

1 10 20 30 40  
QUERY R A K V A M S H F E P H E Y I R Y D L E K N I D I V R K R L N R P L L T L L S E E K  
UniRef90\_F4NSP6 K V A L S N L E K D K Y I L N Y K R I L E D N L L K E V V R D R R L Q H L L T T L L S A E E K  
UniRef90\_Q17EL3 A K V A L S R F E D Q S V I L P Y E K L Q K N L L A I V V K S R R L N R R P L L T T F S A E E K  
UniRef90\_G2R6S2 K V R Q N L E E S F I L N Y K K M S E N L L A I V V K S R R L N R R P L L T T F S A E E K  
UniRef90\_M7P3D7 K V R I S N W E K D K Y I L D Y H H L Q R N L L A I V V K K R R L N G R R P L L T S Y A E E K  
UniRef90\_I2JXF2 M N N L E E S H S F I D N Y K K N L Z S R R L A I V V K R R L N G R R P L L T T Y A E E K  
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UniRef90\_T2M779 K V A I S K F E D P N I Y L P Y E K L N N N L K L V V K D R L K R P L L T T T A E E K  
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UniRef90\_H1XUL1 Y A E L P E R V L N A A R K I I K R P M T L L T E E K  
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UniRef90\_W0T2Z0 R I P T F H P S R V P P Y T E L L T N L E T V R A Q L N R A L T L L A E E K  
UniRef90\_Q4PB22 P P Y S K I V Q N L E Q V R K V L G R A L T L L A E E K  
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UniRef90\_E5R4N5 P P Y A Q L L E R L A V V K R H L G R P L L T L A E E K  
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UniRef90\_V4RIP7 Y Y R L A A L E E A G I A K V S R L P Y S I K V L L E S V L L R Q H D G Y V  
UniRef90\_I4XOD7 Y F S L P D A E K N G L E G V S R R L P N S L K V V L E N L L R F E D N R T V  
UniRef90\_F2J147 N A L S Q L G L S D I N R L P F T L K I L L E N L L R N Y E D N T T V  
UniRef90\_K2C2C2 E K N G L K G I S K L P K S L K V L L E N L L R H E D G T T V  
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UniRef90\_E6WTP0 S Y H S L P A L E E A G V G R I S R L P V S I R I V L E A V L R H C D G H K  
UniRef90\_C4ZP00 L D A V P G S D R L P F S L K I L L E N L L R N E D D V T  
UniRef90\_F9UBW9 Y Y S L Q A L E D A K I G N V S K L P Y S I K V L L E N L L R N Q V D G R V  
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UniRef90\_K9GWM5 Y Y S L A A L A K T Y P A L E K L P Y S L K V L L E N L L R N E D G G S  
UniRef90\_UPI00036D0BDE D I D R L P K S M K V L L E N L L R H I D V K E N  
UniRef90\_G2GWH9 Y Y S L P A L A D P R I D R L P Y S I R I L L E S A I R N C D E F Q V  
UniRef90\_F2DCZ4 A Y Y S L K A L E D K G L G P I S K L P F S I K V L L E A A V R Q F D G V A  
UniRef90\_U1YBB3 D I S R L P K S L K V L L E N L L R W Q D G D S V  
UniRef90\_V3DWL6 Y Y S L E A L E E K Q G I G N V S K L P Y S I K V L L E S V L R Q V D G R V  
UniRef90\_A8FDR0 Y F S L R A A E R N G L R D V S R L P Y S L K V V L E N L L R N E D G R S  
UniRef90\_J7Q4K7 Y Y R L G A L E E A G I G A V S K L P Y S I K V L L E S V L R Q E D G R V  
UniRef90\_UPI000318F1D2 Y R L S A V D G S D K L P F S L K V L L E N L L R T E D G A N  
UniRef90\_UPI0002E203F7 Y Y S L A E A E K N G L E G I S K L P K S L K V L L E N L L R Y E D D G V S  
UniRef90\_F2I2A5 Y Y S L R A A E E A G L A D V S S L P V S M K V L L E N L L R N E D G V S  
UniRef90\_Q9A299 Y Y D L K A V E E Q G I T K V S N L P Y S I R V L L E S L L R Q E D D F V  
UniRef90\_Q5HG69 Y Y A L A A L D A V T D G P V S R L P V S I R V L L E S V L R N L C D G K R  
UniRef90\_Q2W120 Y Y P L N K L L D G K R L E K L P R S L R L L E S M V R N L D G R S  
UniRef90\_Q97CB3 A Y Y S I P A A Q A A G L G D F S K L P A A L K V V L E N L L R F E D G G F S  
UniRef90\_A3V9A7 R L N K V E G A Q K L P Y S L K V L L E N L L R T E D G A N V T A D Q I  
UniRef90\_Q1RKD5 L E A S G L G D I S R L P Y S L K V L L E N L L R Y E D G R S V  
UniRef90\_C5CCJ7  
UniRef90\_G2TE51

