F D L V F I D A D K P N Y V T Y F H Q I M E K V T	C L I T	
UniRef90_E6X6P4	I I P E L N E T F D L I F I D A E K A S Y D H Y F E A V L K K T K	C L I T	
UniRef90_UPI00035FE6F3	F L E H T T E Y D L V F I D A D K E N Y V Q Y F E L V K P K L N S	C L I T	
UniRef90_TON9T1	I L E G L Q G T Y D M I F M D A G K G H Y N H F L P H C L R L L S	C L I T	
UniRef90_R1ASJ3	V L P S N D E F D L I F L D A A K S K Y M D F L P Y C N N L K	C L I T	
UniRef90_Q9XGP7	L L A E E A A A G R E A A F D F A F V D A D K P N Y V K Y H E Q L L Q L V R	C L I T	
UniRef90_UPI00047780A6	T L Q A L L T D G E Q G C F D F A F I D A D K I N Y Q A Y F E A C C I	C L I T	
UniRef90_F0NPY1	Q M K T I E K E S L D L V F I D A D K Q T Y P T Y L T L A R L S R	C L I T	
UniRef90_R4WSZ8	T L E S F I R D G P P F D F I F L D A D K P N N P H Y L K W A L E L A M	C L I T	
UniRef90_Q9C9W4	G L D Q L L N G E K Q E Y D F A F V D A D K T N Y V Y F L E K L L K V K	C L I T	
UniRef90_A6TR06	A L K F L D G Q Y D I I F L D A G K G Q Y K E F F N D C I R L L K	C L I T	
UniRef90_W4ESR0	T L P N I K E R V I A P F D L I F I D A D K P N N P H Y L K W A L E L A M	C L I T	
UniRef90_F8N8N6	E A P K L G I M F D M M F L D G D K R T Y A E T Y D A L L P L L N	C L I T	
UniRef90_R7CXH9	L V P R L D L H C D M A F M D G N K R N Y I D Y Y E M L L P R L P	C L I T	
UniRef90_H6RL66	T L R A L P P D E Q F D F C F V D A D K A G Y P G Y Y D E L L P R T R	C L I T	
UniRef90_F0F2H7	T M D E L I A Q G Q G G S Y D M A L I D A D K P P T P H Y F E R V L Q L V R	C L I T	
UniRef90_R5EA62	V L K T L D G P Y D F I F M D A A K G Q Y I N Y F P D I M R I L L K	C L I T	
UniRef90_R5QT68	Q M K T I E L D G P D I Y M D A D K L R Y A Y Y F E Q S L P L L K	C L I T	
UniRef90_UPI000367346B	U N I E L D G P F D I Y M D A D K L R Y A Y Y F E Q S L P L L K	C L I T	
UniRef90_UPI00036EDB5B	M L P G I E G P I D L T F I D A D R V N N P A Y F Q E A L R R L S R	C L I T	
UniRef90_G8N1J0	T L K Q F I S Q K R K F D F F F I D A D K E N Y R L Y L E Y S I Q L A K	C L I T	
UniRef90_C1EBB3	T L D A L L A R D G P G H Y D V G F V D A D K R G Y W E Y Y E K L L K V R	C L I T	
UniRef90_UPI0004650150	V L P A L R D E Q R D A P F D F A F I D A D K V N N P H Y V R W A L E L G R R	C L I T	
UniRef90_C3YSQ2	T L D D L I S A G E E E T Y D V V F I D A D K V N Y D L Y Y E R A L V L L R	C L I T	
UniRef90_M5VQV3	L D E L L E H H E N E G S F D F A F V D A D K V N Y W K Y H E R L M K L L K	C L I T	
UniRef90_Q5BLE6	T L K E L A A T G E Q F D M V F I D A D K Q N Y I N Y Y K F L L D H N L L R	C L I T	
UniRef90_G5HPU8	L L G Q L E E G R F D L V F M D A A K G Q Y L H W L P F L L K L M P	C L I T	
UniRef90_K4BT13	V L D K L E D D D N K S S F D F A F V D A D K T N Y G N Y H E R L M Q L V K	C L I T	
UniRef90_A0A024KJY1	T L P G L A A D G A G P F D F I F L D A D K P N N P G Y I D W A L K L L S R	C L I T	
UniRef90_R9IQF6	V M K G L D G P Y D F I F M D A A K G Q Y I R H F L P E A I R R L L G	C L I T	
UniRef90_R5UBZ0	V L K T L E G S F D F I F M D A A K G Q Y I R Y M P Q V L R L L R	C L I T	
UniRef90_G5H989	L L D A P G L G I F D L I F I D G D K R E Y P Q Y Y E M A M R S L V H H	C L I T	
UniRef90_J9FCW2	L L P P M N L S I D V A F I D A N K R E Y V E Y Y E L L M P Y L H H	C L I T	
UniRef90_X5LCN4	D G G R T L R V L E E H G F D L L F I D H K S A Y L P D L H S I T E R G W L H H	C L I T	
UniRef90_I7KA71	V L P N L E G K F D L I F I D A A K G H Y I H F L P D C L R L L K	C L I T	
UniRef90_UPI0003696640	U N I E L N T I E K D S V D L A F I D A D K E S Y P Y Y F E K V L E L L R	C L I T	
UniRef90_R7EZ00	L L P Q M E A E S V D M I F L D S D K R D Y P A L Y P L C K R L L R	C L I T	
UniRef90_F0SA66	I I P L L D E V F D I V F I D A D K K N N Y Y L Q V F D K V R	C L I T	
UniRef90_F6YD46	V L P T I A E K C G V Q T F D F V F I D H A K E L L Y K R D L I M L E N L G L I R	C L I T	
UniRef90_A6LH44	I I P R L D E T F D M V F I D A D K R L Y S E Y Y D L V F P M V R	C L I T	
UniRef90_A0A059MRZ0	T L P S L E G G A P F D L V F I D A D K Q S N P H Y V R W A L R L G R	C L I T	
UniRef90_UPI000365B692	T L P Q L A G P F D L S F I D A D K Q S N P E Y F Q W A L R L S R	C L I T	
UniRef90_H6L9B4	L L P Q L S D D W D L A F I D A D K M N Y D N Y Y E L I P K M R R	C L I T	
UniRef90_A0RCW7	U N I E L S K Q I E N E K Y E P F D F I F I D A D K Q N N P A Y F E W A L K L S R	C L I T	
UniRef90_F5L6C6	S L S R L I S S G E K F D F F F I D A D K E N Y D T Y L E L A I Q C A A	C L I T	
UniRef90_R6VZ24	I A P R L A T T F D L V F I D G D K R E Y P D Y Y R M T S G T P L V H	C L I T	
UniRef90_UPI00046DF2FA	I L D K L E D P E K E G S F D F A F V D A D K N N Y W N Y H Q R L M K L I K	C L I T	
UniRef90_B6FZ56	T L K T L D G E F D M I F I D A A K G Q Y Q L F F D L V I D R L	C L I T	
UniRef90_UPI00047E013F	I L P E L T G P F D L I F I D A D K R N N P R Y F E W A L K L S R	C L I T	
UniRef90_G4TD21	I I D N L H K I P S S E P F D L V F I D A D K T N N A N Y F R E A E R L V R	C L I T	
UniRef90_A4GK48	U N I E L Q P L D Q K F D F V F I D H W K E A Y L D D L K L I K H D R L K	C L I T	
UniRef90_UPI0002C37144	V I P Q L D E V F D L V F I D A D K D N Y I N Y H E L L L K L V R	C L I T	
UniRef90_M0SC85	V N D L I T N G K E E G S F D F V F I D A D K A N Y I N Y H E R V L K L V R	C L I T	
UniRef90_UPI00036EF904	I I P R L D E V F D L V F I D A D K R E Y S K Y Y H L V F D K V R	C L I T	
UniRef90_A0A022RNN8	U N I E L L I A K E E H S G S F D F A F V D A D K A N Y I N Y H E L L L K L V R	C L I T	
UniRef90_G5IK37	T I H K F L D N G E E G T F D F A F V D A D K E N Y I K Y H E L L L K L V K L G	C L I T	
UniRef90_G3WFI7	V L K G F G D G V F E F V F M D A A K G Q Y L N W L G E V M R V L A R	C L I T	
UniRef90_UPI0002C35173	T L D E L L A G G A A D T F D M A V I D A D K E N C S A Y Y E E K C L K L V R	C L I T	
UniRef90_C6XXP5	V L D K L E Q H E N E G S F D F A F V D A D K E N Y C N Y H E R I M K L V R	C L I T	
UniRef90_F2I1E2	T V N H L D E T F D L V F I D A D K K N N G R Y Y D L I F D K V R	C L I T	
UniRef90_UPI0003631481	I A A L Q N F I K Q K L L F D F I F I D A D K S G Y K T Y F D N C L D L I S	C L I T	
UniRef90_Q0RCF4	S L E A L A A D H Q R F D F F F I D A D K S N Y K N Y L E Y C I K L A E	C L I T	
UniRef90_Q26G10	S L D A L A I A A R P E P F D L V F I D A D K Q N N A R Y L A A A R L T R	C L I T	
UniRef90_M0TT06	G P A L D I I P S L E G K F D M I F I D A D K P N Y I N Y F H A I M K V N	C L I T	
UniRef90_W2D0G2	V D E L M Q E E K Y R G W F D F V F I D A D K E N Y M N Y H K R V V I E L V R	C L I T	
UniRef90_UPI00046FA1F2	V L P Q L G P F E P F D L V Y I D A D K R D Y C A Y Y D L V F P L V R	C L I T	
UniRef90_UPI00046DF038	Q L A K L E E E G A A P F D L I F I D A D K P N N P G Y L K W A L R L S R	C L I T	
UniRef90_B6YQW1	V L N D L I T N Q G K E E F D Y A F V D A N K D N Y I E Y H E L M D K V N	C L I T	
UniRef90_C1F18	I I P Q I N G M F D M V F I D A D K R L Y N E Y Y D L I F D K V N	C L I T	
UniRef90_R9B6Q4	T L P A L L E A E G L G P F D F V F I D A D K Q N C A P Y F D W A L R L S R	C L I T	
UniRef90_R6L3K1	V L K A L P A D F E P F D I F I D A D K Q S P E Y L E L S L D L S H	C L I T	

	170	180	190	200
UniRef90_Q9M266	V G G V I V I D N V L	W H G W V A D S T V L	R N F N K K L M D Q R V S I S M V	
UniRef90_R6C192	S G G Y I I A D N T L	W D G H V L E P E G I	K K F N D L V I A A D T R V E K V I L	
UniRef90_L8ETU3	P G S L I V G D N V R	R H G D R R F L E L I	A E H P K L T A T A V Q T V G A	
UniRef90_J9BNE8	V G G Y I L A D N T L	H G V V D A A Y I	R A F N D K V A A D S R V E K V I L	
UniRef90_UPI0002B481B1	V G G V I A Y D N T L	W F G S V A L S D H I	Q R F N A F L V K D S R V E I A L L	
UniRef90_UPI000374A43F	P G G L L V V D N V L	A G G R V P T A H A I	H E F N R Y V L R D H R V E L T M L	
UniRef90_L8H6V4	A G G I I A I D N V L	W G G K V A D T V A L	R Q L N E T I K D D N R V E P V M L	
UniRef90_V9F7X6	S G S V I I A D N V L	F G A V G S D Y L E Y I	R G S P H F K S V L L E S Y H E Y S	
UniRef90_R6Z8Z4	E G G V L I S D N V L	Q D G D I E S R Y A V E	R E R R N R T I H S R M R E Y L S V L	
UniRef90_I0KEQ5	P G G F I L A D N V L	W S G K V R D T Q A V L	H H D D R V E N V L L	
UniRef90_W5AMV0	V G G T I V Y D N T L	W G G T V A I A E F L	L K G F N A E L A A D P R V D V C Q I	
UniRef90_A4ATE8	S G S I I L S D N V L	W S G K V V E P K T L	L G G Y N K K L K E D S R V E T V L L	
UniRef90_S5Y0N8	P G T L L I G D N V V	R G G A R R F L E M I	A A D P R L E A T A L Q T V G E	
UniRef90_R9MMU1	P E G V L L S D N V L	Q D G D V E S R F A V E	R E R R N R T I H S R M R E Y L S I L	
UniRef90_UPI00037D3EFE	P G G L L V A D N V L	Y R G A V V T D P A A I	R E F N D H V L A D G R M D A V L L	
UniRef90_G8R0H1	T G G F I I A D N V L	W S G K V T D T E A L L	V L F N K K M Q D D P R V E N V L L	
UniRef90_D5SLM7	P G G L L L A D N V L	Y A G E A A D P R A I	R L F N E R V I R A D S R V E S V M L	
UniRef90_K6U086	N D G I I I A D N V L	F R G M V A S E E L V	K R R K I T I V K R M R T Y L E L V	
UniRef90_FORAP0	P G G I I I L S D N V L	W S G K V V E P K I L L	D D P R V E T V L L	
UniRef90_UPI0003F689AC	K D G I I I A D N V L	F R G M V A S Q D L V	K R R K I T I V K R M R T Y L E M V	
UniRef90_Q5AZ78	P G S V L I A A D N V I	P K P G N P P Y L E Y V R R S V	D E K R K H L G V	
UniRef90_W8VX11	S G S L I I S D N V L	W H G K V V E D V K E Y N R L L	K E D S R L Q T V L L	
UniRef90_E6X6P4	S G S V I L S D N V L	W S G K V K V T K I L L E Y N K K L	K E D P R V E T V L L	
UniRef90_UPI00035FE6F3	S G G V L M F D N V L	W Y G K V L D E N N I Q O L N Q R L	A E D P D F E N L I L	
UniRef90_TON9T1	D Q G V I V A D N V L	F R G M V A S K E L V	K R R K I T I V K R M K S Y L D L L	
UniRef90_R1ASJ3	T R G I I I S D N V L	F K G M V A N D Q L V V R R K K T I	V R R M R E Y L E Y I	
UniRef90_Q9XGP7	V G G H I V Y D N T L	W A G T V A F S V A I R D L N S R L	A A D P R I D V C Q L	
UniRef90_UPI00047780A6	P G G L I V V D N V L	W G G S V I D P E A I R I F N Q S L I	I N D A R V	
UniRef90_FONYP1	N G G V I L M D N V L	W Y G K V Y D E N A L R D L N E R V	V V K K D S R V E S L I L	
UniRef90_R4WSZ8	P G T V I L A D N V I	R G G V R A F L D M L A T S P R L S S T A	L Q T V G S	
UniRef90_Q9C9W4	V G G I I I A F D N T L	W F G M R A Y R E A L L E F N K I L A R D	D P R V E I A Q I	
UniRef90_A6TR06	V G G I I I I S D N I L	F H G M I A N D E L V Q R S K R T I V	N R M R D Y L S I I	
UniRef90_W4E8R0	P G A I I I I A D N V V	R D G I I R K F I S L L E S E P R I E S T A L	L Q T V G S	
UniRef90_F8N8N6	P G G I I I L A D N T L	W D G H V V D P K Y I R R F N D R I A	D D D R V E K V I V	
UniRef90_R7CXH9	S G G Y I I L A D N T L	W D G H V V L E Q A Q I Q A F N D L I A	A D N R V E K V I L	
UniRef90_H6RL66	A G G L I I L A F D N V L	L G G S Q G D A V M R A F N D Q L A	A D P R V D V A M I	
UniRef90_FOF2H7	P G G I I I I A I D N L L	P E S H R I L Q A F A R N R L P H D E R I	E T L T L L	
UniRef90_R5EA62	K G G L L I I S D N V L	Q E G E I I V Q S K Y V T R R N R T I	H E R M R E Y V Y M L	
UniRef90_R5QT68	P G G V L L S D N V L	Q D D G D I I I Q S R Y V A R R N R T I	H T R M R E Y L S I I	
UniRef90_UPI000367346B	E G G L I M V I D N V L	W D G T V L D P E A I A N F N K L V A D	H P E V E Q V L L	
UniRef90_UPI00036EDB5B	P G G I I I I V I D N V L	R A G A V A D P E L I A A E P R V D A T A L	L Q T V G K	
UniRef90_G8N1J0	K G A L I I T A D N V L	W K G K V T D K N F L R E F N E F V I A K	H P R L E S V I V	
UniRef90_C1EBB3	P G G L I I A V D N V L	W Y G K V A D P E A I R E F N A R V A E	D E R V T Q Q I V	
UniRef90_UPI0004650150	P G T V I V V D N V V	R R G T R E M L D L L R T E P R L D A T A I Q T V G T		
UniRef90_C3YSQ2	P G G L I I A L D N V L	W G G G Q V E T T R T I S A L N K K I H	K D P R V D V S M L	
UniRef90_M5VQV3	V G G I I V Y D N T L	W G G T V V M L E Y M K E L N K L L A	A D A R V Q I S H A	
UniRef90_Q5BLE6	I D G G V I C V D N T L	F K G R V V E M G K A L R D F N Q F V T	A D P R V E Q V I I	
UniRef90_G5HPU8	P G G V L I I S D N V L	Q D D G D V E S R F A V Q Q R R N R T I	H S R M R E Y L H T L	
UniRef90_K4BT13	V G G L I I V Y D N T L	W Y G M R M S E R S Y L L E N K S L A	A D T R N Q I S Q V	
UniRef90_A0A024DKJY1	P G T V I V C D N V I	R R G A R A A F E L I L G R D P R V A A T	S M Q T V G S	
UniRef90_R9IQF6	P G G I I I V S D N V L	Q D D G D I I E S R F A V T R R N R T I	H K R M R E Y L S I I	
UniRef90_R5UBZ0	P G G T L I V T D N V L	Q D D G D I I E S R F A V V E R R N R T I	H S R M R E Y L S I I	
UniRef90_G5H989	S G S Y I I L A D N I L	W Y G K V A F T E G I K Q F N R M V T	E D D R V E N V I L	
UniRef90_J9FCW2	S G S I I I L A D N T L	W S G K V K D T S N I M M F N D E I A	T E D D R V E Q L I L	
UniRef90_X5LCN4	P G S I I V V A D N V R I P G A P K Y R E Y M R Q Q Q G F D T I	I E H K T H G E Y Q		
UniRef90_I7KA71	D G G M L I I S D N V L	F R G M I A T N E L V K R R K I T I V K R L R R Y L D V L		
UniRef90_UPI0003696640	P G G T M I I V D N V L	W Y G K V P S T K I L K E F N E M V T	K D K R V E S I I L	
UniRef90_R7EZ00	P G G L I I I I A D N V L	W S G K V H I T D S R Y D R F N D M V A	K D A E T D V V I L	
UniRef90_F0SA66	K G G I I I V D N V L	W S G K V K D T S N I M M F N D E I A	K D D R V E K L I L	
UniRef90_F6YD46	H G T T I I V A D N V I Y P G C P D Y L K Y V R N N P K Y K S A N Y L S K L E Y T			
UniRef90_A6LH44	P G G L I I I I L A D N T L	W D G K V V E E V H P S D F N E K V K Q D D R V E K V I L		
UniRef90_A0A059MRZ0	P G T V I I V D N V I R R G A R E V E L E L M A T D P R L D A T A L	L Q T V G A		
UniRef90_UPI000365B692	P G S L I I I I V D N V V	R G G A V P S I Q G V R R L H E I I A T E P R V D A T A V		
UniRef90_H6L9B4	S G G C I I I I D N V L	W S G K V A E E E A I D A L N K K I R E D K R V E P M I L		
UniRef90_A0RCW7	P G T V I I I I G D N V V	R E G I R R F Y E L I A T E P R V S A T A L	L Q T V G S	
UniRef90_F5L6C6	P G A I I I A A D N V L	W D G D E E L T E A I R K F N E K A A R D S R L E S L L V		
UniRef90_R6VZ24	S G S V L I I A D N I L	W S G K V R H T Q A L L E F N R M V V E D P R V E N V I V		
UniRef90_UPI00046DF2FA	V G G I I I M Y D N T L	W G G T V D V P E A K R E F N K L V S A D T N V E I S Q V		
UniRef90_B6FZ56	K G G L V I V S D N I L	Y K G M V A H D D F V V R R K K T I V K R M R N Y L S L I		
UniRef90_UPI00047E013F	K G S L I I F V D N V I	R R G T R K L F Q K M A T D P R V I A T A Q Q T V G S		
UniRef90_G4TD21	P G G V I I I V D N V V R R G T R E L L R Y I K G N K G V E A T T M A T V G T			
UniRef90_A4GK48	D G A V I I F A D N I V L F H L E E Y L D F V R T S P N F S S E F I P A L R E Y S			
UniRef90_UPI0002C37144	V G G I I I I A Y D N T L	W F G T V A E P D H V I E L N K F L A G D S R V E L A F V		
UniRef90_M0SC85	M G G V I I G Y D N T L	W G G F V E F L D T V E F N K F L L A A D P R V E I C H L		
UniRef90_UPI00036EF904	A G G M I I I A D D V L	W D G K V A D P N V I L E F N D M V Q A D S R V E N V I L		
UniRef90_A0A022RNN8	G I I I A Y D N T L	W A G T V A L V I E H L K N L N S F L A S D S R I E L A H L		
UniRef90_G5IK37	P G G V L V A D N V L Q D G D V V Q S K Y V E R R K R T I H G R M R E F L A V V			
UniRef90_G3WF17	S G G I I V A I S N D T L W N G E V M A A Q C Y P R D L N E R I L R D S R V H I S L L			
UniRef90_UPI0002C35173	V G G I I I A V Y D N T L W G G S V A M I K Y I P E L N K L L A A D T R V Q I S H A			
UniRef90_C6XXP5	P G G L I I I I V D N V L W S G K V K D T R N I T T F N D K I A A D T R I E K L I L			
UniRef90_F2I1E2	E N G L I I V D N V L W S G K V A D L E T I R E F N K Y I K N D N R V D T T M I			
UniRef90_UPI0003631481	P G A L I I V D N V I W R H G V R E F Y D L L A Q G E A R I S A T A L Q T V G S			
UniRef90_Q0RCF4	P G S A I I V D N V R R G A V V D P A H V R A E P R L T A T A L Q T V G S			
UniRef90_Q26G10	P G A L I I L S D N V L W H G K V V E T V N P K D F N Q L L K E D P R L Q T V L F			
UniRef90_M0TT06	V G G V I I G Y D N T L W S G T V P V L D Y V M E L N R H L A A D P R I E I C Q L			
UniRef90_W2D0G2	P G G L I I I I L A D N T L W S G K V V K D E A I M A F N E L I R N D N R V E K V L L			
UniRef90_UPI00046FA1F2	P G T I I I I L G D N V I R H G V R E F Y D L L A Q G E A R I S A T A L Q T V G S			
UniRef90_UPI00046DF038	V G G I I I A Y D N T L L F G S V I T E P E H T R D L N S F L A T D S R I E L A H V			
UniRef90_B6YQW1	A N G I I I I L A D N T L W N R H P N D N Q T I G A F N E K V K Q D K R V E K V I L			
UniRef90_C1F18	P G T V I I V D N V I R D G G R F F E A V A V E P R V T A T T Q Q T V G S			
UniRef90_R9B6Q4	S G T I I I I V L D N V I R A G D I V N P E R L K N H P R R L L C T A L Q T V G S			
UniRef90_R6L3K1	P G G I I I I L S D N V L Q E G L I E S H Y L V E R R N R T I Y K R M R E Y L S I V			

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UniRef90_Q9M266	S I G D G M T I C R K R
UniRef90_R6C192	P L R D G L T I I R K K
UniRef90_L8ETU3	K G Y D G F S L A R V T G
UniRef90_J9BNE8	P L R D G L T L I R R
UniRef90_UPI0002B481B1	S I G D G V T L C R R
UniRef90_UPI000374A43F	P I S D G I T L A R K I
UniRef90_L8H6V4	A I A D G L T L L R V L
UniRef90_V9F7X6	D L K D A I E I S T Y K
UniRef90_R6Z8Z4	P I G D G V T V S V K K S A G
UniRef90_I0KEQ5	P V R D G L L L V R K R
UniRef90_W5AMV0	A V G D G L T I C R R L
UniRef90_A4ATE8	P I R D G L T L S R V L
UniRef90_S5Y0N8	K G W D G F V M A V V R G
UniRef90_R9MMU1	P F G D G I A L S V K K
UniRef90_UPI00037D3EFE	T V A D G V T L A R K R
UniRef90_G8R0H1	P I R D G L M I A R K K
UniRef90_D5SLM7	P L A D G L T I I A R R L P P S G
UniRef90_K6U086	P M G D G I A V T K R R
UniRef90_FORAP0	P I R D G L T L S R V L
UniRef90_UPI0003F689AC	P M S D G I A I T K R R
UniRef90_Q5AZ78	S V R D G L T L S R V L
UniRef90_W8VX11	P I R D G L T L S R V L
UniRef90_E6X6P4	P L R D G L N L A L K K
UniRef90_UPI00035FE6F3	P M G D G I A L T V R R
UniRef90_TON9T1	P I G D G I A L S Y K K
UniRef90_R1ASJ3	A I A D G L T I C R R L
UniRef90_Q9XGP7	P V R D G L T I I R K K
UniRef90_UPI00047780A6	K G W D G F S L S I V
UniRef90_FONYP1	P I G D G V T I S Y K K
UniRef90_R4WSZ8	K G Y D G F V I S V V K
UniRef90_Q9C9W4	P I R D G L T I I R K K
UniRef90_A6TR06	P L R D G L T I I R K K
UniRef90_W4ESR0	P V A D G L T L A V K R
UniRef90_F8N8N6	P L G D G L T L V R K K
UniRef90_R7CXH9	P I G D G I T L S V K K
UniRef90_H6RL66	P L G D G I A L S V K K
UniRef90_FOF2H7	P I R D G L L I A E K L
UniRef90_R5EA62	K G H D G G L A V V L V T
UniRef90_R5QT68	P I G D G L T I I A R V L
UniRef90_UPI000367346B	P V G D G L T L C R V R
UniRef90_UPI00036EDB5B	K G Y D G L A V A L V V T P
UniRef90_G8N1J0	T V S D G L T L A F K R
UniRef90_C1EBB3	S L G D G I T I C R R
UniRef90_UPI0004650150	P L R D G L T I I R R V P Y T P Q
UniRef90_C3YSQ2	P I G D G M T I I C R R L
UniRef90_M5VQV3	K G Y D G F I L A V V
UniRef90_Q5BLE6	P I G D G V T V S V K
UniRef90_G5HPU8	P L G D G V A V S V K K
UniRef90_K4BT13	P L R D G L N L I R V K
UniRef90_A0A024KJY1	P E R D G L S V I R V K
UniRef90_R9IQF6	T V V R D L M L S V V L G
UniRef90_R5UBZ0	P I G D G L A I I S L K
UniRef90_G5H989	P I R D G I T L I R K K
UniRef90_J9FCW2	P M R D G L S L I R K
UniRef90_X5LCN4	P V R D G L F I I R K K
UniRef90_I7KA71	D R E D A I E K S I Y L
UniRef90_UPI0003696640	P L R D G L T M I W K K
UniRef90_R7EZ00	P I G D G F A I A V V T
UniRef90_F0SA66	K G Y D G F T I A L V T
UniRef90_F6YD46	P L R D G M M M I R K K
UniRef90_A6LH44	K G Y D G F I M A V V K
UniRef90_A0A059MRZ0	P I G D G L F I I R V K
UniRef90_UPI000365B692	P L R D G L N L I R V R
UniRef90_H6L9B4	T P L G D G I T I C R R
UniRef90_A0RCW7	P I G D G V A L S Y K E G
UniRef90_F5L6C6	K G H D G F A M A L V
UniRef90_R6VZ24	K G W D G F L Y A V K L
UniRef90_UPI00046DF2FA	S H P D G I E V S Y F K
UniRef90_B6FZ56	S I G D G L S L C R R L
UniRef90_UPI00047E013F	P V R H G L M M I R K
UniRef90_G4TD21	S I G D G L S L C R R
UniRef90_A4GK48	P I G D G V A V S V K M G
UniRef90_UPI0002C37144	P L G D G L T L A F K
UniRef90_M0SC85	S V G D G I T I C R R L
UniRef90_UPI00036EF904	P V R D G L F V I R K K
UniRef90_A0A022RNN8	S I G D G M T L C K K K
UniRef90_G5IK37	P I G D G M V V S K V K
UniRef90_G3WFI7	K G W D G F V L A L V
UniRef90_UPI0002C35173	S I R D G L T L S R V L
UniRef90_C6XXP5	S I S D G L T L C R R
UniRef90_F2I1E2	P L R D G L T V I W K K
UniRef90_UPI0003631481	K G Y D G F V L G I V N G
UniRef90_Q0RCF4	T T D D G L A L C R R L
UniRef90_Q26G10	P I R D G L T I I H R L
UniRef90_M0TT06	K G Y D G F T L I R V
UniRef90_W2D0G2	K G H D G F A I A I V K
UniRef90_UPI00046FA1F2	P L G D G I S L S V K Q E R G N Y E
UniRef90_UPI00046DF038	UniRef90_B6YQW1
UniRef90_C1F1I8	UniRef90_R9B6Q4
UniRef90_R6L3K1	UniRef90_R6L3K1

UniRef90_D4M4J7
UniRef90_B9XK41
UniRef90_UPI0003665D97
UniRef90_W4B0U5
UniRef90_G7QJU1
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UniRef90_E3G6R4
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UniRef90_W9ASH4
UniRef90_J2KG64
UniRef90_S4XP05
UniRef90_I8ALJ8
UniRef90_U1FU8A
UniRef90_S3IXZ6
UniRef90_C3AKL0
UniRef90_UPI00032A50D5
UniRef90_I1K3L5
UniRef90_UPI0002378C85
UniRef90_M0U7T7
UniRef90_F4KKW4
UniRef90_UPI000023E771
UniRef90_W3AB89
UniRef90_UPI00047BB3BA
UniRef90_E6SHY4

1 10 20 30 40

The sequence logo displays the frequency of each amino acid at five specific positions. At position 1, there is a mix of hydrophobic (blue), polar (red), aromatic (yellow), basic (green), and acidic (purple) residues. Position 10 is dominated by hydrophobic (blue) and polar (red) residues. Position 20 shows a high frequency of aromatic (yellow) and polar (red) residues. Position 30 has a significant presence of basic (green) and polar (red) residues. Position 40 is characterized by hydrophobic (blue) and polar (red) residues.

