



QUERY  
UniRef90\_Q8I0X1  
UniRef90\_D3TPF3  
UniRef90\_A0A044U530  
UniRef90\_U5ESH2  
UniRef90\_E0I565  
UniRef90\_E2B8K5  
UniRef90\_T1G9N6  
UniRef90\_A6MI56  
UniRef90\_D3BML8  
UniRef90\_G0R571  
UniRef90\_K8EER4  
UniRef90\_A9URX7  
UniRef90\_D8SPU6  
UniRef90\_H5UJK4  
UniRef90\_R6LK80  
UniRef90\_A4IT28  
UniRef90\_M0M7C8  
UniRef90\_K2JT64  
UniRef90\_R8BR92  
UniRef90\_UPI0002488557  
UniRef90\_UPI000346D8B0  
UniRef90\_M4S744  
UniRef90\_L1LF86  
UniRef90\_C4L5B5  
UniRef90\_UPI00031909CA  
UniRef90\_UPI000361EA67  
UniRef90\_R4KUY6  
UniRef90\_A0A023D528  
UniRef90\_UPI00035D3ECA  
UniRef90\_F8EVQ9  
UniRef90\_K9B7Z2  
UniRef90\_D6TJ8  
UniRef90\_M5ESH0  
UniRef90\_B3CNS5  
UniRef90\_UPI000406CE2A  
UniRef90\_A0A024JF64  
UniRef90\_U4JW64  
UniRef90\_J8VP23  
UniRef90\_V4PAH7  
UniRef90\_G1XYN2  
UniRef90\_V4RJ7T  
UniRef90\_UPI00037C6F8D  
UniRef90\_UPI00037A4657  
UniRef90\_X1E774  
UniRef90\_C8VES9  
UniRef90\_W9WZB7  
UniRef90\_U1P6E4  
UniRef90\_V6Q6D1  
UniRef90\_Q02C51  
UniRef90\_G2LHN3  
UniRef90\_N1QCS7  
UniRef90\_A7TJM1  
UniRef90\_X0YD12  
UniRef90\_I5BQ35  
UniRef90\_C7JDV1  
UniRef90\_UPI0003638D89  
UniRef90\_A7IMM3  
UniRef90\_UPI0004785310  
UniRef90\_L1Q947  
UniRef90\_S7TQ40  
UniRef90\_U6KR05  
UniRef90\_UPI000369C89B  
UniRef90\_I4C1N5  
UniRef90\_UPI0003B74C9F  
UniRef90\_UPI0004743FFF  
UniRef90\_UPI00036CECF7  
UniRef90\_I0JNS9  
UniRef90\_A5FJW2  
UniRef90\_UPI0002FA1CE8  
UniRef90\_A0A017RVY3  
UniRef90\_C1MUI7  
UniRef90\_UPI000382CA10  
UniRef90\_G5ZVY4  
UniRef90\_G2KSM6  
UniRef90\_I5C8H8  
UniRef90\_V5E5C5  
UniRef90\_F3WWWX5  
UniRef90\_UPI00037F1021  
UniRef90\_UPI0003FAD8E6  
UniRef90\_L0A087  
UniRef90\_H5S918  
UniRef90\_S5SYI2  
UniRef90\_F8D9X5  
UniRef90\_B8EJT8  
UniRef90\_UPI0002F98A71  
UniRef90\_K5W8M8  
UniRef90\_V5T8W4  
UniRef90\_UPI00036DBF26  
UniRef90\_W4VGG2  
UniRef90\_UPI0002D52ED6  
UniRef90\_UPI00025558CF

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

QUERY UniRef90\_Q8I0X1 UniRef90\_D3TPF3 UniRef90\_A0A044U530 UniRef90\_U5ESH2 UniRef90\_E0I565 UniRef90\_E2B8K5 UniRef90\_T1G9N6 UniRef90\_A6MI56 UniRef90\_D3BML8 UniRef90\_G0R571 UniRef90\_K8EER4 UniRef90\_A9URX7 UniRef90\_D8SPU6 UniRef90\_H5UJK4 UniRef90\_R6LK80 UniRef90\_A4IT28 UniRef90\_M0M7C8 UniRef90\_K2JT64 UniRef90\_R8BR92 UniRef90\_UPI0002488557 UniRef90\_UPI000346D8B0 UniRef90\_M4S744 UniRef90\_L1LF86 UniRef90\_C4L5B5 UniRef90\_UPI00031909CA UniRef90\_UPI000361EA67 UniRef90\_R4KUY6 UniRef90\_A0A023D528 UniRef90\_UPI00035D3ECA UniRef90\_F8EVQ9 UniRef90\_K9B7Z2 UniRef90\_D6TJ8 UniRef90\_M5ESH0 UniRef90\_B3CNS5 UniRef90\_UPI000406CE2A UniRef90\_A0A024JF64 UniRef90\_U4JW64 UniRef90\_J8VP23 UniRef90\_V4PAH7 UniRef90\_G1XYN2 UniRef90\_V4RJ7T UniRef90\_UPI00037C6F8D UniRef90\_UPI00037A4657 UniRef90\_X1E774 UniRef90\_C8VES9 UniRef90\_W9WZB7 UniRef90\_U1P6E4 UniRef90\_V6Q6D1 UniRef90\_Q02C51 UniRef90\_G2LHN3 UniRef90\_N1QCS7 UniRef90\_A7TJM1 UniRef90\_X0YD12 UniRef90\_I5BQ35 UniRef90\_C7JDV1 UniRef90\_UPI0003638D89 UniRef90\_A7IMM3 UniRef90\_UPI0004785310 UniRef90\_L1Q947 UniRef90\_S7TQ40 UniRef90\_U6KR05 UniRef90\_UPI000369C89B UniRef90\_I4C1N5 UniRef90\_UPI0003B74C9F UniRef90\_UPI0004743FFF UniRef90\_UPI00036CECF7 UniRef90\_I0JNS9 UniRef90\_A5FJW2 UniRef90\_UPI0002FA1CE8 UniRef90\_A0A017RVY3 UniRef90\_C1MUI7 UniRef90\_UPI000382CA10 UniRef90\_G5ZVY4 UniRef90\_G2KSM6 UniRef90\_I5C8H8 UniRef90\_V5E5C5 UniRef90\_F3VWX5 UniRef90\_UPI00037F1021 UniRef90\_UPI0003FAD8E6 UniRef90\_L0A087 UniRef90\_H5S918 UniRef90\_S5SYI2 UniRef90\_F8D9X5 UniRef90\_B8EJT8 UniRef90\_UPI0002F98A71 UniRef90\_K5W8M8 UniRef90\_V5T8W4 UniRef90\_UPI00036DBF26 UniRef90\_W4VGG2 UniRef90\_UPI0002D52ED6 UniRef90\_UPI00025558CF

90 100 110 120

G G F A S E I I S S T V I Q Q E E R C C F F L N L E A P I V S R R V V G Y D T P F F H H V V F F P F F  
N G F G S A E I I A S A S K I Q Q E E R H C C F F L N L H E A P I V S R R V V C G Y D T P F F H H V V F F P F F  
Q G F G S A E I I S S A S K I Q Q E E R H C C F F L N L H E A P I V S R R V V T G W D T P F F P H H V V F F P F F  
S G F A A E I I S S S K I Q Q E E R C C F F L N L H E A P I V S R R V V T G W D T P F F P H H V V F F P F F  
C G F G S E I I A A T I Q Q E E R C C F F L N L H E A P I V S R R V V T G W D T P F F P H H V V F F P F F  
S G V A A E I I A A T I Q Q E E R C C F F L N L H E A P I V S R R V V T G W D T P F F P H H V V F F P F F  
N G F G A E I I A A T I Q Q E E R C C F F L N L H E A P I V S R R V V T G W D T P F F P H H V V F F P F F  
L G F A S E I I A A S K I Q Q E E R C C F F L N L H E A P I V S R R V V C G Y D T P F F P H H V V F F P F F  
G G V A A E I I A A N I H E R R C C F F L N L H E A P I V S R R V V C C C G Y D T P F F P H H V V F F P F F  
G G W A A E I I A A S N T I H E R R C C F F L N L H E A P I V S R R V V C C C G Y D T P F F P H H V V F F P F F  
G G I G S E I I A A G I V Q Q E K C C F F L N L E A P I V S R R V V C G L D T P F F P L I H F F I  
C G V G S E I I A A C I V Q Q E K D A F D Y L D A P V V K R R V T T G V D T P F M P Y A L E E A M Y  
A G M G A E I I S S S T I Q Q E E T F F D Y L D A P I E R I S I G A D T P M P Y A L E E R L  
H G V C A E V I C A S V Q Q E E T F F D Y L D A P I E R I S I G A D T P M P Y A L E E R L  
G G I G A E V I A A A G I G S E E A F F R Y L D A P V L R R I S G A P F T P V P F S L E E K A  
G G F G G E I I A A A G I G S E E A F F R Y L D A P V L R R I S G A P F T P V P F S L E E K A  
S G F G A E I I A A L I S E E A L F Y L Q E A P I V R V I A G Y D T P Y P P S V L E E D D Y  
G G L A G E I I T A T L S E E A L F Y L Q E A P I V R V I A G Y D T P Y P P S V L E E D D Y  
A G I G S E I I A A L M M E E C F F L H L E A P V K R V C G V D V P F P Y A L E E K L  
A G V G A E I I A A A V Q Q E E D P F L H L E A P V A R V A G V S T P T P L L Y E E K F  
S G F G A E I I S A L V Q Q E H C C F F H L E A P I E R V T T G W D T P Y P H S L E E W A  
N G F G A E I I V A T L Q Q C C F F L H L E A P I E R V T T G W D T P Y P H S L E E W A  
C S I A S E I I A A T I M E D G F D D L D A P V L R V T T N E D V P L P Y A L E E K A  
V G M G A E I I A T E I M E R R C C F F L H L E A P I K R V C G Y D T P F A L V Y E E K L  
A G I A A N V I V T E I M E R R A L L H L E A P I K R V T T A P D T V F A F A G E D M  
A S I S S E I I A F H V Q K N A F D Y L D A P V L R I T C A D V P L P Y A L E E T A A  
A G I G S E I I S A V V T E S A F D Y L D A P V L R R I T G I D V P M P Y A L E E K A  
G G F G G E I I A A L V T E E S G F D Y L D A P I K R V T T G A P F T P V P F S L E E A A  
A G I G A E I I A M Q V T E H A F D W L D A P V R V T T G L D V P M P F A L E E K L  
S G V G S E I I S A R V T E Q A F D W L D A P V T R V T S G K D V P M P Y A L E E K L  
C S I S S E I I A A I A M D E Q G F D N L D A P V L R V T T N A D T P T P Y A L E E K M  
G S V M S E I I A A L I A E N C L F D L D A P I M R V L A G P D V P F A P L E E D E  
G G I G A E I I A A M L I A E N L F E Y L D G P I T R V A A A P D V P F P Y A L E E S A  
H G F G A E I I S A L I M E N A F D Y L D A P V A R V A A G M A D V P M P Y G L E E R E  
A G I G A E I I S A M I M E Q G F D Y L D A P V V R V T T G K D V P L P Y A L E E K K  
A G V A A E I I A J A I N E H A F Y H L E A P V L R I T T P D T V Y P F A M E D E S F  
N G I A A E I I A A E I Q S E C F L S L E A P I Q R V T T G W D T H V P L M Y E S F  
S G F G A E I I M S V V Q Q E E C F W Y L K A P I E R V T T G W D T P Y P H A F E W A  
C G Y G A E I I A A L V Q Q E H C C F F Y A L E A P I E R V T T G W D T P Y P H A F E W D  
A G F G G E I I S A L V Q Q E R C C F F Y H L E A S A V R R V T G G W D T P Y P H A F E W D  
A G I G A E I I M S A V M M E H A F D Y L D A P V V R V H G K D V P M P Y A L E E K L  
C S I S S E I I A Y Q V I M E K A F D Y L D A P V T R V T T A P D T P F P Y A L E E K L  
A G T A G Q I I M S E I A E R N F M D L D A P V L M R V T T A P D T P F P F G M E E A  
C S V A S D V I S A Q L M E K A F D W L D A P V T R V N S A D V P L P Y A L E E K A  
G G F M G E I I S A Q V S T K G F D W L D A P V A R V A G G R N C P V P Y A L E E Q E  
F G V G A E I I A A T I Q Q E G A F L R L E A P I V Q R V A G W S T H T P G L T Y E K L  
A G V G A E I I A A S I Q Q E G A F L R L E A P I V A R V T G W S T H P P G L I F E K F  
G G L A G E I I T A T L Q E E A L M Y L Q E A P I G R V A A A P D S H F P F S A E S V  
T G L A N H I M A E I A E N A M Y D L E A P I G R V A A A P D S H F P F S A E S V  
G G M A G E I I A A T I T E N V F E Y L D G P I V R V T A P D T P V P Y S L E E S A  
W G Y G A E I I A A R I G E E L F D D L D A P V R R V T G A L D T F V G Y A L E E D Y  
A G V G A E I I A A T I Q Q D K C F L R L E A P V Q R V A G W S T H P G L G Y E R F  
F G V G S E I I A A Q V M E E A F D H L D A P V V R V T G A D V P T P Y A L E E D F  
S S F I S E I I A M R I Q E E V F D W L D A P V V R V A A A A D V P P E S L E E D A  
L G V G A E I I S A M I A E E A F D Y L D A P V V R L G G A E T P I V Y E L E E K A  
C N M A C D I S A L V A E K A F F S L K A P I R R V V P P H T P V P F S L E E K L  
L G L G A E I I S A L V S E R A F E J L Y A P I F R V T T G F D T P F P Y A N E E H  
C S I A T D V A A Y I A Q Q A F G A L K A A P Q M V T T A P H T P V P F S L E E D L  
A S I G A E I I A A L I A E H A F E Y L D A P I M R L C G P D V P F A A T L E E A  
M G V G A E I I V A R V I E H A F D Y L D A P L R V H Q E D V P L P Y A L E A L  
G G F A G E I I A A V V M E E A F A D L K A P I R R V T G P D I P V P A S L E E R F  
M G F A A E I I A A A V I Q E K C F F S L E A P I K R V T T G Y D T P F P L A Y E P F  
Q G F S G E I I A A W I A E N C F F F L D A P I M R V E G S L D T P V P F A L E E D Q  
G S P G A E I I A A L V A E K A F D R L D A P I L R V A A A P F V P V P F S L E E R E  
A G I G A E I I S A L V N E N A F D W L D A P V K R V T T G K D V P M P Y A L E E K L  
C S V A A D I A A L V A N K G A F D Y L D A P I K T I T A P H T P V P F A L E E Q L  
C S I A T D I A A L V A N K G A F D S L D A P I K R I T A P H T P V P F S L E E D L  
G G I I S E I I S A I I S E N C L F D L D A P V Q R L A G P D I P M P Y A M E K F  
A S L S S E I I S Y I V Q E Q A F D L D A P I Q R I T T A D T P A P Y A L E E K D  
C G F G A E I I V A L V Q E H C F Y H L Q A P I E R V T T A D T P Y P H S A Q E W D  
G G L G S A V C E V L S E N H P V V V K R I G V M D T F K P G E L L E K E  
A G V G A E I I A A M V M E D A F D H L D A P V E R I T G V D I P M P Y A L E E D L  
S G F G A E I I A A L V Q E H C F Y H L E A P V G R V T T G W D T P Y P H A Q E W D  
A G I G S E I I A A V Q M M E Q A F D Y L D A P V M R V T T G K D V P M P Y A L E E K L  
A G I G S E I I A A L V N E H A F D Y L D A P V R R V C A A D V P M P Y A L E E A L  
S S V G A H I A S Q V M Q R A F D Y L D A P V I T V A G A K D V P M P Y A L E E K L  
A G V G A E I I A A E V Q K N C F L N L E A P I T R V A G G W D T P F P H V G E L F  
A G F G A E I I S A L V Q E R C F Y H L E A P I A R V T T G F D T P Y P H S L E E W A  
G G V G A E I I S A I I S E E A L F D L D A P I M R L C G P E I P M P Y S L E E K F  
L G L G A E I I S A R I H E E C I L Q L E A P V A R V A S F D V P P P Q L E E D L  
G G F H S E I I A A L L A E E A L L D S L A P V V R V T T G F D A P Y P P S V L E E D T  
C S F S S E I I T A L I T E K L L H L Q A P V V R V T T G Y D T H I P Y L M E Q Y  
C G V A A D I S A L L A D Q C F D A L K A P I K L V T A P H T P V P Y A L E E D A  
G G L G A E I I A T L Q E E A F D Y L Q E A P V E R V T G F D T P Y P Y A L E E D Y  
S G I G A E I I A A V L M E H A F D Y L D A P V A R V T G K N V P M P Y A L E E K L  
U P I 0 0 0 2 F 9 8 A 7 1 G G V G G E I I A A E I Q K R C F L K L N A P I K R V A A P D T I Y P F Q A E N V  
U P I 0 0 0 K 5 W 8 M 8 A G V G G Q V A S A I A E D A L L S L D A P I G R V A A P D T V Y P F A Q E E V  
U P I 0 0 0 3 6 D B F 2 6 G S I G N H L S A V I M E R A F D Y L D A P V I N C T G K D V P M P Y A L E E K L  
U P I 0 0 0 W 4 V G G 2 A G I A S Y I V S N I Q E R A L L H L E A P I L T V A A P D T V Y A F T Q E E V  
U P I 0 0 0 2 D 5 2 E D 6 A G I A S Q I V A E I Q E R A L L H L E A P I L R V A A A P D T V Y A F T Q E E V  
U P I 0 0 0 2 5 5 5 8 C F G G F G G E I I A A V I A D E A F F Y L D A P I R R L G G L D V P I P Y N L E A Q

QUERY Y I P D K W K C Y D A L R K M I N Y  
 UniRef90\_Q8I0X1 Y M P D A H K V I Y E V K K M M K  
 UniRef90\_D3TPF3 Y L P N K Y R C L S A I K K K V I N Y  
 UniRef90\_A0A044U530 Y L P T K W R I V E T I K K K L I N D F  
 UniRef90\_U5ESH2 Y I P D K Y R C L D T V K K L I N F  
 UniRef90\_E0I565 W L P S P E R V V K A A K Q V L N F  
 UniRef90\_E2B8K5 Y L P D K W R C F A A V R G L L K Y  
 UniRef90\_T1G9N6 Y L P D K W K C F E A V K K A V N Y  
 UniRef90\_A6MI56 Y I P N R L K I F D G I M E T M E Y  
 UniRef90\_D3BML8 Y V P N R L K N F E A I K K S V K Y  
 UniRef90\_G0R571 Y L P D K W K V Y D A I K K S I N Y  
 UniRef90\_K8EER4 A L P K P A D I V S V A K R T L  
 UniRef90\_A9URX7 Y V P D T N R C F E A I K E T I N Y  
 UniRef90\_D8SPU6 A L P Q I E D I V R A A K R A  
 UniRef90\_H5UJK4 Y V P D A D R I V A G A R R L L E  
 UniRef90\_R6LK80 I L P D A D R I Y D A A K K L L E F  
 UniRef90\_A4IT28 W L P N P A R I V E G I E T L M R Y  
 UniRef90\_M0M7C8 Y L P E S A R I E D G L R E A V E F  
 UniRef90\_K2JT64 A L P Q A D H I T E A A K A V  
 UniRef90\_R8BR92 N I P D V A R I Y A S T K K V L N Y  
 UniRef90\_UPI0002488557 Y F P G P V R L N E A L K R V L  
 UniRef90\_UPI000346D8B0 Y I P D A L K V F E A I K N A V E F  
 UniRef90\_M4S744 A L I K A D D V V A A V K K V  
 UniRef90\_L1LF86 Y L P N E H K L Y D A I V D V  
 UniRef90\_C4L5B5 W L P D H K D V V A K V K E V V N F  
 UniRef90\_UPI00031909CA S L P N A E R V V K A V K E V M  
 UniRef90\_UPI000361EA67 V L P D A K R I A D A A K A V  
 UniRef90\_R4KUY6 Y I P D E N K I I A A V K E L L  
 UniRef90\_A0A023D528 A L P Q P D W V V D A V R K L V  
 UniRef90\_UPI00035D3ECA A L P S V A D V V E A A K A V  
 UniRef90\_F8EVQ9 A L V S A E A V I K A V H K V  
 UniRef90\_K9B7Z2 F M M N P E K I K A K M K E L A E F  
 UniRef90\_D6TJ8 Y L P N A E K I L A A A R K L A A Y  
 UniRef90\_M5ESH0 L I P N A A R I A E A A R T V  
 UniRef90\_B3CNS5 A L P Q V E D I V E A V H Q V  
 UniRef90\_UPI000406CE2A W I P T P Q R V L A G L D K A L S E Y  
 UniRef90\_A0A024JF64 V I P D V T R N F H A I K K A I E Y  
 UniRef90\_U4JW64 Y F P S Q E R V L K A L N R V L E E  
 UniRef90\_J8VP23 Y F P G P A R V A Q T L Q R I V E  
 UniRef90\_V4PAH7 Y F P G P S R I V P A L Q R A C L E  
 UniRef90\_G1XYN2 A L P Q V D D V V T A A K A V L  
 UniRef90\_V4RJ7T A L P S V K E V I E A V K A V  
 UniRef90\_UPI00037C6F8D W M P S V D D I V A K A K E A V E F  
 UniRef90\_UPI00037A4657 A V V D A K D I V K A A K A V  
 UniRef90\_X1E774 M I P G A G R I E K G I L D L L K E Y  
 UniRef90\_C8VES9 I L P D V T R I Y D A I K R T L E Y  
 UniRef90\_W9WZB7 N I P D V A R I Y D T M K R T L E Y  
 UniRef90\_U1P6E4 Y M P N E T R V A E G I R D A V E F  
 UniRef90\_V6Q6D1 W L P N A K D I E A E V K R V I N  
 UniRef90\_Q02C51 F L P N A D K V V E K A R W L Y R Y  
 UniRef90\_G2LHN3 I L P Q I P D L I G A I V A L A E Y  
 UniRef90\_N1QCS7 N I P D V T R I Y D T I K S V L D Y  
 UniRef90\_A7TJM1 A F P D P D T I V R A V K E V L A  
 UniRef90\_X0YD12 A I P N V D A I V S G L R Q V L S  
 UniRef90\_I5BQ35 T V P Q V D G I V K A A R E L V  
 UniRef90\_C7JDV1 Y M P D A N K I A A A V R S I  
 UniRef90\_UPI0003638D89 Y L P D E D R I L K Y V R K S L E Y  
 UniRef90\_A7IMM3 Y I P T A D A I A G A V L R T V P H  
 UniRef90\_UPI0004785310 F M P S P E K I A A K L R E L A A Y  
 UniRef90\_L1Q947 S L P G V D K I V A A V K E I V M A  
 UniRef90\_S7TQ40 Y I P D A A Q V V S A V K E I L  
 UniRef90\_U6KR05 Y L P N E W K L A D A M R E L K A H  
 UniRef90\_UPI000369C89B F L P K D R L R E K T R K L M E Y  
 UniRef90\_I4C1N5 F I P N E E K I V K A K T V V E  
 UniRef90\_UPI0003B74C9F A L P Q V D D I V N A C G E V  
 UniRef90\_UPI0004743FFF Y I P N A E K V I N T A Y E L I N  
 UniRef90\_UPI00036CECF7 Y L P S P Q K V L E V V S E M L G  
 UniRef90\_I0JNS9 F M M N P D K V E K A M R D L A E F  
 UniRef90\_A5FJW2 W L P N A G D V V K A V K K V L  
 UniRef90\_UPI0002FA1CE8 Y F P G P S R V I D A M Q R V L E  
 UniRef90\_A0A017RVY3 Y G L T A D N I V A A V K E V I N  
 UniRef90\_C1MUI7 A L P K V A D I V R V A K R V  
 UniRef90\_UPI000382CA10 Y F P G P A R V G E A L V R A M E  
 UniRef90\_G5ZVY4 A L P Q A D D I V A A A R Q A  
 UniRef90\_G2KSM6 A L P Q V D E I V H V A K Q V  
 UniRef90\_I5C8H8 A L P N V A E V V E A V K A V  
 UniRef90\_V5E5C5 Y K P E A V R I A D A L V K C L T F  
 UniRef90\_F3VWX5 Y F P G P V R I G Q A L K T L L K  
 UniRef90\_UPI00037F1021 Y L L N P T K I A D A M R K L A E F  
 UniRef90\_UPI0003FAD8E6 H A P T P Q R I S A G I E K V F A F  
 UniRef90\_L0A087 Y R P N P T R V A R A I K Q V L A Y  
 UniRef90\_H5S918 Y L P D A G R V K K G I E K V L R F  
 UniRef90\_S5SYI2 Y V P T P D A V I K A V K S I V K  
 UniRef90\_F8D9X5 Y L P E A A R I E D G L R N A V E F  
 UniRef90\_B8EJT8 A L P N V G E V V A A K A S L  
 UniRef90\_UPI0002F98A71 W L P N Y K D I I E T A K K V L T F  
 UniRef90\_K5W8M8 Y I P D A L R I L D A V V E T L A Y  
 UniRef90\_V5T8W4 W I P R K A E I I D K V K E I I N Y  
 UniRef90\_UPI00036DBF26 A L T T T A E V I S A V K K V I  
 UniRef90\_W4VG62 W L P N Y N D I I E K V N K V M H F  
 UniRef90\_UPI0002D52ED6 W L P N H N D I V E K V N D V I N F  
 UniRef90\_UPI00025558CF V V P T E E K I T A A L E S L L

UniRef90\_D8F8I0  
UniRef90\_G8TJA0  
UniRef90\_G4VF59  
UniRef90\_K0QA15  
UniRef90\_F2I6N2  
UniRef90\_A0A024G3X5  
UniRef90\_A3LYM2  
UniRef90\_B9ZYV6  
UniRef90\_L8GIL6  
UniRef90\_M1YY87  
UniRef90\_B2J576  
UniRef90\_S5U51  
UniRef90\_R7Q9G6  
UniRef90\_T1JQ99  
UniRef90\_F1Z9S7  
UniRef90\_I8A8S8  
UniRef90\_F8L7F5  
UniRef90\_W9GAG3  
UniRef90\_B5Y8U0  
UniRef90\_A9HHP7  
UniRef90\_U4LX25  
UniRef90\_N6UPZ6  
UniRef90\_UPI000409F355  
UniRef90\_F8PP79  
UniRef90\_L8FZS4  
UniRef90\_C1C2R8  
UniRef90\_J8VXT0  
UniRef90\_C4PQR8  
UniRef90\_W0RGK7  
UniRef90\_S2JPY8  
UniRef90\_G8RHC3  
UniRef90\_UPI000413698C  
UniRef90\_G7UWT8  
UniRef90\_A0LY35  
UniRef90\_V6QA82  
UniRef90\_UPI00037363E4  
UniRef90\_UPI00035EB101  
UniRef90\_UPI0003B45811  
UniRef90\_D8RRS3  
UniRef90\_C6A4Z4  
UniRef90\_UPI00035E665C  
UniRef90\_W9YCH5  
UniRef90\_L8MAT7  
UniRef90\_U1WQF2  
UniRef90\_R5SI31  
UniRef90\_UPI0003B3BF1F  
UniRef90\_A5I2A1  
UniRef90\_T1ELL0  
UniRef90\_A8TJR4  
UniRef90\_UPI000474E888  
UniRef90\_D8LXY9  
UniRef90\_Q0SGE6  
UniRef90\_K1Q329  
UniRef90\_H8IP13  
UniRef90\_V2XMW5  
UniRef90\_D1C9P0  
UniRef90\_B8KSP8  
UniRef90\_A9WCB8  
UniRef90\_C3MMO2  
UniRef90\_V9R5E2  
UniRef90\_UPI00040B0D69  
UniRef90\_F8L127  
UniRef90\_UPI000345324B  
UniRef90\_A0A016SNS5  
UniRef90\_E8PRD8  
UniRef90\_A0A031FY80  
UniRef90\_UPI000363F5DD  
UniRef90\_F4DIV1  
UniRef90\_UPI00037B5EC6  
UniRef90\_H9KJL4  
UniRef90\_W2EXG4  
UniRef90\_D9VF09  
UniRef90\_R5SI36  
UniRef90\_UPI00038F845F  
UniRef90\_W7YDGO  
UniRef90\_UPI0003B5BC9F  
UniRef90\_UPI00035F591F  
UniRef90\_UPI0002490A64  
UniRef90\_UPI0003734761  
UniRef90\_U5UKL7  
UniRef90\_V6SE27  
UniRef90\_A0LSF2  
UniRef90\_D3FEC9  
UniRef90\_W2BPN7  
UniRef90\_C7MWP4  
UniRef90\_UPI00036B5608  
UniRef90\_UPI0003675615  
UniRef90\_UPI000365C308  
UniRef90\_R5F2B2  
UniRef90\_UPI0003650677  
UniRef90\_Q5Z124  
UniRef90\_UPI00047CD8F7

1 10 20 30 40  
T L P L G K S V K V R Q G K D L T M I S Y G A M M R P T L E A A E T L L K E D  
D F N I G D K A L V R K A E G K D V T T T V S Y G A M M R P T L E A A E T L L K E D  
F L T I G G Q A K V E R E T G Q D V T T L I A W G A M V Y K A L D A A A E T L L K E D  
Y T I K I G G K A K V Y V T E G Q D V T L I A W G A M V Y K A L D A A A E T L L K E D  
Y T I P L G G V A N V A R E E G S D D V T L I A W G A M V Y K A L D A A A E T L L K E D  
F V V P F G G K A N V I M K E E G T D D L T F V S H F S R S V G F A L D A A A E T L L K E D  
F V L P L S T A E I V R P G S D D V T L V S G S T M I Q L L K E A A D L A K K E N  
Y E I P L G S K A H I E K E E G E D I T T V I T F W G A M V R D V L Q A A Q S E M A V K  
Y G L D I G S K A K V V E E E G E D I T T V I T F W G A M V R D V L Q A A Q S E M A V K  
Y L L P L D K A E V V R E E G Q K D V T I I T Y S R M R H H V L Q A V K T L E K  
P L H K A K V V R E E G Q K D V T L V A Y G P R M V K L C Q E V A A A A E E  
F L L P I L G K A K V M R E E G T D D V T L V A H S R P V A F A L E A A E L L A E  
F T L P I G K A K V I E K E G Q S H T T L V A H S R K A V G T C L E D A A E L L A E  
Y R I P I G N A R V I A R E E G Q D D V T L V A Y G T M V H V L A L E V A A  
F V L P I L G K A K V I A R E P G Q D D L T V I V S L S R M V G L S L N A A E L L K E K  
Y L V P I L G K A K V I R E E G T D D V T V V S H S R M L S H C R E A A S E L L A K  
H V V P F G R A A V A R A G G D D V T I V T V S L S V H H A L D V A E K L L S G E  
Y T I P F G E A N L T R A E G T D D L T I V A F G R M V K L A N E A A D R L L Q K K  
F V L P I G G K A K I H H K A S G Q D D V T I V A Y G I G M H Y A I Q A L P E V E K  
Y E V E I G R G K K L A E G K D V T L I G W G A M I P I V M K A L E E M K E  
F T L P I G S S A E I E R V G K D V T V V A H S K M V T H S M E A A E L L E K E  
Y T L P I L G S S A E I L K P G E G T D D V T V V A S Y G H P L Y T C S A A L E L L E K D  
F L V P I L G K A K V M K E E G T D D V T L V A H S I G V K F C I E A S E A L L A Q  
Y V V P I G G V A R I V Q E E G C D D V T L V S L A S R M V H H A L Q A A A T L A Q  
Y L I P I G G K A R I V Q E E G K D L T I I S H S R M V S I V E A L Q A A K T A K Q R  
Y V I P I G K A E L K R E E G D H A T I V T W G K M A L V A V N A A D Q L L A K  
F V I P I G K A K I E R E G K D T T V V S H S R T V G F A M K S A A D L L A A K  
Y T V E I G G R A A V R R T R E E G D D V T V I A Y G A M M D V A V K A A E K A E K  
L L D V C F D I R D G S D D V T L V S W G A Q V K E A L E A A A D T L L A A E  
Y L I E I G K A D I K R E G S D D V T I V S F G K I I K E A Y K A A D Q L L A E E  
Y T V E I G K A K V K R E E G N D L T I V T I G K M L Y V A L E V A E E L L A E K  
Y R V P I L G K A R V V L Q E E G S D D V T L E A W G A M L R V A M K A A A D L L E R E  
W V L P I L G K A K V R R E E G T D D V T L V A H S R M V G F A L E A A E Q L L S K A  
Y M L P I L G S N A E V I R E E G T D D V T L V A W G A Q L A V M Q Q A C A E A E E K  
P Y S I P L G E A D I L K K E E G K D V T L V V A T A L M V Y R A L E V A E K E E E  
Y A I P L G K A A K I R E E G A D L T L L T Y G T M V H V A L E A A A A E E  
F V I P F G K A K I E R P G K D L T I T L S R C V G L S L D A A E Q L L K K K  
Y I V P L D K A E M V R P G K D V T I L T Y S R M R H H C T Q A A E K L L K K K  
Y E F E I G K G V Q I R E E G N D V A I I A T G V M V H I A V E A A E E L L A Q  
Y T I P I G G K A R I A R E E G K D V I V Y G V M V S R A L T A A E E L L A K  
Y T I P I G G V A D I K R A E E G D V I T L A T S R M V S N A L T A A E D T L A A D  
F L I P F G G K A K I A R A G K D V I V S H S R M V G F S L D A A A K E L L E Q  
Y T L P F G Q A A L V R E E G D D V T I I S F G A G V H W A L E V L L D M Y  
F V Y Q L H R A R V A R E E G T D A T L V A Y G S V V P T A L S A A S I A E K  
D L P L H R A R V A R E E G T D A T L V A Y G S V V P T A L S A A S I A E K  
F L I P I G K S K I E R E E G K H V T L V S H S R Y V G H C L E A A N E L L A G  
Y T L P I G R A M V R R Q S G T D D V T V V S Y G S L V G T A V V A E E A Q R Q  
Y T L P F G Q A A V R R E E G S D D L T L V A G G V M V P R S L R A A E R L A A Q  
P Y T I P F G G Q A A F A R E E G S D A T L V A F G A M V P K A I A V A D K L A A K  
Y T I P G P A D I K R P E G E D M S V F A Y G L M V H Y C I E A A A Q T L L A A E D  
P Y E V E F G K A A L R R E E G N D L T I I S A G L M V H R S L K A A E M L L Q Q D  
Y L T E I G K A A I V K K E G T D I T A F S L Q V K L A L E A A E L L E K  
Y L T P I G K A S I V K E G T D V T I V T F G K M S R V V M P A V A E L T K  
Y L T P I G K A R I D I P G K D L T I V S H S H T V K I C R E A V R E L A K  
E I G R A K V T R E E G T D I T L I G Y S R M A M V A G Q V A E Q L L A E A  
F V L P I G K C K I E R E G D H I L V S F S K G M V E L S L E A A K E L L E A  
Y T L P L G R A R V V R E E G K H A T L I G Y G G M V E V M L E A A E V A A R  
P L G L A R V V R E E G T D V T V V I T Y G A Q V T T A M D A A L A A E D  
Y I P I L G K A R T V I Q K G N D L T L I A H S R M T G Y A L A A A E E L A K  
Y L V P I G K A R I H R A G K H V S V I A H S K A V E Q A L Q A A N E L L A G  
Y T V E I G K A K I H R A G K H V S V I A H S K A V E Q A L Q A A N E L L A G  
F L L P L D R A R I V R P G R D L T L F A Y G P M V K T C L E A A A A A E E  
L D K A V I R R E E G T D V T L I S Y G G A L G T T L E A A A E A A A E  
Y T I P L G K A K V K R E E G K D L T I I S W S R E V N F S L E A A E T L A Q  
Y T V P I G K S N V L R E E G D D I T V I S Y S L P L H F A L I Q A A E E L L A A  
Y T V P I G E A N M L R E E G S D I T V I G Y S M P L H F C L Q A A E E L L E A  
Y T V P I G K A A V T R E E G S D I T L I G Y S R M A Y V A S K V A E E Q L L A E S  
P Y V T P L G Q A A V V R P G T D C T I V A L G R M V Q V A Q E A A A E L L A G  
Y T V P L D S A K V V R E E G T D V T V V A Y S A E V N E A L K V A D K L L A E K  
Y T V P L D T C F V V A R E E G D D V T V V S W G A M L Q E V Q E A A D E L L A A D  
Y T V E I G K A N V V R E E G S D L S I V A I G K M V A V A L E T A D Q L L A E S  
Y T L P L G K A N S L K E E G K D V T I I S F G A G V H W A L E T A D Q L L A E S  
Y V T E I L G K A N V M K E E G D D I T I V S Y S R M A V A L D V A R R L E E Q D  
H V V E L G K A A I T R E E G S D I T L V A H S F A T R A L R V A E K L L K R D  
L E M T E A D V A R E E G T D V T L L A W G P T V S V C Q E A A D K A A E N  
Y E V P L T G K A S I A R P G T D V T L V T L S L S V H H A L D V A E K L A V  
P L Y K A K V V R E E G T D A T L F C Y G P M V K T A L Q A A E A A V I E D  
F T V P I G K A E I K R Q G T D T V I A Y G I A V N Y A L Q A A E E L L A R  
Y T V K I G E G A I R R E E G T D L T L V A Y G G V M P D A E R A A A L A A  
Y E I P L Y E A E V R E E G S D I T L V A T Q I M L D K A H K A A D I M A K  
L L D R T C F T L R A E G R D L T V V S W G A S L H A E T L Q A A D R L A E R  
P P E L P L H R A R V C R A E G T D A T L V A Y G G T V A P A L A A E I A A S E  
P F G T A E V R R E A D A T L L A Y G P T V P V A L E A A A A A V D D