QUERY	50	60	70	80
UniRef90_F4NSP6	I V Y G H L D D N P A N Q E I E R R G K T Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	K E Q D D I I Q R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_Q17EL3	I L Y G H L D D D P A N Q E I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	P A N Q E I I Q R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_G2R6S2	I L Y G H L D D D P A N Q E I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	P A N Q E I I Q R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_M7P3D7	V V Y G H L D D D P A N Q E I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y T Q D D I I Q R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_I2JXF2	I L Y G H L D D D P A N Q E I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	A T A D E I I Q R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_D2VAQ5	I L Y G H L D D D P A N Q E I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	A N Q E I I Q R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_R4X6V1	L V Y G H L D D D A H N Q E I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	H N Q E I I Q R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_T2M779	V L Y S H L D D D P S T K N Q E I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	P S T K N Q E I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_D3BTY9	I L Y S H L D E D P S T K V I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	P S T K V I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_A0A059LPE3	V V Y G H L D E D P S T Q D I V I R G E S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	P S T Q D I V I R G E S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_W7TSY3	I L F A H L D D D P S T T K V I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	P S T T K V I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_Q9NG03	I L Y S H L D D D P S N Q E I L V I R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	P S N Q E I L V I R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_F0NXG9	I L Y A H L D D G E P T K A Y T R R G G S Y V D F A P D R V A M Q D D A T A Q Q M A M L L	P T K A Y T R R G G S Y V D F A P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_UPI000423348B	I L F A H L D S G Q N Q L S N F A R R G K S Y V D F A P D R V A M Q D D A T A Q Q M A M L L	S G Q N Q L S N F A R R G K S Y V D F A P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_M7N4R6	I L Y S H L D S E D N A S E A Y A R R G K S Y V E F A P D R V A M Q D D A T A Q Q M A M L L	S E D N A S E A Y A R R G K S Y V E F A P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_H1XUL1	I L Y A H L D D G K A N R A L Q R R G K E Y V N F A P D R V A M Q D D A T A Q Q M A M L L	D G K A N R A L Q R R G K E Y V N F A P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_F7VVE7	I L Y S H L D D N P H E Q D I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	N P H E Q D I E R R G G S Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_UPI000405A791	I L Y S H L D D G N P T V A F K R R G K D Y V D F A P D R V A M Q D D A T A Q Q M A M L L	D G N P T V A F K R R G K D Y V D F A P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_UPI0003643C31	I L Y S H L V S N K A D R E I K R R G D E Y I E F N P D R V A M Q D D A T A Q Q M A M L L	V S N K A D R E I K R R G D E Y I E F N P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_R6YKW2	V L Y A H L D E T S L A D F S R R G A D Y V N F R P D R V A M Q D D A T A Q Q M A M L L	E T S L A D F S R R G A D Y V N F R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_L2FJQ5	I L F A H L A D N I G D E P L H R R G K T Q L V K L R P R R I A M Q D D A T A Q Q M A M L L	F A H L A D N I G D E P L H R R G K T Q L V K L R P R R I A M Q D D A T A Q Q M A M L L	Y L R L R R P R R I A M Q D D A T A Q Q M A M L L	L L
UniRef90_I2EZT6	I L Y S H L E G S P T K A Y N R R G A D Y V D F A P D R V A M Q D D A T A Q Q M A M L L	E G S P T K A Y N R R G A D Y V D F A P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
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UniRef90_W1QC16	I L Y G H L D D D Q N Q D D L E I R R G K S F L K L R R P D R V A M Q D D A T A Q Q M A M L L	D D D Q N Q D D L E I R R G K S F L K L R R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
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UniRef90_A0A016PBW1	V L L T H L L Y N G T D V P L T R R G S T Q L V D F R P D R V A M Q D D A T A Q Q M A M L L	L T H L L Y N G T D V P L T R R G S T Q L V D F R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_F8NAS8	V L F S H L L Y N G T D V P L T R R G S T Q L V D F R P D R V A M Q D D A T A Q Q M A M L L	F S H L L Y N G T D V P L T R R G S T Q L V D F R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
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UniRef90_V6ATY3	I L L G H L M S E Y D P Q K E P E R R G K S Y V F L K P D R V A M Q D D A T A Q Q M A M L L	L G H L M S E Y D P Q K E P E R R G K S Y V F L K P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_D1PY81	V L Y A H L H D K D L V P F K R R G E S Y V S F R P D R V A M Q D D A T A Q Q M A M L L	Y A H L H D K D L V P F K R R G E S Y V S F R P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_Q6C5V2	I L Y S H L H N P E E P S L T R R G D T Y L K L N P D R V A M Q D D A T A Q Q M A M L L	Y S H L H N P E E P S L T R R G D T Y L K L N P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_W0T2Z0	I L Y S H L C D P H E S L V S R R G Q Y L K L N P D R V A M Q D D A T A Q Q M A M L L	Y S H L C D P H E S L V S R R G Q Y L K L N P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_Q4PB22	I L Y S H L R N P A D V S A I R R G K K Y L K L K I D R L A M Q D D A T A Q Q M A M L L	Y S H L R N P A D V S A I R R G K K Y L K L K I D R L A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_Q5B6D6	I L Y S H L D N A E N G R K D I R R G K A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y S H L D N A E N G R K D I R R G K A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_E5R4N5	I L Y A H L D N P E G G R D I R R G Q A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y A H L D N P E G G R D I R R G Q A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_M2RBA0	I L Y S H L A D P A R A G I T R R G E T Y L Q L H P E R V A M Q D D A T A Q Q M A M L L	Y S H L A D P A R A G I T R R G E T Y L Q L H P E R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_W9XMZ1	I L Y S H L D N P S N G K N I R R G N A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y S H L D N P S N G K N I R R G N A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_UPI0003A85C19	I L F S H L S E D L Q S M P E R T L S P D R V A M Q D D A T A Q Q M A M L L	F S H L S E D L Q S M P E R T L S P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_UPI0004414B1C	I L Y S H L N D L E G A G R V R R G E A Y L R L N P A R A V A M Q D D A T A Q Q M A M L L	Y S H L N D L E G A G R V R R G E A Y L R L N P A R A V A M Q D D A T A Q Q M A M L L	Y L R L R R P A R A V A M Q D D A T A Q Q M A M L L	L L
UniRef90_K1KFL1	I L F T H L H P E S R E F K R G V D Y I E L R N P D R A G T H D I G G P M A I I	F T H L H P E S R E F K R G V D Y I E L R N P D R A G T H D I G G P M A I I	Y L R L R R P D R A G T H D I G G P M A I I	L L
UniRef90_G2WRV3	I L Y S H L D N T S N G R D I R R G S A N L K L N P D R V A M Q D D A T A Q Q M A M L L	Y S H L D N T S N G R D I R R G S A N L K L N P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_G7XCB6	I L Y S H L D T T F D E R T E R R G K T Q L K L R P Q R I A M Q D D A T A Q Q M A M L L	Y S H L D T T F D E R T E R R G K T Q L K L R P Q R I A M Q D D A T A Q Q M A M L L	Y L R L R R P Q R I A M Q D D A T A Q Q M A M L L	L L
UniRef90_D8PMR8	I L Y A H L A D P A K A G L E V R D G T Y L Q L H P Q R R I A M Q D D A T A Q Q M A M L L	Y A H L A D P A K A G L E V R D G T Y L Q L H P Q R R I A M Q D D A T A Q Q M A M L L	Y L R L R R P Q R R I A M Q D D A T A Q Q M A M L L	L L
UniRef90_G7SQQ7	I L Y S H I L D N P E N G L N I R R G N A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y S H I L D N P E N G L N I R R G N A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_UPI0001583D90	I L Y S H L D N P E N G L N I R R G N A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y S H L D N P E N G L N I R R G N A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_A0A024SA63	I L Y S H L D N V E G G R S I R R G K A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y S H L D N V E G G R S I R R G K A N L K L K P D R V A M Q D D A T A Q Q M A M L L	Y L R L R R P D R V A M Q D D A T A Q Q M A M L L	L L
UniRef90_R5Q4H9	S A D D I K A M P E W L K N K R S D R E I A F R P T R V L M Q D D F T G V P A V V	A D D I K A M P E W L K N K R S D R E I A F R P T R V L M Q D D F T G V P A V V	Y L R L R R P T R V L M Q D D F T G V P A V V	L L
UniRef90_UPI00037F0133	S A D D I R A V K T W L E T R T S D R E I A Y R P A R V L M Q D D F T G V P A V V	A D D I R A V K T W L E T R T S D R E I A Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_A7HSY9	T A D D I R A V A W D P A A E P D R E I A F T P A R V L M Q D D F T G V P A V V	A D D I R A V A W D P A A E P D R E I A F T P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_J0B4V7	V N E S D V T N L A N W S A E S P N V E V P F K P G R V V L Q D D F T G V P A V V	E S D V T N L A N W S A E S P N V E V P F K P G R V V L Q D D F T G V P A V V	Y L R L R R P G R V V L Q D D F T G V P A V V	L L
UniRef90_R7Z463	V T E K D V E A L A N Y D A K N P Q G E I P F K P S R V V L Q D D F T G V P A V V	T E K D V E A L A N Y D A K N P Q G E I P F K P S R V V L Q D D F T G V P A V V	Y L R L R R P S R V V L Q D D F T G V P A V V	L L
UniRef90_UPI00036A245D	T W D D V K A I N E W A E T R K S N H E I A Y N P A R V V L Q D D F T G V P A V V	W D D V K A I N E W A E T R K S N H E I A Y N P A R V V L Q D D F T G V P A V V	Y L R L R R P A R V V L Q D D F T G V P A V V	L L
UniRef90_T0R4Q1	R A F A E W G A K G G Q N P R E I A Y R P A R V L M Q D D F T G V P A V V	A F A E W G A K G G Q N P R E I A Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_C8S4K9	E H I R A L G G W D P K A P S Q E I Q F T P A R V L M Q D D F T G V P A V V	H I R A L G G W D P K A P S Q E I Q F T P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_UPI0003454907	I L Y G H L S D P K T K D I V R G S S Y L N L S P D R V T M Q D A T A Q Q M A M L L	Y G H L S D P K T K D I V R G S S Y L N L S P D R V T M Q D A T A Q Q M A M L L	Y L R L R R P D R V T M Q D A T A Q Q M A M L L	L L
UniRef90_W6UTL5	I L Y G H L S D P K T K D I V R G S S Y L N L S P D R V T M Q D A T A Q Q M A M L L	Y G H L S D P K T K D I V R G S S Y L N L S P D R V T M Q D A T A Q Q M A M L L	Y L R L R R P D R V T M Q D A T A Q Q M A M L L	L L
UniRef90_W4PHS1	S K A D I E A M P G W L A E Q K S T R E I A F R P A R V L M Q D D F T G V P A V V	K A D I E A M P G W L A E Q K S T R E I A F R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_V4RIP7	I K D E H V E E L A K W K D V N K E A E V P F K P S R V L L Q D D F T G V P A V V	K D E H V E E L A K W K D V N K E A E V P F K P S R V L L Q D D F T G V P A V V	Y L R L R R P S R V L L Q D D F T G V P A V V	L L
UniRef90_I4X0D7	T A D D I R A V A K W L V E R R S D K H E I S Y R P A R V L M Q D D F T G V P A V V	A D D I R A V A K W L V E R R S D K H E I S Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_F2J147	N L E D I Q A L L A W V K D E R Y S D K H E I A Y R P A R V L M Q D D F T G V P A V V	L E D I Q A L L A W V K D E R Y S D K H E I A Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_K2C2C2	K K E D I Q A I A D W L K T K K S T H E I A Y R P A R V L M Q D D F T G V P A V V	K E D I Q A I A D W L K T K K S T H E I A Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_UPI00037369FF	V L P E H I E A V A N W D P T A P D T E I A F M P A R V V L Q D D F T G V P A V V	L P E H I E A V A N W D P T A P D T E I A F M P A R V V L Q D D F T G V P A V V	Y L R L R R P A R V V L Q D D F T G V P A V V	L L
UniRef90_E6WTP0	V T A E H V R E L A N W E A D A P T A E I A F V V A R V V L Q D D F T G V P A V V	T A E H V R E L A N W E A D A P T A E I A F V V A R V V L Q D D F T G V P A V V	Y L R L R R P A R V V L Q D D F T G V P A V V	L L
UniRef90_C4ZP00	V T R S D I E D L A N W D P Q A P S K E I Q Y R P A R V L M Q D D F T G V P A V V	T R S D I E D L A N W D P Q A P S K E I Q Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_F9UBW9	I T K E H V E N L A K W G T D E L Q E V V P F K P S R V I L Q D D F T G V P A V V	T K E H V E N L A K W G T D E L Q E V V P F K P S R V I L Q D D F T G V P A V V	Y L R L R R P S R V I L Q D D F T G V P A V V	L L
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UniRef90_A4YGS2	T R E D I Q A I V D W Q K T Q R S D R E I Q Y R P A R V L M Q D D F T G V P A V V	R E D I Q A I V D W Q K T Q R S D R E I Q Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_F3WYS1	V S T D D I K A F A E W G A N G G K N E I A Y R P A R V L M Q D D F T G V P A V V	S T D D I K A F A E W G A N G G K N E I A Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_U2Z1L7	D I Q A I V D W Q K D K G K S E R E I Q Y R P A R V L M Q D D F T G V P A V V	I Q A I V D W Q K D K G K S E R E I Q Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_A0A031JJV0	T T D D V K A C A E W L K S K S S T R E I A Y R P A R V L M Q D D F T G V P A V V	T D D V K A C A E W L K S K S S T R E I A Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_K9GWM5	V T K A D I E A L A N W A D N G Q N G E I A F R P S R I L L Q D D F T G V P A V V	T K A D I E A L A N W A D N G Q N G E I A F R P S R I L L Q D D F T G V P A V V	Y L R L R R P S R I L L Q D D F T G V P A V V	L L
UniRef90_UPI00036D0BDE	D L Q A M L D W L S T G H S D R E I A Y R P A R V L M Q D D F T G V P A V V	L Q A M L D W L S T G H S D R E I A Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_G2GWH9	T G K D V E K I L D W E N S A T K Q V E I P F K P A R V L L Q D D F T G V P A V V	G K D V E K I L D W E N S A T K Q V E I P F K P A R V L L Q D D F T G V P A V V	Y L R L R R P A R V L L Q D D F T G V P A V V	L L
UniRef90_F2DCZ4	I T E D H V K K I A D W T E E R P N Q E I P F T P A R V L L Q D D F T G V P A V V	T E D H V K K I A D W T E E R P N Q E I P F T P A R V L L Q D D F T G V P A V V	Y L R L R R P P A R V L L Q D D F T G V P A V V	L L
UniRef90_U1YBB3	T L D D I Q A L A G W L E K A H A D R E I A Y R P A R V L M Q D D F T G V P A V V	L D D I Q A L A G W L E K A H A D R E I A Y R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_V3DWL6	I K K E H V E N L A K W G T E V K E I D V P F K P S R V I L Q D D F T G V P A V V	K K E H V E N L A K W G T E V K E I D V P F K P S R V I L Q D D F T G V P A V V	Y L R L R R P S R V I L Q D D F T G V P A V V	L L
UniRef90_A8FDR0	V A R E S I E T F A K W L E E K G K T E I A F R P A R V L M Q D D F T G V P A V V	A R E S I E T F A K W L E E K G K T E I A F R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_J7Q4K7	I T K E H V E N L A K W G T E V K E I D V P F K P S R V I L Q D D F T G V P A V V	T K E H V E N L A K W G T E V K E I D V P F K P S R V I L Q D D F T G V P A V V	Y L R L R R P S R V I L Q D D F T G V P A V V	L L
UniRef90_UPI000318F1D2	I T E D H I K A L A S W D P K A P S V E I Q F T P A R V V L Q D D F T G V P A V V	T E D H I K A L A S W D P K A P S V E I Q F T P A R V V L Q D D F T G V P A V V	Y L R L R R P P A R V V L Q D D F T G V P A V V	L L
UniRef90_UPI0002E203F7	G K N Q I L A M K E W L N T K T S N T E I A Y R P A R V L L Q D D Y T G I P A V A	K N Q I L A M K E W L N T K T S N T E I A Y R P A R V L L Q D D Y T G I P A V A	Y L R L R R P A R V L L Q D D Y T G I P A V A	L L
UniRef90_Q9A299	V N E D D L K A V A A W L N N K G E H E I S F R P A R V L M Q D D F T G V P A V V	N E D D L K A V A A W L N N K G E H E I S F R P A R V L M Q D D F T G V P A V V	Y L R L R R P A R V L M Q D D F T G V P A V V	L L
UniRef90_Q5HG69	I T D D H I K A L S Q F G K D G N E G E I V P F K P S R V I L Q D D F T G V P A V V	T D D H I K A L S Q F G K D G N E G E I V P F K P S R V I L Q D D F T G V P A V V	Y L R L R R P S R V I L Q D D F T G V P A V V	L L
UniRef90_Q2W120	I T E E H V R Q L A N W R P S D A P T Q E I P F V V A R I V L Q D D F T G V P A V V	T E E H V R Q L A N W R P S D A P		