50 60 70 80

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UniRef90_B9XK41	I G R D Q G S F M T M L V A A I G A K H A I E I G T F T G Y S S I C I A R G L L P
UniRef90_UPI0003665D97	V A P N Q G K L L H L L A L T Q G A T R I L E I G T L G G Y S T I W L G R A L L P
UniRef90_W4B0U5	V T P N Q G K L L Q L M L Q I Q G A S R V L E I G T L G G Y S T I W M A R A L L P
UniRef90_G7JQU1	I S P E E G Q Q F L N I L L T K I S G A K R I I E I G T F T G Y S S I C F A S A L L P
UniRef90_I3T4A8	T L P E A G P L I T I L L K L L N P K K T I E E V G V F T G Y S S L L T A L N I L P
UniRef90_UPI000463B3B4	V A P N Q G Q Q L L A L L V Q I S G A R K V I L E I G T L G G Y S T I V W M A R A L L P
UniRef90_R6SL59	I R R E M Q S F L K V L L Q I K A P A R I V L E I V G T A V G F S T I L L M C T Y N P
UniRef90_UPI00038970A6	V G P L K G K I V E R L L C E R A P R T V V L E L G T Y C G Y G T V L M A A A M P
UniRef90_W7CF06	I D A D S A Q F L R V L L K T T G A K N V L L E L G T L G G Y S A I L F A S I I P
UniRef90_A0A023GGK4	G D S C Q L Q F F Q I L L K T M S A K Y L E I G T F T G C S A I A A A L A L P
UniRef90_U5CZ55	T S P D G G Q F I S L L K L I N A N A K T I E I G V F T G Y S S L L A T A L S L P
UniRef90_V2TV95	V A P N Q G M L L Q M L I Q M N K C K R V L E I G T F A A Y S T I W L A R A L L P
UniRef90_B5HBJ6	V A P N Q G K L L H L L A Q T Q G A R T A L E I G T L G G Y S T I W L A R A L L P
UniRef90_D3A674	I A Q E Q Q A A M L V W L A K L L N A K K Y L E I V G V F T G Y S S T A M A L S L P
UniRef90_G1UH84	S N P D A A Q L M G I L K L L K L A N A K T I E E V G V F T G Y S S L L L T A L T I P
UniRef90_K8A1E4	V S P L Q Q G Q F L A L M V M M T G A R R V L E I G T L G G Y S T I W L A R A L L P
UniRef90_J3MU53	S P P E E G Q L L S L L L K V I G A K D T I E E V G A F T G C S V L A T A L A L P
UniRef90_L1NN4T	V A P E Q Q A V L A W L A R L T G A E N Y L E I V G V F T G Y S S T A V A L A L P
UniRef90_UPI00047765D6	V S R A Q G E M L G L L V R A T G A R R V L E E V G T L G G F S T I C L A R G V G P
UniRef90_L1L740	V A A N Q G K F L Q L L A Q Q G A R R I L E I G T L G G Y S T I W L A R A L L P
UniRef90_F5Z2S1	I G D E K G A L L D A A V Q R V I Q P A L A L E L G T Y C G Y S A L R I A R S A P
UniRef90_U4WQC6	I Q L T G A Q F L R T L L L I K R P K S I L L E V G T A I G Y S T I W L A E A A P
UniRef90_H9CJ8K	G A P E V Q L Q L N S N I M Q A I G A K K V L D I G V F T G A S S S L S A A L A L P
UniRef90_UPI000375AD6A	L A P E Q A Q A L L V W L A K L T G V K R Y L E L G V F T G Y S S T A M A L A L P
UniRef90_A0A010NH63	V T Q S M G A F L G L L V Q I T G A R R V L E F G T L A G Y S S I W M A R A M D P
UniRef90_B2IC53	V A P N Q G K L L H M L A R L I G A R A I L E I G T L G A Y S T I W L A R A L L P
UniRef90_J5K9M3	I G E D K G A I V T R V I H E T Q P K V M V E L L G G Y V G Y S A I L F A R A A P
UniRef90_U4TN87	T G R V P A K L L R M L I Q M G A K Y V L E L G T Y T G Y S A L T I A E A L P
UniRef90_F6WGU2	V G D A K G A I L L D K C F L E A S P Q N V L E L G C Y C G Y S A L R M G R L L K P
UniRef90_W9CF68	V G E D K G A I V T N I I K E N N P Q V M V E L L G G Y C G Y S T I W L A K A L P
UniRef90_N8QRE0	V A P N Q G M F L Q M L I Q M N K C K R V L E L G T F G A Y S T I W L A K A L P
UniRef90_UPI0003C7FCAA	V P D P S Q C Y L H L L I K I S N I K N V L L E I G T F T G L S A L S I S L A L P
UniRef90_UPI0004642B1B	I G D E K G L L L D A A V Q R V N P A L A L E L G T Y C G Y S A L R I A R A A P
UniRef90_R7JN7Y	I R R E M Q S F L K V F L K M K Q P K R I I L E V G T A V G F S A V F F M A Q Y G E P
UniRef90_Q5WBL8	U H P T Q G K Q L L T L L A R M K G A K R I L L E I G T L G G Y S T I C L A Q G M S S P
UniRef90_D4GJU7	V S A L Q Q G K M L G L F I K M I N A S R V L E E I G T L G G Y S T I W M A Q A L L G P
UniRef90_UPI0003FA86D9	V S P A Q G K L L F L L A R I I Q G A K K V L E E I G T L G G Y S T I W M A R G L P
UniRef90_UPI00016A304C	V T A N Q G K F L N N L L A T I I R G A R R I L L E E V G T L G G Y S T I W L A R A L P
UniRef90_D9TAU4	V A P E Q A A F L T F L T R L L G V R Q A V E E V G T F T G L S S L A I A R G L P
UniRef90_UPI0003B42B6F	V P P E V G V K T L T Y L L A G L S G A K R V L E E I G A L G G Y S T I W L A R A L P
UniRef90_UPI0003347956	M G P V K G Q I L M R L V E E K A P V C Y L E E I G T H Y G Y S T I L I A R A L P
UniRef90_D7JE6	S G H Y Q G R L L K M F T R I V A P R N V L L E E I G T F S G Y A T L C L A E G L L Q P
UniRef90_C3JCK3	S G H L L G R L L K M L V Q L V N P R N V L L E E I G T Y T A Y A S L C L A E G L L Q P
UniRef90_U5XMH7	L P L E E A A L L T F F L V R L T G A R S V V E E V G M F T G S S A I A L A R G L L A P
UniRef90_H3GMU3	V D E M Q G K F L S F L V R T T R A K R V L E E I G C F T G Y S A L C L A S G L L A P
UniRef90_M3ECL3	V S P L Q Q G K L L Q L L A R L L Q G A R R V L L E E I G T L G G Y S T I W L G R A L L P
UniRef90_C2R6U4	V A P N Q A K F L H R L L A L I Q G A K R I I L E E V G T L G G Y S T I W L A R S L L P
UniRef90_G8S3Z4	V S A D E G A L L T M L V Q L T G V D Y A V E E V G T F T G F S S C L A R G L R P
UniRef90_Q86IC8	T Q A E Q C S F F K L L I Q V L N A K K T I D I E I G V F T G L S S L T A A L A M G S G P
UniRef90_B7IYN7	D R L G M E F M L Q F L R R L I G P K S I I L E I G T A I G Y S S I R M M Q A I S G P
UniRef90_R5J5Z0	U H K E V I A E L L R F I L D H K P K R I I L E I G C A I G Y S S I F F A T V L L G P
UniRef90_I4BCG9	S G H V E Q G Q L L K F L V R M S A V R V L E E I G M F T G Y S A L A M A E A L P
UniRef90_C9LJI3	S G H W Q G T L L R L L T K L L R P K R V L E E I G T Y T G Y S A L S I A A G M E P
UniRef90_A6VYI2	S G K T I G R T L K L L A K I I A Q P K R A L L E I G M F T G Y S A L S I A E G M P P
UniRef90_G4CRD1	I A P E Q A S L L C W L A R L M H A E R Y L E V G V F T G Y S S T A M A L A L P
UniRef90_E3G6R4	V A A N Q G Q G Q L L A L L V R I S G A T R I L E I G T L G G Y S T I W M A R E L P
UniRef90_D5P366	V G D E K G R F L D A A V R R A D P A V A L E L G T Y V G Y G A L R I A R A A P
UniRef90_R5V3X9	I R K E M Q S F L K L L L A M T K P K R I I L E V G T A V G F S S I L M A E Y D P
UniRef90_UPI000474EAB8	I S H D Q G T T L L T L L V K L T G T L H A V E E V G T F T G Y S S I C I A R G L P
UniRef90_N9QMM6	V A P N Q G M L Q M L I Q M N Q C K R V L E L G T F A A Y S T M W L A R A L P
UniRef90_UPI000365A988	V A P V Q G K F L H L L A R A I G A R R V L E E I G T L G G Y S T I W L A R A V G P
UniRef90_UPI00038ECB40	L T C E Q A Q A Q L L A N L A R L V K A Q K A L D L G T F T G Y S T I C L A L A L P
UniRef90_M8D8Z1	V Q L P T A Q V M R S Y L Q L H R P E Q I L E E V G T A I G Y S T I W M A E A A P
UniRef90_UPI000440C72F	V S A A Q G K F L K L L A Q S L I G A K R I I L E E V G T L G G Y S T I W L A R A L P
UniRef90_UPI000225BC9C	V S P S T G K F L L T M L V S I S G A K N V L L E E I G A L G G Y S S G C L S R G F G G P
UniRef90_UPI00047A75D4	V S P S S G K F L L T M L V S I T G A L N V L L E E I G A L G G Y S S G C L A R G F G G P
UniRef90_Q5YWR2	V S A A Q A Q K F L Y L L G K S L G V R R V L L E E I G T L G G F S T I W L A R A V G P
UniRef90_B7KFL0	S G H I E Q G T L K M F I R R M M G V K R V L L E E V G M F T G Y S A L A M A E A L P
UniRef90_UPI0002BC855D	U T A P E D G Q F L I A L L K L T N A K K T I E I G V F T E Y S S L V L N A L T I P
UniRef90_UPI00042B6B62	V P V D E G Q F L S M L L K L M N A K R T M E I G V F T G Y S S L L A T A L A L P
UniRef90_UPI000466FDD4	I R E E T A A F L K T M T A A M N P K A I I L E I V G T A V G Y S T I L M A E V M A P
UniRef90_UPI0003B43FF4	V S P L Q G A F N I L A K S I G A K R I I L E L G T F F A G Y S T I W L A R A L P
UniRef90_UPI00046804C1	S G T L Q G R V L K M L V R L L K P K R I I L E L G T Y T G Y S A L C L A E G L L P
UniRef90_Q93D14	V A P N Q G M L L Q M L I Q M N Q C K R V L E L G T F A A Y S T I W L A R A L P
UniRef90_D2QF60	S G H V Q G Q R F L S M I S W M I R P R Y I V L E I G T Y T G Y S A L C L A E G L L P
UniRef90_W9ASH4	V S A Q H G R F L L H L L A R I R G A R R V L E I G T L A G Y S T I C L A R G A G S P
UniRef90_J2KG64	S G Y Q Q G R F L L T S Q I L K P E N V L L E I G T F T G Y S T I C L A T G L L S P
UniRef90_S4XP05	V A P N Q G K F L L N L L A R I H G A R T I L L E I G T L G G Y S T I W L A R A L P
UniRef90_I8ALJ8	V S A S Q G K F L Y L L A R I K I K G A K R I I L E I G T L G G Y S T I W M A R A L P
UniRef90_U1FUUA8	V G P D D G K F L I V C D L I A E V K P E I M V E L G G Y I G Y S G L L F G D A V R P
UniRef90_S3IXZ6	V A P N Q G K F L Q L L V Q I Q G A R N I L L E I G T L G G Y S T I W M A R A L P
UniRef90_C3AKL0	V S P T Q G K F L Q L L V Q I Q G A R N I L L E I G T L G G Y S T I W L A R A L P
UniRef90_UPI00032A50D5	T A P D A G Q L M V L F L K L L N A K K T I E E V G V F T G Y S S L L L T A L N I P
UniRef90_I1K3L5	V P V D E A Q F V S I L L K I M N A K K T I E I G V F T G Y S S L L A T A L A L P
UniRef90_UPI0002378C85	V P Q E Q A A L L T L L T R I I A A R N V L L D I G T F T G L S A L S F A R G V A P
UniRef90_M0U7T7	T G P D E M Q F L S M L L K L M N A K K T I E I G V F T G Y S S L L A T A L S L P
UniRef90_F4KKW4	C G A T Q A G L L S M L I K L S G A Q R V L L E I G A Y S G Y S T I A M M A L E P
UniRef90_UPI000023E771	V G E D D G K F L V T D L I A E V K P K V I V E L L G G Y V G Y S T I L F A N A V R P
UniRef90_W3AB89	V S A N H G K F L S M L M V K M A N A K N V L L E I G T L G G Y S S I W M G R G F P
UniRef90_UPI00047BB3BA	E L I A G I E A I L Q L L R I Q D S K K I V L E I G T A I G Y S A L R M A Y T L P
UniRef90_E6SHY4	I R P A Y G R L L T L L V A A R G A R R V L L E I G A L A G Y S A I C L A R G L P

	90	100	110	120
UniRef90_D4M4J7	E G G H I T T I E N Y E K R L P I A R E N F R R A G K E D K I T L I E G D A T E			
UniRef90_B9XK41	E R G K L L C D V S L E D A S E E W T N V A R K Y W K K A G V D K K I E L R L G P G A D			
UniRef90_UPI0003665D97	A D G R L V S L E E Y S A E H A D V A R A N L A R A G L L D K N A E V R V G P A L D			
UniRef90_W4B0U5	E H G R I L C C D V S E E W T N V A R K Y W K E N G L E N K I F L K L G S A L E			
UniRef90_G7JQU1	E D G K I L C C D V S E E W T N V A R K Y W K E N G L E N K I F L K L G S A L E			
UniRef90_I3T4A8	D D G K I T A I D I D R K A Y E V G L P V I K K A G V E H K I D F I E S P A L P			
UniRef90_UPI000463B3B4	E D G K I C V V T L I E A D A H H A R V A Q E N I R S A G L N N V E I R V G P A A D T			
UniRef90_R6SL59	V S C K I V T I E N Y E K R P I A M E N F K K A G R E K Q I T L L P G D A Q E			
UniRef90_UPI00038970A6	A G A H L Y T V E P N P R H A S V A E K V I R L A G F D E Q K E L I V G P S E E			
UniRef90_W7CF06	A T G H V V T T I D N D V R Y Q P L S Q G N A E K T G Y K D K I T F I C N D G L K			
UniRef90_A0A023GGK4	P D G K V V V A L D L H E T L V N V G R P L W K E A G V E N K I E L R F G P A V D			
UniRef90_U5CZ55	D D G K I V V V A I D I D K A V Y D E Y G L P I K K V G H K I S F I H S P A M P I			
UniRef90_V2TV95	K D G Y L L T I E G R E S H A Q V A Q Q N I A E A M M N T H I D L K V G F A A D			
UniRef90_B5HBJ6	E D G R L I S L E Y D P A H A E V A R A N I A R A G L A K I A E V R T G A A L L E			
UniRef90_D3A674	E D G K I T A C D I N V T F D I A R E T W Q A A G I A H K I S L H L Q P A L L			
UniRef90_G1UH84	N D G K I L A I D P D Q E A Y D L G L P V I K R A G V E H K I N F V A E A A L P			
UniRef90_K8A1E4	E E G L V V T T I E A A N E H A Q V A A A A N L A L A S V T P K V Q L R V G P A V E			
UniRef90_J3MU53	D D G R V V V A I D V S R E Y F D L G L P V I K K A G V A H K V D F R E G P A M P			
UniRef90_L1NNNT4	E H G R V T A C D I N A A Y T E Y A R Q A W Q D A G V A H K I S L H L Q P A I F			
UniRef90_UPI00047765D6	A D G S V I T C E Y E P R H A E V A R S N I D S A D V G D R V E I R V G A A L			
UniRef90_L1L740	A D G Q L I S L E Y S P K H A E V A C R N I A R A G L D S L V T C V V G T I L G D			
UniRef90_F5Z2S1	A A R I Y S I E L A E A N A D N A R Q I W A H A G V V A D R I T C V V G T I L G D			
UniRef90_U4WQC6	T A K I V T M E L L D E E R P T R A R A S F K E A G G L E D R I E L I E G D A T K			
UniRef90_H9CJ8K	P E G K V H A D I S E Y T N I G K P F W E E S G V A D K I R L H I A P A A E			
UniRef90_UPI000375AD6A	E D G R I V A C D I N A S F T A L A Q E A W Q E A G V S D K I Q L R L Q P A L F			
UniRef90_A0A010NH63	D D G A V V T L D I D P A A A Q V A R R N F H A A G V V A E R V Q V R V G P A L E			
UniRef90_B2IC53	T D G F L I T L E A K P E H A K I A Q E N I R Q A G L T S Q V E V V R L G P A I E			
UniRef90_J5K9M3	G A Q A Y I C L E R S A E F A R I A R A L I D Q A G L G S F S V D I V V G P S S H			
UniRef90_U4TN87	E D G H V I S C D V N P M C K S F R S Y Y F E Q D S P H G Y K I D L R I A P A F E			
UniRef90_F6WGU2	E G A K I Y T V E G N P D F A D V A Q E I I T F A G M E E K I Q I V R G F S E K			
UniRef90_W9CF68	A G G K K Y Y S L E R S P K F A K V I T T L V E F A G L D G F V E V I V G P S N			
UniRef90_N8QRE0	E D G Y L L T V E G R D T H V I I A Q E N I D Y A S M P T I E L K K G R G A D			
UniRef90_UPI0003C7FCAA	D D G K I L A I L D K D E K T N E V A L K F F K K A K D H K I K T I I K P A L E			
UniRef90_UPI0004642B1B	S A R I Y S I E L A E A N A A N A R R I W A H A G V V A D R V T C V V G T I I G D G			
UniRef90_R7JNY7	P D A E I T T I E N Y E K R P I A R E N F E K S G F A D R I T L I I P G D A A E			
UniRef90_Q5WBL8	D T G K I V T L E E Y E P K H A A C A K E N I A F G Y A D Q V D I I I I G P A L E			
UniRef90_D4GJU7	A E G K I T T I E A D S P H H A K V A Q S N F E R A G V V S D M V D L R L G P A L Q			
UniRef90_UPI0003FA86D9	A D G K V V T L E L D P H H A K V A Q S N F E R A G V V S D M V D L R L G P A L Q			
UniRef90_UPI00016A304C	P G G A L L L T L E A N P D H A A L L A R E N V A R A G L A D V V S V V V G R A K D E			
UniRef90_D9TAU4	U N G R I L T C F D I S E E Y T G V A R R Y W Q R A G V Q D R I E L R I G P A A E			
UniRef90UPI0003B42B6F	A D G Q V I S L E L K E H A A F A R E N V A K A G L A D R V T I I M V G D A			
UniRef90UPI000347956	P E S R L L T V E R N P H R L A G F D E H T V S P Y L P D L V E L I V G S S E E Q			
UniRef90_D7JE6	D G A H I D T V E I D D E L E D F I V Q N L N L S P F A D R I T L H I G D A L L Q			
UniRef90_C3JCK3	N P S A R V H T I H N D E M E D F I H R S L A L S P F G D R V V V V H I G D A L E			
UniRef90_U5XMH7	P D G R L V T C E I E P G F A E I L R P Y F E R A G V V A D R I E V R I G P A			
UniRef90_H3GMU3	S D G S L V T C D I D G D T M Q F A Q K F F A R S S H A L K I K A V N Q D A L E			
UniRef90_M3ECL3	A D G R L V T L E Y D P R H A E V A V R N I A R A G L A E R V E V R V G P A L E			
UniRef90_C2R6U4	E D G H L V T L E L L E N H H A E V A K A L N I V R A G L S N I V E V R T G P A L E			
UniRef90_G8S3Z4	P G G R L L A C C D V S A E W T R I I A G G Y W E R A G L R D R I E L R L G P A V E			
UniRef90_Q86IC8	D E G R V V V A C D V S T E Y T Q H A L K F W A K A G V D H K I N L K I Q P A S K			
UniRef90_B7IYN7	N S R I V T V E R N R E R Y E K A L E Y I E R S P V T D R I S V I Y G D A L E			
UniRef90_R5J5Z0	G D V E I T T E R N P V M L E K A Y E N I E K A G L K D K I K I L V G D A A A Q			
UniRef90_I4BCG9	E H G R V V V A C E I D S T T A E L A R T A F D H S G V G H R I H V E M G P A L E			
UniRef90_C9LJ13	A D G L I R T Y E L I N D E Q E D F T R P W E G A P Y P P R I E L I I G D V L L D			
UniRef90_A6VYI2	E N G E L I C C E T N P R A I E F A Q S F F D R S E H G K K I K A I F G P A L D			
UniRef90_G4CRD1	E H G K L I T C C D I N V S F T D T A R R F W Q Q A S V A D K I T L H L Q P A L I			
UniRef90_E3G6R4	A S G R L I T L E A D E H H A H V A R Q N I R L A G V E G R V E V I V E G P A L A			
UniRef90_D5P366	Q A K V Y S V E L I E A E A N A A N A R R I W A H A G V V A D R V T C V V G T I I G D G			
UniRef90_R5V3X9	V P C E I V T I E N Y E K R P I A R E N F K R A G K E E Q I T L L E G D A A E			
UniRef90UPI000474EAB8	P G G R L L A C D V S E E W T G T A R R Y W E R A G V V A D R I E L R I A P A A E			
UniRef90_N9QMM6	D D G Y I L T I E G R D T H A A M G Q E N I D R A Q L K Q T V E L K C G R A A D			
UniRef90UPI000365A988	P A G R V V T C E V D A G P P A L G R P L W Q Q A E A E P K I D L R L R P A L E			
UniRef90_M8D8Z1	Q A R I V T M D I D E E R L H R A R A N L I S E A G V V A D R V E V L L K D A T T			
UniRef90UPI000440C72F	E G G E L V T C E L K P E H A Q V A Q A N V E N A G V V A S K V K I I V G P A K E			
UniRef90UPI000225BC9C	R D G K L T S L E L V D D Y A Q L A N Q N L S K A G F E N Q V S Y M V G P A L H			
UniRef90UPI00047A75D4	S S G K L T S L E L E E K Y A K L A E N N L I A K A G F G N Q V T Y L T G P A R K			
UniRef90_Q5YWR2	E Q G R V V V T I E Y Q E R H A R V A G E N I A R A G V V A G R V E I R V G A A M E			
UniRef90_B7KFL0	E D G Q V V A C E V D P Y V A Q F A Q E C F Q Q S P D G H K I T V E V A P A			
UniRef90UPI0002BC855D	D N G K I I A I D L Y R D A Y E M E S P I I K K A N V E H K I I N F I Q S S A S A			
UniRef90UPI00042B6B62	D D G K I T A I D T S W E F F E V G L P F I K K A G M E H K I I N F I E S D A M K			
UniRef90UPI000466FDD4	P D C Q I T T I E K Y E K R P I V A R Q N F E E E A G K T E C I T L L E G D A G E			
UniRef90UPI0003B43FF4	E G G K V I T L E Q D V N A D L S Q R N F D D A G L A D R I E I R R G P A E K			
UniRef90UPI00046804C1	E G G H V D T V E C D D E M E D F I C H F I R L S P Y G R L V T L H L G D A L E			
UniRef90_Q93D14	K D G Y L L M T I I E G R D T H A A L A Q Q N I D H A N L P V N I E L K V G R A A D			
UniRef90_D2QF60	E D G Q L I T I I D Q N E E L E D F A R S Y W R Q S P L D H K I D F R L G K A V D D			
UniRef90_W9ASH4	P D G R V V V S L E E F D P R H A E V A R R N I Q R A A V A D R V E V V V V G A A L L D			
UniRef90_J2KG64	K E G K I T T I D L N E D L A Y L P Q K Y F E E S E Y S S Q I Q F K L Q D A K E			
UniRef90_S4XP05	A G G R L I T L E S E P K H A E V A R A N L I D R A G V V A D R V E L R L G R A L D			
UniRef90_I8ALJ8	Q D G K L I T L E E Y E Q K H A D V A L R N L Q R T N V A S L V E I K V G P A L			
UniRef90_U1FU8A8	K G K R Y Y S L E E R N P E F A A V I T S L V D L A G L S D I V K V H V G P S D Q			
UniRef90_S3IXZ6	A G G K L V T L E E A S E K Y A E L I A R A N I K R A N L S E V V H V R T G M A I D			
UniRef90_C3AKL0	T D G R L I T L E E A S E K Y A E L I A R A N I K R A N L S E V V H V R T G M A I D			
UniRef90UPI00032A50D5	H D G K I T A V D P D R K A Y E L G I P F I K K A G L L H K I D Y I E S P A L P			
UniRef90_I1K3L5	H D G K I T A L D V N R K T Y E I G L P F I Q K A G M E H K I D F I L L G D A L S			
UniRef90UPI0002378C85	P G G R V L T C D V T E R W A N I A R E H W K R A E V A D R V E D F R I A P A Q D			
UniRef90_M0U7T7	H D G E I L I A T D T N R K N F E L G L P F F E K A G V V A H K V D F R E G L A P I			
UniRef90_F4KKW4	V G G E I D S I E C D A E M H F L T P F V A R S G C S E R I H H H G Q A L E			
UniRef90UPI000023E771	K G T N Y Y S L E E R N P E F A A V I T S L L D L S G L L S S M A R V V V G P S D A			
UniRef90_W3AB89	E D G R I V T L E E Y K N A H A K V A R E N T E R A G V V A D R V E V I E G A A L L D			
UniRef90UPI00047BB3BA	H A K V I T T I E R D E E R F A L A E A F I I R N S G K N E Q I S L I K G D A L E			
UniRef90_E6SHY4	P G G R L I S L E E K N P D Y A R V A H A H V A A A G L A D R V E I R V G D A L T			