		90	100	110	120
UniRef90_D8F8I0	F	V	M	H	S
UniRef90_G8TJA0	I	S	M	D	A
UniRef90_G4VF59	C	A	N	V	E
UniRef90_K0AA15	G	A	N	D	H
UniRef90_F2I6N2	A	I	S	T	D
UniRef90_A0A024G3X5	H	A	S	T	L
UniRef90_A3LYM2	F	A	M	E	F
UniRef90_B9ZYV6	G	A	C	N	F
UniRef90_L8GIL6	C	I	L	A	E
UniRef90_M1YY87	L	V	S	I	G
UniRef90_B2J576	A	I	S	I	L
UniRef90_S5UU51	L	A	R	I	E
UniRef90_R7Q9G6	F	A	A	F	E
UniRef90_T1JQ99	C	A	R	I	E
UniRef90_F1Z9S7	G	A	A	R	I
UniRef90_I8A8S8	F	L	A	L	A
UniRef90_F8L7F5	T	G	F	I	H
UniRef90_W9GAG3	F	V	J	A	V
UniRef90_B5Y8U0	Y	L	T	G	E
UniRef90_A9HHP7	C	N	M	A	S
UniRef90_U4LX25	F	S	G	V	A
UniRef90_N6UPZ6	S	S	V	G	T
UniRef90_UPI000409F355	G	G	T	G	A
UniRef90_F8PP79	F	C	A	Q	I
UniRef90_L8FZS4	A	G	V	I	G
UniRef90_C1C2R8	S	C	A	R	M
UniRef90_J8VXT0	C	G	I	A	S
UniRef90_C4PQR8	C	G	I	S	S
UniRef90_W0RGK7	S	G	V	G	A
UniRef90_S2JPY8	F	G	V	G	S
UniRef90_G8RHC3	L	G	F	G	A
UniRef90_UPI000413698C	G	L	G	D	T
UniRef90_G7UWT8	A	G	F	G	A
UniRef90_A0LY35	A	G	N	I	S
UniRef90_V6QA82	N	N	T	A	T
UniRef90_UPI00037363E4	A	G	M	A	A
UniRef90_UPI00035EB101	A	G	F	G	G
UniRef90_UPI0003B45811	M	G	V	G	A
UniRef90_D8RRS3	G	G	F	G	A
UniRef90_C6A4Z4	C	S	F	A	T
UniRef90_UPI00035E665C	S	G	F	G	G
UniRef90_W9YCH5	F	G	V	S	S
UniRef90_L8MAT7	G	G	I	G	A
UniRef90_U1WQF2	G	L	G	A	A
UniRef90_R5SI31	C	G	F	G	A
UniRef90_UPI0003B3BF1F	A	G	F	G	A
UniRef90_A5I2A1	A	G	Y	S	G
UniRef90_T1ELLO	F	G	V	G	A
UniRef90_A8TJR4	G	G	F	G	A
UniRef90_UPI000474E888	G	G	V	A	S
UniRef90_D8LXY9	C	G	V	G	A
UniRef90_Q0SGE6	L	G	L	G	A
UniRef90_K1Q329	C	G	L	G	A
UniRef90_H8IP13	L	G	F	G	A
UniRef90_V2XMW5	A	G	V	G	A
UniRef90_D1C9P0	Y	G	M	T	G
UniRef90_B8KSP8	C	S	L	A	A
UniRef90_A9WCB8	G	G	F	G	G
UniRef90_C3MM02	Y	G	M	T	G
UniRef90_V9R5E2	S	G	I	G	S
UniRef90_UPI00040B0D69	A	A	L	S	S
UniRef90_F8L127	A	G	I	S	A
UniRef90_UPI000345324B	Y	G	I	G	A
UniRef90_A0A016SNS5	A	A	G	V	G
UniRef90_E8PRD8	G	G	F	G	A
UniRef90_A0A031FY80	A	G	V	A	A
UniRef90_UPI000363F5DD	A	G	I	G	A
UniRef90_F4DIV1	S	G	I	S	S
UniRef90_UPI00037B5EC6	G	G	I	A	G
UniRef90_H9KJL4	C	G	L	G	A
UniRef90_W2EXG4	T	G	F	G	A
UniRef90_D9VF09	C	G	Y	G	A
UniRef90_R5SI36	G	S	Y	A	G
UniRef90_UPI00038F845F	G	G	I	G	A
UniRef90_W7YDGO	G	G	V	G	A
UniRef90_UPI0003B5BC9F	Y	G	I	G	A
UniRef90_UPI00035F591F	C	G	A	A	S
UniRef90_UPI0002490A64	A	G	V	G	A
UniRef90_UPI0003734761	C	G	V	G	A
UniRef90_U5UUKL7	C	N	V	A	G
UniRef90_V6SE27	G	G	I	A	S
UniRef90_A0LSF2	Y	G	V	G	A
UniRef90_D3FEC9	Y	G	V	S	A
UniRef90_W2BPN7	Y	F	P	G	A
UniRef90_C7MWP4	F	G	L	S	G
UniRef90_UPI00036B5608	L	G	P	G	S
UniRef90_UPI0003675615	G	G	V	G	A
UniRef90_UPI000365C308	S	N	F	M	G
UniRef90_R5F2B2	S	G	W	G	A
UniRef90_UPI0003650677	C	G	V	G	A
UniRef90_Q5Z124	G	L	G	L	G
UniRef90_UPI00047CD8F7	A	S	V	S	A

UniRef90\_D8F8I0  
UniRef90\_G8TJA0  
UniRef90\_G4VF59  
UniRef90\_K0AA15  
UniRef90\_F2I6N2  
UniRef90\_A0A024G3X5  
UniRef90\_A3LYM2  
UniRef90\_B9ZYV6  
UniRef90\_L8GIL6  
UniRef90\_M1YY87  
UniRef90\_B2J576  
UniRef90\_S5UU51  
UniRef90\_R7Q9G6  
UniRef90\_T1JQ99  
UniRef90\_F1Z9S7  
UniRef90\_I8A8S8  
UniRef90\_F8L7F5  
UniRef90\_W9GAG3  
UniRef90\_B5Y8U0  
UniRef90\_A9HHP7  
UniRef90\_U4LX25  
UniRef90\_N6UPZ6  
UniRef90\_UPI000409F355  
UniRef90\_F8PP79  
UniRef90\_L8FZS4  
UniRef90\_C1C2R8  
UniRef90\_J8VXT0  
UniRef90\_C4PQR8  
UniRef90\_W0RGK7  
UniRef90\_S2JPY8  
UniRef90\_G8RHC3  
UniRef90\_UPI000413698C  
UniRef90\_G7UWT8  
UniRef90\_A0LY35  
UniRef90\_V6QA82  
UniRef90\_UPI00037363E4  
UniRef90\_UPI00035EB101  
UniRef90\_UPI0003B45811  
UniRef90\_D8RRS3  
UniRef90\_C6A4Z4  
UniRef90\_UPI00035E665C  
UniRef90\_W9YCH5  
UniRef90\_L8MAT7  
UniRef90\_U1WQF2  
UniRef90\_R5SI31  
UniRef90\_UPI0003B3BF1F  
UniRef90\_A5I2A1  
UniRef90\_T1ELL0  
UniRef90\_A8TJR4  
UniRef90\_UPI000474E888  
UniRef90\_D8LXY9  
UniRef90\_Q0SGE6  
UniRef90\_K1Q329  
UniRef90\_H8IP13  
UniRef90\_V2XMW5  
UniRef90\_D1C9P0  
UniRef90\_B8KSP8  
UniRef90\_A9WCB8  
UniRef90\_C3MMO2  
UniRef90\_V9R5E2  
UniRef90\_UPI00040B0D69  
UniRef90\_F8L127  
UniRef90\_UPI000345324B  
UniRef90\_A0A016SNS5  
UniRef90\_E8PRD8  
UniRef90\_A0A031FY80  
UniRef90\_UPI000363F5DD  
UniRef90\_F4DIV1  
UniRef90\_UPI00037B5EC6  
UniRef90\_H9KJL4  
UniRef90\_W2EXG4  
UniRef90\_D9VF09  
UniRef90\_R5SI36  
UniRef90\_UPI00038F845F  
UniRef90\_W7YDGO  
UniRef90\_UPI0003B5BC9F  
UniRef90\_UPI00035F591F  
UniRef90\_UPI0002490A64  
UniRef90\_UPI0003734761  
UniRef90\_U5UKL7  
UniRef90\_V6SE27  
UniRef90\_A0LSF2  
UniRef90\_D3FEC9  
UniRef90\_W2BPN7  
UniRef90\_C7MWP4  
UniRef90\_UPI00036B5608  
UniRef90\_UPI0003675615  
UniRef90\_UPI000365C308  
UniRef90\_R5F2B2  
UniRef90\_UPI0003650677  
UniRef90\_Q5Z124  
UniRef90\_UPI00047CD8F7

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



UniRef90\_U1HU73  
UniRef90\_W0RYK3  
UniRef90\_UPI0003B5E5EA  
UniRef90\_W5N6J4  
UniRef90\_M9RHE5  
UniRef90\_Q8ZUR7  
UniRef90\_T1VTS3  
UniRef90\_B8EJC0  
UniRef90\_UPI0003813DFB  
UniRef90\_G0L6M9  
UniRef90\_UPI00047CF532  
UniRef90\_UPI0001850B93  
UniRef90\_A0A037UQY8  
UniRef90\_D5XCS0  
UniRef90\_UPI00042A2C43  
UniRef90\_F8I2W2  
UniRef90\_J2DDB2  
UniRef90\_V7EQI4  
UniRef90\_G8R585  
UniRef90\_F0VX22  
UniRef90\_H2ILU2  
UniRef90\_A2RHE3  
UniRef90\_UPI00047DD461  
UniRef90\_E4MZ88  
UniRef90\_G8AWU3  
UniRef90\_F4GM25  
UniRef90\_K6WZ09  
UniRef90\_UPI0003639126  
UniRef90\_U1X353  
UniRef90\_A0A024JKW5  
UniRef90\_UPI00047D335C  
UniRef90\_UPI0001E2EC1E  
UniRef90\_E1IEZ4  
UniRef90\_A5GEF1  
UniRef90\_UPI0002D389E0  
UniRef90\_B8KTY9  
UniRef90\_UPI00037057DA  
UniRef90\_UPI0003662223  
UniRef90\_UPI00036834FE  
UniRef90\_J5EC79  
UniRef90\_G9ADN9  
UniRef90\_T1XLG1  
UniRef90\_A5V418  
UniRef90\_UPI0002F3CDAB  
UniRef90\_L7TWWJ9  
UniRef90\_U5KMU7  
UniRef90\_G2J5D0  
UniRef90\_M7N7I2  
UniRef90\_Q52015  
UniRef90\_W8WY64  
UniRef90\_UPI00047C1CDE  
UniRef90\_UPI00037ACE9D  
UniRef90\_W6TG98  
UniRef90\_U2A7P1  
UniRef90\_D4GSZ8  
UniRef90\_UPI0003FB5F06  
UniRef90\_W9ASU0  
UniRef90\_R9KMM4  
UniRef90\_W5WNB2  
UniRef90\_UPI0003707DEC  
UniRef90\_F7BBJ9  
UniRef90\_E4RKW3  
UniRef90\_J9DVV5  
UniRef90\_Q0JZ08  
UniRef90\_B1QT32  
UniRef90\_UPI0003780E17  
UniRef90\_U2CAS2  
UniRef90\_D4HAT9  
UniRef90\_U1LNZ0  
UniRef90\_UPI000477C420  
UniRef90\_I3YYV1  
UniRef90\_F0T287  
UniRef90\_L2GXW1  
UniRef90\_E8TQA2  
UniRef90\_F4H581  
UniRef90\_H6LD70  
UniRef90\_I4B441  
UniRef90\_S6FJ33  
UniRef90\_A8ZXH9  
UniRef90\_E1VUG4  
UniRef90\_D5HAP8  
UniRef90\_I4AQ50  
UniRef90\_R5ZPB9  
UniRef90\_E0TKV6  
UniRef90\_U1YY67  
UniRef90\_M5E9V6  
UniRef90\_R7IRY8  
UniRef90\_UPI00036CEB45  
UniRef90\_F1LGK0  
UniRef90\_W0JPR4  
UniRef90\_UPI0002D693B7  
UniRef90\_S7W0X8

UniRef90_U1HU73	K	G	V	N	L	E	L	I	D	L	R	S	L	Y	P	W	R	E	T	I	R	I	A	S	A	E	K	T	G	R	V	V	V	H	E	S	M	T	N									
UniRef90_W0RYK3	G	Y	D	P	E	V	I	D	L	R	S	L	K	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	H	K	R	L	V	V	V	H	E	C	M	K	T							
UniRef90_UPI0003B5E5EA	G	I	S	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	V	P	T	D						
UniRef90_W5N6J4	E	G	I	S	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	G	A	V	Q	S					
UniRef90_M9RHE5	G	I	S	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	G	G	H	Q	S	T					
UniRef90_Q8ZUR7	V	K	A	S	V	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	D	D	S	A	K	R				
UniRef90_T1VTS3	G	I	S	V	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	D	S	A	R	R					
UniRef90_B8EJC0	E	G	V	D	V	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	H	P	R	D					
UniRef90_UPI0003813DFB	E	A	G	I	S	A	D	L	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	V	R	D					
UniRef90_G0L6M9	E	A	G	I	S	E	L	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	A	S	L	R	F		
UniRef90_UPI00047CF532	E	A	G	I	E	L	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	A	R	T					
UniRef90_UPI0001850B93	Q	F	I	N	V	D	L	I	D	A	R	T	I	Y	Q	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	H	V	R	S					
UniRef90_UPI00047UQY8	F	E	G	I	N	I	K	V	I	N	M	H	I	K	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	H	S	V	I						
UniRef90_D5XCS0	E	E	G	M	S	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	A	R	T					
UniRef90_UPI00042A2C43	E	E	G	I	S	V	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	A	R	T					
UniRef90_F8I2W2	E	G	I	S	D	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	N	L	T				
UniRef90_J2DDB2	E	G	I	S	D	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	G	W	P	T				
UniRef90_V7EQI4	E	P	E	I	S	A	D	L	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	N	R	R				
UniRef90_G8R585	D	G	I	S	A	D	L	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	V	M	F					
UniRef90_F0VX22	D	G	I	S	A	D	L	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	Y	K	T					
UniRef90_H2ILU2	E	G	I	K	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	Q	W	R	T				
UniRef90_A2RHE3	D	G	I	K	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	A	K	R					
UniRef90_UPI00047DD461	G	I	S	V	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	A	K	R					
UniRef90_E4MZ88	G	R	R	L	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	P	V	F					
UniRef90_G8AWU3	E	G	I	E	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	V	Q	A					
UniRef90_F4GM25	E	E	G	I	E	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	P	L	H				
UniRef90_K6WZ09	D	D	G	I	S	C	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	Q	G	F				
UniRef90_UPI0003639126	D	D	G	I	S	V	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	H	N	V	I			
UniRef90_U1X353	E	E	G	I	S	V	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	V	K	R				
UniRef90_A0A024JKW5	Y	E	N	V	E	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	G	F	P	A				
UniRef90_UPI00047D335C	E	D	L	S	L	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	A	Q	F					
UniRef90_UPI0001E2EC1E	Q	G	I	S	A	R	V	V	I	H	T	I	K	P	I	D	K	D	I	V	R	A	A	K	E	T	G	A	I	V	T	C	E	E	H	T	V	M										
UniRef90_E1IEZ4	E	G	I	S	V	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	D	W	Y	S			
UniRef90_A5GEF1	E	G	I	S	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	G	W	R	S				
UniRef90_UPI0002D389E0	E	E	G	I	D	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	V	K	T				
UniRef90_B8KTY9	K	G	I	S	T	A	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	T	P	M					
UniRef90_UPI00037057DA	D	D	G	I	E	C	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	H	P	F				
UniRef90_UPI0003662223	E	G	I	M	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	T	R	A	T				
UniRef90_UPI00036834FE	E	G	V	D	C	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	A	R	T					
UniRef90_J5EC79	D	G	I	S	V	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	V	E	Q				
UniRef90_G9ADN9	E	E	G	I	N	C	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	W	R	S				
UniRef90_T1XLG1	A	Q	G	M	P	C	D	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	S	P	R	N			
UniRef90_A5V418	A	Q	G	V	D	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	D	D	D	Y	P	R	N
UniRef90_UPI0002F3CDAB	Q	G	V	S	V	E	L	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	V	K	P					
UniRef90_L7TWWJ9	E	G	I	S	V	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	W	P	F				
UniRef90_U5KMU7	S	G	I	S	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	S	F	P	M				
UniRef90_G2J5D0	G	I	S	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	D	Y	L	H					
UniRef90_M7N7I2	E	G	F	Q	A	E	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	E	A	W	P	L					
UniRef90_Q52015	R	S	T	A	K	C	W	T	C	A	P	P	A	R	W	T	K	T	A	F	S	K	A	W	K	P	A	A	L	V	V	I	D	E	A	N	P	R										
UniRef90_W8WY64	G	I	D	A	D	I	L	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	A	T	R	T							
UniRef90_UPI00047C1CDE	E	G	I	N	A	R	V	I	D	L	R	S	L	R	S	P	W	D	R	E	T	I	R	I	A	S	A	E	K	T	S	R	L	V	V	V	H	E	S	I	L							
UniRef90_UPI00037ACE9D	D	G	I	S	V	E	V	V	I	D	L	R	S	L	R	S	P	W	D	R</																												

UniRef90\_U1HU73  
UniRef90\_W0RYK3  
UniRef90\_UPI0003B5E5EA  
UniRef90\_W5N6J4  
UniRef90\_M9RHE5  
UniRef90\_Q8ZUR7  
UniRef90\_T1VTS3  
UniRef90\_B8EJC0  
UniRef90\_UPI0003813DFB  
UniRef90\_G0L6M9  
UniRef90\_UPI00047CF532  
UniRef90\_UPI0001850B93  
UniRef90\_A0A037UQY8  
UniRef90\_D5XCS0  
UniRef90\_UPI00042A2C43  
UniRef90\_F8I2W2  
UniRef90\_J2DDB2  
UniRef90\_V7EQI4  
UniRef90\_G8R585  
UniRef90\_F0VX22  
UniRef90\_H2ILU2  
UniRef90\_A2RHJ3  
UniRef90\_UPI00047DD461  
UniRef90\_E4MZ88  
UniRef90\_G8AWU3  
UniRef90\_F4GM25  
UniRef90\_K6WZ09  
UniRef90\_UPI0003639126  
UniRef90\_U1X353  
UniRef90\_A0A024JKW5  
UniRef90\_UPI00047D335C  
UniRef90\_UPI0001E2EC1E  
UniRef90\_E1IEZ4  
UniRef90\_A5GEF1  
UniRef90\_UPI0002D389E0  
UniRef90\_B8KTY9  
UniRef90\_UPI00037057DA  
UniRef90\_UPI0003662223  
UniRef90\_UPI00036834FE  
UniRef90\_J5EC79  
UniRef90\_G9ADN9  
UniRef90\_T1XLG1  
UniRef90\_A5V418  
UniRef90\_UPI0002F3CDAB  
UniRef90\_L7TWJ9  
UniRef90\_U5KMU7  
UniRef90\_G2J5D0  
UniRef90\_M7N7I2  
UniRef90\_Q52015  
UniRef90\_W8WY64  
UniRef90\_UPI00047C1CDE  
UniRef90\_UPI00037ACE9D  
UniRef90\_W6TG98  
UniRef90\_U2A7P1  
UniRef90\_D4GSZ8  
UniRef90\_UPI0003FB5F06  
UniRef90\_W9ASU0  
UniRef90\_R9KMM4  
UniRef90\_W5WNB2  
UniRef90\_UPI0003707DEC  
UniRef90\_F7BBJ9  
UniRef90\_E4RKW3  
UniRef90\_J9DVV5  
UniRef90\_Q0JZ08  
UniRef90\_B1QT32  
UniRef90\_UPI0003780E17  
UniRef90\_U2CAS2  
UniRef90\_D4HAT9  
UniRef90\_U1LNZ0  
UniRef90\_UPI000477C420  
UniRef90\_I3YYV1  
UniRef90\_F0T287  
UniRef90\_L2GXW1  
UniRef90\_E8TQA2  
UniRef90\_F4H581  
UniRef90\_H6LD70  
UniRef90\_I4B441  
UniRef90\_S6FJ33  
UniRef90\_A8ZXH9  
UniRef90\_E1VUG4  
UniRef90\_D5HAP8  
UniRef90\_I4AQ50  
UniRef90\_R5ZPB9  
UniRef90\_E0TKV6  
UniRef90\_U1YY67  
UniRef90\_M5E9V6  
UniRef90\_R7IRY8  
UniRef90\_UPI00036CEB45  
UniRef90\_F1LGK0  
UniRef90\_W0JPR4  
UniRef90\_UPI0002D693B7  
UniRef90\_S7W0X8

UniRef90\_U1HU73 N M P D L A R I Y D A I K R T L N Y  
UniRef90\_W0RYK3 T T I H P E Q I V S A V K S M L  
UniRef90\_UPI0003B5E5EA W L P Q H D D I E R A I R S T L E  
UniRef90\_W5N6J4 S V P Q I K D I I F A V K K T L N  
UniRef90\_M9RHE5 T V P T P E G V A A N A R K L M A  
UniRef90\_Q8ZUR7 Y A P T V E R I I K A I E Y V M R Y  
UniRef90\_T1VTS3 W L P D V A R I E E S V R K L V  
UniRef90\_B8EJC0 Y I P S A E T I A G A V K K T I  
UniRef90\_UPI0003813DFB W L P S R D T L A D T V R R I  
UniRef90\_G0L6M9 Y L P K S R F E K A L Q R E L L A Y  
UniRef90\_UPI00047CF532 H L P D L D R I L D G V D Q A M N  
UniRef90\_UPI0001850B93 Y L P T V E R V V E A I K K C Q E Y  
UniRef90\_A0A037UQY8 H Q P S V Q K I V V K I K E L V N Y  
UniRef90\_D5XCS0 Y G L T A K D I A A A V K R T I A  
UniRef90\_UPI00042A2C43 Y M P S V E R I A A A A R K V C A Y  
UniRef90\_F8I2W2 F M V T P D K L R D A A K K L A A F  
UniRef90\_J2DDB2 A L I D  
UniRef90\_V7EQI4 S V P Q K E D V V A A V K R V L H  
UniRef90\_G8R585 F L P K K R F A E A V E E L L R F  
UniRef90\_F0VX22 I L P D V A K I K A A I Y K M  
UniRef90\_H2ILU2 A L P K V E K I V S A A K A T L  
UniRef90\_A2RHE3 W A V K A E D I V N K V K E V V D Y  
UniRef90\_UPI00047DD461 V I P Q P A Q I A E T L R K V  
UniRef90\_E4MZ88 Y L P D L D R V L D A V D R A L A F  
UniRef90\_G8AWU3 Y L P D A D R I V A A V K S T L A  
UniRef90\_F4GM25 I I P S V E K I V E K A R S M V E W  
UniRef90\_K6WZ09 Y L P G V D R V L D A I D R L  
UniRef90\_UPI0003639126 Y K I D T D G I V E K V R E L L G  
UniRef90\_U1X353 A V P Q V E D I I Q A C K T I M N  
UniRef90\_A0A024JKW5 A F P T P D T V V T A A K T A L  
UniRef90\_UPI00047D335C F L P T A E R V L A A M D R  
UniRef90\_UPI0001E2EC1E Y G L T A E N I V N K A K E A I A  
UniRef90\_E1IEZ4 A K P S A H S L I H A I R S I V  
UniRef90\_A5GEF1 A I P Q A E T I V A T V K R M V  
UniRef90\_UPI0002D389E0 A V P Q E D D I L T A A R R L  
UniRef90\_B8KTY9 Y A P T A A R I S A A I E S V Y A Y  
UniRef90\_UPI00037057DA W Y P S T K Q V I D A T V N Q V  
UniRef90\_UPI0003662223 Y M P S V E R I V A A V R K T L E  
UniRef90\_UPI00036834FE Y L P S V A R I A D A V R K T M E  
UniRef90\_J5EC79 F M Y S D D R I E T A I R K A V  
UniRef90\_G9ADN9 A L P Q P Q S I A A A V R K A M  
UniRef90\_T1XLG1 Y V P G P A Q I E A A V R A L L E  
UniRef90\_A5V418 A L P N A D R I V D E A L N L V  
UniRef90\_UPI0002F3CDAB F V P G L K E I E A A I R A T L A  
UniRef90\_L7TWW9 W F P K L E K V K E E L K K A L  
UniRef90\_U5KMU7 S Q P Q V A D V L A V A R R A L A  
UniRef90\_G2J5D0 V I P Q V D G L V A A V K A Q L A  
UniRef90\_M7N7I2 V L P N L Q R S L D A A K R V L  
UniRef90\_Q52015 Y I P D A A K I E A A V R K V I E  
UniRef90\_W8WY64 Y F P G P K R V A E A F K R V  
UniRef90\_UPI00047C1CDE Y G L T S N N I V N K V K E V I K  
UniRef90\_UPI00037ACE9D A L P D A T A L V R V I H E T L D  
UniRef90\_W6TG98 C F P H A Q D V V D V V K  
UniRef90\_U2A7P1 Y I P N I D R I L Y G I Q R V L E Y  
UniRef90\_D4GSZ8 V L P S G S D V E A A I N R I V  
UniRef90\_UPI0003FB5F06 Y L P K V R F E K Q L L A L I S Y  
UniRef90\_W9ASU0 S V P Q V D D T I T A A R E L V  
UniRef90\_R9KMM4 Y G L D A Q G I Y E K V K N F V K  
UniRef90\_W5WNB2 Y L P D L D R V L D A V D R S L A W  
UniRef90\_UPI0003707DEC Y L P K N R F E A E L K A L L A F  
UniRef90\_F7BBJ9 A L P G V K D I V L S V K K T L H  
UniRef90\_E4RKW3 F I P S E E K I I K G V L D I L D  
UniRef90\_J9DVVW5 Y L P S P G K I A D A V E R T L A W  
UniRef90\_Q0JZ08 Y L P G V A R I V D A A R K A M A  
UniRef90\_B1QT32 Y K L T S D E I I L K V K E M V  
UniRef90\_UPI0003780E17 F L P N L D R V L D A V D R S L A Y  
UniRef90\_U2CAS2 Y G L D A D G I Y S K V K E F V K  
UniRef90\_D4HAT9 H I P D V D R I L D A V D R S L A F  
UniRef90\_U1LNZO Y L P D A D R V L A A V D R A L A H  
UniRef90\_UPI000477C420 Y L P Q A D D I V R A A I R T L A  
UniRef90\_I3YYV1 Y L P K E K F K E I L L N L L S Y  
UniRef90\_F0T287 Y N L T K E A I I K A V K E V  
UniRef90\_L2GXW1 S L P S V E D V F K R V R D M M K  
UniRef90\_E8TQA2 Y V V T A E R V I D A V R K T L A  
UniRef90\_F4H581 F L P D L D R V L D A V D R V L G  
UniRef90\_H6LD70 C T P K K E D I A A A V R K T  
UniRef90\_I4B441 V L P N V D R I I A A K E V V  
UniRef90\_S6FJ33 Y G L T T K E I V E K A K K A L N  
UniRef90\_A8ZXH9 Y K L D A D G V L E T V R E V M N  
UniRef90\_E1VUG4 V L P T P A R I K E A V L K Q V G  
UniRef90\_D5HAP8 I F S A T A R L R P K V E D L L A F  
UniRef90\_I4AQ50 F L P Y N R F V E K L T K L I Q Y  
UniRef90\_R5ZPB9 Y G L D A A N I V A T T K E F L A  
UniRef90\_E0TKV6 H A I N D K K I L N K I K E V M S F  
UniRef90\_U1YY67 Y L P D L D R I L D G V D R V L G  
UniRef90\_M5E9V6 S F P T P E L V Q K V A K R A L  
UniRef90\_R7IRY8 Y G L D A E G I Y T K V K A F V  
UniRef90\_UPI00036CEB45 C V P Q K E D I V K K V I K M L H H  
UniRef90\_F1LGK0 A Q P S S S D V V K M V K K S M N  
UniRef90\_W0JPR4 V I P A V S D I E D A V K S V  
UniRef90\_UPI0002D693B7 V V P Q T T E V I E T L R K V  
UniRef90\_S7W0X8 A V P Q V E D L V A A T E L V

UniRef90\_A0A011Q0H3  
UniRef90\_L9VMW0  
UniRef90\_UPI0003714AC0  
UniRef90\_F4LWT3  
UniRef90\_A8LNX3  
UniRef90\_UPI00047D13C6  
UniRef90\_UPI000372CA7F  
UniRef90\_S7U5Z5  
UniRef90\_Q020J5  
UniRef90\_G3X2Y2  
UniRef90\_A0A024YQY6  
UniRef90\_B1CAK3  
UniRef90\_Q3AKD7  
UniRef90\_UPI000468BDE6  
UniRef90\_D3D6K9  
UniRef90\_UPI00047DE6B2  
UniRef90\_UPI0001744A21  
UniRef90\_C7PJW5  
UniRef90\_G2PLB3  
UniRef90\_L7U9L3  
UniRef90\_MOCKV6  
UniRef90\_UPI000475CA55  
UniRef90\_G4ENI5  
UniRef90\_C9R9G4  
UniRef90\_D4YLH3  
UniRef90\_M0NB44  
UniRef90\_R4UZH8  
UniRef90\_UPI00036C2024  
UniRef90\_UPI00040AB868  
UniRef90\_F0XFX5  
UniRef90\_UPI0003765F58  
UniRef90\_B8D2I3  
UniRef90\_UPI00034872B4  
UniRef90\_J7LRV0  
UniRef90\_M1ZL97  
UniRef90\_M7MVZ5  
UniRef90\_L7W5A8  
UniRef90\_D6TBK8  
UniRef90\_H0QT44  
UniRef90\_G2J4S8  
UniRef90\_D8J6H7  
UniRef90\_H8IN08  
UniRef90\_S6HJU6  
UniRef90\_C9NS84  
UniRef90\_A3U0V1  
UniRef90\_W0K3P0  
UniRef90\_F4CWK5  
UniRef90\_UPI000248DB15  
UniRef90\_W4WMM99  
UniRef90\_B0TEJ5  
UniRef90\_UPI00045E8C6C  
UniRef90\_S7XMD2  
UniRef90\_L9WLB4  
UniRef90\_UPI0004705411  
UniRef90\_K0P8P2  
UniRef90\_D3F7R8  
UniRef90\_V6AUM6  
UniRef90\_K2CKM2  
UniRef90\_R7JX88  
UniRef90\_DOMIR5  
UniRef90\_H5UW25  
UniRef90\_R5KK05  
UniRef90\_L7ERJ1  
UniRef90\_UPI000376A04E  
UniRef90\_A0A022L123  
UniRef90\_W7INY3  
UniRef90\_UPI00036E10FE  
UniRef90\_L7VM17  
UniRef90\_R5GYV1  
UniRef90\_I3CA71  
UniRef90\_F5TBM7  
UniRef90\_G4HZM3  
UniRef90\_UPI000255C872  
UniRef90\_X1NEV4  
UniRef90\_N2AJE0  
UniRef90\_C8XD86  
UniRef90\_D3FUU1  
UniRef90\_A1T0M0  
UniRef90\_K6D3M2  
UniRef90\_E1VZL3  
UniRef90\_C0W4K7  
UniRef90\_C7GYZ2  
UniRef90\_I5ASS9  
UniRef90\_W9G1Q2  
UniRef90\_W4EZV3  
UniRef90\_A1HT03  
UniRef90\_UPI00047A5C43  
UniRef90\_L8JTV3  
UniRef90\_Q0PII0  
UniRef90\_UPI00026CBCD9  
UniRef90\_UPI000477362A  
UniRef90\_J1H9L8