QUERY UniRef90\_F4NSP6 UniRef90\_Q17EL3 UniRef90\_G2R6S2 UniRef90\_M7P3D7 UniRef90\_I2JXF2 UniRef90\_D2VAQ5 UniRef90\_R4X6V1 UniRef90\_T2M779 UniRef90\_D3BTY9 UniRef90\_A0A059LPE3 UniRef90\_W7TSY3 UniRef90\_Q9NG03 UniRef90\_F0NXG9 UniRef90\_UPI000423348B UniRef90\_M7N4R6 UniRef90\_H1XUL1 UniRef90\_F7VVE7 UniRef90\_UPI000405A791 UniRef90\_UPI0003643C31 UniRef90\_R6YKW2 UniRef90\_L2FJQ5 UniRef90\_I2EZT6 UniRef90\_R7DJL4 UniRef90\_G7YC77 UniRef90\_W1QC16 UniRef90\_M4VS86 UniRef90\_A0A016PBW1 UniRef90\_F8NAS8 UniRef90\_Q9P7D4 UniRef90\_V6ATY3 UniRef90\_D1PY81 UniRef90\_Q6C5V2 UniRef90\_W0T2Z0 UniRef90\_Q4PB22 UniRef90\_Q5B6D6 UniRef90\_E5R4N5 UniRef90\_M2RBA0 UniRef90\_W9XMZ1 UniRef90\_UPI0003A85C19 UniRef90\_UPI0004414B1C UniRef90\_K1KFL1 UniRef90\_G2WRV3 UniRef90\_G7XCB6 UniRef90\_D8PMR8 UniRef90\_G7SQQ7 UniRef90\_UPI0001583D90 UniRef90\_A0A024SA63 UniRef90\_R5Q4H9 UniRef90\_UPI00037F0133 UniRef90\_A7HSY9 UniRef90\_J0B4V7 UniRef90\_A6CF59 UniRef90\_R7Z463 UniRef90\_UPI00036A245D UniRef90\_T0R4Q1 UniRef90\_C8S4K9 UniRef90\_UPI0003454907 UniRef90\_W6UTL5 UniRef90\_W4PHS1 UniRef90\_V4RIP7 UniRef90\_I4XOD7 UniRef90\_F2J147 UniRef90\_K2C2C2 UniRef90\_UPI00037369FF UniRef90\_E6WTP0 UniRef90\_C4ZP00 UniRef90\_F9UBW9 UniRef90\_UPI0002899381 UniRef90\_A4YGS2 UniRef90\_F3WYS1 UniRef90\_U2Z1L7 UniRef90\_A0A031JJV0 UniRef90\_K9GWM5 UniRef90\_UPI00036DOBDE UniRef90\_G2GWH9 UniRef90\_F2DCZ4 UniRef90\_U1YBB3 UniRef90\_V3DWL6 UniRef90\_A8FDR0 UniRef90\_J7Q4K7 UniRef90\_UPI000318F1D2 UniRef90\_UPI0002E203F7 UniRef90\_F2J2A5 UniRef90\_Q9A299 UniRef90\_Q5HG69 UniRef90\_Q2W120 UniRef90\_Q97CB3 UniRef90\_A3V9A7 UniRef90\_Q1RKD5 UniRef90\_C5CCJ7 UniRef90\_G2TE51