	130	140	150	160
UniRef90_D4M4J7	V L A E M E G T	F D F I L F M	D A K G Q Y I L	H Y L P N V L R L L S
UniRef90_B9XK41	S L K K L E P G I K F	D F A F F D A D K P G Y D T Y Y E L	V L P R M R	
UniRef90_UPI0003665D97	S L A A L E S E G T A P F D F F I	D A D K A N P N H Y V E W A L K L S R		
UniRef90_W4B0U5	T L P D V Q E E Y R E P F D M I F	D A D K P S N P D Y L R W A L R L T R		
UniRef90_G7JQU1	T S W A S D F A F G P S S I D L F F L	D A D K E N Y P N Y Y P L I L K L L K P G		
UniRef90_I3T4A8	I L D K L E D A A N E G T F D F A Y I	D A D K E N Y V N Y H E R L I K L V K		
UniRef90_UPI000463B3B4	L P G L A A L A P F D L I F I	D A D K P N N P L Y L E W A L K Y S R		
UniRef90_R6SL59	V L K T L L E E P F D F I F	M D A A K G Q Y I L H F L P E I M R L L K		
UniRef90_UPI00038970A6	V I P Q L R A R H G L H N V D F V F	M D H W K R C Y L R D L K L L E E H G L L A		
UniRef90_W7CF06	A M E Q L A S E G A T F D F F I	D A A K N S Y I N Y Y E W A L S M A K		
UniRef90_A0A023GGK4	S L D D L L R E G Q A G T F D F V F	D A D K E N Y D N Y Y E R C L Q L V R K		
UniRef90_U5CZ55	L D E L L L Q D P K E E G S F D F A F V	D A D K P N Y E N Y H E R L L K L V K		
UniRef90_V2TV95	V L K L S L P S D T P A F D F I F I	D A D K G S Y P E Y L E L S L N H A H		
UniRef90_B5HBJ6	T L P R I A A A E P G A G G P F D L V F I	D A D K R N N P R Y V E W A L R L T R		
UniRef90_D3A674	T L D D L L I A Q G E S E S Y D L A L I	D A D K P P T P K Y F E R C L Q L V R K		
UniRef90_G1UH84	V L D K L L I D P E N E S F D F A F V	D A D K E N Y L N Y H E R L L K L V K		
UniRef90_K8A1E4	S L P L Y V D E P P F D V I F I	D A D K P G N P I Y L E W A L S L S R		
UniRef90_J3MU53	I D E L F A D E A N E G R F D F A F V	D A D K G S Y V E Y H E R L L R L V R		
UniRef90_L1NN4T	T L D E L L A A G R A D S Y D I A F I	D A D K A P T P H Y Y E R C L R L V R		
UniRef90_UPI00047765D6	D T L A A L A E E N A G P F D F V F	D A D K E N N A N Y L E L S M A L L T H		
UniRef90_L1L740	S L P R L A D E N P G P F D L V F I	D A D K A N N P H Y V E W A L K L T R		
UniRef90_F5Z2S1	G R T L D D V L T A R H G F D F I F	D H D K D A Y L S D L Q S I L D R G W L H		
UniRef90_U4WQC6	G L S G S Y E F D C L F I	D A A K G Q Y L T F L Q L Y C L T L L K		
UniRef90_H9CJ8	T L Q K F V D G G E A G T F D Y A F I	D A D K T N Y D R Y E L C L T L L R		
UniRef90_UPI000375AD6A	S L E E L L D E G M A G T F D M A F I	D A D K A P T P E Y E V D L C L Q L V R		
UniRef90_A0A010NH63	S A E A L I I Q E Q A E P F D L V F I	D A D K V K T P H Y E A S L E L S H		
UniRef90_B2IC53	T L P Q I A A E N K G P F D L V F I	D A D K Q G T P E Y F R W A L D L S R		
UniRef90_J5K9M3	S L R A L H A S G R L E R I D V L F	D H Y K P A Y L P D L Q L C E Q G F V G		
UniRef90_U4TN87	T I M T L P E N H F D L V F I	D A D K A N Y L K Y Y E A T S K L V		
UniRef90_F6WGU2	V L P T I A A K Y G V R T F D F V F I	D H A K D C L Y E R D L K M L E D L G L M R		
UniRef90_W9CF68	E G I Q I L L H S K G L K S I D M M F L	D H Y K P A Y T T D L K L C E Q L G L I N		
UniRef90_N8QRE0	I M N Q L I I A D G S E P F D L I F I	D A D K Q S I R E Y F E L S L K L S H		
UniRef90_UPI0003C7FCAA	S L E D L K N N K F N M V F I	D A D K M N Y K E Y Y E R S L K L V D		
UniRef90_UPI0004642B1B	G R T L D A L T A K H G F D F I F I	D H D K D A Y L P D L Q A I L D R G W L R		
UniRef90_R7JNY7	V L K T L D G P Y D F I F M D A A K G Q Y I	H F L P E V L R V L D		
UniRef90_Q5WBL8	S L P I L H E Q Q Q S F D F I F I	D A D K P N N P H Y V K W A L K L A S		
UniRef90_D4GJU7	V L P Q L Q G P F D L I F I	D A D K R N N P H Y L R W A T L L A R		
UniRef90_UPI0003FA86D9	S L A A L D S E G A G P F D L I F I	D A D K P N N P N Y L A W A M K L S R		
UniRef90_UPI00016A304C	S L E E R L I I A E R T E P F D L I F I	D A D K E N Y P A Y L P M V E L L A R		
UniRef90_D9TAU4	T L R E L P R E R Y L D F A F I	D A D K V G Y P I Y W D E L V P R M R		
UniRef90_UPI0003B42B6F	T E S L A K L V D K Q E K F D F F I	D A D K P N Y P H Y L E Q A I A L A S		
UniRef90_UPI000347956	V I P N L R S Q H K M S R A D L V L L	G H R P R C Y L R D L Q L L E A H A L L P		
UniRef90_D7JE6	I V P S L G K V F D L V F I	D G N K R H Y R Q Y L D M V L P L L S		
UniRef90_C3JCK3	V M Q E L L T Q H P F D L V Y I	D A N K R D Y S S Y Y Q L L I P A L P		
UniRef90_U5XMH7	L P T L R A M P A G P H D L L A F I	D G H K P E Y L D Y W T E L V P R L R		
UniRef90_H3GMU3	Y L T N V A S S Q E Q Q P F D L I F I	D A N K R K Y R A Y Y D L V L E H Q L L H		
UniRef90_M3ECL3	S L P K L A D E Q P P P F D L V F I	D A D K Q N N A E Y L K W A L K L A R		
UniRef90_C2R6U4	T M S N L Y N E G A E P F D M I F I	D A D K G Q Y K M F Y D M V T P Q L R		
UniRef90_G8S3Z4	T L R A L P A D P V I D F G F I	D A D K I N Y P A Y Y E L V T R L R		
UniRef90_Q86IC8	T L Q E L I D Q G E E N T Y D F V F I	D A D K T G Y D T Y Y E L S L K L I R		
UniRef90_B7IYN7	T G E Q V K E H G T F D V I F I	D A A K G Q Y R R F F D L Y E P L L N		
UniRef90_R5J5Z0	T L K D L D G E F D M I F I	D A A K G Q Y K M F Y D M V T P Q L R		
UniRef90_I4BCG9	T L D A S A R A D A G A A F D F V F	D A D K G G Y R D Y L D L L L D S A L L R		
UniRef90_C9LJ13	L L P K E N E V Y D M A L I	D A N K R D Y C T Y Y D L V L P R L R		
UniRef90_A6VYI2	T I E S L E G E F D F V F I	D A D K R N Y L N Y Y E A V L P L V R		
UniRef90_G4CRD1	T L D E L I N E G R A G T Y D I A F I	D A D K P P T P Q Y Y E R C L T L V R		
UniRef90_E3G6R4	U S S A L G E I A P F D I I F I	D A D K P N N P N Y L Q W A L H Y S H		
UniRef90_D5P366	G R T L D E H G F A A G A L D F V F	D H D K D A Y L D D L H S I M A R G W L R		
UniRef90_R5V3X9	I L P T L T E P F D L I F M D A A K G Q Y I	H F M P D I L R L L K		
UniRef90_UPI000474EAB8	T L R A L P R E E Y L D F A F I	D A D K V G Y P V Y Y E E L L T R L R		
UniRef90_N9QMM6	V L K A L P E D T E A F D F I F I	D A D K Q S I P E Y L E L S N L S H		
UniRef90_UPI000365A988	T L P T L P A A D A P F D L V F I	D A D K P N N S N Y V L A A L R V S R		
UniRef90_UPI00038ECB40	T L D G L L A A G E A G T F D V A V V	D A D K E N C A A Y Y E R C L Q L L R		
UniRef90_M8D8Z1	G L P D S Y H F D C L F I	D A A K G Q Y R A F L D L Y L P L L R		
UniRef90_UPI000440C72F	T L L A N L Q P S P P F D F V F I	D A D K P S L L P Y Y I E A K R L V K		
UniRef90_UPI000225BC9C	S L E E K L V S E N K R F D F F I	D G D K E N Y E N Y L N Y C I Q L A E E R		
UniRef90_UPI00047A75D4	S L E E K L E E N Q R Q F D F F I	D A D K E N Y K H Y L D H C I K L A E E R		
UniRef90_Q5YWR2	T L P A L A Q E R P E P F D L V F I	D A D K E N N P N Y V D W A V R L L G R		
UniRef90_B7KFL0	T L R L K L A R R G E T F D L V F I	D A D K R E Y V D Y Y N L L L E T G L L A		
UniRef90_UPI0002BC855D	L D E L L N D D N R N R E S F D F P F I	D G D K V S Y Q K Y H E R M L E L V K		
UniRef90_UPI00042B6B62	V K E M S S N D K Q K P E F D F V F	D A D K T S Y M K Y H E H I K K L V K		
UniRef90_UPI000466FDD4	L L K G L T G P F D L V F M D A A K G Q Y L A W L P E I L R V M R			
UniRef90_UPI0003B43FF4	S L N I L I N D G V K P F D F I	D A D K P R Y P T Y L D Q I L M L S R		
UniRef90_UPI00046804C1	L L T H E L M S R E R Y D M V Y M D A N K R E Y P A Y Y K A V M E Y L P			
UniRef90_Q93D14	I L S K I D T D T F E P F D F I F I	D A D K Q S I P E Y L D S L K L S H		
UniRef90_D2QF60	I L L P T L T E T F D L V F I	D A D K R N S T Y F D Q I I D K V R		
UniRef90_W9ASH4	U N I K Q T D T E V F D L V F I	D A D K E N N S A Y V E W A V R L A E		
UniRef90_J2KG64	F L K Q T D E V F D L V F I	D A D K E N N S A Y V E W A V R L A E		
UniRef90_S4XP05	T L L P K L A A E G R G P F D I F I	D A D K P S N P D Y F A W A L K L S R		
UniRef90_I8ALJ8	K L L P L L A A K E E Q S F D L I F I	D A D K G N N P H Y L Q W A L T L S Q		
UniRef90_U1FUUA8	S I T A R L H D E G T L T R I D L L F I	D H Y K P A Y T T D L K L C E H L K L I R		
UniRef90_S3IXZ6	T L L A H L G G E A P F D L I F I	D A D K P N N P L Y L E W A L K Y S R		
UniRef90_C3AKL0	S L Q Q M A T E N C E P F D L I F I	D A D K Q N N P A Y F E W A L K L S R		
UniRef90_UPI00032A50D5	V L D K L E D P A N E G T F D F A F V	D A D K N N Y W N Y H E R L I K L I K		
UniRef90_I1K3L5	V L N D L I N D K H E D S F D Y V F	D A D K A E Y I K Y H E L V L K L V K		
UniRef90_UPI0002378C85	T L R A L A P G T A F D I V F I	D A D K E N Y P S Y F R A V E E P L L R		
UniRef90_M0U7T7	L N E L T K E E K Y K G W F D F V F	D A D K S N Y M N Y H E R V V I E M V		
UniRef90_F4KKW4	R M P A L L A Q H Q Y D L V Y I	D A N K R Q Y P D Y Y Q L L R K Q L R		
UniRef90_UPI000023E771	G L A R L H K N G T V K K I D L M F I	D H Y K P A Y T S D L K C E R L G L V G		
UniRef90_W3AB89	T L P T L K S K G W P A F D I F I	D A D K P S Y P E Y F K W A L E L S R		
UniRef90_UPI00047BB3BA	V E G L V A G H A P F D A I F I	D A A K G Q Y K R F F D I Y S K F L S		
UniRef90_E6SHY4	L M P A L V A E P P H P S F D L V F I	D A D K Q H Y P D Y L E W S L R L L R		

	170	180	190	200
UniRef90_D4M4J7	D G G C L V S D N V M Q D G D I E S R F A V E R R N R T I H A R M R E Y L S I I			
UniRef90_B9XK41	S G G L I L F D N M L W G G R H P N G K A D K L N R K L A K D K R V Q S V L L			
UniRef90_UPI0003665D97	P G S V I V V D N V V R G G T R R M F E V I S T H P R L T A T A F Q T V G A			
UniRef90_W4B0U5	P G S L I I G D N I V R D G V R K F I E M L G Q D P R L T V T A L Q T V G S			
UniRef90_G7QUJ1	G L L I I A D N I V L W D G S V A D L S H I R K F N E L V Y N D S L V D V S L V			
UniRef90_I3T4A8	V G G L L I Y D N T L W G G G C V A W P D E M R N F N K T I T K D S R V E F A L T			
UniRef90_UPI000463B3B4	S G T L I I G D N V V R D G V R K F I E M L G Q D P R L T V T A L Q T V G S			
UniRef90_R6SL59	T G G I L L V S D N V L Q D G D I E S H F A V E R R N R T I Y K R M R E Y L S I L			
UniRef90_UPI00038970A6	D R A T V L A D N V V F P G A P H F L Q Y A K T C G K Y R C R V H R A S L E Y C			
UniRef90_W7CF06	P G A M I V A D N T L W K G E V P D P D A M R R F N E Y V S Q D E R V D V I I T			
UniRef90_A0A023GGK4	P G A M I V A D N T L W K G E V P D P D A M R R F N E Y V S Q D E R V D V I I T			
UniRef90_U5CZ55	Q N G L I V I D N V L W R G G T V Y D P E A L R A F N K K L H E D E R I D I C L L			
UniRef90_V2TV95	V G G L I M Y D N T L W G G G V P D F K H I N F N R A L A I D P R V E I S Q I			
UniRef90_B5HBJ6	S G T I I V L D N V I R A G D R Q T F E A L K A H P K L L C T A L Q T V G S			
UniRef90_D3A674	P G S L I I V D N V V R G G G T R E M F E L V A R E P R L D A T A L Q T V G V			
UniRef90_G1UH84	S G G V I A I D N I L L G G D P P S L D I L R H F N Q N L P R D T R I I P I T L			
UniRef90_K8A1E4	L G G V I V Y D N T L W F G T V A L P E D V K E V N K A L T S D P R I Q L A H V			
UniRef90_J3MU53	S G T L I I G D N V V R G G G A R T F I E M L G N H P R L R A T A L Q T V G H			
UniRef90_L1NN4T	A G G V L I A Y D N T L W G G G S V D I R R S V M A F N A M I A A D P R V E A V Q L			
UniRef90_UPI00047765D6	P G G I I A I D N I L L G G D P P A L P V I R A F N A A L P H D T R I E P L T L			
UniRef90_L1L740	P G S L I I V D N V V R R G A R A A L E W L G S D E R V D A T A V Q T V G T			
UniRef90_F5Z2S1	A G S V I V V D N V V R R G G T R A A L E L L G S H P K L T G T A L Q T V G S			
UniRef90_U4WQC6	P G S V V V A D N V K V P G A P R Y R E Y M R A Q Q H W D T V E H K T H V E Y Q			
UniRef90_H9CJK8	E G G L V I T D N V L L Y R G L V T D V E K I D G F G N K H L M G H P Q L E T S I V			
UniRef90_UPI000375AD6A	P G G V I A F D N T L W D G G A V I D P A L R K L N E K L K D D Q R I N I S F L			
UniRef90_A0A010NH63	D G G I I A I D N V L L G G S P P S V A I L L Q Q F N R N M P Q D P R Y M A I T L			
UniRef90_B2IC53	P G T V I V I D N V V R S G A R A L M E L I Q A D E R L S A T A L Q T V G L			
UniRef90_J5K9M3	K G S L I I V D N V V R G G G K V R F H Q W V A A E P R V S A T A L Q T V G S			
UniRef90_U4TN87	R G A V I V A D N V I K P G N P P Y L A Y V R R S S			
UniRef90_F6WGU2	R G G L L V I D N A L W Y G E V L V P R S V H E L N A H L T A D E R V E N V L L			
UniRef90_W9CF68	N G T T I L A D N V I Y P G A P K Y L E Y V R N N T K Y D C T T Y P T K L Q F R			
UniRef90_N8QRE0	K G T V L I A A D N V I S P G N P P Y L E Y V R S S			
UniRef90_UPI0003C7FCAA	S G T I I V L D N V I R A G A R E A F T A L K D H P Q L L C T A L Q T V G S			
UniRef90_UPI0004642B1B	K G G L I I V D N V L W H G E V A D K D N I R E F N S Y V S N D K R V E Q I I I			
UniRef90_R7JN7Y	P G A A V V A D N V K L P G A P R Y R E Y M Q A Q Q R W D T V E H K T H V E Y Q			
UniRef90_Q5WBL8	K N G V L I T D N V L Q D G D V E S R F A V E R R N R T I H K R M R E Y L F E L			
UniRef90_D4GJU7	P G A V L V A D N V I R D G G R T F V E L L E Q E E R E I E T A I Q T V G E			
UniRef90_UPI0003FA86D9	P G T V I V A D N V V R Q G V R E Y F R L I A A D P R L T T T A L Q T V G S			
UniRef90_UPI00016A304C	S G T V I V C D N V I R D G A R A A F S F I G G D K R L L D G T A I Q T V G A			
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 V W K E I I D E Y I E A R L G A N E D E I L K E T L R T S E E A G L P S H N
 W S A V D A W F E Q L A P Q D V A L V D A A R S A R E A D L P D I A
 R W S E V D R Y I I A A K L I P D D P V F S Q T L V I A N Q R A G L P A Q D
 R Y V Y N Q S S A L T D D E L L R K L E T T R T W P K A E Q L
 N E H P L Q T E I R E Y T E K N L G T M Q
 L W T R T D E Y L T R T V A D D A A D F D F I R Q A Q A D G G L P D I A
 Y D Y I I E D Y L R D L K D E K L R E M M D Y A E E N H V P I
 L D P Y L D E H T S P A S H A L G E L E R R T S A E N W D H E M L
 R W N A V D A Y V A D L L A P A D E A L A A A L T A S D E A G L P R I A
 D F V K K E V E E Y A K L Y T S N E P E L L K E L A E T E T N M P M A Q M L
 D F L S P E I I Q Y V A Q H T S P E S A L L Q K L N R E T H L N V L K P R M L
 Q I N N Y M D E V F Y Q Y D A T L E D V L S S I A E N G M P A I S
 E L I N Y I I L A H S E P E G D Y L Y R L Y R A T N I H T I H G R M A
 T Q E S E P L R E Y E K T M S H D W N Q V H E K G E T I F Q L P K E C I T
 F M N S F S Q E L P P L K A I E Q E A L A D Y V P I
 G D G R E E T M A G Y V I A N A P A G D V D A A I D A I D N F A Y D K S I L M N
 G D T K E Q R I L R H V L Q H A V A G D P Q S V L E A I D T Y C L Q K E W A M N
 D G R E T D L L H F V Y S R P I R G N P E L V L K A I D D F G R T K Y L M N
 L W A A V D A Y M S A A L P D S D P A L A V V Q A A N A A A G L P S I D
 E Q Y L Q S L L S E P S R P V K E M E T Y A K E N H V P I M
 E E Y V D R L F A P D A D L S R A E E G I R A A G M P D I S
 D I V N E R V V S F I N S F D K G N S P I C N I I E K E A R E Q G V P I
 G D G R E Q Q L D F V K S H L M E N N P S E A L S A I D E F G H Q E N F L M N
 V E E R I T S F I N S M N A D E T G I V G V I E G E A I R D E V P I I
 D L V L P K I D A Y A A A Y S L P E T P I R R A L R E E T E T M E F A R M L
 A V D D Y F S Q V L L A D D P A K V L I A H C E A H A M P A I Q
 E W I A A E E F I S R V V V H P D A G L Q Q A I D S A A A A G M P P I E
 N D H T W S S V E Q F E T E K L Q P E S K N L E Y V R K N N Q R N G L P E I D
 E Q Y V D Q L V Q E D E T L R S I R E A I V K E G M P E V S
 W N E V D L Y M N D K L I Q P D P I L D E V L K A N Q E A E L P A I D
 W E D V D E Y F D D K L H V P S D E L T E S L E K N E A N G L P A I E
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 A V D G Y I E G L F A K E D D A L A A A V A D M E A A A M P G I S
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 Q Y A E S L L P V P D Q L E Q V R T S I R D Q M H D I S
 D G R E I A L L H F V Y L H P I R G S P E K V L A A D E Y G R T K K Y L M N
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 V H E G Y G R L L T M L V S M S G G K D V L L E I G A L G G Y S G C C L L R G M P
 E L I G V E T L L Q I L R L H Q P K H I L L E I G T A I A Y S S I R M T H A L P
 V A P N A G K L L K M L V Q L S G A R R V L L E I G C F T G Y S A L C L A N G L A
 I D E M H G K F L S F L V Q T T P A R R V L L E I G A L G G G I S G I C L S R E L P
 I A P G F G K L L T M L V K M S G A R D V L L E I G T F T G Y S A L A M A E A M P
 S G A T Q G H L L A T L V H L G R A R N I L L E I G S A I G Y S A I R F A S V Q R
 M T C E Q A Q L L A N L A R L I K A K K A L D L L E I G T F T G Y S A L A L A L P
 D L V G M E S L L Q I L Q L I Q P K R V L L E I G S A I G Y S A I R I A L T F P P
 V G I N K G K I L V D K E I R K K K P T V M A E L G G Y T G Y S A V R F A S V Q R
 V S P P S S G K L L T M L V S I S G A Q N V L L E I G A L G G G Y S G I C L A R G F G
 S G H L Q G R L L K M M V Q L V R P R H I L L E I V G T F S G Y S A L C M A E G L Q
 V S A T Q G K M L A L F I K M A K A S R V L L E I I G T L G G Y S T I W M A R A L P
 I E P G Y G R L L T L L V G I T G A K Q V M E I I G A L G G Y S G M C L V R G L L P
 V S P L Q G K L L S L L A R A I G A R R V L L E I V G T L G G Y S T I W L A R A V V G
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 V H A G Q G K L L H L L A R S I G A K R V L L E I V G T L G G Y S T I W F A R A V V P
 V T P A Q G K Y L L K L L A L S V G A K R I L L E I I G T L G G Y S T I W L A R A L P
 S G H Y Q G R V L S F L S K M A R P G R I L L E I I G T F T G Y A T L C L A E G L L G
 V T P A Q G K Y L L K L L A L S V G A K R I L L E I I G T L G G Y S T I W L A R A L P
 V G S E K G K V V T D L I D E I K P H T M I E L G C Y V G Y S A I L F G D R R N
 V S P A Q G K F L H L I A R S I G A R R A L E F F G T L G G Y S T I W L A R A V V G
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 V G I I E K G K I V Q D L I P K L Q P D L M V E I I G G Y V G Y S T I L L F G L K K T
 S G H I E Q G Q F L K M L V A I S Q S K S R V L E I I G M F T G Y S A L L A I A E A L P
 V G D E K G A L L D A A V I R A N P R L A L E I I G T Y C H G Y G A M R I A R A A P
 S G Q L V G G L L R M L I H T I R P R L V L D I V G T F T G Y S A L L S M A V A L P
 V S A A Q G K M L H V L A K I K G A K R I L L E I V G T L G G Y S S I W L A S A L P
 S G R L V G R T L K L L S A I H Q P K N A L E I I G M F T G Y S A L S S I A E G M P
 T S A D E G Q F L N M L L K L I G A K K T M E I I G V Y T G Y S L L A T A L A L P
 V S V Q Q G K F L N L L A T A T R A T R I L E I I G T L G G Y S T I W L A R A V V G
 I I A P E Q G Q A F M Q L L T R A L R V R T A I V E I I G T F T G F S A L C I A R G L P
 L G D E K G R I L A G L V K E R Q P R S V E I I G T F L G Y S A I W T A S N L P
 S G H L E G Q T L K M F V H M I G A K S I L L E I I G M F T G Y S A L A M A E A L P
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 V S P S Q G K L L Q L L A G A I G A R R V L L E I I G T L G G Y S T I W L A R A V V G
 V A P N A G K L L K L L V Q L S G A R R V L L E I I G T L G G F G S T I W M A Q G L P
 I G Q G G G A A L R F L A A V L G A K T V V V E I I G T G C G V S G I W L L R G M R P
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 I R K D T Q A L L K F L M V Q S K P K N I L L E I I G C A V G F S A L L M A E Y S S
 V H P E V A K L L Q V I G M I K R P S R I L L E I I G T A I G Y S S I L L S E V L Q
 V A P N Q G K F L Q L L A T I R G A R R I L L E V G T L G G Y S T I W L A R A L P
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 V S F L H G R L L Q I L A Q S V S A K R I L L E V G T L G G Y S T I W F A R A L P
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 I S P D Q G Q A F L Q F I I K S S N I Q N C L E I I G T F T G Y S A L T M A L A L P
 V S P N E G K F L Y L L A R G N V R A L E V G T L G G Y S T I W L A K A V G
 V R E S E E F I N F L L A M H K P K R I L L E I I G T A I G Y S S I S F A K R N K
 S G H V V E G R F L R F L V Q A M Q A K R V L L E I I G M F T G Y S A L A M A E A L P
 V A P V Q G G K F L H L L A R V Q G S R T I V L L E I I G T L G G Y S A I W L A R A L P
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 S G H V V Q G R F L S M V S H M I K P K Q I L L E I I G T Y T G Y S A L C L A E G L A
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 G H V E Q G T L K M L I H M S Q A K R V L L E I I G M F T G Y S A L S M A E G L P
 V G D E K G Q Q L L D A A V K R A N P K L A M E L L G A Y C G Y S G I L M A E S A P
 V G D K K G Q Q I L D A V V R E Q R P S V L L E I I L G A Y C G Y S A V R M A R L L E
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UniRef90_UP100042150DA	A D G R L L L T C E Y L A K H A D V A R A N V D A A G L G H L V E I R F G A A L D			
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UniRef90_E0RY87	A D T K I T I E K Y E K R I P I A R Q N F I Q Y D T N N K I T L M E G D A T E			
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UniRef90_UP10002D7324A	P G G K L V T L E L N P N P E H A K I A T R N I A R A G F A E V V S V V V G S A K G			
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UniRef90_A6CS07	D T E I V T I E R D E A R Y Q Q A L N F V G R S P Q K D Q L D I I F G D A L E			
UniRef90_I1CGH4	S S L K L L S C E K N P T H A A V A K K N I E R A G L G E F A E V V R V G A A L D			
UniRef90_F4GZ09	P D G T V A T L E V S P E H A R V A R E T F V R A G V D D Q V E V L V G P A A Q			
UniRef90_W0HXR8	P S G R I V T L E A N A R H A E V A R D N L R R A G V L D Q V E L R T G P A L A			
UniRef90_V9EYR4	F D G S L V T C D I D A A T M Q F A Q T F F D Q S L R A S Q I T A V N Q D			
UniRef90_UP100037F2426	E N G S I S L D I D K K N T D I A K K Y W N K H S V G K K I D F I L A P A L E			
UniRef90_G7H442	A D G L V V S L E S E R E H A D V A A A S L R T A G L A D R I V E V L V G A A L D			
UniRef90_E4KXY3	C E K I H S V E L K E E M V E I A R N I L E V G L E D R I K V H H S D A Y D			
UniRef90_UP10001FFDDA6	E D G E L I A C E I D P H A A A L A R E A L L S R S T A S Q R I T I E V G A A T D			
UniRef90_UP100029A2090	P D G R L I S L E H D P A H A E I A R L N L A R A G L D H V A E V R T G A A L D			
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UniRef90_UP10004286693	P E G Q L H T I V D N E L E E M V R D Y V S Q A G Y A E K I S Y Y L G D A A T			
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130 140 150 160