UniRef90\_A0A011Q0H3  
UniRef90\_L9VMW0  
UniRef90\_UPI0003714AC0  
UniRef90\_F4LWT3  
UniRef90\_A8LNX3  
UniRef90\_UPI00047D13C6  
UniRef90\_UPI000372CA7F  
UniRef90\_S7U5Z5  
UniRef90\_Q020J5  
UniRef90\_G3X2Y2  
UniRef90\_A0A024YQY6  
UniRef90\_B1CAK3  
UniRef90\_Q3AKD7  
UniRef90\_UPI000468BDE6  
UniRef90\_D3D6K9  
UniRef90\_UPI00047DE6B2  
UniRef90\_UPI0001744A21  
UniRef90\_C7P7JW5  
UniRef90\_G2PLB3  
UniRef90\_L7U9L3  
UniRef90\_MOCKV6  
UniRef90\_UPI000475CA55  
UniRef90\_G4ENI5  
UniRef90\_C9R9G4  
UniRef90\_D4YLH3  
UniRef90\_M0NB44  
UniRef90\_R4UZH8  
UniRef90\_UPI00036C2024  
UniRef90\_UPI00040AB868  
UniRef90\_F0XFX5  
UniRef90\_UPI0003765F58  
UniRef90\_B8D2I3  
UniRef90\_UPI00034872B4  
UniRef90\_J7LRV0  
UniRef90\_M1ZL97  
UniRef90\_M7MVZ5  
UniRef90\_L7W5A8  
UniRef90\_D6TBK8  
UniRef90\_HOQT44  
UniRef90\_G2J4S8  
UniRef90\_D8J6H7  
UniRef90\_H8IN08  
UniRef90\_S6HJU6  
UniRef90\_C9NS84  
UniRef90\_A3U0V1  
UniRef90\_W0K3P0  
UniRef90\_F4CWK5  
UniRef90\_UPI000248DB15  
UniRef90\_W4WM99  
UniRef90\_B0TEJ5  
UniRef90\_UPI00045E8C6C  
UniRef90\_S7XMD2  
UniRef90\_L9WLB4  
UniRef90\_UPI0004705411  
UniRef90\_K0P8P2  
UniRef90\_D3F7R8  
UniRef90\_V6AUM6  
UniRef90\_K2CKF2  
UniRef90\_R7JX88  
UniRef90\_DOMIR5  
UniRef90\_H5UW25  
UniRef90\_R5KK05  
UniRef90\_L7ERJ1  
UniRef90\_UPI000376A04E  
UniRef90\_A0A022L123  
UniRef90\_W7INY3  
UniRef90\_UPI00036E10FE  
UniRef90\_L7VM17  
UniRef90\_R5GYV1  
UniRef90\_I3CA71  
UniRef90\_F5TBM7  
UniRef90\_G4HZM3  
UniRef90\_UPI000255C872  
UniRef90\_X1NEV4  
UniRef90\_N2AJE0  
UniRef90\_C8XD86  
UniRef90\_D3FUU1  
UniRef90\_A1T0M0  
UniRef90\_K6D3M2  
UniRef90\_E1VZL3  
UniRef90\_C0W4K7  
UniRef90\_C7GYZ2  
UniRef90\_I5ASS9  
UniRef90\_W9G1Q2  
UniRef90\_W4EZW3  
UniRef90\_A1HT03  
UniRef90\_UPI00047A5C43  
UniRef90\_L8JTV3  
UniRef90\_Q0PII0  
UniRef90\_UPI00026CBCD9  
UniRef90\_UPI000477362A  
UniRef90\_J1H9L8

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

UniRef90\_A0A011Q0H3 G G I V G A E I S A W I N E H C F Q Y L 100 D A P V M R V V A S L D T A I I P F A L E Q N E S  
UniRef90\_L9VMW0 F G V T G E I V A S V V E A E D G G L A D L A V V E R V V A G V P D V P I P Y A A L M E N S  
UniRef90\_UPI0003714AC0 A G L P G A E I T A T V Q R E L F G T L L A P I K R I A G A R K F V P A P E L L K L  
UniRef90\_F4LWT3 G G L G S A V A E I V A E V A E K L F G T K P T P I K R I A G A R K F V P A P E L L K L  
UniRef90\_A8LNX3 C G V L G A E I S A R L A T E E C F D F L E E P V V R V A G G E D T P I P F A L L E Q N  
UniRef90\_UPI00047D13C6 G G I G G A E I A A W I A E N K A F F D Y L D A P V M R L E G G L E D T A P P F F A L E E K R R  
UniRef90\_UPI000372CA7F G G A F G A E I A A L A E N K A F F D D L D A P V M R L E G G L E D T A P P F F A L E E K R R  
UniRef90\_S7U5Z5 G S L A A E I S A R I M E G A F Y D L D A P V E R R L C S A E V P L P Y A L E E A A  
UniRef90\_Q020J5 W G Y G A E I C A R I A D E L F F D K L D A P V R R R L G A L D T W L G Y Q L E E A A N  
UniRef90\_G3X2Y2 F G V G A E I C A R I A D E P T F F N F A P A V R R V L G A N V P M P Y A L E E A A N  
UniRef90\_A0A024YQY6 G G P G A E I A A R V T E R C F H H L E A P V L R V V T G F D I P Y P P M L E E K H  
UniRef90\_B1CAK3 G G L G S V L S Q A L S E E C P V L D A R P V R L A S V Q D D T F T P D A L L A K  
UniRef90\_Q3AKD7 G G I G A E I J A L I T E Q C F D D L D A R P V R L A S V Q D D T F T P D A L L A K  
UniRef90\_UPI000468BDE6 G S V M N N V S A L I A E E V L F D L D A P I K I L L A G P D S P M P Y A L E E N D A  
UniRef90\_D3D6K9 G G F G A E I V A T I S D G A F Y S L L E A P V A R R V C P P D S P M P Y A G I L E E D Y  
UniRef90\_UPI00047DE6B2 G G W G A E V V S V A E G G F E L D A P I R R R L G A G A N V P L P P A G I L E E E Q  
UniRef90\_UPI0001744A21 C A V S S Q I A A S I S L H C F F D L D A P V Q R R L A G S L D A P Y S P P I E E K L  
UniRef90\_C7P JW5 G G V G S E I S A W I A E H C F F S L L D A P V M R C A G S L E D T P V P F A L E E K N  
UniRef90\_G2PLB3 G G I A S E I S A L V M E N G F F L D A P V K R V L A G S L E T P V P F A L E E T N  
UniRef90\_L7U9L3 C G V A S E I A A L V A E R A M F D L K A P I Q R R V T G F D V P H P Y S I L E E H H  
UniRef90\_MOCKV6 Y G T H A E I A T R V Q E E A F F S L D A P I Q R R V T G T P D T H M P F S L E E Q E  
UniRef90\_UPI000475CA55 G V Y G A E I A A R L T E Q C F H Y L E A P V L R V V T G G L D V P Y P P K L E E H  
UniRef90\_G4ENI5 H S V S A E I J A L V N E L J A F Y N L K A A P A R V T G W D V T V P W A G E K Y  
UniRef90\_C9R9G4 G G L G S A V A E L V S E E C P V L L R L G V R D T F K P H H L L H H  
UniRef90\_D4YLH3 C G F A H D I A A L V A N K G F S S L K A P V Q L V P P H T P V P F A L E E A E  
UniRef90\_M0NB44 Y G F H A E I M A R V M E D G F F T L D A P P Q R V V G V A D T P V P F A L E E A E  
UniRef90\_R4UZH8 M G L G A E I A A R L T E R C F Y H L E A P V L R V V G G F A L P Y P A N S V E E H H  
UniRef90\_UPI00036C2024 C G A A S Y I S A I T E R A F A L K A P V C R V T G V G D V A M P F S L E E D A  
UniRef90\_UPI00040AB868 G G F G S A V L J E W M M D H G Y Q A Q V K R V L G I P D A V I E H E L L Q E R F  
UniRef90\_F0XFX5 Q G V G A E V A A S I Q E E D C F D T F V L R A P V M R V A G G W S T P N G L L E E R F  
UniRef90\_UPI0003765F58 L G M G A E V A A R I T E E C F H S L E A P V L R V A G G F D T P Y P P A A E E H  
UniRef90\_B8D2I3 G G F G S A I L E F I N E E N D L R G I K V K R L G L P D R F L P H H L Q T E I  
UniRef90\_UPI00034872B4 G G P G A E I A A R V T E E C F Y H L E S P V L R V A A A F D T P Y P Q S L E E H Y  
UniRef90\_J7LRV0 A S V S E I V A R V T E E R A F H Y L E A P V L R V A A T G F D V P F P K L E E Y  
UniRef90\_M1ZL97 G G L G S A V A E V L V I E N R P T F M E R I G T I D T F G E F L L E E K  
UniRef90\_M7MVZ5 G G I G A E I S A S L T E R C F D H L D H A P Q E F V A T N D T F T P P A L L E E H  
UniRef90\_L7W5A8 G G L G E S A R S L T E R C S L H H P T P Q E F V A T N D T F T P P A Q L L E E K  
UniRef90\_D6TBK8 Y G V T A E I A A V I A E G A F Y Y L D A P V R R M G A M N V P V P F A L E E D L  
UniRef90\_HOQT44 N G L G A E I A A S L T E R C F Y H L E A P V R R V T G F D V P Y P Y A L E E M H  
UniRef90\_G2J4S8 G S L A A E V V A R L T E R Q A F Y E L D A P V R V V C S A E V P I P Y A L E E E A  
UniRef90\_D8J6H7 Y G V H A E I M A R A V I E D A F Y E L D A P I Q R V V G V P D T H I P F A L E E E  
UniRef90\_H8IN08 A G P G A E I A A I L H A E Q L F G E L A A P V E R V A A A R F V P N P A A L E E A Q  
UniRef90\_S6HJU6 G S V A S E I S A I L A E E G L M S L M A P I L I A C G H D T V M P F K L E E A Q  
UniRef90\_C9NS84 C G V G A E I J A R T A E H A M C T L K A P P K R V T G M D T V M P Y R N E D Y  
UniRef90\_A3U0V1 A G F G A E I A A T V A E T L H D R L E A P V R R L G A P R I P V A Y A L E E D R E  
UniRef90\_W0K3P0 L G L G A E I T A V I N E Y A F D R L H A P V Q R A T G Y D V H F P S A Q L E E D E  
UniRef90\_F4CWK5 S S V T A E I A A R V Q Q D C F H S L E A P V L R V T G F D T P Y P P S K E D D  
UniRef90\_UPI000248DB15 C G A S A E I C L Q V V I E R L Q L H K K I H V E R L G Y E N T P C M P T T L E E M  
UniRef90\_W4WWM99 C G V G A E I J A T V M E N P V F F Q D A P A V R C A G V D V P M P Y S M E Y E  
UniRef90\_B0TEJ5 G G F G S A I L E L L E M E G V H C A V R R T G I P D E Y V Q H V L R E D  
UniRef90\_UPI00045E8C6C Y G T G A E I A A R I T E E C F F S L E A P V L R V V G G F H S P Y P V A L E E T A  
UniRef90\_S7XMD2 Y G L G A E I S A T I T E E G A F D Y S L E A P V R R V A A A E V P L P V A L E E T A  
UniRef90\_L9WLB4 Y G T Q G Y I A N E I V I E N E F F S F D A P P K T L G V K D V P I P L S L E E Q E  
UniRef90\_UPI0004705411 F S I A S E I A Y S V N E E C F E Y L K A P L S R C T G Y D I S I P F A L D G E Y  
UniRef90\_K0P8P2 A S I A S E I T A Y Q Q K H A F Y L D A P I Q K V N S L D D V P Y D A L I E A  
UniRef90\_D3F7R8 A G F A S E V A A T A Q Q E A F W T L E A P V A R V T G H D T P Y P L A L E E E R  
UniRef90\_V6AUM6 G G F G S A V S E V V S E V Y P V I K R I G V Q D R F I P A L L E E K H  
UniRef90\_K2CKM2 C G V G A E I A A M L A E Q G L F F L K A P V I R V T G Y D T V V P Y K L E E K K  
UniRef90\_R7JX88 G G L G S A V C D A L A E K C P V P V K K I G V Q D V F G E S A L L A K  
UniRef90\_DOMIR5 A G F G A E I A A E I A E V A F E W L D A P V V R V A A E D L P V P F A L E E K  
UniRef90\_H5UW25 L G L G A E I A A Q V Q R R C F Y H L E A P V Q R V T G Y D I P Y P S L E E L  
UniRef90\_R5KK05 G G L G S A V M E C L A E K N P V K V T R I G V R D T F P A K D L L H K  
UniRef90\_L7ERJ1 A G V G A E I A A R V Q E R C F D A L R A P V L R V T G L D I P Y P L L E S A  
UniRef90\_UPI000376A04E G G F G S A V A E F L V D Q N L N V K L K R I A L P D E F I E H H L E S A K  
UniRef90\_A0A022L123 G G L G G E I A A R V A E E C F Y H L E A P V L R V G G Y H T P Y P P A M E H A  
UniRef90\_W7INY3 A S L S S E I A A R V Q Q E C F H S L E A P V L R V T G F D T P Y P P A L E E H  
UniRef90\_UPI00036E10FE A S V A S E I A A R V S E R C F H S L A A P V R R V T G F D I P Y P K L E E L  
UniRef90\_L7VM17 G S F L K E M A Q T I T E L J A F D Y L D A P V V V V G S R N W I T P H E L E E F  
UniRef90\_R5GYV1 G G L G S A V C E A L S E E C P T K V C R I G L Q D V F A G E L L V K  
UniRef90\_I3CA71 G G I S S D I S A L I M E N C F E Y L D A P V K R I A S L E T P I P F A L E E N Q  
UniRef90\_F5TBM7 G G F G G E I S A R I A E D A F D Y L D A P I Y R L A G A D T N I P S A L E E A V  
UniRef90\_G4HZM3 G S F A G E I S A R I V J E G A F Y D L D A A I A R R V C T E E V P I P Y A L E E D A  
UniRef90\_UPI000255C872 A S V A G E I V A R I Q E R C F H S L A S P V R R V T G F D I P Y P K L E E Q H  
UniRef90\_X1NEV4 C G V A S E M G M I L M E E C F D C L D A P V R R V T A M D L P I A F A E E K R  
UniRef90\_N2AJE0 G S L G G A V A E L L S E K C P T K M L R I A G V E D T F G E S Q L L E E D E  
UniRef90\_C8XD86 S S I T A D I A A R V T E E A F Y S L A A P V L R V I A G Y D T P Y P S V L E D E  
UniRef90\_D3FUU1 G G F G S A V L J E F F H D H H Y H N V E V N R M G I P D E F I E H Q L L E E  
UniRef90\_A1T0M0 G G M S A E V S A T I A E L G L W Y L D A P V N R V C S A E V P I P Y A L E E Q A  
UniRef90\_K6D3M2 G G L G S A V A E V L S E H C P T K M R R I G V K E Q F K A E Y L K E F  
UniRef90\_E1VZL3 G G L G G E I A A R I T E R A F L S L E A P V L R V G G F H M P Y P I S V E S Q  
UniRef90\_C0W4K7 G G L G G A V A E L T S E K C P V P V K R L G V P D Q W A P T G L M D K  
UniRef90\_C7GYZ2 G G L F S A V S E S L A P Y G N K K I R A V A Q M D T Y G E S G K P D L L R E H  
UniRef90\_I5ASS9 G G L G S A V C D A L S E K A P T K T K I G V N D V F G F S G P A N E L L H E F  
UniRef90\_W9G1Q2 L G M A S E I S A Q V T E R C F Y E L E A P V L R V A G A N I P Y P S M E E D  
UniRef90\_W4EZW3 G G F G S A V L E F V A N D N H Y S T I Q L D R V I P D M F I E H M L L E Q E  
UniRef90\_A1HT03 G G L G S A V A E V V I E T C P V P M E R V G L L D V F T P D A L L A K  
UniRef90\_UPI00047A5C43 C S A I S E I T A M V V I E N G F D T L K A A P Q R R A W E D V P V P F S L E E Q N  
UniRef90\_L8JTV3 G G I G G E I S A W I S E H C F E H L D A P V M R E A S L D T A V P F S L E E K R  
UniRef90\_Q0PII0 G G L G S A V A E V L A E H C P A P A V M R V G L K D T F K P N E L F E K  
UniRef90\_UPI00026CBCD9 C G L G A D L C A L V A E K A F S S L K A P P Q Q V T P P H T P I P F A L E S A  
UniRef90\_UPI000477362A G G V G A V L E F M A R H G Y K N E V R L L G I P D R L V E H E L Y S A  
UniRef90\_J1H9L8 G G L G S M V S Q L V C A E H P V R V K S L T L P D E P V S Q Q V F D Y

UniRef90\_A0A011Q0H3 F L  
UniRef90\_L9VMW0 V I P D A E D I T N A I R D A  
UniRef90\_UPI0003714AC0 I Y L P S V E R I V A A V R Q T L  
UniRef90\_F4LWT3 Y N L T A E D I V K A A K E I  
UniRef90\_A8LNX3 S V P T P E L I V D I A R K M F A  
UniRef90\_UPI00047D13C6 F L P E S R F K A K L E K L L A F  
UniRef90\_UPI000372CA7F I A P Q V E D I V A A C R E L V S  
UniRef90\_S7U5Z5 A L P Q V D K I V D R V R K M V G  
UniRef90\_Q020J5 I L P Q T D T L V T A L D H L L A Y  
UniRef90\_G3X2Y2 C I P Q V K D I I F A A K K T L N  
UniRef90\_A0A024YQY6 H L P G V E R I L D A V A R L  
UniRef90\_B1CAK3 Y H I D T P D I I E A A K K A V G  
UniRef90\_Q3AKD7 T I I Q P H Q I V E A A Q A L V N  
UniRef90\_UPI000468BDE6 F L V N Q A D V T K S I R E L A E F  
UniRef90\_D3D6K9 Y L P S V E R V V A A R A T V K  
UniRef90\_UPI00047DE6B2 V I P T V D K V V D A V R A L V D Y  
UniRef90\_UPI0001744A21 Q L P Y P D V V V A K V L G M  
UniRef90\_C7P7JW5 F L A K T R M H Q C I Q Q L M N Y  
UniRef90\_G2PLB3 Y L P K N R F E S A L I E L Y Q Y  
UniRef90\_L7U9L3 H R P D P S R V L A A V H G T L E  
UniRef90\_MOCKV6 V L P G D D D V R A A L E R I  
UniRef90\_UPI000475CA55 H L P G V D R I L A A M D R L  
UniRef90\_G4ENI5 F I V T P D Q I I E K A L E L I N  
UniRef90\_C9R9G4 Y G L T A G N V V E A A E K I I K  
UniRef90\_D4YLH3 W I P G P S K I E A A V R A V V E  
UniRef90\_M0NB44 V L P S A P D V E R A V R R V L  
UniRef90\_R4UZH8 Y L P D A E R V M D A V D R A I A  
UniRef90\_UPI00036C2024 L R P G K A E I V R A A L G L V E  
UniRef90\_UPI00040AB868 C G F D P E G L A E A V R S F V E  
UniRef90\_F0XFX5 N I P D V A  
UniRef90\_UPI0003765F58 F L P D L D R L L D A V D R S L T W  
UniRef90\_B8D2I3 Y H I D K N A I I E S A L K L V D  
UniRef90\_UPI00034872B4 Y L P D L D R V L D G V D R A F A Y  
UniRef90\_J7LRV0 Y L P S V D R I L D A V D D L  
UniRef90\_M1ZL97 Y G L N V K N I I E K A K N I L  
UniRef90\_M7MVZ5 H L P D L D R I L D G V D R A M  
UniRef90\_L7W5A8 Y G L N A E N I A L K A E K V I K  
UniRef90\_D6TBK8 T V P T A T A V V D V A K M L  
UniRef90\_H0QT44 H L P N L D R I L D G V D R A L G  
UniRef90\_G2J4S8 A L P Q V A S I A A A V R T V  
UniRef90\_D8J6H7 V V P D S A Q V R E A I E R I  
UniRef90\_H8IN08 V Y P S P A R I V E A A L R T  
UniRef90\_S6HJU6 Y M P S V A Q I T S A A K K V M E F  
UniRef90\_C9NS84 F M I Q E E D I V T A A K E L V E  
UniRef90\_A3U0V1 V R V S K D E L V E A V  
UniRef90\_W0K3P0 Y L P D A Q R A E Y A I E A V M S Y  
UniRef90\_F4CWK5 Y L P D L D R V L D A V D R  
UniRef90\_UPI000248DB15 F Y P N P S V I A S K A H N M M H  
UniRef90\_W4WM99 C T P K D H H I A D Y A K R I  
UniRef90\_B0TEJ5 Y G L T A S N V A R V A R E L  
UniRef90\_UPI00045E8C6C Y L P S L D R V L D A V D R A M A  
UniRef90\_S7XMD2 A M P H A A D L S R A V R E T L D  
UniRef90\_L9WLB4 V L P S A D R I A A G I E S L  
UniRef90\_UPI0004705411 H Q V N P T K V L V K M K E V L D Y  
UniRef90\_K0P8P2 I L P N V A K T V A A L K Q V L  
UniRef90\_D3F7R8 Y I P T P  
UniRef90\_V6AUM6 G L T S I N I A K A V K E V L G  
UniRef90\_K2CKF2 Y L P S E S R I K Q A V Y T V M E  
UniRef90\_R7JX88 Y K L D G E G V Y E Q V K E  
UniRef90\_DOMIR5 I F S A R P R L R P A L V R L L R F  
UniRef90\_H5UW25 H L P D L D R V L D G V D R A L A Y  
UniRef90\_R5KK05 Y E L D A E G I Y K Q I K A A L  
UniRef90\_L7ERJ1 H L P G V G R V L A S L R R L V  
UniRef90\_UPI000376A04E Y G L D I A G I K A K I R A V M  
UniRef90\_A0A022L123 Y L P D L D R V L D T V D R V L A H  
UniRef90\_W7INY3 F L P D L D R V L E A V D R S L A W  
UniRef90\_UPI00036E10FE Q L P S V D R I L D A V D D L  
UniRef90\_L7VMI7 F F P Q P E W M I D A I H E  
UniRef90\_R5GYV1 Y G L D G N G V Y N T V K N E V  
UniRef90\_I3CA71 F L A K S R L E K E L L N L L S Y  
UniRef90\_F5TBM7 I V P S V E D I K N T I R K A V N  
UniRef90\_G4HZM3 A L P Q P D K I V A A V R G L F G  
UniRef90\_UPI000255C872 H L P D V D R V L D A  
UniRef90\_X1NEV4 C I P G K D D I R K A I E E T L S  
UniRef90\_N2AJE0 Y G L D A A G I Y K K V K  
UniRef90\_C8XD86 Y L P D L D K V M H A V D R V L A Y  
UniRef90\_D3FUU1 V G L T S A G V V E Q L S T M L  
UniRef90\_A1T0M0 S L P Q V A Q I I A V A K Q M M E  
UniRef90\_K6D3M2 Y K L T A G D I A G A V R E L V  
UniRef90\_E1VZL3 Y L P D I D K L L E A L D R S F A Y  
UniRef90\_C0W4K7 W G I S A D G I V A A A H E L  
UniRef90\_C7GYZ2 Y G L T S E H I V K E A L A L I N  
UniRef90\_I5ASS9 G L D G E G V Y A K V K S W L  
UniRef90\_W9G1Q2 F L P D L D R I L D G V D R A L A Y  
UniRef90\_W4EZV3 I N L T A E E T V L R I Q E L V N  
UniRef90\_A1HT03 Y N L T V A D I V Q A K R V V S  
UniRef90\_UPI00047A5C43 V L V Q E P D I L N A I L K T L S  
UniRef90\_L8JTV3 F L P K G R L Q K K I K D L V E F  
UniRef90\_Q0PII0 Y G L T K E  
UniRef90\_UPI00026CBCD9 Y L P S V E K I E A A V R R V L N W  
UniRef90\_UPI000477362A C G Y D A E G I A A A V R E M M S  
UniRef90\_J1H9L8 Y G L N A E G I A R A A M E I T



UniRef90\_UPI00036E42FC 1 T L P I G Q W E V L R K Q G T D A V I L T F G T T I A M S L A A S E F L Q K 40  
UniRef90\_R6CZK0 Y P F E I G K K A N V V L R E E G K D D A A V I F A T G L M V N E A L E Q A A K L L S Q E  
UniRef90\_R5QGP6 Y K F F E L G K K A V I V L R E E G K D D V T V I L I A T G L P V N D N C L E Q A A A E K L L S A A Q  
UniRef90\_UPI00041377A2 UniRef90\_E1REX2 Y E F F E F G K A V Q I K R E G T D D V T V L I A T G T M V T E A I K A A S E V L K K  
UniRef90\_D9XW38 UniRef90\_S2Z5M3 UniRef90\_F6B901 UniRef90\_H1YCW0 UniRef90\_K6QBR4  
UniRef90\_A7BPK5 UniRef90\_UPI00029A7391 UniRef90\_T0T2V0 UniRef90\_C0QWF3 UniRef90\_F6DND6  
UniRef90\_V6KYD9 UniRef90\_UPI000409F2A6 UniRef90\_UPI00034A2802 UniRef90\_J8Q9U4  
UniRef90\_UPI0003F9E6B2 UniRef90\_B5YG84 UniRef90\_R4KKB6 UniRef90\_D2QRV0 UniRef90\_L2GMN3  
UniRef90\_D9XN2 UniRef90\_UPI00035FC0DD UniRef90\_N0E2P2 UniRef90\_K9SWD6 UniRef90\_A7Z6J5  
UniRef90\_R5SHF8 UniRef90\_D4ZW22 UniRef90\_U1ZCN4 UniRef90\_I8AMT5 UniRef90\_L1N6E2  
UniRef90\_UPI0002554F4D UniRef90\_UPI00046FEFEB UniRef90\_Q9HK12 UniRef90\_T1DB46 UniRef90\_R5C6P7  
UniRef90\_R7JVG8 UniRef90\_D9QMU2 UniRef90\_W4QHF2 UniRef90\_F3ZY41 UniRef90\_M6F9V4 UniRef90\_F3P798  
UniRef90\_W4Q7V5 UniRef90\_UPI00037220EB UniRef90\_R6LYN3 UniRef90\_L0HMH3 UniRef90\_X1TWX6 UniRef90\_U2R155  
UniRef90\_G9RQW7 UniRef90\_UPI0003B67BDB UniRef90\_UPI00035D7DF3 UniRef90\_UPI00040DC853 UniRef90\_C5BD62 UniRef90\_D6D187  
UniRef90\_R6LHV3 UniRef90\_UPI00036688A3 UniRef90\_R5GH59 UniRef90\_UPI0002890524 UniRef90\_UPI00037F8F87 UniRef90\_A0A059FHQ3 UniRef90\_A6E911 UniRef90\_G5HGC9 UniRef90\_D1AVR3 UniRef90\_E5AVN8 UniRef90\_X0T092 UniRef90\_G9RUL3 UniRef90\_D3FD88 UniRef90\_K9SMR8 UniRef90\_R5C0F8 UniRef90\_F8L7N2 UniRef90\_F4CZ09 UniRef90\_K2BG10 UniRef90\_D8UF03 UniRef90\_C6VXK6 UniRef90\_U7QV16 UniRef90\_A7HR71 UniRef90\_A0A010ZDE4 UniRef90\_X6L2H1 UniRef90\_E6MH37 UniRef90\_B8FYY7 UniRef90\_F6DU94 UniRef90\_C6VW11 UniRef90\_H8G7E4 UniRef90\_X1J155 UniRef90\_R6GR42 UniRef90\_E5Y1K9 UniRef90\_W7D441 UniRef90\_W3APK0 UniRef90\_UPI0003B7711C

UniRef90\_UPI00036E42FC  
UniRef90\_R6CZK0  
UniRef90\_R5QG6P  
UniRef90\_UPI00041377A2  
UniRef90\_E1REX2  
UniRef90\_D9XW38  
UniRef90\_S2Z5M3  
UniRef90\_F6B901  
UniRef90\_H1YCW0  
UniRef90\_K6QBR4  
UniRef90\_A7BPK5  
UniRef90\_UPI00029A7391  
UniRef90\_T0T2V0  
UniRef90\_C0QWF3  
UniRef90\_F6DND6  
UniRef90\_V6KYD9  
UniRef90\_UPI000409F2A6  
UniRef90\_UPI00034A2802  
UniRef90\_J8QJ4U  
UniRef90\_UPI0003F9E6B2  
UniRef90\_B5YG84  
UniRef90\_R4KKB6  
UniRef90\_D2QRV0  
UniRef90\_L2GMN3  
UniRef90\_D9X8N2  
UniRef90\_UPI00035FC0DD  
UniRef90\_N0E2P2  
UniRef90\_K9SWD6  
UniRef90\_A7Z6J5  
UniRef90\_R5SHF8  
UniRef90\_D4ZW22  
UniRef90\_U1ZCN4  
UniRef90\_I8AMT5  
UniRef90\_L1N6E2  
UniRef90\_UPI0002554F4D  
UniRef90\_UPI00046FEFEB  
UniRef90\_Q9HKI2  
UniRef90\_T1DB46  
UniRef90\_R5C6P7  
UniRef90\_R7JVG8  
UniRef90\_D9QMU2  
UniRef90\_W4QHF2  
UniRef90\_F3ZY41  
UniRef90\_M6F9V4  
UniRef90\_F3P798  
UniRef90\_W4Q7V5  
UniRef90\_UPI00037220EB  
UniRef90\_R6LYN3  
UniRef90\_L0HMH3  
UniRef90\_X1TWX6  
UniRef90\_U2R155  
UniRef90\_G9RQW7  
UniRef90\_UPI0003B67BDB  
UniRef90\_UPI00035D7DF3  
UniRef90\_UPI00040DC853  
UniRef90\_C5BD62  
UniRef90\_D6D187  
UniRef90\_R6LHV3  
UniRef90\_UPI00036688A3  
UniRef90\_R5GH59  
UniRef90\_UPI0002890524  
UniRef90\_UPI00037F8F87  
UniRef90\_A0A059FHQ3  
UniRef90\_A6E911  
UniRef90\_G5HGC9  
UniRef90\_D1AVR3  
UniRef90\_E5AVN8  
UniRef90\_X0T092  
UniRef90\_G9RUL3  
UniRef90\_D3FD88  
UniRef90\_K9SMR8  
UniRef90\_R5C0F8  
UniRef90\_F8L7N2  
UniRef90\_F4CZ09  
UniRef90\_K2BGIO  
UniRef90\_D8UF03  
UniRef90\_C6VXK6  
UniRef90\_U7QV16  
UniRef90\_A7HR71  
UniRef90\_A0A010ZDE4  
UniRef90\_X6L2H1  
UniRef90\_E6MH37  
UniRef90\_B8FY7  
UniRef90\_F6DU94  
UniRef90\_C6VWI1  
UniRef90\_H8G7E4  
UniRef90\_X1J155  
UniRef90\_R6GR42  
UniRef90\_E5Y1K9  
UniRef90\_W7D441  
UniRef90\_W3APK0  
UniRef90\_UPI0003B7711C

