

1 10 20 30 40  
QUERY MR L T L V T D S T S T A Y I L P Q D E L L R R G R L N V I R V V P L L Y V N L S G A E Y R D W  
UniRef90\_UPI000287B6C1 MK T A I V T D S T S T A Y I L P K E E L R R E R E L N I H M I P L L S V V F G G E E S Y R R E E E E E  
UniRef90\_F7Z2R0 MR T A I V T D S T S T A Y I L P K E E L R R E R E L N I H M I P L L S V V F G G E E E Y Y R R Q E E E E  
UniRef90\_E5WG20 MK T A V V T D S T S T A Y I L P S K D I R R E K L N I H M I P L L S V V F G G E E N D E E S Y Q E E E E  
UniRef90\_UPI00038142E5 MK T A V V T D S T S T A Y I L P S K D I R R E K L N I H M I P L L S V V F G G E E N D E E S Y Q E E E E  
UniRef90\_UPI0002F5E9CF MS T A V V T D S T S T A Y I L P S K E E R R E K Y N I Y M I P L L S V V T L E G E E G V T F R E E E E E  
UniRef90\_B7GL11 MK T A I L T D S T S T A Y I L P K H L R R E K L N I H L I P L L S V V F F G G E E T A Y K D E E W  
UniRef90\_A4XJ14 MG V T I V T D S T S T A D L P S L E M Y E K F G I E M V P L L T V V F K D E E A Y K D E E W  
UniRef90\_UPI00047D521F K L A V V T D S T S T A Y I L P Q Q V I D E E L D I H V V P L L N V V F G G E E D N Y Q E E E  
UniRef90\_D6Y0E9 K T A V V T D S T S T A Y I L P K E L R R D E E L N I Y M I P L L S V V F G G E E D D A Y R K D R  
UniRef90\_UPI00035E19C8 MK T A I L T D S T S T A Y I L P K E E L R R A E L N I Y M I P L L S V V F G G E E D D A Y R K D R  
UniRef90\_E4U7S3 MN V A L V T D S T S D L P P A A L R A A R E L G I V R V V P L L S V I H F Q Q G K T Y F K D R  
UniRef90\_U5LCK1 K V K I V T D S T A D L P P A A L R A A R E L G I V R V V P L L S V I T I F Q Q G K T Y F K D R  
UniRef90\_A0PX97 MA I R I V T D S T G S D L P K A D I T E K Y N I K F L P L L Y V V N D D G E P Y L D D G G E  
UniRef90\_N1ZNL6 MK I A V V T D S T S T A Y I L S A E E Q L R K E N D I H L V P F I L F G G E E S Y R D E E G E  
UniRef90\_W8R4A2 MK I A V V T D S T S T A Y I L P Q E E L R D K K H H I M I P L L N V I F G G E E K T Y L D D G G E  
UniRef90\_E8MYI8 K V A V V T D S T S T A Y I L P P E E L R G Y S I E V V P L L H L I W G G E E K T Y L D D G G E  
UniRef90\_E3ZJL7 K I A V V T D S T T Y L P P E E A K K Q E L R I H V V P L L S V I V D G N K A Y R R E E E  
UniRef90\_H0UBZ9 K I A I I T D S T S T A Y I L P K E E L R Q D Q L Q I T V V P L L S Q V V Y G G E E K A Y R R E E E  
UniRef90\_D3FZF8 K V A V V T D S T S T A Y I L A P D I R D Q Q Y S I E M V P L L N V V V I G G E E S Y R E E E E  
UniRef90\_E3DXE5 MK I A V V T D S T S T A Y I L P D I R R E Q Q N H I H M I P L L N V V F G G E E S Y R E E E E  
UniRef90\_UPI00047AA3FE K V K I V T D S T L D L P K E L L D E Y E I T V V P L L S I T I G D S E S Y L D D G G E  
UniRef90\_UPI0003741438 I K I V T D S S S D L T M Q E A K E L D I V Q I I P L L T I S I G G E S D S Y L D D G G E  
UniRef90\_UPI00047A80C6 MR T A V V T D S T S T A Y I L P K D I R D K C H M I P L L H V I F G G E N E V Y H E E R G  
UniRef90\_UPI0003799FD3 K I A I V T D S T A Y L P D D D Y I E K K N R I T V V P L L S V N F F G G E T Y R R E E G  
UniRef90\_I4X0B9 K I H I V T D S T A D L K P Q V I E K Y D I H V V P L L T I Q I G G E K T Y L D D R G  
UniRef90\_A0A024PRJ5 MN V K I L A D S A C D L S E E E Y N E F N I E M V P L L K V I H L D D E K E E F S A D D G  
UniRef90\_I4D2Q5 MK I A L V T D S T A D L T E E E I K K F D I H V I P L L K V I S F G K E E F S A D D G  
UniRef90\_UPI000472E357 K I K I V T D S T A D L T E E E I N Q Y G I Q V V P L L S I H I D G G E T Y Q D D Q  
UniRef90\_A0A033UZV7 MK I A V I T D S T A Y L P Q A Y L D K Y N I R T V A L N V I F N G D E E V Y K E L  
UniRef90\_E6TTN0 K V R I V A D S T A D I L P K D L Q E S L N I S V V P L L N V H F G G E T F F E D D G G  
UniRef90\_A8MTFW1 I Q I V T D S M I D L P K D M T E A H N I V V V P L L T I I F D D D K E Y T R D D G G  
UniRef90\_U4QD92 N V I V T D S S C D L S K E E A I S E Y P I K V V P L M P V S L K G D D P S Y T D D  
UniRef90\_M7NHS6 T I H I V T D S T A D L S K E T V R E L G I H V V P L L S V I F G G E E S F K E G G G  
UniRef90\_M1YYU1 K I A W I T D S T C Y A S E K D W L E A H H I H V V P L L S V I F G G E E S F K E G G G  
UniRef90\_V6T4K2 V Q I I T D S S A D L P K D I L R E K Y F I H V V P L L S V R L R G K S Y L E D S G  
UniRef90\_UPI0002895CA5 K I R I V T D S T A D I L P A E I R E K Y G I S M V P L L K V H F D K E T Y L E D S G  
UniRef90\_UPI0002490B5C MK L A V V T D S T A Y L T D E E V A E N D I K V V P I P V I D G G S Y R E E G E  
UniRef90\_F2F327 MK T A V V T D S T A Y L T L E E E R N S Y N I H M I P L L S I N I F G G E T F Y D E E G  
UniRef90\_V6T084 I A W V T D S T S G L T L E E Y K D N H I Y V V P L L S I I F G G E S Y L D E E G  
UniRef90\_UPI00047CCD1E K I K I V T D S T M D M P L D M T E K L G I V V V P L L S V T I N G E E S Y L D R E E  
UniRef90\_W4QMZ6 K V A I V T D S T A Y I S E S P E O I R N K H S I K M V P L L N V I F G G E S Y R E E G  
UniRef90\_R6LGX6 MT Y Q L I S D S T C D L P S Q I K K Y N I H L M P L Y Q L I G D K T F R E G G  
UniRef90\_UPI00041649D7 N I A F V T D S T A Y L T P E Q C A E N N I T V V P L L S V I F D G V A Y R E G G  