90 100 110 120

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

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

QUERY	E	V	N	F	L	A	T	A	G	K	Y	G	V	G	F	W	R	P	G	S	G	I	H	Q	I	L	N	Y	A	Y	P	G	V	L	M						
UniRef90_F4NSP6	E	V	N	F	L	S	T	A	G	K	Y	G	V	G	F	W	R	P	G	S	G	I	H	Q	I	L	N	Y	A	Y	P	G	V	L	M						
UniRef90_Q17EL3	E	V	Y	K	F	L	S	T	A	G	K	Y	G	V	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M					
UniRef90_G2R6S2	E	V	Y	D	F	L	S	T	A	G	K	Y	N	I	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M					
UniRef90_M7P3D7	E	V	Y	D	F	L	S	S	A	C	A	K	Y	N	I	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M				
UniRef90_I2JXF2	E	V	Y	D	F	L	A	S	A	C	A	K	Y	N	I	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M				
UniRef90_D2VAQ5	E	V	Y	N	F	L	A	T	A	A	A	K	H	N	I	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M				
UniRef90_R4X6V1	E	V	Y	D	F	L	S	S	A	S	A	K	Y	D	I	G	F	W	K	P	G	S	G	I	H	Q	I	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_T2M779	E	V	Y	D	F	L	S	S	A	S	A	K	Y	G	V	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M				
UniRef90_D3BTY9	E	V	Y	D	F	L	A	S	A	S	A	K	Y	G	M	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M				
UniRef90_A0A059LPE3	E	V	Y	D	F	L	A	S	A	G	S	K	Y	G	M	G	F	W	R	P	G	S	G	I	H	Q	I	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_W7TSY3	E	V	Y	D	F	L	A	S	A	G	A	K	Y	G	I	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M				
UniRef90_Q9NG03	E	V	Y	N	F	L	S	T	S	G	A	K	Y	G	V	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M				
UniRef90_F0NXG9	E	V	F	N	F	L	S	S	V	S	N	K	Y	G	V	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_UPI000423348B	E	V	F	D	F	L	S	S	V	S	N	K	Y	G	I	D	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_M7N4R6	E	V	Y	E	F	L	S	S	V	S	N	K	Y	G	I	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_H1XUL1	E	V	Y	D	F	L	E	N	T	S	K	K	Y	G	I	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_F7VVE7	E	V	Y	D	F	L	A	S	A	C	A	K	Y	N	I	G	F	W	K	P	G	S	G	I	H	Q	I	L	N	Y	A	F	P	G	V	L	M				
UniRef90_UPI000405A791	E	V	Y	F	D	F	L	E	S	V	S	N	K	Y	G	L	G	F	W	R	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M		
UniRef90_UPI0003643C31	E	V	Y	N	F	L	Y	S	V	S	Q	K	Y	G	I	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_R6YKW2	E	V	Y	A	F	L	K	S	V	A	S	K	Y	G	L	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_L2FJQ5	E	V	Y	D	F	L	S	S	A	C	K	R	H	G	M	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_I2EZT6	E	V	Y	D	F	L	S	S	V	S	N	K	Y	G	I	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_R7DJL4	E	V	Y	D	F	L	K	D	S	V	S	N	K	Y	G	I	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M		
UniRef90_G7YC77	E	V	Y	D	F	L	Q	S	V	A	S	A	K	Y	G	I	G	F	W	K	P	G	S	G	I	H	Q	I	V	L	N	Y	A	F	P	G	V	L	M		
UniRef90_W1QC16	E	V	F	D	F	L	Q	S	C	G	E	K	Y	G	I	Q	F	W	G	P	G	S	G	I	H	Q	I	V	L	N	F	S	V	P	G	V	L	M			
UniRef90_M4VS86	E	V	Y	F	N	F	L	A	T	A	S	K	Y	N	I	G	F	W	K	P	G	A	G	I	H	Q	I	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_A0A016PBW1	E	V	Y	E	F	L	M	S	A	C	Q	R	Y	N	M	G	F	W	K	P	N	A	G	I	H	Q	I	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_F8NAS8	E	V	Y	D	F	L	Q	S	A	S	A	K	Y	G	I	G	F	W	A	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_Q9P7D4	E	I	F	D	F	L	Q	S	A	A	K	K	Y	G	I	Q	F	W	G	P	G	S	G	I	H	Q	I	V	L	N	Y	A	A	P	G	V	L	M			
UniRef90_V6ATY3	E	V	Y	K	F	L	E	S	A	A	R	K	Y	G	A	G	F	W	K	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_D1PY81	E	V	Y	D	F	L	R	S	A	S	A	K	Y	H	I	G	F	W	A	P	G	A	G	I	H	Q	V	V	L	N	Y	A	F	P	G	V	L	M			
UniRef90_Q6C5V2	E	V	Y	D	F	L	Q	Q	S	C	A	E	K	Y	G	I	Q	F	W	G	P	G	S	G	I	H	Q	I	V	L	N	F	S	V	P	G	V	L	M		
UniRef90_W0T2Z0	E	V	F	D	F	L	Q	S	C	A	S	K	Y	G	I	Q	F	W	G	P	G	S	G	I	H	Q	I	V	L	N	F	S	V	P	G	V	L	M			
UniRef90_Q4PB22	E	V	F	A	F	L	E	S	A	S	K	K	Y	G	I	E	F	W	G	P	G	S	G	I	H	Q	V	V	L	N	Y	A	A	P	G	V	L	M			
UniRef90_Q5B6D6	E	V	F	D	F	L	E	S	A	S	K	R	Y	G	I	E	F	W	P	P	G	A	G	I	H	Q	S	V	L	N	Y	S	A	P	G	V	L	M			
UniRef90_E5R4N5	E	V	F	D	F	L	E	S	A	S	K	K	Y	G	I	E	F	W	P	P	G	A	G	I	H	Q	S	V	L	N	Y	S	A	P	G	V	L	M			
UniRef90_M2RBA0	E	V	F	D	F	L	E	S	A	A	R	K	Y	G	I	E	F	W	K	P	G	S	G	I	H	Q	V	V	L	N	Y	A	A	P	G	V	L	M			
UniRef90_W9XMZ1	E	V	Y	D	F	L	E	S	A	A	K	K	Y	G	I	E	F	W	P	P	G	A	G	I	H	Q	S	V	L	N	Y	A	A	P	G	V	L	M			
UniRef90_UPI0003A85C19	E	V	Y	D	F	L	K	S	V	C	A	K	Y	G	I	G	F	W	K	P	G	A	G	I	H	Q	T	I	L	N	Y	A	V	P	G	T	M	M			
UniRef90_UPI0004414B1C	E	V	F	D	F	L	Q	S	A	A	A	K	Y	G	I	E	F	W	R	P	G	S	G	I	H	Q	I	V	L	N	Y	A	A	P	G	V	L	M			
UniRef90_K1KFL1	E	T	Y	E	F	L	R	D	V	S	R	R	Y	G	F	D	F	W	P	A	G	S	G	I	C	H	Q	V	F	M	E	V	Y	N	F	P	G	V	L	M	
UniRef90_G2WRV3	E	V	F	D	F	L	E	S	A	A	R	K	Y	G	M	F	W	P	P	G	A	G	I	H	Q	T	V	L	N	Y	A	L	P	G	V	L	M				
UniRef90_G7XCB6	E	V	Y	D	F	L	E	S	A	C	Q	K	Y	N	M	G	F	W	K	P	G	A	G	I	H	Q	I	V	L	N	Y	A	F	P	S	G	M	M			
UniRef90_D8PMR8	E	V	F	D	F	L	E	S	A	A	K	K	Y	G	I	A	F	W	P	P	G	S	G	I	H	Q	I	V	L	N	Y	A	A	P	G	V	L	M			
UniRef90_G7SQQ7	E	V	I	Y	N	F	L	K	S	A	A	K	K	Y	G	M	G	F	W	R	P	G	S	G	I	H	Q	I	V	L	N	Y	A	F	P	G	V	L	M		
UniRef90_UPI0001583D90	E	V	F	D	F	L	E	S	A	A	K	K	Y	G	I	E	F	W	P	P	G	A	G	I	H	Q	T	V	L	N	Y	S	A	P	G	V	L	M			
UniRef90_A0A024SA63	E	T	F	D	F	L	E	S	A	A	R	K	F	G	M	F	D	F	W	P	P	G	A	G	I	H	Q	T	V	L	N	Y	A	L	P	G	V	L	M		
UniRef90_R5Q4H9	E	T	Y	D	F	L	A	R	A	A	K	R	Y	G	F	D	F	W	P	A	G	A	G	I	C	H	Q	V	F	L	N	Y	N	F	P	G	V	L	M		
UniRef90_UPI00037F0133	E	R	Y	E	F	L	K	W	G	Q	G	F	D	N	F	R	V	V	P	P	G	T	G	I	V	H	Q	V	N	L	E	Y	L	G	Q	T	V	W	S	L	
UniRef90_A7HSY9	E	R	Y	E	F	L	R	W	G	A	K	A	F	N	F	R	V	V	P	P	G	T	G	I	V	H	Q	V	N	L	E	Y	L	L	A	R	Y	P	D	T	C
UniRef90_J0B4V7	E	R	Y	Q	F	L	R	W	G	Q	S	A	F	N	F	K	V	V	P	P	G	T	G	I	V	H	Q	V	N	L	E	Y	L	L	A	R	Y	P	D	T	C
UniRef90_A6CF59	E	R	Y	Q	F	L	R	W	G	Q	Q	A	N	N	F	G	V	V	P	P	A	T	G	I	V	H	Q	V	N	L	E	Y	L	L	A	R	Y	P	D	S	L
UniRef90_R7Z463	E	V	Y	A	F	L	S	S	A	G	E	K	Y	G	I	G	Y	W	R	P	G	S	G	I	H	V	V	I	F	N	Y	A	F	P	G	V	L	M			
UniRef90_UPI00036A245D	E	R	Y	E	F	L	K	W	G	K	E	A	F	N	F	R	V	V	P	P	G	R	G	I	V	H	Q	V	N	L	E	Y	T	T	A	Y	P	D	T	L	
UniRef90_T0R4Q1	E	R	Y	N	F	L	K	W	G	Q	K	S	F	N	F	R	A	V	P	P	G	T	G	I	V	H	Q	V	N	L	E	Y	L	A	D	V	V	W	T	C	
UniRef90_C8S4K9	E	R	Y	Q	F	L	K	W	G	Q	G	A	F	N	F	R	V	V	P	P	G	T	G	I	V	H	Q	V	N	L	E	Y	L	L	A	Q	T	V	W	T	C
UniRef90_UPI00034																																									