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

UniRef90\_UPI00036E42FC G G F G S A I L E F A E E N N Y H P Q 100 I K R M G L L P 110 D R Y L E H E L L E 120  
UniRef90\_R6CZK0 G G L G D A V A D V L M G K C K F R K I G V N D R F G Q S G K A A D V L R E E  
UniRef90\_R5QG6 G G L G S A V A E V L M G C D V L S A N V P T K V L K R V I G T N D V Y M G P E A L L E E K  
UniRef90\_UPI00041377A2 G G L G S A V A E V L A E E Q C D V L S A N V P T K V L K R V I G T N D V Y M G P E A L L E E K  
UniRef90\_E1REX2 G G L G G A V A E L L A E E S F Y E L D A P V E R V I G K D R F Y E H L I N K F  
UniRef90\_D9XW38 G S V A A E L V S A R L A A E E S F Y E L D A P V E R V I G K D R F Y E H L I N K F  
UniRef90\_S2Z5M3 L G W G A E L V S A R L A A E E S F Y E L D A P V E R V I G K D R F Y E H L I N K F  
UniRef90\_F6B901 S S F A S E V A A L V S E E G F D L D A P I K R V I T A V P V P F S P L E E Q A F  
UniRef90\_H1YCW0 G G A S A Y I L Q H L L A R V E Q N G Y Y H L D G Q P C L H R P P Y G S D G D R Y F  
UniRef90\_K6QBR4 G G F G S A V L E M A A R H G L D A R L R C L G V P D R V V E H H F M A D D  
UniRef90\_A7BPK5 G G V T A E I J A Q V V I E R A F Q L D Q Q P P V R L A S P D H P V P H F M A D D  
UniRef90\_UPI00029A7391 N G F G A E I S A W I G E H C F Q H L D A P I M F C A S L Q D T A L P K A L L E D  
UniRef90\_T0T2V0 G G L G S A V S E V V V S N E Y P A K L I R V V G I K D T F T V E D L I N K H  
UniRef90\_C0QWF3 G G L G G A V A E R L L A E E H Q P V L Q R V V G V S A R E V P M P Y A L L E E A  
UniRef90\_F6DND6 G S L A A E I S A R L T E E Q H F Y D L D A P V E R V C S A R E V P M P Y A L L E E A  
UniRef90\_V6KYD9 G G L G E S V S R V L A L N S P A P Q E F V A V N D S F T P A Q L M D K  
UniRef90\_UPI000409F2A6 G G L G D S I A Q V L S L K L P S P L E M V G I P D Y F I E E Q L L E E  
UniRef90\_UPI00034A2802 G G F G S A V L E F Y N E A S L G Y R D L T I K R M G L P D Y F I E E Q L L E E  
UniRef90\_J8Q9U4 A G F G S A V V I E F M A D H G Y S A Q I K R L G M E D R V F E H E L L Y R E F  
UniRef90\_UPI0003F9E6B2 G G L G S A V A E F V C E N H P V P I K R I G T I K D T F S W K L L R K F N  
UniRef90\_B5YG84 G G F G S A V L Q L L A A K E M P G I Q V K C V G I G I E D V F I E H L L R K N  
UniRef90\_R4KK6 G G F G S A V L E F M A N D Y M A R V K R L G L P D A V I E H E L H H E  
UniRef90\_D2QRV0 Y S V A H E I S A V V Y D R E M Y G R L K T K I C L D A G K N T H V L G Y S L E E K A  
UniRef90\_L2GMN3 G G W G A T V V I S A V A D E G F G L D A P I R R L A A E C V P L P F A L E E Q  
UniRef90\_D9X8N2 S A S G F M M Q Q V L E Q H A Y R W L D S A P V T I A A E K D H P Y G S D G D Y F  
UniRef90\_UPI00035FC0DD V G L G S A E I A A V T E R C F Y S L E A P V I R V T G W N A P Y P S I E E H  
UniRef90\_K9SWD6 G G F G S T I L E Y A H D L G M Y H T P I D R M G I P D R F I E H A L L E E  
UniRef90\_A7Z6J5 G G L G E L I A G V L L A A K A P A P M E F I N G G D R E T P A K L M A S  
UniRef90\_R5SHF8 G G F G S A V A E A L L A H D V L V P V K R F G I P D Q L V D H A T P D Q  
UniRef90\_D4ZW22 G G F G S A V L E C Y A Q A G Y H D M V V E L M G I P D Y Y V E H E Q R A E E  
UniRef90\_U1YCN4 G G F G S A V L E Y A N E H R Q P V L L D A M G I P D V F V E H G L L E E  
UniRef90\_I8AMT5 G G L G E A V A G V V T E H A P V P V H R I G V R D E F P A A E L L K Q  
UniRef90\_L1N6E2 G S Y L H T V A S N I Q T M A F D Y L D A P V A V V G S R N W I T P A A M E E L  
UniRef90\_UPI0002554F4D N G L G S A V S E V A A E T G R C V S Y P V V K R I G I Q D Q F A P Y E L L A L  
UniRef90\_UPI00046FEFEB N G L G S R V A E I T S E S Y P V P V R R I G M R D T F K A W E L L F S Y  
UniRef90\_Q9HK12 A S L G S E L A A E L S E R C F Y S L R A P A L R V S A Y H V P Y P S I E E Y  
UniRef90\_T1DB46 G G L G G A V A E V L S E K L P T K L C R G V I Q D R F G E S E L V A J K  
UniRef90\_R5C6P7 G G L G S M V S Q V V G A E C P R K V V H M S L P D A P V S S E V F D Y  
UniRef90\_R7JVG8 G G F G A F V L I Q F L A S E G A L D A G L K I R T L H L P D V F S P A A Q Y V T  
UniRef90\_D9QMU2 G G L G S A V A E V V S Q N H P I P V V Q V L P D E P T K E V F E Q  
UniRef90\_W4QHF2 G G L G S A I T E L T A Q R C P I P V S I M A F P D E Y A I T G E Q Y  
UniRef90\_F3ZY41 G G L G S A V L E F C N D E I P N E T G K I R R I G L P D R F S E E L L N Y  
UniRef90\_M6F9V4 N G L G S A V A E V L G E N T C P I P L E R I G T P D I F T M D E L F D Y  
UniRef90\_F3P798 G G L G S A V T E V V S Q T C P I P V K V L G T P D E P A T A E V F K H  
UniRef90\_W4Q7V5 G G L G S A V S H W C Q E N A K D M P V P I K N L A L P D K F I E H L L K K K  
UniRef90\_UPI00037220EB N G L G S A V A E V L V I E N H P V P M R R H G M M D V F K W N A L L E Y  
UniRef90\_R6LYN3 G G L G S E V A Q V V V R N H P V P M G F V A T K D T Y A Q S E L L Q R  
UniRef90\_L0MHM3 N G L G S A V A E V I A E T G N A K L R R I G I Q D R F L E F L M N E  
UniRef90\_X1TWX6 G G L G S A V A E V V C E V N P V R M L R I G V K D R H F L P D E L Y K M  
UniRef90\_U2R155 G G L G E A V C S C V A E H C P V P V K R I G V N D E F P A V E L L K Q  
UniRef90\_UPI00035D7DF3 G G L G S A V S D L L S E K L P T Q V L K I G I Q D D C F G S D L L H K  
UniRef90\_UPI00040DC853 G G L G D S V A Q V L A R N N P A P Q E Y V A V D D S F G P E A L M A R  
UniRef90\_C5BD62 G G M G S A V C E A L A Q R C P C P V T R V G V D D S F G P E A L M A R  
UniRef90\_D6D187 G G M G S A I L E F M A D N E Y K P T V K R L G I P N L F V E H E L Y Q L  
UniRef90\_R6LHV3 G G L G A V A E L L A E N C P T P M V I H G V I Q D R F V G P A Q L K R  
UniRef90\_UPI00036688A3 A S V A A E L A A L I G E R C F H H L E A P V R R V T G F D I P Y P K L E R H  
UniRef90\_R5GH59 G G M G S A V L E Y F A D H D C D V H I V E R L G L P D Q F V E H S L H H L  
UniRef90\_UPI0002890524 G G F G S A V L E F A H D H G Y Q N A L I D R M G L P D Q F I E H E L L H E  
UniRef90\_UPI00037F8F87 G G L G S A V S E V V S Q H Y P V K I A M V G V K D Q F S P T E L L I E K  
UniRef90\_A0A059FHQ3 G G F G A Y I V L E Y L A R S G G L D S G L K I R P M T L A P D V F P Y N M Y E A  
UniRef90\_A6E911 G G G A A Y I L Q K V L E S E Q N G Y Y D G K P R T L T A H R P P Y G S D G D Y F  
UniRef90\_G5HGC9 G G L G G A V T E F L S E H Y P V P V K R I G T N D V Y P A C D L L R L  
UniRef90\_D1AVR3 G G L G G A V S E Y L S E N H P A K V V K H G L N D V F G G N V M L D K  
UniRef90\_E5AVN8 C S V A T D I A A L I A Q R A F K S L K A Q L E L V T A H T P A P A L E D M  
UniRef90\_X0T092 G G L G S R V A Q I V V K E N P V P M D F V G I R D T Y A P N E L L Q K  
UniRef90\_G9RUL3 G G L G S A V A E V L A G R S G A K F A R V G L E D R F T P A E L F A D  
UniRef90\_D3FD88 G S W G A T V V I A G V I A R F E S L D A A P V L V S G P D T P V P Y A L E D A  
UniRef90\_K9SMR8 G G F G S G V L E G L M D M G I M L P I T R L G V I P D I L V D H A S P D E  
UniRef90\_R5C0F8 G G L G E A V A G V L A A N L P A P L E F V N G K D R F T P A E L L K A  
UniRef90\_F8L7N2 G G L G S I N S V I V Q E G F T D L L V W N I G V P D E F V Q H D L L K M  
UniRef90\_F4CZ09 F G A G A E I A A T V A E H C F G D L R A P V T R V A F A P S P F P P Q L E A A  
UniRef90\_K2BG10 G G F G S H V A Q L L A E E G L F E D T G L K Y R S M V L P D T F I P E A M Y R A  
UniRef90\_D8UF03 G G I G A S L S A V I N E S L F N E L D H E V I R L S S Q D V P Y A Y E L E A A  
UniRef90\_C6VXK6 G G L G E A C A S F L I Q N N F C N R F K I I G I P D E Y T Q S E I F N H  
UniRef90\_U7QV16 A S V G A S I V A D L L D E N D N F F S A P P R L V T R E D I H I P F N L E K A  
UniRef90\_A7HR71 G G F G S H V L D F L A H S G A L D R G L K V R P M A L P D I F I P E K M Y D I  
UniRef90\_A0A010ZDE4 G G L G D A V G D V L L I E N K C N V T F K K I G V Q D R F K P E E L L I E  
UniRef90\_X6L2H1 G G F G S H V A Q L L A D E G V F D S G L K Y R S M V L P D D T F I P E D M Y A V  
UniRef90\_E6MH37 G G L A G A V C E V L A E E T A P A P V E K V G I P D D A F S G K A L E E H  
UniRef90\_B8FYY7 G G L G S A V A E A L S E Q A P T P L V R V G I K D T F G E S G R P L  
UniRef90\_F6DU94 G G F G S A V L E L L E S A G L A D C K V K R L G I A D S F V E H L L K A N  
UniRef90\_C6VW11 G G F G S A V V E F M A D N G Y S S A I K R L G I A D T I E H E L Y H E  
UniRef90\_H8G7E4 G G L G D A V L D A L T G S T V M P A V L K L A V L A L P G S A T P A E Q L C H  
UniRef90\_X1J155 G G L G S A V A E V L A E S G N S H I A F K R L G L T D S F C S Q V G S S Q E  
UniRef90\_R6GR42 G S I I N D M A T H I N E L A F D D L D A P A V V L G A R N W I T P P M E E Q  
UniRef90\_E5Y1K9 G G L G S A V A E V L A E Q R P T P L E R V G V K D H F G Q V G K A P  
UniRef90\_W7D441 G G L G S A V A E F L G E N C P V P M Y R V V G V R E Q F M P Y L Q F E  
UniRef90\_W3APK0 G G L G S A V A E V L A G N A G A K F S L I G I N D L F K P D N L F A E  
UniRef90\_UPI0003B7711C G G F G S T V L E A L A A A G I T D V Q I T N L G I P D E F I E H H L Y A R

UniRef90\_UPI00036E42FC I D L T K E Q I V V I E L K K L L A  
UniRef90\_R6CZK0 Y G L T A D Q I A V K I K E T L  
UniRef90\_R5QG6P Y G L G I N G I Y E K V K A F V S  
UniRef90\_UPI00041377A2 F E L R A A R I A K T A E E L I D  
UniRef90\_E1REX2 G L N A S E I V K S A K I L L G  
UniRef90\_D9XW38 A L P Q T A G I V A A A H R A V G  
UniRef90\_S2Z5M3 V L P S V A R I V E E V R K  
UniRef90\_F6B901 Y I P S V A S I V Q A V K E L  
UniRef90\_H1YCW0 S K P S H E D I V E T L Y N I M G  
UniRef90\_K6QBR4 F G L T P E G I A R A A R E L V  
UniRef90\_A7BPK5 Y Y P E A E T I A E R T I H L L G  
UniRef90\_UPI00029A7391 G F L A K A R L A E T I E K L L K Y  
UniRef90\_T0T2V0 Y G L T A N D I V E A V K R V I A  
UniRef90\_C0QWF3 Y G L N A K S I Y D I I K  
UniRef90\_F6DND6 F G L T S G E I I K A V Q K V M E  
UniRef90\_V6KYD9 A L P Q V H G I V A A A H R T V G  
UniRef90\_UPI000409F2A6 Y K L N N E A I V A A V E K V M K  
UniRef90\_UPI00034A2802 Y G L N T Q S I V D A A L K V V E  
UniRef90\_J8Q9U4 I G L T A N Q V S E Q I A M V  
UniRef90\_UPI0003F9E6B2 A G Y D V D G I A K A A L A M V  
UniRef90\_B5YG84 Y G L T S E N I I H T V R E F F K  
UniRef90\_R4KK6 Y G L T P E N I M N L A M Q M I G  
UniRef90\_D2QRV0 C G F D P Q G I A D A V R E L L  
UniRef90\_L2GMN3 F Y P S E K D I I E A I K K C V S  
UniRef90\_D9X8N2 V I P T V D K V V M E V L R L A A Y  
UniRef90\_UPI00035FC0DD S K P N M D D I F E T V Y E I M  
UniRef90\_N0E2P2 F L P D L D R V L D G V D R A L A H  
UniRef90\_K9SWD6  
UniRef90\_A7Z6J5 I G L T K A E V M N R I K L L M  
UniRef90\_R5SHF8 Y G L D A E H I A E A A K R A I  
UniRef90\_D4ZW22 S G L T S S Q I A E Q I R E L  
UniRef90\_U1YCN4 V G L T P E N V A Q K V R S L  
UniRef90\_I8AMT5 I G L T T D A V V E R T K Q L V N  
UniRef90\_L1N6E2 F G L T A E H I V A Q T K T F V G  
UniRef90\_UPI0002554F4D Y F P Q I N W I I D A I H E  
UniRef90\_UPI00046FEFEB N G I T V E N I V A T A K E L V K  
UniRef90\_Q9HK12 F H M D V K D I I N E A M T C L E  
UniRef90\_T1DB46 Y R P S V D R V L D A V D R V M E W  
UniRef90\_R5C6P7 Y G L D G A G I A A K T L A F V K  
UniRef90\_R7JVG8 Y G L N A E G I A K K A K E L L A  
UniRef90\_D9QMU2 A G L D A D H I A A A A L K A L G  
UniRef90\_W4QHF2 Y G L S A E N V S S I A K K M I S E  
UniRef90\_F3ZY41 Y G L T A D G I Y N T A L N M L E  
UniRef90\_M6F9V4 F G I N K D S L V K T M K D T I  
UniRef90\_F3P798 F G L R A E N L A D A A R R A L S  
UniRef90\_W4Q7V5 Y G L S V K N A K A I A L E M  
UniRef90\_UPI00037220EB Y G L T V E G L I T A V K A V L G  
UniRef90\_R6LYN3 Y E L D A L S I A K K L A E  
UniRef90\_L0HMH3 Y G M D D R G I A R E M L S F  
UniRef90\_X1TWX6 Y G L T A K D I E E A V G R V V E  
UniRef90\_U2R155 Y E L T A E H I Y K A A L E L L K  
UniRef90\_G9RQW7 Y H L T P D D I A Q K C R Q  
UniRef90\_UPI0003B67BDB F G L C A D N I A K Q T K A L L G  
UniRef90\_UPI00035D7DF3 Y G L D Q D G I Y K A I E N L  
UniRef90\_UPI00040DC853 Y G L E S G D I I K A A Q K A I N  
UniRef90\_C5BD62 Y G L D A A H I V A A A Q R A L A  
UniRef90\_D6D187 C G M D E E G I L T K T K E F I N  
UniRef90\_R6LHV3 N G L T A Q A L A D A V R K A V S  
UniRef90\_UPI00036688A3 H L P S I D R I L D A V D E L  
UniRef90\_R5GH59 V G I D A E G I A A A I R K N L  
UniRef90\_UPI0002890524 I G M T T E N V V D S I H K L V  
UniRef90\_UPI00037F8F87 Y G L T E T D I I K A V K  
UniRef90\_A0A059FHQ3 A G L N A R H I A A R A I E A L G  
UniRef90\_A6E911 S K P S V D D V I E L V Y E M M H  
UniRef90\_G5HGC9 Y G L D T L G I Y V Q V K E F V  
UniRef90\_D1AVR3 Y G L R A E R I V E L V L E  
UniRef90\_E5AVN8 Y I P S P E K I A A A V T K V  
UniRef90\_X0T092 H G L T A E A I E Q A V L A L  
UniRef90\_G9RUL3 Y G L T A E N I A E N A R R L V K  
UniRef90\_D3FD88 W L P S E R H I A G E I R S L L G  
UniRef90\_K9SMR8 A G L T S G Q I K D R I  
UniRef90\_R5C0F8 Y G L D A P H I V E A A K K V I A  
UniRef90\_F8L7N2 V G I T P E A I V K Q V L R A  
UniRef90\_F4CZ09 Y L P Q P G T I A D A I R A S V  
UniRef90\_K2BG10 A G M D A A H I E A K V L E V L G  
UniRef90\_D8UF03 T I V Q S S Q V V E A V E R V  
UniRef90\_C6VXK6 Y G I S E E G I A A T A L A L  
UniRef90\_U7QV16 V L P G T D D I L A S V Y A V M S  
UniRef90\_A7HR71 A G L N A A Q I V E T A L S V L G  
UniRef90\_A0A010ZDE4 Y G L S E K Q V Y N Q T K G V L E  
UniRef90\_X6L2H1 A G M N A K D L E A R V L S V L G  
UniRef90\_E6MH37 Y G L T A E H  
UniRef90\_B8FY7 E L L E K Y G  
UniRef90\_F6DU94 L G L N A E E I V K T V  
UniRef90\_C6VW11 C G I D T K G I V S A S V E V M  
UniRef90\_H8G7E4 A G I D A D S V V D A V R D L M S  
UniRef90\_X1J155 Y L L S V E G I V S K A V Q L L K  
UniRef90\_R6GR42 F F P N E H W F I D A I H E K L  
UniRef90\_E5Y1K9 Y L M G V F G I T A A  
UniRef90\_W7D441 Y G L T A E N L A L Q A E K L I  
UniRef90\_W3APK0 Y G L T A E H A V E E I K K M L  
UniRef90\_UPI0003B7711C C R C D A D A V V R T A E K M L

UniRef90\_UPI000382A391  
UniRef90\_UPI0003738163  
UniRef90\_Q65HJ2  
UniRef90\_B6B3Q8  
UniRef90\_UPI00047E1A80  
UniRef90\_H6L2L5  
UniRef90\_H5WJY2  
UniRef90\_UPI0004791B8E  
UniRef90\_L8JPY0  
UniRef90\_S0EZM6  
UniRef90\_UPI000410A7C3  
UniRef90\_M7ZI82  
UniRef90\_UPI00036DF535  
UniRef90\_K4LD57  
UniRef90\_UPI00034B0CBA  
UniRef90\_UPI0002C2E8C9  
UniRef90\_H1PWY3  
UniRef90\_UPI0003694540  
UniRef90\_UPI0003F9C279  
UniRef90\_G9A1W8  
UniRef90\_I3CFV4  
UniRef90\_UPI00037C5156  
UniRef90\_D7JH29  
UniRef90\_I6ZTB6  
UniRef90\_D3F8D1  
UniRef90\_R5UHQ0  
UniRef90\_E4N2V5  
UniRef90\_D5SPC2  
UniRef90\_UPI0002D2AAA8  
UniRef90\_UPI00038138E6  
UniRef90\_G7GME5  
UniRef90\_J6LAT4  
UniRef90\_Q7WL37  
UniRef90\_A1URW6  
UniRef90\_UPI00036F2939  
UniRef90\_UPI00046EC564  
UniRef90\_S0FJW1  
UniRef90\_UPI0004761946  
UniRef90\_X0WI22  
UniRef90\_G5IBU2  
UniRef90\_A1AN93  
UniRef90\_R9MTI3  
UniRef90\_UPI0004770D9D  
UniRef90\_K2APG0  
UniRef90\_E3BPR8  
UniRef90\_F8J9V4  
UniRef90\_M2TBU8  
UniRef90\_C7GDL7  
UniRef90\_R5JZ63  
UniRef90\_K8GQE9  
UniRef90\_B3T699  
UniRef90\_S0FXE1  
UniRef90\_Q4PJA3  
UniRef90\_H6RGL7  
UniRef90\_UPI000374EB04  
UniRef90\_A8LQ19  
UniRef90\_A0A024PJZ6  
UniRef90\_M7TWX1  
UniRef90\_I0HPS3  
UniRef90\_H1BP98  
UniRef90\_UPI0003706974  
UniRef90\_G5H7H4  
UniRef90\_B5E1I3  
UniRef90\_UPI00045E6403  
UniRef90\_G1WJG5  
UniRef90\_UPI0003620D5F  
UniRef90\_N4WST0  
UniRef90\_T2JKC9  
UniRef90\_C3KXC2  
UniRef90\_M5E1N8  
UniRef90\_R6JQW0  
UniRef90\_J2D5P8  
UniRef90\_A3X722  
UniRef90\_C1MKH6  
UniRef90\_A0A024ICX3  
UniRef90\_C6X9M4  
UniRef90\_I0I8D9  
UniRef90\_D6GQF0  
UniRef90\_E4TNL4  
UniRef90\_J8NU66  
UniRef90\_A6FQ00  
UniRef90\_R6R0S0  
UniRef90\_D1C4M6  
UniRef90\_M5T9Q4  
UniRef90\_UPI000382ABF0  
UniRef90\_D5E2P8  
UniRef90\_I0YVF0  
UniRef90\_X0ZDQ7  
UniRef90\_UPI000477962C  
UniRef90\_U2U0I2  
UniRef90\_D8FB00  
UniRef90\_E31B7

1 10 20 30 40

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

UniRef90\_UPI000382A391 K G L D T A H Y D M R F V V K P L D D E E M L H E V F S T F N K I V I T V E D G C I Q  
UniRef90\_UPI0003738163 E G V S V R L T H M P F V V K P L D D E E M L H E V F S T F N K I V I T V E D H S I Q  
UniRef90\_Q65HJ2 G R S V R V V N A R F F A K P L D D E E M L H E V F S T F N K I V I T V E D H S I Q  
UniRef90\_B6B3Q8 Q G V S A T V A D A R F F A K P L D D E H A L I R K E L V K A K E T K G I V I T T I E E Q G A S V L Q Q  
UniRef90\_UPI00047E1A80 G K S V R V V N A R F F A K P L D D E E M L H E V F S T F N K I V I T T I E E E A S V L Q Y  
UniRef90\_H6L2L5 G I S A V E L I N D L R T I H K P L D D E Q A A V H A S A A K S T G A R L V V V H E A V V Q V Y  
UniRef90\_H5WJY2 A G A S V E V I D L R T L W P W D W A T V V A S L E R T N R R L V I A H E A V V Q D G  
UniRef90\_UPI0004791B8E G I N A E V I D L R T L A P L D D W A T V V A S L E R T N R R L V I A H E A V V Q D G  
UniRef90\_L8JPY0 G I S A C E V I D V Q S L P F D D A E T T V K S V R K T G K L V V V D T G W T P  
UniRef90\_S0EZM6 G I R A E V I D P V S L P F D D A E T T V K S V R K T G K L V V V D T G W T P  
UniRef90\_UPI000410A7C3 Q G I D P A H Y D M R F V V K P L D D E E L L H E V F S Q Y T S K V V T V E D G T V V  
UniRef90\_M7Z182 G Y D P E V T D L R S I K P F D D L H T I G N S I K K T G R V L V V E D C M R T  
UniRef90\_UPI00036DF535 L D V E V V N A R S I F K P L D D W Q T V R D S V K K T G R L V V V D T G N R M  
UniRef90\_K4LD57 G T E T A V V N V S T V I K P L D D E E Q T V I N W A R K A G A V I T A E E E T H S I Y  
UniRef90\_UPI00034B0CBA G F S I R L V N A R S I F K P L D D E E L L H E T A G K N G S F L I T V E E E T A I Q  
UniRef90\_UPI0002C2E8C9 G I E V T R V A D A R F C K P L D D K L R Q L C E N H S V F L I T V E E E G S I  
UniRef90\_H1PWY3 E G I S V R V T N V G T I K P L D D G E T I L K A A Q E T T K F I T A E E E H S V I  
UniRef90\_UPI0003694540 D G I L P V R V V D L Y S V K P P F D D W A G L A E S V S R T G R L V V V D D S H R P E  
UniRef90\_UPI0003F9C279 A S V E V W D P R S V P F D D V A G L A E S V S R T G R L V V V D D S H R P E  
UniRef90\_G9A1W8 G L S T T V A D A R F A K P L D D H E L R Q L A R H H E V L V T I E E D G A I  
UniRef90\_I3CFV4 G L S D A T V I N M R F V K P L D D E E M V L N M A M Q T H D L I V T I E E D S C I M  
UniRef90\_UPI00037C5156 Q G V N A R V L N M A T V R P I P L D D E K A I A A A M Q T G A I V T A E E H S I Y  
UniRef90\_D7JH29 A D I G I A H Y D M R F I K P L D D E K T L H E V G K K T F E K V I T I E D G S I Q  
UniRef90\_I6ZTB6 V G I S A C E V T N L V S I R P L D D K H E T L E S S A K K T K H V E V V D F S W P S  
UniRef90\_D3F8D1 E G V A A S V L D L R F S W L R P L D D H E A I E R S V Q A S G R V L V V H E A T L T  
UniRef90\_R5UHQ0 G I P T T V V N A R F A M P L D D K N C L R K L A E S H P L V T M E E N V A S  
UniRef90\_E4N2V5 P Q V S V E V F D P R F A K P F D D W A G L A A S L E R T G R L V T I E D D S N R S  
UniRef90\_D5SPC2 H G L D V G I V N A R F A K P L D D E E C L L G V L E Q T G F V I T V I E E H V L A  
UniRef90\_UPI0002D2AAA8 G L S T T V A D A R F A K P L D D E D L V R R L A T S H E V L L T V I E E G A V V  
UniRef90\_UPI00038138E6 G I K V G V S M P T I K P L D D C E L L Q V S K E T T D G L I L T I E E H S V V  
UniRef90\_G7GME5 G Y S V G V V D L R N L S P L D D V P L I E Q V R R T G R A V I V H E A S T F  
UniRef90\_J6LAT4 H G L A T T V A D A R F A K P L D D I D L L T R L A R E H E V L I T V I E E G S V I  
UniRef90\_Q7WL37 G Q I D A T T V A D M R F V K P L D D R E L V L R E L A A R H E D A L V T I E E A A I M  
UniRef90\_A1URW6 G I S T T V A D A R F A K P L D D K D L M R R L A R E H E V F I T I E E E G A I  
UniRef90\_UPI00036F2939 I S V E V F D P R S I Y P F D D W A G L T A S L E R T R R L V V I D D S N R T  
UniRef90\_UPI00046EC564 R G I S V S I V N A R F I K P L D D E E M L D E S F A A A T G K P I V T V E D S A V L L A  
UniRef90\_S0FJW1 G L S V R V V N M S T I K P V F D D E Q I I V E S A K R T G A V V V A E T A G N M  
UniRef90\_UPI0004761946 H G I S A E I I D A R T L V P F H Y E K V L E S V R K T G R L L L V S E E A S E R  
UniRef90\_X0WI22 H D I E A T V V N S R F V K P L D D E A L L E D L A G R D A P V V T T M E E N G V L A Q  
UniRef90\_G5IBU2 D I S C T L V N S G R F I K P I P L D D A E M I D R I A A T H D Y V V V T M E E N L L Q  
UniRef90\_A1AN93 L G V R V G V V N A R F I K P L D D A G A I V K A A S G A Q A V I T V I E E E H S P F A  
UniRef90\_R9MTI3 E E G Y N P G H I N L R F V K P L D D A G E I L Q R I A C E Y A Q H I T I T I E E D G S I F A  
UniRef90\_UPI0004770D9D K G I S T T V V C F G S I K P L D D E Q L I V G M A R D H K V L F S V I E E E H S V I  
UniRef90\_K2APG0 K E I G A T T V A D M R F V K P L D D E A S L I R Q L V Q D H D V I V T V I E E E N S I T  
UniRef90\_E3BPR8 F G L S T T V A D A R F A K P L D D E A L I R D L A T N H E V L V T V I E E E G A I  
UniRef90\_F8J9V4 G L P T T V A D L R F A K P L D D T A L I R K L A A T H D V L V T V I E E E G A I  
UniRef90\_M2TBU8 G I D A Q S V I N M H T I K P L D D E A L V L K E A K K T G R V Y T V I E E E H S I V  
UniRef90\_C7GDL7 G I S C S V I N M H T I K P L D D D G A C L E Q C A K H K L V T I E E E H S I V  
UniRef90\_R5JZ63 Q G I E A T V V N A R F A K P L D D T E L I P L A E K G R V V T L I E E E G C L P  
UniRef90\_K8GQE9 G I S V S V N A R H T I K P L D D C A L V D Q L A S E C G C I I T A E D H S V I  
UniRef90\_B3T699 E G I F A T V I N A R F V K P L D D Q T L L A K A A G L K R I I T V I E E H V L A  
UniRef90\_S0FXE1 K G L N L T L I D A R F C K P L D D E N L M W N T A K N H E V V I S I E E E G S  
UniRef90\_Q4PJA3 Y K G R V E L L D L R S L H P L D D H D A M N L L C Q R H K R V L I T I E E S I  
UniRef90\_UPI000374EB04 N G I S V K I V A D A R F A K P L D D T D L I A Q L T A N H E A L T V I E E Q G A E  
UniRef90\_A8LQ19 R G I L G V T I A D A R F A K P L D D T D L I A Q L T A N H E A L T V I E E Q G A E  
UniRef90\_A0A024PJZ6 E G R S I K V V N A R Y I K P L D D E R G M L H D L M K S R M P I V T V I E E A V L K  
UniRef90\_M7TWX1 G I D T Q V V D M W S I K P L D D D E R A I L D S S K K T G V V I T I E E E H S I  
UniRef90\_I0HPS3 E K L G A T V V D M R F V K P M D E A A L V L I E M A R R H E A L V T V I E E G C V M  
UniRef90\_H1BP98 P T V I S M S I K P F D E A A L L E T A K S C G A I I T V I E E H S V I  
UniRef90\_UPI0003706974 Q G I S C R V I S H S I K P F D E A A L L E T A K S C G A I I T V I E E H S V I  
UniRef90\_G5H7H4 E G I S V L H A D L R F A K P L D D E G L L H R T I G R E F R R V I T V I E D G G V V N  
UniRef90\_B5E113 E G V L D L A V M N R S I K P L D D R D L L A S L A A T R G R L V T A E E N V L Q  
UniRef90\_UPI00045E6403 M G V Y C A V I N D L R S I K P L D D D T L A A S L K R T G R L V L D T N G A A T  
UniRef90\_G1WJG5 E G I S A E V V D L M S I K P L D D E E T I L A S A A K T G V V L T V I E E H S V Y  
UniRef90\_UPI0003620D5F E G W S V G L V N D M P T I K P L D D R D A I L A V A N E S A V L M T I E E A H N I Q  
UniRef90\_N4WST0 Q Q I S V K I V N A R F M K P L D D D E M L H T I F Q N S A P L T I E E A V L Q  
UniRef90\_T2JKC9 G I K S T V I N A N F I K P L D D E K E L I K N F V K K T G Y K I V T V I E D N V I K  
UniRef90\_C3KXC2 G L N L R V I D L R F I K P I D E E L L V K A A E E T G A V V T A E D H N I I  
UniRef90\_M5E1N8 E G S S A V V N M H T I K P I D D K D I V L K M N E S C K A I V T V I E E H S V I  
UniRef90\_R6JQW0 K G L S A S T V I D L R F A K P L D D E A L I R R M L T T H E V A V I T I E E E G A I  
UniRef90\_J2D5P8 K G I T P S V I A D A R F A K P L D D R E M I L D V A G H H E A L I S I E E G A V  
UniRef90\_A3X722 L D I S V T V A D A R F C K P L D D T S L I R Q L A K N H A A M I T V I E E E G S I  
UniRef90\_C1MKH6 E R L G A S V A N M R F V K P L D D I J E L L R E I A A R H V A I V T V I E E G C T M  
UniRef90\_A0A024ICX3 E K L D A T V V N M R F V K P L D D V A L I A E I A A S H S L L V T V I E E N T L M  
UniRef90\_C6X9M4 Y G V S T E V I D A R F L N P L D D N Y A P L V I E S V K K T G K V V L A S D A C E R  
UniRef90\_I018D9 K G Y S V G I V N A R F I K P L D D Q T L L S Q I S K A K H I I T I E E N V L A  
UniRef90\_D6GQF0 G V E A G V F D M R F V K P L D D E K T L L H E V F S Q Y K K I V I T I E E D G C L M  
UniRef90\_E4TNL4 G L E V E V I D P R S L S P L D D E D T I L A S V E K T N R L I V I D E A N P R  
UniRef90\_J8NU66 E G L S V T L A D A R F A K P L D D T E L V M Q L A E K H R A L I T V I E Q G A E  
UniRef90\_A6FQ00 K G I N P T I V N A R F V K P F D D T V M I E E L S R T H D L I V T I E E N V M S  
UniRef90\_R6R0S0 Q G I E A R V L D M H T V K P L D D E A V A A A A R E T G G I V V A E E H L H H  
UniRef90\_D1C4M6 L S V G V V N A R F V K P L D D T E M V E K S M A D G R F V V T L I E E G T I V  
UniRef90\_M5T9Q4 G V E A T V V N A R F V K P L D D T E L I L P L A Q R L G K V V T L I E E G C L M  
UniRef90\_UPI000382ABF0 Q G I S V K L L D M H T I K P L D D R E A V V D C L N I G K I I T V I E D H N I L  
UniRef90\_D5E2P8 S G I T A T V A D M R F C K P L D D M P L L R Q M A R S H P V M I T V I E E N G I  
UniRef90\_I0YVF0 L G I S I K V A N L S V K P I N I S A L I K E M S N T K G V I T V I E E H N I Y  
UniRef90\_X0ZDQ7 G L S T T V A D A R F A K P L D D L D L L T R L T R E H E V L I T V I E E G S V I  
UniRef90\_UPI000477962C G V S A E V I D M F C I K P L D D V E L V L A E A A G K R A L V T F E N H S I V  
UniRef90\_U2U0I2 E G I S A G I L N D R F A K P M D V R L A D I A A V S G R A L V V E N N V R M  
UniRef90\_D8FB00 M G L S T T V A D A R F A K P L D D L D L I R Q L A R H H E V L V T V I E E G S C  
UniRef90\_E31B7

