

QUERY	1	10	20	30	40
UniRef90_D3SL70	R F V G R D G A R L G D S V F V S G T L G D S R A G L E L L L M E K E E Y E P F				
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UniRef90_D3S1A7	R L L T R S G A K E G D L V C V T G D I G R A L A G L K V Y F D N L G V S P K T	L L L			
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UniRef90_E6W7Y2	R A L K R S G A K P G D W I F V T G T L G D S A A G L A L L Q H R Y R L P D P A				
UniRef90_J9E116	R P I L R S G A R P G D I L F V T G W L G G S A A G L D V L Q G K H S A S P V T				
UniRef90_G8R914	I V Y R S G A K V N D L I V V S G D L G G A Y M G L Q L L E R E K S V F Q S D				
UniRef90_F8D9J2	P V R R S G A E P G D L V C V T G T L G R S A A G L E L F R R A D R E D D A S				
UniRef90_H8GLC5	Q A L R R R S T A R P G D S I Y V T G H L G D A G L K I C Q G Y R C D R P E A				
UniRef90UPI00046A7215	K I V Y R N Q A Q P T D L I C V S G D L G A A Y M G L Q L L E R E K A V F E D A				
UniRef90_Q8X8E7	R A L T R S G A K P G D W I Y V T G T L P G D S A A G L K I C Q G Y R C D R P E A				
UniRef90UPI00036C8FD6	I V Y R D G A K E N D L I V V T G D L G G A Y L G L Q V L L E R E K A V F Q D M				
UniRef90_J7G9F9	R A L K R S G A K P G D W I Y V T G T L P G D S A A G L A I L Q D R L T V K D A D				
UniRef90_D2AVL4	P V T R S G A R P G D V A V T G R L G H A A A G L A L L H G G R A E P A A L				
UniRef90_B4EU21	A L L R S G A K I G D W I Y V T G F L G D S A A G L A V L Q N R L Q P S Q P E				
UniRef90_A4BXG2	I V Y R S G A K E T D L V V V S G D L G A A Y L G L Q V L L E R E K Q V F Q E N				
UniRef90_D5XCG8	K V I Y R S G A A P G D I I C V T G P L G G S A A G L Q L L N R D L E C P E E A P				
UniRef90_C2M7R2	K I V Y R N G A K E N D L I V V T G D L G A A Y M G L Q I L L E R E N E V F K E P				
UniRef90_E6SRL2	K V V Y R N G A R E T D L I C V T G D L G A A Y M G L Q L L E R E K S V D F A G				
UniRef90_D7JCQ0	K T V Y R N G A R Q T D L I C V S G N L G A S Y M G L Q L L E R E K R V F F A T				
UniRef90_W4LHY3	Q A I Y R S G A Q P G D E I W V T G T L G G A K A G L E V L H P E A V A G V P				
UniRef90_I3RGH2	R L L L R S G A K P G D L V C V T G D L G R P L L A L A L W L K G E K I P K E V				
UniRef90_K2PVK7	V V Y R S G A Q S N D L V V V T G D V G G A Y L G L Q V L L E R E K Q V F Q D Q				
UniRef90_D3V0W3	R A L R R A G A K N G D W I Y V T G T L G D S A A G L A L L Q D R F T V E D A I				
UniRef90_F4DAM0	R A L M R S G A K A G D G I Y V T G T L G D A A L A L S H L G K R T L N E N Q				
UniRef90_I4ANF4	K I V Y R N T A K K G D V L C V T G D L G A A F V V G Q I L L E R E K R V F I D A				
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UniRef90UPI00047D7254	I V Y R K G A K P N D L V V V T G D I G A A Y M G L Q V L L E R E K E V F K E A				
UniRef90UPI0003F7D6DC	I Y R D G A K P N D L V V V T G D I G A A Y M G L Q V L L E R E K E V F K E Q				
UniRef90_A8H1Q7	K I V L T R S G A K N G D W I Y V T G F L G D S A L Q D L L R N K A E A N A E D				
UniRef90_F8WWK3	K V V L R S G A Q E T D L I C V S G D L G A A Y M G L Q L L E R E K R I F K G E				
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UniRef90_Q3Z9F7	R A L T R S K A R I G D W I Y V T G T L G D S A A G L A I L Q N Q W E V A D P E P				
UniRef90_V3TY84	K I T Y R S G A K P N D L L V V S G D L G G A Y M G L Q V L L E R E K E V F K E P				
UniRef90UPI00047E460B	K I V K R S G A K Q G D L V C V S G D L G S S A F L G L T L L E R E K K I D L E N				
UniRef90UPI00036208A4	R A L R R G G A R I G D W I Y V T G T L G D S A A G L A L L Q Q R L T V D D A A				
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UniRef90_Q83BT7	F I K R S T A S K G D L I C V S G D L G G A Y L G L T L L M E R E K K I Y Q E G				
UniRef90UPI00040F6DE3	I V Y R K G S R P N D L L V V T G D L G G A Y L G L Q V L K R E K E V F K E P				
UniRef90_G2PQ34	K P V T R S G A R P G D V V A V A G R I G W S A A G L A V L G R G F R S P V				
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UniRef90_E1L8F6	P V T R G G A R P G D V V A F A G R I G W A A A G G W A V L A R G F R S P L				
UniRef90UPI0003623078	Q A L T R S G A R P G D D L L C V G G E L G N A A G A L P L V L G Q R G A E P A I				
UniRef90_F2KLS4	R A L T R S G A K P G D W I Y V T G T L G D S A A G L A V L Q Q R L T V N D A A				
UniRef90_I2BBS1	V I Y R S G A K E N D L I C V S G N L G A A Y M G L Q L M E R E K R V F E A G				
UniRef90_G5GAK3	Q A L R R K G A Q V G D G I Y V S G P L G D G A A A A A L V L V R G E L E T T P S E				
UniRef90_C5BS83	K A I R R D S A K A G D W I Y V T G S L G D S A A A G L D V I L N G N A P K N D T				
UniRef90_R1IZH9	R A L Q R H G A S V G D D C I F V T G S L G D A A A A A L F M Q G Q L P V A K S A				
UniRef90UPI000476A3A4	L V Y R S G A N D N D L L V V T G D I G S A Y M G L Q I L E R E K Q V F L S I				
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UniRef90_C8XF01	K M V Y R N T A K I G D L I C I S G D L G A A Y L G L Q I L E R E K Q L F L E A				
UniRef90_F4L485	Q A V T R S G A Q I G D W I Y V S G Q V G D A A A Y G L K H I G H P L Q				
UniRef90_G7GCQ2	Q A L L R C G A S A G D L I C V S G K L G D S R A G L E L L D I E Q P D A S				
UniRef90_S6GKE6	A I R R D G A R P G D R V C V S G P L G D A A A A G L A L I E G R V A G D G P A				
UniRef90_A4A6E1	U I R R S G A R P G D V V A V A G E L G R S A A G L A L L L G G S T D F P D L				
UniRef90_C1B2P1	P I R R S G A R P G D V V A V A G E L G R S A A G L A L L L G G S T D F P D L				
UniRef90_X0YWN8	K L L T R S T A Q V G D T I L V T G Y P G Q A A A G F Q L M L H S K P T K E L G				
UniRef90_W8VWQ6	K I V Y R S G A K D T D L L V V S G D V G A A Y M G L Q I L E R E K A V F K E A				
UniRef90_F0KHZ5	Q A V L L R S G A K V G D Y V C V S G Q V G D A A A Y G L Q H I G H P L Q				
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UniRef90_R5NVF3	Q I V Y R N T A K E N Q L I C V T G D L G G A A Y M G L Q L L E R E K T V F S S G				
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UniRef90_C6CBE3	R A L R R G G A K V G D W I Y V T G T L G D S A A A G L A I I L L R Q F S V I A N D E				
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UniRef90_V5E0J8	Q A L R R S S A K A G D L I V C V T G F L G D A G L G L K I K Q G Y H C E Q P D A				
UniRef90UPI00026C75EE	Q T V L L R S G A K P G D I I V L S G D L G A A A L K F L D H K E L S Q P E				
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UniRef90_A1TYX4	R A L Y R S G A K P G D I I V L S G D L G A A A G A A L H Y L A E T D P S P A				
UniRef90UPI000255A53F	K I T Y R N T A K E N D L L V V T G D L G A A Y L G F Q V L E R E R Q V F E E A				

QUERY

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

QUERY	90	100	110	120
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UniRef90_D3S1A7	L I A E M S K V R I T I Y A E K P	P R K E V F E V A E L L G V D P I N L	A L A N	
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UniRef90_E6W7Y2	H H C K A S S N V G C K L Y E D K I P	P D P M T Y E T A R E F G L D P T V I C A L	S A L L S	
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UniRef90_R7PTM2	E E A Q A S Q V N M S I V G E Q I P	P L S Q S T E I L S E K V G V S P I H Y A L L V		
UniRef90_W1RNC1	H H L K A S S D V G A V I D A A S L P	P I S A E L K Q W V Q P E S A V T T L A L T		
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UniRef90_E1L8F6	E E A K A S H V V S I V I D E A L I P	P L L H E E T Y K L A A V L H T N P V D Y A L L E		
UniRef90_UPI0003623078	H V A E A S S G V A I D L H S D R I P	G V P P Q R L L S E V A S A L G A N P W R W V L T		
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UniRef90_I2BBS1	H H L T A S S Q C G A R I D L L E A L P	P L P L S A L L R E S V P P A Q A L G W A L L S S S		
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UniRef90_C5BS83	H H C C S S S G V A G L V Y L E R I P	P F S A A V V N R L D T T A R Y Q A A L A T		
UniRef90_R1IZH9	H H L K A S S V A S A V I N A E T L P	P V S E E L L V A F A G G E E A A R K I A L L T		
UniRef90_UPI000476A3A4	H H L A R R S A V V G A V I D V D V S L L P	P P V S A E L Q A N A S A E Q A L S Y A L S S S		
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UniRef90_R5NVF3	H H C C K A S S G I I G C K I Y E E K I P	P I P I P I D Y Q T Y K M A E E L N M M A T V C A L S S S		
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UniRef90_UPI00047E020C	E E A K A S G V R L R I D S A K I P	P L P L H P A T K N F A R R R G E D P L A Y A W Y		
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UniRef90_UPI000248E61	H H C C K A S S L S A T I Y E E D K I P	P L P D P T V I S T C E E F N I D S T T V A L L S S S		
UniRef90_H2FZ43	H H T T A S S N V R A V L E E L E Q L P	P L P L S Q A M T D V T V E L E R A W Q L A L L S S S		
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130 140 150 160

QUERY	G G E D Y Q [L L F T H P K E R W N P F L D M T E I G R V E E G E G V F V D G K K
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UniRef90_D3S1A7	S G E E E Y E L L F T V P Q S D Y D K I L D S V I G Y V T E A A A I S K S G H E
UniRef90_U2HX50	G G E D Y E L L C F T V P E V N R G A L V P Y T C I G Q I A E A D G L T L N G K P
UniRef90_E6W7Y2	G G E D Y E L L F T V P E A F A R L L P V T A I G R C E D G D G V V M D G E V
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F A Q C E A A R L R P T P R P R V A L L G Q A L L P L A T A A Q D I S D G L A Q D L	
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V R L M S R R M D R P E P R N A L G R A I L P L A T A A I D I V S S D G F S Q D L	
H P D C L T A H R R P A P P Y P A P E A A R L G A T A M I D I S S D G L L Q D L	
L E A A C V R L H T P Q P Q V A L G L A L R G I A H S A L D I V S S D G L I G D L	

90 100 110 120

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UniRef90_A3QC64	H L K R S A V V G A V L V D V D R L P L S A Q M R E S L A E T E A L G Y A L T
UniRef90_F2I9T1	H C K S S K K G A M V Y N A K L P I D S L T S T T A L D F N L D P V T C V L N
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UniRef90_J3IAD7	H A L A S K V G V Q V E R S K L P L S K A L L A F L G Q S G A E Q A A L S
UniRef90_C4GK54	H L A A S R V V G A E I H A H A V P T L P E L R Q A L P E H I V H E L T L S
UniRef90_I4WZA7	H C T A S G V G A E I E A A W L P R S S A L L E L H D D T T A L H F A L S
UniRef90_A0A23Y7H6	H T T R S S G V R A E V D A D A V P L S P A L R A V L G R D A A R A C A L S
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UniRef90_I6ZIJ9	H A A A S F V R L A I E Q A Q V P L S D A L V R W A G R E R A L Q C G L A
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UniRef90_A0A23X6S2	H C R A S G V G A T V H L E R R L P L A D D T R K L A S L L R E P E Q L A A T
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UniRef90UPI00037C9ADC	H H H A E D S G V S V D V R T D W L E V P Q R L S E V A S A L G A N P W Q W V L T
UniRef90UPI0003705E71	H H V C R V S S G V G A Q V D L R Q I P P L S D A A R S W L E S G Q A T L E Q A V T
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UniRef90_E4LAE3	H E A A A S N V V I Q I D S T K I P I S K E T C E I S E K L G K N S L E L A D
UniRef90_F9N5J3	H E A K A S Q V I Y I D E S A L P I H P E V Q A Y C E S H Q M S P Y L P M W T
UniRef90_I3R5X9	H Q L A E A S D C G F E L D D W A L L P V H D V V S E V A T D D A D R R T L S T Y
UniRef90_Q6LU10	H H L K R S Q V S A V I D V D K L L P L S D E L L T F E S D R Q K A Q Q L A L T
UniRef90_V6L483	H H H A A A S R V R I D V R S R Q L D V P L Q M S D I G Q A V G V D P L Q W V L T
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UniRef90_B8KWB4	H H H A A A S G V A L T I D S T A I P S D A L R R A A P S E A R L F E W A L G
UniRef90_U7UNN4	H E A K A S K V R L L Q K D R I P C S E E L R A W S A E T G K D I W T Y V F N 4
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UniRef90_R41B5	H H V L K A S K C S A H N L D K I P P L S K I L S L H T S A K Q A L Y W G L T
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UniRef90_H8GAF5	H H H L A E A S V V G I D V S S E R L T V P E R L V D V A T A L G A D P M H W V L T
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130 140 150 160