QUERY K T G R A D I A N L A D E F K D H L V P D S G A C H Y D Q Q L I E E I N D N L S E L L K P H H  
UniRef90\_F4NSP6 A T S R R G A I A A D Y A T S F K Y Q Q S V L V A D D S G A K Y D D Q Q L I E E I N D N L S E L L K P H H  
UniRef90\_Q17EL3 S T A T N R K H V G A G F A K K E Y A K Q K E L V L R A D D E G G A K Y D D Q Q L I E E I N D N L S E L L K P H H  
UniRef90\_G2R6S2 A T T R R S E Y L A S D H L D N Y S H I L L S A D E G G C E E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_M7P3D7 A T T R R S E Q I A S D F A N L Y H K D I L S A D K K N A D Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_I2JXF2 S T K R T Q M A Q V I N D Y H K D I L F K A D E G G C E E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_D2VAQ5 A T K R S N I I A Q Y A K S F G G Y L K A D E G G C Q E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_R4X6V1 A T E R R S K D I A L L A E K Y K S D L L E A D E N G A E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_T2M779 A T E R R S G I A Q N A L K F R D N L V A D P N G A E H Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
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UniRef90\_Q9NG03 A T D R R N D I V A D L A N A N R A Y L R S A D D E V Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_F0NXG9 A T G R R S A A A A D D K I R E H L Y A D P E K Y F D D Q Q L I V E I E I N L S S E L L E E P P H Y  
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UniRef90\_H1XUL1 A T E R R S E I A E F A K V Y Q K E L R A D E G G A E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_F7VVE7 A T E R R S E I A D E A N K I R E Y L T G D P E Q Y F D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_UPI000405A791 Q T G R E E K V A Q L C E T V S K E L C P D M D N Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_UPI0003643C31 A T G R E I A E L A A R N A S E L Q A D E P E V Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
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UniRef90\_L2FJQ5 A T G R A R V I A S L A N G I K D L L R P D D Q E C Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_I2EZT6 A T G R A R V I A K M A N K L S D Y T L E A D S P E K Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_R7DJL4 A T N R R A G I A E L A A K K H S D T L E T P D S N C C K Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_G7YC77 A T N R R G P I A D L A N Q N Y Q Y M T A D A D P G C E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_W1QC16 S T S R R K E L A A A L A E V A K H I L T A D A D K Y F D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_M4VS86 A T S R R P E L A Q A L E V A K H I L T A D A D K Y F D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_A0A016PBW1 Q T G R D D V A E M A M A N V A D L S A D N E K Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_F8NAS8 A T H R A E I A D A A S E V H S E Y N Y D T G A K Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_Q9P7D4 A T G R A E I A D A V A N K V H K D L T E D P E V E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_V6ATY3 K T G R A E I A T L A M Q N A Q E L L R A D P E I Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_D1PY81 A T G R A F I A A A A A A A R D Q F L A A D E G G A E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_Q6C5V2 A T N R S F I A S A A D Q A L H Q F L A A D E G G A E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_W0T2Z0 A T G R A D V I A R A A E K G Q G F L A A D E G G A E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_Q4PB22 A T N R A D V I A E A A A K I A S D S P M Q D P E A A Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_Q5B6D6 A T H R G P V I A R A A D A A A R F G F A D D G G A E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_E5R4N5 A T R R G D A I V D Y G S E K H N F L R A D Q G T H Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
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UniRef90\_W9XMZ1 A T R R G A V A R A A D A A A Q G Q A D E G V E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_UPI0003A85C19 A T G R Q A V A D L A S K V R D L A A D K F A K Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_UPI0004414B1C Q T R R E A Q H R A I E S F R T W G D F D F G A Q Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_K1KFL1 A N H R H E M A D A V K S I A P E L Q A D Q G A E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_G2WRV3 A T G R A N R A A G L A A R G G Y L A A D E G A K Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_G7XCB6 K S G R K E I S E M A D K M K K F L K A D E G A K Y Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_D8PMR8 S T R R F A G N S T S E D A R F Q F K A D E G A E Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_G7SQQ7 S T S R R Q A V V D L A R G V A K D L K A D E P E K Y D D Q Q L I V E I E I N L S S E L L E E P P H Y  
UniRef90\_UPI0001583D90 S T S R R D P G R Y C A K Q G M F R T D E T P D P V F T D T L E L D D L G S T V V P S S  
UniRef90\_A0A024SA63 A T G R S K E E R Y A K A Q G M F R E K G M P D P V F T D T L E L D D L G S T V V P S S  
UniRef90\_R5Q4H9 I T G R S K E Q I A Q A Q G L W R H E P R Y S F T S K L E L D D L G S T V V P S S  
UniRef90\_UPI00037F0133 R T G R T D E R Y Y K E Q G M F R T D S S P E P S F T S K L E L D D L G S T V V P S S  
UniRef90\_A7HSY9 A T K R A D I E A R T A D R F K D V T A D E G S P E N S Y D S E V I E L D D L G S T V V P S S  
UniRef90\_J0B4V7 R T G R S E I L V K L V E A Y F R T D D T P D S P E N S Y S S T L E L D D L G S T V V P S S  
UniRef90\_A6CF59 I T G R K E E T I A L V I E A Y W L S T E D A D P V F S S T L V E L D D M S T V E P C  
UniRef90\_R7Z463 N T G R D E A R V Y A K A N G M W R G A D Y A P I Y T S Y L H L D M G D I V P A  
UniRef90\_UPI0003454907 I T G R P E A Q T Y A K E Q G L W L D P A H E P E F S E Y L E L D L S E L L E E P P H Y  
UniRef90\_W6UTL5 A T G R G D I A D L A S K Y R S K L L P D K G C V Y D R V I K E I D L S E L L E E P P H Y  
UniRef90\_W4PHS1 A T G R E P V A D W A A A V A G D L C A D H P E K Y Y D R V I K E I D L S E L L E E P P H Y  
UniRef90\_V4RIP7 E T G R S D E R Y A K A Q G M F R T G D A H P E T Y T D T L E L D L S E L L E E P P H Y  
UniRef90\_I4XOD7 I T A R D D E Q I A V T K K Y L Q E N D M F D P I Y T D T L V E L D D L S K I E P N  
UniRef90\_F2J147 A T G R D P E R V Y A K A Q G M F R A G E S E P V F F T D T L V E L D D L S T V V P A  
UniRef90\_K2C2C2 I T G R E E E T I Y T K E Q G L W R E N S E P V F F T D T L H L D L S T V E P A  
UniRef90\_UPI00037369FF A T G R D E E A R I A Y A K T Q G L W R D D S V P T F T D T V H L D M S S V V P S S  
UniRef90\_E6WTP0 L S G R S E E Q I A L V I E A Y W H T P D S P H A S Y S S V L E L D D M G D I V R P A  
UniRef90\_C4ZP00 A T G R E E A E C A L M E G Y F R A Q G L F E I D Y T R S L M L D L G S A T I E P P A  
UniRef90\_F9UBW9 I T G R D E E A Q I A L V I E A Y W H T A D A A E A D Y S E T L A L D L G S A D I V P S  
UniRef90\_UPI0002899381 L T G R E E E Q V K V V E I E Y C Y T A D A Q D P T F T D V V E I N L S S E L L E E P P H Y  
UniRef90\_A4YGS2 A T D R D A E I V G E Y A K A Q G I F A Y G I E P N Y S E M V N I N L S S E L L E E P P H Y  
UniRef90\_F3WYS1 I T A R S D E N V A L V I E A Y W R H D A A D P V F T D T L E L D D M S T V V P S S  
UniRef90\_U2Z1L7 Q T G R D K E D R I Y A K E N G M W R D P G S Y E P V Y T D T L E L D D M G T V V P A  
UniRef90\_A0A031JJV0 I T G R S K E N I Y A K E Q G F W L D P S A E P V F T D V L E L D D M G T V V P A  
UniRef90\_K9GWM5 T T G R T D D Q I A L T E A Y A K A Q G M W D P V F S D T L E L D D M G E V V P S S  
UniRef90\_UPI00036D0BDE L T S G R D D D R V A L V I E A Y A K A Q G M W D P Q F T D T L E L D D L G S A V V P S S  
UniRef90\_G2GWH9 L S G R S D Q Q I A L V I E A Y T K A Q G L W R Y P G D E P V L F T D L A T V V T S  
UniRef90\_F2DCZ4 I T G R S D E T V A M I E T Y L R A N N M F E R V Y S S Y L E L D D L D E V G P C  
UniRef90\_U1YBB3 A T G R S E E Q Y Y Q E Q G I F R T D D T P D P V F F T S E T L E L D D L G S I V P T  
UniRef90\_V3DWL6 L S G R S E E Q V A L V I E A Y M W R N P G D E P V F F T S T L E L D D M G S V E P A S  
UniRef90\_A8FDR0 I T G R D E E Q I A L V I E E Y S R A N G L F E P I F T D T V V E L D D L S Q I V E P A S  
UniRef90\_J7Q4K7 M S G R A D D R Y A R A Q G E M L R A N G A P D P E F T D T L E L D D L S A I V E P A S  
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UniRef90\_UPI0002E203F7 L T G R S D E Q I V A K E Q G L W H D P S N E V I E Y S E Y L E L D D L S T V V P S  
UniRef90\_F2I2A5 F S G R D E E T I K L V I E D Y A K A Q G L W D L V F T D T V E L D D M S T V V P T  
UniRef90\_Q9A299 G T G R A E E R V A L V I E A Y A K E Q G L W E P T F T D T L E L D D L S T V V P S  
UniRef90\_Q5HG69 I T G R S D E H I A L V K E Y L K Q N H M F D P N Y T D V I E L D D L S T V V P S  
UniRef90\_Q2W120 A T G R T D R A Y Y S A Q G L F G M P G D I D Y S E V I E F D D L G S T V V P S  
UniRef90\_Q97CB3 T T G R S D H K I K L I K K Y L J E L Q G M F G E E Y T K V I D D L S T V V P S  
UniRef90\_A3V9A7 N T G R D E D R I Y A K E N G F W R G A D Y A P V Y T E T L E L D D M G T V V P A  
UniRef90\_Q1RKD5 I T G R S D K E Q I Y A K A Q D L W H C N F D D A E A Y S D I L E L D D L S T V V P S  
UniRef90\_C5CCJ7 L T G R S D E Q V Y T K E Q G M W H D P S S E V A Y S E Y L E L D D L S T V V P S  
UniRef90\_G2TE51 F T G R D E D S Y A K A Q G M W R Q T G S A E P L F T D T L A L D M G T V E P S





QUERY UniRef90\_F4NSP6 UniRef90\_Q17EL3 UniRef90\_G2R6S2 UniRef90\_M7P3D7 UniRef90\_I2JXF2 UniRef90\_D2VAQ5 UniRef90\_R4X6V1 UniRef90\_T2M779 UniRef90\_D3BTY9 UniRef90\_A0A059LPE3 UniRef90\_W7TSY3 UniRef90\_Q9NG03 UniRef90\_F0NXG9 UniRef90\_UPI000423348B UniRef90\_M7N4R6 UniRef90\_H1XUL1 UniRef90\_F7VVE7 UniRef90\_UPI000405A791 UniRef90\_UPI0003643C31 UniRef90\_R6YKW2 UniRef90\_L2FJQ5 UniRef90\_I2EZT6 UniRef90\_R7DJL4 UniRef90\_G7YC77 UniRef90\_W1QC16 UniRef90\_M4VS86 UniRef90\_A0A016PBW1 UniRef90\_F8NAS8 UniRef90\_Q9P7D4 UniRef90\_V6ATY3 UniRef90\_D1PY81 UniRef90\_Q6C5V2 UniRef90\_W0T2Z0 UniRef90\_Q4PB22 UniRef90\_Q5B6D6 UniRef90\_E5R4N5 UniRef90\_M2RBA0 UniRef90\_W9XMZ1 UniRef90\_UPI0003A85C19 UniRef90\_UPI0004414B1C UniRef90\_K1KFL1 UniRef90\_G2WRV3 UniRef90\_G7XCB6 UniRef90\_D8PMR8 UniRef90\_G7SQQ7 UniRef90\_UPI0001583D90 UniRef90\_A0A024SA63 UniRef90\_R5Q4H9 UniRef90\_UPI00037F0133 UniRef90\_A7HSY9 UniRef90\_J0B4V7 UniRef90\_A6CF59 UniRef90\_R7Z463 UniRef90\_UPI00036A245D UniRef90\_T0R4Q1 UniRef90\_C8S4K9 UniRef90\_UPI0003454907 UniRef90\_W6UTL5 UniRef90\_W4PHS1 UniRef90\_V4RIP7 UniRef90\_I4XOD7 UniRef90\_F2J147 UniRef90\_K2C2C2 UniRef90\_UPI00037369FF UniRef90\_E6WTP0 UniRef90\_C4ZP00 UniRef90\_F9UBW9 UniRef90\_UPI0002899381 UniRef90\_A4YGS2 UniRef90\_F3WYS1 UniRef90\_U2Z1L7 UniRef90\_UPI00031JJV0 UniRef90\_K9GWM5 UniRef90\_UPI00036DOBDE UniRef90\_G2GWH9 UniRef90\_F2DCZ4 UniRef90\_U1YBB3 UniRef90\_V3DWL6 UniRef90\_A8FDR0 UniRef90\_J7Q4K7 UniRef90\_UPI000318F1D2 UniRef90\_UPI0002E203F7 UniRef90\_F2I2A5 UniRef90\_Q9A299 UniRef90\_Q5HG69 UniRef90\_Q2W120 UniRef90\_Q97CB3 UniRef90\_A3V9A7 UniRef90\_Q1RKD5 UniRef90\_C5CCJ7 UniRef90\_G2TE51