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UniRef90_UP10004624365	T L Q T L P S D E K F D F A F I	D A D K A S N L T Y F L Q A K R L V R
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UniRef90_C2G1R5	V I K E I S G D F D L I F I	D A D K K R N L Q Y Y E L L V I D R V P
UniRef90_S7RN88	T L A K M D P S E L F D F I F	D A D K P N Y P T Y F K R C R S L M R
UniRef90_C5D4Y8	V Y N D V A K Y A P F D V I F I	D A D K G Q Y Q R F F Q M Y E P L L Q
UniRef90_R5G4K1	I I S E L P L E E Y Q L V Y L	D A D K A Q Y P E Y Y Q L L A S R L P
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UniRef90_UP100044A14E	T L A N M P T P P E S E L F D L A F I	D A D K E N N L N Y F L Q A K R L V R
UniRef90_S3P9U1	V L R E L P A D T A P F D F I F	D A D K Q S Y P E Y I D L C L E H S H
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UniRef90_W6QHG9	S L R K L R Q E Y S T G A V D G F F I	D H A K R E Y V N D L K L C E E L G L I G
UniRef90_B4WR10	T L R E L A T A G E S F D I A F I	D A D K G G Y I D Y V N L L E S S L L T
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UniRef90_L7PIN5	T V A G I D E P L D L V F I	D A D K P N Y H N Y Y A A T L P K L S
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UniRef90_UP10003785D62	T I E K L D E L D F T F I	D A D K R N Y L N Y Y N R V K E M T R
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UniRef90_UP1000467335E	T L P T L T G E P F D L V F I	D A D K E N N V G Y L N W A V Q L S R
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UniRef90_K9WUZ5	T L H K L A A R K E V F D L I F	D A D K P E V Y E V F Q T I L D S N L L A
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UniRef90_Q110E0	T I K K L A D A G E T F D L V F I	D A D K R N N P D Y Y E E A L R L L R
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UniRef90_G4XIL3	T L Q D E L A A E D P F D L V F I	D A D K E N N V G Y L N W A V Q L S R T
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UniRef90_I1CGH4	T L D A L I A Q N E P P F D L F F I	D A D K V N N N Y Y F N R A I K L A R
UniRef90_F4GZ09	T L D R L A A D G I E P F D L V F V	D A D K D Q T L A Q Y L D Q V A G L V R
UniRef90_W0HXR8	S L P T L T G P F D L I F I	D A D K P A N P E Y L A W A I K L S R R
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UniRef90_UP10001FFDDA6	T L A T L V G Q R F D L I F I	D A D K G G Y A E Y L D A V L Q G G L L A
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UniRef90_C7RB04	T L S N L N Q T F D L A F I	D A D K E N Y V E Y Y Q A I P K L K
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90 100 110 120

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UniRef90_B8FVJ4	R A G K I V T L D L N V D R A T R A I E Y F K R G G V A E K I Q V V M G D A R R		
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UniRef90_S5KV00	P L G D G L S I S K R K K T G G
UniRef90_K1PIF8	P I R D G M M I I R R K
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UniRef90_A7VJ02	N I G D G M S L S V R K
UniRef90_Q8ETG6	K D Y D G F V I G I V K
UniRef90_UPI000441488A	K G W D G F I Y A V R L
UniRef90_K2GAW8	P S G D G V A I T T R K
UniRef90_F6EJP2	K G W D G F A I A L V T
UniRef90_B6QHQ1	K G E E L I K A V K E G
UniRef90_G2YMJ1	
UniRef90_UPI000225BD7A	P I G D G V A I S Y K K
UniRef90_A4T3L2	K G W D G F A V A L V R
UniRef90_UPI000379FCA0	Q A G D G L A L T R R
UniRef90_UPI0003C4B6C9	P L G D G L T L A F K
UniRef90_D1A8S0	P V G D G L L C A L K R
UniRef90_E5WIW0	P V G D G V A I S K K R
UniRef90_A8KEV3	N L G D G T H I A F K K
UniRef90_UPI00047C71E3	P L G D G V A I S Y K R
UniRef90_E8TOY5	P V G D G L A I S K K R G
UniRef90_A0A023X3Z6	P L V D G L A L A R V
UniRef90_D2B0Q0	P L G D G I L A A I K L
UniRef90_F4IAT4	S I G D G V T L C R R L
UniRef90_E0LSI0	K G W D G F V I A I V K
UniRef90_F9YQJ1	P I R D G L T V S R V
UniRef90_UPI000255D01A	K G W D G F S L A V V R E P A S
UniRef90_UPI00035DA11E	A L G D G L L I A Q K R
UniRef90_UPI000344DED1	P V R D G L T L I R R
UniRef90_X5HKF4	Q T E N G M T I A L K K
UniRef90_H5Y013	P F G D G V S I S R R I G
UniRef90_R2QQ22	K G Y D G F T I S I V
UniRef90_UPI0003B61730	N I A D G V T L S V K K
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UniRef90_UPI0003FAEDFC	P I G D G L M V S V K K
UniRef90_M5DQU1	P T R D G V I V A R K R
UniRef90_L0EEH7	P G Y D G L A V A F V K
UniRef90_UPI0003652FD5	K G Y D G F A L I R V
UniRef90_UPI0003AD617A	P V G D G L L C A V K R
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UniRef90_J7J527	P F G D G V S V S R R
UniRef90_UPI0003181FEC	P L R D G V T L I R R
UniRef90_UPI000455CF27	K S F D G F L Y A I R L
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UniRef90_Q2GDG8	P T A N G L T V A I K R
UniRef90_M3AKR3	
UniRef90_G0MTE5	N L G D G T H V A F K K
UniRef90_UPI00047ED1EE	T V G D G V A L S V K K
UniRef90_UPI0002D4E7F9	K G Y D G F L T A M V K
UniRef90_UPI00045EC5DF	P T R D G V I V A R K L
UniRef90_I0AM64	P V G D G I G I G V K
UniRef90_A9P099	P C K M T V S T Y
UniRef90_K9VJL0	P L R D G L T L I R R
UniRef90_I1K629	S I G D G F T I C R R
UniRef90_H3E8N2	N V G D G V H L I V K K
UniRef90_UPI00041600D7	P L G D G L A L S W K K
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UniRef90_I0ZA19	P F R D G V S I I T R R R D A S A E
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UniRef90_A0A014N5B0	P L W D G L S M I R
UniRef90_F2CQV9	P I A D G V T L C R R
UniRef90_I6WDW8	K G W D G F A I T L V K
UniRef90_H3NIR8	P L G D G V L M I R K E S D C P D
UniRef90_E0NNK3	P I G D G A L L I R R K
UniRef90_W9A8G7	P I G D G V A I S V R K
UniRef90_V9GIC5	K G Y D G F Y I G V V
UniRef90_R0PEP6	P V G D G L A I S K K K
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UniRef90_C2CFM6	E Y I T S F I D D L L E D M D F L E L R K F A E E N S V P P I M			
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UniRef90_X2GUQ8	D A Y I Q S F I Q P R N D L L L E M E A Y A E E N H V P I M			
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UniRef90_UPI000367E7CD	D P V D A Y I T S L I R G R M P L F E E M E T Y A H E Q H I P I M			
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UniRef90_UPI00032A904E	T K K H P L W I M A			
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UniRef90_D2VAL7	V W K Q V D D Y F D M L C P V D P L L K H A V E E S E K H G L P P H Q			
UniRef90_F8IDT7	E R Y I F E A I L P P D P V R D A I R H A L L Q R G W P M C			
UniRef90_W0EFJ7				
UniRef90_L0ACU7	D V L S D E I E Q F V R T V G P D P D E T L S E M D E Y A R E H G F P H			
UniRef90_I3TP71	R W Q A V D L W F A D H L L P V D P A G E A A L A A N A A A G L P P H D			
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UniRef90_V4UF31	M L M M			
UniRef90_M2XR13				
UniRef90_D9TQ83	E N K V I S Y I N T L T P Q R N E L V S N M E K L A E V E N V P P I M			
UniRef90_UPI0001E89990	L D P D L H G Y I L S H G G G P D E A Q Q A L I A A T Q A L G S V A M Q			
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UniRef90_Q9KDE1	D E R L S V F I D A L Q W N L P G E E A L E L E Q A L E D Q V P I			
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UniRef90_Q5PXL8				
UniRef90_E1FHP3	S E E L Y Q Y V V A T T S S L D K H A L R S A I D R D W S Q D L T A K M			
UniRef90_B3CMD0	E E R L K H Y L E K Q I P A R D Q Y I E Q M E R E A H E Q Q V P I M			
UniRef90_V6QC20	D E R L S V F I D A L Q W N L P G E E A L E L E Q A L E D Q V P I			
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UniRef90_Q39RD1	V Y G Y C V N K S V K M D P Q K I I R K R T L N L P D G G M I			
UniRef90_UPI00046A1C85	G L L Q S D E L Y N Y L M T S V Y P R E A E I L K G L R D A I A N H P Q S Y F A			
UniRef90_UPI0004431152	V V D D Q A V L I D F M R T K V A V L D G P L G E L E A Q A H E K G I P V			
UniRef90_UPI0002FA3C4C	S E D D P L W Q Y L L S R S M R E H P A L R S L R K L T L E Q P Q G D S M			
UniRef90_H2X7G0	E I E K Y I L E Q M I P K R S A L F Q Q M E E E A K E H Q V P I M			
UniRef90_UPI000428D02A	D P V I A Y T S E H T T V Q S P L Q V E L Q K E T L L S K A P F A G A L			
UniRef90_K0J3Q7	D Y L A R S S T T P V P A L R S L A A R T A A L G E A A G M A			
UniRef90_E8NAU2	D E Q V R E Y Y L D T L K Q P P T S W Q V E E M I D E A L K D R I P I M			
UniRef90_D0LTQ3	D D V D T F L T D T L V G D D P V L D A V L Q T Q H D A G L P S I E			
UniRef90_R9P674	D E S I R T Y L N E L H A P H D D G L Q R A F D A P A S S D M P A I M			
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UniRef90_E3R0J0	G P W E P V D N F T V S H L K P S L S E G L A H A L K T S Q E Q G L P D I A			
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UniRef90_9FJ68	D E G L Y D F I L N M N K L E P A K L M L R E K T Q Q L F P E D A V M L			
UniRef90_UPI0002F022C8	D Q F I I E S F I H P R N E L L Q K M E Q Y A Q N H H V P I M			
UniRef90_E1RCG3	D R V A H Y I E A L Y A E K K G L N K K E Y I D Q T A L K A F I P V			
UniRef90_FOGZG4	I I D Y L I N S I Y I D E D F V E L L R N F G I E N N I P I M			
UniRef90_F6FPU5	W A Y A E S F V P E D E V L L R A R E R A A E L G C P A			
UniRef90_K9ARQ5	S E K D L N Y L V N L H Q V L K E N D I I E Q L R E Y A E A H Q V P I			
UniRef90_A0A023GE68	M H			
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UniRef90_Q5HNT6	I E E L R V Y A E E N Q V P I			
UniRef90_UPI0003DEAE0D	G R S T M S			
UniRef90_UPI00036E21C5	E Y L L R E M E E Y A V V H H V P I I			
UniRef90_UPI0003B5D237	G P P P W F E E M I E E A E R D R I P V M			
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UniRef90_K4C018	W A A S D A Y H T R F L L G G P D P A L D F A L S N S A K N D L P D I A			
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UniRef90_Q2UFT3	D D I N E F I I K N T R L D L S N D L M D L E V Y A L E N N V P I			
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UniRef90_UPI00047C5F89	UniRef90_A9WFT5	E V L A N L E A R A R Q Q G L S L		
UniRef90_R7F794	UniRef90_R7F794	E I E L K I I K E K A L E D H I P I		

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UniRef90_C2CFM6	K V E T K E F L K S L V K M K N P S S I I L E I G T A I G Y S S L V F E K Y S			
UniRef90_D4J9K9	I R Q E T G S L L K V L L K M N K P Q R I I L E I G T A V A Y S A I L M S E C L E			
UniRef90_B1HXG0	V S P T Q G R F L Y L L T K L K G A V N V L L E I G T L G G Y S S I C L A Q A L S			
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UniRef90_Q8NKC1	I G K L K G K I I S E K I Q Q V K P K V M I E L L G G Y V G Y S A I L F K Q L T D			
UniRef90_M5PDX5	E P T G I E A L L Q L L S L K N P K K I L L E I G T A I G Y S A I R M A L K L P			
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UniRef90_H2X7G0	G A P E V L V T F G Q N F I R A F G G K K R A L D I G T F T G A S A L T W A L A V P			
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UniRef90_E8NAU2	E R D G I D F L K Q M L R L K P D R I V L L E I G S A I G Y S A L Q M I D A V P			
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	90	100	110	120
D D G R I	V A I	D V S R E Y F D L G L P V I K K A G V A H K V	D F R E G P A G P	
E G G S I	T T I	E K Y P P R I E A A K K N F I R T G T T D R I T	T L L E G D A A D	
T G G H	V T T	D M N K D R R A R A V I Y F E R A G L Q N C I	T L A L E G D A R K	
Q A K I	T T I	E L S E E M A N I A R D N F E K Y N A N	I N L I N	
P G A T I	T T I	E K Y E K R P I A R E N I I R R A G K E D C I	T L I E G D A L E	
K E G G K	V V T	D M N R D R L S R A E G Y F E R A G L L Q S I	T P L K G D A R K	
C G G H	V T T	D M N R D R L S R A E G Y F E R A G L L Q S I	T P L K G D A R K	
N G K V	V V L	I D Y Q E R N I E R A R Y F F E K G G L T D K A E	E F R V G D A V E	
E D S F V	K T T	V E R D E I R Y T E A K N N I K K Y G Y D D N I	I N L I M D D A G E	
S N G R L I	S L S	V E S N V E Y A D L A R R N I A A A G L S D V V S V I V	G T A V R	
A D G V L T	T T V	D I E A E H Q R L A K E T F S D A G I S A N R A R T I	A G A G L	
P D G K V V T	L L E	Y E C H V D I G R P F W K K A P R G R S E H P N F F P K L		
S T G K C F T I	E L L N A D H A R F A K E N I S R A N L D E Q V T	V I V D D A S E		
P S A H Y Y S L	E V N P	K F A K I A S K I I D L A G L S N K V T I I V	G K A T D	
E A E I F T I	E R D E N R Y H E A L Q N I Q S F Q L E N R I H	H V F F G D A L		
A D G V L T	T T I	D I S M E H Q R A A R A A Y Q R A G Y P P Q R T R I I S G S A L		
D G A R I	V L T	E Y A E K N L A Y A R G I F T E E G L A E K A E F R T G N A L E		
N V Q I	V T I	E R D E E R V A R A K A Y I A R S T V S N R I T V I E G D A L E		
D D G C Y V I A C E	V D E Y V S R F A L D C F A A S P H G K K I	Q V K V A P A L E		
G G E Q Y L S L	E M N P E F G A V I D S L V D L A G L R D I V K V E V G K S S A			
D A E I L T	V E R E E A R F T K A Y D Y L A Q T P L S A Q I R L L T G D A L	D		
S D G V L H T C	D V E P Y L V E F T K P Y F D Q S P H G K K I K V H I A P A L E			
D D G K I I A L	D K N E E T N K V A I D F F K K A S Q D H K I K T L I K P A L E			
S D G K I I A L L	D V S S E Y Y E L G L P I E K A E V A H K I D F R E G H A L P			
D D G K V V A	D L S R E S Y D E P R V P L P P S V L A P L C C M Q Q R D D R E			
E A I V D T I E	R D E D R Y S Q A Q Q F V A K A D L Q E R I Q L H L G D A T T			
P K A R L L S L	E L L D P K H I E V A E T F V K Q A Q L Q D K I L F K Q G P A L	D		
E S G R V T A C	C D V S D T F T R I A R R H W E D A G V A G R I E L V I Q P A L			
R N G K V V I S	F E N P K H A T V A R E N V K F A N L Q E I I R E G K A A E			
P G A R L I T L	E S R A E H A D L A R H H D A A R L G D R V D I A L G D A A E			
R K G Q I T T I	D L N V D R A R R A I E Y F K R A G I E E H V E V L F G D A R K			
E D G E I V L T E V D E D E L E M A R G Y M A Q G G Y D D L A W Y E L G D A L E				
P A G G R V T V L E F N P H H A D V A R A N T A A G V M D R I D L R V G P A H D				
S D G Q I I S M D I S H E S L D I I G K E I F E K I P D I A R K I D F R S A L E				
P E G G K L I S L E L D P F H A Q V A K S N V T L A G L E D R V E I R V G D A L				
E D G Q I T A I D V N R E T Y E I G L P I K K a g v d h k i n f i e s e a l s				
E G T E S I L Y C L E C N Y A R T A Q R E W T N A G L Q D R I S L V L E D A T E				
K N A K V L T I E K D I D M A E M A K I N F I K A S L I D R V E L V K G D A L E				
E A T I V S I E R D E R R Y E E A H K H V K A L Q L E S R I E I I I L G D A A A				
E N A K I I S L E E L D E R E K A Q A Q D F I N Q S A Y K E Q I C L L E G D A A E				
E E Q T S T T L E L K V P A R I R T A K A N F V R Y G K E D R I T L R L G P A A A				
E D G K I L A M D I N R E N Y E L G L P V I E K A G L A H K I D F R E G P A L P				
N G S E V L T I D I Y P G N Y E I S R D L I N R P D I Y S K I K R H L G P A V Q				
K D G H I Y T I I E N N P Q H S R I A K K N F S A F N L S D S K I T L I E G D A D L				
K D G H V T T I D R Y D V M K L K A R E N Y E K L G L T E R V T T L L E G D A A A D				
Q D G K I T A D V D R E A Y E I G L P F I K K a n v e h k i D F V E S Q A P I				
D T G K V V M T D Y S P T N I A Y A R E M F Q E S G L S D R V E F R V G D A L N				
A S G H V T T D R Y E L M Y E R A A A N F E R L G L T D K V T Q K N G D A A D				
A T G Q V V A C	C E R D A A P T E L G R R F W R E A G E E Q K I D L R L R P A L L Q			
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D D G E V F T F D I D H T N Y R K F G V P V I S K C T F K K I K L V E G P A V E				
E G G Q V T T C D V S D R W V G L A R E H W R L A G V A D R V L F R R S S G A R				
S A R V I T I E R D Q A R A K R A K Y Y F N R Y N Q D Q T V E L I E G D A F D				
E D G R V V T I I A E P A N A E I A R A N L E R A G V A A R V E V R E G R G A D				
A G G H L W T V E Y D A E H A R I A R E N I A A A G C A A S D V L V G A A L D				
E G G K V V T A L E I D D P Y L D T F T R P L F S Q T G L S D K I D V K V G N A V H				
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H L V T T V E V N E H A A V A R D N L K F A G V E D R V E V I V G N G M D				
P D G K V V G L E L S P E Y A S Q S R K I A A D S G I Q N V E V V E G D A A E L				
E N S K I I T I E K N P D K I K R A Y E N F Q K A E V T D I V T I K E G T A I N				
E G G M I H T I D I T D K Y S Q L A K E H W K F A G L Q D K I T L H V I N D G L S				
Y C R I V T I E R D E Q R V Q L A K Q F I E E S H V G N R I T V I E G D A L E				
W D G R I T S I E Y D E R V A A Q A Q E N F R R E G V D D V I E L V I D D A R K				
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S G I H V T T V E R N P D M D Q R A K E N I Q H Y R Y E D N I T L V E G D A S E				
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130 140 150 160

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UniRef90_W9DUY8	S L D E I K K E K F D L V F I D A D K M N Y I E Y Y E R S L K L L V K R		
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UniRef90_Q2L3T7	F M A W P L Q D G N L G K F D F A V F I D A D K A N F H Y H E R L L R L V R		
UniRef90_UP10004682E69	Y A S H L Q D R E Y D V I F I D A A K G Q Y K L F F E Q Y T S S L L K S R		
UniRef90_S2K9M7	S L N Y G Q E N P A N I Q Y D I F I D A D K A G Y I Q Y F N S I M E H D L L S R		
UniRef90_UP1000365CDB8	T L N A L L A D G A G S F D C V L I D A D K P S Y P A Y Y E R A L Q L V R K		
UniRef90_D2VAL7	L M Q G M I D M N N E G P F D L I F I D A D K P S N P I Y L E L S L Q L S K S		
UniRef90_F8IDT7	T L A R L R A D G H R F D L A F V I D A D K A N F H Y H E R L L R L V R		
UniRef90_W0EFJ7	I I P T L E G D F D F V F V I D A A K G E Y L D Y L N L V L P R I A P		
UniRef90_L0ACU7	T I G R Y D G P F D V V L I D H Q K H R Y V E A F E A I R E K V P		
UniRef90_I3TP71	H L P D L A E D G S E P P D L I F I D A D K P S N P V Y L D W S M M L V R		
UniRef90_A8PJ17	T L D V L I A S G Q S G K W D F A F I D A D K E N Y P N Y Y E R C V Q L L R		
UniRef90_W4AVD9	V Q L E Q L A K E K A E P F D L I F I D A D K P N N P N Y M K W A L Q F S R		
UniRef90_V4UF31	V L D Q L L K D S E N E S F D Y A F V I D A D K D N Y C N Y H E R L M K L L K		
UniRef90_M2XR13	I S S Q K L I V E K E G W F D F I F I D A D E K E K Y D E Y Y E T A L A L L N N		
UniRef90_D9TQ83	V L P C L S N K Y D L I F I D A S K G H Y K E F F D E S L R V L N N N N		
UniRef90_UP10001E89990	V L D Q V E K E A P F D F I F V I D A A K G Q Q Y E R F F T M Y E T L L N N		
UniRef90_UP100047099D4	S L A T P Q E P M F D L G F I F I D A D K E N G R L Y Y E E V L A R L R K T		
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UniRef90_A0A059CUV2	L T K L L E N Q E N E S S F D F A F V I N A D R A N L K N Y H E R L L R L V R		
UniRef90_Q39RD1	I T K L L E N Q E N E S S F D F A F V I D A D K E N Y H R E A M E A M I P H R A		
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UniRef90_H2X7G0	V L R E L A Q G P P V D L V F V I D A D K M N Y P A Y C R A A V P L L R		
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UniRef90_R9P674	H L Q A M S Q N I D Q E A Y D I F I D A D K P G Y T T Y F K T I L E K G L L K		
UniRef90_Q7NGS2	S L D K L A H F A P F D A V F I D A D K S G Y A R Y R W A F E H R R A		
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170 180 190 200