UniRef90\_V9HF59 MK V R L I T D S A C D L P L D Y I K Q N N I E V V P L L M V N L N G E F F I P D D G G  
UniRef90\_UPI00037C69E MT I K I I T D S A A D L P K D L L Q N Y D I E V I P L R M V Y D E E F F V D D G G  
UniRef90\_UPI00047C5289 K I K I V T D S T M D M P Q E S V D Q L G V E V V P L L S I T I N G E E T F V D D R G G  
UniRef90\_W7Z135 K T A I I T D S T A Y L D E S E L R E K L E V Q V I P L L S V N F G G E K T F A R A D G  
UniRef90\_UPI000479B255 MK I R L V T D S T G T D L P L E F A E K H N I E V V P L L N V S F G G D E A Y A D G G  
UniRef90\_V6T124 MS V K I M A D S A C D L P L S F Y E E N D A T L F P L L K V Q I N G N E Y E D L  
UniRef90\_W7CX4 K I A I V T D S T A Y L P Q A V I D K F Y I Y S V A L P V I I D G G K S Y T E N G  
UniRef90\_UPI0004657DD8 MK I A V V T D S T S Y L S A E E V E R Y H I H V V P I P V I I D G G R S Y D E G G  
UniRef90\_C2ESR2 MK I A V V T D S T C Y L S K E E L A A N N I H V V P I P F I L N G G K T Y H E G D  
UniRef90\_W7D1T8 K L A I V T D S T A Y L P Q A A T E E L E I Y S V S L S V T I D N G K S Y L E D  
UniRef90\_UPI0002D9EA32 MK L F T D S G S D L P K E F A Y E E H D V T L F P L L R V H L N D G K E Y E D V  
UniRef90\_A0A017RVD1 K I K I L T D S A C D L D L D Y L R E L E V E L I P L L K V S F D Q E E Y E D R E  
UniRef90\_R9C2C7 MK T A I V T D S T A Y I P K D V R E K Y N I H M I P L L T V I L G G E E V Y E E E G  
UniRef90\_W7Z8M3 S I K I V T D S T A D I P E E L V R K Y N I H V I P L L T V I H F G G E E Q T F E E G D  
UniRef90\_C8NDS0 MK I A V V T D S T A Y L T K E E L A E L N V Y V M P L L S V I F G G E E T Y R E E D E  
UniRef90\_W3AHR3 MK T A I V T D S T A Y L P E E L R K E K N I H M I P L L Q V T F G K E E S F A E E G  
UniRef90\_A0PYN1 K I K I I T D S T C D L N K E T I E K Y D I E V I P L I V N F G E E S Y L D G N  
UniRef90\_I7KR01 MK I A V L T D S T S Y L S Q T L I E K Y N I R I A P L L S V T F D N G E S F V I E N  
UniRef90\_B2TPC5 MA V K V V T D S S Y I P Q G L V E E Y D I S I V S L N V I L N G G E S Y K E  
UniRef90\_L5N343 MT V Q V C D S A A D L D L E T T D R L S I H S L P L L N V I M N G G E Y E D R  
UniRef90\_W7ZJ84 K V K V V T D S T A D I P N A L V D E L N I S V I P L L N V H F G G D E Q F E D G D  
UniRef90\_UPI00030BE1A3 MK I A V V V D S T S Y L P D G L K E K Y N I R T I P L L P L S V V T I G D E S Y K E D  
UniRef90\_G9QK69 MA I R L F T D S G S D L P L S F F K E H S V T L I P L L N V Q L E N K A Y E D  
UniRef90\_UPI000469128E MK I A V V T D S T A Y L E S E I I D K Y D I K V V P I P F I F G G S D V Y N E G  
UniRef90\_UPI000360EE9 K I K I V T D S T V D M T E A S L K E Y E I E M V P L L S I S I F G G E S K T Y L D R D  
UniRef90\_F8F9U0 V R I V T D S T A D L P A D I R K E L G I E M V P L L K V L F G S E A F A D D G  
UniRef90\_U1WKN2 MK L Y I V T D S T A D I P K E L L A A E L D I H I V P L L K V H I G D M T Y L D D G G  
UniRef90\_R7RRK5 K I A I V T D S T S D I P K E E L V N K Y N I R V V P L L V S Y K D G K L Y Y D D G  
UniRef90\_S0KIF5 MK L A I V T D S T A F L P E E V K T H P D L Y P I P V I I D G K L Y N E D D  
UniRef90\_A6TU61 I K I I T D S T S D L P L S L L E K E K I P V I P L L Y I S F D D H T Y R D D G G  
UniRef90\_W2E3H8 K V R I V T D S T S D L M P V S L R E Q L N I E M V P L L R V I H F G D T E Y L D D G  
UniRef90\_E3DVF1 MK V H L I A D S A D L P R S F F E A N D I G F I P L L K V S L D D K E Y E D A  
UniRef90\_G9RZG8 MR Y K I L T D S T T D L S P Q L V A Q T G V T V L P M T Y T I G E K S Y R E E  
UniRef90\_I7KVV0 K I K I I A D S G C D L E R S Y A E S L G V Y L I P M I V V F G D E E A Y Y D R G  
UniRef90\_M8DDI0 MS I V I V T D S A A D I D S E L R E S L G I T V A V P L L K V M F G G E E S F L D D G  
UniRef90\_F0SX95 MG V K I L T D S T A C D L P K D L A R E L G I T I V P L L R V V F G G E E S F L D D G  
UniRef90\_F6DRZ8 L R I V T D S T A D L P E E I V Q Q Y G I T K V P L L K V V F F G G E E T F R D S N  
UniRef90\_G9YWN5 Y V L L T D S S A D L T D A L Y K E L G V E V L P L S F T M R N K E T Y R D N  
UniRef90\_D3EDR5 K I R I F A D S T C D L P P S W I D E Y N I G I V P L L Y V V F G G E Q S L R D D G  
UniRef90\_A7GQ25 MG V K I T T D S A A D L P K E V L Q A Y D I D V I P L L Y V F D E A E E Y L D D G  
UniRef90\_A5FSH1 MT I K I V T D S T A D L P A D I L V K N L G I T V V P L L R V V H F G G E E V F R D D G  
UniRef90\_W4ELK9 R I H I V T D S T A D L T K E E I E K H E I H I V P L L S I H I E G Q T Y T D D G  
UniRef90\_F5LFZ9 I K I F T D S T N D L N P H Y L K E N E I G V V P L L Y V I F G D D S Y R E G  
UniRef90\_B1QT13 MS V K I I T D S T S Y I P K E L I E K Y D I K V V S L L N V I M N N V S Y R E  
UniRef90\_UPI000473BDF3 MS I K I L T D S A S D L P C F F K E N N V S L L P L L R V H L R D T E Y L D D  
UniRef90\_UPI00028868DE MS V K I I T D S T S Y I P K E Y I E K Y N I S I V P L L N V V L N G K S Y R E  
UniRef90\_F7Z358 MG I Q I F A D S A S D L P L S F F K E N H I H L I P L L T V V Y V L N G K S Y R E  
UniRef90\_UPI000478F21C MA V R I I T D S A S D I S Q E K A K Q W G I T V L P L L K V R F G E E E Y L D G