QUERY	410	420	430	440
UniRef90_F4NSP6	R D G G Y A Q V L L R D V G G I V L L A N A	C C G G P P C C C C I	G G Q W D R R K D V K K G E K N S	I I I I I I I I I I
UniRef90_Q17EL3	R D G G L A K T F F E F F G G V V L A N A	C C G G P P C C C C I	G G Q W D R R K D V K K G E K N S	I I I I I I I I I I
UniRef90_G2R6S2	R D D G Q L K T F F E F F G G V V L A N A	C C G G P P C C C C I	G G Q W D R R K D V K K G E K N S	I I I I I I I I I I
UniRef90_M7P3D7	R D D G Y L K T F F E F F G G V V L A N A	C C G G P P C C C C I	G G Q W D R R K D V K K G E K N S	I I I I I I I I I I
UniRef90_I2JXF2	R D D G F L K T F F E F F G G V V L A N A	C C G G P P C C C C I	G G Q W D R R K D V K K G E K N S	I I I I I I I I I I
UniRef90_D2VAQ5	R D N L L L T D L E A A G G Q V L A N A	C C G G P P C C C C I	G G Q W D R R K D T K K G E K N S	I I I I I I I I I I
UniRef90_R4X6V1	R D D G Q L E T F E A A G G M V L A N A	C C G G P P C C C C I	G G Q W N R S D V P K K G E P N S	I I I I I I I I I I
UniRef90_T2M779	R D D G L A K T F L R D V L G G V L A N A	C C G G P P C C C C I	G G Q W D R R K D V V P K K G S K N S	I I I I I I I I I I
UniRef90_D3BTY9	R D D G Q M K T F E A A G G V V L A N A	C C G G P P C C C C I	G G Q W K R D D I V K K G Q K N S	I I I I I I I I I I
UniRef90_A0A059LPE3	R D D G L I E V F F E K V G G T V L A N A	C C G G P P C C C C I	G G Q W K R T E I A K K G T P N S	I I I I I I I I I I
UniRef90_W7TSY3	R D D G L I G T F E E A G A S V L A N A	C C G G P P C C C C I	G G Q W H R K D V E K K G S K N S	I I I I I I I I I I
UniRef90_Q9NG03	R D D G I A E T L R Q F A G G I V L A Q P	C C G G P P C C C C I	G G Q W D R R K D V K K G E K N S	I I I I I I I I I I
UniRef90_F0NXG9	R D D G L L K P F N D L D A V I F T N A	C C G G P P C C C C I	G G Q W D R R E G A D K K E E K N T	I I I I I I I I I I
UniRef90_UPI000423348B	R D D G F L L D T F N Q I G A K V F A N A	C C G G P P C C C C I	G G Q W D R R V G A D K K K E K N S	I I I I I I I I I I
UniRef90_M7N4R6	R D D G L L E P F A E I G G V I F A N A	C C G G P P C C C C I	G G Q W A R H M K D P S R K E K N S	I I I I I I I I I I
UniRef90_H1XUL1	R D G Y L L D I F F K K I G G K V L A N A	C C G G P P C C C C I	G G Q W N R E G I D D D R P N S	I I I I I I I I I I
UniRef90_F7VVE7	R D D G Y L L D I F F E E F G G T V L A N A	C C G G P P C C C C I	G G Q W D R R S D T P K G T P N S	I I I I I I I I I I
UniRef90_UPI000405A791	R D G L L Q T F E K I N G A T I F T N A	C C G G P P C C C C I	G G Q W D R S D M L G D Q K N S	I I I I I I I I I I
UniRef90_UPI0003643C31	R D D G L L K D F F E K I N G V V L A N A	C C G G P P C C C C I	G G Q W A R H R G P D D E P N S	I I I I I I I I I I
UniRef90_R6YKW2	R D D G M I A D F Q A V G A V I M T N A	C C G G P P C C C C I	G G S W K R V T D D D P T R A N S	I I I I I I I I I I
UniRef90_L2FJQ5	E N G V L Q V F E E L G S K L T N A	C C G G P P C C C C I	G G S W W R Q D M E K K G V K N S	I I I I I I I I I I
UniRef90_I2EZT6	R D D G I L A K F D A I G G V V L A N A	C C G G P P C C C C I	G G Q W A R H G A E K K G E R N S	I I I I I I I I I I
UniRef90_R7DJL4	R D D G L I S D F F E S I G G I V M T N A	C C G G P P C C C C I	G G Q W K R H T D D D N Q R A N S	I I I I I I I I I I
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UniRef90_W1QC16	R D D G L I S T F E E N G A T V L A N A	C C G G P P C C C C I	G G Q W D R R G E A A P K D T N V	I I I I I I I I I I
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UniRef90_A0A016PBW1	R E G V T E V F E F E R L G S K I L S N A	C C G G P P C C C C I	G G S W D R T D V M T K G T P N S	I I I I I I I I I I
UniRef90_F8NAS8	R D D G L L K D L R H I L G G V I M T N A	C C G G P P C C C C I	G G Q W K R H T D D N T R K N S	I I I I I I I I I I
UniRef90_Q9P7D4	R D D G L T E R L E E A G A T V L A N A	C C G G P P C C C C I	G G Q W K R T D D D I A G E A N S	I I I I I I I I I I
UniRef90_V6ATY3	R D D G Q M Q V L K E I G A T V L A N A	C C G G P P C C C C I	G G Q W S R P E L K K G D E A N S	I I I I I I I I I I
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UniRef90_Q6C5V2	K D G L L T D V F E S A G A V V L A N A	C C G G P P C C C C I	G G Q W D R T D E K P G E F N S	I I I I I I I I I I
UniRef90_W0T2Z0	R D D G L I D T F F E K N G A V V L A N A	C C G G P P C C C C I	G G Q W D R R Q D V S K N E F N S	I I I I I I I I I I
UniRef90_Q4PB22	R D D G I Q Q I L L T D V G G R V L A N A	C C G G P P C C C C I	G G Q W N R K E L Q Q G E D N V	I I I I I I I I I I
UniRef90_Q5B6D6	R D D Q T L S T F T S A G G T V L A N A	C C G G P P C C C C I	G G Q W K R T D D D V P G E D N A	I I I I I I I I I I
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UniRef90_UPI0003A85C19	R D D G Y T K I L F E E L G G K V L A N A	C C G G P P C C C C I	G G Q W K R S D I S D G E K N S	I I I I I I I I I I
UniRef90_UPI0004414B1C	R D D G V I G A L L E D V G A V V L A N A	C C G G P P C C C C I	G G Q W K R E T T G E E N A	I I I I I I I I I I
UniRef90_K1KFL1	R D D G V L E V F E E K L H A T V L A N A	C C G G P P C C C C I	G G Q W K R T I G N L K K G D K T	I I I I I I I I I I
UniRef90_G2WRV3	R D D G T L Q T F L E G A G G I V L S N A	C C G G P P C C C C I	G G Q W K R Q D D I L K G T P N A	I I I I I I I I I I
UniRef90_G7XCB6	D A G I L P V F E R L G A T M L P N A	C C G G P P C C C C I	G G S W D R V D M P K G T P N S	I I I I I I I I I I
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UniRef90_J0B4V7	R A G L T P Y L D K L G F D L V G Y G	C C C C T T T T I	G N S S Q A I N Q N D L A V A S	I I I I I I I I I I
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UniRef90_W4PHS1	R D D G M I D A F K I G A L I M A N A	C C G G P P C C C C I	G G Q W K R H T D D D P E R K N S	I I I I I I I I I I
UniRef90_V4RIP7	K A D L L Q K D L D A L G F N L V G F G	C C C C T T T T I	G N S G P A V N E G D L V A C S	I I I I I I I I I I
UniRef90_I4X0D7	D S G L L Q D Y M N Q I G F N L V G Y G	C C C C T T T T I	G N I E E A I L D N D L L V S S	I I I I I I I I I I
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UniRef90_K2C2C2	K A G L Q D Y L D A L G F S L V G Y G	C C C C T T T T I	G N S G P A I N E N D L I V S A	I I I I I I I I I I
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UniRef90_UPI0002E203F7	K A G L I D D L E A L N F F I V G Y G	C C C C T T T T I	G N S G P A I Q D N D L S V T A	I I I I I I I I I I
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UniRef90_Q2W120	K A G L L G D L E S L G F G V L A Y G	C C C C T T T T I	G N S S E Q P A I A A D D L V C A S	I I I I I I I I I I
UniRef90_Q97CB3	E S G L I D Y L D S K L G F Y V L V G Y G	C C C C T T T T I	G N S G P L D K D V D E N V V S	I I I I I I I I I I
UniRef90_A3V9A7	A A G L Q E D L D A I G F N L V G Y G	C C C C T T T T I	G N S G P L D P A I D L I A T S	I I I I I I I I I I
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QUERY 450 460 470 480  
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UniRef90\_D4H1N1 E R Y S L L K W A Q A S F N F R I V P P P R S G G I V H H Q Q Q N N L L E Y L E T A F C D T L  
UniRef90\_I7IHZ2 E R Y K L L K W G E S F N F R V V P P P G T G G I V H H Q Q Q N N L L E Y L A Q V V C D T V  
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UniRef90\_A8UUM9 D D H K Y L M S V A K R F G L I W L S K P P P G N G G I I H H Q Q V N N L L E Y T W A Y P D T L  
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UniRef90\_H8Z049 E R Y A F L K W G Q T A F N F Q V V P P P D T G G I V H H Q Q Q N N L L E Y L A A Y P D T L  
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UniRef90\_T1HB40 E R F T F L K W G A K A F N M L I V P P P G S G G I V H H Q Q V N N L L E Y L A R V V W T V  
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UniRef90_M4V963	V	G	T	D	S	H	T	T	M	V	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
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UniRef90_A9SX78	V	G	T	D	S	H	T	T	M	I	D	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
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UniRef90_R7XW18	V	G	T	D	S	H	T	T	M	V	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
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UniRef90_A8HWR5	V	G	T	D	S	H	T	T	M	V	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_N9BJ91	V	G	T	D	S	H	T	T	M	I	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_C1D9N5	V	G	T	D	S	H	T	T	M	I	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
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UniRef90_I7IHZ2	V	G	T	D	S	H	T	T	M	V	N	S	L	S	I	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
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UniRef90_W7KW04	I	G	T	D	S	H	T	T	M	V	N	G	L	S	V	L	A	W	G	V	G	G	L	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
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UniRef90_G2PCH0	V	G	T	D	S	H	T	T	M	V	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_D3PC36	I	G	T	D	S	H	T	P	M	V	N	G	I	G	V	L	S	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	Y	L	S	I	P	K
UniRef90_I4N0T0	V	G	T	D	S	H	T	T	M	I	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_A0A023HY62	I	G	T	D	S	H	T	T	M	I	N	G	L	S	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_B8ETP6	V	G	T	D	S	H	T	T	M	V	N	G	L	S	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_Q0BV50	Y	G	T	D	S	H	T	T	M	V	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_UPI00037A4466	V	G	T	D	S	H	T	T	M	I	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_B3LVY8	V	G	T	D	S	H	T	S	M	I	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	S	I	A	M	M	L	P	
UniRef90_A0A014NU01	V	G	T	D	S	H	T	T	M	I	N	A	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_D7GE14	V	G	T	D	S	H	T	T	M	V	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_C5CAC8	V	C	G	D	S	H	T	S	T	H	G	A	F	G	A	L	A	F	G	I	G	T	S	E	V	E	H	V	L	A	T	Q	T	L	P	L	K	P	K	
UniRef90_UPI00035DC7BE	I	G	T	D	S	H	T	T	M	A	N	G	L	S	V	L	S	W	G	V	G	G	L	E	A	E	A	A	M	L	G	E	P	Y	M	T	V	P	K	
UniRef90_W8KHK9	V	G	T	D	S	H	T	T	M	I	N	G	L	G	V	L	G	W	G	V	G	G	I	E	A	E	A	A	M	L	G	Q	P	V	S	M	L	I	P	
UniRef90_Q4JUX2	V	C	G	D	S	H	T	S	T	H	G	A	F	G	S	I	A	M	G	I	G	T	S	E	V	E	H	V	L	A	T	Q	T	L	P	L	K	P	K	
UniRef90_A0LVA3	V	C	G	D	S	H	T	S	T	H	G	A	F	G	A	L	A	F	G	I	G	T	S	E	V	E	H	V	L	A	T	Q	T	L	P	L	K	P	K	
UniRef90_UPI0002629DC7	V	C	G	D	S	H	T	S	T																															