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

50 60 70 80

UniRef90_D6XWW3	E R D S I S V M L H Y M R V L Q P K N V L E I	G T A I G Y S G S R I L K A V	
UniRef90_UP100016C0494	I K P E V A S L I T V L L A M Q K P E N V L E I	G T N V G Y S A I H M A K S C A	
UniRef90_W4LZ63	G P W E A Q L L A L L A R S V R A Q R I L E L	G T A T G Y S A I W L A S A V A	
UniRef90_UP100035A1848	V G N E K G K I L D K T V E E V N P S V A L E I	G T Y C G Y S A V R I S R L L K	
UniRef90_K2DYI2	I P R E S G N H L N L I I K A T G Y K S I L L E I	G T S N G Y S T I W F A E A V R	
UniRef90_J7MAI7	I Q P E V V A Y F R F I L Q S I Q P K H I V L E I	G T A I G F S A L L M A E N A P	
UniRef90_R4M1Y2	Q G K F L C L L A G A I Q A R R V L E I	G T L G G F S T I W L A R G A G	
UniRef90_G5K5Z7	I Q H E V V A Y F R F L L Q S L Q P K K I L L E I	G T A I G F S A L L M A E N A P	
UniRef90_Q2NB61	V S P A Q G R F L Q M V C E I M G A R R A L E I	G T L G G F S T I F L A R G V G	
UniRef90_J9XVA1	T S A D E G Q F L S M L L N S S C Q N T M E I	G V F T G Y S L L A T A M A L P	
UniRef90_W9XKD1	S Y P A Q G K L L S I Q V Q I T R A K N I L L E I	G T L G G Y S A I W L A S G A G	
UniRef90_UP10003B488D8	V S N A A G A T L R L L A T V S A R H V V E V	G T G A G G S S G L W L L Q G M P	
UniRef90_R5I0L4	S D G V Q G G F L Q A F S S M M V R P R A V L E I	G T F T G Y A T L C L A R G L Q	
UniRef90_C5KNL6	G G M D E A Q F F K L M L R A T G A K K V L L E I	G V F R G A T T A Y L A Q G V Q G	
UniRef90_G8RIY8	V S A Q H G K L L Y L L A T A M G A A R V L L E I	G T L A G Y S T I S L A R A V G	
UniRef90_U1FRK8	V D K L S L D M I K Q L I R V H C P K H I L L E I	G T A I G Y S A M Q F A S V N	
UniRef90_W6JVS4	V G T G G G A L R M L A A A S A A K A V I E E	G T G A G T S G L W L L E G M P	
UniRef90_R6DF13	I R R S M Q S L L G F I L L R T R K P D A V L E I	G T A V G F S A M L M R E N L K	
UniRef90_E1G1F1	G A P E V L Q M G K N M I R L I K A K R A L D I	G T F T G A S A L A W A L A L P	
UniRef90_Q15BQ9	T D P I E A Q T I K M F T F M K N A Q R V L L E I	G M F T G Y G A A A I V E A L P	
UniRef90_UP10003780E2C	V S A P L G A M L H L L A L G S S R I L L E I	G M F T G Y S T I C L A R A L L P	
UniRef90_M7U285	V G R K R G E E L A H I I R K V K P Q R I L L E I	G T L G G Y S T I M M G K E L L G	
UniRef90_W8QY99	E K V S I E L L L Q L L S L K K P K K I L L E I	G T A I G Y S A I R M A E A L P	
UniRef90_E6RB88	V S P Q Q G Q L T I I A L S I R A E R I L L E I	G T L A G Y S T A C L A R A L P	
UniRef90_A0A033V2X3	D K I S T E F V K Q L I R I K D D V K S I L L E I	G T A I G Y S A M H F A S C D P	
UniRef90_I2G5D5	A G A Y Q G N F V G L L T K L S H A K K A L E I	G M F T G T T V C I A Q Q L P	
UniRef90_B4UE35	V G A M D G H E V L V A R A C G W R S A V E E I	G T L G G Y S G V C L L R G M G	
UniRef90_E4KQV3	I P H E S A K F I D F L C A S L Q P Q T I L E I	G T A I G F S A S L M A Q H L D	
UniRef90_S9PR61	I G Q A K G Q Q I I V D K I R E K K P K I M V E L	G G Y L G Y S A I L F G K E L L L	
UniRef90_UP100035A1712	T G N L E G Q F L K S I V S I Q K A K R V L D I	G M F T G Y S A L S M A E A L P	
UniRef90_A1YIE6	M I L L K I I N A T A N T N T L L E I	G V F T G Y S L L T T A L A L P	
UniRef90_J9HXM7	V R P M L G Q L L T V L S K G C H R A L L E I	G T Y A G Y S G I C I A R G L A	
UniRef90_I0RZF5	V G P E K G A L L D A A V R R A D P K L A L L E I	G T Y C G Y G A L R I A R A A P	
UniRef90_Q4L6W1	V D R L S L E M I K Q L I R I H R A K N I L L E I	G T A I G Y S S M Q F A S V S N	
UniRef90_UP10003B52BE8	R R S A V G L L S F F V R M T G A V V N I L L E I	G T G T G F S A L T M W E A S G	
UniRef90_J9GX38	V D K L T L E M I K Q I R I H K P N I L L E I	G T A I G Y S A M Q F A S I I S P	
UniRef90_K9Y8X5	S G H I E G Q T L K M F V H M T G A K R I L L E I	G M F T G Y S A I A M A E A L L P	
UniRef90_UP1000462EF70	V D D N A A K L L E C L T L L A R P Q V V I E I	G A L F G Y S T I H L A R G L R	
UniRef90_A0A059MT36	I P A A V G A A L A M F T R M L D A R T V V E E I	G T G A G G V S G L W L L R G L R	
UniRef90_T0N8F6	V Q A P E G K L M S I L V R S I N A K R A L L E I	G V L G G Y S G L W I L S G M K	
UniRef90_UP10002EBBB0E	V D R L T L D M I K Q I R I H K P N I L L E I	G T A I G Y S S M Q F A S V S	
UniRef90_M1WF68	I S L L E S R M L L W L A R L I G A K R V L L E I	G A F V G F S V A A W A E A V G	
UniRef90_X6M5Z7	T D L A E L Y F F R W L M P T L N V K K A L L E I	G V F T G S S S L A I A K G L P	
UniRef90_R6XZZ6	Q Y D S L I Y L L T I I R L K V K V T R I L L E I	I G T A I A Y S S L Q M A N M S	
UniRef90_N0E248	V G T G A G A L L L R V L I A S V G A R H V M E I	G S G A G T S G I W L L G G M P	
UniRef90_F9CXD7	I T R D A G I F Y N I L L K T H K P K K I L L E I	G T S F G Y S T L W F N A I I G	
UniRef90_A9KKS1	I R K E A Q A V L K F F L D M K Q P K Q I L L E I	I G T A V G F S C S L L S E Y M P	
UniRef90_UP100037796A0	I Q H E V V A Y F R L L M Q S L A P K H I L L E I	I G T A I G F S A L L M A E F A P	
UniRef90_G9WJX0	I R D E T A A L L R V C L E M K P K S I L L E I	I G T A V G F S G L L M L D S L K	
UniRef90_U7PK47	I S T Y Q A Q A L S F L A Q L A G A R R V L L E I	I G V F R G F S S M V W S H A V G	
UniRef90_H6BM19	S Y P A Q G K L L S I Q I Q I A G A K N I L L E I	I G T L G G Y A S I W M A S G A G	
UniRef90_K0KJB9	I G A H K G K L L T D H I K E T E P E V I V E F	I G T H T G Y S S I L M A K Q L D	
UniRef90_F7PIC9	V G P A V G G W L E V L A R M V D A E S V F E	G F G S G Y Y S A Y W F A R G L A	
UniRef90_UP100025C063	Q P S S M A F L Q Q L I R W T G A R R I L L E I	G T A I G Y S S I I R M A L A A G	
UniRef90_F9N3U3	R E S E V E L F E D L I S S L Y K P K R V I L L E I	G V G T A I G Y S S L L L L A K H M D	
UniRef90_H8XA70	I G R Q K G E L I T T E I R E K K P K V M I L L E I	G L G Y L G Y S A V L F E L I Q D	
UniRef90_M8DH3	V A P N Q G K L L Y L L A K L A G A N N I L L E I	G L T L G G Y S S I W L G R A L P	
UniRef90_R7THC1	S D D A V I T Q L I Q M L A K N M Q A K H I L L E I	G I V Y T G Y G A L S L A S L L	
UniRef90_D4W1U7	Q D Q G L E L M L Q L L R V K Q P K T I L L E I	I G S A I G Y S S L M M A R H L P	
UniRef90_G3B580	I G P V K G K R I I E E I Q K T K P S V M I E M	M G G Y C G Y S A I L F N E L K K	
UniRef90_D6U4N1	V S P L Q G K L L Q V L A L T C G A R R I L L E I	I G S M A G Y S G I W L A R A L P	
UniRef90_M7E3R5	I Q P E V V A Y F R F L M Q T L A P K S I L L E I	I G T A I G F S A L L M A H Y A P	
UniRef90_R7C8S0	I R S G T R D M L R F L L R E R K P K E V L L E I	I G T A V G F S C M R E Y L P	
UniRef90_S9RAS2	V G E H K G Q A T I N E I R K K K P Q I M V E L L E I	I G C Y L G Y S A V L F G K E L L	
UniRef90_R6YHB4	I R A T R D V L R Y R L K T K P A R V L E V G T A I G Y S A L F M R H C L P		
UniRef90_Q5PSV1	T A P D A G Q L L M E M L L N L V N A R K T I L L E I	V G V F T G Y S S L L T A L T L P	
UniRef90_A0A015KJQ8	A T P I Q G S L L T F L L S K A M N A K K I L L E I	I G C F T G Y S A I C F A E G I K	
UniRef90_R6H5N3	I E R D S I K F I Q K Y I K L N N V K K I I L L E I	I G T A I G Y S A I L M A S V D D	
UniRef90_K6VSC6	V L P G T G A I R L L A A A C H R A I V E I	G T L G A Y S S I W I L E G M P	
UniRef90_M1W886	I G P E K G A I V T K L I A T H K P K V M V E L L E I	G S G A G V S G L W I L E G M P	
UniRef90_A5UWJ2	V G P V E G Q Q F L Y M L A K M H G A R E A L E I	G G Y V G V Y S A I L F A D A V R	
UniRef90_R9AJF6	V S A I Q Q G K F L M I Q A K M M R A K R V L L E I	I G V A T G Y A A I W L L R A I A P	
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UniRef90_UP10003B55930	P E N G Q F L S I L I I R S I R A Q N V L L E I	G T S N G Y S A I W I A A A K E P	
UniRef90_A0A023VNYY7	I Q H E V V S Y F R V L L Q S L Q P K R I L L E I	G T A I G F S A L L M A E N A P	
UniRef90_B9WJY7	I G P Y K G K H I V A K I K E K A P K T M I L L E I	G G Y L G Y S A V L F A S E I A	
UniRef90_D2UZT7	S S P E Q M A L L Q L L K L T G A K K I L L E I	I G C F T G Y S A L S F A L T E A	
UniRef90_R5VJK9	I R R A T R D I L G Y M L R T K K P E N V L L E I	I G T A I G Y S A I R L A E A L P	
UniRef90_W7ZN12	D E L S L N T M I S I L I Q A Q Q P K R I L L E I	I G T A I G Y S A I R L A E A L P	
UniRef90_A8U6S2	I P H E T V V F L N V L L N Q I K P K Q I L L E I	I G A A I G F S S S S L M A Q H V G	
UniRef90_R5Z991	I M D D T L V E L V I A K I L L T E K K P K R I L L E I	I G T A V G Y S A M C F S K Y L A G	
UniRef90_S0KQJ5	I P H E T V V F L Q F I L L G Q I K P K E I L L E I	I G A A I G F S S S S L M A Q F V G	
UniRef90_F7NI84	A A A S E Q V L L E V I L V L A Q K P A R I L L E I	I G T A I G Y S A I L M A A H H M P	
UniRef90_K4KZC2	V T P A V G H F L E L M V K M T D A K R I L L E I	V T P A V G H F L E L M V K M T D A K R I L L E I	
UniRef90_Q011C5	K L G A E K S A L Y V L D T I E D L R C V V E I	G T F L G Y S A I L A T M R F R D	
UniRef90_L9DX2	V G P E V G A F L P F L A R V T D A D R I F E	G F G S G Y G Y S A Y W M A E A L P	
UniRef90_S7VDA5	S G H L Q G K F L L E I L V K M S G A Q N I L L E I	G T Y T G Y S A I F L A R G L P P	
UniRef90_T1G7A0	I P H E T V V F L Q F I L L G Q I K P K N I L L E I	G F S S S V M A Q Y V G	
UniRef90_R3U419	Q K D G I K F L T N Y V Q E Q G V K S I L L E I	I C M A L V D P	
UniRef90_R6SK94	I S N L Q A Q F Q T F F T R T I G S K R V L L E I	G A F V G Y S A M V W V A N A V G	
UniRef90_J4UPQ3	I P H E T V V F M Q F L L G Q L K P V N I L L E I	G C A I G F S S S L M A Q F V G	
UniRef90_S1NIJ8			

	90	100	110	120
UniRef90_D6XWW3	E A A S L V T V E R D E E R A R K A E D T F	L T F G L D D R V L Y K E D A L H		
UniRef90_UP100016C0494	A K I K T I E R N E K V A A I A I N N K K E G L Q D R I F V I E G D A L D			
UniRef90_W4LZ63	W D G H V T T V D Q D P G R V R E A Q R N I D V A G L S N R I R I V Q S T A L P			
UniRef90_UP100035A1848	A G A C L L T V E F N P E F A A I A K Q M E F A G V Q D K V K L L E G P S E E			
UniRef90_K2DYI2	A N G Y I I S I E Y Y Q E R I D I A Q K N F E E C G L S D F I T L K Q G K A L D			
UniRef90_J7MAI7	D A T I V T I D R N R E M D F A K A N F A K Y D S R Q Q I R L L E G D A A D			
UniRef90_R4M1Y2	P Q G R V V T L E Y Q P K H A E V A R V N Q R A G V V A D R V E V V V G P A L D			
UniRef90_G5K5Z7	D A Q V I T I D R N P E M G F A K D N F A K Y D S R H Q I T L L E G D A V D			
UniRef90_Q2NB61	E T G R V V T L E A K K T Y A S V A R K N F D E S G I G D R I E M K V A A A L E			
UniRef90_J9XVA1	D D G K I L A M D I N R D N Y E I G L P V I E K A G L A H K I E F K E G P A L P			
UniRef90_W9XKD1	E D V R V T T V E V D P K H K Q V A E E N A H A G L S S Q I S V L L G S G L E			
UniRef90_UP10003B488D8	R D G I L T S I D L D P E H Q R A A R E A Y A A G P S Q R T R V I S G			
UniRef90_R5I0L4	D N G T V D T I E K D D E M T D I F L R A F D M A G M L S D G R I R C H A G D A			
UniRef90_C5KNL6	K D G K V I G L D V C K E Y D E V Q D Y W K E L G V N D R I E I R I G N A V D			
UniRef90_G8RIY8	P S G H V V T L E Y E P A H A E V A R R N L T R A G V E D R V E V I V G T A L D			
UniRef90_U1FRK8	E Q I H V T T I E R D E K M Q R L S K Q H V T Q F G Y D D Q I T L V Q G D A L E			
UniRef90_W6JVS4	G D G V L T T I D A A A E H S R A A K A A Y A K A G I S H T R T R V I T G			
UniRef90_R6DF13	P D A V L D T I E K V P M R I Q A A K Q N F E K Y N K S A S I R L L E G D A K D			
UniRef90_E1G1F1	P D G E I L S M D I L S H E S L N V T G K A I P D K K I I N F K L G P A L E			
UniRef90_Q15BQ9	E G G E L V L S L D I D P Y L K E W V G E V M S Q F P D G K K H S V E V G P A L			
UniRef90_UP10003780E2C	D G G K L I T L E Y D P K H A E V A E N I A R A G L A D K V D I R V G A A L D			
UniRef90_M7U285	E G S E I V T I E I D P D E A E M A K E N I I M A E L K V N R V L T G D A I E			
UniRef90_W8QY99	D A E I Y T I E R N A K R Y E E A T R N I E E L H F K D R I H V F F G D A I			
UniRef90_E6RB88	S H G Q I D T L E V K P E H A K V A Q E N F I D A D L Y P F P K I H V G P A I E			
UniRef90_A0A033V2X3	S L N V W T I E R K E E M Y E Q A L S N I K D F G Y E S Q V N V I F S D A L E			
UniRef90_I2G5D5	P G G K V T A L E I D P Y L D T F T R P L F Q Q T G L G D K I E V K V G N A V E			
UniRef90_B4UE35	E H G R L H T F E L D P G R A A L A R R H F E E A G V V A D R V R V H V G P A			
UniRef90_E4KQV3	G G G H T T I D R Y P K M F E R A K E N F V K M N L Q D Q I T L L E G D A Q D			
UniRef90_S9PR61	Q D S T A H Y Y S L N P T F A E M A T K L I D L A G I S E K V T I L V G P A T T			
UniRef90_UP100035A1712	A D G E L V T V D F E K Y L E T F T G S L L R E S P H S K K I Q I F V G S P			
UniRef90_A1YIE6	E D G R I T A I D I D K E A Y E V G L E F M K K A G V V D H K I N F I Y C D G M E			
UniRef90_J9HXM7	P E G R L V T I E Q R E S H A E L A A R N F R D A G L A E M V E I R L G D A L E			
UniRef90_I0RZF5	G A K V Y S V E L A E A N A V A N Q I W A H A G V V A D R V T C V V G T I G D			
UniRef90_Q4L6W1	D I H I T T I E R D E E M T Q A K S N F E T Y G Y S S Q I R L I E G N A L E			
UniRef90_UP10003B52BE8	R K A H I I T I E N Y E P R I K E A K I N L H K E G A G E Y I T L L A E D A T E			
UniRef90_J9GX38	E K I N V T T I E R N V E M Q D K A K E K I N E L F Q Y Y Y N Q I R L I E G D A L E			
UniRef90_K9Y8X5	E N G R V V A V L E V D P Y T A Q L G R N C F D V S P H Q G K I E I M V D S A I N			
UniRef90_UP1000462EF70	K G G K L I S F E I D Q R S A E I A R E N V R R F G L D D D R V E I S T E N A V S D			
UniRef90_A0A059MT36	E D G V L T T I D S E P E H Q R A A K T A F R E A G V T S R T R L I N G R A L L D			
UniRef90_T0N8F6	N G K L V G L E K S E K H A T I A T E N F I R A G Y G E D V N I I V G E A L L T			
UniRef90_UP10002EBBB0E	K E L K V V T I E R D D E M D M Q L K A K E N F T K F G Y E T Q E L E K D A L E			
UniRef90_M1WF68	G D G R V T G L E Q S P E Y A R F A R E Q L A R Y G W K N A E E I L V G D			
UniRef90_X6M5Z7	K D G R L V A I D I S D E F T K V A R E F W K K E G I N E K I D L R L G K G I D			
UniRef90_R6XZZ6	D D I V I D T I E R D D E M Y D I A K T N V E K Y N K Q A Q I K I H H S D A L M			
UniRef90_N0E248	E D G V L T T I D I P D E H A S A A K Y A A G V A P Q R T R V I T G			
UniRef90_F9CXD7	K N S K I V T I E Q N P H K N I A Q K N F R K A G V V S K M E I K E G T A K N			
UniRef90_A9KKS1	E D C H I T T I E K V P M R I V E A K K N L A K A R R A S D I S L V M G D A I P			
UniRef90_UP100037796A0	E S Q I T T I D R N P E M I G L A K E N F D K Y D S R K Q I R L L E G D A V D			
UniRef90_G9WJX0	G K T K L C T V E N F P E R I K A G E N F A K S P Y N S A I R L L E G D G G E			
UniRef90_U7PK47	P S G K V T G L E F V P E Y A E A A L K G F A Q V G I E N A E V I V G			
UniRef90_H6BM19	P D G R V T S V E V N P K H K E V A A E E N A N A G L S N Q V D V L L G P G L E			
UniRef90_K0KJB9	E I G S S T S K I Y T F E M Y E L S K E I V K L S G L Q H R I V Q V L G K A G D			
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UniRef90_H8XA70	P E A K Y Y S F E V N P E F A K I A T D V I R L A G L S K K I E I I V G K A S Y			
UniRef90_M8DH3	E G G R L V T L E L D E H H A K V A E E N R K A G L E N V L N K I V E V I V G P A L D			
UniRef90_R7THC1	D E G Q L V A C D V D P G M P E V G E P F W E K A G V L N K I D L H I Q P A K E			
UniRef90_D4W1U7	Q S H V V T E R D E S R Y K E A V N Y H A R S T I S D R V T I L V G P A T E			
UniRef90_G3B580	L N G K Y Y S F E L S D E Y A E V A S K L V D L A G L S G T V E I I V G P A N A			
UniRef90_D6U4N1	A G G K L I S L E V N D K H A E L A R A N L A E A G L A E R A E V R V G S A L E			
UniRef90_M7E3R5	Q A Q I T T L E R N E E M D L A R K N L V K Y D S R Q Q I K L V E G D A L D			
UniRef90_R7C8S0	K S S H I T T I E K V E M R L K E A R K N L E R L D E D D R I T L L E G D A I E			
UniRef90_S9RAS2	Q D P H Y Y S L E I N P K F A E L A S K V I E L L A G L S H K V T I L V G P A T E			
UniRef90_R6YHB4	E T S K I T T I E K V E M R L V E A R K N L E K H D K T Q G I E L L E G D A V D			
UniRef90_Q5PSV1	E D G K V I A I D V N R S S Y E I G L P V I K K A G V E D K I D F R E S E A L P			
UniRef90_A0A015KJQ8	E N G P D A K I I T C E N D H K Y A N I A L Q N V K E A G M D N L I E I K V G D			
UniRef90_R6H5N3	D V E I T T I E R D D K R Y R E A V K V N V N R T G M D K R I E I V F N D A L D			
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UniRef90_A0A023VNYY	E A E I V T I D R N P P E M A F A K E N F A K Y D K K K Q I T L L E G D A A D			
UniRef90_B9WJY7	D D P K Y Y S F E L N P P E F A K I A N Y V I G L A G L S D K V E I I V G K A S Y			
UniRef90_D2UZT7	T K A T I V T L D V V S S E F V D I G R E F W D K A G V S D R I I T T M I A P A			
UniRef90_R5VJK9	K T S Q R L L T T V E K V E M R L V K A R E N I A R Y D K D K Q I T L L E G D A A E			
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UniRef90_S7VDA5	A T G K L T T I D I N E E L E E M V Q G F F N Q S G L E D K I D Y R I G D A L E			
UniRef90_T1G7A0	E D G K L V A L D I N D D Y A N I G R P F W K K A G V D K K I N F I K G P A L E			
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UniRef90_S1NIJ8	E K G H V T T I D R Y E V M E K A K K T Y E R L G L T D K V T L L E G Q A A E			

130 140 150 160

I	E D S V	R R H A P F D S I L	F I	D A A K G Q Y E T F F N L	Y	A P F V R
I	L Q T V Q T A K Y D I V F M D C	A K G Q Y I N	L L	E N S I R I L L K		
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UniRef90_J9XVA1	V L D Q M I E D G K Y H S Y D F I F V	D A D K D N Y L N Y H K	R L I	D L V K K		
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UniRef90_G8RIY8	T L P P V L A D R G E I F D L V F I	D A D K E N N V A Y V E W A I K L G R				
UniRef90_U1FRK8	Q F E N V S T H S Y D M I F I	D A A K A Q S K K F F E L L Y S P	P L L N			
UniRef90_W6JVS4	S A H D V L P R M T D G A Y D M V F V	D A D K A S Y P E Y V E H G I R L L R				
UniRef90_R6DF13	V L E Q L V K E Q K Q Y D F I F M D	D A A K G Q Y Y M H F L P M I L S L L T				
UniRef90_E1G1F1	A L D A L A I A N G Q C G K W D F A F I	D A D K E N Y P N Y Y E R C V Q L L L R				
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UniRef90_E4KQV3	I L P T L S G D Y D L I F M D S A K A K Y V	D F L P E C L R L L K				
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UniRef90_M8DH3H	T L P T L K E K G F T A P D F I F I	D A D K P N Y P H Y L K W A L N Y S R				
UniRef90_R7THC1	F L N E L T K T K A G C F D V V H L D A D K S K L L D D Y Y E A S L V L L R					
UniRef90_D4W1U7	E I L N E D I P N A P F D V I F I	D A A K A Q Y Q K F F E K Y E P L L K				
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UniRef90_D6U4N1	L L P A L V S E A P F D L I F I D A D K R N N P Q Y L E W A L K L S R					
UniRef90_M7E3R5	T L P S L E D N Y D F V F M D S A K S K Y I V F L P Q V L K R L Q					
UniRef90_R7C8S0	V L K E L L I K E K S Y D F I F M D A A K G Q Y Y L N F L P D V I A L M A					
UniRef90_S9RAS2	S E K L R K E V N G F H A F D F V F I D H W Q N L Y V P D L R V M E S L D L I A					
UniRef90_R6YHB4	V L Q Q L C G E G N T Y D F I F M D A A K G Q Y Y L N F L P N V I T L L E					
UniRef90_Q5PSV1	V L D E L L N H N E G G F D F A F V D A D K V S Y W N Y H E R L M R L T K					
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UniRef90_R6H5N3	V N L V D H E Y D L I F I D A A K G Q Y Y I K F F E K F Q N Y L S					
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UniRef90_B9WJY7	S L E N F G D V P P F D L I F I D A D K P N N P G Y L E W A L H Y S R R					
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UniRef90_D2UZT7	L D S L Q V L K N N N E T F D F V F I D A D K V N Y P K Y V D L V D L V N T					
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UniRef90_J4UPQ3	A L E T L A K L S P D E P Y D L V F I D A Q K T G Y P S Y L R T I L E K R L L R					
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UniRef90_D6XWW3 170 180 190 200

E G G I V F T D N V L F K G L V A D K E K I R A F N K K M M E T P D W Q T I I L	T G G I L I A D N V L H D G V V A K S R Y I D R K N R T I Q R R L K E F L S V I	P G G L L L C D N A L R G G R V L D A A A T K A F T E T L L Q H P H V D A S L I
S G G M L V A D N V T S H E M E D F L D I I S H N E N Y Q I S Y L	V G G V V I L D D V F Q G G D I K P I E D I R R G Q R T I L T H P N L T T S L V	R G A V I V V D N V I R G G A R R T L Q M M G E H P G L D A T A I Q T V G R
V G G L I V F D D I F Q G G D V K P I E E V R R G Q R T I Y R H P G L T A S L L	P G A L I I V D N V V R K G T R A L Y E H V N N H P R L E A T A L Q T V G A	V G G L I G Y D N T L W N G S V P L R K Y V R Y Y R D F L A A D S R I E I C Q L
P K T C Y V D N V V R Q G T R K L V E A V G S N E K V D A V V I Q T V S E	A G G V L V L D N V L W H D R V A D P A L L R D L G K K L R A D E R L L P L L L	P G G Y I L A D N V L W S G K P A D R Q A I L D F N H T V S T D S R V E A A V I
P T G I I A V D N T F Y G G T V E E E G S A I D R L N K K I L V D D R V E A S M L	E G S I I I V V D N I S R F G V R E M L E M M G A H P R L D T A A I Q T V G T	P G T K I I V D N V I R G G A I V D P A V V G T R A L F E A V G P Q V K A T A I
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210

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UniRef90_R4M1Y2	P P S D G L L M I R K
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UniRef90_I0WNX4	V P P A V G A A L A L F A R M L D A K T V V E V G T G A G V V S S L W L L R G M R
UniRef90_M1VM75	S G P V Q Q G A V L H A V A R L L R A Q R V L E I G T F T G Y A T L C F A G A M G
UniRef90_UP10003819F57	I P R E T V A Y F R L L L Q S L Q P E N I L L E I G T A I G F S A L L M A D N A P
UniRef90_M2QS32	I V P E E G A L L T L L T G L T E A R F A V E V G T F T G Y S S L C I A R G L A
UniRef90_M0GLS7	I G P E A G G V L R V L A H L A D A K R L F E F G S G F G Y S A T W F A E G M A
UniRef90_C7YRS2	S S G F Q S Q F N I F L A K S I G A R V L E I G V Y A G F S A L V W A H A V G
UniRef90_B3T567	I G P L K G K V L L D D V V I Q T K P K V I L L E I G T L V G Y S A I R M S R F L T
UniRef90_UP100036BE5E4	V L P G A G A A L S V L A A A V G A R A A V E I G T G A G V G S L Y L L R G M P
UniRef90_M7WNI9	S G P Y E A V V L Q N F A L M Q G A K T V V L E I G V F T G T A T L A A L L P
UniRef90_UP1000371BDD5	V S G A T G S T L S F L A A G L Q A R A V V E I G T G A G V G S G L Y L L R G M A
UniRef90_U2UBF7	I R D E T A A L L R L F L L L K R P K V R V L E I G T G A A V G Y S A L F M A G F L P
UniRef90_M1CHH4	M L V Q I L G A E R C I E V G T Y T G Y S S L A V A L V L P
UniRef90_R6U7D7	Q K E G I D F M C S F L K E H N L K H V L E I G I G S A I G Y S A I R M A M L D
UniRef90_L9X9M0	V G P E V V G G F L R F L A R I V D A E R I F E F G S G Y G Y S A Y W F A D A L P
UniRef90_T0VL20	I P H E T V V F L Q F L L Q F L L Q G M K P K Q I L E I G T A I G F S S S S L M A Q Y V G
UniRef90_U1QRB1	V S P G T G A A L R M L A A V A G A R A V V L E I G T G A G V G S G L W L L D G M A
UniRef90_L9PPQ0	V S R E T G A L L Y M L A R S T R A R N V V I E F G T S F G I S T L H A A L R D N
UniRef90_M0BIT0	I G P D A G G V L R S Y A A A T Q A E R V F E F G S G F G Y S A Y W F L K G M A
UniRef90_Q9HRG3	V G P D V G R F L R V L A T L S D A E R V F E F G S G F G Y S A A W M L P V L P
UniRef90_H8LDI5	I P H E T V V F L K F L L Q P E R I L L E I G I G A A I G F S S S S V M A T T I G
UniRef90_U7USF7	R T A E V E L L R R I T A S A A P R R V L E I G T A I G Y S A L L L I A S R L G
UniRef90_UP1000365FAE0	V A P S V G A L L S I Y A Q V S G A R S V V E V G T G A G V G S G L W L L D G M R
UniRef90_O42898	I G D V K G G F I V G K I R E R K P K I M V E L G G Y L G Y S A I L F G N E S
UniRef90_H8G6R6	V S C A T G A T L S F L A A S V Q A K A V V E I G T G A G V V S G L Y L L R G M T
UniRef90_H1D2E1	R G P E R E L L L K A A A L A E P R R M L E I G T A I G Y S A L L L I A E R F P
UniRef90_L2GF23	S N F Q A Q N H I W L A K L I G A K R V L E I G V Y V G Y S G M V W S H A V G
UniRef90_C9A794	I P H E T V V F L Q F L L Q F L L Q G Q L P K E I L E I G T A I G F S S S S L M A Q C V K
UniRef90_D8J413	V G P E V V G G F L R L T A R L A G A R S V F E F G S G Y G Y S A Y W F A K A L P
UniRef90_R5NS55	I M D A T L S V I E E R R L R A R R T N R I L E I G T A V G Y S A I C F S E F L E
UniRef90_B9E6Z2	D K I S V E F I K Q L I R H K A Q S I L L E I G T A I G Y S A L H F A S V D D
UniRef90_UP10002C2E064	T A P D A A Q L G M L L K L V D A K T I L E I G V F T G Y S L L T A L T I P
UniRef90_S3A7K6	V S P G T G A A L R M L A A V S G A R A V V L E I G T G A G V V S G L W L L D G M A
UniRef90_F3B2K8	I K R D T E N L L K F V L K M Q K P E S I L L E I G C A T G Y S A I V M L E N
UniRef90_R7G577	Q E E G L S F M L D F I K E H N K R I L L E I G S A I G Y S A I R M A M L D
UniRef90_UP100034A3BE8	I P H E T V S Y F R L L M E T L Q P E R I L L E I G T A I G F S A L L M A Q Y A P
UniRef90_UP10003B5A512	Q D E G C D F I C D Y K I H E S C K N I L L E I G T A I G Y S S L R F A S L P
UniRef90_Q6MQS9	I N A A E A K L I Q T L V R T H G C R K F V E I G T L T G L S A Q Y I F E A L P
UniRef90_F4HVJ6	
UniRef90_N2JFG6	I T R D T G E F L Y V M V Q A T N A K R V L E I G T S N G Y S T L W L A K A H T
UniRef90_B4SSJ9	I T P D T G E F L S V L V R F G T A R R V L E I G T S N G Y S T L W L A E A A A A
UniRef90_L9UUU9	V G P A A G G T L R V L A R L T D A E S V F E F G S G F G Y S A T W W A R G M A
UniRef90_Q1JXV1	I T P D T G E F L A V L V R A M N A R R V L E I G T S N G Y S T L W A D A V S A
UniRef90_UP10002EC3E7D	DK I S T E F V K Q I I R K E A K N I L E I G T A I G Y S A M H F A S C H N
UniRef90_W6RDX3	V G R E T G Q L I N I L A K C L K E P V I L L E I G T S F G Y S G I W L A E A A R
UniRef90_N8WPH4	I E P E S G R F L S S L L I R A Q Q S K R I L E I G T S T G Y S T L W L A E A A R
UniRef90_A0R2D5	V T P A V G A L L S V L A R T G G R A V V E V G T G A G V V S G L W L L S G M R
UniRef90_K9E8U3	I P H E T V V F L I W F H Q V Q P K A V L E I G V T A I G F S A A L L M A D Q M
UniRef90_A0A017SNN3	F K E P K L K V A R E A L E S T K P K L I V I E F G T Y V G N S A I A W G A I L Q
UniRef90_UP100035EEF9F	V A P S V G A L L S L F Q A Q I T G A K N V V I E V G T G A G V V S G L W L I D G M R
UniRef90_W5KBE0	K A H E D G K T M F R L P K E C I T G H V E G I N I L L R Y K S P V K N K S V L
UniRef90_R1DC10	L P E E Q G R V L S T L A A A L D A R K L L D L G T F T G Y S S I A M A L A T A
UniRef90_W8R122	V G P N T G Q L I N T L V R S L D A P T I L L E I G T S F G Y S T L W L A E A Q A
UniRef90_H1LYA4	I K R D T E N F L K F V L K M Q N P G S I L L E I G C A V G Y S A A V M L E N
UniRef90_E3H772	V T K E V A E Y L K F M V K M N K S K N I L L E I G T A I G Y S T I M A K A V E E
UniRef90_UP100038355BC	G H I F R M L I H M I R A R K I L L I G K L K G Y S I L A I A E E L P
UniRef90_E8JZR3	I P H E T V A Y F R L L M E T I Q P K N I L L E I G T A I G F S A L L M A Q H A P
UniRef90_I2B0X2	S E K V V A K L L Q F F V F T S Q A K V C V D V G T F T G M S A L A M A E V L A
UniRef90_A7JP41	
UniRef90_C3DIP0	V S P T Q G K F L Q L L V Q I Q G A R N I L E I G T P G G Y S T I W I A R G L P
UniRef90_H1PPI8	V T K E V A E Y L K F V K S Y T K N V L E I G T A I G Y S G I L M K E I K E
UniRef90_N4WZ50	I G A E K R E F I T N L A A E P A P T L F L E I F G S Y V G Y S A C L A S A M V
UniRef90_U7VE75	V T K E V A K Y L E F T S S H N F K N I L L E I G T A I G Y S G T I M G R V A K
UniRef90_F7SS99	I T R D T G E F L S V L T Q A T N A K R V L E I G T S N G Y S T L W F A Q A A Q
UniRef90_G2XNZ4	I S P F Q A Q F Q I M F A R M G A K R E I G T Y I G F S T M G W S E A V G
UniRef90_V6ASA1	I T Y E T G Q F I H S L I V G I R A K S A L E I G T S T G Y S T L W I T D A I L
UniRef90_A0A010ZUR1	I S A A G G D L L Y A L A R S A R P T T V V E F G T S F G I S T I Y L A A A V A