QUERY UniRef90\_UPI000287B6C1 UniRef90\_F7Z2R0 UniRef90\_E5WG20 UniRef90\_UPI00038142E5 UniRef90\_UPI0002F5E9CF UniRef90\_B7GL11 UniRef90\_A4XJ14 UniRef90\_UPI00047D521F UniRef90\_D6Y0E9 UniRef90\_UPI00035E19C8 UniRef90\_E4U7S3 UniRef90\_U5LCK1 UniRef90\_A0PX97 UniRef90\_N1ZNL6 UniRef90\_W8R4A2 UniRef90\_E8MYI8 UniRef90\_E3ZJL7 UniRef90\_H0UBZ9 UniRef90\_D3FZF8 UniRef90\_E3DXE5 UniRef90\_UPI00047AA3FE UniRef90\_UPI0003741438 UniRef90\_UPI00047A80C6 UniRef90\_UPI0003799FD3 UniRef90\_I4X0B9 UniRef90\_A0A024PRJ5 UniRef90\_I4D2Q5 UniRef90\_UPI000472E357 UniRef90\_A0A033UZV7 UniRef90\_E6TTN0 UniRef90\_A8MFW1 UniRef90\_U4QD92 UniRef90\_M7NHS6 UniRef90\_M1YYU1 UniRef90\_V6T4K2 UniRef90\_UPI0002895CA5 UniRef90\_UPI0002490B5C UniRef90\_F2F327 UniRef90\_V6T084 UniRef90\_UPI00047CCD1E UniRef90\_W4QMZ6 UniRef90\_R6LGX6 UniRef90\_UPI00041649D7 UniRef90\_V9HF59 UniRef90\_UPI00037FC69E UniRef90\_UPI00047C5289 UniRef90\_W7Z135 UniRef90\_UPI000479B255 UniRef90\_V6T124 UniRef90\_W7CX4 UniRef90\_UPI0004657DD8 UniRef90\_C2ESR2 UniRef90\_W7D1T8 UniRef90\_UPI0002D9EA32 UniRef90\_A0A017RVD1 UniRef90\_R9C2C7 UniRef90\_W7Z8M3 UniRef90\_C8NDS0 UniRef90\_W3AHR3 UniRef90\_A0PYN1 UniRef90\_I7KR01 UniRef90\_B2TPC5 UniRef90\_L5N343 UniRef90\_W7ZJ84 UniRef90\_UPI00030BE1A3 UniRef90\_G9QK69 UniRef90\_UPI000469128E UniRef90\_UPI00036B0EE9 UniRef90\_F8F9U0 UniRef90\_U1WKN2 UniRef90\_R7RRK5 UniRef90\_S0KIF5 UniRef90\_A6TU61 UniRef90\_W2E3H8 UniRef90\_E3DVF1 UniRef90\_G9RZG8 UniRef90\_I7KVV0 UniRef90\_M8DDI0 UniRef90\_F0SX95 UniRef90\_F6DRZ8 UniRef90\_G9YWN5 UniRef90\_D3EDR5 UniRef90\_A7GQ25 UniRef90\_A5FSH1 UniRef90\_W4ELK9 UniRef90\_F5LFZ9 UniRef90\_B1QT13 UniRef90\_UPI000473BDF3 UniRef90\_UPI00028868DE UniRef90\_F7Z358 UniRef90\_UPI000478F21C