UniRef90\_UPI000382A391 G G F G S A I I E F M V D K G Y A S 100 K V K R L G L I P D E V V E Q E L Q R Y  
UniRef90\_UPI0003738163 G G L G E A V A G I V A E E A P C M V H R L G M Q D V F G E S G Q A G  
UniRef90\_Q65HJ2 G G F G S S I L E F A H E H Q S Y S P L I D R M G T L P D D Q F I E H D A M Y A D  
UniRef90\_B6B3Q8 G G F G A M V L H Y L A G E G L L D L A I R T M T L P D R F I P B D A M Y A D  
UniRef90\_UPI00047E1A80 G G F G S S I L E F A Q E H N Y T Q T I S R T G I P D K F I E H G L L E E  
UniRef90\_H6L2L5 G G L G E S I A G L L A R K T P T P I E M V G V Q D S F T V T E L M T K E  
UniRef90\_H5WJY2 A G F G A E V A A S T A E A T G A R V A R L G A P R I P V G Y A L E E Q E  
UniRef90\_UPI0004791B8E F G V G A E L A A R A V S D G F W H L D A P V M R V A P T E P A P Y A P S L E R V  
UniRef90\_L8JPY0 G A S A F M M Q K V L E E Q N G Y K C D S K P I T L T G K E H R P A Y A G D Y F  
UniRef90\_S0EZM6 C G A S A E I V T Q V A E R L Q G E Q T L R F A R M G Y Q P V P C P P L L E E L  
UniRef90\_UPI000410A7C3 G G F G S A V L E F M N A H G Y K A S L R I L G I P D R L V E H E L H R E  
UniRef90\_M7ZI82 G G L G A S E L R S A I I D N F W D E L D A R P V C L S S Q D V P T P Y A L E K A  
UniRef90\_UPI00036DF535 G L L A S E V V A T A A E E Y S E L F R D P P I R V T R A E G A V P F S L E K A  
UniRef90\_K4LD57 G G L G S A V A E V L G E N C P V P L E R V G I R D R F S P D K L L E A  
UniRef90\_UPI00034B0CBA G G F G S A V L E F F H D H G Y H N I T V K R M G I P D K F I E H A Q L L E E  
UniRef90\_UPI0002C2E8C9 G G F G S H V A Q F F S L D G Q L D G K I K W R P I V L P D N Y I E H A Q L A I  
UniRef90\_H1PWY3 G G L G S A V S E F L S E V H P T K V K K L G I Y D K F A N E L L E K Y  
UniRef90\_UPI0003694540 G G L G D A V A E A F S D G R P A P R L A R L A V Q G M P A S A T P E E Q L H A  
UniRef90\_UPI0003F9C279 C G M G A E I L A T A V I E M L H T A P K R V T R P D V G A V P L L E E L  
UniRef90\_G9A1W8 G G F A S H V L H F L A E E G L L D G G L K V R P M V L P D I W M P E S M Y A A  
UniRef90\_I3CFV4 G G A G S A V S E Y L H T Q A Q V V P V L Q L G L P D E F Y A E H Q M L J A D  
UniRef90\_UPI00037C5156 G G L G S A V A E V V E N A P V P M K R L G V P G L Y A P T G S A E  
UniRef90\_D7JH29 G G F G S A V L E F F A D N G Y R V Q T K R L G L P D T F V E H E L Y S M  
UniRef90\_I6ZTB6 F S V A S E V S A L I H E Q C F G D L A V P V Q R I N G E D V P T P Y S V E R M  
UniRef90\_D3F8D1 G G F G A E V A A H V H E H C F D V L D G P V F R L G G A D V R M P S A L Q R A  
UniRef90\_R5UHQ0 G G F G E H V A A F L E E E A L H T K V L R M A T P D C F V E S H E L K K A  
UniRef90\_E4N2V5 C G L G G E I A T A A S E M R L L A P P R R I T R P D G P F A P A L D R A  
UniRef90\_D5SPC2 G G F G S V L E A A S Q R G V S C D R L K I L A L P D R F V E H A L L A E  
UniRef90\_UPI0002D2AAA8 G G F A S H V L H F L A K E G L L D S G L K V R P L V M P D E F T D H A M Y A D  
UniRef90\_UPI00038138E6 G G L G S A V S E F L S Q E N P M R I T K L G V N L P Y P R E L I E K Y  
UniRef90\_G7GME5 A G L G A E I A A T I T E R C F R E L N A P V L R V G A Y N L P Y P A V E E K  
UniRef90\_J6LAT4 G G F G S F C L Q A L A E A G L L D R G L K V R P L V L P D C Y I D H A M Y A K  
UniRef90\_Q7WL37 G G A G S A V L E T L A E A G V T L L P V L Q L G L P D A F I D H A L L A G R  
UniRef90\_A1URW6 G G F G A H V L Q F L A Q E A G L L E H G L K V R T L R L P D E Y L P E K I L S R  
UniRef90\_UPI00036F2939 C G L G A E I I A T M V E Q M T L A A P P K R V T R P D G P F A R S L D L A  
UniRef90\_UPI00046EC564 G G F G S A V L E Y V A H D T G V S A P I Y R M G I N P D Q F I E H A L L A E  
UniRef90\_S0FJW1 N G L G A Q V C R V Y C R E R P V P V R I V G I N D S F T E Y E L M H K  
UniRef90\_UPI0004761946 G S F A M T L S S N I T R F A Y G D L K A A P R V L G S P N W I V P A E M E S T  
UniRef90\_X0WI22 G G F G S A V R E Y I H D E T D G H I P V V S L G A L P E D D F V E H A L L E L  
UniRef90\_G5IBU2 G G Y G L Q V T A Y L H E H Y P Q V K V N I A L P D D A Y V E H L L R E D  
UniRef90\_A1AN93 G G F G S A V L E L L N D N M Q D V I V R R L G I P D R F V E H G L R Q D  
UniRef90\_R9MTI3 G G L G S M V S Q V Y V G A E C S P R K V T N M A L P D A P V S K E V F D Y  
UniRef90\_UPI0004770D9D G G V G S A L L E Y V S D H H L S I P L T R I G V S D H F V K Q S L Q H A  
UniRef90\_K2APG0 G G L G G A I A E V L T A Q Y P A K L H R L L G L Q D E F A P Y V L Q R H  
UniRef90\_E3BPR8 G G A G S G V V E F M M K E K L I K P V L N L G L P D K F I E H E A L Y E E  
UniRef90\_F8J9V4 G G F G S H V L Q F L S N E G L L D R G L R V R P K V L P D V F I P E A M Y E A  
UniRef90\_M2TBU8 G G L G A H V L T L A S D E G L L D A G L K I R T M R L P D I F Q P K R Q Y E E  
UniRef90\_C7GDL7 G G L G S A V A E L L G E K C P T K I R I G V K D V F G E S G P A K E T L L H K Y  
UniRef90\_R5JZ63 G G L G G A I A E H L K A G Y A N V P P Q L F L G I T D E Y K A T G A R A F  
UniRef90\_K8GQE9 G G F G S A V A E A L L D A D I S V S L T R I G V P D I L V D H A S P D Q  
UniRef90\_B3T699 G G L G G A V A E H L S V G Q A V P L E M V G V R D R F S P S E L M S E  
UniRef90\_S0FXE1 G G F G S A V L E L F M D H G L T D L H V K R I G I D D C F V E H V L K K E  
UniRef90\_Q4PJA3 I G G F G S H L S K F L S E K G L L E K I K F R S M T F P D K F I P D L M Y Q I  
UniRef90\_H6RGL7 C N F M L G I A G R L Q R D N F N Y L D A P I E I V G S V D T P I P S D L E F S  
UniRef90\_UPI000374EB04 G G F G S A V L E F A S D H G Y D S S L V D R M G I P D Y F V E H S L L E E I  
UniRef90\_A8LQ19 G G F G A M V L H W L A R T G R L D G T L K I R T M T L P D R F I P A D M Y H D  
UniRef90\_A0A024PJZ6 G G F G S S I L E F A E E N G Y T S Q W I K R I G V P D R F I E H G L W E E  
UniRef90\_M7TWX1 G G L G S A V A E V L A E K G F V G K F K R I G V K D V F C P H D L L E K  
UniRef90\_I0HPS3 G G A G S A V L E C L A A A G A T T P V L Q L G I P D R F V E H G L L S M  
UniRef90\_H1BP98 G G L G S A V S D V V A S S A H A C I V S V K H I G V Q D T F G E Q A L F E K  
UniRef90\_UPI0003706974 G G L G E L C A G V L M Q K I L S V P F K I V G I P D E Y T G S Q L E Q H  
UniRef90\_G5H7H4 G G V G A A V L A F M N R H G Y P C R I T M L G V E D R F V A H Q L K E M  
UniRef90\_B5E1I3 G G F G T S I L E L L E E C G V T G V R V R L G Y P D S F V E Q E L K A A  
UniRef90\_UPI00045E6403 G S V A G E I I A R L T M E H W S F R C P P Q R L A P D C P E P T S Y S R A  
UniRef90\_G1WJG5 G G M G S A V A E L L A E K H P C R V S R L G M T G F G Q S G N A A E L L A H  
UniRef90\_UPI0003620D5F G G L G G A V A E V L T D E G A G V R L K R H G F N D E Y P P T H L Y R H  
UniRef90\_N4WST0 G G F G S A I L E F A E T H Q Y A P R L K R M G I P D T Y V E H L L E E L  
UniRef90\_T2JKC9 C G M A G E I I A S V T E S C P M G T L L S P L R L T L P D A P A P T S L E Q I  
UniRef90\_C3KXC2 G G F G S L V L Q Y I S E L K A N N T V L N L G F K D K F P H L L Y K L  
UniRef90\_M5E1N8 G G L G G A V S E V L S T K M P V P V E L I G V Q D C F G P E E L F T E  
UniRef90\_R6JQW0 G G L G S A V A E V L S A G H N G A K F A M V G I E D K F K P D Q L F E A  
UniRef90\_J2D5P8 G G L G A H V L T L A S D E G L L D A G L K I R T L R L P D I L F K P D K Y A D  
UniRef90\_A3X722 G G F G S H V A Q L L S D E G V F D R G F K F R S M V L P D I L F I P A D M Y E T  
UniRef90\_C1MKH6 G G F A S H V L Q F L A L D G L L D G N L K V R P L T L P D R P I E H G A F E M  
UniRef90\_A0A024ICX3 G G A G S A V M E A L Q A E G L Q L P V L A L G L P D D F I E H G L L A L  
UniRef90\_C6X9M4 G G A G A V M E A L Q Q I N P Q V A T L S L G L P D T F I D H T M L A E  
UniRef90\_I0I8D9 G S F L H T M A S N L T Q L A F D Y L D G P V V V G A R N W I T P P A L E E M  
UniRef90\_D6GQF0 G G F G S A V S E L L K T N G D T D C S M L S I G I P D E F V P H L L K K E  
UniRef90\_E4TNL4 G G F G S A I L E F M A E N D Y S S Q V K R L G I P D R V V E H E L H A E  
UniRef90\_J8NU66 C S I A T D I A A I V A D K  
UniRef90\_A6FQ0 G G F G S L V M H A L A R E N G G F D R G L A M R N V C L P D R F I D Q A S P A A  
UniRef90\_R6R0S0 G G F G M S V L S Y V N S N R M K V K V L N I A L E P D K Y I E H E L K E A  
UniRef90\_D1C4M6 G G L G S V V A M A V A R L H P C N M G F V D L G D T Y A Q S G T G A E L L R E  
UniRef90\_M5T9Q4 G G F G S A F L E S A A D Q R L D T R Q I H R L A L P D V L V E H D L L A D  
UniRef90\_UPI000382ABF0 G G F G S A V T E A L A E N N V L V P V K R F G V P D I L V E H A K P  
UniRef90\_D5E2P8 N G L G S A V C E V V A E E G K G T V R R I G V Q D Q F A P Y E L L E L  
UniRef90\_I0YVF0 G G F G S H V M H N I A L E G L L D G N L K F R P M T L P D R F I E H D Q L A E  
UniRef90\_X0ZDQ7 C G F G S L L A R I S E Y F P M P M K F I G I E S F G E K L L N F  
UniRef90\_UPI000477962C G G F G S H V L S A L A E L G A L D R G L K V R T M T L P D R Y K P D V M Y R D  
UniRef90\_U2U0I2 G G L G E A V A A T L M E G G I A V P F K R H G V N E R F T E Q E F L Q A E  
UniRef90\_D8FB00 G G L G S G V L E L F N D M D V R G I R V K R M G L P D L F V E P Q L L R K N  
UniRef90\_E3I1B7 G G F G S Q V L E F L A R D G L L D H G L K V R P L T L P D T Y I P E A M Y E A

UniRef90\_UPI000382A391 S G F C P D G I E K E V L E L I G  
UniRef90\_UPI0003738163 E L M D A K N I I E K A R K L M  
UniRef90\_Q65HJ2 I G M T K E D V I R R L R  
UniRef90\_B6B3Q8 A G L T A T D I A A T A L Q A A N  
UniRef90\_UPI00047E1A80 I G M T T D Q V V D K L M T L L  
UniRef90\_H6L2L5 Y G L D A V N V I E A A K K V L L D  
UniRef90\_H5WJY2 S R L T P R K I A L A A R A L L  
UniRef90\_UPI0004791B8E W L P G R Q A I A D A L H A I V  
UniRef90\_L8JPY0 S K P N T E E V F D K V Y A L M A  
UniRef90\_S0EZM6 F Y P N P Q T I A A M A A R L V  
UniRef90\_UPI000410A7C3 C A Y D A Q G I A D A V R D M M K  
UniRef90\_M7Z182 T V V Q P A Q I V A A V E E I  
UniRef90\_UPI00036DF535 I V P S A N D I R S A L E R F L D  
UniRef90\_K4LD57 F G L T A P H I A Q  
UniRef90\_UPI00034B0CBA I G L T S V N V A D Q M M T M L  
UniRef90\_UPI0002C2E8C9 A G L T G H H I A A T A L S L L G  
UniRef90\_H1PWY3 E L T A A K L V S M V K E N M  
UniRef90\_UPI0003694540 A G I D A E S I A A A V K L L V E  
UniRef90\_UPI0003F9C279 L Q P T K E Q L A E A I R T V L K  
UniRef90\_G9A1W8 A G L D R A G I V S T V F K A L G  
UniRef90\_I3CFV4 C G L D V A G I V R S V T R  
UniRef90\_UPI00037C5156 F L L D E  
UniRef90\_D7JH29 L G L D T E G I A N S I R E M I  
UniRef90\_I6ZTB6 A F P T Y L D V V S S V  
UniRef90\_D3F8D1 L V P G A A A I A Q R G R E L L G  
UniRef90\_R5UHQ0 L G L D A D S V T E K I  
UniRef90\_E4N2V5 L Q P G R D Q L R Q A L A S V M K H  
UniRef90\_D5SPC2 C G L S V S G I V A T A L E M  
UniRef90\_UPI0002D2AAA8 A G L D S A G I V H A V F A A L G  
UniRef90\_UPI00038138E6 N L S I K G I V N T A M K I L K  
UniRef90\_G7GME5 F L P D V D R V L E A V D R S L F F  
UniRef90\_J6LAT4 A G L D R R G I V A K V F E A L G  
UniRef90\_Q7WL37 L G L D A A G I E R A I R  
UniRef90\_A1URW6 V G L D A K G I I N A V F T S L G Y  
UniRef90\_UPI00036F2939 V Q P T R A Q L R A A V E E V A K  
UniRef90\_UPI00046EC564 I G M T P G A L A D  
UniRef90\_S0FJW1 Y R I D E N S I V K A A L E S V N F  
UniRef90\_UPI0004761946 Y F P Q V E D I L D V V  
UniRef90\_X0WI22 L G L T P A R I V R R V L E M M  
UniRef90\_G5IBU2 L G I D S D S I I K T I K  
UniRef90\_A1AN93 L G I D A E G I  
UniRef90\_R9MTI3 Y K L T A E G I A E K A K E A L K  
UniRef90\_UPI0004770D9D Y G M D A E S I I N K A K E V  
UniRef90\_K2APG0 Y K L D K E G I V G S V I E R L K  
UniRef90\_E3BPR8 L G L D A K G I E K S I Q N Y M  
UniRef90\_F8J9V4 A R L N A S G I V E T V F A A L G  
UniRef90\_M2TBU8 A G L D A P A I V R K V L E A L R H  
UniRef90\_C7GDL7 E L D A E G I A K R I M E  
UniRef90\_R5JZ63 Y G L T A V Q L A E T I K  
UniRef90\_K8GQE9 S G L T P A Q M A E R I  
UniRef90\_B3T699 F G L T S T D I Q N A A R R A M E  
UniRef90\_S0FXE1 Y Q I D  
UniRef90\_Q4PJA3 A G L D S K A I E E K V Y E V L D  
UniRef90\_H6RGL7 L L P N A A K V R A K I D K L F K Y  
UniRef90\_UPI000374EB04 E F T T E H V V T R L Q K R V N  
UniRef90\_A8LQ19 A G L T A R H I A G Q V L H L M G  
UniRef90\_A0A024PJZ6 I G L T R E N I V Q Q M K Q L I  
UniRef90\_M7TWX1 Y S L N S K Y L I K T A K E F V K  
UniRef90\_I0HPS3 L G L D A A G I E A S I R K  
UniRef90\_H1BP98 Y G I N A K A I V K A V Q D  
UniRef90\_UPI0003706974 Y G I S A E G L F E V G N E L L E  
UniRef90\_G5H7H4 C G Y D A P G I L R A T R E A  
UniRef90\_B5E113 Y G L D A A G I A R S I R E A  
UniRef90\_UPI00045E6403 F Y T G A A D I L R S V G R M L D  
UniRef90\_G1WJG5 Y G L D A A G I V A R V H E V L G  
UniRef90\_UPI0003620D5F Y R L D A A G I R A V A L E Q L  
UniRef90\_N4WST0 Q I T K D E A I L Q M K Q L L N  
UniRef90\_T2JKC9 Y Y L K V E E I C Q K I K M L L D  
UniRef90\_C3KXC2 E G L D P E G I V K N I I K I I  
UniRef90\_M5E1N8 Y C M N T E H I V E A V K R V V K  
UniRef90\_R6JQW0 Y G L T A A N V A A K A K E L L K  
UniRef90\_J2D5P8 A R L D A D A I V D T V L T A L R H  
UniRef90\_A3X722 A A M N A P Q I E A K V L E V L G  
UniRef90\_C1MKH6 Q L L E A S Q I A S S A L S L L G H  
UniRef90\_A0A024ICX3 Q G L D A A G I E R S V R E  
UniRef90\_C6X9M4 C G L N A E G I I A S I E K K L  
UniRef90\_I018D9 F F P T K E W I I D A V H E  
UniRef90\_D6GQF0 L Q L D E D G I L Q Q L S S F L E  
UniRef90\_E4TNL4 C N F D P E G L F T T A L Q M V E H  
UniRef90\_J8NU66  
UniRef90\_A6FQ00 M Y A D A  
UniRef90\_R6R0S0 Y G L S P E K I C A Q I E  
UniRef90\_D1C4M6 Y G L T A D R I V E E A T R I V  
UniRef90\_M5T9Q4 A S L S A E G I A N V C R S A  
UniRef90\_UPI000382ABF0 S K A D  
UniRef90\_D5E2P8 N G I T V E N I I K T A K E L I  
UniRef90\_I0YVF0 A G L S A S H I A A T A L T L L G  
UniRef90\_X0ZDQ7 Y G L N K E K I M E K I K N L L  
UniRef90\_UPI000477962C A G L T A E G I M R K V F E V L G  
UniRef90\_U2U012 F K L T A A D L V E T V E G L L  
UniRef90\_D8FB00 L G L D A E G I A K E A R D L  
UniRef90\_E31B7 A G L N



UniRef90\_G8ARS3  
UniRef90\_N1V5W2  
UniRef90\_UPI0003669F3A  
UniRef90\_F1W0B7  
UniRef90\_B9T619  
UniRef90\_UPI0003B64FAA  
UniRef90\_R5KY02  
UniRef90\_D5EHN3  
UniRef90\_T0E0J4  
UniRef90\_U1L3U2  
UniRef90\_W0PA07  
UniRef90\_F4C400  
UniRef90\_Q0G0V9  
UniRef90\_R7BM11  
UniRef90\_B8EPA0  
UniRef90\_UPI00031C92C1  
UniRef90\_B5JS03  
UniRef90\_UPI00031450D4  
UniRef90\_X5DCH3  
UniRef90\_R6T4A2  
UniRef90\_F8G2X6  
UniRef90\_UPI00047DB41D  
UniRef90\_N8Y4N9  
UniRef90\_Q3AAN0  
UniRef90\_D1B8W9  
UniRef90\_R5RS98  
UniRef90\_R5Q277  
UniRef90\_UPI00041B674C  
UniRef90\_W0F1C9  
UniRef90\_F9Z4J8  
UniRef90\_W8Q4X1  
UniRef90\_UPI00037718E7  
UniRef90\_L1NVR8  
UniRef90\_J4VPF6  
UniRef90\_K2D0K9  
UniRef90\_I0DSC6  
UniRef90\_G2NKG8  
UniRef90\_X1J477  
UniRef90\_UPI00047CF474  
UniRef90\_A6CG29  
UniRef90\_R7GFJ4  
UniRef90\_UPI0003B47F93  
UniRef90\_F8N7U5  
UniRef90\_UPI0003638609  
UniRef90\_L0INB4  
UniRef90\_S3ZV04  
UniRef90\_D3SDW0  
UniRef90\_H3MIY8  
UniRef90\_Q8D357  
UniRef90\_A8UNW2  
UniRef90\_W7C7B7  
UniRef90\_I3ZKA7  
UniRef90\_UPI000381501E  
UniRef90\_Q0S9Z2  
UniRef90\_R4PJY2  
UniRef90\_UPI00040E1537  
UniRef90\_K1YKX5  
UniRef90\_UPI00045EA793  
UniRef90\_A0A014LCU7  
UniRef90\_Q6PHI8  
UniRef90\_UPI000473DA26  
UniRef90\_UPI000365B168  
UniRef90\_UPI000370E271  
UniRef90\_S6ACY9  
UniRef90\_E2SAS1  
UniRef90\_I0QZY3  
UniRef90\_B9JAL7  
UniRef90\_W0ZAF5  
UniRef90\_UPI00047B15F3  
UniRef90\_R1GXK3  
UniRef90\_H6LCW4  
UniRef90\_UPI0002C2EC9E  
UniRef90\_J2IFN6  
UniRef90\_R7LKC6  
UniRef90\_C0BJS0  
UniRef90\_A1TNR1  
UniRef90\_U3QDF1  
UniRef90\_UPI0003645AB9  
UniRef90\_E8R1F0  
UniRef90\_U1LSF6  
UniRef90\_K6WUY6  
UniRef90\_G6A225  
UniRef90\_UPI0003F4C60C  
UniRef90\_W0JIB9  
UniRef90\_UPI00037CB06E  
UniRef90\_K6KFB4  
UniRef90\_F9U7L1  
UniRef90\_UPI0002EF39F8  
UniRef90\_H2BVJ7  
UniRef90\_T1AV00  
UniRef90\_UPI00046342B1  
UniRef90\_UPI0003955E52

1 10 20 30 40

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

UniRef90\_G8ARS3  
UniRef90\_N1V5W2  
UniRef90\_UPI0003669F3A  
UniRef90\_F1W0B7  
UniRef90\_B9T619  
UniRef90\_UPI0003B64FAA  
UniRef90\_R5KY02  
UniRef90\_D5EHN3  
UniRef90\_T0E0J4  
UniRef90\_U1L3U2  
UniRef90\_W0PA07  
UniRef90\_F4C400  
UniRef90\_Q0G0V9  
UniRef90\_R7BM11  
UniRef90\_B8EPA0  
UniRef90\_UPI00031C92C1  
UniRef90\_B5JS03  
UniRef90\_UPI00031450D4  
UniRef90\_X5DCH3  
UniRef90\_R6T4A2  
UniRef90\_F8G2X6  
UniRef90\_UPI00047DB41D  
UniRef90\_N8Y4N9  
UniRef90\_Q3AAN0  
UniRef90\_D1B8W9  
UniRef90\_R5RS98  
UniRef90\_R5Q277  
UniRef90\_UPI00041B674C  
UniRef90\_W0F1C9  
UniRef90\_F9Z4J8  
UniRef90\_W8Q4X1  
UniRef90\_UPI00037718E7  
UniRef90\_L1NVR8  
UniRef90\_J4VPF6  
UniRef90\_K2D0K9  
UniRef90\_I0DSC6  
UniRef90\_G2NKG8  
UniRef90\_X1J477  
UniRef90\_UPI00047CF474  
UniRef90\_A6CG29  
UniRef90\_R7GFJ4  
UniRef90\_UPI0003B47F93  
UniRef90\_F8N7U5  
UniRef90\_UPI0003638609  
UniRef90\_L0INB4  
UniRef90\_S3ZV04  
UniRef90\_D3SDW0  
UniRef90\_H3MIY8  
UniRef90\_Q8D357  
UniRef90\_A8UNW2  
UniRef90\_W7C7B7  
UniRef90\_I3ZKA7  
UniRef90\_UPI000381501E  
UniRef90\_Q0S9Z2  
UniRef90\_R4PJY2  
UniRef90\_UPI00040E1537  
UniRef90\_K1YKX5  
UniRef90\_UPI00045EA793  
UniRef90\_A0A014LCU7  
UniRef90\_Q6PHI8  
UniRef90\_UPI000473DA26  
UniRef90\_UPI000365B168  
UniRef90\_UPI000370E271  
UniRef90\_S6ACY9  
UniRef90\_E2SAS1  
UniRef90\_I0QZY3  
UniRef90\_B9JAL7  
UniRef90\_W0ZAF5  
UniRef90\_UPI00047B15F3  
UniRef90\_R1GXC3  
UniRef90\_H6LCW4  
UniRef90\_UPI0002C2EC9E  
UniRef90\_J2IFN6  
UniRef90\_R7LKC6  
UniRef90\_C0BJS0  
UniRef90\_A1TNR1  
UniRef90\_U3QDF1  
UniRef90\_UPI0003645AB9  
UniRef90\_E8R1F0  
UniRef90\_U1LSF6  
UniRef90\_K6WUY6  
UniRef90\_G6A225  
UniRef90\_UPI0003F4C60C  
UniRef90\_W0JIB89  
UniRef90\_UPI00037CB06E  
UniRef90\_K6KFB4  
UniRef90\_F9U7L1  
UniRef90\_UPI0002EF39F8  
UniRef90\_H2BVJ7  
UniRef90\_T1AV00  
UniRef90\_UPI00046342B1  
UniRef90\_UPI0003955E52

50 60 70 80  
G L S T T V A D A R F A K P L D E D L V R R L A L E H E V L I T I E E G S V  
D G H S V E V V D L R S I K P L D D S E T L V R A S V Q K T G R L I V A H E A P T F  
UniRef90\_UPI0003669F3A E R L I R A R V D L R S I K P L D D S E T L V R A S V Q K T G R L I V A H E A P T F  
UniRef90\_F1W0B7 E R L I R A R V D L R S I K P L D D S E T L V R A S V Q K T G R L I V A H E A P T F  
UniRef90\_B9T619 N G I T A T V A D A R F F C K P L D D G E Q L V R Q L A Q E H E L I T V E E E G S  
UniRef90\_UPI0003B64FAA N G I T A T V A D A R F F C K P L D D G E Q L V R Q L A Q E H E L I T V E E E G S  
UniRef90\_R5KY02 T D I S I A H Y D M R F V K P M D E T K L E E I L G R K D F H K I V T M E E D G N V A S R A T  
UniRef90\_D5EHN3 G I Q A G L V N P R F F A K P L D D T S E L K R T S G Q V K L I V T V L E E D D H I R T T  
UniRef90\_T0E0J4 V G I N A T T L L V N A R F F V K P L D D E N M I T E Q L A A S H K S T L V T V L E E D D N V A L T M  
UniRef90\_U1L3U2 I N A T T L L V D M R F F V K P L D D E A L L L E L M Q S H Q Q L V T V L E E E D G A I M G S  
UniRef90\_W0PA07 N A T T L V D M R F F V K P L D D E A L L L E L M Q S H Q Q L V T V L E E E D G A I M G S  
UniRef90\_F4C400 G L S T T V A D A R F A K P L D D T D L V E R L A R N H E V L I T V E E E D G S  
UniRef90\_Q0G0V9 Y G L S T T V A D A R F A K P L D D T D L V E R L A R N H E V L I T V E E E D G S  
UniRef90\_R7BM11 E G V H A T T V T S V H T I K P L D D S E Q L V V D M A Q S S R R L F T V E E E H S I T  
UniRef90\_B8EPA0 L G V S T T V A D A R F A K P L D D E A L L M R Q L A S S H E A L T T I E E E G S V  
UniRef90\_UPI00031C92C1 G L S T T V A D A R F A K P L D D E A L L M R Q L A S S H H G V L V T I E E E G S V  
UniRef90\_B5JS03 G A S L V N M R F V S P L D D E Q R L I E M A E T H D L I I T V E E E N G V I A  
UniRef90\_UPI00031450D4 V G L S E A E V I D P I W L S P L D D I D T I V A S V E K T G R L C V V D D E D N G W A T  
UniRef90\_X5DCH3 K G I S I E V I D V Q T L M P F D D E H I I E S I K K T G K V I F M D E D N V P G  
UniRef90\_R6T4A2 T G I N V A V Y D L R Y I K P I D E D I L E R A A K C G K V L T V E E E G C I K  
UniRef90\_F8G2X6 G R S V G V I D M A S I K P L D D N E T L L A Q A A A R S K R M M T V E E E H S N V L  
UniRef90\_UPI00047DB41D H N I S C K I V S H T I K P L D D N E L L L A S A A N G K P I T V E E E H S I Y  
UniRef90\_N8Y4N9 H D L A V R V I N M R F V K P L D D E Q I I R E Y A D K T S L F V T V E E E H A V M A  
UniRef90\_Q3AAN0 E G I S L E T V I D A R F V K P L D D A E Y K L L E E V G S L H K P V I T V E E E N V V A  
UniRef90\_D1B8W9 G I E A E V I D C Y S V R P L D D A E Q V V L S V R R T G C C V V A E H S L H  
UniRef90\_R5RS98 T G V T P A I Y N R Y I K P L D D E E L V R D A A S K G M I L T V E E E G C I K  
UniRef90\_R5Q277 G I E A K V D M H T I K P L D D V E A I K E A C Q A K L I V T V E E E G S V  
UniRef90\_UPI00041B674C N L A A T V V S M H T I K P L D D A E L L S A V A R K C K A V L T V E E E H S I Y  
UniRef90\_W0F1C9 L V A L V I D M R F L K P L D D E E S I L H T V F Q K F S K I I T L A E D G H T I Q  
UniRef90\_F9Z4J8 G I S C E G L Y I N H T I K P L D D E E S I L K S V K K C I I T A E E D N Y W  
UniRef90\_W8Q4X1 N A T T L V D M R F V K P L D D E E L V L E M A A K H Q V L V T V E E E N A I M  
UniRef90\_UPI00037718E7 G H D I V I D V Q S L A P F D D E H D I V K S V Q K T N R L V V D E E D M P G S  
UniRef90\_L1NVR8 E G H S V A H V D L V F A K P L D D E E C L R K L F A S V P N L L V I E E D G C L S  
UniRef90\_J4VPF6 N N I F A R V E N F H T I K P L D D E E S L K N I F S N Y T L V V T I E E E H S L I  
UniRef90\_K2D0K9 E A L N A T V D M R F V K P L D D T P A L L E A L D M V N S H D M L V T L E E E N A I M  
UniRef90\_I0DSC6 D G V S A N V L H L H T V K P L D D T P A L L E A L D M V N S H D M L V T L E E E N A I M  
UniRef90\_G2NKG8 D G L T V D V I N A R F A A P V D R A E L I S L A L D K G K G I T V E E D H R L A M  
UniRef90\_X1J477 G L T V D V I N A R F A A P V D R A E L I S L A L D K G K G I T V E E D H R L A M  
UniRef90\_UPI00047CF474 G L D L G V I N A R F S K P L D D R A E V I H Q A L Q E S G F V I T V E E D G T K I  
UniRef90\_A6CG29 C N I E A D L I N A R F L K P F D D V K T V K E S I L K T K N I V T I E E D G T K I  
UniRef90\_R7GFJ4 G I R C G L S M H T I K P F D D T Q T J L E M A A A K A I V T V E E H S V N  
UniRef90\_UPI0003B47F93 T G W I J A H Y D L R F L K P F D D G D L L A T A I G C K F R K I I T V E E D G V R N  
UniRef90\_F8N7U5 G V R A R V I D L Y S V K P L D D T D T L A L A A R E T G A L V V V E D H H P E  
UniRef90\_UPI0003638609 E N I E A T V I D M A S I R P L D D K E L L G L A L K V N L I V T V E E D H N V  
UniRef90\_L0INB4 P E I V D V E V V D M R W V A P L D D M A T V L E S V S R T G R L V T V H E G S K D  
UniRef90\_S3ZV04 E A L D A T V V S M R F I K P L D D T E L L A R L A S S H E R F V A L E D H A R A  
UniRef90\_D3SDW0 G I Q A Q V V S V P S I R P C D D T S A L L A A L K G C H A V I T V E E E N V N  
UniRef90\_H3MIY8 G I Q A Q V V S V P S I R P C D D T S A L L A A L K G C H A V I T V E E E N V N  
UniRef90\_Q8D357 K G I D A E I I D V Q S L L P F D D L N H D I K S I A K T N R V M V I D E E D V K G  
UniRef90\_A8UNW2 G L S V A V V N P R F V K P L D D R A C I E G Y G R K C G L V I T F E H V L A  
UniRef90\_W7C7B7 G L S V A V V N P R F V K P L D D R A C I E G Y G R K C G L V I T F E H V L A  
UniRef90\_I3ZKA7 N G I S A E V V H T P T I K P F D D A E T V L A E V N T D R L V V T L E E N A H T V  
UniRef90\_UPI000381501E G I S T G V L H V P T I K P F D D A K A V A E F A N S V G R I V T A E N H V V  
UniRef90\_Q0S9Z2 K I Q A R A V L N M H S I K P L D D E A J I T S A A K E T G A I V T A E A S V A  
UniRef90\_R4PJY2 G L S A A V I D M A S V K P L D D R D L I T Y A A K K G K V V T A E D H S V I  
UniRef90\_UPI00040E1537 G Y D V G V L D M H T V K P L D D E E A V L T A A R R S R L L M T V E E H N V L  
UniRef90\_K1YKX5 E G V N I R V I D P F T I K P L D D S A S T I V A S A R A T G R V I T V E E H Y K E  
UniRef90\_UPI00045EA793 D G V S C R V I D L R V I P F H S D S L I N E S V K K T G N L L V I D G G W K T  
UniRef90\_A0A014LCU7 R G I S V T V A D A R F A K P L D D E A L L T Q L A R H H E A L L V E E E G A V  
UniRef90\_Q6PHI8 V E V A A D L I D L R W L D R I D W D T I G A S I R K T N Q V L I V E Q G G A V G  
UniRef90\_UPI000473DA26 T G L D G E L I D L R W L D R I D W D T I G E S I K K T N S V I V E E G S V G  
UniRef90\_UPI000365B168 A G L P T T V A D A R F A K P L D D H D L I R Q L A S H H E V L I T I E E G S V  
UniRef90\_UPI000370E271 T G V D A E L I D L R W L D R I D W D T I G N S I K K T N A V L I V E Q G G A Q G  
UniRef90\_S6ACY9 S D I Q V E I I D L R T L Y P L D D E E T I F K S V K K A K C L V V T E E P T N  
UniRef90\_E2SAS1 T G K T V A I D M H T I K P L D D T E L L T E A R K T G R V T I E E H N V I  
UniRef90\_I0QZY3 N G Y S V R V I G L P T V Y L D Q E L I R S S A K K T K R V M T I E E H Y T D  
UniRef90\_B9JAL7 W S V T K T G R L I T V S H E A P L T  
UniRef90\_W0ZAF5 Q G I S A K V V D I T I K P L D D E E L V K K C A K T T K A I M V A E N A N V I  
UniRef90\_UPI0003645AB9 A E T I S I E V I D L Q C L P F D D K A E I R K S V A K T N R L L V D E E G V P G  
UniRef90\_U3QDF1 N I D P E I I D I Q S L L P F D D Q K D I L V K S L Q K T N R L L I I D E D V P G  
UniRef90\_UPI0003645AB9 Y G I S L E V I D V Q T L L P F D D V S H K I E S I A K T N R V I F A D E D V P G  
UniRef90\_E8R1F0 H G L R V G V V N A R F V K P L D D E A V I L Q T L T E S P F V I T V E E G C L M  
UniRef90\_U1LSF6 D A T L V D M R F V K P L D D S E M V T K L A A E H D L L V T L E E D N A I A  
UniRef90\_K6WUY6 D N V S V A V V H S P T I K P F D A E T V L R E L D T D R L E T L E E H S V T  
UniRef90\_G6A225 E K I D V S V L N M H T I K P L D D H E A L Q Q A A E Q H D K I F I V E E H F K V  
UniRef90\_UPI0003F4C60C G I S I A H Y D L R Y L K P L D D E E L L H E V G R Q F K K V I T V E D G V I K  
UniRef90\_W0JIB89 N G I N P H I T N A L S I K P F D D T K M F S D L I N T F N N I I I M E E E N Y I  
UniRef90\_UPI00037CB06E E E L I V N I V L V L S I R P V D E E W I K K V L K C G R I V I V E E N K I  
UniRef90\_K6KFB4 N A T T L V D M R F A K P L D D E A L V L Q L A A E H E V L V T L E E N A I M  
UniRef90\_F9U7L1 E A T V A N M R F V K P L D D E A L L L E L A D R H R L V V T V E E E N A I M  
UniRef90\_UPI0002EF39F8 R G I S A R V E S F H T V K P L D D E A N L Q Q A F A G Y A V V A V E H S R I  
UniRef90\_H2BVJ7 E E I A H Y D A K F V K P L D D E R M L H E I F D I F D K I I T V E D G V I S  
UniRef90\_T1AV00 D L T V I N M R F V K P L D D T A L L V A L T R S H A G L V S L E D N M I A  
UniRef90\_UPI00046342B1 E G H S L E V I D M R F L K P L D D T K L I K A E T E N K K L I T F E E H S I Y  
UniRef90\_UPI0003955E52 E A L N A T V V N M R W A K P L D D T A L L E Q V A Q S H E A L V T V E D G C L M