90 100 110 120

UniRef90_U4LIN4	A A N P Y Y C L E Y N P V F G A V I M A L V H L A G L E D T V R V I G S S T D		
UniRef90_X1DK00	T G G K L T T H E D A R R A S L A R E N F K R A G V S H L V T L V E G N A H E		
UniRef90_Q8H2A1	K D I H V T T I E R D D D M L Y A K D N Q Q F G F N D Q I T L V E G N A L D		
UniRef90_UP10004794667	S D G Q I V L T E H D P D E L D M A R E F F A R G G Y D D R A V F E E G D A I E		
UniRef90_R4XFC3	E A K I T T V D S N R K R S V V A K K F F K R A G I E E V L E A D G		
UniRef90_A8HM6	N G R L Y S F E V N S A K Q Q E Q K E N L E A A R R L L S V V E L I D Q E A I E		
UniRef90_G5JM88	D D G E I V L T E V D E D E L E L A R E Y M D R G G Y D D L A Q Y E L G D A M E		
UniRef90_UP1000407B823	P G G R L Y S V I P D P S L G I A E E M I L V A G F Q P A Q F Q V I T S S F D E		
UniRef90_M0LSZ4	H D A H I T A I D V D K D V Y Q E Y A L P F L Q K V E H K I N F I H S P A L P F		
UniRef90_F0S259	K A K V F S V E L A D A N A A A N A R Q I W A H A G V A D R V T C V V G T I G D G		
UniRef90_L7E7A6	D D I H V T T I E R N E T M Q Y A K Q N L A T Y H F E N Q V R I I E G N A L E		
UniRef90_L9W187	S D I Q I T T I E R N E A M I Q E A K A N I E N L G Y Q S Q I R L I E A D A T G		
UniRef90_M3XGV7	D G G I I D T I E R E H D R V E E A K R N I K L V D I A D K I N I I E G D A V E		
UniRef90_U5D229	D G G H L T T I D R Y R P L M Y E R A K K N F E K N G L K Q K I T L L E G D A A D		
UniRef90_J5E5A8	G G G N I I T C E F E P G K V A L A R N H F A D A G V V S D L I E V R V G D A L Q		
UniRef90_A5ITD9	G G G K V I T S E F E P A K V A L A R N H F A D A G V V S D L I E I R E G D A L E		
UniRef90_S2XHV4	A D A V L T T I D I E P E H H K I A R T A F A A G M R P P R T R L I T G Q A L D		
UniRef90_R7L877	S E D E V H T V E I D D E A E P F I R G W F D R S P L G K R I I R L H I G D A F D		
UniRef90_K1LJR4	Q A Q I T T I D R N P E M I L E L A K A N F A K Y D S R Q Q I T L L E G D A V D		
UniRef90_J2UZA3	T Q A E I I T E L D P K M A A S R R T F N Q Y G L N D R V K L I E G P A Q Q		
UniRef90_E6WJM5	T G G K L I T M E L H G Y K S A Y A R D M A E K A G L A D W I D F R V G N A V S		
UniRef90_C0W111	E D G V L T T I D S E P E H Q R A A K L S F R T N D I A P R T R L I N G R A L D		
UniRef90_R5AVD7	P N H V Q T V V T V E Q D P N D T A E Q F F K C V A G Q L A P I E L H R G A V L		
UniRef90_A8AYJ1	Q A S I T T I D R N P E M I L A L A R Q N F A K Y D V R K Q I R L I E G E A M D		
UniRef90_C5G0J0	E G G T L L C C D N S E E W T R V A R E A W R K A G V E D R I T L E L A S A T E		
UniRef90_W5Y724	D D A E L L Y L T E H D A H E L D M A R D F L D R A G L A D R T T F L E G D A L D		
UniRef90_I0WNX4	P D G Q V T G L E Y E P E Y A K L S N E G F A A N G V V N V E I V V G P A S E T		
UniRef90_M1VM75	S G A R I V C V E I S K S F A E E A Q D N I S K A G V S D M I Q I L I V G D A E E		
UniRef90_UP10003819F57	D D G V L T T I D I E V E H Q R A A K E A F A E R G V R S T R T R T I S G R A L		
UniRef90_M2QS32	S V T Q V V A L D I D E P F L E S F N T P Y W T R A G V S S K I D L R I A P A L E		
UniRef90_M0GLS7	A D G V L T S I D L V E P F H S R A A F S D A G F A P R M R L I I I G R A L		
UniRef90_C7YRS2	E G G R I L T V E S C P R R A E E A R A N I A G S P F S D R I I D L F E G D A G E		
UniRef90_B3T567	E G G H L V A C C E R D G K V I E V A K R Y Y D R A G V S H K V D V R H G L A A D		
UniRef90_UP100036BE5E4	M D I Q I T T I E R D K D R Y D Q A V E Y V K R S G L Q D R I I T L L F G D A L E		
UniRef90_M7WNI9	E T G E V V L T E V D E D E L E L A R E Y M A A G G Y D D R A H Y E L G D A L E		
UniRef90_UP1000371BDD5	D G H V T T I D R Y D V M I K K A R E T Y K Q L G E D K V T L L E G Q A A D		
UniRef90_U2UBF7	R D G V L T T I D V E S E S L L G H A R R N F A A A G G S S H R T R L I A G R A L		
UniRef90_M1CHH4	G G G L V I S S E F E P S K V V Q R A R A H V D Q A G L A D L V E I R D G D A L T		
UniRef90_R6U7D7	D D G R I V L T E I D E A E L A K G E E F L A S A G L A D R A T F E C G D A M E		
UniRef90_L9X9M0	A D G E L V L T D H D S D R L A D A R S F L D R A D A D A T A V F E A G D A L		
UniRef90_T0VL20	E N A H V T T I D R F D V M I E K A K K N Y E R L G L T D K V T L L E G Q A A D		
UniRef90_U1QRB1	R G G T I T T I E C D A E R V Q L A K T Y G R S P Y A V V I D V I H G D G T T		
UniRef90_L9PPQ0	E D G T I T T I D S E P E H Q R A A D F R S A E I P P R T R L I N G R A L		
UniRef90_M0BIT0	P G G R Y Y S L E V N E D Y A K I A Y E L V K L A G L D E I V T I M I G K A C D		
UniRef90_Q9HRG3	P D G V L T S I D I E P F H R S A R R S F L E A G Y P A G R T R L I M G R A L		
UniRef90_H8LDI5	K A Q I H T V E L D E E R Y H M A V Q V M E R A G L T G R V H C I L G D A G Q		
UniRef90_U7USF7	P N G T V T G L E I F D A N Y A K Q A Q E A W A A N G K N A S V I V G D A L Q T		
UniRef90_UP1000365FAE0	E G H V T T I D R F D V M I R K A K E T Y A R L Q N G E D K I T L L E G Q A A D		
UniRef90_O42898	E D G E V V L T E V D E G E L E M A R E Y L A R G G Y D D L A S Y E H G D A M D		
UniRef90_H8G6R6	P N G I I D T I E R D E E R I K E A K E N I K I D N N K K I N I Y E G D A V E		
UniRef90_H1D2E1	A I H V T T I I E R N E T M Y K A A L L N F E S F N S K Q I R P I Y K D A L E A		
UniRef90_L2GF23	E D G K I V A I I D R D T Y Q L G L P I K K V E H K I D F I I E S E A V P V		
UniRef90_C9A794	S D G V L T T I D S E S E S L L G H A R R N F A A A G G S S H R T R L I A G R A L		
UniRef90_D8J413	S D A N I V T I E K M P E R V E E A V K N I K Y T N L T N R A K V L E G D A G D		
UniRef90_R5NS55	D D I H V T T I I E R D D E R Y Q K A C E N L A K S S C Q K Q I Q I Y H A D A		
UniRef90_B9E6Z2	K A K I T T I D R N P E M I L E L A K E N F A R F D E R G Q I T L L E G D A V D		
UniRef90_UP10002C2E064	D D L K V T T I E L D I D R H L K A V E N F K A A E L S D R I I T A I H A D A		
UniRef90_S3A7K6	E G G E L W T L E K D P K H G E Y S A Q I F A Q L D Q S Q K K I H L V M G D		
UniRef90_F4HVJ6	H K I N F I H S D G		
UniRef90_N2JFG6	V G G T I R T V E L S E A K I E L A R Q N F K R S G L E A L I T Q L H S D G G A		
UniRef90_B4SSJ9	I D G H V T T L E Y A E D K V I A M A R D T F A R S G L A D R I I T L V H G D A G L		
UniRef90_L9UUU9	G G R V V L T E H D P D E L D M A R E W L S A G E Y P V S F D Y R D		
UniRef90_Q1JXV1	I D G S V T T V E Y A E Q K Y R L A Q K N F S R T S L A H R I I D A I L G D A G T		
UniRef90_UP10002EC3E7D	D I K V W T T I E R N E E M Y E L A A R N K Q Y G F E N Q V H P I F A D A L K		
UniRef90_W6RDX3	A G G K L I T M E L H E Y Y K S A H A K E M A T K A G L A D W I D F R I G D A V Q		
UniRef90_N8WPH4	Q T Q A I I T T I D A E R V A Q A E Q Y A N Q L D L K D I I D F K V T T D A L Y		
UniRef90_AOR2D5	D D G V L T T I D V E P E H Q R I A K Q G F S E A G V G P G R T R L I S G R A Q		
UniRef90_K9E8U3	E G G H V T T I E R N P D M Y Q R A E K V F A D L N L E D K I S L K K G Q A K E		
UniRef90_A0A017SNN3	D G C R V Y T E F E L D P T M V R L S K D L V Q L A G L D D I V H V L E G P A S E		
UniRef90_UP100035EEF9F	P E G I L T S I D A E P E H Q R A A R E A F R A G G V A P R T R L I N G R A L		
UniRef90_W5KBE0	K K Y W F K K Y L K Y S R P G V S K L F L L G A R R R N I F E V T G P Q T K S		
UniRef90_R1DC10	D D A K V I C C E P D T T A A R S A R D W W I K A G V A A K M E M H E T K A E A		
UniRef90_W8R122	S G G R V V T M E L H Q K H S D F A R D M A E Q A G L A S V I D F K V G D A L		
UniRef90_H1LYA4	S D A D I V T V E K M P E R V E E A K R N K Y A D F E S R A S I L E G D A G E		
UniRef90_E3H772	Y G G H L T T I E I D E E R F N Q A K E N F A K A K V D N V T L I		
UniRef90_UP100038355BC	D D G K I F A C A E A P Y L G V N S Q E A F D Y S S D G K K I S M R V G P I		
UniRef90_E8JZR3	N A K I T T I D R N P E M I L G F A K E N F D K F D N R Q Q I T L L E G D A V D		
UniRef90_I2B0X2	N T K V Y T I D R A N Q S G E T L A K E F I A K Y P N I E Y C K G N A I D I L P		
UniRef90_A7JP41	C D I S Y E Y L K P Y E H F W Q Q A K V E H K I N L N I A P A L E		
UniRef90_C3DIP0	S G G Q V V T L E A N E K H A K I A R S N I E R A N L N D K I E I R T G I L A L D		
UniRef90_H1PPI8	N S G I L Y T I E I D E E R Y R N Q A E N F K K S G L D N I I I S I K		
UniRef90_N4WZ50	A R A G A G Q R V Y V I S F E K N P I A I A V A A S L A D L A G L R D V V T I		
UniRef90_U7VE75	K N G G K L T T I E I D E I R Y N Q A L E N F K K G E L L N S V N L I L		
UniRef90_F7SS99	K I S G H V T T V E I S E Y K F D A A T N F E R S G L S D Y I T P L Q C N A G K		
UniRef90_G2XNZ4	P E G H V T S I L E S S P E Y A E I A R E T F S K N L S N V E V L I G D A R E S E		
UniRef90_V6ASA1	T H Y K T P R I T T I E R N P K K I L E R A I T R N F K R A G V S R F I R I R R N E		
UniRef90_A0A010ZUR1	D N G H V Y G S E L S T T K L A A A R D N L T E A G V A D Q V T L L P G D A R Q		

130 140 150 160

T I K R C D G T W G K S G A D F V F L D H L K P M Y T P D L R L M E S L G V V R			
T V T R I K E P I D I L F L D A D K A G Y I D Y L N K L L P L V R			
V L D Q L L E D K N H G S F D F V F V D A D K D N Y L N Y H K R L L D V K			
E V L P R L T D G A Y D L F C D G D T E Y G E Y L Q Q A L R L L R			
T I L D K Q S V Q G K F D L I F I D A E K S G Y L D Y I K V I L E R D L L R			
L A G V L Q R A G G P G C I D L L F L D G T P K E Y L D Y L R A E P F L A			
Q F N H V N D K V Y D M I F I D A A K A Q S K K F F E I Y T P L L K			
L L P T L P D D T Y D F V F M D S A K S K Y I V F L P E V L K K V K			
T V E R Y D G P F D L V L D N E D D R Y V E A F E A V R G K V A			
F K V I R D Y L A E N E K F D F I F I D S V K S E Y P F F N F K F Q A L L K			
V I L E I E T D I D L V L L D H W K E L Y V R D F E V C W P K L K			
T V E D Y T G P F D V V L L D H W K E L Y V R D F E V C W P K L K			
A I T R F K S Y Y K V K T F D F I L M D Q S E G R Y L Q D L Q A L K K A G L I A			
L D N L L E D P K E E G S F D F A F V D A D K A N Y I N Y H E R L L K L V R			
G R T A T E H G F A E G T L D F V F L D H D K D A Y L L D D L K S I M E R G W H			
Q F E N V N D K V Y D M I F I D A A K A Q S K K F F E I Y T P L L K			
A L E L V N D Q S Y D M I F I D A A K A Q S Q R F F E L Y S P L L R			
I L P T I N K K Y D A I F I D A A K G K Y P F F L S E A L R L I N			
I L P P N L E G P F D L F I F M D S A K A K Y V E F F L P Y C M N L L D			
U n i f r e g o r e s t r a c t i o n s p r o t o l s u p p e r o g o r e s t r a c t i o n s p r o t o l s			
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170 180 190 200

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UniRef90_Q8H2A1	P G G L I A Y D N T L W N G T V P L R K Y V R Y Y R D F L A V D P R V E I C Q L		
UniRef90_UP10004794667	P G G A V A F D N A L W H N R V A D S A A I R E L G R L V R E N D E L V P A L L		
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UniRef90_M0LSZ4	P G G I V L A D N V L A A G A P A T A H H I A D Y Y E R V R A D P D F E T A L V		
UniRef90_F0S259	S K G I A V F D N V L F R G H P R Y T R T V A L L K K F L R K Y P G F E T Y L V		
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UniRef90_L9W187	V G G V I V A D N A L T A G P I D F E A L I A D Y L E R V T D D P D F E T I V L		
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UniRef90_U5D229	V G G L I L Y D N T L W G G G M R P N R Q H L M K L N Q F L A V D P R I E I S Q V		
UniRef90_J5E5A8	P G S I V V A D N V R V P G A P K Y R E Y M H R Q Q G F S T V E H K T H V E Y Q		
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UniRef90_S2XHV4	E K G V I I T D N V L Y H G F V A N L D D V V K S R N A W L S Q R E D Y S T N F V		
UniRef90_R7L877	K N G Y I I A D N V L Y K G M S D Y N K H V R N L R E Y I A E P T L E T E L		
UniRef90_K1LJR4	M G G I L L I D D I F Q G G G M V F D A E E T V P R K V R K H R G L N C L L		
UniRef90_J2UZA3	P G A L I I V A D D A D F S P E Y L E L V H S S R G F M S		
UniRef90_E6WJM5	P G A L I I A D D A D Y S P A Y L A R V R A S G G		
UniRef90_C0W111	R G G V L V V A H A L W N D T V A D P A A I R Q L G K D L A D S E D F M T T L		
UniRef90_R5AVD7	P G G Y I I A D N T L W S G K V A D D E A L R H D N E R V A R D P R L E T V I L		
UniRef90_A8AYJ1	P G G L V L I D D V F Q G G G D V A K P E E I K R G Q R F D A T N P D L T A S L L		
UniRef90_C5G0J0	P T G F M C V A N F V A R G M P T L P E K V R K M M N K C K T D P R I D T V L L		
UniRef90_W5Y724	P G A I V V A D N M I R P G T E D V K R Y G R A I R T L P G M S S V I L		
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UniRef90_M1VM75	P N G A L V D N V L F R R S R K L L M D A V H A F N Q H V L E D A R V T Q V I L		
UniRef90_UP10003819F57	L G G L V L I D D V F Q G G G D T T L L E A I S R Q G R A I L T N P D L T A S L V		
UniRef90_M2QS32	R N G V I V I D N T L L R G R V E D A E M V H A F N E R L L G D D R I E S V L L		
UniRef90_M0GLS7	E G G V V V A D N V M R D G A D A D T R G I A A F L D A V R A D P R Y E T I V L		
UniRef90_C7YRS2	P G A L I V S D N V L R R G L V A D D K A L R E F N D L S L S N P R L E T F V I		
UniRef90_B3T567	K G T K I V A D N A G M S E M Q N F L T Y V R E S Q L Y Q S K Y H D F D L S G		
UniRef90_UP100036BE5E4	P G G V L A V D D A L W H D R V P D P A R I R E V G R T V R D H E Q L L P A L L		
UniRef90_M7WNI9	E N G V I L V D N T L Y K G Y P E A T K G I D D F N T Y V R S H P D L E T A V L		
UniRef90_UP1000371BDD5	P G G V I A F H N V L A A G R I A D P S A L R E V A R A R V R D D P R L V P T L L		
UniRef90_U2UBF7	E G G I L L S D N V N V L L D G E I A K S R F I P P R R D R T I H R R M R E Y L A V L		
UniRef90_M1CHH4	V G G L I V V D N V L W H G R V S D P L V K K Q F P S L		
UniRef90_R6U7D7	K G G Y V I T D N L K F H G L V E H P E N K S R N R S L V R K I G N F V E Y L		
UniRef90_L9X9M0	V G G V V A D N A I T A G P I E F L E V E A N D E R V T R D Q A F E T V V L		
UniRef90_T0VL20	K G G V L M V D D V F Q G A Q T I D P I E D P R G Q R A I H R H P Q L T S S L I		
UniRef90_U1QRB1	P G G T A F V H A L W H D Q V A D P A R A R E V I N Y L R E S D E F V P A L L		
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UniRef90_Q9HRG3	P G G L I V A D N V M A G P A P V T D V A V R D G G R R V R D A S G F E T A L V		
UniRef90_H8LDI5	K G G V L M V D D I F Q G G G T R A I H R K L N E F L R V V M D H P D L T S T I L		
UniRef90_U7USF7	P Q A I V V A D N I R Y H D M V Y M E G V L P H K H R T A V L R L R E Y M E L I		
UniRef90_UP1000365FAE0	S G G A I L L H N A L L G G R V P D P A A V R A A T R A I A E D S Q L T S V L I		
UniRef90_O42898	P G T L L V A D N I I T P G A P E Y H K Y V		
UniRef90_H8G6R6	P G G V I A F H N V L A A G R I A D L L A L R D V A R A V V R E D T R L I P T L L		
UniRef90_H1D2E1	E R A V I A A D N V L F R G L V E A K D P V P H R Y R T L V M R L R E Y I D Y V		
UniRef90_L2GF23	A G G L I V A D N V L R R G L V E D V E K L R E F N R M V R E D E R L D S W L M		
UniRef90_C9A794	K G G V L M V D D V F Q G A Q T R N Q R A I H R K L N L F L D T H P Q L T S T L V		
UniRef90_D8J413	P G A V V I A D N A M S D G A V V F D D L I A D Y L D T V R S D P A F E T M V L		
UniRef90_R5NS55	K D G I I F A D N I L Y K G Q R T A V T H L R E Y I K L T T E D P Q L N T E I L		
UniRef90_B9E6Z2	R G G L I I T D N I L Y H D F V G N I E I V R S R N A W L S K H P D Y D T N F L		
UniRef90_UP10002C2E064	G L V Y D N T L L C R G T V V F P E E T E H N K S L A A D P R I E I S H A		
UniRef90_S3A7K6	P G G T I A F V H A L W H D Q V A D P A R R D A H T N Y L R D S E E F V P A L L		
UniRef90_F3B2K8	D N G M I F S D N C L Q E G D L L E A I R K R D K T I H K R M R E Y I Y L L		
UniRef90_R7G577	Q G G Y I I S D N L S F H G Y V E H P E R I I K N F R L Y L E S R D D Y E T K Y Y		
UniRef90_UP100034A3BE8	V G G L V L I D D V F Q G G G D V A D I K E V R R G Q R T I Y K G L Q L T A S L L		
UniRef90_UP10003B5A512	P G G V I I S D N L S F H G M V D D L K K I Q K Y A E F L R T N Q E F E T T F Y		
UniRef90_Q6MQS9	K G G L I L A D N I F L S G S V K Q I R I M Q D F N K R L A D P S L F E S A I I		
UniRef90_F4HVJ6	V G G I I A F D N T L W F G M R E Y R A A L I E F N K K L A L D P R V E V S Q I		
UniRef90_N2JFG6	P G G L L I V D N A L S H A M F A K V L E S D P D F S T C L V		
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UniRef90_L9UUU9	P G G V V V A D N V I R R G L A Y L D A V R A A P D F E T T C V V		
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UniRef90_UP10002EC3E7D	N D G V I I T D N I L Y H G F V S D I D V R S R N		
UniRef90_W6RDX3	P G A I V V A D N M L R P G D E N V R Y R G A D I R A K P G I T S V L L		
UniRef90_N8WPH4	P G G V L L V D N V I S H A A E E F I Q L I Q Q D S R F I M S T L L		
UniRef90_A0R2D5	S G G A I V V H R A A L G G R A G D A D A V R E A A R L I A E D E R L T P V L I		
UniRef90_K9E8U3	R G G I I A V U D D V L Q G G T E E I P K R V R K L H R K L N D F L D V V L S I L		
UniRef90_A0A017SN3N3	K G S L I I A D N T D F P G A P E Y L E Y V R S G R Y E S E G H K S E T K R G		
UniRef90_UP100035EEF9F	P G G A M L L H N A L P G G L G D A A Q A V R T A A T A I A E D E R L T S A F I		
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UniRef90_R1DC10	V G G V I V Y Y D T L W A A D H V L S H E M R A F N A R L A A D P R V L A S L V		
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UniRef90_H1LYA4	E S G M I F S D N C L Q E G D A E S S F A I R K R D K T I H K R M R E Y I Y L L		
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UniRef90_UP100038355BC	M D A V I C V E N T L M K G Q V Y L E A V R K L N T A I I N S D P R V E Q V I L		
UniRef90_E8JZR3	V G G V V V L V D D I F Q G G D I A D I M E V R R G Q R T I Y R G L Q R T A S L V		
UniRef90_I2B0X2	D K G V V L V D D I L W R G E V I D P K A L D D F N K Y V S Q R D D L E T L V L		
UniRef90_A7JP41	S G G L I A I D N V L W S G R V A D K S V I R Q L N N L I H D D K R V D A C I I		
UniRef90_C3DIP0	D G G I V F I D N I M F R G Y L Y K E P K R F K T I V K R L D C F I D Y L		
UniRef90_H1PPI8	S G T V V L A D N I V F P G A P E Y L E Y V Q A		
UniRef90_N4WZ50	D D G M I F I D N I M F R G Y K R F K T I V R R L D E F I T Y L S K N H N V L L		
UniRef90_U7VE75	E G G L L V V D N A T S H A M S F M A L V S A D P D F T T C T V		
UniRef90_F7SS99	P G G L I A L D N I L R R A L V D N A L K E F N D L M V T E K R L D T F L L		
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 P A W D G C T L L R Y K
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 N I D D G L A I S I K
 S M S D G L L M I R K
 P V G E G L L A S V R L
 P V G D G L L I S V K R
 P I G D G I E M T V K
 P L G E G L A A S Y R