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UniRef90_D3A762	L T S L G F D H F
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UniRef90_A5F5Z5	F E A K G F E H F
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UniRef90_K9XYF5	K I I R R S N A Q V G D A V I T G Y H G L S R A G L E L L L N G K N L D R Q E H				
UniRef90_A3WJC8	A I R R D Q A R A G D W I Y V S G S L G D A G L A R L R L Q G E L S A T H R H				
UniRef90_E6VYL8	R F L T R G N C A P G D I F T V G D L G L A R A G L M T L E A L G E K G R E A				
UniRef90_G7H4F3	P V R M S G A R P G D V L A V S G P L G A S A A G Y A V L S R G L P F A D A A				
UniRef90_F6AK23	Q A I L T R A G A R P G D L L C V G G N L G N G A G A L P F V L G E R A E Q A Q				
UniRef90_B4W5V8	A V S R A G A Q V G D L V F V T G T I G D G L L Q L Q A Q K L K L D A E R				
UniRef90_F7RY95	R Y L Q R S G A Q P G D R I Y V S G T L G D A A L A A Q Q G R V D L P D N L				
UniRef90_UPI000361DCDC	K V L L R S E A G E G D L I A V T G P M G L S A A G Y F A I T Q G I D A P R A L				
UniRef90_UPI00046A9090	R M I G R T G A R P G D R I L C V S G D L G A A Y M G L Q I L E R E K A V Y Y Q G				
UniRef90_F9DDL6	I V Y R K D A Q P T D I C V S G D L G A A Y M G L Q I L E R E K A V Y Y Q G				
UniRef90_F3KRE2	Q A I L R S G A R P G D D I W V S G T L G D A R A L L A I K A Q R G E R G P A				
UniRef90_UPI0003B5C0A4	R I L L R N G A K P G D V I A V A G R L G D A G A L T V L E H R S D A N K W S				
UniRef90_G8NRX3	R A L R R S G A R V G D L I Y C T G T L G G A T A F Q V Q D G R G G K T Q T				
UniRef90_V4ZYY7	A V D D R A G A T P G D R V V T G A F G R S A A L R C V L L F E R D				
UniRef90_F7FXN2	R L L T R K G A K P G D M V C V T G Y A G S A A L Y A L E N N I E T S E S L				
UniRef90_K4QLX0	A I L R R A A A Q P G D D V W V S G E L G G A D I A Y R L L D R Q L P A D P L R				

50 60 70 80

UniRef90_G4M7N6	V A A G W K [A L R P E P R V A L G L A L R G V A R A A L D I S D G L A G D L M
UniRef90_D3IDU8	V D E A R K R N F Q P D F A G K E Y L L Q R Q H P T A M I D I V S D G L S S E L I
UniRef90_R7C1I5	Y P A A A Q R M D R P Q A R L A L G R A L L S S A S A C A D V S D G L A Q D L G
UniRef90_UPI000375CF5F	V N A Q R A P E P P Y P A G P A A A L A G A T A M I D I V S D G L L A D L G
UniRef90_B0UU24	Q E Y L I Q R H [R P T P R V G L E L A S A E L A N A A I D I S D G F I A D L G
UniRef90_UPI0003B4FF91	A A G H P H [Y P E P R L Q G V G A E L M R R G M A T A A I D I L S D G V S T D L A
UniRef90_UPI000364B6A1	Q A H L A D R Y L L P Q P R T A A A R A V R T H A H A A L D I V S D G L C G D M K
UniRef90_B9TLX7	L T A L A T A M H H P Q P R V A L G L A L R G V A T A A L D I S D G L L A D L T
UniRef90_R4YU75	D S G L A S D Y F Y P Q A Q I N L G Q K L V G L A H S A L D I S D G L L Q D A S
UniRef90_UPI00036641C5	K D L S L A N L F K P K G R I K E A L M I S S F L N C C M D I V S D G L A I S L N
UniRef90_UPI000374341C	E A A L V Q A H C R P E P Q I A A G R L L A A G C R A L N D I V S D G V A S E A W
UniRef90_UPI00035DA3E9	R H R N V K K H E P I P R I N E S A S K R S L K V T S M I D I V S D G L T Q D L
UniRef90_A0A021W6Q0	H A R L F E R L Q R P T P R V A A G R A L G S L A H A C I D I V S D G L L A D L G
UniRef90_R6VZY7	K E Y I I D R Q L R P E A R G D I M A Q L H E H P T A M M D I V S D G L S S E I L
UniRef90_J0JGA9	L A A S R A A L E Q P W P P Y R L G H A L A G V A H A A I D I V S D G L V Q D L
UniRef90_UPI000362123C	R E P A C D R L F W P R A R L A L G R G L R N R A R A A I D I V S D G L L Q D L
UniRef90_UPI00041A846C	K E Y I I D R Q L K P E A R G D I L N Q L R E H P T A M I D I V S D G L A S E L K
UniRef90_F0F5R4	K E Y I L L Q R Q L Q P E A R G D V V E L L R Q H P T A M M D I V S D G L S S E L L
UniRef90_V8C2E2	A D E L E K A H Y L S T P R V L A G Q A L V G L A S S A I D I V S D G L L A D L
UniRef90_W7UA88	R R C H V A P E P P Y P Q G Q R V A A D G G A T A M T D I V S D G L L A D L
UniRef90_I0RMY3	H E H L R Q R L L R P T P R V Q A G H C L R G L A R A C C V D I V S D G L L A D L
UniRef90_D2UG01	K H M F F E P R L D E G I A L I N K N F T V H A M I D I V S D G L T A D L
UniRef90_Q1Q1A8	W Q P L V K A H L N P D A Q V A L G R A L A R G R H A M Q D I V S D G L A T D L
UniRef90_Q1NMW0	M R A C L G R L D R P T P R V A L G R A L R G L A S A A L D I V S D G L L A D L G
UniRef90_UPI00036E6D39	D I E R A N E L F R F T P P R V A D G L A L A G T A T A M M D I S S D G L A R S S C H
UniRef90_M0E2B4	K E Y I L I D R Q L K P E A R G D V I E A A G I H P T S M I D I I S S D G L L A S E L K
UniRef90_E1GXR3	K E Y I L I D R Q L K P E A P G E V L E Q L R N R P T S M I D I I V S D G L L A S D L
UniRef90_F9DH52	D P Q L L I D R Y R L P Q P R I R L L G P G L V G L A T A A L D I V S D G L L V Q D S G
UniRef90_A8TL34	F E S A R E R M E Q P T P R V A L G Q A L R G I A T S A V D I V S D G L L I G D L
UniRef90_UPI0003789228	D C D R A N D L F R F T P P R V A A G V A L R P Y A T A M M D I S S D G L A R S S L H
UniRef90_E4NLG9	D L E R A N E L F R F E P P R V D A G R T L A P H A T A M M D I S S D G L A R S S L Y
UniRef90_W0JNU2	R I E L Q Q A H Q R P Q P R L D V I Q V L K E F T P V G M D S S D G L L A D A V L
UniRef90_UPI00024847AE	S A T L R R R L E R P E P R V G L G R G R L A G L A S A M I D I L S D G L L A G D L
UniRef90_L0GSW5	W L P L A E A H Q R P S A Q I Q A G R Q A S G A C G A L N D I V S D G L L A S E L
UniRef90_V6MG51	H E F L I I Q R H L R P T P R V G L E L A V S S L A N A A I D I I S D G F L A D L
UniRef90_G7SV64	V F I I S A H K K P P V V N Y E L A E K F R N V N S M C D I V S D G L L A S E L
UniRef90_UPI000465A436	W A K L I E A H Q R P R A Q V E A G R L E S G A C G A L N D I V S D G L L A S E L
UniRef90_L5MVD8	L D A H R R P R P P Y A A G A E A R A A G A T A M I D I V S D G L L V Q D L
UniRef90_UPI00035DE50D	L A E A R P A L E R P V P P W R F A Q R L P G L A H A A L D I I S D G L L Q D L
UniRef90_UPI0002DE1CDB	A E P L L A R Y W S P Q P Q L A L G Q A L R G R A T A A L D I I S D G L L Q D L
UniRef90_A0A024HC25	L Q R V V E K L H Y P H P R V A L G Q S L R G I A S A A I D I I S D G L L A D L
UniRef90_K2KM20	A R D H L K D R Y W L P R P R I D I A K S C G K R F A A M D I I S D G L L A G D L
UniRef90_UPI0003B715F5	Q P R V R E G Q A L G R A G V S A M M D I I S D G L V L S L H
UniRef90_A3CSR3	V E A Q R T P Q V P Y R Q G R R A A E A G A T A M C I D I I S D G L M A D L
UniRef90_W2UIW0	D R L L R R F Y C P E P Q I Q A G L K L R S I A S A C I D I I S D G L S S D I
UniRef90_UPI000478616B	A R A A L L A L M P Q P R L A E A A I I A A A R Q A T A M I D I I S D G L L I A D L
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UniRef90_M0MSL8	D D A R A N E L F R F S P R V A A G R A I G Q Q A T A M M D I I S D G L L A R S L
UniRef90_I3Y7V0	D P A L L R R R L E Y P T P R V E L G L R L R G L A T A M D I I S D G L L A G D L
UniRef90_I4MX88	A A S L L A H Y W S P P P Q F G L G L A L R G K A T A A M D I I S D G L L A D L
UniRef90_M0MQL4	E N D R A N E L F R F T P P R A A S E V I A P H A G A M M D I I S D G L L A R S L
UniRef90_E6SF40	A V A V Q R Q R P P R P L E A G P A A A A A G A T A M L D I I V S D G L L A R D G G
UniRef90_A0A024F689	K E R H L R P K P R L D L V A S L Q K Q H T R I H A L M D C S D G L V N D A L
UniRef90_UPI0003450E4D	A A T F R R A L E R P E P R V A L G L A L R G I A S A A L D I I V S D G L L A G D L
UniRef90_I1XHF2	I E Y L L Q R L E M P T P R N Q I G Q R S S R L G V K A C I D I I S D G L L V I A D L
UniRef90_W0TL72	L A Q R L L D Y P D P R V A E G R Q S S R L G V K A C I D I I S D G L L V I A D L
UniRef90_E6N7Z0	A E A V Y S P V A R V D E G V A L A T C G G V S A C I D I I S D G L L A E S L
UniRef90_N9MBB2	Q R L D Y P T P R C E L L G Q Q L K G L A S S M I D I I V S D G L L A Q D L
UniRef90_UPI00046B0517	P S M E P F M N L L F A H Q Q P L A R L S A K G A I A L N D I I V S D G L L S S E A
UniRef90_K9W196	K S Y L I I Q T H Q R P K P R W E I F N S S D S A I R I A G M D S S D G L L A D A
UniRef90_UPI0003B3D946	A T F L L A Q R F T L P E P R C A L S G L V R Q Y A H A A I D I I V S D G L L L A D A
UniRef90_UPI000464689A	R E R L W R P T P R I A L G A A L A G R A H A A I D I I V S D G L L L A D L
UniRef90_UPI00037CA014	R E A L I Q A H Q R P K P P F L W Y A T G D S P R V A G M D S S D G L L A D A I L
UniRef90_Q1H3U4	L A A C G K A L H Q P Q P R V V V L G Q A L R G L A H S A I D I I S D G L L L A D L
UniRef90_R7JKW2	N E Y L L Q R Y L K P V A R K D I V E L L A E E P T S M I D I I S D G L L A S D L
UniRef90_K2EY59	A N K F I T A H I N P I P R L Q E G R D F C K K P P A L M D T I S D G L L A D A I L
UniRef90_Q3YRW4	L K K Y K D I P Q P R I N L G I S I N N I A S S C I D I I S D G L L I Q D L
UniRef90_Q479L2	P R L L C V G A L E K P R P R V A L G L G L A L T G I K E L L T S A I D I I V S D G L L
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UniRef90_G6AFD6	K E Y L I I D R Q L K P E A R G D I L Q L L K E H P T S M I D I I S D G L L A S E I
UniRef90_UPI00037A8CA6	H D E C I A A L E Q P Q P R V A L G A A L Q G L A T A M I D I I V S D G L L A D A I L
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UniRef90_A1RXF5	K K V L I I D G F F R P K P R I E E R L S K Y P E V T A M M D I I V S D G L L G K S I
UniRef90_R0FS98	N S L V E E Y G W G Q L P E P A T W L G I K E L L T S A I D I I N S D G L L A L S L
UniRef90_K9XYF5	H E Q W R S R L L R P Q P R V Q A G L R L R G L A H A C V D I I V S D G L L L A D L
UniRef90_A3WJC8	K E F L I I Q A H Q K P Q P R L D V I I D C S S I E I A G M D S S D G L L A D A I V
UniRef90_E6VYL8	L Q S S L I N R L H Y P T P R V A L G Q L L R G V A N S C I D I I V S D G L L A D A I L
UniRef90_G7H4F3	F P T A V L A H I R P K P K V L I T L L N A A G Q K G L M D I I V S D G L L A R D L
UniRef90_F6AK23	S V E V V D A F R C P A P D T Q G A V A A R A G A H A L T D I I V S D G L L I E E L
UniRef90_B4W5V8	S T E L L A H Y W S P M P Q L Q L G K A L R C L A T A A L D I I V S D G L L A A D L
UniRef90_F7RY95	L A R L L I D H Y R T P M P R L D F A D V V R N L A T A A A D I I V S D G L L A D L
UniRef90_UPI000361DCDC	R A E L L E K R L F Y P T P R V G L G Q L L R N Q A T A A I D I I S D G L L L G D L
UniRef90_UPI00046A9090	K F A L L E P Q P R T R E G M V L S S S G A V T S C M D I I T D G L L A F T I S
UniRef90_F9DDL6	R D F L V S R Y R V P Q P R N V L A R A V R D H A T A A M D I I V S D G L L A G D L
UniRef90_F3KRE2	K E Y L I I D R Q L K P E A P G E V L E Q L R N A N S I M D I I V S D G L L A S D L
UniRef90_UPI0003B5C0A4	A A R W L Q R L E R P T P R V A L G V A L R G I A N A C M D I I S D G L L V I G D L
UniRef90_G8NRX3	R A R I A E A Q C K P A P P G S G P R A A E A G A H A M M D I I S D G L L V R D T S
UniRef90_V4ZYY7	A S S M N P H F P Q P R L A A G Q A L L R R K L A T A C I D I I T S D G I S T D L
UniRef90_F7FXN2	E V E R A N D L F Q F P P R D A G R A L A G S A T A M M D I I S S D G L L A R S L
UniRef90_K4QLX0	L I K K L F E P I P R V R E S L S L A D S G A V T S M M D I I T S D G I A I S L Y