UniRef90\_G8ARS3  
UniRef90\_N1V5W2  
UniRef90\_UPI0003669F3A  
UniRef90\_F1W0B7  
UniRef90\_B9T619  
UniRef90\_UPI0003B64FAA  
UniRef90\_R5KY02  
UniRef90\_D5EHN3  
UniRef90\_T0E0J4  
UniRef90\_U1L3U2  
UniRef90\_W0PA07  
UniRef90\_F4C400  
UniRef90\_Q0G0V9  
UniRef90\_R7BM11  
UniRef90\_B8EPA0  
UniRef90\_UPI00031C92C1  
UniRef90\_B5JS03  
UniRef90\_UPI00031450D4  
UniRef90\_X5DCH3  
UniRef90\_R6T4A2  
UniRef90\_F8G2X6  
UniRef90\_UPI00047DB41D  
UniRef90\_N8Y4N9  
UniRef90\_Q3AAN0  
UniRef90\_D1B8W9  
UniRef90\_R5RS98  
UniRef90\_R5Q277  
UniRef90\_UPI00041B674C  
UniRef90\_W0F1C9  
UniRef90\_F9Z4J8  
UniRef90\_W8Q4X1  
UniRef90\_UPI00037718E7  
UniRef90\_L1NVR8  
UniRef90\_J4VPF6  
UniRef90\_K2D0K9  
UniRef90\_I0DSC6  
UniRef90\_G2NKG8  
UniRef90\_X1J477  
UniRef90\_UPI00047CF474  
UniRef90\_A6CG29  
UniRef90\_R7GFJ4  
UniRef90\_UPI0003B47F93  
UniRef90\_F8N7U5  
UniRef90\_UPI0003638609  
UniRef90\_L0INB4  
UniRef90\_S3ZV04  
UniRef90\_D3SDW0  
UniRef90\_H3MIY8  
UniRef90\_Q8D357  
UniRef90\_A8UNW2  
UniRef90\_W7C7B7  
UniRef90\_I3ZKA7  
UniRef90\_UPI000381501E  
UniRef90\_Q0S9Z2  
UniRef90\_R4PJY2  
UniRef90\_UPI00040E1537  
UniRef90\_K1YKX5  
UniRef90\_UPI00045EA793  
UniRef90\_A0A014LCU7  
UniRef90\_Q6PHI8  
UniRef90\_UPI000473DA26  
UniRef90\_UPI000365B168  
UniRef90\_UPI000370E271  
UniRef90\_S6ACY9  
UniRef90\_E2SAS1  
UniRef90\_I0QZY3  
UniRef90\_B9JAL7  
UniRef90\_W0ZAF5  
UniRef90\_UPI00047B15F3  
UniRef90\_R1GXC3  
UniRef90\_H6LCW4  
UniRef90\_UPI0002C2EC9E  
UniRef90\_J2IFN6  
UniRef90\_R7LKC6  
UniRef90\_C0BJS0  
UniRef90\_A1TNR1  
UniRef90\_U3QDF1  
UniRef90\_UPI0003645AB9  
UniRef90\_E8R1F0  
UniRef90\_U1LSF6  
UniRef90\_K6WUY6  
UniRef90\_G6A225  
UniRef90\_UPI0003F4C60C  
UniRef90\_W0JIB9  
UniRef90\_UPI00037CB06E  
UniRef90\_K6KFB4  
UniRef90\_F9U7L1  
UniRef90\_UPI0002EF39F8  
UniRef90\_H2BVJ7  
UniRef90\_T1AV00  
UniRef90\_UPI00046342B1  
UniRef90\_UPI0003955E52

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

UniRef90\_G8ARS3 A G L A A R H I V A T A L Q A L G  
UniRef90\_N1V5W2 Y L P D I D R I L E A L D R S L A Y  
UniRef90\_UPI0003669F3A A G I D A A A I T E A A R G L V  
UniRef90\_F1W0B7 V G L D A E G I V R S V Q Q  
UniRef90\_B9T619 A G L S S K H I A A T V V S L I G  
UniRef90\_UPI0003B64FAA L G L D A D S I A E K V L R  
UniRef90\_R5KY02 T G T D A D A I A S A I L E V  
UniRef90\_D5EHN3 V G L D A P G I L Q S V V E K L E  
UniRef90\_T0E0J4 C G I S P R C I A S E I E G L L K  
UniRef90\_U1L3U2 L G L D A D G I Q K S I E T Y L A  
UniRef90\_W0PA07 G L L D A A G I E Q A I A R  
UniRef90\_F4C400 T K P S V D D I I E M I Y S M M H  
UniRef90\_Q0G0V9 A G L D K A G I V S T V F R A L G  
UniRef90\_R7BM11 N G L D A D G I Y N S I K  
UniRef90\_B8EPA0 A G L D A K A I V A K V L S V L G  
UniRef90\_UPI00031C92C1 A A L N A A H V V A T V Q  
UniRef90\_B5JS03 M L L D A A G I E T Q I R E W L K  
UniRef90\_UPI00031450D4 Y Y P N G R T I A S T L H E M V K  
UniRef90\_X5DCH3 S K P N V E L L F R N V Y E M M  
UniRef90\_R6T4A2 C G L D A E G I A A K C M E M L E  
UniRef90\_F8G2X6 Y K L D A A G I E E V A L A H M A  
UniRef90\_UPI00047DB41D Y G I S A E G L K N T A L N I I K  
UniRef90\_N8Y4N9 C G L D E K G I Q N A V I E K A  
UniRef90\_Q3AAN0 Y G L T E E K L Y L K F R E I L S  
UniRef90\_D1B8W9 Y G L T A G R I V S S A V Q V  
UniRef90\_R5RS98 C G L D A E G I A G K A V K M L E  
UniRef90\_R5Q277 S G L T A P Q I A E K I T E A  
UniRef90\_UPI00041B674C Y G L S A K H I I D V A S E M L  
UniRef90\_W0F1C9 Y G I S K T G I A D A A R A L V  
UniRef90\_F9Z4J8 C G F D E K S L T R C I Q E M L  
UniRef90\_W8Q4X1 Y S L D K E  
UniRef90\_UPI00037718E7 L G L D A A G I I Q R Q I E A W L A  
UniRef90\_L1NVR8 S K P N A D S I I E K L Y S I M H  
UniRef90\_J4VPF6 C G L D E D S I Y D A A K A L L G  
UniRef90\_K2D0K9 F N L T S E Y I C K T I L E I  
UniRef90\_I0DSC6 L G L D S Q G I I H A L L E Q  
UniRef90\_G2NKG8 A G V S A R S V A E S A R R A L G  
UniRef90\_X1J477 A G I N A D K I A Q T A R Q M L E  
UniRef90\_UPI00047CF474 A G L D A A G I R A A L L R  
UniRef90\_A6CG29 L G L D V A G I T A T A R E L  
UniRef90\_R7GFJ4 Y G L D S I T I K N D I L K  
UniRef90\_UPI0003B47F93 Y G I S A S G I Q C A A L E L L K  
UniRef90\_F8N7U5 C G I D N D S I C E V I E K L L  
UniRef90\_UPI0003638609 A G I S R K H I A D A A R S L V K  
UniRef90\_L0INB4 F M L D D V G I A Y S I S E F L K  
UniRef90\_S3ZV04 Y L I G V Q E I K D E V  
UniRef90\_D3SDW0 C G L D T E G V L A A I R  
UniRef90\_H3MIY8 H G F D A Q A I A L A K T M  
UniRef90\_Q8D357 V G L D S I G I K E K I K N W L N F  
UniRef90\_A8UNW2 S K P S T E D I F E A V Y D V M H  
UniRef90\_W7C7B7 F G I D T V T L A K K I H D F I E  
UniRef90\_I3ZKA7 Y G I S V D G  
UniRef90\_UPI000381501E M L P N P K K L S T L I N S I L L S Y  
UniRef90\_Q0S9Z2 Y G L S T D R I V A K V  
UniRef90\_R4PJY2 F G L D D N A I T D R V K Q F V H  
UniRef90\_UPI00040E1537 Y G L T T E A V I A T I V A L  
UniRef90\_K1YKX5 F G L T A P Y I  
UniRef90\_UPI00045EA793 F S L N A S G I I M A V K D  
UniRef90\_A0A014LCU7 Y R L D A P G V E A E A R E A L  
UniRef90\_Q6PHI8 F G I S A K C I V A A V K R T F A  
UniRef90\_UPI000473DA26 Y Y P D L D L I I E N I R N I V  
UniRef90\_UPI000365B168 Y K L D G E S V A K R I I E  
UniRef90\_UPI000370E271 A G L D A Q G I Q E A A L A L L G  
UniRef90\_S6ACY9 C G L D Q D G I V R A V Q G R L H  
UniRef90\_E2SAS1 A T A R T D E V V D A L T R I  
UniRef90\_I0QZY3 S I A G L E E V V A  
UniRef90\_B9JAL7 A G L D R A G I V Q T V F K A L G  
UniRef90\_W0ZAF5 A T A R T P E V V A G L E A V  
UniRef90\_UPI00047B15F3 M L P N V D K V R A K M E E L L N Y  
UniRef90\_R1GXC3 Y G I S A E R I A D  
UniRef90\_H6LCW4 Y H L D L D G L V Q S A I R F L  
UniRef90\_UPI0002C2EC9E Y I P D K W K C Y D A L R K M I N Y  
UniRef90\_J2IFN6 L G L D S Q G I L T Q A Q A L  
UniRef90\_R7LKC6 Y E M S A E N I V K Y A I N I L  
UniRef90\_C0BJS0 S K P S A D D I E E A A Y A I M H  
UniRef90\_A1TNR1 Q G L D A E G L V R S I  
UniRef90\_U3QDF1 S K P S V E N I I E K V L K I M H  
UniRef90\_UPI0003645AB9 S K P S V D D V V E I A Y R I M N  
UniRef90\_E8R1F0 Q L L D V E G L V  
UniRef90\_U1LSF6 M G L D A D G I Q K R I Q A V L  
UniRef90\_K6WUY6 Y G L S T D R V R D R V L E L L G  
UniRef90\_G6A225 K L D S S G I A C F V R E Q L S  
UniRef90\_UPI0003F4C60C C E I D A P A I C K A I I Q M  
UniRef90\_W0JIB9 Y F L S K D N L I E K I Y N L L K  
UniRef90\_UPI00037CB06E M L P S A N I V I E T I N Q I  
UniRef90\_K6KFB4 L G L D A A G I E A K I H A W L A  
UniRef90\_F9U7L1 Q L L D A A G I V Y S V R M E M E H  
UniRef90\_UPI0002EF39F8 Y G L T A D N I A A K V E A A  
UniRef90\_H2BVJ7 A K I D V L S I S N A I K D L L K  
UniRef90\_T1AV00 A G L D A A G I E A A I R Q  
UniRef90\_UPI00046342B1 F G L T A E H L K K E I E N Y L  
UniRef90\_UPI0003955E52 Q G L D A S G I E R S I R E

UniRef90\_I1E2I3  
UniRef90\_D7CKI3  
UniRef90\_UPI00036870FC  
UniRef90\_I7LI64  
UniRef90\_H6Q5G9  
UniRef90\_G9YD79  
UniRef90\_D4MUX2  
UniRef90\_F9D1U2  
UniRef90\_U2CD26  
UniRef90\_I3CY96  
UniRef90\_UPI00037C2961  
UniRef90\_UPI0003B3E54B  
UniRef90\_A3WFP3  
UniRef90\_R9PNR1  
UniRef90\_G7M123  
UniRef90\_G1KMS6  
UniRef90\_D8F046  
UniRef90\_X1MT89  
UniRef90\_UPI000428AF43  
UniRef90\_U5F7K3  
UniRef90\_UPI00047A81C6  
UniRef90\_B1Y2X5  
UniRef90\_D6TL38  
UniRef90\_B6FZ45  
UniRef90\_Q5J5B3  
UniRef90\_K8QJ58  
UniRef90\_B9XJW4  
UniRef90\_UPI00037D1E63  
UniRef90\_X1J504  
UniRef90\_A0A024M6S4  
UniRef90\_UPI0002FC8B60  
UniRef90\_UPI000376FDCA  
UniRef90\_UPI0002D4398C  
UniRef90\_N9YW09  
UniRef90\_D6Y2L8  
UniRef90\_F2BAF8  
UniRef90\_M1M8P8  
UniRef90\_F7MQC0  
UniRef90\_UPI0002DB2073  
UniRef90\_UPI0002M7PTP4  
UniRef90\_W9V9K3  
UniRef90\_R7KND4  
UniRef90\_UPI00036DD66C  
UniRef90\_R7IQ13  
UniRef90\_X5KHJ0  
UniRef90\_UPI00037A21A3  
UniRef90\_R7B5E5  
UniRef90\_UPI00030DC76C  
UniRef90\_F8WWA1  
UniRef90\_R7G328  
UniRef90\_R6PFH4  
UniRef90\_G6FNR7  
UniRef90\_Q1R1E5  
UniRef90\_F3ZKN9  
UniRef90\_K2JTB0  
UniRef90\_Q4QKG6  
UniRef90\_Q7VC14  
UniRef90\_UPI0004164ADF  
UniRef90\_K2ABZ5  
UniRef90\_G0VS17  
UniRef90\_R6RY09  
UniRef90\_J9DUZ5  
UniRef90\_T0MSQ0  
UniRef90\_S7TG16  
UniRef90\_F7SN52  
UniRef90\_S3JL62  
UniRef90\_Q4BYF2  
UniRef90\_W4YKX5  
UniRef90\_C8XDX2  
UniRef90\_S2YB42  
UniRef90\_UPI0003B3D0C7  
UniRef90\_R6T7E2  
UniRef90\_I5BZM0  
UniRef90\_K9XN50  
UniRef90\_D4H101  
UniRef90\_H0JB76  
UniRef90\_U1K146  
UniRef90\_UPI000381A5BB  
UniRef90\_UPI00029ACB91  
UniRef90\_X1H4N5  
UniRef90\_UPI0003346764  
UniRef90\_A0A022A2D6  
UniRef90\_UPI0003FCDFC9  
UniRef90\_X5LFP7  
UniRef90\_M1P773  
UniRef90\_H3ZHR2  
UniRef90\_J9BVH3  
UniRef90\_UPI00046F792F  
UniRef90\_G3HJX4  
UniRef90\_H1S6E5  
UniRef90\_X0YV71  
UniRef90\_UPI0003741AEE

1 10 20 30 40

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

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

UniRef90\_I1E2I3  
UniRef90\_D7CKI3  
UniRef90\_UPI00036870FC  
UniRef90\_I7LI64  
UniRef90\_H6Q5G9  
UniRef90\_G9YD79  
UniRef90\_D4MUX2  
UniRef90\_F9D1U2  
UniRef90\_U2CD26  
UniRef90\_I3CY96  
UniRef90\_UPI00037C2961  
UniRef90\_UPI0003B3E54B  
UniRef90\_A3WFP3  
UniRef90\_R9PNR1  
UniRef90\_G7M123  
UniRef90\_G1KMS6  
UniRef90\_D8F046  
UniRef90\_X1MT89  
UniRef90\_UPI000428AF43  
UniRef90\_U5F7K3  
UniRef90\_UPI00047A81C6  
UniRef90\_B1Y2X5  
UniRef90\_D6TL38  
UniRef90\_B6FZ45  
UniRef90\_Q5J5B3  
UniRef90\_K8QJ58  
UniRef90\_B9XJW4  
UniRef90\_UPI00037D1E63  
UniRef90\_X1J504  
UniRef90\_A0A024M6S4  
UniRef90\_UPI0002FC8B60  
UniRef90\_UPI000376FDCA  
UniRef90\_UPI0002D4398C  
UniRef90\_N9YW09  
UniRef90\_D6Y2L8  
UniRef90\_F2BAF8  
UniRef90\_M1M8P8  
UniRef90\_F7MQC0  
UniRef90\_UPI0002DB2073  
UniRef90\_M7PTP4  
UniRef90\_W9V9K3  
UniRef90\_R7KND4  
UniRef90\_UPI00036DD66C  
UniRef90\_R7IQ13  
UniRef90\_X5KHJ0  
UniRef90\_UPI00037A21A3  
UniRef90\_R7B5E5  
UniRef90\_UPI00030DC76C  
UniRef90\_F8WWA1  
UniRef90\_R7G328  
UniRef90\_R6PFH4  
UniRef90\_G6FNR7  
UniRef90\_Q1R1E5  
UniRef90\_F3ZNK9  
UniRef90\_K2JTB0  
UniRef90\_Q4QKG6  
UniRef90\_Q7VC14  
UniRef90\_UPI0004164ADF  
UniRef90\_K2ABZ5  
UniRef90\_G0VS17  
UniRef90\_R6RY09  
UniRef90\_J9DUZ5  
UniRef90\_T0MSQ0  
UniRef90\_S7TG16  
UniRef90\_F7SN52  
UniRef90\_S3JL62  
UniRef90\_Q4BYF2  
UniRef90\_W4YKX5  
UniRef90\_C8XDX2  
UniRef90\_S2YB42  
UniRef90\_UPI0003B3D0C7  
UniRef90\_R6T7E2  
UniRef90\_I5BZM0  
UniRef90\_K9XN50  
UniRef90\_D4H101  
UniRef90\_H0JB76  
UniRef90\_U1K146  
UniRef90\_UPI000381A5BB  
UniRef90\_UPI00029ACB91  
UniRef90\_X1H4N5  
UniRef90\_UPI0003346764  
UniRef90\_A0A022A2D6  
UniRef90\_UPI0003FCDFC9  
UniRef90\_X5LFP7  
UniRef90\_M1P773  
UniRef90\_H3ZHR2  
UniRef90\_J9BVH3  
UniRef90\_UPI00046F792F  
UniRef90\_G3HJX4  
UniRef90\_H1S6E5  
UniRef90\_X0YV71  
UniRef90\_UPI0003741AEE

50 60 70 80  
R G I D A T V D M R F V K P L D D E A L L L G S E L L A S T H P L F V V S V E D N A I H  
G I E A S V V D A R F F V V K K P L D D A K G L L E E S V R Q T F E R R V V T V I E E D N N V L H  
D I F P A E T L L I N A R F F V V K K P L D D Y A K G L L E E S V R Q T F E R R V V T V I E E D N N V L H  
E Q Y N A S V V D A R F F V V K K P L D D E K A L L L K K V A A T H Q D A L I T T L I E E N N V I M  
S G V D A A L Y D M R F F L K P L D D E G Q L L D E V G S R R K F G R I V V T V I E E D G G V R N  
E G I S A R V V E S F H P T I K P L D D N E E A V R T Q A F S A G A Y G K G V V A V V C E E E H S I R  
K G I S T G V T D M Y C L K P L D D E A T L L E Q A S K D V D L V V S V I E E D H S S Q Y  
U P I 0 0 0 3 7 C 2 9 6 1  
U P I 0 0 0 3 B 3 E 5 4 B  
E G F H S A V L N P R F A K P P V L D D R G C L I S D R F G S R A G I V V T V I E E D G G V L A  
U P I 0 0 0 3 A 3 W F P 3  
E Q L S T T V A D M R F F V K P L D D E D E C L I A R L M R T H E V V V T V I E E D H G A I  
U R 9 P N R 1  
U G L N D A T V L D M R F F V K P L D D E A C I K A L V A E H D V L V T V I E E D N A I Q K  
G 7 M 1 2 3  
U G L N P T I I N A T F F I K P L D D A K N L L E S N A R K A T G Y G R I L I T V I E E D N A I L K  
G 1 K M S 6  
Q G I H I R V L D P F T I K P L D D A N T I I S N A R A R T G R I L I T V I E E D H Y K E  
E D 8 F 0 4 6  
E G I S A S V L D L R S T V A P L D D C A N T V A G D V A R T T G R L L I V V D E D A Y C K R  
X 1 M T 8 9  
E G I S D V E I I D V P Q S L L P F D D L Q H D I K K S V K T N R L L I V D E D E A C K R G  
U P I 0 0 0 4 2 8 A F 4 3  
G I  
U 5 F 7 K 3  
F V P T I V D M H T I K P I D K A L L C S L A K D H Q L I V T A E E D H S I I  
U P I 0 0 0 4 7 A 8 1 C 6  
K V D A E V L D R W L D R I D D A W E T V G E S I K K T N N A L V I A E E Q G G A L G M  
B 1 Y 2 X 5  
E K L S T A T V A N M R F F L K P L D D E A E L F L H L A K T T Y R R I V T V I E E D H V L A  
D 6 T L 3 8  
E E G I K A T V I V N A R F F L K P L D D E A E L F L H L A K T T Y R R I V T V I E E D H V L A  
B 6 F Z 4 5  
U E Q G L S L T G V A D A R F F C K P P V L D D R D L I R S L A R E H E V L I T V I E E D N G S  
Q 5 J 5 B 3  
E Q G L S L T G V A D A R F F C K P P V L D D R D L I R S L A R E H E V L I T V I E E D N G S  
K 8 Q J 5 8  
Q Q G M S A D V I D M F T I K P L D D K D L L L H R L P Q K K A V I T V I E E N H N I  
B 9 X J W 4  
E D G V G I T T D A Y S F I K P L D G E K D V I R E A A K K S T N N V I V I E E D H G S P E  
U P I 0 0 0 3 7 D 1 E 6 3  
Y G L S V E L I D I R F I N P L D N Y D V I I E S V K K T D G K L V L A S D A S C E R  
X 1 J 5 0 4  
D N V D V A V L H V P I K P L D D E A T L L A E I A K S D R L A V F T L I E E N D H S I V  
A 0 A 0 2 4 M 6 S 4  
E K L N A T V V N M R V W K P L D D E T E L L T Q M A Q S H E R L A T T L I E E N G S C I  
U P I 0 0 0 2 F C 8 B 6 0  
E E G I S V D L I N I H T I K P L D D E A A V I A S A K K T G A V V S C E E E H N K Y  
U P I 0 0 0 3 7 6 F D C A  
Q G I S V R V I N I H T I K P L D D E Q A I I K A A Q E S T K L G I M T L I E E H S I Y  
U P I 0 0 0 2 D 4 3 9 8 C  
U N 9 Y W 0 9  
G I S A K V I N V S T L K P F N E K L I I E M S E S C R G I V T A E E H S I  
D 6 Y 2 L 8  
E V G C R V V L D L R W L S P L P V I E D L L E S A E L T G R V L I A D E E T R R T  
F 2 B A F 8  
E T L N T S V D M R F F V K P L D D E A E L V L Q L A D T H D C L V C A E E S N S A V C  
M 1 M 8 P 8  
L G I D I N V I N A C F V K P L D D K S L N K L I L K E H K I I T L I E E D N V I T  
F 7 M Q C 0  
K V S V A V L H C P T I K P L D D E A T L L A E V R K Y Q G R L V V V I E E N H S I V  
U P I 0 0 0 2 D B 2 0 7 3  
E K L D A T V I N M R F F I K P L D D T A L I D Q L A E Q Q L L V T V I E E N N A L M  
M 7 P T P 4  
E S V D A T V A N M R F F V K P L D D R D L I L E L A A D S H E I L F T V I E E N A I A  
W 9 V 9 K 3  
E S V D A T V A N M R F F V K P L D D R D L I L E L A A D S H E I L F T V I E E N A I A  
R 7 K N D 4  
R G I A A R V L N M A S V R P I L D D E D A I I A A A A T H D G A I L T C E E H T I F  
U P I 0 0 0 3 6 D D 6 6 C  
G Y R V S L V N A R F V K P L D D E A C I E E L C Q T H S S L I V T L I E E N V L N  
R 7 I Q 1 3  
F E G Q V E I V D L R T L V P M P R E E Y L Y E V V K K C I I V A D E E Q I L Q  
U P I 0 0 0 3 7 A 2 1 A 3  
R G V G V R V L D R T W L A P P E Q L T A A E A T G K V L I A D E T R T S  
R 7 B 5 E 5  
Q Q T I S A R V V D M R W V K P I D K E A I R K A A E T K L V V T V I E D G V I I  
U P I 0 0 0 3 0 D C 7 6 C  
E E T L D A T V A N M R Y V K P L D D V E L I E A V A C S H D L V T V I E E G V I K  
F 8 W W A 1  
E G Y S I A H Y A N M I F L K P L D D T A L L K E V A E N F T H V I T T I E E N G V I N  
R 7 G 3 2 8  
G Y D C S L T N A R F I K P L D D A K M L D R L T K K H R L I V T L I E E N V K S  
R 6 P F H 4  
G E T P T I N A R F V K P L D D E K M L D R L A K H S L L V T M E E D N V S Q K  
G 6 F N R 7  
E G I T V R V I D A Y S V K P L D D E A T L H Q A A R D T G K L V V V I E E D H W  
Q 1 R 1 E 5  
G N H I A L Y D L R S F L K P L D D R E A I L A A A R D H R L L V T L I E E S V V A  
F 3 Z N K 9  
L D V E L I D L R S L D R A D D Q K T V G A S I E K T N N V I L I E E Q G G A R G  
K 2 J T B 0  
L N A T V V D M R F F V K P I D D E M I N V L A Q T H D Y L V T L I E E N A I Q  
Q 4 Q K G 6  
G I S A T V I N A R F L R P L D D Q G L I H P L A R R G K V V T M E E H S T L L  
Q 7 V C 1 4  
E G L E A D V L H L H T I K P L D D V G E A V I A S A R R G C V V V T A E E H S V L L  
U P I 0 0 0 4 1 6 4 A D F  
E G L V S A E V L D M C S I K P I D D S E L I L K V A R G K K L F T V I E D H S Y V D  
K 2 A B Z 5  
R G R G V M V I D M A A I K P L D D E D L V V A A A K Q T G F V V T A E E H S V R  
G 0 V S 1 7  
G Y S C C L V N A R F V K P L D D T D M I D R L C R S H K L I V T L I E E N V L  
R 6 R Y 0 9  
I G V S C C E V I D L R T I L P W D D D T V A K S V Q K T G H L I I T H E A P I T  
J 9 D U Z 5  
Y S A S L R V A N C R F I K P L D D E K M L S S L L G Q F N K V L T L I E E N V L K E  
T 0 M S Q 0  
E G V S L R V A N C R F I K P L D D E K M L S S L L G Q F N K V L T L I E E N V L K E  
S 7 T G 1 6  
G I S A T V I N A R F L R P L D D Q G L I H P L A R R G K V V T M E E H S T L L  
F 7 S N 5 2  
Q N I G A K V V N L S T I K P L D D V K R L K A Y I L S T P V V V V T A E E H T L M  
S 3 J L 6 2  
E G I K V T V I D P F T I K P L D D A A T L T A C A K A G G R V L T V I E D H Y R E  
Q 4 B Y F 2  
H K V D V A V V H T P F I K P F D E A E T V L A E L N S D R L A V T L I E E N H T I R A  
W 4 Y K X 5  
G I Q S T L V N S R F V K P V D E A K L L E L S K S H T L Y V T L I E E N V L I  
C 8 X D X 2  
E G L D L A V V N A R F A K P L D D E E M I L R Y T Q P G G R I I T M E E N G V I N  
S 2 Y B 4 2  
U P I 0 0 0 3 B 3 D 0 C 7  
D N I H A A V L H I P T I K P L D D E T L I L K E I Q K S D R L V T A E E N H T V L  
I 5 B Z M 0  
E G I R A E V I N H T I K P L D D E T L I L K E I Q K S D R L V T A E E N H T V L  
K 9 X N 5 0  
H D L T A Q I I C P T Q I Y P F N I K P C L E I I A Q S R T L A I V I E E G S Q G F  
D 4 H 1 0 1  
Q G V S A Q V I N L S S I K P L L N G K A V A D A L R G A K L V A T V I E E G S V K  
H 0 J B 7 6  
D E F N T T L V D M R F V K P L D D E Q L L T E L S Q S H T H F I T L I E D N A I A  
U 1 K 1 4 6  
K G I S A A L Y D M R F V K P L D D E V M L H K E V F G K F D H V I T V I E D G C V I Q  
U P I 0 0 0 3 8 1 A 5 B B  
T S L D A T V V D M R F V K P L D D I D E V I N S V K K T G R L I I V S E A C R R  
U P I 0 0 0 2 9 A C B 9 1  
U X 1 H 4 N 5  
G I S I R V I D L F T V K P L D D E A Q I V S S A R A T G R I I V I E E D H A I P E  
U P I 0 0 0 3 3 4 6 7 6 4  
H D V S V C V I N M R F F V K P L D D E A Q I R D L A E H T H L F V V I E E H A I M  
U P I 0 0 0 2 2 A 2 D 6  
R V D V G V L H V P T I K P L D D T E A V L R V A G R S D R L V V T V I E E N H S V V  
U P I 0 0 0 3 F C D F C 9  
Q D I S A R V V D L R W L A P V P V D D M M R E A N A T G R V L I V D E D T R E T  
X 5 L F P 7  
K G H S V A V L N M G S L L P V L D D R E A V L T A A D T G V V L T V I E D H H V E  
M 1 P 7 7 3  
H 3 Z H R 2  
D S L T I A H Y A N R F V K P L D D E A L L K Q L M Q N H Q A F I T V I E D N A I M  
J 9 B V H 3  
E Q L N A T V A N M R F V K P L D D E A L L H Q V V G K Q F R H I V T V I E D G G A R M  
U P I 0 0 0 4 6 F 7 9 2 F  
G I F I R V I D P F T I K P L D D A A T I I C S A K D T G R I I T V I E D H Y R E  
G 3 H J X 4  
E A L D A S V A N M R F L K P L D D E A L V K K L A S E H D R A L V T V I E E G C V M  
H 1 S 6 E 5  
Q G I D A S E V D P R T L L P L D D M D T I L G S V R K T K R A L V H E A V R F  
X 0 Y V 7 1  
G L T L C D M R F V K P L D D T E L I N A M Q E R H Q Q L V T L I E E N A I A  
U P I 0 0 0 3 7 4 1 A E E