UniRef90\_UPI0003B6D905 G P G L L A A G L T L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_J7TBD6 G D G L L A Q D M P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0003675242 G G E G L L A Q D M P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_M4V963 G G E G L L A Q D M P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI00036E6EB9 G S G G L L A Q D M P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A9SX78 G G K G L M A S E L T T L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0003780D10 G D G G L L A S A L M T L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_N8S798 G D G G L L A S A L M T L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_E8U8M5 G G A G L L A S A L M T L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_R7XW18 G G G V L D A L V P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_V6F075 G G P G V I D A L V P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0003625DBC G D G V L D A L V P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
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UniRef90\_N0E3D9 G A G V L D A L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_C6DK21 G D G L L D S A L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A8HWR5 G D P G L L D S A L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_N9BJ91 G D G G L A S A L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_C1D9N5 G S G G L A S A L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI000401612F G S G G L Q A S H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_X5MCU1 G G P G L L D A H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_I0R0L0 G E G V L A S V P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_P37032 G G P G L L N D S L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_D4H1N1 G G P G L L K A L S L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_I7IHZ2 G S G G L D H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0003B49392 G D G V L K N S L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_Q46EK0 G G P G L L N S L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_W7KW04 G G P S V R E L S V P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A8UUM9 G G E G V L A Q L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI000255842A G D G L V A Q L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI000466720C G G P G V A T A L P M A N R T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_H8Z049 G G P A V A T A L P M A N R T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_E3ENX4 G E G I A S V P L L A N R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_Q2J3F8 G G P G L L D H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0002E997F6 G D G L L K D S L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_W8Y145 G D G L L S N L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
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UniRef90\_E1IAI5 G G P G L L A E L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_J1J685 G G P G L L A E L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_S9T2Z9 G G P G L L G N M T L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_E2C1K1 G G P G V T S I L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_G2PCH0 G E G S I K T L S V P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_D3PC36 G D G L A D L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
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UniRef90\_B8ETP6 G E G L L N H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_Q0BV50 G P A L L D H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI00037A4466 G D G L L D E N L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_B3LVY8 G G P G V L A E L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A0A014NU01 G D G L L D A Q L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_D7GE14 G S G V L A E V P L L A N R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_C5CAC8 G E A I R N L S M E G R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI00035DC7BE G P S L L S V P D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_W8KHK9 G D G L L D H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_Q4JUX2 G E A I R A L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A0LVA3 G E A I R A L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0002629DC7 G S A L R S L S M D G R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A6GND3 G P G A A S L S V T D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_E6R0B1 G S T I R A L S M E A R M S I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_F6EMS2 G D A I R S L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_H2ZQT3 G P G V I R S L S I A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A2SF11 G E G T R T L A L P D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI00036B488D G D G L L A N L S L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0003B39DF2 G D T I R S L S M E G R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_G7UN40 G P G L L Q H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A0A034WDC5 G P G V A E L S I A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A0A031GTY1 G E G A S H L T L G D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI000473159F G E G T A S L S L T D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_J9YZN9 G E G V I K N L S L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_Q1AZC4 G E A I R N L S M E G R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0003741451 G D G L L D H L P L L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_C8XEL9 G E A I R A L S M E G R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_G7H4E5 G P A I E K L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_R7NQ89 G E G V K T L S V P E R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_R5UX38 G S A I R N L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_W6KV74 G P G V A Q L S I A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0002C2E124 G P G V A Q L S I A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI00042B12AB G V A E L S L A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_A7HT10 G E A I R D L S M E G R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_D5XA62 G P G V A T L S V P E R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_I5C2H8 G S A L E S L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI000346772D G E G A S H L T L G D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_U3GU23 G E A T E K L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_E8T296 G E G V D K Y L T V P E R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_D0A059 G P G V D A T L S V P E R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_C6HX40 G E G V A S L S V P E R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0004776194 G E G V E V L S T P D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI0001744749 G P G A R A L S V P D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_M2YCB5 G T A T E E L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_UPI00031E554C G E A I R N M T M E E R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_T1HB40 G P G V A E L S I A D R A T T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R  
UniRef90\_W6K3K0 G E A I R N L S M E A R M T I A A N M A P E E Y G A T T C G F F F P L D D E E K T L D Y M R