E E I T P T E F Q K V R E G A A F P 60 S S Q P S P D F A R V Y R E A L E E 80  
V D I T A E A F Y D E K L K M R A M A K D E L P T T S S Q P S P I G E F F V A E L L F Y F E K Q L G Q E A N  
I V E D I T T A A A D F F Y E E E M R K A M A K D E L P T T S S Q P S P I G E F F V A E L L F Y F E K Q L G Q E A N  
U n i R e f 9 0 \_ U P I 0 0 0 2 8 7 B 6 C 1  
U n i R e f 9 0 \_ F 7 Z 2 R 0  
U n i R e f 9 0 \_ E 5 W G 2 0  
U n i R e f 9 0 \_ U P I 0 0 0 3 8 1 4 2 E 5  
U n i R e f 9 0 \_ U P I 0 0 0 2 F 5 E 9 C F  
U n i R e f 9 0 \_ B 7 G L 1 1  
U n i R e f 9 0 \_ A 4 X J 1 4  
U n i R e f 9 0 \_ U P I 0 0 0 4 7 D 5 2 1 F  
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U n i R e f 9 0 \_ U P I 0 0 0 3 5 E 1 9 C 8  
U n i R e f 9 0 \_ E 4 U 7 S 3  
U n i R e f 9 0 \_ U 5 L C K 1  
U n i R e f 9 0 \_ A 0 P X 9 7  
U n i R e f 9 0 \_ N 1 Z N L 6  
U n i R e f 9 0 \_ W 8 R 4 A 2  
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U n i R e f 9 0 \_ E 3 D X E 5  
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U n i R e f 9 0 \_ A 0 A 0 2 4 P R J 5  
U n i R e f 9 0 \_ I 4 D 2 Q 5  
U n i R e f 9 0 \_ U P I 0 0 0 4 7 2 E 3 5 7  
U n i R e f 9 0 \_ A 0 A 0 3 3 U Z V 7  
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U n i R e f 9 0 \_ V 6 T 4 K 2  
U n i R e f 9 0 \_ U P I 0 0 0 2 8 9 5 C A 5  
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U n i R e f 9 0 \_ F 2 F 3 2 7  
U n i R e f 9 0 \_ V 6 T 0 8 4  
U n i R e f 9 0 \_ U P I 0 0 0 4 7 C C D 1 E  
U n i R e f 9 0 \_ W 4 Q M Z 6  
U n i R e f 9 0 \_ R 6 L G X 6  
U n i R e f 9 0 \_ U P I 0 0 0 4 1 6 4 9 D 7  
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U n i R e f 9 0 \_ W 7 Z 8 M 3  
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U n i R e f 9 0 \_ I 7 K R 0 1  
U n i R e f 9 0 \_ B 2 T P C 5  
U n i R e f 9 0 \_ L 5 N 3 4 3  
U n i R e f 9 0 \_ W 7 Z J 8 4  
U n i R e f 9 0 \_ U P I 0 0 0 3 0 B E 1 A 3  
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U n i R e f 9 0 \_ U P I 0 0 0 4 6 9 1 2 8 E  
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U n i R e f 9 0 \_ R 7 R R K 5  
U n i R e f 9 0 \_ S 0 K I F 5  
U n i R e f 9 0 \_ A 6 T U 6 1  
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U n i R e f 9 0 \_ E 3 D V F 1  
U n i R e f 9 0 \_ G 9 R Z G 8  
U n i R e f 9 0 \_ I 7 K V V 0  
U n i R e f 9 0 \_ M 8 D D I 0  
U n i R e f 9 0 \_ F 0 S X 9 5  
U n i R e f 9 0 \_ F 6 D R Z 8  
U n i R e f 9 0 \_ G 9 Y W N 5  
U n i R e f 9 0 \_ D 3 E D R 5  
U n i R e f 9 0 \_ A 7 G Q 2 5  
U n i R e f 9 0 \_ A 5 F S H 1  
U n i R e f 9 0 \_ W 4 E L K 9  
U n i R e f 9 0 \_ F 5 L F Z 9  
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U n i R e f 9 0 \_ U P I 0 0 0 4 7 3 B D F 3  
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U n i R e f 9 0 \_ U P I 0 0 0 4 7 8 F 2 1 C