UniRef90\_I1E2I3 G G A G S A I N E F V A R S A L Q V R C V N L G L P 110 D Q F I K H S Q E Q 120  
UniRef90\_D7CKI3 G G F G S A V L E M A A D L R R H C N I L R V L G V P D R F F I E H E A L F D E  
UniRef90\_UPI00036870FC G G F Y G S A V C E K F A R D G V C C D M D A V I R N T G L Y P D E D V F T E T D L L J A K K  
UniRef90\_I7LI64 G G F G S A V L E Y A A K K M Y Q K L L I P V L N I G L P D Y F I S Q G G S Q Q E E  
UniRef90\_H6Q5G9 G G A G S A V N E F L M S K R K M I S V P V K R I G L V K E K F T A E F F L Q E E  
UniRef90\_G9YD79 G G A G S G V N E V L A E N G K R K M I S V P V K R I G L V K E K F T A E F F L Q E E  
UniRef90\_D4MUX2 G G L G S V S E V L A E N G K R K M I S V P V K R I G L V K E K F T A E F F L Q E E  
UniRef90\_F9D1U2 G G L G T A V L I E W M D D H G Y H P Q V V R L G L P D D Q F P A Q L H H I  
UniRef90\_U2CD26 G G L N M L V S F A L R G S G E P M E S V A V M D S F G Q D S A S S H E E L L E Y  
UniRef90\_I3CY96 G G L G S S I A E W L A Q Q E P L K G R L L S F G V D D V F S M H E I G T Q E  
UniRef90\_UPI00037C2961 G G L G S R V A Q T L A C H H L P K K L I E I Y L P D S G T N K E V F Q Y  
UniRef90\_UPI0003B3E54B G G F G S A V M E T L A N E L G L N V P V V R L G W P D D V F S E H S L R E K E  
UniRef90\_A3WFP3 G G L G A H V L T Y A T D E G L T D N G L K V R T M R L P D T F I S E P D K Q Y E E  
UniRef90\_R9PNR1 G G A G S A V N E F L F A Q Q L T D N Q V K V L N I G L P D N F V E E Q I Y D L  
UniRef90\_G7M123 G G L G S A V A K S Y L S E S I L K Y R G T I R C L G Y D D E F I P E L L Y K T  
UniRef90\_G1KMS6 G G I G D A V A S A V S G E P S I L L V Q S L A V S G V P R S F G K P E L L D L  
UniRef90\_D8F046 F G L S G E L A A T L L E A G L T A R Y A R V A V E G T I P F D P V R E R A  
UniRef90\_UPI000428AF43 G A S A F I L Q Q V L D Q N A Y D L D S K P Q T L A A P H R P Y G T D G D Y F  
UniRef90\_U5F7K3 G G L G S A V A E V L A Q Q P H A C A L R M V T G V F D V Y T P Q D V L H K  
UniRef90\_UPI00047A81C6 T S Y G S A V L A D E I Q R R F F D W L D H P V Q R V T G A S P S I E S K V L E R A  
UniRef90\_B1Y2X5 G G A G S A V L A D E I Q R R F F D W L D H P V Q R V T G A S P S I E S K V L E R A  
UniRef90\_D6TL38 G G F G S A V L E L F E Q H G L L R D I E T R L I A L P D K Y V E H L L K E L  
UniRef90\_B6FZ45 G G F G S R I V S Q F L S E K E Y N N K V L N I A L P P E R F I E H E L L Q E L  
UniRef90\_Q5J5B3 G G F G S H I V S Q F L S E K E Y N N K V L N I A L P P E R F I E H E L L Q E L  
UniRef90\_K8QJ58 G G L G S A V A E V M A E N G L L D G K L K W R P L V L P N D R F T P D F L Q S E  
UniRef90\_B9XJW4 G G L G D A V A G E L S V D G V R V H K L A I R E L P H S G K P E E L L A K E  
UniRef90\_UPI00037D1E63 G G I G E H I G C L A M G H G V W Q G Q F A H L G L P D S F P P A E I M H E  
UniRef90\_X1J504 G S F L H T V A S H I T Q A A Y D Y L D G P V V V V G S R N W I T P A A M E S M  
UniRef90\_A0A024M6S4 G G L F E S I V S A L V R N G V S R P V S P I A L P D E F L V P T L Y D R S  
UniRef90\_UPI0002FC8B60 G G A G S A V S E A L Q A A K L V R P L L Q L G F A D E F I E H G L L T S  
UniRef90\_UPI000376FDCA G G L G S A I A E C L S K N H P T F Q E Y V A T D D T F G E S G T A N  
UniRef90\_UPI0002D4398C S G L G A A V A E V I S A K I P Q S A P V K I L G I A D D T F A T K E I F E H  
UniRef90\_N9YW09 G G L G G A V S Q A L C K A C K P I E F V G I N D T F S A H S Y K D Y  
UniRef90\_D6Y2L8 G G V S E G V I T A L I D N G F S G R I A R V A S C D S F V P L G D A A  
UniRef90\_F2BAF8 G G A G S A V L E M L A A K G R L K P V L L I G I P D T V T E H L L L D Q S  
UniRef90\_M1M8P8 G G A G S A V L E L L A A K G R L K P V L L I G I P D T V T E H L L L D Q S  
UniRef90\_F7MQC0 G G F G E S V L Q C I N T L K Q N D S Q V K V L N L G F E D K F I P H T L Y K V  
UniRef90\_UPI0002DB2073 G G L G E A V A S L L M R E G V V P A K F R M L A L P D A F L D P T L H D R  
UniRef90\_UPI0002M7PTP4 G G A G S A V N E Y L R Q V G H N I D I R M L A G L P D R Y V E H Q M L A D  
UniRef90\_W9V9K3 G G A G S A V A E T L S S H G R V V R C I H L G L P D R Y I D H A D H R E  
UniRef90\_R7KND4 G G A G S G L E A L S E M G M D A V P V L V L G V K D R F I A Q E L M R E  
UniRef90\_UPI00036DD66C G G L G S A V A E V V V D A A V P M K R L G V P G V F A H T T L L D D  
UniRef90\_R7IQ13 G G F G E L V T R F I N G L D Y Q G K I L N I G V P N F Y L E H L L R K E  
UniRef90\_X5KHJ0 N S F A E A L S S R I S R E C F R Y L D A P V T P V V G V P A I P I N I D S E K E A  
UniRef90\_UPI00037A21A3 G G I S E R V I T A L I D S G F T G K I R R V V S E D S F I P E L L G E A A  
UniRef90\_R7B5E5 G G A G A A V S E V L G E E E L K V D S L A P V L Q L G L Q D Q F I P E Q L L S A  
UniRef90\_UPI00030DC76C G G F G A A C L I E H L A V S M F S N P V L Q L G L Q D Q F I P E Q L L S A  
UniRef90\_F8WWA1 G G A G S A V L E Y F A D N N Y L N I N V V R V L A L P D D Y V E H D L K K L  
UniRef90\_R7G328 G G F G E H V S E Y L M R T G A D V R V Q I L A L P D D Y V E H H L R K E  
UniRef90\_R6PFH4 G G F G S A V L D Y M H R H H P Q V R V L N M A L P D R F I P E K L K E K  
UniRef90\_G6FNR7 G G L G A A V A P A Y G E L N L V K L A V R N M P G S G T P E E L L H A  
UniRef90\_Q1R1E5 G G A G S G V N E L L A A E G V V Q V E V L N L G L P D D F V E H E L L A A  
UniRef90\_F3ZKN9 G G M G T A I L E F M A D N S Y T P S I Y R M G L P D E F I E H E L L K V  
UniRef90\_K2JTB0 T S Y G W A L A D E V Q R R Y S F G W L A Q P V E R L A G A S P S V S K V L E R A  
UniRef90\_Q4QKG6 G G A G S A V A E V L N S S G K S T A L L Q L G L P D Y F I P Q A T R Q E  
UniRef90\_Q7VC14 G G F G S A I V E S F A D Q D I L A V S T Y R I G L P D K L V P Q Q S K E E  
UniRef90\_UPI0004164ADF N G L G S A V A E A L G E R L P V P L E R V G T K D V F  
UniRef90\_K2ABZ5 G G L G S A V S E A L A G G G C G V P L K R L A V E E S G K P E H L Y G K  
UniRef90\_G0VS17 G G L G S A V A E T L S R R H P T R Q Y V G I D D C F G E S G K A G E L L Q K  
UniRef90\_R6RY09 G G M G M C A T R Y I H E H H P E I H V I Q V A L P D A Y V E H L L R E M  
UniRef90\_J9DUZ5 S G F A A E I S  
UniRef90\_T0MSQ0 G G F G S A I L E F I A D K N L K G I E I K N L G V P D E F I E Q L L L Q Q  
UniRef90\_S7TG16 G G Q G E T I L A A M A D A G L S T P L L R L G L T G T P C G R N D E V L L S A  
UniRef90\_F7SN52 G G A G S A V N E L L H A E G V Q I E V L N L G L P D T F V E H E L L L R D  
UniRef90\_S3JL62 C G M G S A V A E V L C E T G I P I G M V A V L P D D C F Y D K L L E A Y  
UniRef90\_Q4BYF2 G G L G S A I A E L I A E A N F S E G K R F K R I G L P D V F F Y D A D L M K R  
UniRef90\_W4YKX5 G G L G E A V A G A L A S Q P G I V V R R L A V D R V P P S K V L J D M  
UniRef90\_C8XDX2 G G L F E T V A S A A V L A G V A K R V I P V A L P D A F V E P T L H R R E  
UniRef90\_S2YB42 G G Y G A Q V L A Y V E K R L P V Q V E S F G I P D E Y V E H V L R K E  
UniRef90\_UPI0003B3D0C7 G G F G S A V R E V L D K N M E F D V R F K S I G L P L D I Y P E Q I K A R  
UniRef90\_R6T7E2 V G G L G S L V A N L L V D N Q V S A V L K K I A L P D K Y L A E T L Q N L  
UniRef90\_I5BZM0 G Q L G E S V A R T L A Q N F P C P Q E F V A V M D S F T P A Q L M E K  
UniRef90\_K9XN50 A G F G A E I V A Q L A E A D A S F L S K V T R I L V P P A T S I P A S G E K D  
UniRef90\_D4H101 G G A G E E I Q S T L M D N S I C T K V L K F G L P D S F I E H S L R K L  
UniRef90\_H0JB76 G G V G S L V A E V M A E A A L G V R L I R L G L A D G E Y A A A G R A K  
UniRef90\_U1K146 G G A G S A V S E F L A S I N A S V H V S H L G I P D E F I K H E M H D E  
UniRef90\_UPI000381A5BB G G F G S A V L G F M V D H G Y K S K V V R L G L P D R I V E H  
UniRef90\_UPI00029ACB91 G G A G E A V G A V C H A Q Q L H C E L G L G F P D Q F I E H Q L L S E  
UniRef90\_X1H4N5 G S V A S D I S A R V T E R V F E Y L K A P V K I V A G L D T P I P Y T L E R A  
UniRef90\_UPI0003346764 G G I G E A V S T A V S M E P D I L V H Q L A V P G V S P K S E L L D M  
UniRef90\_A0A022A2D6 G G A G S A V N E F M A Q E Q I V K P I I N L G L P D S F L H Q A M L O D  
UniRef90\_UPI0003FCDFC9 G G L G E A V A S C L A F N G V G R D L V P V A L P D E F L A P T L H D R  
UniRef90\_X5LFP7 G G V G E G V L A E L L S H G Y T G R V V K V A G S D S F I P L G D A A  
UniRef90\_M1P773 T G L G S I V G T I L A E A G M R S G V V Q Y G G S G K P A E L Y A S  
UniRef90\_H3ZHR2 G G A G S A V N E F L L R E Q Y T G R I V N L G L P D E F I K Q E I Y A E  
UniRef90\_J9BVH3 G G M G S A V M E W L E D H G Y R V T R L G L P D E F V E H E L Q R L  
UniRef90\_UPI00046F792F G G A G S A C L E T L A A K R I Q T P L L Q L G L T D D F V P H G L L S A  
UniRef90\_G3HJX4 G G I G E A V C A V I S R E P D I T V H Q L A V T E V P K P S E L L D M  
UniRef90\_H1S6E5 G G A G S A V L E A I L A A A G L A V P V L Q L G L P D R F V D H G L L A Q  
UniRef90\_X0YV71 C G V G A E I A A Q I S E K T F H E L A A P V A R L G G P F V P F S P L E D A  
UniRef90\_UPI0003741AEE G A G S A V A E Y L S N T G L V I T P L L Q L G L A D E F V S H A S Q S D

UniRef90\_I1E2I3 YGLDSAGI L A S I K A L  
UniRef90\_D7CKI3 L G M D A S G I V A K V M E T  
UniRef90\_UPI00036870FC Y G I S A E A I A S K A E K L I G  
UniRef90\_I7LI64 Y N L D I E G L Y N T I L K  
UniRef90\_H6Q5G9 I G L D S Q G I R K K I E N W L N  
UniRef90\_G9YD79 A L L D A Q G I V D Q I Q N W L  
UniRef90\_D4MUX2 F G L T A K Q I K E T I  
UniRef90\_F9D1U2 C G I D A E A I A Q T I R K I  
UniRef90\_U2CD26 Y G L D A K S I Y R K I R K A  
UniRef90\_I3CY96 Y G L T A D N I A A K V  
UniRef90\_UPI00037C2961 Y G L D A D G L E K A V R N A L  
UniRef90\_UPI0003B3E54B Y G L T A E G A L E R A R  
UniRef90\_A3WFP3 A G L S A P H I V D T V L K A L K H  
UniRef90\_R9PNR1 L G L D S K G I Q Q K I E R  
UniRef90\_G7M123 Y K L D C E N I S K A V I E L  
UniRef90\_G1KMS6 F G I S A K K I I A A V K S T F A  
UniRef90\_D8F046 A L P N I E R L T A A A R N L M K  
UniRef90\_X1MT89  
UniRef90\_UPI000428AF43 S K P S V E D I Y E K V Y A M M N  
UniRef90\_U5F7K3 Y G I D A K T I V N T I  
UniRef90\_UPI00047A81C6 A I A K S E E V V T A L T T V T R Y  
UniRef90\_B1Y2X5 C G L D S A G I E A A I Q K  
UniRef90\_D6TL38 Y G L S S A H L K E V V R E M L G  
UniRef90\_B6FZ45 A G I S V N K I A E R I K K I  
UniRef90\_Q5J5B3 A G L T A S H I A A S V L N I L G  
UniRef90\_K8QJ58 Y G L T S E K I Y N R I E P L L  
UniRef90\_B9XJW4 Y G I D A A G I V K M V K S I L  
UniRef90\_UPI00037D1E63 L K L D Q A A I M E Q L R Q L  
UniRef90\_X1J504 F F P Q K E W L I D A I H E R L  
UniRef90\_A0A024M6S4 Y G L S V S R I V D R V R S A L  
UniRef90\_UPI0002FC8B60 Q G L D A L G I E R A I R  
UniRef90\_UPI000376FDCA E L L D K Y G L G I K D V V  
UniRef90\_UPI0002D4398C Y G L S V E N I K Q I V  
UniRef90\_N9YW09 H G L T K E H V I D A I K K M  
UniRef90\_D6Y2L8 Y L L S E D D I E Q A A R R L L A  
UniRef90\_F2BAF8 L G L S A D K I R Q R I A R  
UniRef90\_M1M8P8 I G L D V Y G I E N S I R  
UniRef90\_F7MQC0 N N L D V D G L I K S I V K I L  
UniRef90\_UPI0002DB2073 Y G I S A E K M N D R I K A W L A  
UniRef90\_M7PTP4 C G L D S N G L V D T I N R  
UniRef90\_W9V9K3 Q L L D A S G I L A S L R A E L E  
UniRef90\_R7KND4 N E L D T T S V L R R L E E A L  
UniRef90\_UPI00036DD66C F G M A P E A I A E S A E A L I A  
UniRef90\_R7IQ13 C G L D A E S I V K K V S R T  
UniRef90\_X5KHJ0 I L P N P E K L K K T L E Y L L N W  
UniRef90\_UPI00037A21A3 Y L L D E D D V E K A A L E M L  
UniRef90\_R7B5E5 L G L D A A G I A R Q T I Q  
UniRef90\_UPI00030DC76C C G L D A E G I A A A L Q  
UniRef90\_F8WWA1 C E L D I Q G L V K R M Q S I L H  
UniRef90\_R7G328 T G L D V E S M T A Q T C K M  
UniRef90\_R6PFH4 A G I D A V S V Y K K I K E A  
UniRef90\_G6FNR7 A Q I D A D A I V K A V R S L V K  
UniRef90\_Q1R1E5 C G L D A E G I E T A V R R R L E  
UniRef90\_F3ZNK9 C G L D E D S I H A T I  
UniRef90\_K2JTB0 A I V G E A E I E A A L Q R L L A  
UniRef90\_Q4QKG6 A L L D T K G L E E K I L N F I A  
UniRef90\_Q7VC14 L G L T P T A M A D N I K K R F G W  
UniRef90\_UPI0004164ADF  
UniRef90\_K2ABZ5 M G L N A E G I Y N L V F K  
UniRef90\_G0VS17 Y G L T A E A I V K A  
UniRef90\_R6RY09 L G I D S D S V I K R I  
UniRef90\_J9DUZ5  
UniRef90\_T0MSQ0 C G L D P E G I E K A I V S A L G  
UniRef90\_S7TG16 V G L D A G S L A Q A V R R A L G  
UniRef90\_F7SN52 C G L D A D G I E R A I R A R L  
UniRef90\_S3JL62 H L M P E D I V T K A L S M L  
UniRef90\_Q4BYF2 Y G M T S Q Q V V A A V K K Q L A F  
UniRef90\_W4YKX5 F G I S A N C I V K A V K E M L A  
UniRef90\_C8XDX2 Y G L D V D S I V A T V L D G L A  
UniRef90\_S2YB42 V M L D A D T I T E R I L S V  
UniRef90\_UPI0003B3D0C7 F K L D A E G L A E Q I R E F I A  
UniRef90\_R6T7E2 Y G V S T E A V T A Q L K A Y L E  
UniRef90\_I5BZM0 Y G L N A A  
UniRef90\_K9XN50 I L P N V D K I I A A I V E M  
UniRef90\_D4H101 A G I D A E S I V N R I K D  
UniRef90\_H0JB76 H G I D A A G I V A A V Q R L L  
UniRef90\_U1K146 M G L S A R G L S D Y V R Q L L  
UniRef90\_UPI000381A5BB  
UniRef90\_UPI00029ACB91 F G L T S A A I A E Q V T Q R L A  
UniRef90\_X1H4N5 S I P Q K S D I I K A V K E L L E  
UniRef90\_UPI0003346764 Y G I S A R H I I V A V R C I L L  
UniRef90\_A0A022A2D6 C G L D A K G I L N S I E R A  
UniRef90\_UPI0003FCDFC9 Y G L S T D R L V R R V L D A L E  
UniRef90\_X5LFP7 V L L S E D T I E A A V K L V G  
UniRef90\_M1P773 Q G L D G K S I A T K V E G M L A  
UniRef90\_H3ZHR2 I G L D S A G I M A T A R Q L V  
UniRef90\_J9BVH3 V G L D K E S L V K A  
UniRef90\_UPI00046F792F C S L D A A G I E T S I R R F V E H  
UniRef90\_G3HJX4 F G I S A R H I I A A V K D T L  
UniRef90\_H1S6E5 C G L D A K G I E Q S V R E  
UniRef90\_X0YV71 W L P N A G G I K N A V L E L V  
UniRef90\_UPI0003741AEE Q G L D A E G I E H A I D Q R L



UniRef90\_MOSYN5  
UniRef90\_M1MCB6  
UniRef90\_K2CM67  
UniRef90\_D4MAQ3  
UniRef90\_R6MLV7  
UniRef90\_H1CZ17  
UniRef90\_B8KNQ6  
UniRef90\_S6EJ47  
UniRef90\_G5HEV8  
UniRef90\_R6G446  
UniRef90\_Q12D12  
UniRef90\_UPI000237B423  
UniRef90\_Q1MRB3  
UniRef90\_G8QQX3  
UniRef90\_W6MA01  
UniRef90\_R5YD30  
UniRef90\_UPI0003B73ABD  
UniRef90\_H0JEL8  
UniRef90\_UPI00038231D1  
UniRef90\_A0A024IK74  
UniRef90\_R6SWX3  
UniRef90\_V5UJB2  
UniRef90\_D6THL7  
UniRef90\_U3U4D0  
UniRef90\_UPI000464A513  
UniRef90\_UPI0003B368B6  
UniRef90\_R5E6J6  
UniRef90\_UPI0003B541EB  
UniRef90\_C8P8E3  
UniRef90\_Q823V1  
UniRef90\_G4CK92  
UniRef90\_M5DZR6  
UniRef90\_A3W1Q5  
UniRef90\_X1IGL8  
UniRef90\_V6SA25  
UniRef90\_A6LJM5  
UniRef90\_W0DFE3  
UniRef90\_K0B043  
UniRef90\_Q8YPY8  
UniRef90\_UPI000317160F  
UniRef90\_R5FMP4  
UniRef90\_H0URU1  
UniRef90\_UPI0003B63F54  
UniRef90\_K2GBQ6  
UniRef90\_R7QHM0  
UniRef90\_B0U0B3  
UniRef90\_UPI0004672CB5  
UniRef90\_E0VWT5  
UniRef90\_D8PG58  
UniRef90\_Q9H0I9  
UniRef90\_UPI000479EBE7  
UniRef90\_F2IAX8  
UniRef90\_UPI00037EBE1D  
UniRef90\_F0Z5L4  
UniRef90\_H6P949  
UniRef90\_Q60AN1  
UniRef90\_UPI0003B500D1  
UniRef90\_S2TY4  
UniRef90\_O17759  
UniRef90\_I2QN69  
UniRef90\_K0V702  
UniRef90\_D5QEG9  
UniRef90\_X8CWN8  
UniRef90\_B6EIA7  
UniRef90\_UPI000346174C  
UniRef90\_Q98B20  
UniRef90\_UPI0003F18569  
UniRef90\_K6YH13  
UniRef90\_C5BCH9  
UniRef90\_C5YD00  
UniRef90\_V9E9R7  
UniRef90\_UPI0004725313  
UniRef90\_Q7VNP7  
UniRef90\_B0KWW3  
UniRef90\_G8AWT3  
UniRef90\_L0LLJ7  
UniRef90\_X1XW78  
UniRef90\_A5F331  
UniRef90\_UPI00041A5024  
UniRef90\_X1S9B0  
UniRef90\_UPI00035DDA4E  
UniRef90\_R7NML4  
UniRef90\_A0A014NZ94  
UniRef90\_A7HNN2  
UniRef90\_J9JQV2  
UniRef90\_UPI000364FE4B  
UniRef90\_R5H695  
UniRef90\_A2U0I8  
UniRef90\_UPI0003619599  
UniRef90\_R6DSP2  
UniRef90\_A8F7V3  
UniRef90\_I4VRH6

1 10 20 30 40

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

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

UniRef90\_M0SYN5  
UniRef90\_M1MCB6  
UniRef90\_K2CM67  
UniRef90\_D4MAQ3  
UniRef90\_R6MLV7  
UniRef90\_H1CZ17  
UniRef90\_B8KNQ6  
UniRef90\_S6EJ47  
UniRef90\_G5HEV8  
UniRef90\_R6G446  
UniRef90\_Q12DI2  
UniRef90\_UPI000237B423  
UniRef90\_Q1MRB3  
UniRef90\_G8QQX3  
UniRef90\_W6MAO1  
UniRef90\_R5YD30  
UniRef90\_UPI0003B73ABD  
UniRef90\_H0JEL8  
UniRef90\_UPI00038231D1  
UniRef90\_A0A024IK74  
UniRef90\_R6SWX3  
UniRef90\_V5UJB2  
UniRef90\_D6THL7  
UniRef90\_U3U4D0  
UniRef90\_UPI000464A513  
UniRef90\_UPI0003B368B6  
UniRef90\_R5E6J6  
UniRef90\_UPI0003B541EB  
UniRef90\_C8P8E3  
UniRef90\_Q823V1  
UniRef90\_G4CK92  
UniRef90\_M5DZR6  
UniRef90\_A3W1Q5  
UniRef90\_X1IGL8  
UniRef90\_V6SA25  
UniRef90\_A6LJM5  
UniRef90\_W0DFE3  
UniRef90\_K0B043  
UniRef90\_Q8YPY8  
UniRef90\_UPI000317160F  
UniRef90\_R5FMP4  
UniRef90\_H0URU1  
UniRef90\_UPI0003B63F54  
UniRef90\_K2GBQ6  
UniRef90\_R7QHMO  
UniRef90\_B0U0B3  
UniRef90\_UPI0004672CB5  
UniRef90\_E0VWT5  
UniRef90\_D8PG58  
UniRef90\_Q9H0I9  
UniRef90\_UPI000479EBE7  
UniRef90\_F2IAX8  
UniRef90\_UPI00037EBE1D  
UniRef90\_F0Z5L4  
UniRef90\_H6P949  
UniRef90\_Q60AN1  
UniRef90\_UPI0003B500D1  
UniRef90\_S2ZTY4  
UniRef90\_O17759  
UniRef90\_I2QN69  
UniRef90\_K0V702  
UniRef90\_D5QEG9  
UniRef90\_X8CWN8  
UniRef90\_B6EIA7  
UniRef90\_UPI000346174C  
UniRef90\_Q98B20  
UniRef90\_UPI0003F18569  
UniRef90\_K6YH13  
UniRef90\_C5BCH9  
UniRef90\_C5WCD0  
UniRef90\_V9E9R7  
UniRef90\_UPI0004725313  
UniRef90\_Q7VNP7  
UniRef90\_B0KWW3  
UniRef90\_G8AWT3  
UniRef90\_L0LLJ7  
UniRef90\_X1XW78  
UniRef90\_A5F331  
UniRef90\_UPI00041A5024  
UniRef90\_X1S9B0  
UniRef90\_UPI00035DDA4E  
UniRef90\_R7NML4  
UniRef90\_A0A014NZ94  
UniRef90\_A7HNN2  
UniRef90\_J9JQV2  
UniRef90\_UPI000364FE4B  
UniRef90\_R5H695  
UniRef90\_A2U0I8  
UniRef90\_UPI0003619599  
UniRef90\_R6DSP2  
UniRef90\_A8F7V3  
UniRef90\_I4VRH6

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



UniRef90\_M0SYN5 A G L S S R H I A A T V L S L L G  
 UniRef90\_M1MCB6 N G M S V E K L T A Y L K E N V N  
 UniRef90\_K2CM67 Y  
 UniRef90\_D4MAQ3 Y G L T A T Q V V S A A  
 UniRef90\_R6MLV7 Y G L D A K T I A S K I  
 UniRef90\_H1CZ17 Y G L T A E H L V S S A L H L I S  
 UniRef90\_B8KNQ6

UniRef90\_S6EJ47 I L L D V E G I E E Q I I N F L  
 UniRef90\_G5HEV8 Y G M N T E N I A D T I L K R V K  
 UniRef90\_R6G446 H L T E E L I V N D I K A V L K  
 UniRef90\_Q12D12 Y G I S T E A V V A S V K S W L  
 UniRef90\_UPI000237B423 V L L D E Y T V E M A A L E L A K  
 UniRef90\_Q1MRB3 L L L T V D G I K K M L L Q M L  
 UniRef90\_G8QQX3 F G F T A E N I A K K A E D L V  
 UniRef90\_W6MAO1 C G L D A A A V L R  
 UniRef90\_R5YD30 V G L E K T N I V E K I  
 UniRef90\_UPI0003B73ABD V G M T T E Q I I E D L K  
 UniRef90\_H0JEL8 C G L D V A G I E R A V R E R L A  
 UniRef90\_UPI00038231D1 A G I S L G Q I K E K I L S I L S  
 UniRef90\_A0A024IK74 A R V S P A A V V E A A L S L M A  
 UniRef90\_R6SWX3 H L T K E Q I V E D V A R I L A  
 UniRef90\_V5UJB2 V G L D A T G I A A S I R R A L A  
 UniRef90\_D6THL7 A G I S A H H I V Q A V K A L I  
 UniRef90\_U3U4D0 Y Q L D A A G I Q Q Q L A A W L A  
 UniRef90\_UPI000464A513 C G L T P Q R V V N S Y R K  
 UniRef90\_UPI0003B368B6 C G L D M A S I F G R I I E  
 UniRef90\_R5E6J6 C G M D E E S I L N K I E E R L K  
 UniRef90\_UPI0003B541EB L R M D A Q S V A E R I  
 UniRef90\_C8P8E3 Y H L T P K Q L V D D V E K V L H  
 UniRef90\_Q823V1 V G L D T E S M V K R I L T H F N F  
 UniRef90\_G4CK92 M G L S A G K I E Q R I  
 UniRef90\_M5DZR6 Y Q L D A R G I L E N A L S L L S  
 UniRef90\_A3W1Q5 Y G L S V D K V A E Q I K A W L  
 UniRef90\_X1IGL8 Q G M D V D S L V K N V I K L I K  
 UniRef90\_V6SA25 Q I  
 UniRef90\_A6LJM5 L N L D V E G I E R R M R K V L E  
 UniRef90\_W0DFE3 Y G L D A P G I L R A I  
 UniRef90\_K0B043 L G M D K E S I K N I I L E N L  
 UniRef90\_Q8YYP8 A K I D A D A I V E A V K  
 UniRef90\_UPI000317160F V L L S E E T I E A A I K L  
 UniRef90\_R5FMP4 C H L D D A S L K E N I S K M L  
 UniRef90\_H0URU1 Q L L T P H G V V Q M L D E I

UniRef90\_UPI0003B63F54 V G L S E E G I K K S I L E  
 UniRef90\_K2GBQ6 A G L S A S H I E A T A M R L V G  
 UniRef90\_R7QHM0 S N L S F N K I A E V L E K L L S H  
 UniRef90\_B0U0B3 A G L D A A G I T A S I R  
 UniRef90\_UPI0004672CB5 Y G I N S A A I I R A V K  
 UniRef90\_E0VWT5 F G I G V R S I V E A A K E I V K  
 UniRef90\_D8PG58 F G I S T R H L I A A V  
 UniRef90\_Q9H0I9 L G L D P D S M A D R L I E  
 UniRef90\_UPI000479EBE7 S K P S V D D I V E T A Y S I M N  
 UniRef90\_F2IAX8 H L S E D L I I S D T K R A L E  
 UniRef90\_UPI00037EBE1D V G L D C E S I V K Q V  
 UniRef90\_F0Z5L4 N G V T V D N I V K N I L A S L A  
 UniRef90\_H6P949 A G L D Q A G I A R S I D A F I  
 UniRef90\_Q60AN1 F G L N A A G L V R A V E E V L N  
 UniRef90\_UPI0003B500D1 A G I D A E A I A A A G K L L V E  
 UniRef90\_S2ZTY4 Y G I S A R H I V A A V K  
 UniRef90\_O17759 Y G I S T A E V A R Q L K Q W L A  
 UniRef90\_I2QN69 V L L S E D T I E A A A V K L V G  
 UniRef90\_K0V702 A C A G R D D L S I A L G E L L A  
 UniRef90\_D5QEG9  
 UniRef90\_X8CWN8

UniRef90\_B6EIA7 L M L D A T G I E K Q I R D Y L D  
 UniRef90\_UPI000346174C Q G I D P E G I M S H V K G L I G  
 UniRef90\_Q98B20 Y G I S S S E L V R R V R K  
 UniRef90\_UPI0003F18569 F G I S A R H I V E T V K G I V  
 UniRef90\_K6YH13 L G L D S E G I V N K V N A F L A  
 UniRef90\_C5BCH9 L Q L D A D G I L A Q L E G W L A  
 UniRef90\_C5WD00 Y Q L D A T G I H Q Q I M K W M N  
 UniRef90\_V9E9R7 Y L P Q V E D V V A A K H T L A  
 UniRef90\_UPI0004725313 Y Y F S A D T V V E K A N S I  
 UniRef90\_Q7VNP7 F G L D A K G I D Q K I K L A L S  
 UniRef90\_B0KWW3 Y G I S A R H L V V A V K C M L  
 UniRef90\_G8AWT3 Y G I S T D A M V T S L K  
 UniRef90\_L0LLJ7 T L P S Y R K L V D L M A E V L E  
 UniRef90\_X1XW78

UniRef90\_A5F331 L G L D G A G I E R A I R D Y L A  
 UniRef90\_UPI00041A5024 H L K E E L I V E D I K K A L E  
 UniRef90\_X1S9B0 I I P N E H N I W A A A L E L M G  
 UniRef90\_UPI00035DDA4E M L L S V T K I L D R L K P L L E  
 UniRef90\_R7NML4 N R I T P E Q I V E D I K N S L  
 UniRef90\_A0A014NZ94 Q G L D A A G I E R A I R Q  
 UniRef90\_A7HNN2 Y G L S G E K I A E T I L D K L S  
 UniRef90\_J9JQV2 F G I S A K N V V A A V K K F V N  
 UniRef90\_UPI000364FE4B G G I S A K H I E R K V I Q M V H  
 UniRef90\_R5H695 Y R L T K E L I S D D V A K I L K  
 UniRef90\_A2U0I8 S K P S S E D L F E K I Y A I M H  
 UniRef90\_UPI0003619599