90 100 110 120

UniRef90_G4M7N6	H L K R S G M R A V V H A D A V P C S D V V R A L P E S A R R Q C A L A
UniRef90_D3IDU8	H C K Q S N C G C R V Y E K N I P I D Y Q T A I M A E E L N M N V T T C A L N
UniRef90_R7C1I5	H L E R S G V A A D I L W D A V P P H P A V K A L S A D R R I E A M N
UniRef90_UPI000375CF5F	H V A A A S E V G I D V H T P R L Q I S Q K L R E V G S A L G A D P L R W V L T
UniRef90_B0UU24	H L Q R S Q C G A V I D L D K L P L S E Q L I K T V G I E R A E R F A L T
UniRef90_UPI0003B4FF91	H L C E A S G V G A E V E E G A I P L H P L T K R L G R K K A L D A A L N
UniRef90_UPI000364B6A1	R M A K A S G V A M R V D A Q R I P L S S A V A V A M E P E A L G R A L N
UniRef90_B9TLX7	H L Q A S S V G A V L D W T A M P K P V L Q Q S V R D A V L Q Q A V L R A
UniRef90_R4YU75	H A K A S N V C L N F S A A H I P T S E L A V A L C G Q A E A L Q L A L T
UniRef90_UPI00036641C5	Q L C E L N G L G A K I F N I P I H E K V Y E F C E M N N D P L E L S L T Y Y
UniRef90_UPI000374341C	E I A E A S G I G I E L L E G A L P V H E A V A N W A M A Q G K N P L D Y V L Y
UniRef90_UPI00035DA3E9	H L C S K D N L G A N L Y E D S L P V S E A L Y N V C L R K R H D P L N W T L Q
UniRef90_A0A021W6Q0	H V C C A A S K V G A R I D A A A L P V S P A L A A C E G E A R W S L Q N G
UniRef90_R6VZY7	H C C N Q S H C G C R I Y E N K I P I D Y Q T A V M A E E L N M N V T T C A L N
UniRef90_J0JGA9	H A T A S Q C A A H L D W D A L P D R T L L G L P A S L Q R E A A L V
UniRef90_UPI000362123C	H L C C A A S G C G C R V D V D W P A V P R D P L L A Q I P D D Q A R E Y A L G
UniRef90_UPI00041A846C	H A A A S G V R V D V D W P A V P V A D V L G P D G L R H A L T
UniRef90_F0F5R4	H C C K Q S H C G C R I Y E K N I P I D Y Q T A A T C E C E F N M N L T T A A L N
UniRef90_V8C2E2	H C C K Q S G C G C R I Y E Q N I P I D Y Q T A V M A E E F N M N V T T C A L N
UniRef90_W7UA88	H L K R S Q V G V S I D V S Q L P I S S E L V Q F L D D K V S A Q Q Y A L S G G
UniRef90_I0RMY3	H A E A S G V G V G I D L S T D A L P V V A P S E A S T A Q V H A W Q L G
UniRef90_D2UG01	H C V R S G V A A E L S L A A L P V V S D D A L K I S K K T G K T P I H H A F S S
UniRef90_Q1Q1A8	H L E E S G V G A V L F E D K I P V P V S D D A L K I S K K T G K T P I H H A F S S
UniRef90_Q1NMW0	H L A A A S G Q Q G E L V K A E L P P Q A E L L Q Q A A T H C E A D P T T W T I A
UniRef90_UPI00036E6D39	H G E R S A C G A E L D W E E I P A H P A L A S L P E A V R Q Q A V L A
UniRef90_M0E2B4	Q L A E A S D V G I E I E R D A V P V H P A V E A V A E D S A E R F E L A A H
UniRef90_E1GXR3	H C C K Q S G C G C R V Y E D K I P I D Y Q T A A T C E C E F N M N L T T A A L N
UniRef90_F9DH52	H C C K C E S N V G C R V Y E D K I P I D Y Q T A A C E C E F N M N L T T A A L N
UniRef90_A8TL34	H L A H R S G A A V R I E A G A V P L S P A A H R R V D S Q P A L L H D A L T
UniRef90_UPI0003789228	H L A S S G V G A T L D A D A T T A L I S V D T G N L G R E V L R T C A L S
UniRef90_E4NLG9	Q L A E A S D C G F A F E W D A L P V H D A V T E Y A R D T D D E R A M A A Y F
UniRef90_W0JNU2	Q L A E A S E C G F A F E W D A L P V H D A V T E Y A R D T D D E R A M A A Y F
UniRef90_UPI00024847AE	Q C C R A S G M G A V I D S S A P I P D D A V F D T A E T D E A A L E R A I T
UniRef90_L0GSW5	H L A A S G V G A D L E L A A L P V G P E G A T V V A E T G D W A L P L A
UniRef90_V6MG51	E I A E A S D V T I H I D A E C I P I R E E V L A Y A R I A S K E P L D W A L Y S
UniRef90_G7SV64	H L T R S Q C G A V I E L D L D K P L S S S L V N V F G V E Q A E T F A L S
UniRef90_UPI000465A436	H I A S A S S V G I E V D D S E L L A K P P G F Q D L V A A T T E D I W D L V A
UniRef90_L5MVD8	E I A E A S A V S M C V D A D K I P V R E D V R A Y A L L S G K D P L E W A F Y
UniRef90_UPI00035DE50D	H V A A A S G V R I E I D A A A A L P L E I P P G V P G G D G L R F A L T
UniRef90_UPI0002DE1CDB	H L K K A S G C G A I L Y Y H Q L P I D A V L Q P L D E S L V R E A V L S
UniRef90_A0A024HC25	H A A R A S G V G A V L V I E A E R L P V S E P L E A L L G A E R A L Q A K L G
UniRef90_K2KM20	H L L Q R S Q L A A R I D L N E L P L S L A L T E T V D T D T A L R Y G L T
UniRef90_UPI0003B715F5	H C C C A A S S V G G M T I D R M K I P L S N A A L Q A V E H D E H R W Q N V L A
UniRef90_A3CSR3	D L L A V N D C G F S V D T A R L P L P A G V P E D G R E L A L Y T C
UniRef90_UPI00047EF5E1	H L A N A S G V V V I D T S R L V V A E P L T V V A Q T G S D P L S F V L T
UniRef90_W2UIW0	H C C K A S G V T A V I Q T E R L P I A A E I L E R S P L D A L E W A L C
UniRef90_UPI000478616B	H C C R C C S G V G A R I D A A R I P I S A A T E A V A R Q Q G L P A W E L A L N
UniRef90_C6X7G3	H L L Q A S Q L G A D I R F A D I P I S P I T R Q H I A D N A V Q S F V L G
UniRef90_Q40I70	H C C C N S S Q V G V A S I Y L D K I P I S N E A K E I I N N T P Q Y I N Y I L S
UniRef90_M0MSL8	Q L A D A S E C G M R V S E T L P I D E S V T E V A D D P D E A H E L G V F F
UniRef90_I3Y7V0	H L A A S G V G A E L D L V H P L S P P V A D V V A R T G D W S L P L S
UniRef90_I4MX88	H A A S A S G V G A V L A D E L E A L P L S N A L L A L L G R Q A A Q T A A L T
UniRef90_M0MQL4	Q L A A A S D C G F A V D T P P V A D A V G E V A T D P A E K R E L S V F F
UniRef90_E6SF40	R L A R A S G V V V E L D R P A L D P D V A V I S E A V V G V E T W D C V L A
UniRef90_A0A024F689	Q L R P P N G G F H F A E N L P L H D S E S L A V D L H L N P Q D F V L W
UniRef90_UPI0003450E4D	H L E S S R V N A V I D A D A V P R S A A L A R L A P D V Q R R C T L A
UniRef90_I1XHF2	H L L N A S D K G K A L D V S A L P P F S A A L K K L P T E M A T Q L A L T
UniRef90_W0T7Z2	H C C R R S S C G A R V Y L D L S P L P S S P V R E Y L A A G G D Y Q P V V A
UniRef90_E6N7Z0	Q L S E A N D V G F I V D S S P L D S S A Q R Y C V D N N D P V E A V F Y
UniRef90_N9MBB2	H L L K A S K V G A T L D D L L P L S D T L R H L P D T Q R W Q Y A L A
UniRef90_UPI00046B0517	E I A E R S Q V S L V I E Q E K L P L S E P L K F E A F K C V G K N P Y E W V F H
UniRef90_K9W196	Q C C H A S S V G G A K D R N L P I P T T L P K T L S A E Q A L N W A Y
UniRef90_UPI0003B3D946	H I A D A S C C T V E L N L D A I P L S D S A R H W L A Q Q P D R S Q A L L A S
UniRef90_UPI000464689A	H V L L R A S G V G A E L A I D A L P A S D A L R A A L P A A Q A R R A L Q A A
UniRef90_UPI00037CA014	Q C C Q C A S G V G A E I E R S K I P V P P A L S R L V S A E R A L E W A M Y
UniRef90_Q1H3U4	H L L T E H S Q V G A E V W L K A I P K S E V V S A H S Q E V A I Q K M I L S
UniRef90_R7JKW2	Q C C K A S K C G A R I Y L D R I P I A R Q T T A F A E E I H T D P V V A A L N
UniRef90_K2EY59	K C C C L Q S N V S M E I D F G N I P I D K D L S D I A H I A E I N P L K W V F Y
UniRef90_Q3YRW4	H C C C H S S Q V G A E I Y L N K I P I S N E A Q E I I T N S P K Y I N N I L S
UniRef90_Q479L2	H A A E R S A C A A A V K L V Q L P H L P K G E S Y D A D L R R I A L E C Q L A
UniRef90_J1ENX3	H L L K A S G V G A R I D T S A G A L M A Q G S A V A D P E L L R Q C T L A
UniRef90_G6AFD6	H C C C E N S H C G C R I Y E K N I P I D Y Q T A A T C E C E F N M N L T T A A L N
UniRef90_UPI00037A8CA6	H I A R A S G L G A V V D D A A L P A W A L H A A C T D G A A R D A L L A S
UniRef90_H81R97	E L L S S S H V G F L V D A D R L P V R E E A K K L P A K D R G E L L L D M A I C F
UniRef90_A1RXF5	Y Y L L A E S S G V G I V V E E L P P V H A V A K E C L P R E R L V D A V L Y A
UniRef90_R0FS98	H C C C C E R S S G V G A Q I A L A A L P T M P Q R S A Q I T A L Q Y I G W Q L G
UniRef90_K9XYF5	Q I I A R S S K V G A I I E A N T I L Q P S L F K L V D S K Q V W E W I L Y
UniRef90_A3WJC8	H L L P T N Q M G V Q L E D K L P L S M A L T E T L D L D E A F S L A L T
UniRef90_E6VYL8	R F I G P K V G A D L T I P T N V L L N G N V I A F A L A T G A D P V E L A M L
UniRef90_G7H4F3	L L S A S S G V A V E V A A D D I P I T D A V R V V A E Q Q L G V D V R T W A L G
UniRef90_F6AK23	H I A R A S G V A L F V E Q Q R I P I S A A L L A C M G D E R A R Q L A L G
UniRef90_B4W5V8	H I A K A S G V G I A L N L S V L P L S A A A Q A W F E D D P Q A A L E D L A T
UniRef90_F7RY95	H I L V A S K V G A R I Q L D A L P H S K A F A G S I A G P E G W K Y Q A L
UniRef90_UPI000361DCDC	E I G K R S G V S F E V D W S R I P I D P E T L E V A K R T G E S V E E L A M Y
UniRef90_UPI00046A9090	K L C C A A S G V S A S V D V P S V P I L S A A A A A L C A R S V A S V E T L L A
UniRef90_F9DDL6	H C C C K C E S N V G C R I Y E D K I P I D Y Q T A T C E C E F N M N L T T A A L N
UniRef90_F3KRE2	H I L E A S R C G A R I L A P S E L L A S H R L D G N A L T P P E R L S L V L S
UniRef90_UPI0003B5C0A4	R L A K S S G I S I D F N S E L K K F A A R L A P A Q L T G T D P M A W V L H H
UniRef90_G8NRX3	H C C C E A S G V N A E I D A A S L P L H P L A Q Q L P T Q E A A M A A A L H H
UniRef90_V4ZYY7	Q L A D A S C G F A V D R D A V P V A D A L D E V A N D A A D R W E A A V H H
UniRef90_F7FXN2	D L L A D A S D V V G F I V Y E D R L P P Q D D L K Q L I H E P E R L L D Y S L Y
UniRef90_K4QLX0	H I L A A S G V A A E L R Y D A L P V V A A A L A G L P A E T V R R A A L G