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

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

P M G N G L L V A
 K E G D G L A V S L K K
 P L Y D G V H L A R
 P L G D G V I L I T K
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 E V G D G L A I T T M K
 D I G D G M S I S I K K
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UniRef90_X8K694	D A E I Y S L E K D E E I L E I A K K N V I A S F D N S G R I H F M L G D G Q E		
UniRef90_U5W2E9	D N G H V I S T E L S A T K V A A A R E N L A E A G L A G S A T V L A G D A L E		
UniRef90_UPI00036AE340	E G G V L T T D V E P E H Q R T A R A F T E A G Y P A G R A R L I M G R G L		
UniRef90_UPI0001A632AB	P D G R V V L A L D I T D E Y K D Y C P A W K M A G V E S K I D F R H G P A V E		
UniRef90_UPI0003871288	D D G K I F A C A E A P Y L G V I N S Q E A F D Y S S D G K K I S M R V G P M		
UniRef90_F8JQK0	G T G T V T G T E L D P G K A E W A R A N L A E A G L A E Y A T V L T G D A R E		
UniRef90_K0CJ2K	D G G R V V T T V E C L D D K V G E A K A N F E R A G L A D R I E Q I K G D A V T		
UniRef90_J2ZL41	E D G S I V L T E F D A D E L A M A R E F E Q A G L S E R A T F E E G D A I D		
UniRef90_G4F342	M I G G H V T T V E L S E F K A M A A R N F E R S G L S K V I T T Q H R G E A G G		
UniRef90_R1G4J9	G M R V T S F E Y S E H H A A V A R R N F E D A G V A D R I D L R V G P A A E		
UniRef90_B6CZ53	P G G R L L T V E R D P R T A A V A E K L I R A G F D E H M V E L I V G S S E E		
UniRef90_U4KRL4	D I K V D T I I E R D L K R Y Q E A S Q F L K P L D Y P I H L I		
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UniRef90_UPI00024869F2	V T G A K V V T T L E I D E N R T L Q A K H Y A Q E L Q V D D V I D F W V		
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UniRef90_R5SZ55	T G G R L I T T I E Y D K R Q S V A I E N F K K C G V I D V V R P L Q G S A C E		
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UniRef90_E8T6I1	E S S I T T V D S N P K R L K T A E S F F Q R A N A P V E T V L A D G		
UniRef90_G8P7L3	E A E I V T I D R N P E M I E L A K K N L T K Y D H R N Q I Q L K E G D A A D		
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UniRef90_R7LSP4	T G G K I L T T I E F Y D K R L D I A K E N F Q K C G V I D A I I D T R K G D A A T		
UniRef90_W4HRB3	P G G R L I T C V E E L D S E L A E V T R K V N V D I L Q L T D L V E V V C R D A L N		
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UniRef90_B6VME5	G G G K V I S T E F E H E K V V Q A R I N M E K A G V E H L V E I R E G D A L E		
UniRef90_A0A010RQL8	S G I R I Y S F E L D P E L A D I A R D V V K L A G M S D V V T V V D G P G A E		
UniRef90_B0T531	D N G G V V V I T T E F E K A A R A R G N L T A G G L I D L V E I R E G D A L Q		
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UniRef90_D3CZ04	D N G R V V S T E L S P G K A A A A R A N L A E A G L G D V A E V W P G D A L E		
UniRef90_U2Q3W7	E R G V L T S I D A Q A Q W Q V Q A R Q A F I A E R I P T R R F R L I P G S P L		
UniRef90_UPI000477576A	E G I L T T V D V D P V C Q E A A R E A Y R A A G F S A N R T R L I R G T A L E		
UniRef90_UPI0003785E26	G V S V V T T L E K N E D S H R A A E E A N F E K Y N V T D R V K P I L G D A A D		
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UniRef90_E7MKZ3	W D M T I D T V E I N P D M Y E Q A V N N I M H A G L Q D R V H A Y L Q D A Y Q		
UniRef90_UPI00037F78E2	T G G S V T T V E S S A Y K A G L A S D T F S R S G L S E Y V T L V H D D A G A		
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UniRef90_M0JMC9	E D G Q I V L T E V D A N E L A E A R E F D R G G F T D R A A F E H G D A I E		
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UniRef90_U7Q1A0	A D V H V Y T F E L D P A R A Q I A R D F A K A A G R A S Q I T V L E G P G D V		
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UniRef90_A5EGK1	G G G R L I T T E F E P S K I A R A K H H A E E G G L L D L V E I R E G D A L Q		
UniRef90_C0RYC4	E T H E I I T L E V S P E M I A V A R G V F D K Y N V N D R I T L I E G P A A E		
UniRef90_R7GDN3	S N A F I I T T L E R D P V M H E E S V K N I E A L D L K S K V R L I Y K D A L E		
UniRef90_R4GB59	D D G K I L C C D V S E E W T N V A R K Y W K E N G L E N K I F L K L G S A L E		
UniRef90_R4XXH8	G G G R L I T T E F E P S K V A L A S D H L L E A G L A D L V E L R Q G D A L Q		
UniRef90_E6W144	R K T L E R F V T L E F N H K R L E V A R Q M A E R I G W A N R V Q M L H		
UniRef90_D9WMD5	D N G R V V T T E M S K E K I A E A R R T F A E T G L D D L I T V L E G D A R E		
UniRef90_D9XPS8	P D G V L T T V D Q E P E H Q Q S A R Q A F R D A G F G N R A R F I P G R A L D		
UniRef90_R8ZP14	S S N I I T I D R H E E Q A K L L D G Y A Q K M G L E S Q M D V T R V N C S		
UniRef90_U3HBV2	G G G R L I T T E F E P T K V A R A R G N L A A G G L E D L V E F R V G D A L R		
UniRef90_D8I3X8	P D G V L T S I D V E P E Y Q R A A R A T F R E A G F A P G R T R L I I G R A L		
UniRef90_E7G7N7	D L K V D T I E L N E E R Y Q E A V S N I H K Y H D S Q I S I F L D D A L T		
UniRef90_A0A010R0V3	A G T K V T S I E I N P K H R D V A L D N V S G L D V E I I L G S A		
UniRef90_R7F5S1	N V K I T S I E R D S E R Y L E A V K N V K L L F G L E D R I T L I F K D A		
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130 140 150 160

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UniRef90_K2AN99	V M M S E E C L K D Q V V D M A F F D S T K Y E H L S Y F D A V Y P R L K		
UniRef90_UPI00035FE3A6	V L P R L T S G G Y D L V F V D A A R V E Y P S		
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UniRef90_J3ABT4	L I A Q I D E P I D F V L L D L W K D L Y V P S L E A F Y P K L N		
UniRef90_R5IXR7	L N I E D K Y D L I F I D A A K G Q Y I K F F T M C W E L L N		
UniRef90_N1WWDY7	L E Y L Q E N R E E W D S D L F C D I T Y P E I F R I L W R D S K		
UniRef90_UPI00047E8FB5	L L E E K V E G P Y D V I F L D S A K A Y I E F L P R C E L L A		
UniRef90_R5KAY2	I L E E L P E D F M I D I A F V D A N K S E Y I K Y F E L I D K H R		
UniRef90_R6A034	G D A L E V Q L P K D Q L F C I F I D A A K A Q Y T R F F T K Y A P L L A		
UniRef90_B1LZS4	T L G L D L P D S V D L L D G A K G L P E V L S L V E S R L A		
UniRef90_W7TFF7	I Y Q E P P P G K E R P Q F D V I F V D G D K K R Y Q E Y Y D F I L E H N L A		
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UniRef90_X8K694	Q C D K L F D M G I S D F D F V L D A A K S H Y R R F F D A A V R V C A		
UniRef90_U5W2E9	T L A G V P P G P I G F V L L D G W K E L C P V L R L L E P R L T		
UniRef90_UPI00036AE340	D V L P R L T D A G Y D L V F V D A A R I E Y P R Y Y E Q G V R L L R		
UniRef90_UPI0001A632AB	T L Q N L I D N G E S E T F D F A M I D A D K E N Y S N Y Y K L C L K L V R		
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UniRef90_R1G4J9	N L P K L L E E I E V E V R V G F T F I D A D K L N N W T Y C D F A I R M G Y		
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UniRef90_E2Q4R9	V L P R L A D G G Y D L V F C D G D R L E S T C T A Y Y E R C L Q L L R		
UniRef90_UPI0003C86427	U L D E L L A A G E A G T F D V A V D A D K E N C T A Y Y E R C L Q L L R		
UniRef90_K0WKX9	T L A V S L P E K I D L L V L D G A K A L Y G D V L K L V E K H L R		
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UniRef90_U1QZA8	M L Q V D L P D T I D L V L L D G A K A L Y P D I L D L V E G H L R		
UniRef90_K6WV75	V L D R E A P A S R D L V F I D A D R E R Y V D W W P V V R E T L R		
UniRef90_M7SIW3	W L A E A G E G C I D L L F L D S D R G Q Y A G W W P Q L R R V L R		
UniRef90_R5SZ55	L E F M R E A L S A G E Y D L I F I D S T K G E Y P F Y I Y K V E A L L S		
UniRef90_H5YIY3	V L Q E L K G P F L V F M D S A K S K Y V E F L P K S L E L L R		
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UniRef90_D3CZ04	T L A A L P D Q V D F I L L D G W N H L Y L P V L R L I E S R L S		
UniRef90_U2Q3W7	D V L N N L R D G A Y D I V F I L N G D K L E Y A E Y L D Q A L R L L R		
UniRef90_UPI000477576A	V L P R L T D G A Y D I V F I F A D V K T E Y P E Y L R A A L R L L R		
UniRef90_UPI0003785E26	T L H K E I A D R T F D M L F I D A S K G N N Q K F F E M Y S P F I K		
UniRef90_UPI00047E4A69	V L D K L V E E G R E Y D F I F I D A A K A Q Y L G F L P N I L K L K		
UniRef90_E7MKZ3	F E T K K I Y D I F I D A A K S Q Y R K Y M E H F F K N A R		
UniRef90_UPI00037F78E2	T L T R V T D A S I D L F I D S E R S Y R A W W D Q I R R V L R		
UniRef90_L8GSP8	S M E R L L A E H G A S F D F A F I D A D K R R N G Y I Y Y E L A L K L L R		
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UniRef90_M0JMC9	U I V E R Y D G A F D V V L L I D N E K H R Y A E A F E A V R E K V P		
UniRef90_K0UT13	T L S D I A G P V D L V L L D G W P E L A L P V L E L L E P R L R		
UniRef90_U7Q1A0	S L S K T D G V L P P G S V D V V F I D H W E P R Y K P D L Q C E S L G V L R		
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 N
 G D T L D E T L V R F L R A A G P E H T E V Q R R M A T F A D D Q S F P N
 Y S D L K E F A L P
 E R A D A L S D I Y M P
 P E D E V L Q R A R A R A A E L G L E P
 R W A A V D E Y A L K Q T H P P S R R P L Q H A L S L S S E A G L P D Y S
 E R L L D H A E A T V R E D D A L A A A R D R A V E V G A D P
 L S R Y A E S A I V E D E A L R L A R E R S D E L G A P A T
 H S K T E Y L D F Y G R L K D L W L P
 E D E A L H W A R D R A R E A G L R S
 D S L L L Q L E Q Y G E E H D R H R N
 D A Q Q R A D A M S E F Y I P N
 M A R A R G E E L G A T P
 E L K Q Y I R E L N T E A E I F D I Y D Y A V K H H V P I
 D T Q K D R L Q R Y R N
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 E R A E V L K N V Y M S
 E D E P L A D A Y E A G S R S S A P P
 E R I G S Y M H S T S V P Q N I I D Y H E H I R E K M P A T A N Y M
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 Q A N D A H T Q E R G Q K M N
 A F L S Q F S R A E L D R L L R E Y L D L Y T R L K D M P L P
 E D E V L A A A R A R G V A L G C E P I S
 N
 G D D T Q L A A T L A N S A R H G L P P I S
 Q
 E R F V P E D E I L L S A R Q R A N E V G A Y P
 E Y L A S M E P P A D D L V A E M E T H A A E D G I P I A
 M P R D E R E R L F Y R N L Y G R L K D L W L P
 W A H G E E F V D E A D L F A D D G V L A R A R E R G S E L G A P P
 D K L S S W S Y T E N L P A E D E V L L R A R D R S H E L G V T P
 D Y A D F Y A R L K D Y P L A
 L D N A I A N S R E N K L P E I A
 A V P Q Y V L T T S Y P R E A E I L K E L R D A I A N H P Q S Y S A
 M A
 N M K D K F I A
 H R K L L N
 R A N T D F Y R D K Y I P
 T S W A L A D A Y G A E L V E S A E S E A L R W A R A R A Q E A G L R S
 L K N M K K Y A I Q E N I P I
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 K E L E K D A I E R N I P V M
 T K Q E Q T W S H Y L F N L R R Q F F G A T L E S V D A F M G D K F V A L
 D V L P D D I G R F I R A V G P E P D D Q L Q E M D D Y A D R E G F P H
 L D K L E D Y A L R H D I P I M
 D E I E K S A R E R N I P V M
 M L
 E D D A L I R A R G R A R E A G V R P
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 I E A E S A K C L L G M L V R T Q H S Q H | L E I | G T S T G Y S T L | W L A E A A K
 M G A A L R M L T A A S N A R A V | A E V | G T G T G V S A L | W L L E G M A
 I S A E L G S L L R N L V L S H R P M R I | L E L | G S S Y G V S T L | Y F A D A L R
 I T R D T G E F L S V L V K A M G A R K I | L E I | G T S N G Y S T I | W L A S A L P
 V S R N T A Q L L Y M L A R G C R A K A I | V E F | G T S F G I | S T L | H A A L R D N
 V S T G T G A A L R M L A G S V G A K S V | A E V | G T G T G V S G L | W L L A G M G
 S S R L Q G S W M I F T A R D R K P K R I | L E I | G C Y S G Y S A L | A W Y E G T R
 I G R D T G R L L Y S L V R A T R P T T | V V E | F G T S F G L | S T L | H A A L R D N
 I G P V M G S L L A L L C R V M G A V R | V L E | L G S A V G Y S T A F L | A R A M R
 L D K D K C E F V Y T L V R A I G A K N V | V V E | A G T S Y G V S T I | Y L A L G V G
 V S P G T G A V L R M L A A A L G A R V | V V A E | V G T G T G V S G L | W L L E G M T
 V S R E A G T M L Y M L A R S C R A Q T I | I I E | F G T S F G I S T L | H A A L R D N
 V S K E T G R L L Y I L R S C G A R S I | V E F | G T S F G L S T L | A A A L R D N
 S A R D T G Q L L R T L A A S K P G G R L | L E I | G T G V G V G A G W L L D G M D
 R K S E E N L F R S A V L A A A A P R R I | L L E I | G T G I G Y S A L | L M A T L L P
 L H S D S A Q L L H I M I Q T A G C K R L | V E I | G V A F G Y S T I | W L A H A A Q
 C G P E K G A I L E R L I V A R Q R P A L | A L E I | G T F M G Y G C A R I A R Q L P
 I S S R E M M G Q F L S I L V K G C S A K N | I L E I | G T S N G Y S T L | W A D A V E E
 L G P D A G A V L Q L L A R | T D A E T V F E | F G S G F G Y S A S W F | R
 V S R E T G T L L Y M L A R A T H A R S I | V E F | G T S F G L | S T L | Y L A R D N G
 V T P E A G R L L Y S V R A T K P A | V V E | F G M S F G L S A L | H L A S A V R
 V S P G V A S V L T V L | T A A T R A R T V | V E | V G T G T G V S T I | S L | R G M G
 L P A C H A K F L A L H C R T A S V R H | A L E | V G T L G G Y T A I | W L A S E N P
 V D A A T G A A L R F I | T A A I G A R S | V V E | I | G T G C G T S G | W L L R G M A
 V S P A V G A A L S V F A R M L D A K | S V V E | V G T G G A V V S S M W L | R G M R
 P E S A E L L A L L V R T A G A D R | V L G | L G T S N G Y S T L | W L A D A V E
 P A V G A T L L S L L A R L V D A K A | V V E | V G T G G A G | I S G | W L L N G M R
 M S P G T G S A L R R L L A A T A D A K A | V A E | I | G T G T G V S S G | Y L L Q G M R
 M R L L T A A C G A R A V V | V E | I | G T G T G V S S G | H L L Q G M R
 V S R Q T G E L L Y M L A R S T N A K T | V T V E | F G T S F G I S T L | Y A A L R D N
 V S A G T G A A L R L L A A A A D A K | V V A E | I | G T G T G V S S G | H L L R G M R
 I S R E M M G Q F L S I L I K G C S A Q K | I L E I | G T S N G Y S T L | W A N A V E E
 V T P E A G R L M Y A L V R A I R P | T T V V E | F G M S F G V S T I | H L A A A V R
 I S R E M M G Q F L S I L I K G C S A Q K | I L E I | G T S N G Y S T L | W L A E A A Q
 I E A E S A K L L S Q L I R M Q Q A S I | V E | K A V A E | V G T G G A G V S T L | W L L S G M S
 V S P A T G A A L R M L A G A T G A K S | V I E | V G T G G A G V S T L | W T L A G M P
 I D G D A L N A V K Q Y I S I K G A K N | I L E I | G T A I G Y S A L | H F A S V D D
 I E P D S A H F L A M Q I R I Q K S K | V V L E I | G T G T G V S T L | W L A D A L Q
 V G P P S K G E I L T R I L V E A V N R | K V V L E I | G T G G A Y C G Y S S I | L M G R A M L
 V S R E M M G Q F L S I L I K G C S A Q K | I L E I | G T S N G Y S A L | W A N A A E E
 V S Q T G G E L L Y L L A R A T G A R T | V V E | Y G T S F G V S T I | Y L A S R D N
 V D A A T G T A L R F L A A S I G A R S | V V E | I | G T G C G T S G | W L L R G M T
 V S I S Q A Q A M H F L A K T V G A K R | I L E I | V G V Y V G L S S L | V W S N V V G
 D T T A G A A L R F I | A A A T R A R S | V V E | V G T G C G A S G L | W L L R G M P
 I S A A T G N F I L T M I L M K T A R | V K N V V E | V G T G T G I S G M Y M | L R S G
 L E P E T A Q F I H I L L R S T R R K | H I L E I | G T S N G Y S T T | W A W A A S E
 A A Q L I Y R L A K D N N P K T | T I I E | L G T C L G V V T T A Y | L S K A C P
 V S R E T G L L L Y M L V R G S G A R S | I V E | F G T S I G I S T L | H A A L R D N
 V S A E T G R F L R N M V L S H K P A R | I L E | L G S S C G V S T L | Y F A E A L R
 P G S G A A L R F I L A S S L R A R A | V V E | V G S G G A G V S G L | W L L R G M L
 C A S Q K

50 60 70 80

I E A E S A K L L A M L V R C Q Q S K R | I L E | I | G T S T G Y S T L | W L A E
 I E A E S A K L L S Q F I R M Q Q A K S | I L E | I | G T S T G Y S T L | W L A E A A Q
 I T P L H G Q H S L L A Q V S A R A V | L E I | V G T L G G Y S A Q W F A R A G A E
 I P R E T G K L I A L L A A S A P E | G D W L | E I | G T G G A Y S T L | W L A L A C E
 V M P G C G A A L C F L A T V L D A R A | V V E | I | G T G C G V S G L | W L L R G M R
 S R S V A T L Q A I L A R G T D A D R | A E F | F G T A I G Y S T L | H T E V D G
 V S R E T G V L L Y Q L A R S M N A R | H I V E | F G T S F G L S T L | Y A A L R D N
 V L P G A G A L M R L L A A A V Q A R S | A V E | I | G T G S G V G S L | Y L L A G M H
 P D S A E F V C A I A A G C H A R R | L A E | I | G G S S G I S T I | A L A E A A R
 V T Q G V G A A L T V L A A G S K A Q T | A V E | V G G A G A G V S V C L L R G L G
 V S R E T G T L L Y M L A R G C G A R S | I V E | F G T S F G I S T L | H L A A A L R
 V S P L Q G Q F L A I Q C Q L I G A K T | V L E | I | G T L G G Y S T I | W L A E T G A
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 L E Q D K C H F V Y Q L I R S T N A K C V | V E | A G T S F G V S T I | Y N C R A T G
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 V P D A A A L L S V V C Q A M G A R | W V V E | V G T S N G Y S T L | W L A R A V H
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UniRef90_UPI000376F49E	G G G R L I S S E F E V I S K V A R A R Q N I I A E G G L A D L V E I R A G D A L E			
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UniRef90_A9VFU4	T N G N V I T V E L S S E R V G E A L G N F E R A N L T Q R I D I H N Q E A G A			
UniRef90_B2HLN1	D N G R V V T T E L N A S K I I A A A K Q T F A D T G L A D V I T V A E G D A L A			
UniRef90_N8QV03	S T H G K V I T L E I I D A N R S N E A K R H V T E L A L N E V V I D F W I			
UniRef90_U5WQ91	N D G V L T T I D I E P E H R L A K Q A F H E A G I G P S R T R L I G G R A Q			
UniRef90_D0YT7	T E G G V L T T I D S E A Q I H Q I A R E L L I S R S G V P L T R V R M I T G R A L			
UniRef90_UPI00047E95BB	D I H V T T I E K D E A S H N I A N E N I N N S P Y K D R I T T I L A D A K T			
UniRef90_R9AWA2	V T Q G Q G L T T L E I D A V R S Q Q A Q Q F E G L D P L I Q F W V			
UniRef90_KORWP1	E T M H V F T T E I N P E S V R V S E S L V R M S G L E D L I S I N Q I H F N G			
UniRef90_C3ALM8	T K G N V T T V E L S S E R V A E A L M N F E K A N L R Y R I D I H N Q E A G A			
UniRef90_A0R265	G G G T V I T T E L Q P G K A A A A Q R S F D T A G L G D L I D R I G D A R D			
UniRef90_UPI000346781A	P D G I L T T V D T N A A Y Q D Y A R S T F S R A G F G P G R A R L I R G			
UniRef90_G3JT86	E N G K V T G L E F D P A F A K Q A E E T F A K Y G V E N V E I L V G			
UniRef90_UPI000475CD47	P E G I L T T V D V N G A H Q E F A R G L F S R A G A G A G R A R L I R G S S R			
UniRef90_UPI0003B44D6A	N I H T T L D T E S E A Q H A A R D F F T K A G A R P G R V R L I N G			
UniRef90_D6TTW3	Q T G R V V V S I I D R D P H K H E L A D A N R Q A G L R E F V D L K C G N A T E			
UniRef90_W6U333	E A D V I T T E G C P E T A K V A H N N F K E L D L E N V E L Q V G N F D V L			
UniRef90_A6SWS8	G G G R L I T T E F E P S K V L V R A R A N L E A G G L G D L V E I R E G D A L H			
UniRef90_D5WDS5	I S G S V V A T E L D A G K C A Q L R A H V E M A G V H A Y V D V R E G D V F E			
UniRef90_UPI0004288FD1	G E G V L T S I D F D P E N Q R A R K A L A E A G V A A G R A R L I T G R G L			
UniRef90_M6DPV5	F D G K L L C D L S E E W T N I A R K Y W K E N G L E N K V F L K L G C A L E			
UniRef90_N9N4C9	A A Q A V D G N V Q T V E I D P L R S A Q A K K Y A E E F E L E Q Q I D F W V			
UniRef90_D8JNL4	S T Q G K V T T E I I D A N R S T E A K R H T T E L A L D E V V D F W I G D A A D			
UniRef90_A0A014N0V2	R V T S I E V D A R H R D V A L E N L R A A G V D G A E V V V L G D A L D			
UniRef90_A0LMF3	T S R N L V T V E V S E E K V R L A R E T I R L T G L E S I V K C I R G D A L E			
UniRef90_D6Y7K2	P D G T L T S V D V E P E L Q R M A R Q T F A Q G F T G S R V R L I G G R A L D			
UniRef90_UPI0003449E4C	E G R P L L T I E H S P H K A A Q A K T N L R A S G L Q D W V Q V I E G D A T S			
UniRef90_M0BTV2	E R I D A A V D Y L E R D G I D V T V D P T T I D A E P T G D G T V F I V E			
UniRef90_A9AMQ1	G G G T L I G S E F E P S K V A K A R A H L A A G G V D D L V E I R E G D A L Q			
UniRef90_UPI00026C733B	P D G V L T T I D P E V E N Q R A A R E A F A E A R I R T P R V R T I A G Q			
UniRef90_E6Q3C5	Q G G S L T S V E P I T R Q S E A R E T I A A L G L T N W V E S V L G D A K D			
UniRef90_UPI00047C357C	P Q S V L T T I D S D V D H L R T A R E A Y S E A G V P G N R T R T I S G			
UniRef90_Q0B6B6	D N G G G R V I T S E F E A S K V A R A R A N L A A A G L A D L V E I R E G D A			
UniRef90_H1VSN2	K V T S I E I D P K H R D V A L Q N V A G L D V E I I L G A A L D			
UniRef90_A0A059CV52	K M A R S A I I G L S F I I K K A N I E H K I N F V K S Q A L P V			
UniRef90_A5BVM6	D D G K I I A I E I D R H T H E M G L P V I K K A G V E H K I N F I E S Q A L P			
UniRef90_S8A857	G Q G K V I G T E H E P D K A K E A R K Y W N E C G E I V S N I V D L I R E G D L			
UniRef90_B5HA09	P D G V L T T V D L E P E R Q Q F A R E A F R A A G F G N R A R F I P G R A L D			
UniRef90_F4DEA7	R E G H V T T I I E L L D E D K R V L A H D N F Q R A G L A P W V T L L A G D A S E			
UniRef90_Q7NNT2	G G G R V I G T E I V P E K V V Q A R K H I A Q A G L G S S V E I R E G D A L V			
UniRef90_S3C1T9	P D G V L T T V D L D P E R Q Q F A R E A F R A A G F G N R V R F I P G			
UniRef90_UPI00029AE4DD	D G E V I T I E G C P Q T A E V A K H N F Q D L D L T N I E L H V G N F			
UniRef90_Q13WH2	T G G V V V A T E L D P A K C A H R E H V A T A G V D A Y V D L R E G D V F Q			
UniRef90_M7PWP95	T M C N P T N R I Q T L E R S K I I Y Y Q L A K K I F S H T P F N I E V			
UniRef90_UPI00036ED18A	V D G V L T T I D S E R E H S K I A R N I F E E A D I A V T K Y R I I I T G K L I			
UniRef90_E8YNW4	T S G M V V A T E C D L A K F Q A N L K A A G L S A Y V D L W E G D A F E			
UniRef90_A0A010PN53	P D A V L T S I D Y E A D H Q A A R E T F R D A R L P S A R T R L I T G			
UniRef90_UPI0004632DBE	D F K V I E T I E L N D E R Y L E A L K N I D N E L L D E K I I I H H G D A L			
UniRef90_U4LP85	G G G R V I A T E K E G K K A E K A R E Y W K E A G E E V E K H I E L R E G D I			
UniRef90_L9WEY2	D D G E L V L T E V D A D E L E L A R E Y L R E G G Y D F E T R Y E L G D A M A			
UniRef90_M2PNV9	G I L V E S I E R D D L R Y Q Q A L D N H K Y H L T D R I H L I H A D A L			
UniRef90_UPI0003B48E41	H D G I I T S I I D T E G D R Q S A A R Q V F T S A K I A S N R F R L I A G			
UniRef90_R5Q9A5	D F V V E T I E L D D A R Y L E A I Q N K E Q Q L E D Q I E I H H D D A L T			
UniRef90_G4VHP2	P D G R V V L A L D L I T D E Y K D Y C L P A W K M A G V E S K I D F R H G P A V E			
UniRef90_UPI000477590A	P D G V L T T V D T E P D R Q Q L A R T A Y R E A G F G N R A R F I P G R A L D			
UniRef90_W9ARG8	D N G R V I T T E L S K A K I A A A S Q T F A E T G L A D D I T V V E G D A V T			
UniRef90_UPI00047E1363	D Q R G T V S V D V D G E A Q R M A A A T L D R V G L R D Q V Q F R C A D G G A			
UniRef90_UPI000262A974	A A T L T S I E I E P E H L R E A R A V F A D A G V V A A R L R L I E G D A R H			
UniRef90_U4TC24	H Q S N V D I S L D I D E S R S G I A K A H L Q N T G L A A G V S L L V			

UniRef90_U1YA08
 UniRef90_Q5FTI4
 UniRef90_N8ZSE7
 UniRef90_UPI0003B59EFB
 UniRef90_F2L9N3
 UniRef90_D01656
 UniRef90_UPI000479E846
 UniRef90_UPI0003FC7B31
 UniRef90_B2B6I4
 UniRef90_M0QJ72
 UniRef90_C7LN21
 UniRef90_UPI000410FD6D
 UniRef90_UPI000441435D
 UniRef90_C5BZ52
 UniRef90_S5RY59
 UniRef90_G2TB81
 UniRef90_UPI00035EB949
 UniRef90_W1TSQ6
 UniRef90_E0XY62
 UniRef90_E1Z7I0
 UniRef90_Q6HQI1
 UniRef90_U1PN47
 UniRef90_M4RZ13
 UniRef90_X5KVQ8
 UniRef90_A6W749
 UniRef90_E3R151
 UniRef90_UPI00034ABB1C
 UniRef90_R7WLB1
 UniRef90_UPI00047E8A30
 UniRef90_V8CYZ5
 UniRef90_UPI0003800372
 UniRef90_UPI000474F399
 UniRef90_UPI000376F49E
 UniRef90_G2NXU7
 UniRef90_A9VFU4
 UniRef90_B2HNL1
 UniRef90_N8QV03
 UniRef90_U5WQ91
 UniRef90_D0YT87
 UniRef90_UPI00047E95BB
 UniRef90_R9AWA2
 UniRef90_KORWP1
 UniRef90_C3ALM8
 UniRef90_A0R265
 UniRef90_UPI000346781A
 UniRef90_G3JT86
 UniRef90_UPI000475CD47
 UniRef90_UPI0003B44D6A
 UniRef90_D6TTW3
 UniRef90_W6U333
 UniRef90_A6SWS8
 UniRef90_D5WDS5
 UniRef90_UPI0004288FD1
 UniRef90_M6DPV5
 UniRef90_N9N4C9
 UniRef90_D8JNL4
 UniRef90_A0A014N0V2
 UniRef90_A0LMF3
 UniRef90_D6Y7K2
 UniRef90_UPI0003449E4C
 UniRef90_M0BTV2
 UniRef90_A9AMQ1
 UniRef90_UPI00026C733B
 UniRef90_E6Q3C5
 UniRef90_UPI00047C357C
 UniRef90_Q0B6B6
 UniRef90_H1VSN2
 UniRef90_A0A059CV52
 UniRef90_A5BVM6
 UniRef90_S8A857
 UniRef90_B5HA09
 UniRef90_F4DEA7
 UniRef90_Q7NNNT2
 UniRef90_S3C1T9
 UniRef90_UPI00029AE4DD
 UniRef90_Q13WH2
 UniRef90_M7PW95
 UniRef90_UPI00036ED18A
 UniRef90_E8YNW4
 UniRef90_A0A010PN53
 UniRef90_UPI0004632DBE
 UniRef90_U4LP85
 UniRef90_L9WEY2
 UniRef90_M2PNV9
 UniRef90_UPI0003B48E41
 UniRef90_R5Q9A5
 UniRef90_G4VHP2
 UniRef90_UPI000477590A
 UniRef90_W9ARG8
 UniRef90_UPI00047E1363
 UniRef90_UPI000262A974
 UniRef90_U4TC24

130 140 150 160

Sequence logo showing conservation of amino acids at positions 130, 140, 150, and 160 across UniRef90 entries. Positions 130, 140, and 150 show high conservation of Cysteine (C), while position 160 shows high conservation of Alanine (A).