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90 100 110 120

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

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

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U N I F 5 V R G G R L T N G A A L I G G L L L K I K P I L L T F D E G G K I V L H E K  
S L D Y L H K G G R I S A A S N F F G S L L L K I R P I L L K V D D G G K I V L D Q K  
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I R T R K K K A M K M V D L F W E D D A K S G E P Y Q A V I I I H H A N R R E E K E A R E  
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I R T R K K K A L S R V I E E L L S Q D D A A K Y D R I H A M V I I H H A N R R E E E A L E  
I R T R K K K A L S Q R I E E L F V Q D D A N L G V P M R A V I I H H A N R R E E E A R A R E  
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V R T A K K A I A R I M A L L H E D D A K Y G N P L D V V V I H A N R R E E A D A R N  
I R T S K K A L K E R I G D L F E E D Y N K G D K L Q A V I I H A N R R E A D A R N  
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V R S Y T Q V A K Y I V K Q F A E D V K G R T I K G V G I C H H A G L D L A M K  
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V R T R A K A K T G I M E L F E A E A K A G K P I Q L S I V I I Q A Q V Q E E A E  
V R T E K K A V A R I C Q L L E E D V T Q G G A Y K V T V I H A N R R E E E A Q T E  
I R T R K K K A I L R I Y E L F E E D A S K G L P M K A A V I H A N R R E E E A D N E  
V R S H S Q A V K F L A K Q F T E D I K G K T V K A V G I H H A D A F D F A M N N  
A R S Q S Q A I K Y I V K Q F M N D V K G K T I K Y A S I A H A N G L E F A M K E  
I R T R K R A M K R I V D L D E D A S S G I S Y Q A V I H A N R R E E G A E R E  
V R T R K R A L D R L V S L L R E D A Q P D L P I R L A V V I Y T Q R D E Q A A R E  
V R S H K Q V V E Y L M K D F V D R T A G K I V K G V G I A H A N G L A M A E P  
I R G S K R L F Q R M L E I M E E R G T G F T N Q T I G I S H G D D L E Q A E Q  
A H S Q K K S L E C V V I Q A F Q D I A K G R K Q I R L L A V A H G D A E A G H  
A R S H K Q V A Q Q L F A S F K E D T A G K K V K G V G I S H A Q G L A M A E P  
V R T R K R A M K R I E E Q L A K E V E G Y K N L S I V I E G N A D K E T A L S  
V R G Q K K A T A K I I D E F T N E V Y G Q S A V N I G I S H A N S V S E A E S Q  
V R G S K K V I G K M I E L A K A R G E N F E G K T I G I S H A I S L E A L E  
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I R G N K R F F K R A L D I L G E R K T D F S E T V I G I T H T A G S F E D V E  
A R G Q K K A M N R L I E L T R A K H G D K E V N V I T A H A S I G T A E  
V R S T K K A L L R C E E I F D E S V S K D D Y P V R A I I I H A N D E E P A A I  
I R T R K K A L R R R V E E Q L A S A V E K H G A L Q A T V I H A N C E E L A R E  
I R T E R K V K E R I F E Q L F E E A S T N I K E A S V I H A N V K E L A E E  
V R S H S Q V V K Y L A K Q F A E D V N G K T I M G A G I V H A E A I E L S S K  
V R T E K K A L A R I V D L L A E D V S K G G S F Y A T V I H A H R L D G A E A  
Y R G F E K R C I R D Y I T D R L A G R D D L D L R R V F I T H S G V S P E I E A  
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I K G R K K A L K S L V Q Q L K E K A N P E N Q V I F I C H A D D C L E D A E D  
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I R G R K K L L H R M L D I M E E R G T D L E H Q V G I C H H G D D E A A E  
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L K D E L L E K R F P N V D F S V S Y F G G P V I A G T H L L G E G A I G L G W A W  
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W K E E L L S A L Y P H V E F W I S Y F G G P V I A G T H L L G E G A I M G L C W I  
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W K E T L E Q R Y P H V E F F L S Y F G G P V I G T H L L G E G A I M G F G W Y  
Y V E M I K K E L S P G E L I V T Q I G S V I G T Y V L G P G T V A F I F F E  
I V T E L L Q E K Y P N A K V S L S Y F G G P V I G T H L L G E G S I G I G W N T V  
L A G Y I R K E Y P D V T V T I S Y F G G P V I G T H L L G E G S I G I G W  
W M I D L K K R F P N A E F G I S H F G G P V I G T H L L G E S A L A M G W  
L R E E L R S L G G G E E V E T S E I G A V I A S T H T G P G G I Y G Y A Y S L  
V K E G L V E L T G Y E N V E I T P I I S T H T T G P G A I G F M Y Y  
V K E I L F K E E F G S K D F L I S T I G G V I G S H V L G P G T V A V F F L N  
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W K A Y I E A T Y P H V T V T I S H F G P V I A T H L L G P G G A I G L T W Y N  
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QUERY

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UniRef90\_C7H5X7 K I A I L T D S S C D I P Q E L A E K Y G I D I M S F H I L L D D Q V D Y E R  
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UniRef90\_U5P3P6 P L G W M A E A I K W A G E G R S F D E L A N I Q M Q I D G T S A Y I M V D  
UniRef90\_R6NUJ3 G E G L L V H K A V Q M K E N G A T L E E T V K W L E E N K L H L V H N F T V D  
UniRef90\_S4DJE9 G Q G V L V L E A A R M Q K E G K E L T E V L T W L Q D N Y L K V H S W V T V D  
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UniRef90\_B8E049 G T G F M V I E A A K A S L N G W N I K E T I K H I S K I R E N L F H A F T N D  
UniRef90\_R6C6J4 G T S L L T E F A L Q C L E E G M S A A E I A E T L E K K K E D V C L I A M L D  
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UniRef90\_X0PU14 G Y G L L M D K L A D L R D A G K S I D A V K S W A E N K L S V H H W F I S T  
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UniRef90\_R6S4L6 T Q R Q A V L D A Y E L I K Q G K T G K E I K E L L E K E A L S S I Y I M V E