	130	140	150	160
UniRef90_G4M7N6	G G D D Y E L C F T A P P S A R E A L V P	L T R I G T I E S A P G I W R D G A P		
UniRef90_D3IDU8	G G E D Y E L L F T V P I G D H E K I Q N V K I	I G H I T K P E L V T R D N N E		
UniRef90_R7C1I5	G G D D Y E L V F T A P H E K K S A L T P V T C	G R I R E A E R L L M H D D K		
UniRef90_UPI000375CF5F	G G E D H A L A A T F P V D L P E G W L R I	G S V T P E S G V T V D G K A		
UniRef90_B0UU24	G G E D Y E L C F T V P D R N L E K L V N Y S C V	G Q I R N K K R I S F Q G K T		
UniRef90_UP10003B4FF91	G G E D Y E L L F T A R A G A R V A G V A I T R I	G V V E E G A G V V R I I D G R D		
UniRef90_UP1000364B6A1	G G D D Y E I V A A V P A A A D A E A G L A V E E I	G Q I T A Q A G L L H V F N G D		
UniRef90_B9TLX7	G G D D Y E L C F T A A P Q H R D A L L P L S R I	G Q I E E R K A V V L L D G Q T		
UniRef90_R4YU75	G G D D Y E L L F T A P Q Q A H N E L L N C Y H V	G Q I E E R K A V V L L D G Q T		
UniRef90_UP100036641C5	G G E E Y E I L L F C F E E K Y L E D I C E F N V I	G K V T K E K K L I Y D D G K		
UniRef90_UP1000374341C	G G E D Y Q L I L G T L P P S A A D A G I A F H L	G T V T P Q H R V R L I G R V		
UniRef90_UP100035DA3E9	G G E D Y E L L F T L P D E V K N L K R I S H I	G E I T N S P K I R E N S S K		
UniRef90_A0A021W6Q0	G G D D Y E L C F T A A P S R R D A I T P A C V	G R I E A E P G V R V D G S P		
UniRef90_R6VZY7	G G E D Y E L L F T V P I G D H E K L N G I K Q I	G Y I T T K E S L I T R D G N E		
UniRef90_J0JGA9	G G D V F Q L C F T A A P E Q R E E G V P L S R V	G T M Q R G S G V Y V R D Q A		
UniRef90_UP1000362123C	G G E D Y E L L F A L P A G E S L D L P L T V I	G C T E G D A V V V D G R R		
UniRef90_UP100041A846C	G G E D H A F A G T F P A A A S A L P P S W T R I	G T V V A R G T G V R V D G R V		
UniRef90_F0F5R4	G G E D Y E L L F T V P H E K I E K M E N I R Q I	G Y I T T K E N L I T R D G N E		
UniRef90_V8C2E2	G G E D Y E L L F T V P H E K I E N L E G V K M I	G H I T R K E L V S R D S Q E		
UniRef90_W7UA88	S G E E Y E I L C F T V S E Q N R G S L C K V T C I	G Q I R P N G T F E L H D N D		
UniRef90_I0RMY3	G G E D H A L V A T F P D A P P P G W T V I	G A T T A G E G V T V D G A A P		
UniRef90_D2UG01	G G D D Y E L C F T S P P A Q R E A I I Q A T R I	G R I V A G R G I V V D G R P		
UniRef90_Q1Q1A8	D G E D Y E L L A V L S K T Q A E K G L E I S C O	G E I V I E D K G G L W L R D R R		
UniRef90_Q1NMW0	G G E D Y Q L I F S P A P E H R D K L P A L H R I	G Q L V A G A G V V F L R G E E		
UniRef90_UP100036E6D39	G G D D Y E L C F T A P A L H R G R L L P L S R I	G R L V I G G Q Q V V R V A G Q R		
UniRef90_M0E2B4	F G E D F E L L C A V S E A E I I A G V R E L T R I	G T V V E E G P R V L A D G D P		
UniRef90_E1GXR3	G G E D Y E L L F T C P H E K L E H L E G V V R Q I	G Y I V T D A S L I T R D G N E		
UniRef90_F9DH52	G G E D Y E L L F T I P I S E H A K I T N I H Q I	G Y V T E D S K L I A R D G N E		
UniRef90_A8TL34	G G D D Y E L L F T A P L S A R K V D V M V T R I	G S V E A G Q Q G V R V V V G P D		
UniRef90_UP10003789228	G G D D Y E L V F T A P A S A R E A V M Q A T R I	G R I V E A D A G L R I V D T A		
UniRef90_E4NLG9	G G E D F E L L V F T L P A D A V D T A I P I T V V	G Q V V T D E Q I V A N G D P		
UniRef90_W0JNU2	F G E D F E L L V F V V T I T P E A A L E S A V A L T P I	G T V V D D G I T T M D G E P		
UniRef90_UP100024847AE	G G E D F E L L V L C L P L S F A Q E L L L E A M I I	G H I V A E D D V T L I K S N		
UniRef90_L0GSW5	S G D D Y E L C F T T P A A R R A E L C A V T V I	G Q I T A A P G L R C D L W P Q		
UniRef90_V6MG51	G G E D Y Q L I V G T V V S R D G L A A L I P F T V I	G H C V I E G I G I T T R D G Q Q		
UniRef90_G7SV64	G G E D Y E L C F T V T P V D S N K A K L V D Y T C V	G Q V V R A I I S P F Q R D G N P		
UniRef90_UP1000465A436	G G E D H V F V V T P A A R R A E L C A V T V I	G A F V I V R V S G S K		
UniRef90_L5MVD8	G G E D Y Q L I V G T V V T P A D D V A A L G D V T V I	G E V E E E G K P A L R S G T D		
UniRef90_UP100035DE50D	G G E D H A F A A A F P S G A V P S S W R A I	G R V V A R G D G V V V D G R A		
UniRef90_UP10002DE1CDB	G G D V Y Q L C F T S P S R N R D A I V R A T R I	G V I E E S G A Q L K V H D A P		
UniRef90_A0A024HC25	A G D D Y V I L A F T L P P S E L P A L P A L A V I	G V R V E A G S G G V V R V S G H D		
UniRef90_K2KM20	S G D D Y E L C F T V P P E E R A H T A V K P I C I	G Q V I G G R P L S L D G Q A		
UniRef90_UP10003B715F5	G G D D Y E L L I A G A P D D V A A L G D V T V I	G T V V T D K V G V V E L I G A E		
UniRef90_A3CSR3	G G D D F E L L I F T A P P D I L P P G V E A R V I	G E V I I P E R T V L A D G E P		
UniRef90_UP100047EF5E1	G G E D H A L V A C Y C F E P G F V P D D W H V I	G R V V L P R P A V V L V D G E P		
UniRef90_W2UIW0	G G D D Y Q L C F T V A A D Q L A S V L D A R R I	G T I N P G D Q V S V I D K T		
UniRef90_UP1000478616B	G G E D Y E L C F T A P P Q Y A A A G T P V R D V	G E I L P A E R I I L P D G R P		
UniRef90_C6X7G3	G G D D Y E L C F T A P S A K R E Q I L S L G V I	G Q V T R A Q A G V D V Y D A D		
UniRef90_Q40I70	G G D D Y E L V F T V P I N P K F S H I Q D I S C I	G E I T L G N C V T L N N R N		
UniRef90_M0MSL8	G G E D F E L V F T V P V P E D D L E T V V A V T R I	G T V V I E D S V A L D G D R		
UniRef90_I3Y7V0	S G D D Y E L C F C L P A E R R A R E V C P I R T V	G R I I R A K A G L L P D G G A		
UniRef90_I4MX88	G G D D Y V L V F S L P P E H L P A L R P I H V L	G Q V R E G Q G V C L L G H D		
UniRef90_M0MQL4	G G E D F E L V F T V P E S E L D A I R E A T R I	G S V V E S G V T L D G D P		
UniRef90_E6SF40	G G E E H S L L I A T F P G D V P P G W R L	G A V V E A P G V L L E G R R		
UniRef90_A0A024F689	G G E D Y E L L M A V H P E D Y E Y F P E W K M I	G Q F T E D P R A F V H H E E		
UniRef90_UP10003450E4D	G G D D Y E L C F T A P P N A R D A G V P V T R I	G T I V I A A P A I T W R D A P		
UniRef90_I1XHF2	G G D D Y E L C F T V T P A D V D N V A R L K H I H V I	G E I V I T E D E G M Y Y Q N A H		
UniRef90_W0T7Z2	G G D D Y E L C F T V P P A L A P Q L R P V S C	G E I V I T A G E G V V E L S G K L		
UniRef90_E6N7Z0	G G E E Y E L V F T V K P A L A R L G K E V V W I	G S V V N Q G R G V Y F Q G K P		
UniRef90_N9MBB2	G G D D Y E L C F S I S P Q H F E Q L L Q V T K I	G Q I H A A P E L H F V D H S		
UniRef90_UP100046B0517	G G E D F V L I G T L P K E L A A Q A L A F Y P I	G Y A M E G K G V Y L Q E K K		
UniRef90_K9W196	G G E D F E L V L V C L P L E K A Q P L V E A A I	G T I T K D E L L L V D P T Q		
UniRef90_UP10003B3D946	S G D D Y E L V L T V S V D A A P D F I I A A T C M G E	V T S R R D V R A D G A P		
UniRef90_UP1000464689A	G G D D Y E L C F T A P A A A R E A G V V A V T R I	G R I V I A G E G I A C D G A A		
UniRef90_UP100037CA014	G G E D F E L V L V C L P V G A A E R F I G G A A I V	G R I V I A G E G I A C D G A A		
UniRef90_Q1H3U4	G G D D Y E L C F T A S T Q H R Q I A D I A V I G	R I G R I T D T Q Q L V I H G L D		
UniRef90_R7JKW2	G G E D Y E L L F T V P L A L Q E R V V M G V D V I	G H I T A E N T V T P D G G E		
UniRef90_K2EY59	G G E D Y Q L I I G T V S Q E C L E T L I S V I V I	G R V I I E S S N N I T I N S T S		
UniRef90_Q3YRW4	G G D D Y E L I I F T I N P Q F S S L I I K I S K I	G E I T P G N S V T L Y D K T		
UniRef90_Q479L2	G G D D Y E L C F T A P P G Q S L S L A I A Q I I A A I	G E M V I T Q G Q A G E V V D G K P		
UniRef90_J1ENX3	G G D D Y E L A F T A P P L Q R A A V V T P V A R I	G T I E A E T G L R L Q G R P		
UniRef90_G6AF6D	G G E D Y E L L F T V P H E K I D K I D G I R Q I	G Y I T K E S L I T R D G N E		
UniRef90_UP100037A8CA6	G G D D Y E L L F C A P P E S A R L A L P L T R I	G A M Q S G D G G V R V D A P		
UniRef90_H81R97	G G E F E L L F T M S P T G L D K V K D V T V I	G R V V P I E E G L T L D D R P		
UniRef90_A1RXF5	S G E D Y N F I I F T F P P E E A E E V V R G A T I	G R V T E G E G V V F D G R R		
UniRef90_R0FS98	G G D D Y E L C F T A A P Q H R D A G I A A T R I	G R I V I A A P G V V V D G N P		
UniRef90_K9XYF5	G G E D F E L V L V C L P F Q F A Q A L I G A A I	G Q I T A E E Q V V L T D S N		
UniRef90_A3WJC8	A G D D Y E L L F T V P V E Q N R G R L E T T C	G R M V K D E R M T Y Q G E P		
UniRef90_E6VYL8	G G E D Y A L L G V M D E E T R E K V P G F T E L	G R V V T D T P G I L V I N G K P		
UniRef90_G7H4F3	G G E D H E L L G A F P D G G A I P V G W T V I	G R V V A A A S P V S I D G G P		
UniRef90_F6AK23	G G D D Y V L V A F T L P T E K L D A L R P V T V I	G R V V E A G Q G G V H L D G R V		
UniRef90_B4W5V8	G G D D Y Q I V F T A H P R H E E R L L R L T R I	G A V T A G E G G V A V V D G R R		
UniRef90_F7RY95	G G D D Y E L C F T P E S R L Q A G V K V T C	G I L D G H R E L R F Q Q R V		
UniRef90_UP1000361DCDC	Y G G D Y E E L L F T F R P E A E E Q L R R F H I	G K A V G K E N I L I R D G Q G P		
UniRef90_UP100046A9090	G G D D Y E E V L C T A P P A Q S D A L I A A T A	G T I T E G P L H F L D G Q G G		
UniRef90_F9DDL6	G G E D Y E E L L F T I P H A K V A S L K N I H Q I	G Y I T E S R L I A R D G N E		
UniRef90_F3KRE2	G G D D Y E E L L F T A P A N R R E A V T P V T R I	G Q I E A Q E G E G L R V Q G Q R		
UniRef90_UP10003B5C0A4	G G E D F G L V A A F P N E D V V P E E F T V I	G V A K A R S R G V T V D G K A		
UniRef90_G8NRX3	G G E D Y E L L F T A R A A R K L L G G V P L T C	G R V V A A P Q V T L D G S R		
UniRef90_V4ZYY7	F G E D F E L V A T V P A S V L D D V R A T E I	G R A V D A E G V T V G G E A		
UniRef90_F7FXN2	S G G D F E L L F T L S P E K A T K T C D F T I	G K V V A E K D G G I T L L E		
UniRef90_K4QLX0	G G D V Y E L C F T A D P A H R Q A I A P V S R I	G R I L A G Q G Q L R V D G A P		