170 180 190 200

UniRef90_U1YA08	S K G T L V V N D A L D K D R V S N P A A L R Q V G K S I R E D D R L V S A M L
UniRef90_N5FT14	P G A I I V A D N M R V I P G G E D A R K Y Q Q A V R A I P H M L S V P L
UniRef90_N8ZSE7	P G G T L I I D N V I S H T A E P L L E L I K Q D E N F M S T I L
UniRef90_UPI0003B59EFB	R G G M L V V A E A L W H D R V A D P A A M R E L G R S V R E D E N L V P S L L
UniRef90_F2L9N3	P G S I V L A D N M Y T A G E A V Q P F K R Y L D A H P R I S S T T I L
UniRef90_D01656	T G G L L V C D N A T S H A D E L S E F R A W V S S Q Q N L S V S L V
UniRef90_UPI000479E846	P G A L I V A D N A D Y S P E Y L E R V R A P A S G Y L S S V
UniRef90_UPI0003FC7B31	I G G V L A V T R A L W N D H V A D P A A A R E L G K A M R D S D A L L T T L L
UniRef90_B2B6I4	A N G I I L C D N S L
UniRef90_M0QJ72	S G T L I L A D N A E S P D A D Y L E H V R D P A N G Y T S V N L P G
UniRef90_C7LN21	P G G L L V A D N T A F A D A D A F N M L I Q D G G R W D A V N I Y A F L N H A
UniRef90_UPI000410FD6D	R P G L L A I D N A I S H A H V D F A K V V D A D D R A L T A L D Q T
UniRef90_UPI000441435D	R G A I V V A D N T V S H A Y A E L L A V V R A P D G P F R S L I L
UniRef90_C5BZ52	P R G A L V V T D A L W Y D R V A D P A A M R E L G K S L R A D E R L Q S A L L
UniRef90_S5RY59	P G A L I V A D N A D V S P E Y L A R V R S
UniRef90_G2TB81	P G A I I V A D N A D H S P D Y L S L V R A D Q G Y V S T S I G A E I E L
UniRef90_UPI00035EB949	P G G L F V C D D V I W P Q V R P S K D R V D K F R A E I H G E P D F H V S L L
UniRef90_W1TSQ6	K N A T I L A D N V L F R G Y V A D D S D V P R R M R T I A H R M R A F L A Y L
UniRef90_E0XY62	P G G L L V T D N V T P S G T D P F I K V L R E H P L M E T V S V
UniRef90_E1Z7I0	P G T M V A D N V M V P G T P D Y L E H V G A
UniRef90_Q6HQI1	P K G L L V V D N A T S H A S E E F I K M I E E D K M F E T V
UniRef90_U1PN47	V G G V V V A D N V T R G G V A D Y L Q S V R A A D D F E T L V L
UniRef90_M4RZ13	T G A I V I A D N A D F S P E Y L E H V R S S L N G Y M S
UniRef90_X5KVQ8	T G A L L V A D N T S M D D T R P Y L D H V R D S A N G Y V S V N F L A
UniRef90_A6W749	P G G L L V V D D A L W K G R V T D P A A L R E V G R T V L E D G H W Y P S L L
UniRef90_E3R151	P K S V I C I D N I V R D G F L A D D
UniRef90_UPI00034ABB1C	P G G V V V F N N V L T A P S E P D E T A V R E V V M Q R M R E D E A F I P L L V
UniRef90_R7WLB1	A G G L I V F H A N A G N G G R V A D P T A L R E A A K A L A A D D S L L Q V F V
UniRef90_UPI00047E8A30	P G G L L V V D N C V S H A D Q V A D P A A A R E G A L L I A A D D T L L P V V I
UniRef90_V8CYZ5	P G G V V C F E G V F A E G R T A D A A R V R E L L R A V R E S A E W L P T L L
UniRef90_UPI0003800372	P G G L V V F V A G V F A G G Q P T E V L K L R E L L R A V R E S D A L M P A L L
UniRef90_UPI000474F399	P G A L V I A D D A D Y C P Q Y L D H V R S P S G Y M S T
UniRef90_UPI000376F49E	P G G L V C F E G V F T N G R T V D T E V L R V R E L L R T V R E S T V L S L L
UniRef90_G2NXU7	P K G F L V I D N A T S H A L A G F I K M I E E D V T F E T V
UniRef90_A9VFU4	A G A L I L A D N T E S A G S R P Y L D Y R D P A N G Y V S F N F P A
UniRef90_B2HLN1	P G G V L I I D K V I S H A A E P F L S L I K Q N A D F M S S I L
UniRef90_N8QV03	P G G V I V V H R A A L G G R A G D P A A V R E A A R L I A E D E R L T P A L V
UniRef90_U5WQ91	P G G V L V V P H A L W R D S V A D P A A L R E V L R A I R E S D S W T E N L L
UniRef90_D0YT7	D D A L I I V D N I F I R G L R K L R D K V R E F N Q N M K D S E Y S T S Y L
UniRef90_UPI00047E95BB	Q G G I L I V D N V I S H A E E V K A F T H L V K E E G N Y I L S T L
UniRef90_R9AWA2	N G T R V V A D N V I V F A Q I S D Y L Q Y V Q Q R Q R
UniRef90_KORWP1	P Q G F L V I D N A T S H A L A E F I Q M I E E D A T F E T V
UniRef90_C3ALM8	A G T L I L V D D V L D F G G R D L H G A L L D H L A T C G H Y R T L T
UniRef90_A0R265	P G G M A I V F H G A M V T S S E P D E T A V R E V M R R V R E E E G F V P M L M
UniRef90_UPI000346781A	A G G L I I G D N V I L R C G K S E D I Q S L R K Y N D A V S G S E R L E S W L C
UniRef90_G3JT86	P N G L V V F H N A M A G S P E P D E T A V R E V I R L V R E D E S L V A L L L
UniRef90_UPI000475CD47	P G G L I V I L H A L Q G G K I A D P A A I R G L I K D M N D S E N I D T T L V
UniRef90_UPI0003B44D6A	P D V F L L A D N V I S H P D E G Y L K A L D E L P Q F E K L V L
UniRef90_D6TTW3	E N S L L I F D D I Y W S G M K E A W Q E I K N H P E V V V T D L F W I G L V
UniRef90_W6U333	P G A I V V A D N A N Y C P E Y M A Y V R S G T N G Y R S V G
UniRef90_A6SWS8	P G S I V L A D N M Y T D A V R P Y K H Y L D D D P R F S T T L N F E
UniRef90_D5WDS5	D G G V L A F G N L L R G G T Q E E H A G L R Q L T E V I R V D P R L V P F L L
UniRef90_UPI0004288FD1	G L L T I A D N V L W G G S V S D P S H I K R F N E L V Y N D P L V D V S L V
UniRef90_M6DPV5	A G S T L I I I D N V I S H A A E T F L E L I K H D E H Y M S T T L
UniRef90_N9N4C9	P G G V L L I I D K V I S H A A E V S S F L S L I K K D E N F M S S I L
UniRef90_D8JNL4	R G G A I Y V D N A V Q S M V E D G E D G V T R E G S L V A R D E R V R A A L V
UniRef90_A0A014N0V2	K G G L L V A D N A I S H G E L L G P F I E T A L H D E R V D A M V V
UniRef90_A0LMF3	R G G V V A F N G P F Y H D Q D L E P I R R D P D T L V
UniRef90_D6Y7K2	D D A L L L I A D N A L S H P D E G Y M D S V E A L Q E F D T V T V
UniRef90_UPI0003449E4C	A G G M V V A D N L L R G G R V A A V A A L R E F N E V F V D H D A L E A V I T
UniRef90_M0BTV2	P A A L I V A D N A D Y C P E Y L A R V R D P R N G Y L S V
UniRef90_A9AMQ1	P G G V L V I P H A L F H D R V A D P A A V R G G L R A V S E A E D L V P A L T
UniRef90_UPI00026C733B	P G A V V V A D N I L S H G L F D Y V I A H V R M R S D V E S I T L
UniRef90_E6Q3C5	P G G M L I V N D A L D A D R V S D P A I L R Q V G R T V R D N D Q L F S T V L
UniRef90_UPI00047C357C	A G A F V V A D N A E Y S P D Y L A Y V R A P Q N G Y L S V
UniRef90_Q0B6B6	P K G C I Y V D N V V W S G K D S L L T H V G K D K R V K A T T A H T A S R G R
UniRef90_H1VSN2	A R G G V I M Y D N T L W G S T I V T L W K D T I K F N K M M V G N P R V D I P Q V
UniRef90_A0A059CV52	I D G V V V C D N V F R R G C V A M P E E L
UniRef90_A5BV6	Q G A V I A L A D N T I G S G Y K E L L D Y M R A P G S G F T N L T L
UniRef90_S8A857	P G G L V C F E G V F A D G Q P A E V L R V R E L L R A V R E S H E L L P T L L
UniRef90_B5HA09	P R G G L L V V D N A I S H R S E M V E W M N E V G Q D P A F A T S L V
UniRef90_F4DEA7	K G G I V V A D N V F K A A L R P Y V E F L R D P V N G Y R S T T L N L
UniRef90_Q7NNT2	E N S L L I F D D I Y W S G M K E A W E E I K N H P D V T V T I
UniRef90_S3C1T9	E G G L L I C F A G V F A E G R I G D V E V L R L R E L L R T V R E S T V L S L L
UniRef90_UPI00029AE4DD	P G S I V L A D N M Y T D A V R P Y K Q Y L D D N P R F S T T T L D F E
UniRef90_Q13WH2	P N N G F I I C D N L N F H N V C K I L K K I Q A F K I Y L K N N Y F F K T T F I
UniRef90_M7PW95	P G G L L V I D H V L S G G T Q R D P E S I R D A L K V I K E D A R W A A S V I
UniRef90_UPI00036ED18A	P G G L L V I D H V L S G G T Q R D P E S I D D D P R F S T T T L D F E
UniRef90_E8YNW4	D K G I C I V D N L L D F H G M I F D I D N I R N R N D W I F N N D Q Y D V E Y Y
UniRef90_A0A010PN53	P S G G L L I V N D A L D H D R E E T T Q R M R E L E R L V L E E D R L R T A M L
UniRef90_UPI0004632DBE	K G A V V I A D N T Q F K M P E F L E Y L D Q P E N G L K H M T V
UniRef90_U4LP85	G V V V A D N A I T Q G I V D Y L E C V R S D P A F E T I V L
UniRef90_L9WEY2	E D G F V L A D N L L D F H G M I F D I E H I K N R N D W I F N H D E Y Q A H Y I
UniRef90_M2PNV9	H G G M V V V N D A L W R G L V A H S S N E D D E T V I I R E A L A S V L D L L
UniRef90_UPI0003B48E41	K N G I C I V D N L N F H G M I F D I D K N R N D W I F N H E E Y Q V T Y Y
UniRef90_R5Q9A5	P R G G I I A D N V
UniRef90_G4VHP2	P G G G L V C F E G A F A Q G R S M D A A H L R E L M R T V R D N A A L A P V L L
UniRef90_UPI000477590A	S G A L V I A D N T E M S D T K P Y L D Y V R D P A N
UniRef90_W9ARG8	A G G L L V I D N V L S H P A E V A E V R G R I E A D P H L E S T V A
UniRef90_UPI00047E1363	P G G C V V V P G A F A H G R V P D P A A M R D L L A L V A E S P A I A P I L S
UniRef90_UPI000262A974	L G S V L I V D N V L S H D D E D F L A V F E N N S R Y I C H T L
UniRef90_U4TC24	

210

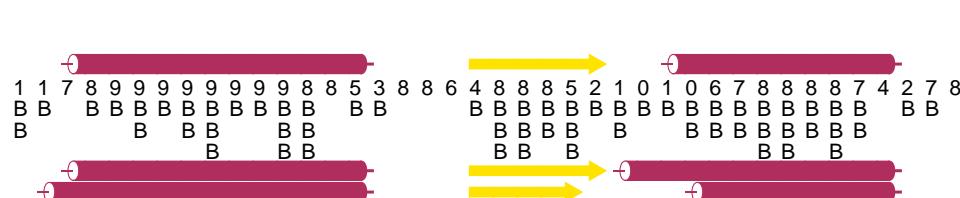
UniRef90_U1YA08	P T G D G L V A V K K
UniRef90_Q5FT14	P V I G T G L E V S R Y L
UniRef90_N8ZSE7	P V G A G L C M V V V K
UniRef90_UPI0003B59EFB	P V G G G L L V A I
UniRef90_F2L9N3	D F E S G L E F A V V T G
UniRef90_D01656	P V I G K G E L L V Y K G
UniRef90_UPI000479E846	P F A E D V E L S M R L G
UniRef90_UPI0003FC7B31	P V G D G L L V A V R Q
UniRef90_B2B6I4	K V G D T V E L S
UniRef90_M0QI72	P E Q D G I C L A R K K
UniRef90_C7LN21	P Y S N G L E L S V Y L
UniRef90_UPI000410FD6D	P A G D G L L V A T R R
UniRef90_UPI000441435D	
UniRef90_C5BZ52	
UniRef90_S5RY59	
UniRef90_G2TB81	
UniRef90_UPI00035EB949	D W G P G I C V A T R
UniRef90_W1TSQ6	K T G D G F A I A R R K G
UniRef90_E0XY62	P I G R D I E L S V K
UniRef90_E1Z7I0	
UniRef90_Q6HQ1	
UniRef90_U1PN47	P V G S G L S V S T K
UniRef90_M4RZ13	P F G G D V E L S V R L G
UniRef90_X5KVQ8	R D S D S M E L S C R T
UniRef90_A6W749	P T G D G L L L A V K H G
UniRef90_E3R151	
UniRef90_UPI00034ABB1C	P V G E G L L A A I R
UniRef90_R7WLB1	P L G D G L L C A S K I G
UniRef90_UPI00047E8A30	P I G A G L L L
UniRef90_V8CYZ5	P L G R G L L A A A K
UniRef90_UPI0003800372	P V G D G L L C A V R R G
UniRef90_UPI000474F399	P A G D G L L C A A R R
UniRef90_UPI000376F49E	P F A D D I E L S M R
UniRef90_G2NXU7	P V G D G L L C A V K R G
UniRef90_A9VFU4	
UniRef90_B2HLN1	R S S D S M E I S C R T
UniRef90_N8QV03	P I G A G L C L V V L K
UniRef90_U5WQ91	P L G D G L L A A V R
UniRef90_D0YT87	T C G D G L L V A I K
UniRef90_UPI00047E95BB	N I G D G L L V
UniRef90_R9AWA2	P L G A G L L V
UniRef90_KORWP1	
UniRef90_C3ALM8	
UniRef90_A0R265	P I G D G I E A C V R L S D G A
UniRef90_UPI000346781A	P V G S G L L A A I R
UniRef90_G3JT86	P L W D G V N L A R
UniRef90_UPI000475CD47	P V G S G L L A A I R
UniRef90_UPI0003B44D6A	P I G D G V L V A R
UniRef90_D6TTW3	P I G K G L S V A Y R
UniRef90_W6U333	Y F R K G
UniRef90_A6SWS8	L A D D V E F S I R L
UniRef90_D5WDS5	
UniRef90_UPI0004288FD1	P F G E G L L I A A K R
UniRef90_M6DPV5	P I A D G V S L V R K K
UniRef90_N9N4C9	P I G A G L C M V I L K
UniRef90_D8JNL4	P V G A G L S L V V L K
UniRef90_A0A014N0V2	P F V D G F L L A V V L
UniRef90_A0LMF3	P V G S G V L V C R R
UniRef90_D6Y7K2	
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UniRef90_M0BTV2	P Q G D G T G V A V K T
UniRef90_A9AMQ1	P F G A D V E L S M R I
UniRef90_UPI00026C733B	G S G D G V L A A V H R
UniRef90_E6Q3C5	P I G M G L E V T R F R
UniRef90_UPI00047C357C	P T G T G L L L A V K R
UniRef90_Q0B6B6	P F G G D V E L S M R
UniRef90_H1VSN2	T I L D G F L L A V V
UniRef90_A0A059CV52	P P G D
UniRef90_A5BVM6	
UniRef90_S8A857	P Y H K G L E M S V Y
UniRef90_B5HA09	P V G D G L L C A V R R
UniRef90_F4DEA7	P V G K G E W L V V R L
UniRef90_Q7NNNT2	K G G T E F S V K I R
UniRef90_S3C1T9	P V G D G L L C A V K R
UniRef90_UPI00029AE4DD	
UniRef90_Q13WH2	
UniRef90_M7PW95	N V G D G L S I S C K
UniRef90_UPI00036ED18A	P I G A G L L V A N K L
UniRef90_E8YNW4	
UniRef90_A0A010PN53	G A G T G L L V A A R R
UniRef90_UPI0004632DBE	H I G D G I C V I R K K
UniRef90_U4LP85	P F S N G L E V A V Y L
UniRef90_L9WEY2	P L G E G I A V S Y R
UniRef90_M2PNV9	E L G D G L C L I T R K
UniRef90_UPI0003B48E41	P V G G G L L A A I K
UniRef90_R5Q9A5	G I G D G I C V I K R K
UniRef90_G4VHP2	
UniRef90_UPI000477590A	P T D D G L L C A V R R G
UniRef90_W9ARG8	
UniRef90_UPI00047E1363	P T A A G L L L A V R R A P A S
UniRef90_UPI000262A974	P A G D G L L T L V R L D G Q T P D
UniRef90_U4TC24	D I G A G L F M A V C Q E P

The figure displays a sequence alignment of UniRef90 proteins, focusing on the first 40 amino acids. The alignment shows high conservation of the sequence D K A D A A L H W S R E Q A R E A G I R A across many entries. Other conserved motifs include Y R Q F Y G L L K D I P L P and L Q E I K T Y A I L H K I P I. The alignment also highlights regions of divergence, such as the N-terminal region where some entries start with A K A W D Y V E E H A A D R Q S N E and others with S L D D R L V E H V V T T A E G G S. The C-terminal region shows varying lengths and terminal sequences.

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm

UniRef90_R4LRM9
 UniRef90_I2NI97
 UniRef90_B9L4M9
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	50	60	70	80
V S P G A G S V L	S V L A A A G S A K A V	V E I G T G T G V S G	V W L R G M R	
A P Q Q G K F L	Y M Q A L A S G A K N I	V E F G T S Y G I S T L	Y A A A A K R	
T G A F L	Y G V L L A L R P P L I	F E A G S A V G Y S T I	W L A L A A R	
V S P A T G A L L	R L L V S S T G V A S I V E	V G T G T G V S G I	Y L L H G M R	
V S T G T G T A L	R L L A A T A D A K A V A E I	G V S G I Y L L L A G A	I G T G T G V S G I	
L S P A T G H F L	T A L S A M G V K T M A E I	G V S G I Y L L L A G A	I G T G T G V S G I	
V S A E T G R F L	R N M V L A Q R P T R I	L E L G S S C G V S T L	Y F A D A L R	
V S R E T G N L L	Y M L T R S T R A Q H I	L E E F G T S F G V S T L	Y A A L R D N	
I H D E T K L F L	E K M I T E N D F R D I	L E I G T A I G Y S S L	S M S N E K N	
F L T F I I A K T I K A E N V V E	I L G T G T G V S G I	S S L L Q G M T	S S L L Q G M T	
C P P E G R T I	Y A L V R A I R P K V V L	E F G T A H G F S T L	H I A L R D N	
S A A M Q A A L L	A V L V R L T N A R S V I A	V G T G S L V E T L	E L V R G L D	
V A P D A G R L L	Y S L S V R A I K P R T I V E	Y G L S Y G I S T L	H S A A A I R	
V G V A T G G F L	T V L A A I S G A R N L V E	I G T G V G I S G T C L L R G A G	I G T G V G I S G T C L L R G A G	
S D L Y G S L L	K T L V A S K P R G R F L	E L G T G I G L S L S W M T D G M D	S L S W M T D G M D	
V S P E T G K F L	R N M V L S Q R P A R I L	E L G S S C G V S T L	Y F A E A L R	
L G D E K G E L	I S S T V A M T D R H I	L E L L E L L G S H S G D G T L R F L S G A G	L E L L E L L G S H S G D G T L R F L S G A G	
I E P E S A E F L	S L L V K T K Q A K R I L	E L G T S N G F S T I W L A E A V S	E L G T S N G F S T I W L A E A V S	
V S P A V G A L L	A L L A R A T D A R A V V E	I G T G A G G V S G L W L L A G M A	I G T G A G G V S G L W L L A G M A	
S W H E V V V Q L V Q T L	M S Y R P S R C L V I	G V F T G L G L L G V A E R V D	G V F T G L G L L G V A E R V D	
S D L Q T G S L L	R T L V A T K K E G R F L	E L G T G T G L S L A W M V E G M S S	E L G T G T G L S L A W M V E G M S S	
K N K S L D F L	L Q I N Q F K Q N I L	E I G T A I G Y S T L S M	S L S M	
F P H A E G S G V L	A A A V D A R R I L E	E L G T A L G Y T A L L W L A C G A K	E L G T A L G Y T A L L W L A C G A K	
V S R E V G R L L	H L L A F A A R A R T V V E	F G T S F G I S T L F L A A A V R	F G T S F G I S T L F L A A A V R	
S S P L Q G A T F K F I	A D W V Q P K R V L L E I G C	F C T F G F S A M A W Y E T V G	F C T F G F S A M A W Y E T V G	
P G A G T T L R F L	A A T V A A R A V V E	I G T G S G V S G L Y L L R G M A	I G T G S G V S G L Y L L R G M A	
M D D G I D F L T	H Y I K E N N V K N I L	E I G T A V G Y S S I K M A L V D N	E I G T A V G Y S S I K M A L V D N	
Q E D G I N Y L C	D Y I K K H R I Y N I L	E V G T A I G Y S S I R M A L T G E	E V G T A I G Y S S I R M A L T G E	
I A R E Q G V F S Y L V A R S S A S R I	V E E F G T S F G V S T I Y L A A R D N	S A I Y M A L R D M	S A I Y M A L R D M	
V S R D F G R F L	Y M C A R T C K A A R I	V E E F G T S F G V S T I Y L A A R D N	S A I Y M A L R D M	
V S P A V G A L L	A L L A R A C D A R A V V E	I G T G A G G V S G L W L L N G M A	I G T G A G G V S G L W L L N G M A	
S D L H I G S L L	Q T L I A S A K A N S R F L	E L G T G I G L S L S W M I E G M D	E L G T G I G L S L S W M I E G M D	
V S P Q L G R F L	Y S C V R A C K P T R I	V E E F G T S F G V S T I Y L A A R D N	S A I Y M A L R D M	
S D I Q T C S L L	K T L A A S K P A G K F L	E L G T G T G L S T A W I L D G M D	E L G T G T G L S T A W I L D G M D	
S D L Q T G S L L	K T L V A S K P P G G R I	E L G T G T G L G T S W I L S G M D	E L G T G T G L G T S W I L S G M D	
D E N K A H Y V Y Q L A R A T G A T T I	V E A G T S F G V	S T I Y L A A A A A	S T I Y L A A A A A	



	90										100										110										120									
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UniRef90_12NI97	N	G	R	V	I	T	C	Y	L	P	H	K	A	A	A	K	H	F	Q	E	G	A	L	D	Y	I	E	L	R	G	D	A								
UniRef90_B9L4M9	Y	G	G	R	V	I	G	S	E	I	P	R	E	V	R	A	A	N	L	A	A	G	L	Q	D	V	A	V	L	E	G	D	A	A						
UniRef90_D0WNP0	G	D	V	T	L	T	S	I	D	V	E	R	E	A	Q	H	A	R	E	A	F	S	K	A	G	V	R	S	G	R	T	R	L	I	N	G				
UniRef90_L8EMG4	P	D	G	V	L	T	T	V	D	L	E	P	E	R	Q	F	A	K	Q	A	F	R	E	A	G	F	G	N	R	A	R	F	I	P	G	R	A	L	D	
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UniRef90_UPI0002DC13A2	N	I	Q	T	I	E	R	E	Y	P	V	Q	L	A	K	E	F	L	K	N	L	S	H	E	I	E	F	I	W	S	E	A	F	F						
UniRef90_W2BRM4	G	E	V	V	L	T	S	I	D	S	Q	T	W	Q	A	Q	A	K	T	F	R	D	A	G	Y	A	Y	H	H	F	R	L	I	A	G					
UniRef90_Q2RMM0	G	E	G	H	L	Y	G	S	E	M	H	P	A	K	V	Q	A	R	T	N	L	A	E	A	G	L	A	W	V	E	V	L	E	G	D	A	S	E		
UniRef90_C4FFG9	G	E	G	Q	L	T	A	V	D	S	S	A	E	G	I	A	L	I	R	K	F	D	R	I	Q	D	E	T	D	T	L	R	A	V	N	A	T	A		
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UniRef90_C5LV93	R	R	K	V	S	I	V	S	V	E	N	P	H	W	L	Q	L	G	K	Q	L	V	S	H	A	I	R	D	P	S	T	G	K	A	R	H	S	L	R	
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UniRef90_I4WF49	K	A	R	V	D	T	L	E	R	D	P	L	H	V	A	M	A	R	A	I	E	K	A	G	H	A	R	I	N	V	H	E	G	F	A	G				
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UniRef90_L7J323	T	R	A	D	I	T	T	L	E	D	A	N	M	R	A	S	R	R	T	I	D	H	F	G	L	G	D	R	V	R	L	L	E	G	P	A	A			
UniRef90_D9V6W6	P	D	G	V	L	T	S	I	D	V	E	P	E	Y	Q	R	A	R	K	T	F	L	E	A	G	Y	P	P	R	M	R	L	I	V	G	R	A	L	D	
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UniRef90_R5TJE2	R	V	K	V	T	T	L	E	K	D	T	N	R	Y	N	E	A	S	N	I	K	M	E	L	D	K	L	K	R	K	N	A	I	N						
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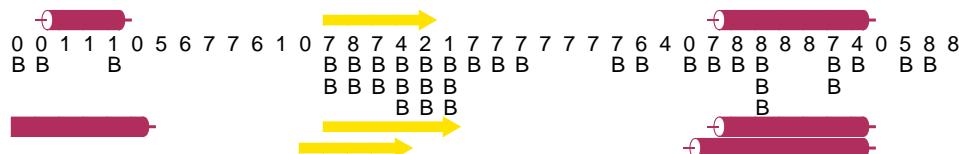
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Sequence logo showing the conservation of amino acids at positions 170, 180, and 190 across UniRef90 entries. The x-axis represents positions 170, 180, and 190. The y-axis lists UniRef90 entries.

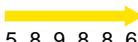
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jnet 

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