	170	180	190	200
UniRef90_R5C219	T L K Y L K K G G R V	T P A A A A I L G T V L N I K P V L Q T I Q E G K L D A Y A K		
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UniRef90_T0NF38	T L S E Y L L K R T G G R I	T R N S A F L V I G A E L L L N I K K P I L I L S M D E D G G K I S A V I A K		
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UniRef90_F9HGL3	D L E N Y L V R G G R I	S K A A A V L G G S L F S V I K K V L I L A M K Q D D G G A I L K T S V I A K		
UniRef90_R5LJM0	D L H Y L H N G G R I	S K S A A S V L G G S I L N I K K P I L I L F V N V N G G E L K L T D A K		
UniRef90_UPI0002DF9056	D L E H L K R G G R I	N A V Q A S V I L L N I K K P I L I L F V N V N G G E L K L T D A K		
UniRef90_UPI000414EAA9	D L T N L K Q K G G R I	S N A Q A F I G G G L L K I K K P I L I L F V N V N G G E L K L T D A K		
UniRef90_F2JKV7	T L E Y L Q K K G G R I	G L V A S L L G T A F D L K P I L I L S C E D D G G I Y Y T V T K		
UniRef90_UPI00024917FD	D L K H L M R T G G R I	S N R S A F V L G G S L L N I K P L L E F D F D D S K I V I A I D K		
UniRef90_G9WH26	D L K N L J A G G R I	S R A S A G L V G G S L L N I K P L L E F D F D D S K I V I A I D K		
UniRef90_U6EW65	D L M Y L K R G G R I	S T I S S A I G G T L M N V K P M L T L N N G A I V N T A N		
UniRef90_UPI00047DACEB	T L E Y L K K K G G R I	T P A A A A L G G T M L N R I K P V L L T I I Q Q G G E K L D A F A K		
UniRef90_R5YRC5	T L E Y L K K K G G R I	T P A A A A L G G T M L N R I K P V L L T I I Q Q G G E K L D A F A K		
UniRef90_U2AYU0	T L L Y L K R G G R I	T P A A A A L G G T I L L K I K P V L L Q I I Q Q G G E K L D A F A K		
UniRef90_R9N3C4	D L S F Y V K G G R I	S K T A G F L V L L E L K P I L L N L D N D G G R L T P R F K		
UniRef90_UPI00036E61B1	D L N H L V K G G R I	S N G S A L L G N L S I K P I L L Y F N D N G G K I E V F E K		
UniRef90_H1HV18	D L K Y L K R G G R I	S G A A A T V G S I L N I K P L V I T K G E K V E P F A T		
UniRef90_D4M2F8	T L T F L H A A G G R I	C S T V I A L I G A N S V L S I R P I E V M S D D G G L S M N V G K K		
UniRef90_X0Y1B8	T L K Y L K R R T G G R I	S T I S W A L I G A N S V L S I R P I E V M S D D G G L S M N V G K K		
UniRef90_U4TP35	D L G H L R R T G G R I	S G V S A T I G G L L K V I K P I L L T I T D E G G K I T A I A K		
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UniRef90_UPI0003F7D031	T L D N L K K G G R I	G R V A S L L G T L L S I K P V L L Q I I Q Q G G D K I D A F A K		
UniRef90_S0J4R0	T L Y Y L K K G G R I	T P A A A A L G T L L S I K P V L L Q I I Q Q G G D K I D A F A K		
UniRef90_UPI00034548C1	D L N H L V K G G R I	S N G A A V L G L L S I K P I L L Y F N D N G G K I E V F E K		
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UniRef90_G5JU13	D L N H L V K G G R I	S N G S A L L G T L L N I K P I L L Y F N D N G G K I E V F E K		
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UniRef90_D7N8K5	T L D E Y L V R G G R I	S S K G S A A I G S K V L L N I K P I M E V V R E K T M Q S V G A K		
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UniRef90_R7G6H1	T L E Y L C K R G G R I	S K T A G A I E G E M A S L K P L I T V I S E E G G K V E V V G K		
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UniRef90_UPI000471C8BC	S L T Q L H R R G R I	S S Q S L L V L S Q T L R I H K P V L L R F D D G G Q I V V A E R		
UniRef90_A0A011AEF1	S L D H L R R G G R I	S A A A A L I G T T L S V I K P I L L R V F D D G G Q I V V A E R		
UniRef90_UPI0002FC6E0	S L D H L A K A G R I	N P F V A K V A N M L A I K P I M A T E E G G T I K L V I E K		
UniRef90_UPI00047E9C47	S L D N L K K G G R I	S G T K A A I A T K L N I K P V L K I E D D G L V K Q K T Q		
UniRef90_M1Z810	S L D N L K A G R I	G R V I G Q I A T K L N I K P V M S N D D G G T I R L V E K		
UniRef90_F3A7P9	D L S H L Q R G G R I	S G A Q A L V G S L L Q V I K P V L L H F E D K I I V I P F Q K		
UniRef90_R5H8T2	T L Y L H R R G G R I	C S A A A A M A G G D L L K L H P Q I I V I E H G A M K P T K K		