UniRef90_G4M7N6	L T L Q G F D H F
UniRef90_D3IDU8	L K A Q G W N
UniRef90_R7C1I5	L P A G G Y D H F
UniRef90_UP1000375CF5F	V G P G G W A H W
UniRef90_B0UU24	V E I G G F D H F
UniRef90_UP10003B4FF91	L M P A G W Q H F
UniRef90_UP1000364B6A1	G E P G A F H H F
UniRef90_B9TLX7	V S Q K G Y A H F
UniRef90_R4YU75	V S H K G Y Q H F
UniRef90_UP100036641C5	I E N R G W E H F
UniRef90_UP1000374341C	L E K G G Y N H F
UniRef90_UP100035DA3E9	V S L K G F N H F
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 A V Y R S G A K A G D K V Y V S G T L G D A A Y A L N H P D S E T
 I V Y R H G A K D T D I C V S G D L G G A Y M G L Q L L E R E K A V V D F S G
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UniRef90_A1UEB9	R R R H L V P A P P Y G Q G R V A A D A G A T A M T D V S D G L L L A D L L G
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UniRef90_UPI00047E177C	N D Y V L V K R Q L K P E A R A D L N E K L K T L P T A M T C I K D G L L A T S L L
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UniRef90_Q7NVF1	L L A A A T H K L E P Q P R V A L G D A L L P L A H A A A D D V S D G L L M A D L L G
UniRef90_UPI000476A531	G A Y F L S R Q M R P V A R Y D L S P S P I G R P S A M T E V T E G L L A G D L L A R S C H
UniRef90_V4ZSF8	E K A R G N E L F P V P R V A A G E A L A P H A T A M M D V S D G L L L R D A G
UniRef90_F4H499	A A V A S F R A P T S P L A A G P I A A A A G A S A M I D V S D G L L L R D A G
UniRef90_W9AYL8	R R R H L V P T P P Y G Q G P A A A A R A G A S S M T D V S D G L L A A D L L G
UniRef90_UPI0004774663	V A A H Q A P T P D Y A S G P A A A A N A G A T A M I D I S D G L L L A D L L G
UniRef90_B4VZ29	R S R L I Q A H Q R P K P R W D S L A S Q S P I P L T A M D S S D G L L A D A I A
UniRef90_R5GB06	R E Y I L L Q R Q M K P I A R L D I L R A A G I K P T A M I S V R D G L L A S D L L
UniRef90_UPI0004761AE7	L C L S E H R R R P S P P Y T A V E A A R L G A T A M L D I S D G L L V I Q D L L G
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UniRef90_UPI000479F4A2	V I E A Q R V P E V P Y G Q G R V I A A E A G A T A M I D V S D G L L L A D L L G
UniRef90_R7XUV1	E R A L R A R L D R P Q P R V A A G R A L S G L A T A C I D V S D G L L L A D L L G
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UniRef90_UPI00036612E5	R D L L I A S R Y R V P Q P R N A L A Q A V R D H A S A A M D V S D G L L A G D L L T
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UniRef90_K2R2R4	K K E L R L N S T L K L I Q K Q A I Q P R A R G A V T S A T D I T D G L L A S E V
UniRef90_UPI00037EAF6E	G R A L R A R L D R P T P R V A A G L A L R G I A S A A I D I S D G L L A G D L L
UniRef90_UPI0003680D3D	D S A A C A R L F W P P M R L A L G R A L R N R A R A L I D I S D G L L L A D L L G
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UniRef90_R7WIP4	D S H R V P T P P Y A S A L A A A A R G G A H A M I D I S D G L L L A D L L G
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UniRef90_Q83WU6	R S D S S A L H E L V A A M I A V P D I H C L R D P T R G G G L L A T T L N
UniRef90_W8RXU6	A A A L L R R Y W L P Q P Q L A L G Q A L R G K A S A A L D I S D G L L L I A D C G
UniRef90_Q3ABW5	D C A P L N E V K S I I H E Y P V H A M R D P S G G L A A T L N

130 140 150 160

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UniRef90_K9WBZ4	UniRef90_A1UEB9	G G E D F E L V L C L P P P E P A T L V E S A V I G T I T T G K E V W L R D R A
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UniRef90_UPI00047VZS8	G G E D F E L L L C T L P A D R V Q T A V P L A A I G E V R A D A G V T A D G D P	
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 E L T P V E A A H C A P L N P G R G M I A R A A G A T A M T D N S D G L I V D L S
 E H F L I S K Q N N P K A R I K E A Q K I S K H L T S L T D A S D G L Y I S V D
 V A R L C R P A P Q L V L G R A L R G Q A H A A I D I S D G L L A D L V
 A A E L V Q W H D A P E P D L S L G W G A G R A A H A M M D L S D G L L V R D G G
 A W H F E E A Y Y R P E P R L F R K T L R T Y A N S C A D I S D G L V A D A R
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 S V P F V E K A K A L D A Y I E A A V A V K S G V S A M H D V T G G I F G A L W
 R E M L I A R Y R I P Q P R N A L A L A L R E H A S A A M D V S D G L A G D F S
 E K A L I A Y H Q R P V P Q V E A G R L E Y G G R I A L N D I S D G L G S E C C
 D Q S F L D R Y R V P R P R S A L A G A V R D H A S A A M D V S D G L A G D L A
 V V E K T R R P L V D V R V G T V I A L N Y K S I H A S M D V S D G L G F T I L M S
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 A D Y L K D R Y L H P R P R V A V A R A L R G R A S A A M D V S D G L V G D L
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 S S D C A P L N F L V G E M L D I C P Y I H V I R D A T R G G L A A V L N
 Y Q D A I Q R H L L P K S R Q V L Q P I L S R Y R I H A C M D I T D G L I Q D A E
 K S D V T P I W E V V K S V A K V I G W E H I H A M K D P T R G G G L S A L N
 E S D T A P L N G L V A D M L D E T R T I H V L R D P T R G G G V A S A L N
 S G P L V D A Y R R P R P R L S E G M L L A P V V S A M M D L S D G L L L I D A A
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 K S D V S P I W D V V E A V A K E I G W E N I H A M K D P T R G G G L S A L N P
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90 100 110 120

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U n i R e f 9 0 _ A 2 B K Y 5
U n i R e f 9 0 _ U P I 0 0 0 3 5 D A 1 A B
U n i R e f 9 0 _ D 5 W Z Z 6
U n i R e f 9 0 _ K 2 F M 4 4
U n i R e f 9 0 _ U P I 0 0 0 2 6 2 D 1 C 6
U n i R e f 9 0 _ I 2 Q D P 3
U n i R e f 9 0 _ D 6 Z E U 1
U n i R e f 9 0 _ F 8 G K Q 2
U n i R e f 9 0 _ U P I 0 0 0 2 6 C 6 B B 4
U n i R e f 9 0 _ Q 8 R 9 R 2
U n i R e f 9 0 _ U P I 0 0 0 2 3 7 C 2 9 9
U n i R e f 9 0 _ F 6 E N G 2
U n i R e f 9 0 _ D 9 R 5 6 8
U n i R e f 9 0 _ L 7 L K M 5
U n i R e f 9 0 _ H 0 H X 7 7
U n i R e f 9 0 _ B 0 T 1 1
U n i R e f 9 0 _ D 4 M Y 3 7
U n i R e f 9 0 _ R 5 E H H 4
U n i R e f 9 0 _ H 0 T 0 1 7
U n i R e f 9 0 _ V 4 I H H 7
U n i R e f 9 0 _ Q 0 2 A U 6
U n i R e f 9 0 _ C 1 A 5 D 5
U n i R e f 9 0 _ S 7 T W M 4
U n i R e f 9 0 _ A 0 A 0 1 1 N 7 C 5
U n i R e f 9 0 _ W 0 D F T 1
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130 140 150 160

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UniRef90_E0POC8	Q S D C A P L C H L T A A M I A A A G D G I A V L R D P T R G G V V A A S L N			
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UniRef90_U7UIJ3	G R L V I I A P Q E H A A T L V D A A V I G T V T A E
UniRef90_D42PZ3	G R F V A F I P A K D V D K T C Q A S V I G K V Q D K A G G L V
UniRef90_V4QUP2	G G D D Y Q I I L C T A D E S G A R A L V G F Y D I G D T P A G A E L W A D D R R
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50 60 70 80

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I C E R A E T F L E E I S V V P A A R L V R E H A T A M H D P T G G V A A G L L	
D P A H R A A F D R P V P R L A Q G R A L A P L V S H A M M D V S D G L L V R D A G	
H S D T A S V S P L V E L L M A A A P G T R W L R D A T R G G V G T V C N	
A R E R A E S F V D E I S V A P D A R A I R D R A T A M H D P T G G V A A A G A L	
T S D T A A L H G L V S T M L A S G S R I H T L R D P T R G G V V A A A L N	
Y D D I K K F R E W L S V R K E S M I L R N F D I S S M H D I T G G L I G A L F	
K S D C R N L N F I V E K C L A V S D N I S V M R D P T R G G L A T T L N	
R E A L E A R R L R P T P R L E F G E A A A A C G V C C M D C S D G F L A D L S	
D S K T L H E E I S K V G K Y L H A A K D P T R G G L A A N I	
R S D C D T L W P I I E Q L L V A N I D I H A M R D A T R G G L S A V L N	
E S D C A P L N E M V E A V L S A A P H V H V L R D P T R G G L A A A V N	
E S D T A A L N D L V D V M I G T G A D I H V L R D P T R G G L A A A V N	
L A A T R G A L E W P E P Q V A L G L A R G I A H A A D I S D G L L Q D L G	
D T A T H P H D T A I H P H D H A A N S A T L S P N S L T D I S D G L L A D L G	
Q T D C A S L W K P V E A L I N A G I K H A L R D A T R G G L S A V L N	
V S D C Q G L G H L M E A V L A A A P G T R A A R D A T R G G L A A A L N	
E S D C A P L N G L I D I L I A A A P G I R M M R D A T R G G V V A A V V	
S S D I I E K A K N L Q D I S V Q I A S E F G V T A M H D V T G G V L G A L W	
A R A L L R R H L R P Q P R L A E G R A L A A A G A R M I D I S D G I A T D A G	
V K A S R R T S V R V E V A H V I M S T Y R F I H A S M D V S D G L G Y T L Q	
R T A T A Q E R L A A L V E D A M A T A N T A G N V M A M H D T E G G I T G A L I	
R S L L D L Q C R P V P P L A A G P A A R A A G A T A M L D V S D G L L R D G N	
Q T D C K P L N H L M M V L E V C P N V R C A D A T R G G L S S V L N	
K E Q A I R Q H Q R P Q P K L D A K P E E L P W R A G G T D S S D G L L Q A I D	
E S A A V V A A Q L R P S P P I G L V V I A A A G A T A M M D V S D G L A L D A R	
U n i R e f 9 0 _ R 6 W Q 2 1 P E Q L I D A A A A M R E Y I S V V P E A A A G V T A M H D V T G G I Y G A L W	
U n i R e f 9 0 _ U 7 F N 2 5 Q S D S A A L H G L V G S M V D A V P G I S V L R D P T R G G L A T A L N	
U n i R e f 9 0 _ K 8 B 3 N 8 U n i R e f 9 0 _ U P I 0 0 0 3 5 D C D C 9 Q A L R G L A S A A I D L S D G L I S D L G	
U n i R e f 9 0 _ U P I 0 0 0 3 5 D C D C 9 Q N F I E R C Q N F L Y N P E A L L A N N M E V H A M H D P T G G L A A G L Y	
U n i R e f 9 0 _ U P I 0 0 0 3 5 D C D C 9 R S D T A P L N G L V A A M L A T G A D V H T L R D P T R G G V A A A T L N	
U n i R e f 9 0 _ U P I 0 0 0 1 2 F B B 7 D C A Y L G D M V Q N L I K E K G I E I K T M R D V T R G G L A T V L N	
U n i R e f 9 0 _ B 9 M 4 A 2 Q S D T A A L Y G L V A E L L P E G E Y L H V L R D P T R G G V A A T T L K	
U n i R e f 9 0 _ U P I 0 0 0 1 4 4 1 5 A 4 I I K S I E H F C R P R V Y P N F R S N K N T K R I G C T D S S D G L F Q A L Q E	
U n i R e f 9 0 _ Q 7 V E I 9 K E H A I K A H Q E P Q P P I K A K P Y A M P W N A A A T D S S D G L L E A I L E	
U n i R e f 9 0 _ D 1 P 1 M 0 E G Q L S S D C A V L T P L I E P L R N I D G V R A L R D A T R G G V N A L H	
U n i R e f 9 0 _ U P I 0 0 0 3 6 1 8 5 C 8 S S D T A A L H G L V A T M L D T G A D V H V L R D P T R G G V A A A T L N	
U n i R e f 9 0 _ U P I 0 0 0 3 8 0 5 D 2 E Q S D C T T L L N D I V E I L D D N S N K V K V L R D P T R G G L A T T L N	
U n i R e f 9 0 _ T 1 V N 9 4 R S D C A S L N G V V A D M I A T G V D I H V L R D P T R G G V A A A T L N	
U n i R e f 9 0 _ T 2 G A N 2 V S D C A S L N G V L V E S L I T T L P D V H T L R D P T R G G L A T T L N	
U n i R e f 9 0 _ F 6 D E 2 4 E I R E A A F Y P L P R L E L L A L S G L L R G S L D S S D G L A E T L W	
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U n i R e f 9 0 _ H 2 C 6 U 6 S V D R I R H P V I P R P L I K A N E E L C E T V S V V S S D V S D G L L I T L H	
U n i R e f 9 0 _ U 2 Q 2 P 4 U n i R e f 9 0 _ U P I 0 0 0 2 F F D 7 A 1 A M I D V S D G L I A D L G	
Y I E A Q Q Y V N S I S V V K E G V V A G Q V G V N S M H D I T G G L L G A L W	
H A R T L A T L W Q E H P E V L A A Q A Q A G H T G A T A M M D V S D G L S L D A A H	
U n i R e f 9 0 _ U P I 0 0 0 4 7 6 1 5 F 3 E S D L A P U L S E T V L A L L E A D I D V R C L R D L T R G G L A S A L H	
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U n i R e f 9 0 _ A 5 E 9 B 6 A S D C D R P L N R M I A D V Q V S E H V K M M R D P T R G G L A T T L V	
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U n i R e f 9 0 _ A 4 W K F 5 G G L V S D V S D P L V K P L T R G G L A M A L N	
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U n i R e f 9 0 _ U P I 0 0 0 2 F 5 8 9 B 7 E S D C A T L N R M I A D V Q V S E H V K M M R D P T R G G L A T T L V	
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U n i R e f 9 0 _ R 4 F 2 9 9 E R A D L A A Q L R P R P P L A L P L A A R S G A T A M M D V S D G L L L D A T	
U n i R e f 9 0 _ A 0 A 0 1 1 U X 0 6 V S D S A S L A G I V G K L L A A V P G V H V L R D P T R G G L A T T L N	
U n i R e f 9 0 _ C 4 X R I 4 Q S D V A P L N N L I E Q V M K T G G A V S M K D T R G G F A N A I N	
U n i R e f 9 0 _ U 5 Q 1 W 3 Q S D V A P L N N L I E Q V M K T G G A V S M K D T R G G F A N A I N	
U n i R e f 9 0 _ V 6 D Q H 6 M D S S D G L A R S C H	
U n i R e f 9 0 _ Q 9 H I Q 3 F S Y G V D L F R K L T T V H E S L V I C K R F G V T A M H D V T G G L L G A L F	
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U n i R e f 9 0 _ M 0 D D J 1 L D P F I E V Q L A P R P D Y E S V Q N L A T W A A A G I D A S D G L A G D L G	
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90 100 110 120