UniRef90\_UPI0003B6D905 L T G R D E D Q I Y A K E Q G F W I D P S V E P V F T S T L E L D L S T V V P P S S  
UniRef90\_J7TBD6 L T G R S D E D E I A L V E T Y C K A Q S G L W R H E F G T D E P L E A L D L S T V V P P S S  
UniRef90\_UPI0003675242 L L S T G R D E E Q Q T I N L V E A Y K Y C K E N G N G D N A E Q F T S D E D V L V T L E L D L S T V V P P S S  
UniRef90\_M4V963 L T G R D E D R Y A K A Q G M W R E T N T P D P V F T F A S L E L L D L S T V V P P S S  
UniRef90\_UPI00036E6B9 F T G R D E D R Y A K A Q G M W R E T N T P D P V F T F A S L E L L D L S T V V P P S S  
UniRef90\_A9SX78 M T S G R P E D S R V E E T J E A Y L R A N L F D N T Y T S G T H L E L L D L S T V V P P S S  
UniRef90\_UPI0003780D10 L S T G R K E D R I Y C K E Q G L W R H T G D E P V F T F T D V L E L L D L S T V V P P S S  
UniRef90\_N8S798 L T G R S D E E Q T Y A K E Q G M F R T D E T P D P V F F S S E K L E L L D L S T V V P P S S  
UniRef90\_E8U8M5 R T G R S L E E D E Y T Y A K E Q G M F R T D E T P D P V F F S S E K L E L L D L S T V V P P S S  
UniRef90\_R7XW18 L T G R S D E E Q T Y A K E Q G M F R T D E T P D P V F F S S E K L E L L D L S T V V P P S S  
UniRef90\_V6F075 F T G R D E A Q V K L V E A Y A K A Q G L W D P V F T F A I V E L L D L S T V V P P S S  
UniRef90\_UPI0003625DBC L T G R A D D Q V Y A K E Q G L W H A N D S V E P R F F T S E K L E L L D L S T V V P P S S  
UniRef90\_A9HEZ2 Q T G R D E H R Y L K A Q G M F R T A E S P E P V F T F S E K L E L L D L S T V V P P S S  
UniRef90\_N0E3D9 L T G R S D E E Q V Y A K E Q G L W L D P A A E P R F F S E K L E L L D L S T V V P P S S  
UniRef90\_C6DK21 L T N R A D D Q I A L V E A Y S K A Q Q G L W R N T G D T P V F F T L E L L D L S T V V P P S S  
UniRef90\_A8HWR5 E T G R A D D R V K L V E A Y S K A Q Q G M W D P V F T F T D T L E L L D L S T V V P P S S  
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	210	220	230	240
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A S L K E L Q D K G N N I E R L P F S I R I L L E N V L R N H D G Y V G K P R T L A E K  
S F Y S L P A L Q K V G F E N I D R L P F S I R I L L E N Q L R H L S K G M V R T L A Q K  
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H L D S H T V C R L Q E D D Q G H V L L Y I D R Q V I N E Y T T S P Q A F S  
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G L R L T G R K P W R T D R N L A V D H N V P T T D R D K G I A D P V S R Q  
D F A V M R E A N Q V Q V P C R D L V I D H S V I A D V A L D K N M E L E F Q R N Q  
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T M A I N V E G E L P P D V T S K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
A I K V T L T G R K A C D D I S G K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
N M R I N V T G K L I P G V T S K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
V I G V T F S D A L P P G V T A T D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
T M R L T I D G R L P P G V T A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
A I K F N L H G K L P K Y V S S G K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
I M G V K L T G Q L L Q P G V S S G K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
T I K V E L T G K L P K Y V K G K D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
T M R I T I D G K L G K G V T A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
S L C I R L S G E L P P G V F A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
K M K V E F V G K P Q K G V Y S K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
I W G V E V T G E L P P W C S A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
N M R I F V N D G S E G I T S K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
V R K I E V N G A L P T G V T Y A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
I I G V E I T G T R A A G I T A T D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
N M K I E V N G A L L P G V T S K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
V V G F K L R D G V T A T D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
K M E V R L R G E L R E G V T A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
N M R I S V E G T L L E G V T S K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
S L E V R G P L G P G V T P K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
T I E V H L T G E K P A D V N G K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
T L E V E V T G L G A G V T A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
V R R I E V T G E L G A G V T A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
V I N V R L H G R M Q P G V S A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
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T I I K F Y T G E L Q P W V S G K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
T I K F D I E G E L N K H V S K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
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T C A V R V D G R L L Q A G V T S K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
T M K V D M T G H A S P G I T A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
K M R I T V N G N L L Q N N V L P K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
S M R I S I N G R L R P H G V G A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
T M R V T V D G R L L P H G V G A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A  
A L K I E V D G I L T E N V T A K D D I V L A I I I A G K R I G T A G G T G Y T L E F F A



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UniRef90\_H8GJJ2 G E A I R A L S S M E T Q R A C I S N M T P E Y A G S T C T G L L F P V D D N K T I L D Y Y R  
UniRef90\_R7BQR4 G E E G L D S L S A T Q R A C I S N M T P E Y A G S T C T G L L F P V D D N K T I L D Y Y R  
UniRef90\_P81291 G E T V K K M S I A S R R M T M T N M A I E M G G K T G T I I E P D D E K T I L D Q Y Y L K  
UniRef90\_U7DJR0 G S T V D A L L S V E A R R M T I C N M A V I E A G A G K A G A F M A P P D D E K T V F A Y Y L K K  
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UniRef90\_U2THB6 G E G V A A L T M D R L T L C C N M A I E I E A G A K A G L F P F D A I T K A Y V D  
UniRef90\_H2AX40 G S A V E A L S M E A R M S M C N M S I E I E A G A R A G M I K P D D Q I T Y D Y V K  
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UniRef90\_W2C179 G E A V R S L T M E G R L T L C C N M S I E I E M G A R A G M I A P D D D V T F A Y I R  
UniRef90\_R7GPH0 G E G V K E L S M A D R F T I C C N M A I E I E A G A K N G I F P V D D E A A I E Y L D  
UniRef90\_A5GAC0 G P G V A T L S V T D R R T I G N M G A E L G A T T S S I F P S D D H R T K E F L E  
UniRef90\_R6IFE1 G D G V A E L A M S D R F T I C C N M A I E I E A G G K N G I F P V D D E K T J A Y L N  
UniRef90\_R5TZP2 G E A I R S L T M E G R L T L C C N S I E I E M G A R A G G M I A P D D E V T F E Y I K  
UniRef90\_UPI0003674211 G P V V E R L S V E E R A T I T N M A V I E V G A K A G M V P P D D E K T F R W V K  
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UniRef90\_R2RQM2 N R R F A P D W Q A A V S D W Q T L Y T D E D A E F D R L L T L D D A G S I L A P F 320  
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UniRef90\_J0B801 G R P Y S P K W D Q A V A Y W K T L H T D D G G A Q F D R V V Q L T D A S Q I T F P P Q  
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G P G V S T L S A G D R S V V A N M A P E E Y G A T T G F F P V D D H T L A Y L R E  
V K N G T D F P M D Y R A T V A N M G I E M N A D T L M F V P D D E E T K R I E  
G E G V R S L T I D E R L S I S N M T T E W G A L A G V F P L D D S T L A W Y E  
G D A L T N H L C L D R M A I T N M A V I E M G A K A G L M A P D D T K V V E Y L K  
G E G A T K H L S L P D R A T L A N M A P E E Y G A T M G F P V D D E V T L E Y M R  
G S T V E S L N M E E R M T L C C N M V V I E A G G K N G V I P P D S I T Y K Y L E  
G P A A R E M S M M A R F T V A N M A L E A G A K C G L F E A D D E K T A E Y Y  
G P G L A T L S A M D R H V I A N M G A E L G A T S T V F P S D L E V R R F L R  
G D T I E A L S V E A R R M T L C C N M A V I E A G A R A A L I A P D D Q K T V I E Y L R  
G S T L S S M E M D E R F V L C C N M S V I E M G A K T A Y I Q P D D E T F G F L E  
G E G I G S L T L E D R M T L T N M A I E A G G K N G I C D V D Q K T L D Y V R  
G D T I E R L S I D D R I T L T N M V A E L G G V S G L I A P D S N T V N F L K  
G P G V A R L T V E Q R L T V A N M T T E W G A L S G L F P V D D G V L E D W Y R  
G E A I S S L T M E G R R F T M C N M A V I E A G A K A G I I T P D D E K T E Y V K  
G E G V A S V P L A N R A T I G N M S P E F G S T A A I F P I D D V T L D Y L R  
G P A L Q A E M A M E D R M T I C C N M T V I E M G S E A L I E P D D D K T F A Y I K  
V E N P K A F P M D Y R A T V S N M G I E M N A D L M F V P D D V E T K D Y I K  
G A G A S S L T L G D R A T I S N M A P E E Y G A T A A M F S I D S Q T I D Y L R  
G E A T N A L S M Q E R M T L S N M S A E L G A Q V G L I A P D A T T V I D Y L R  
G E G I R T L A L P D R A T I G N M A P E E Y G A T M G F F P V D D E K T I E Y F K  
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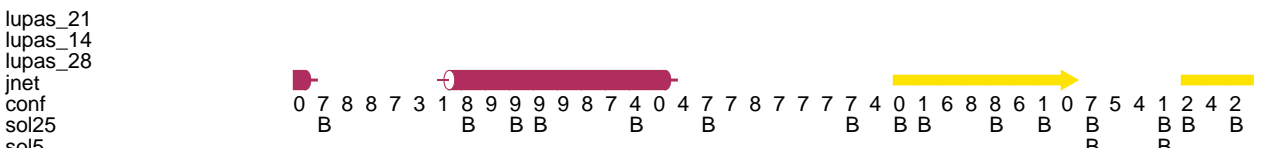








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 UniRef90\_B4UHN7  
 UniRef90\_W1W5P6  
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lupas\_21  
 lupas\_14  
 lupas\_28  
 jnet  
 conf 7 7 7 7 8 8 9  
 sol25  
 sol5



1



10

20



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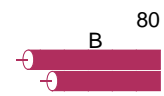
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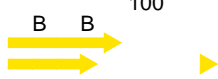
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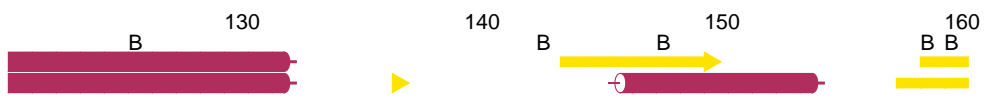
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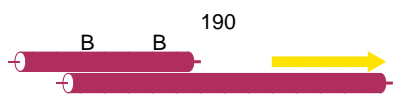
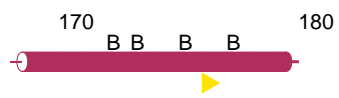


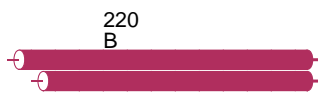
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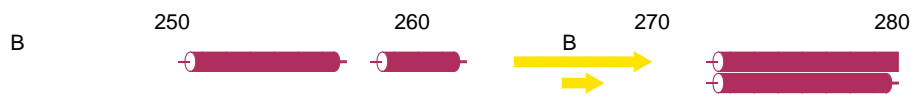
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jhmm  
jpssm



sol0  
jhmm  
jpssm







sol0  
jhmm  
jpssm





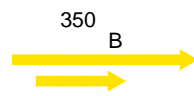
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jhmm  
jpssm



330

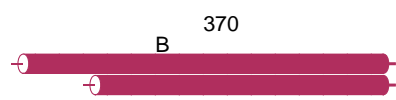


340



360

sol0  
jhmm  
jpssm



380



sol0  
jhmm  
jpssm



410

B

420

B B

430

440



sol0  
jhmm  
jpssm



490



500

510



520