UniRef90_D9QQY9	T L E Y L Q Q G G R I	S A K A K A F V G G L L N I K P I L I E V D E D G E V N F H S Q		
UniRef90_V7I440	S L D H L K R G G R I	S A T S A T V G T L L S I K P I L I I N D E D G K L V P V K K		
UniRef90_U2PQI5	D L N H L R R G G R I	S S T S A I V G G L L N I K P V L L H V E D D G G K L I N I V S K		
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N F I L C C C S T V D M K K E F F E Q R Q I P Y V C F H Y T M D G V T Y P D G G  
K I V L L S D T S C D L P E S I L S K Y N I E T I P F Y V S F D T E N Y K E I  
I V A D S T C D M D P E Y L L K K F N I A T V P L K I I F G D E I K N Q N  
I K F F A D S T M D I S P E D V K K Y D I T L V P I T V I L G D T P Y K D G G  
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50 60 70 80  
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V D R I D I Q D F L A E M K R T G E S A P Q T T S A S P S P S G G F K L K W F E E A  
P D R I D I Q D F L A E M K R T G E S A P Q T T S A S P S P S G G F K L K W F E E A  
R E L D S K L F Y K M S Q E G L M S T T T S Q S V N V G Q F Q E F K G Y A Q R K  
V T L S R E L F F Y E K L L T S G S A D L S T T S Q S V N V G Q F Q E F K L K W F E E A  
Q S M T F E E F Y R R V A T S G S M P T T T S Q S V N V G Q F Q E F K L K W F E E A  
V D L T N Q R F Y E L L L E T D V M P T T T S Q S V N V G Q F Q E F K L K W F E E A  
D E I D I R D V Y E R M A E P D V V P T T S Q S V N V G Q F Q E F K L K W F E E A  
K S I P F K D F Y R R M A E G S M T K T S Q S V N V G Q F Q E F K L K W F E E A  
H C F E A N Y F Y T Q L N S F R T Y P K T S S M N P N L I E E K L A K I A S H Y  
K E E D F C F F Y E K L L A K E S K D L P V T S S Q S P E D F F L K L Y R E A K E K E  
S A S L E D H F Y R A L L A K E S K D L P V T S S Q S P E D F F L K L Y R E A K E K E  
D T R D L K E Y W K K L R E T D K L P V S S Q S P A E F F L E I Y Q E K N R G Y  
I D I T P E M M Y A R L E D E L P V T S S Q S P E D F F L K L Y R E A K E K E  
T E I G I R E F Y R R M A E G S M P T T T S Q S V N V G Q F Q E F K L K W F E E A  
L E I P V R D F Y Q F M D N G A A Y P K T S L A S I E D F E K A F R A H A E A G D  
R E L D I K T F Y D Q R R D G A Q T S L T T Q I N V A V Y L D F F E E S Y A K I N  
T N I D V K E V Y Q Y I R E N K N L K T S L P R Y Q D L Y E V F E S Y A K I N  
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V D I T A E E Y E R L P Q E I P T S S L P D G A A I G E I F D R I R K A D Y  
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L E I T A K E V I D T L E E E V P T T S L P S L D E I H E V F D E L V K E Y  
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D T F N Q K E Y L N K I T L A E S E D C P K T A C P S P D L Y M N A Y K T D A  
K S I T N E E F Y Q R V K N G A M P V T S Q S V N A G Q Y E T M F E E P F L K D G  
V D I L K P E T I Y Q R F P R E I P T T S T P S P Q D V K N M A E E I A K S E G T  
V D L K P D R V Y H E L V H G Q G L P K T S V P S P G D F V I T V Y N N L A E T  
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Q K L S H E E W Y D L M A E A K G V P K T S Q P R V A E L D R L K D S L Y E K Q G  
L G K T N Y D R Y M N Q E A N G A M P T T S Q S V N V G Q F Q E F K L K W F E E A  
S E R S I Q K F Y E D L E Q S R T L P K S S Q P Q P G K Y Y E L M D T L V S K G  
I N L S R E E F F E M L K R K D C E I A T S Q S P E D V M K L W D A L L Q E N Y  
K D I T A D E F Y E R L R K T P E W P K T S Q S P S I G E M V E Y F E D A N R G Y  
I D I T P R E V Y D R F S E E I P K T S L P S S G E V I H R V L D E I K A G Y  
I D E P E D L A G V T T S G A S P S E L S E A Y A Q E A L E E E G  
V E D M P K E F Y R A L K E G K M P T T S A S N P I N I A K F Q Q E I N E G  
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V D I H S G E L V K M M Q E K R Q L A S T S Q P A P G D W E E I L N A K L S G Y  
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V N I D K R T F F D I M R N K E A S F Q T S Q P S L Y N V K E L W D N L L S K E Y  
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V I I T D T S S D L P E D I T K G L P V K V L S M P V A L K D N P E K D I