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UniRef90_D4IWE0	P I R A K N A A D D D V I	I V S G N I G D H H A T V L S Q R M G I K N T I V S	
UniRef90_D2Z6M4	Q M V S T G G A S E G D L V	C V T R G V G L E G T A I L A W C R S K E L P E G D	
UniRef90_A8ZNV6	L I T P R G A K P G D R I	L L T K S V P E A T A I L A R E Y S E Q I S Q A L	
UniRef90_D5EG38	Q P G D K I A S T S I G R H G A A I G A S R F N L N		
UniRef90_A6DQ43	K P I Q R C G A E D G D L	F S T G E F G L S F	
UniRef90_W7KUL9	K E G D Y V L L V G D L G	L E G G S W I L A T Q F K A K G V R D E	

		50	60	70	80
UniRef90_X8IPP7	T S D C A P L W S A V H A A L D A A P D I H V I R D A		T R G G V G T V L Y		
UniRef90_UPI00036149C5	A S F E S I R P L L E A G M Q L R Q A G V S C C I D V S D G L L Q D A G				
UniRef90_C7P921	Y P K I F E K L K R P V A R V K E G L L M N K L I N G G C C D I S D G L G K E I T				
UniRef90_A3YW19	L E R A V Q A H R R P R P L D A V A A L A P W R V A G T D S S D G L A A A L K				
UniRef90_Q2RGH4	V S D C A P L N G I T S L L K E I R G I K I M R D L T R G G L L A T T A K				
UniRef90_F2L657	G L A S D V R P L T R L M P L V E K Y G E Y I H A A R D P T R G G L L A M V L N				
UniRef90_UPI0004752BBD	E D I T A R A A A L T S K V T V K D A E A G G V T A M H D T E G G V				
UniRef90_B1ZQ60	V S D C A P L W P A V E A L L A G G I E V H C L R D L T R G G L L A T A L I				
UniRef90_E6NB80	L R V G S L L I K K T S V V E E A L S L A S T G V N C M H D P T R G G L L G G L Y				
UniRef90_R4KM25	A S D C A P L N N T I N L Q K H C S G I K M M R D L T R G G L L A T A A K				
UniRef90_C2GEP8	E S D T R A L N G A V D K L T G A A T V H F M R D A T R G G V A T V L N				
UniRef90_F0JKY7	Q S D S A A L N H L L V K L V R E L P E V H V L R D P T R G G L L A T T L N				
UniRef90_UPI0003F52657	D N A P L T E M V T G L I E Q N I D V H A M R D V T R G G L L G T L L H				
UniRef90_D8IF27	D D E S V K T H L R P Q L F F N E W Q E I I K K Y N S S I D I S D G L L Q D L S				
UniRef90_R5F673	Q S D T A A L T Q I V S N S L L A G V P D V H I L R D P T R G G L L S S T L N				
UniRef90_F0QVB6	V L D R A K D L I W N L S S V V K E A L E L A D V A N A M H D P T R G G L L Q G L				
UniRef90_G0LBN4	E S D T T N L N H T V I K L I D E F G G D I H L L T D P T R G G V A T V L K				
UniRef90_L7KWT7		L A A R A G A H A M T D V S D G L V E E L Q			
UniRef90_B1B907	E I N E A K S Y I N Y I S V I K E G K I S G E G V N S M H D I T G G L I G A L Q				
UniRef90_UPI0003B5CD0B	G L K S D S Q A L N H V C A A L L K E F K D A V R V M R D P T R G G L L A S V L H				
UniRef90_UPI0003A2F9AE	A S D C A A L N S L I A P L L E N E L N L K L M R D P T R G G L L A T T L N				
UniRef90_UPI00029AE31E	A E P L L G H Y W S P Q P Q L A L G Q A L R G K A T A A L D I S D G L L A D C G				
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UniRef90_D3DI12	E S D C R S L W S L I E K I I T S G A Q H A M R D P T R G G V A S A V L Y				
UniRef90_D8HQM6	E S D T A P V H D L V I A V G L L A A V P G V R A M R D A T R G G V A T I T L N				
UniRef90_UPI000255638C	D V F D Q K L D Y P Q P Q R L D L V S H L I A A N C K C A L D L S D G L L G D L N				
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UniRef90_M3FVP3	R S D T A P L H D L V E V L L K A A P S T R W M R D P T R G G L L G T V C N				
UniRef90_E1QKK0	R S D T A P L A D L V A D V L A A C P G A R L F R D P T R G G L L A T A L K				
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UniRef90_Q9HKS0		M M D L S D G L L Y A S L D			
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UniRef90_E6WYB3	E S D C A S L W P Q V A S L L E A G I K P H A L R D A T R G G V A A V L N				
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UniRef90_I1MU84	A S D S A P L G G L V R D L L A A A P G V H A L R D P T R G G V A A S V N				
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UniRef90_F2LXP2	R S D V S N L T D L I L P I L E S D V E I K F M R D P T R G G V L A M C L N				
UniRef90_E0ST48	I K S D A K P L I D A L L P V I E K Y G E H I H A A R D P T R G G V L A M C L N				
UniRef90_E6WXS6	S R F Y E P V L R R D F V R K C R Y K L R A G M D L S D G L Y C D T D				
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UniRef90_UPI0004650997	E I E T V A S W L S S V S I L E D A Q T V R D L A R F M H D P T E G G L G G L A				
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UniRef90_UPI00036A3453	E S D C A A L I D P V F A L L L D A E I S V H C L R D L T R G G V V A T A L I				
UniRef90_UPI000475C002	R S D T A P I N G N L V H A L L D A A P S T R W M R D A T R G G V V G T V C N				
UniRef90_E9T7K0	T K T D C A S L W K P V E A L I E A G V K V V A Y R D A T R G G V V A T A L I				
UniRef90_UPI0004687C00	R S D C A A L G G L V E A M L A V T P D L H V L R D P T R G G V V A T A L I				
UniRef90_UPI000361016D	I S D C A P I Y E L A Q C I L Q Y Q G N K V K I M R D P T R G G V V A T A L I				
UniRef90_R7RRZ7	E I E L V T R T M T L N K T A A E V M A G Y E I H A C T D V T G F G L G H S T				
UniRef90_S9SIY1	T N I L R Q A H L R P T P R I K E Q L L L Q R G V N T A I D I S D G L L I A D L D				
UniRef90_X1KK28	D K S I N A F C R P T P K H C S S E F M K Q E I G C T D I T G F G L L G H S L				
UniRef90_UPI0002FF3F8B	T S D E L T Q A R G Y L Y K P G I S A N Q A G Q V S A M H D P T R G G V V A T A L I				
UniRef90_D4WE0	P E N L K S D C A P L W P A L K P L L A L K G L R C M R D C T R G G V V A T V L K				
UniRef90_D2Z6M4	I A E A R S L A D K L S V V E E A L K L A S L G A T A M H D T R G G V V A T A L I				
UniRef90_A8ZNV6	T S D E L T Q A R G Y L Y K P G I S A N Q A G Q V S A M H D P T R G G V V A T A L I				
UniRef90_D5EG38	P E N L K S D C A P L W P A L K P L L A L K G L R C M R D C T R G G V V A T V L K				
UniRef90_A6DQ43	P S E H L H F T P R V E E G K F L L S S Y Y A K M I D V T D G L L L D S Q				
UniRef90_W7KUL9	T L K R A R E F R E E L S V Q E K A L K V S S R F V K F M H D V T D G G L L Q C S L				

		90		100		110		120
UniRef90_X8IPP7	E	I A D Q S N V G V R L	D T E S I	P L D S E V A G I T G I L L G L E P L Y L A C				C
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UniRef90_A3YWI9	T L T Q G S G C D A L L	E R R D L	P L D P E M A A L A I A E A W C L E					
UniRef90_Q2RGH4	E I A S A C G L D I W L	D E N C I	P V D A G V K G A A E M L G L D P L Y L A N E					
UniRef90_F2L657	D W A K A S G T V I V	D E A A V	P I P R Q V A A Y A N M M G I D P L A L A S E					
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UniRef90_E6NB80	E V A E A A G V G F E V	N R S R V	P I H P L V Q R I C E K M D I D P L R L I S S					
UniRef90_R4KM25	E I A E G C G L D I R L	R E Y A L	P I D A V R G A A E I L G L D P L Y V A N E					
UniRef90_C2GEP8	E L A R G S G L G L V L	D D D V I	P V R D M T R A A C D M L G I D P L Y V A N E					
UniRef90_F0JKY7	E L T K S S N V C C E L	T E T A I	P V R A E V K G G C S I L G L D P L Y V A N E					
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UniRef90_D8IF27	H I A E K S N L Y A K V	F E E S N W	Q K V N R F F N N N K E V L N S I L T					
UniRef90_R5F673	E I A E G A N V T I A I	D E N E P	P I S S S V N A A C D D L G L D P L Y V A N E					
UniRef90_F0QVB6	E I A E A S G V R L R I	N V D G I	P I L P E T R Y F N T L G L D P L K S L S					
UniRef90_G0LBN4	E I A Q S S E I G I D L	F Q K D L	P I D N Q V A S A C E L L G L D P L Y V A N E					
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UniRef90_B1B907	E V S E G S G V G F E V	Y K E K L	P I S N I T K K L C D L F K I D P L Y K F I S S					
UniRef90_UPI0003B5CD0B	E F S Q S A Q S Q K G I E	T E N C I	P I R P Q V K A G C E L L G L D P L Y L A S S					
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UniRef90_T1CVS9	E W A R D S D K M I E	M I E N E V Q G V C E I L G L E A Y M L A N E						
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UniRef90_UPI0003773E90	E L A R A C G H A V L L	R E D R L P V R P P V G G V C E M L G I D P L Y V A N E						
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UniRef90_E8RCV6	E I A W A S G V S I T	E E D R L P I R P A V N T A C E M I G L D P L Y V A N E						
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UniRef90_E1QKK0	E I A E A S G V A M E L	D E A A A I P I A G A V A G A C E L L G L D P L Y V A N E						
UniRef90_E6N728	D W A K G S D V L L V	Y E S E L P L R E P V V N L C E M I L G V D P L T L A S E						
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 UniRef90_UPI00036DFCC5
 UniRef90_E4RJJ6
 UniRef90_D3E7R7
 UniRef90_S4XK58
 UniRef90_R4T3B2
 UniRef90_E5Y7S2
 UniRef90_N6XLL6
 UniRef90_K9VF60
 UniRef90_I5ARI0
 UniRef90_U1QUS3
 UniRef90_R4KPJ3
 UniRef90_U9VP49
 UniRef90_N6ZX63
 UniRef90_D5U2H8
 UniRef90_J7J348
 UniRef90_X1B458
 UniRef90_C4ZI96
 UniRef90_W2E999
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 UniRef90_F7PQP6
 UniRef90_F2LA80
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1 10 20 30 40

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

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

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

R P D Q D V V V T K W I A I E G T T I L A K E R E E E L L R R F
 I I L P D G A R P G D A L V V T K
 R M V G K N G A K P G D R L I I L T K P I G V G V I T T G I D H K L V H E D
 Q L I T S F D A Q P G D D L V M V V N M A G S Y Y G D Y P F W N A A T T A E P
 G R A A L G F A A L R G E A A L H A P Q
 R V I M T R D A R P G D V V V A I G R I G G E G A G V L A W D W E G K L L E K E
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 Q A L T P S A A A P G M D V I V T G Y V G L E G T A I L A N E K R T E L E T R F
 A G A K P G D Q L I I L T K P I G V G I L T T S I K K G Q L S R E
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 K I L S R R R G Q P G D L V L V A G P I G G F V G A Y L S L D A G V C G E A A T
 A G A R P G D A V L L S G P I G L H G T A V L S T R E G L G F F E A D I
 R A V L R K N A K F G D L V A F T G K L G G S Q K G L N S L L R L A Q I S K N
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 R V L R A S S R P G D V L L L T K H V G L E G M T I L A N D D R E A D L L S P Y
 R L V T P Q G A R P G D R L L L T K G V P L E G T A I L A S D C R A R L A D R F
 Q P G D T L V V S G P I A R H G G A V L A A R E S L G F M P P P
 R I L T N A G A V R P G D A L I I L T K P I G T G I L A T A K A E L V S E E
 I I N R K N A K V G D S I Y T F K N I G F S K L G Y L S I F K K Q N L N K N
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 UniRef90_A0LNS2
 UniRef90_J9Z062
 UniRef90_R6DYU5
 UniRef90_UPI0002E45661
 UniRef90_M1Z5P5

50 60 70 80

This figure displays a sequence alignment of UniRef90 proteins across 80 positions. The positions are highlighted in yellow. Amino acids are color-coded: blue for aliphatic, red for polar, green for polar, yellow for polar, and black for non-polar. The alignment shows significant conservation at positions 50, 60, 70, and 80, where most positions are filled with the same amino acid across all entries.

	90	100	110	120
UniRef90_G7GK40	T A D K S G V S V A V	D S G S V P R P A G L A E A A A A A L G V D A T D W V L A		
UniRef90_Q7VJC3	E W S R A A S V E I I L	T T E E S I P V L Q Q V R G V C E I L G L E A L S L A N E		
UniRef90_C9Z4L4	E I A A A S T G V V V R E R A V P V P E P V A N A C A I L G L D P M Y I A N E			
UniRef90_UPI00034D5BE6	E M A Q A S G C G F L I H N D K L P V G E A Q R R I T R L F G I D H R F C V G A			
UniRef90_F8EQR1	E I A R D S H L G I N L W Q R N I P V L D D V A G A C E L L G L D P L Y V A N E			
UniRef90_B5H2J4	E F A Q A S A V A I E D A S V L P I R P E T A M A A D M L G V D V M Y L A N E			
UniRef90_UPI00035FAFD9	E L T E A S E T G V I I Y K E D I I L D E D V K A I C E L F K D P Y R S L N E			
UniRef90_UPI0004664ED2	C W A E G R K I G L E V E K N I P I R E T V Q S V C D I L G F D P L Y L A C E			
UniRef90_B1X4J0	S L A R T S Y C H A K I D R M A L P I L T S M G L L I E K T Q W C L C			
UniRef90_UPI0003B43EF2	E I A C C Q V P W G L E L D A G S I I Q V H P L T L K A S H K L G F D P L R L I S S			
UniRef90_C6A3P3	E I A D N S E V G F E V Y Y E K I H M P P L V K K V V K F Y G V N P L T V S S T			
UniRef90_H5TMN9	T M S Q A S K V K V A L A V D G S R V P R T A A T T R A A D A L G E D A D I W A L T			
UniRef90_W7KJY2	E W A Q L S G K M I N V Y E K D I P I P D E V K S I T D V T G L D P L V L A N E			
UniRef90_UPI00039427F8	E W C Q C S G M Q L A I Q E A Q I P V D D A V V R G I C E L C Y G F E P C D L A N E			
UniRef90_M4U7P9	E W C I A S K V Q I D I N E T D I P V S D E V Q G L C C E L I Y G F E A Y D L A N E			
UniRef90_F8AGZ2	E M A D V A N L G F R V F A E K I P I R N E T R K I C C R F Y D L D P L A L I S S			
UniRef90_Q9V142	E M A D I N D L G F R I F A E K I I R D E T R K I C C D F Y D L N P L A L I S S			
UniRef90_B8GQG8	E I A S A C G L S V R L S E P A I P V K D P V R A V C E M L G Y D P Y Y L A C E			
UniRef90_I2AXK9	R L A S S A G K H A V L D I D L L Q N H L R L N V S V Q V A L E			
UniRef90_C7H113	E M C M N S K L G A V I Y E D E P I P N D I T K K V M K Y L D V D P L K M I S S			
UniRef90_E6L944	E W A T F C K K D I L I Y E E K I A V K N E E V L G L C E L F G Y E P Y E L A N E			
UniRef90_F6DME0	E L V R G M N F G L T L E E E A L P V S K E I L T L C C R L I I G F D P L Y V A N E			
UniRef90_F4AUR6	D V I A T E T G F N I I E L I E N N I P V R P E V A S V C C D I L G F D P F V L A C E			
UniRef90_B9L1C3	E V A E A S G V G L R I E Q E R I I L R E D V A K I C Q C L F G M D P Y A A I S E			
UniRef90_A0A017RWR6	E F V E G T D M T I E L E E D R I P I K N S V V A N A C E I I I G L D P L Y A A N E			
UniRef90_C7NVH7	E M A S K A D V G I D V E E R S V P V V S G P V S S A G E V L G I E P F D V A C E			
UniRef90_UPI0003B6ECA9	E F F A S A S S E C S I E L V E T D L P V V S P A V K D F C G I L G L D P I Y M G N E			
UniRef90_UPI00031F595F	E M A E G S S V G I R I H A A N P I L P G T R D L A E Q			
UniRef90_F4HIM9	E M A D I N D L G F R V F A S K I I V R E N T T K I C Q F Y D I D P L A L I S S			
UniRef90_F9VMS8	N I I E R S K K G I E L D L P F S K N V I E K T Y E Y G I K I D D L L K Y			
UniRef90_A6FYB2	E L L A T A S G S S M H I R E A D V P V R P A V A D T C E L L L G L D P L Y V A C E			
UniRef90_H1D3B0	E L L A E A S G K A M E L M E D E I P V S E E I R E L S G I L L G L D P L T			
UniRef90_Q607S9	E I L A R A A G A T V R L I E R D L P V R P E V R S V C E I L G Y D P Y Y L A C E			
UniRef90_X1LCA8	D M A S K A N V G I L I R E A D I P L L P A V R S M			
UniRef90_S5ZZ22	E M G K A S G V G I E L Y K N V P L F D S V I E N A E M			
UniRef90_W7L4H2	E L L C E D F H F N C E I N E G S I P I R N D I H G A C D I L G Y D P L Y L A N E			
UniRef90_D2RDT5	E L L A E K S G V G I Y I Y E E R I P I R E E V K G F C E V L G L D P L S M A N E			
UniRef90_R7HBG3	D M A E A G K V G L D I D F K K I P V R Q E I I E I C E I F D V N P Y E L E S C			
UniRef90_C9R9V5	E I L A L A T G K D L L L E E E A I P V S G L V R G A A D L L G L D P L Y L A N E			
UniRef90_W1JFF9	K L C A A S G			
UniRef90_F8AA24	E M A Q A S R V T L V I R A R S V P I I K E A L E F E A R M G I I P E G D Y A N V			
UniRef90_UPI0003605D83	E M I S A S K V G A K I F A S K V P I L D G V L E L I E K F A D S F T H W A L C			
UniRef90_X1FB41	H I C E A S E V S A E V			
UniRef90_UPI0003B6F138	E M S E K A G C G L E V D L R K I P V R Q E T I E I C E F F E L N P Y Q L T S G			
UniRef90_E4U2K6	E W A R Q S D V C I E V D E E K L P I S D E V K G I C E M L G F E A T A L A N E			
UniRef90_E8ZSC6	E I S S L S I S N L G I C V W E D K I P I K N E V K A I N E M I L G L D P L Y M A C E			
UniRef90_W8RSH7	N I I C T A S G V G A R V D L A A L P L L D G A E A L A V H Q N R A T L R W M V T			
UniRef90_T1C2H2	K A K R D F G I G F R I V E D E I P V N D H V Q K A I Q L S G G K S T D L T L G			
UniRef90_I2EW08	E M A I A S G L G I E I Q A D R L N I S P V V S S C E V F S F D P R Y C I G A			
UniRef90_C1BBB1	E L L A H A C Q A V I I D E H S L L P I P V Q L G A C D M L G I D P L Y V A N E			
UniRef90_I3TG15	E W V Y G R E V S I V V D R S E V P V R D E V R G F L E A M G V D P L N V A S E E			
UniRef90_L1M8U6	E L L A R D T G L D I V L D D A A I S V R D L T R G A C D M L G I D P L Y V A N E			
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 P I G **G** G A R P G D R L I I T K P L G T G I I L A A A M A A K A D G D V V
 I L R N N M A K V G D V L I I T K P L G S G V I N T A I K G D L C P Q E
 A G A Q A G D V L I I T K P L G I G I L S A G L K K G L L T D A
 D N L K A G Q A L V I T K W I G L E G T A M I A E K G K E A L S S K Y
 V L S N A T A K P G D I L V L T K P I G S G I I N T A A R G E L V R Q
 K A L E R K N A K V G D L V A Y T G K L G E S Y R G L T R L R G G S L S K K
 K L K R N N G A R L G D S I I L S K P L G V G I L S A A L K K E Q L S D S A
 P I T L A G A C **C** A G D H I I L T K P L G S G T I I L A A E M T G Q A R G A W V
 K V L T N A G A K P G D V L L L T K P L G I G I A T T A I K R G M A S K A L T K
 S A A E I G D D L Y I S K G I G I E G S Y I L A N D Y Q K G V S Q E S
 R V V R N C T A R P G D L I V I T K P L G T G I I S T A I K A E M I E P E
 Q A I I R R N T A K A G D A L I I T K G L G V G V Y S A A F K K Q K L D A D
 Q I I T K A G A Q P G D R L L I S K P L G T G V I I T T A A K R D T I T A A D
 Q P I L L R K R A V L R S P L F V T G T L G G S R V L T K G G V R P G D R L I I T K P I G T G I I L N T A L K A D L L D A A
 Q V L R N S T A R P G D C L L L T K P L G S G I I S T A V K G E M A T V E Q E A
 K A N Q D I V L T K W I G I E G M L R I V R E K G E E L S Q R F
 P I A L S G G R P G D A L L L T K P L G S G V L M A A E M S R D A R G D
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 K I V R N S T A K P G D I I L Y Y T K P L G I G V I T T A I K A D M A D E T
 K V L S N A N V K P G D V L I I L T K P I G T G I I N T A I K G E I A T K N
 D I V L T K Q I G M S G T V A L A K E K Y N E L K E K F
 L N D N I G P G D K V I L T S T I G E H G T A L A V E R Y G F Q V V G D I
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 U n i f r e f 9 0 _ C 0 C 1 G 4
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 U n i f r e f 9 0 _ N 0 B 3 K 8
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 U n i f r e f 9 0 _ U P I 0 0 0 4 7 0 4 4 C 2
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50 60 70 80

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UniRef90_UPI00037C0272	A A C P S I R L M R D P T R G G V S S T L N
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UniRef90_M1SHP3	R V V G I M S T L N R A A G E T F A S G K F Q V N A L T D V T G F G L G H L L
UniRef90_C9CX71	I D K A S G Y L D L L S V I P E S R I A R K N G V K A M H D V T G G V Y G A L E
UniRef90_Q08VK0	V E A E A T R W M T T L N A K A A D L M V A C R A T A A T D V T G F F I I G H A C
UniRef90_M5E2L8	G Y A E M V A S T T L L N R V G A T L A Q D A D V H A I T D V T G F G L G H G L
UniRef90_B5EBG1	A A D Y L I A H R R P S P P Y A P E A A R A G A T A M L D V S D G L L A D L R
UniRef90_G1XYJ8	L A T A I G S M L T L N R Q I A E L M I Q V D I H A A T D V T G Y G L L G H A G
UniRef90_C7QH11	L I Q K H H A F T P R L A E G Q W L A Q Q G A C T C T D I S D G L G K D F A
UniRef90_A9WGZ4	S V A M V M D H M K M L N R A A A E V M V E S G A G A T D I T G F G L G H A A
UniRef90_B5JNY9	M L R D P T R G G L A T T L N
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UniRef90_R716J7	V P A F M T Q V N A L E E N L F A D R A K E F G V S A M C Q I T D G I L A A L W
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UniRef90_A0A024UTJ7	W Q Q A I Q S M M T L N K A A A E T A G R F T V H A C T D V T G F F L G H L S
UniRef90_Q2R112	V I A K G I A W L K R P M L D W P K P P P D C Y V S A S M D S S D G V A D V L W
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UniRef90_F7NE67	Q V S Y L K K A L D M E K Y S E A A V A G S L G V R V M H D L S G G I Y L G L W
UniRef90_F2L1Q8	K S D V K P L N N L I E V L W E Y K E D I R L L K D P T R G G I G Q C F N
UniRef90_UPI0003B374E8	T V A K V T K C M A T L N D K A S V L M Q E V G V H A C T D I T G F F L G H T V
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UniRef90_UPI00047476E5	G Y Q D L I A C T T K L N T P G R L L A E V P G V H A L T D V T G F G L G H L L
UniRef90_X1LWC6	I D D A V E S M L L S N Q A A A C L L Q H G A T A C T D V T G F G L G H L M
UniRef90_U2R313	R R M L V E A Q L R P Q P P V P A G P A A R A G A T A M L D V S D G L L R D A R
UniRef90_F8C333	R L L Q Q L Y D Q M A Q L N K T A R D I M V R Y D V H S C T D V T G F G L G H A C
UniRef90_A0A031LRX6	E S D S A P L A D L V L E L L A A D I E I H C L R D L T R G G L A S V L N
UniRef90_F8GPL6	Y K A M I K T M T E L N N K I A E I L L E L D I K A A T D I T G F G L G H A L
UniRef90_UPI0002D5513E	Y K A M I K T M T E L N N K I A E I L L E L D I K A A T D I T G F G L G H A L
UniRef90_B2GFL3	T I A K L T S L L A T L N R K A S E L M I S V D A H A C S D I T G F G L G H A C
UniRef90_G0VN71	S S D Y V V D C M T H I N M Y A R A S F S K K Y K I N A A T D I T G F M M G H S I
UniRef90_D9Q93	H C Y P R A R L D V P P R L R A S Q P P G T P W R V A G T D S S D G L A Q A L R
UniRef90_R9MSA4	K E V H E S A C A L Y Q T S S L P D A G R A E V T A M H D V T G G V L G A L Y
UniRef90_A8MHJ6	S E S E I S E A R A S M N Y A R P L A E R R L V T S M S H D V T G G G I F G A L W
UniRef90_B9KYQ7	P P V L V K M A G E Q R E Y S E A A T A L K S G V Y V A M H D V R G G I F G A L W
UniRef90_UPI0003B3572E	Q Y D G A V K V V M S M L N K Y A F E A L E N L D V S A C T D I T G F F L G H V Y
UniRef90_UPI00047EA2A9	D Q D L L A R C R R F L Y E P G I S I V P A D L R Y L H D P T E G G G I A T G L H
UniRef90_C0C1G4	I D G A V R F K E M V N I G R E A A V A M K A G A L S I H D A S G G I F A A L W
UniRef90_E8R7K3	S K F I K P L K A D F F Y E A A K Y I N A S M D I S D G L F L D L E
UniRef90_UPI00025593A1	A P A F I K Q I K E Y A G E I F A G E E Q M G V S V F C Q V T E G G I F A A L W
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UniRef90_T1C266	Y D R M I E T M T R L N T P G P E L A A L E G V H G I T D V T G F G L A G H T L
UniRef90_Q0BZA9	W I D K A L T S M L I S N G R A A E C L L Q N N V N A C T D V T G F G L G H L L
UniRef90_UPI0002626735	A A A D I H L M R D P T R G G L A A T M N
UniRef90_UPI00035E54E6	E H A L A S M Q R P L A A A S K I L A P A A H A M T D V T G F G A G H L M
UniRef90_G8QL13	E E C Y L Q P L A T L N Q V A A E T Q Q F N V H A A T D I T G F G A G H A L
UniRef90_E3CU17	W Q L V L S A H L R P E P P A A G V A A A E A G A T A M L D L S D G L L R D A G
UniRef90_UPI00029B39F0	R M I A Y T T Q L N R V G T R L A E L P A V H A M T D V T G F G A G H L L
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UniRef90_R5U1H6	Q E E A V T E M M A L L N K K A A E N L D G L H P N S V T D V T G F G L G H S Y
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UniRef90_R6K339	A A A A L A V M G Q P Q N R E A A V L A K V A Y A M T D V T G F G A G H V Q
UniRef90_L0HED6	A K A Y G S D E E L L Y I G D V V E L L R K N N I N C Y M H D V S S G G I F G A L W
UniRef90_L8XXU5	V E Q T I N L N F L F A C E T L M K N P V F S R I H A M T D V T N G G L G D A F
UniRef90_UPI00046AF8AB	D Q E T A R D I M V Q L N Q A G A R F A L E P Y V H A M T D V T G F G L G H L S
UniRef90_Q182I1	R D V A A A L A I M V Q P Q N S E A Q V L G G V A N A M T D V T G F G A G H V R
UniRef90_R5LIK7	K V I E I M I H N K Y A A S M F E K F D V N S V T D I T G F G L G H T L
UniRef90_N0B3K8	D I E D V F E A M K T L N K K A C K I M N K Y N I S A T D I T G F G L G H A Y
UniRef90_UPI000373C8F5	A Y A E E M M A S T T L L N R Q G Q K L A E N E D V H A M T D V T G F G L G H A L
UniRef90_UPI00047044C2	S S S Y L E E L F N Q I S V I K E G E L A G K Y H H A M H D V T G G I L G A V Y
UniRef90_A1WBG8	Y R E M I A A T T R L N T P G P L L A E L P G V H A I T D V T G F G A G H A L
UniRef90_KOB224	M Y N E A V K V M T T L N K F A K D A M V K S Q A N S C T D I T G F G L G H S L
UniRef90_R6YU39	A V Q E A Q T V M A S L N Q K A K R A A D R C C S A C T D I T G F G L G H C V