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

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

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

		90	100	110	120																																										
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UniRef90_C6WRA1	D	G	V	L	S	V	T	H	L	S	S	R	Q	L	S	S	G	T	W	E	A	A	R	L	A	A	N	L	Y	S	K	D	Q	V	R	V	V	D	S	R	R	S	V	A	S	C	
UniRef90_R9KZG4	E	H	V	Y	A	V	T	H	L	S	S	R	Q	L	S	S	G	T	W	S	A	A	R	L	A	A	N	L	Y	S	K	D	Q	V	R	V	V	D	S	R	R	S	V	A	S	C	
UniRef90_L7KC1	D	G	V	V	A	V	T	H	L	S	S	R	Q	L	S	S	G	T	W	S	A	A	R	L	A	A	N	L	Y	S	K	D	Q	V	R	V	V	D	S	R	R	S	V	A	S	C	
UniRef90_U2EUA2	Y	T	H	V	I	V	T	T	V	N	S	K	L	S	S	G	T	N	M	Y	Q	T	A	R	L	Q	A	K	A	M	F	K	T	R	L	K	E	V	I	D	S	S	K	T	Y	S	L
UniRef90_R3W6P8	E	A	L	I	V	I	T	V	A	D	K	L	S	S	G	T	F	H	D	T	V	K	E	A	A	K	K	M	T	N	D	R	L	K	E	V	I	D	S	S	K	Q	V	N	S	A	L
UniRef90_H3NDH9	Y	D	H	V	I	V	T	V	A	D	K	L	S	S	G	T	F	H	D	T	V	K	E	A	A	K	K	M	T	N	D	R	L	K	E	V	I	D	S	S	K	Q	V	N	S	A	L
UniRef90_B6G9T4	E	D	V	V	V	I	T	L	S	S	S	K	L	S	S	G	T	H	Q	S	A	A	C	A	E	A	A	G	G	A	T	E	V	H	V	V	D	T	K	S	V	T	V	L	L		
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UniRef90_R6BF39	Q	D	I	L	F	I	G	M	S	S	G	V	S	S	G	T	F	Q	A	A	Q	L	R	A	E	F	P	E	R	R	N	I	F	E	L	I	D	T	L	G	A	S	L	L			
UniRef90_R5SM11	D	D	L	I	V	L	C	L	T	T	A	V	S	S	G	T	Y	N	D	A	A	V	L	A	A	K	Y	S	G	R	N	I	F	E	L	I	D	T	L	G	A	S	L	L			
UniRef90_U2VRA7	L	P	T	L	V	L	G	F	T	G	G	L	S	S	G	T	Y	N	D	A	A	V	L	A	A	K	Y	S	G	R	N	I	F	E	L	I	D	T	L	G	A	S	L	L			
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UniRef90_V7ICL9	L	D	I	L	Y	L	S	F	S	S	M	L	S	S	G	T	F	G	S	A	N	V	A	A	E	Y	P	D	R	R	E	I	V	I	D	T	K	C	A	S	S	L	L				
UniRef90_F8JYTO	T	D	I	V	S	L	H	L	S	S	A	E	I	S	S	G	T	Y	D	A	A	R	L	A	A	G	S	A	P	V	P	V	R	V	I	D	T	G	M	V	A	M	G	S	L		
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UniRef90_E7G632	Y	D	E	V	I	L	P	I	A	T	G	L	S	S	S	F	Q	N	A	V	I	A	A	E	E	F	G	D	L	Y	L	I	D	A	L	N	V	T	G	T	A	S	L	L			
UniRef90_A6CKB4	P	D	C	T	I	I	H	I	T	S	K	A	S	S	S	F	Q	N	A	V	I	A	A	E	E	F	G	D	L	Y	L	I	D	A	L	N	V	T	G	T	A	S	L	L			
UniRef90_R5NMZ7	Y	E	N	V	I	V	S	I	S	S	K	L	S	S	G	T	Y	N	T	V	K	S	V	L	E	E	Y	Q	D	G	L	N	Y	A	L	D	T	K	N	G	T	A	N	A	L		
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UniRef90_K9EWP7	Y	E	H	V	I	L	L	S	S	S	K	L	S	S	G	T	G	A	L	Q	S	A	K	V	V	A	E	D	Y	D	F	H	T	Y	F	I	D	S	K	G	T	S	A	L	L		
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G N G L L A L K A V D L R A K N V N A R N A A D I L D E A V P H A C Q Y F T V D  
I E G S F A I Y A A Q L V Q K G Y K P D D I N E L T E I R Q H I G A Y L I V D  
A E G F V V M A A K A A N A G A S L D E A I A L T R K N I P R V N E F H A A F D  
G I G L Q L F S I H D D I L K A G Y S L T E I A E R A K D R V D R V N A E F V V D  
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G A G V L A V W A A M E L E K G K T F D E L T E I L P E K V K D S K V F Y A M D  
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A M G A A M S A A K V A S R G A G L E E C Y A A A M D T L K R A A T W Y Y L H  
U n i R e f 9 0 \_ U 7 K S J 9  
G L A L I V M A A A R A A L E G K N L E Q T I D I I H Q I T P R I H L F G K I D  
U n i R e f 9 0 \_ X 1 L 7 F 7  
Q N D L F L L K I N E L I K E G L S F D Q V V A R M N E Y Q K N T K L L F A L E  
U n i R e f 9 0 \_ F 3 A 9 C 9  
V L G F A A L S A A E A R D G A D L D T V V A V A E S L K N S S L W L Y V H  
U n i R e f 9 0 \_ C 8 R R Y 1  
E V D L I V R K L N Q L V A E G L D F D Q V V D V I T T Y Q S K T K L L F V L A  
U n i R e f 9 0 \_ F 8 D I 4 5  
A V G A A M A A A R L A R D G A S L E E C Y D I A V D T L H R S E T W Y Y L H  
U n i R e f 9 0 \_ Q 8 F N 9 4  
E I D L I V L E A N R L I K Q G L S F E E V V E A I T A Y Q A K T K L L F V L A  
U n i R e f 9 0 \_ U P I 0 0 0 3 6 0 3 D E 5  
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UniRef90\_D8ING9 A R G A K R A Y Q S L V D L V K H N L N S K K V V I D H A N N E K G A L A

UniRef90\_I7KLY3 A R G M K T L R D L L K Q M D E F N Y Q G G R L I I D H C N N Q A D A E K

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90 100 110 120

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