90 100 110 120

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UniRef90_A7I192	R L L E K N G A G I K	F L K N L S K D E L F	
UniRef90_UPI00016A5F53	H I L E R S N A C A D V D V D A V P R S A A L A T L P A D V Q R R C M L E		
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UniRef90_A6FPV1	A I M Q A S G C G A I L R L A D I P L L D G V A A L V E I D G A E P P E W L F D		
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UniRef90_M1SHP3	E M A R G A K L S A K V D W D S I P V I E E A V G L V K E T G A S T R N W L G Y		
UniRef90_C9CX71	G L C E A S H L G A E I T C D A I P L M E G A R E L A E A F N D N A A L L P G I		
UniRef90_Q08VK0	E M M T G A K T R A V L A L E R I P L I Q D V P A L A I Q L P E D I Q W V L A D		
UniRef90_M5E2L8	E M A A A S G L G Y V I E A D N F K I K A E V K D I C N K L N D P A G L I S S		
UniRef90_B5EBG1	E M A L G A K V S F K I E L A R V P V I P G V P A L I D D R N R Q H Y E Q H V I S		
UniRef90_G1XYJ8	E M A R G A G L T L A V E W D R L P F L S Q A A Q L A E A T G A S N R N W A S Y		
UniRef90_C7QH11	H L A V A S G V A V V D V D S T L L I T D R G P R	L D Q V L T	
UniRef90_A9WGZ4	E I A R Q S K V A L H I T A D A V P L L P G A L A Y T E E F A T S F T T F A P T		
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UniRef90_R716J7	E I J A A Q S D V G I M L N E A S I P V H S D V A Q A C E F L G L D P L Y V A N E		
UniRef90_B3E7F7	E M A L G S G V T I R L Y L D A V P L M Q G V T D		
UniRef90_F3BC11	N M M A E A S G V G V E V D L L K K I A V K Q E T I E I C E Y F Q L N P Y Q M T S A		
UniRef90_D0CWH0	G L C E A S S G C G A I L D L N A V P V M D G A R A I V P E L P E G G K A D L L F		
UniRef90_R9KY04	E L L A A N N S V G L V A D L G H I P V R Q E T I E V C E Y F D L N P Y T L M A G		
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UniRef90_I7KV67	E V I A A S S G K G V Y V Y K D K I P M L E E T K S I C N A L G L D P Y R L I S S		
UniRef90_K4KWD8	E M M K A S G M Q A E I F A G N V P V L D C A W D C L E I Y L E D Y L E A A C S		
UniRef90_A8UV14	N I C K N S G V G M R I Y F E R V P V Y P Q A I E L		
UniRef90_A0A024UTJ7	N L A K S Q K M A V D F K L H T P I I K D M L E I N A A F N N N W R L P Q G Y		
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UniRef90_R5NZ74	Q M G V W M D K G F E V Q H V D I P I R Q E T I E I C E F F N N P Y L L D A T		
UniRef90_F7NE67	U H I T S Q V T V R I H S Q A V P L F P Q A R E A A H M		
UniRef90_F2L1Q8	T M A R G V D I I L E K L P A P E E V I S E A L N L G V E P E E V V L N		
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UniRef90_R5NMY2	Q L A A K T Q K G V E V M M D D I D I R Q E T I E I C E P Y G I N P Y K L M S N		
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UniRef90_A0A031LRX6	E V S E V T G K K I S L V K D N S L S I N R A V R A V T S I V N D P F T S I S E		
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UniRef90_U5BK14	E M A S A S G H G A R V D K G K I P L G E V T G K I C S L F S D P Y H S V G A		
UniRef90_D9Q93	E V A K A S G H D I T I Y S D S V V V E D I T R K I F T A L K M D P L K S M G S		
UniRef90_R9MSA4	E I S R K L G V G L D K L K I P V R Q E T I E I C E F Y N L N P Y E L I S G		
UniRef90_A8MHJ6	E M A K G S G V S I E I F A D K V P L I D G A K E L A T M		
UniRef90_B9KYQ7	E V A V A C G T G L V V V S E E A I L V Y P E T R A V C T A L G L D P L G L I A S		
UniRef90_UPI0003B3572E	E L S G R A G C G L K V D L K A I P I R Q E T I E I C E F F E N P Y Q L L S G		
UniRef90_UPI00047EA2A9	K L S K A S N V G F E F F K T I K E E I G T		
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UniRef90_L8XXU5	E M T E G S N V S I E L N C A N I P L L D S V R H Y		
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UniRef90_N0B3K8	E M A R A S R L T L D I A Y A R V P F A E S L V N A G Y K T G A S A R N W A S Y		
UniRef90_UPI000373C8F5	E M A Q A N Q K G V V V H T E K I P L D S N Q R L I C D Q F Q L N P L G I G A		
UniRef90_UPI00047044C2	D L A S A S R C K A I I N Y E K I P K D K D W P R G N K W D E Y Y F F		
UniRef90_A1WBG8	E V A R G A G V T V Q I D W S R V P P L L P G V A D L A A A T G A S G R N W A G Y		
UniRef90_K0B224	E M A E G S N V T I K L F S D K I P V I N G A E E F A K M		
UniRef90_R6YU39	E M A S A S G V T F E L K V N D I A Y F Q D A V E Y A K M		

130 140 150 160

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UniRef90_A7I192	G G D D Y E L C F T A A P S A A R A G V P V T R I G T I T D A P A V T W R D A S
UniRef90_UPI00016A5F53	M G N E G K M V L S V H G D D A K R A V E A C I I G K V I K N S
UniRef90_UPI00047E70DA	P Q T A G G L L A A V P S G K A A A G I D A A E I G E V T D D S A R L L
UniRef90_A6FPV1	G S E D G G L L I S V P E E K A G V L I R A S I I G N V V I E K E
UniRef90_UPI000362E5BE	G E D S G G L L I A C S E S G V D A V L A A H V I G R M V A G R A V L
UniRef90_UPI000374E2FC	G C E D G D R L V A E L E K E G I P A K V V G Y L K S G
UniRef90_UPI00047ACE3C	D F T S G G L L I A V P P E N L S R L Q Q A A I I G E V T P R K
UniRef90_UPI00037C0272	S G E E Y E M L F S F N P R H K K H I L K I S I I G K V
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UniRef90_M1SHP3	G T T S G G L L I A C V A P E H A A Q V L E A A K I G E M R P D E G I V L
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UniRef90_M5E2L8	G N T S G G L L I T F A P D D A K E G L F A A C I G E V E P A G G
UniRef90_B5EBG1	G E E S G G L L V A V A P E R V E E I C R A R V I G R V T E G E P V V
UniRef90_G1XYJ8	G G E D H A L V A T F T S A D A V P E G W R P V G T V Y A G A A V T V D G K P
UniRef90_C7QH11	V P P V Y Q L L L A D P Q L C A E V G Q P L W E I G E V I D G S G I V V
UniRef90_A9WGZ4	D G E D Y E L L F A L P P E T D L P A T P L H Q I G T A I K R P A L H L N A P
UniRef90_B5JNY9	P Q T S G G L L I A V P A D A A D T M V E V A D I G E A V A G P A G R I
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UniRef90_R5NZ74	G C E D G E K L V E Y L T E Q E M E A A V I G V V T E K K E K L I V V N E
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UniRef90_R5U1H6	D P Q S G G L L V A V S A G H A D A G L P A A I V G E V T E K E
UniRef90_UPI0004682C71	G T D D G G L L A A V P E T Q V K A V L A A H Q I G Q L S R G S G V L
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UniRef90_B5JNY9
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50 60 70 80

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90 100 110 120

Detailed description: This figure displays a sequence alignment of UniRef90 proteins. The alignment is organized into four columns labeled 90, 100, 110, and 120, corresponding to specific positions in the protein sequence. A yellow box highlights each of these four positions across the alignment. The sequences consist of standard amino acid abbreviations (e.g., A, C, D, E, F, G, H, I, K, L, M, N, P, Q, R, S, T, V, W, Y) and some gaps represented by dashes. The alignment shows significant variation at these highlighted positions, indicating evolutionary divergence or functional importance.

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 G A G

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

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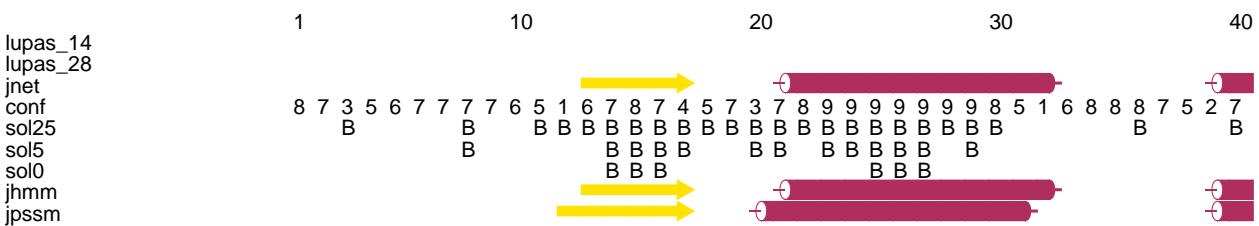
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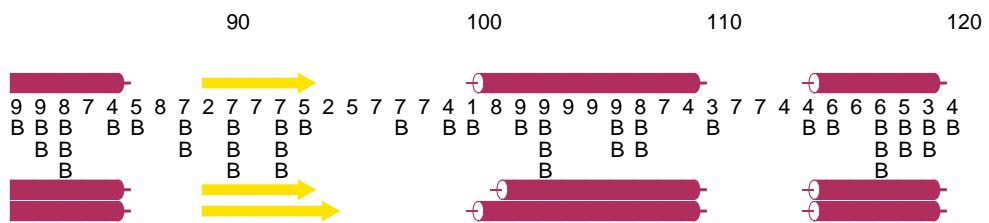
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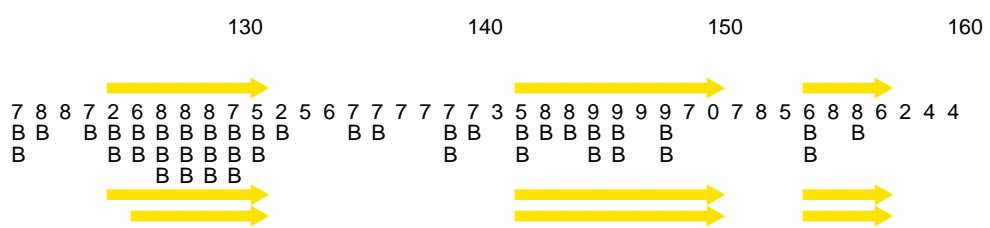


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