UniRef90\_R6DSP2 L G L D A E G I A Q A V R E V L A  
 UniRef90\_A8F7V3 Y G L N A M N L V K A V E  
 UniRef90\_I4VRH6 V L P G D A D V V A A R K L

UniRef90\_UPI0002558392 1 F Y T P V G Y A E T I K V G T D I I T L V S Y G S T L K I V M E V A Q K E L A Q 40  
UniRef90\_G2ECU3 P F E T Q I G K G E Q L K K G K K I I A I L V S I G A I A K N V T E A I Q S L L K E N  
UniRef90\_R9JLW6 G K S E F I Y K E K K D I C L L A V G S M V K T A C Q V R E L L K E N  
UniRef90\_R5XKU3 D F T V G K A E I E I R H K G K R V I L F S T G A V Y E E V A G A K M L E N  
UniRef90\_I5C3N6 Y K V Q L G L P E V I R T G S D V A T V A T Y G S M C R V L D A A D L L A D D  
UniRef90\_F2N735 V L P V G K G R R V R E G E A L A I V N F G V L L P E L G E R V A D M L A E A  
UniRef90\_B8KWB8 Y H F V P G K D E V I R E G T Q G Y V I A F G E T L Y R A L D A V E R L K A E E  
UniRef90\_V5BRC2 F T I G G S T V L Q R E G D K V T F I A A G V M V Y E A F K A A A L I E K E  
UniRef90\_I4BBQ3 F R L I G R A R V L R R G A D V T L V A A G P L P L L L S L E A A A E L J A A  
UniRef90\_B4XYB0 G Q A L V L L G E G R D L V I F T Y G N G V P M A L R A A V A I E Q Q  
UniRef90\_W7G0C0 D I T L V I T Y G G L V D I L V E L I E E L F F E E  
UniRef90\_G8DB21 D Q V T V V A A G Q I L H E A L A A A E H L K K E E  
UniRef90\_Q4RXX0 P F K I E I G K G F T I K T G T K I A I I T T G T L K N N A E S A I N L L S S K  
UniRef90\_A6ELY7 E L K L S E P E I L K E G E V N L A I I E S I G R H V S M L Y D I I S K  
UniRef90\_B9MRT4 E L N K A E L V K G G E V G A I I A V G G F Y Q I G E K A V K I L S Q  
UniRef90\_AO011UBG2 P F A R Y R V T R Q G S D K V I I G L G N M Y P L A E R I A A D L A S E S  
UniRef90\_M4RDD6 T F K I G Q A K V I R Q G S D K V I I G A G V T L H E A L M A A E D L S R E K  
UniRef90\_UPI00032B1A59 Y Q F E I G K A K R L L D G S D A L I I S S G L M T M R A I E A A D E L S K E K  
UniRef90\_L9U6Z4 E L N K Y K V S K S G E C I A V L A L G D F F Q M G E E L V K S I E E T  
UniRef90\_UPI00041F1C20 D T V I L T Y A N G Y Y L S R Q D A A K I L A E R  
UniRef90\_W0BBV9 WE C L Q F G A D V A I L A V G R M V G I A L D A A A L L K T  
UniRef90\_F4A1F5 Y Q F E V G K A K L L E E G N E V L I I S S G I M T M R A L E A A A Q L R K D  
UniRef90\_K8AKA3 H V P I G R G R T Y G D G D R L T L V T F G N G V P M S L R V A A R L P G  
UniRef90\_D2Q001 E M L Q D K G S R V A I V A L G T F L G L G K E V A A N L E K K  
UniRef90\_R5YH52 P F K I E I G K G L C L K T G T Q I A I L S I G T I A K T I T D A I S A L D E K  
UniRef90\_S7WTM9 H F E I G R A K V I R H S D K V I I G A G V T L H E A L A A A D A L S Q  
UniRef90\_UPI000383C192 D L E I G K A K I V K Q G S K I A I L N F G T L L P L A K Q L A E K  
UniRef90\_Q14HJ1 E V T E K G S R V A V I G L G T F Y G L G Q E A A A K I K E K  
UniRef90\_R7R198 W R V N Q T G S Q V A I I G L G N A Y P L A E Q T A A A L S D D  
UniRef90\_E4QZS8 T I E L G K S R T L R E G S G I V I C A F G R P T H D S K L A A D K L  
UniRef90\_F2K4H7 F E P G K A Q V I Y E G D D I A I L I F E G T A G K Q A F E G F K L L K E K  
UniRef90\_D1AHU6 D F Q V I G Q A K V V L K S K D V T A I I G A G V T L H E A L A A A E L L K K  
UniRef90\_B3KS14 V L P I G R G R I V R E G S G I A I L S I G T R L Q D A L L A A D L L A A  
UniRef90\_Q0BVN3 P F T I G R G K V V R Q K P S D E V L I I G A G I T L Y E C L A A A D Q L E K E  
UniRef90\_B5DWE4 P A D F T L P R Y D V V H T E G S D V A I I A L G S F F S L G E S L C A D L S A P  
UniRef90\_C4FBR8 Y T F E I G K A V W L T P P R E V M L I S S G T T V G H C L J A A E K L K E A  
UniRef90\_J6DE16 K F E I G K A I Q I G D G T D A S I I A T G V T V V I E A L K A K E V L K E K  
UniRef90\_K1R513 E I E W G R N E V T K E G S Q A Y I L A F G K T L K Y A L E A A Q D H P E I  
UniRef90\_D3PKB8 K N E V T Q A G T Q V A I V G V G N F Y A L A E E I A E Q L K M Q  
UniRef90\_C9CND1 F Q V G M P T V L K D G S D I A V F T I G I M A I K A L E A A K A L E M G K  
UniRef90\_F3ZYU4 G E V G V Y G E G D T V A I I T Y A N G Y Y L S R Q A E K V L R E A  
UniRef90\_G8UYN8 E L D K F E L T Q K G E K L A I I G L G G F Y Q K G E G L A K A V E E K  
UniRef90\_X8K687 L N K N Q V T Q T G S D V A I I G V G N F Y G L A E E V A E N L E K K  
UniRef90\_H7F4B8 T F P V G G S K T L R S S E D V T L I G A G V T L H E A L A A A E L A E E  
UniRef90\_C7MDC2 E F G K I R L I R P S G S D V A I I C Y G P I M K Q A F A V A E R L A E R  
UniRef90\_Q07RG6 W E L V H E G S Q V A I I A V G D F F G I G Q K T V E K L A A A  
UniRef90\_U2TM40 P F E I E I G K L K T L Q K G T D A V A I L S T G T I G N N V T K A L N E V E N P  
UniRef90\_A3J2J4 L P I G K G V V R R E G Q A P A G R R V A I L A F G S M V A P A M  
UniRef90\_UPI0003733A16 R I L R E Y G D D T L L L S S G F V L D R V L K A A D I L K E  
UniRef90\_V5UBJ8 L R Q G K D I T L V A S G I M V S R A I E A A D Y L K E L  
UniRef90\_R5C108 I N L G S Y E V L S S G E G T V I L A I G N M V K Q A I E A K R L L D  
UniRef90\_J9YP30 V P I G K A Q T R R E G S G L A L A F G P M L E S A L R L G  
UniRef90\_UPI00047725F5 I A V L A F G S M L K T K H A C E I I A K N S  
UniRef90\_C5CRX9 Y K F E I G K A K I T R D G K S V L V I A S G F M T M R S L E V A E Q L R N D  
UniRef90\_UPI0002B48A90 F T I V G R G K V V H Q G S K D V C L V G A G V T L H E C L K A Y N V L K S  
UniRef90\_X1Y0U2 K F E I G R K C K V V K Q G S V L L I G A G I T L Y E A L N A A Q N L E K  
UniRef90\_U2IRW7 L N K N Q V V H Q G S K V A I F G V G N L L G L A K Q A A A K L A E E  
UniRef90\_A6NUY9 A V L L Q Q G S D I T L V L N F G V M I N E V I R C A E L L Q Q  
UniRef90\_UPI00036035DB L K I G K G Q V T R Q G K T I A L V G Y G T L M P Y A E D A D Q L  
UniRef90\_UPI00037F6CE6 A D I L L T G T D G Y F I T I G T K V H T C L K V S E R L Q K A  
UniRef90\_D4MTV3 L N K Y E V T E K G S D V A I V I G L G T F Y N M G C E V A K A V E E K  
UniRef90\_A3X6Y9 I P L G E V G Q H G E G S D V A I V T Y G N G R Y L S T Q A Q A D L E A  
UniRef90\_E6PFI9 P A P I E R G K S E L L R E G S G V A V F A L G N S V D V A M D A Y R L L E S G  
UniRef90\_UPI000361C6A5 V F E I G K A M R L R D G G A D L L V T F A N G V P M C L R T A R R L A E R  
UniRef90\_K8XCX9 L G R A R T Y G D G A D L L V T F A N G V P M C L R T A R R L A E R  
UniRef90\_R6JRP1 K V E Q Q G S N V A I A A G S F F E L G R A A A K L A E Q  
UniRef90\_UPI00037C8366 Y E L V D G V A R V A V E G H D C T I I A P G G M A H R A L E A M R E L L E  
UniRef90\_W4N8P7 L N R F K V E Q R G S K V A I L A L G D F Y I G L K K V A E A Y E R  
UniRef90\_UPI000359E3F4 F A V I G K A K V V R Q S S K V T V I G S C V T L F E A L K A D T L S A S  
UniRef90\_W9VCG9 L G R A R V L G E G R D L T V L S S G I C T E E A M R A I Q A L R G E  
UniRef90\_H1ZEI8 F E I G K S T L M S E G E D I T I T I S T G S I I A D V I E A A E M L K K  
UniRef90\_F5YN45 P W S G Y R I A H D G R D V A V L G L G N A Y P T A K A V V D A L K N D  
UniRef90\_UPI0003FF4358 I N K Y E I T K S G S R I A V I A L G T F Y Q L G E K A A K L I E E K  
UniRef90\_D4JS47 K G R L V S E G E D L L I L S V G F M L P I A N S V A E L I E K K  
UniRef90\_N1W3T2 L E I G K S V T I L E G S R V A I L N F G T L L P A A R E A A E K L  
UniRef90\_B7RWB7 F E I G Q A K I I G S D K I T V I G A G V T L H E A L A A A D D L S Q  
UniRef90\_G5BHU9 E V I S I G S R V V R D H D D L T I V A C G I T V D E A E R A D V L E A  
UniRef90\_UPI00040F87F2 P I G R A R I Y T L G T D L T V T Y G G V R M S L R V A R L A A D  
UniRef90\_D4W2V1 D G S K V A I L A L G S F Y T L G Q N V Q E R L K S I  
UniRef90\_G8S6H3 Y T I Y N K N K I V L N G N T V A I E A I G K M M D M T L D I A K K V Q E  
UniRef90\_Q9CF08 K F Q I G K I F P V T E K S D A I I Y A T G I M V S K A M E A A E R L K S  
UniRef90\_R6SLS9 W E T V Q E G R E I A I G V G N F Y R R A L T L A E A M K A K  
UniRef90\_UPI000370C29A V H G D G G D L A I T Y G N G H Y L S R Q A Q A D L S G  
UniRef90\_F5YEE0 P Y S F G Q A N V I R E N E D V C I M A C G P M V A E A M R A A Y I L K K E  
UniRef90\_T0T2M6 Y D F V P G K E E V I R K G S A G Y V I S Y G D M L Y R S L D A V E R L R K E  
UniRef90\_B7RN61 K I E I G L A S C L K K K G T K T A V L S N G P I G K N V T L A L A N L N P  
UniRef90\_X0RVV3 G S D V L L V S I G V M S A R S L E A A R T L E A  
UniRef90\_I4YAU9  
UniRef90\_H7FPX5  
UniRef90\_UPI0003B3542B

UniRef90\_UPI0002558392 A G I N A E V I I D V Q S V L M P F D L D H H I V K S V A K T N R L V V I D E D V P  
UniRef90\_G2ECU3 A G Y S C A L V N A R F V K P L D D Q S L L H D I F S K Y D V I I T T L E N G T I I  
UniRef90\_R9JLW6 E G I T P A S V Y T F P S V K P M D K E A L I E A A A E E F H K L F V T M E E E N V A S  
UniRef90\_R5XKU3 A G I T P A S V Y T F P S V K P M D K E A L I E A A A E E F H K L F V T M E E E N V A S  
UniRef90\_I5C3N6 M D I D V E V I D V Q S V L M P F D D T T V V G K S I A K T N R A V F A D E D M P G  
UniRef90\_F2N735 H G I R A T L V N P R F V G S E L D D E A C L L E A I G R D H A V V I T T V E E D G N V L D  
UniRef90\_B8KWB8 E Q L N A T V V D M R V W V K P L P L D D E A L L E A I G A S T H E L L I T T V E E S F N K K  
UniRef90\_V5BRC2 G L I D V G L I N K P T L N V I L D E D M L A K V G N S P M V L I V E E S F N K K  
UniRef90\_I4BBQ3 I G Q K I T A Q V L D D A Y S V K P L L D T H E K T L L N A C R G A G V V T V E E H H R P Q  
UniRef90\_B4XYB0 D G T E A Q V L D L R W L V P L L N A A F L I G A Q A A T A S Q R V V L V L D E E G R Q S F  
UniRef90\_W7G0C0 L G W Q V R V V D L R W L V P L L N A A F L I G A Q A A T A S Q R V V L V L D E E G R Q S F  
UniRef90\_G8DB21 H D L T A Q V L C P I Q I L Y P C Q D L K T I M D H T R A T S S R I L T V E E H H R P Q  
UniRef90\_Q4RXK0 R I L S V R V I D P F T L K P L P L D D L K T I M D H T R A T S S R I L T V E E H H R P Q  
UniRef90\_A6ELY7 D Q A Q V G L Y D L G F T S P L L D K D L L N N T F Q H Y N T I I T T V E E D G V I Q  
UniRef90\_B9MRT4 N K L I D A T L I N V V R F V K P L L D N T K L I K R I V N T H K K I I T V E E D N S I L  
UniRef90\_A0A011UBG2 N Q G I N A A L I N P R F V T G L L D T A P M L I K R I V N T H K K I I T V E E D N S I L  
UniRef90\_M4RDD6 G D I D A S V I D P Q Q C T S L L D T A C L E A L R K R C H S M V V T L L E D D A Q L S  
UniRef90\_UPI00032B1A59 D V F I R V L D L F T V K P L L D T A A T I T S A N A K A T G G M I V E E N H S Y A E  
UniRef90\_L9U6Z4 G T N V A V L H C A T I L K P L P L D D T A T I L A E V R R Y P P V F V A E N H S Y A E  
UniRef90\_UPI00041F1C20 F G I T A T L I N P R Y I T G V L D T E L L S K L E E N H D L I I T T V E E D G V V E  
UniRef90\_W0BBV9 Y D I K V K V D L R W L S P L P S K S T L A D L I N I K R L V T V E E D N I E K  
UniRef90\_F4A1F5 M G I N A A V Y N A R C I K P L P L D E E T L V A Q A S K G R L V I T A E N H S A V  
UniRef90\_K8AKA3 N I G V A V L H V P T I K P L P L D E E T L V A Q A S K G R L V I T A E N H S A V  
UniRef90\_D2Q001 V R V L D L R W L A P L P D T V G M L R E A E A T G R V L V A D E D G L R R S  
UniRef90\_R5YH52 T G T V A T V I N P R V Y Y S G I L D T V G M L R E A E A T G R V L V A D E D G L R R S  
UniRef90\_S7WTM9 D A I S H Y D M Q F V K P L L D D E R L L H V V F K Q H K A I I T T V E E D G T I V  
UniRef90\_UPI000383C192 Q D I S I C V I D P F T V K P L P L D D A A T I T S C A K A T D R V V T V E E D H Y Q E  
UniRef90\_Q14HJ1 Y H A T V I D M R F V K P L P L D D A A T I T S C A K A T D R V V T V E E D H Y Q E  
UniRef90\_R7R198 T G A A P T V I N P Y Y I T G L L D E A L L E D L K Q D H S V V V T T V E E D G M L A D E  
UniRef90\_E4QZS8 Y G I T A T V I D P R Q C T S L L D S D A V L E S L R D G H Q Q V I T T V E E D N Q L E  
UniRef90\_F2K4H7 I D A T L I D M R F V K P L P L D D H A A L D S L R D G K K L L V T T V E E N A I M  
UniRef90\_D1AHU6 G Y K C K L I N R S I K P V L D K E L I L K T G R T V K G I I T V E E N H S V Y  
UniRef90\_B3KS14 E K L I N I R V L D P F T V K P L P L D D R T A L V E R L A R E N D V L V V E E G S I A  
UniRef90\_Q0BVN3 H K I T V T V I D P F T V K P L P L D D V D L I V I E H K Q C G G R V V V V E E D H Y Q E  
UniRef90\_B5DWE4 C I T V R V I D P F T V K P L P L D D A V A L A D V A R H A S T V F V I E E H T T V  
UniRef90\_C4FBR8 A D L D A T L V N P R F A T E L L D D A V A L A D V A R H A S T V F V I E E H T T V  
UniRef90\_J6DE16 N G I N V R V I D V H T I K P L P L D D K E M I T K C A K E T K R I I T T V E D H N I I  
UniRef90\_K1R513 G V I N A R F V K P L P L D D K E M L E A L A L E G Y K L V T T E D G Q K M  
UniRef90\_D3PKB8 H G I T P T F I N V S T I K P L P L N T Q V I T D M A K N C K A V I T A E E H S I I  
UniRef90\_C9CND1 I S L K V I N V S T I K P L P L N T Q V I T D M A K N C K A V I T A E E H S I I  
UniRef90\_F3ZYU4 H N I S V K I D L R W L S P L P K K E A I L K E I A K A K R I I V D E D G R Q S  
UniRef90\_G8UYN8 Y G F R P T L I N P R F A S G I L D K E L L D S L A E T H K L V I T T V E E D G I L A  
UniRef90\_X8K687 H Q I K A T I I N P K F I S E L D D T D L L D S L E T N H R L V V T M E D G G I L S  
UniRef90\_H7F4B8 D G V R A R V L D A Y S V K P L P L D R D G V A K I L G S Y A S V V I E E C A P E N  
UniRef90\_C7MDC2 G T K A A L Y S V H T I K P L P L D R D G V A K I L G S Y A S V V I E E C A P E N  
UniRef90\_Q07RG6 G I D A T L V K L L F A S G L D T A T L N A L A Q T H D V I L T I E D G G I V D  
UniRef90\_U2TM40 S F F S H F H F P F I K P L D D V N S I W E L I A A H D Q L I T V E E D G V I T  
UniRef90\_A3J2J4 E I N V S V V L P A V I S P L P L D D I A P I A Q E V A C A R R A L V V E E G V A G  
UniRef90\_UPI0003733A16 A A A D A T V A D M R F V K P L P L D D A L I A R L A Q T H D Y L V T V E E G S I M  
UniRef90\_V5UBJ8 N G V H V T V G D V N I K N A K P P S K V L E A I K K A K K I V T V E E D H N V H  
UniRef90\_R5C108 G I E A S V D L F K I K P L P L P E E L K P L L I D Q S I V T I E E D N H N R I  
UniRef90\_J9YP30 C N I N P A V N A R F L K P L P L D E N L L N D L F K E Y K N V V T I E E D N T I T  
UniRef90\_UPI00047DCAB9 E R L D A T V Y N M R F V K P L P L D E N L I D T I R E D Y H I I T T V E E H Q L M  
UniRef90\_UPI0004725F5 P K T Q F S V Y N M R F V K P L P L D E N L I D T I R E D Y H I I T T V E E H Q L M  
UniRef90\_C5CRX9 G V D I A V L H V P T I K P L P L D E A T I L A E V R R L G R L V V V A E N H S V  
UniRef90\_UPI0002B48A90 E G L Y V R V F D P F T V K P L P L D N E G L S N A N A C E K R V V V E D H Y P E  
UniRef90\_X1Y0U2 S G I H C V R V I D P F T V K P L P L D N E I V H H G N Q C G G R V V V I E E H Y K Q  
UniRef90\_U2IRW7 G V D A T V I N P R Y L T G L D T E L L D Q L Q A D H Q Q V V V T L L E D G I L E  
UniRef90\_A6NUY9 H G I S A E L V K L N T I T P L P L D T Q V I Q R S V S K T G S L V L V A E D V M E T  
UniRef90\_UPI00036035DB G L S I G V I D M R F V K P L P L D D E D L I R Q L A D E H E L L V T V E E D G C I  
UniRef90\_UPI00037F6CE6 T G T K A T V I N P Y Y I T G I D E V L L E D L K K D H D V V I T T V E E D G F L E  
UniRef90\_D4MTV3 R G I K T R I D L R W L A P L P A E A L I A A A K G C K H V I T V E E C R T T  
UniRef90\_A3X6Y9 E Y A L P T I Y S A R F V A P L P L D R E A L V A C A R S H E L L I T L E E H S L A  
UniRef90\_E6PFI9 G I R A R V D L R W L A P L P A A D L L R E A E A T G R V L V V D E E H S R R T  
UniRef90\_UPI000361C6A5 H G L R C A V V D M H T I K P L P L D T D T L K S L F D R R L V T V E E H S V V  
UniRef90\_K8XC9 G I T A T L V N P R Y L T G L D E N L L N S L K A D H K I V A T L L E D G E L D  
UniRef90\_R6JRP1 H D V L C E L L V P A R L Y P G I D A E L L E G G A L P R G R H V C V A E D G T A G  
UniRef90\_UPI00037C8366 T G I Q P T L I N P R F A S G I D A E L L E G G A L P R G R H V C V A E D G T A G  
UniRef90\_W4N8P7 G V N I R V I D P F T I K P L P L D G A T I T A N A Q A T G K I I T V E D H Y P A  
UniRef90\_UPI000359E3F4 Q G L S I A H H V S T L K P F D P A E A T A G A R L G V V T M E N G A I T  
UniRef90\_W9VCG9 D D I T A E I T N M S T I K P I D K E S I T K S A L K T K K V I T V E E H N V I  
UniRef90\_H1ZE18 G G I D A T L I S P L Q F S T L D E R T L T A L A S R H D V V V T L E D A Q L L E  
UniRef90\_F5YN45 T G T A P T L I S H Y I T G L D E R K T M L E D L K K N H D V V I T L E D G I L E  
UniRef90\_UPI0003FF4358 Q G V G V S V V D L F W L R P Y D R D L V H G Q I Q K N K R F V I L D E S Y I H  
UniRef90\_D4JS47 G T T L I N D M R V W V K P M D A E T K V R E L A E S H D L I V T L E E N A I A  
UniRef90\_N1W3T2 Q G I S I P I V N P F T V K P L P L D A A T F I S S A R A T G G W I V G E D H C I R E  
UniRef90\_B7RWB7 E G V L A K V I D C Y S V K P I D T V T L A A A A S E S R A V I T V E D H W P E  
UniRef90\_UPI00040F87F2 T G L E A T L I N P R F A S G I D E A L L T Q L L A N H Q I V I V T L E D D G V L D  
UniRef90\_G8S6H3 G Y G T R V I D L R W L S P L P V A D L V R E S L A T G R V L I V D E T R R S  
UniRef90\_Q9CF08 N G I N A T L I N P L F I N D L D Q A F L E N L V E N H Q V I A T I E D G I L D  
UniRef90\_R6SLS9 K N L D I T V I N P L F L T G L D E T A I N D L K K N H S K L V I T L L E D G E L M  
UniRef90\_UPI000370C29A A G Y S L R L L D L R C L V P L L H E T A I V A A L A D C S Q V L I V D E C R R R  
UniRef90\_F5YEE0 E G I T A Q V V N V S T L K P L L K E E V L K Y A A G K K A A V T A E A V R T  
UniRef90\_T0T2M6 H A V T P T V I K P L L I S K L P L D T D L L D R L Q K N H S L I I T L E D G V I D  
UniRef90\_B7RN61 Q G I D A R V I D L R W L A P L P A E D A I I D A I G D R P L I V I V E C R R T  
UniRef90\_X0RVV3 Y N L E T R I L N I H T V K P L P L D K E S I L K A A E E G L V M T V E E H Q K  
UniRef90\_I4YAU9 G L D V G L N K P L N V V D E E T I K E Y G K T G F V F V V E S I S Q K  
UniRef90\_H7FPX5 N T I A H Y D F A F V K P L P L D E A E L H S I F K T Y K T V I T L E D G V S  
UniRef90\_UPI0003B3542B E G Y N V T V D P R W V A P V P Q A S L I A L A D D H D V V V T V E D G L V R

UniRef90\_UPI0002558392 G G A S A Y I L Q K V V D K Q N A Y H Y L D S K P I C I E H R P Y G S D G D Y F  
UniRef90\_G2ECU3 G G F G S G I A E F K A L N N Y K N T L K I L L G I P D T F I E Q E L E E K  
UniRef90\_R9JLW6 G G Y G S R V R G F L E D R G K A L L S I T I P D E Y I S E H I L R Q E  
UniRef90\_R5XLU3 G G F G S A V A E V L M A T V P C K A R L A L I G I P D E Y V S T V L R R E  
UniRef90\_I5C3N6 G A S A F M L Q Q V I E G Q K A Y Y H A E P V T I H A Q A H R P Y S S D G D Y F  
UniRef90\_F2N735 G G W G E K V A R Y L G P S P A R V R C Y G T P D R F D P G E L L K R  
UniRef90\_B8KWB8 G G A G S G V A E W L A A N G R Y L Q C R I K H V G L G D R F F I E Q A  
UniRef90\_V5BRC2 T G L G S R Y G S W L L E R G F A P K F A H L E G C G G L W E Q F P H Q G  
UniRef90\_I4BBQ3 A G L G S D A V T E V L S A E Q P R R L H R V G L N D E F G A P S L M K H  
UniRef90\_B4XYB0 G G L G D A V T E V V A A E L A Q P R R L P V R R V A V R G R P  
UniRef90\_W7G0C0 G G V G E G V I T A L V E A G H G H L P V R R V C G A D T Y T P L A G A A F  
UniRef90\_G8DB21 A N F S S E M L S Q L I E N D K F K N C N F L R C S S E P S P I P A S L E D K  
UniRef90\_Q4RXK0 G G L G E A V S S A M V N E S G F T V H R L A V S H I P K P H E L L E K  
UniRef90\_A6ELY7 G G F G T A I L E F S S S K Q F K N N I L C W G I D H Y F P E Q L H D Q  
UniRef90\_B9MRT4 G G L G E K I K S I L A E K S V E L K H I A I P D R F Y P H Q L Y S M  
UniRef90\_A0A011UBG2 G G F G Q K I A A Y F G S S D V N V R K S Y G M C K E F Y O D R Y N A N E L L D N  
UniRef90\_M4RDD6 G G W G E Q V T V Y A N Q D G V D K H M R V L N F G A A D R V P A Q D L Y K R  
UniRef90\_UPI00032B1A59 G G I G E S I S A V I A M E A S I V V Y Q L A V I V G L P Q N G K P S E L L D V  
UniRef90\_L9U6Z4 G G L G E S I A S V L M K E G I V S V K F N Q I G L P D E F L D P T L H D R  
UniRef90\_UPI00041F1C20 G G W G Q K I A S F Y G P S D I K V M N Y G L R K E F I D R Y N L N E V M E K N  
UniRef90\_W0BBV9 G S V S E G I A M T L M E H D G L S H L K I R R L T G E D C F I P L S A W Q H  
UniRef90\_F4A1F5 G G F G S S I A E F I F D N D I K G V D L D I I A I P D R F V P H G L L K N K  
UniRef90\_K8AKA3 G G L G E A V A A L L M R R G V R A Q L D T V G L P D E F A L P T L H D R  
UniRef90\_D2Q001 G G V S E G V I A A L V D A G F T G R M A R V T S E D T F V P L A A A H H  
UniRef90\_R5YH52 G G F G E K I T R F Y G N S N M K V L N F G L K K E F L D R Y D V E L L D N  
UniRef90\_S7WTM9 G G F G S T I L A F A S K H N Y S Q K I T I L G I E D Q F I E H Q L M Q L  
UniRef90\_UPI000383C192 G G I G E A V C A A V S G E P A I H V H Q L S V S G V S E R N R K N S E L L S L  
UniRef90\_Q14HJ1 G G A G S A V N E Y F V A K D L S N K I V R N F G L Q D K F L N L L A Q  
UniRef90\_R7R198 G G F G E K I A R F Y G D S D M K V L N F G L K K E F L D R Y D V N E V L K E N  
UniRef90\_E4QZS8 G G W G E K V T A Y A N H H V I S D R N P R V L N F G A A K E F T D R E L N E R  
UniRef90\_F2K4H7 G G A G S A V S E Y L L K E N I L I S T L H L G L P D R Y E E H A K H Q D  
UniRef90\_D1AHU6 G G L G S V T A E I L G T A E H K A V L R Y V G L K D T F T E S D V K E K  
UniRef90\_B3KS14 G G I G E A V S A V V G E P G L T V T H L A V N R S V P R S G K P A E L L K M  
UniRef90\_Q0BVN3 S H V M Q H L A Q A G L L D A R D G H A L K V K H L F V P T V P P A V L T D M  
UniRef90\_B5DWE4 G G L G E A V L S A L A E Q R N F V I V K H L F V P T V P P A V L T D M  
UniRef90\_C4FBR8 G G W G E K V A R Y L G P T S V R V L C Y G V R K G F P D R F D A D E L L A E  
UniRef90\_J6DE16 G G L G S A I L D H Y N A L G M P F P R I V T H G I P D R F V E A G M L K A  
UniRef90\_K1R513  
UniRef90\_D3PKB8 G G F G S A V I L E A L N E L G L K P D I R V L G L P D V F F D H  
UniRef90\_C9CND1 G G Y G Q M I A S Y L G D R E I A V K N Y G L E K K F Y D N Y R A A D V L S E L  
UniRef90\_F3ZYU4 G G L G S A I V I Q A L S K E A K P I E F I G I N D T F Y D E L L S D Y  
UniRef90\_G8UYN8 G S I S E G I A M T L M E E A S P R L K I K R L T G K D C F I P L G T A W Q  
UniRef90\_X8K687 G G F G Q K I A S H L G T S N L K V K N Y G L E K K F Y D R Y N A K A L L K E  
UniRef90\_H7F4B8 G G Y G Q T V A S Y L G N T H V K V Q N Y G L D K A F H D R Y K A T E L L A E  
UniRef90\_C7MDC2 G G L G A A V L A I A A A E P L T D L H L K H L A V G V P G S G T T E E L L A A  
UniRef90\_Q07RG6 G S L S M N I Q S I A W Q E R A A C T L D V F T L K D E F I H D D L L A A  
UniRef90\_U2TM40 G G F G Q R V A G Y L G T N S S T K V L V R G F E R A F Y D R F K A S D L L E E  
UniRef90\_A3J2J4 G G F G E Q I N T I A T N N L K K P I V N L G I P D A F I E H E L Q Q L  
UniRef90\_UPI0003733A16 F D W G A E V A A R L H E T L F G K L D R P V R R L A S K P Q I I P S G E A G  
UniRef90\_V5UBJ8 G G A G S A V A E S L L A G G V T R P V L Q L G L P D R F I D H L L L A A  
UniRef90\_R5C108 G G L G A Y I S K L V V E N D P K P V K R M G L T T F G E S L A D H  
UniRef90\_J9YP30 G G I G S A L C E W L S M E K D T T V S R M G I D E R F G O V G Q M  
UniRef90\_UPI00047DCAB9 G G F G S R I N K F I I D N N H N I K V T N I A L P E E F V H H E I Y E S  
UniRef90\_T1A7S4 G G A G S A V N E Y I L S K T A E A I S V P L M Q I G I P D R F I E H S C L A A  
UniRef90\_UPI00047725F5 G G A G S A V N E Y I L S K T Y M T S V P N V L N I G I D D K F I P H Q Q L E Y  
UniRef90\_C5CRX9 I G G L G E A V I A G L L M R S G V S T A Y R Q I G L P D A F L D P T L H D R  
UniRef90\_UPI0002B48A90 G G L G E A V S G A L S M T N V R V K R L G L P R S G P P D A L L E L  
UniRef90\_X1Y0U2 G G L G E A V L S A L A E H R N F V P T V L I D M F G L S A P M E E D T E Y K  
UniRef90\_U2IRW7 G G Y G Q T I A S Y L G D S A V R V Q N Y G L Q K A Y P D R Y D V N E L L A Q  
UniRef90\_A6NUY9 N C V G R R I A A E L A L S G T A V S R M A L C N L G R S F V T H E L R K L  
UniRef90\_UPI00036035DB G G A G A G V A E F L Q Q D K R L V H L L Q L G L P D R F I E Q E M Y T A  
UniRef90\_UPI00037F6CE6 G G F G S A I L E Y F N D N S L I E E T K I Y R F G V P D L F C E H A Q L K M  
UniRef90\_D4MTV3 G G F G E K I A R F Y G N S D M K V F N Y G V K K E L L D R Y D V T E L L E K N  
UniRef90\_A3X6Y9 G S Q S E A L M A L F V E Q G I S S L A R H A A G D C F I A T G A Y A A  
UniRef90\_E6PFI9 G G F G S A V L I E A L A D A G V S L P L E R T I G V I G E T F L Q A D Q R R A  
UniRef90\_UPI000361C6A5 G G V S E A V L A E L V D A G F G G A M G R V N S M D S F V P L G A A D Q  
UniRef90\_K8CXC9 G G L G G A V A E Y L A E Q  
UniRef90\_R6JRP1 G G F G E K I A R F Y G D S N M K V L N F G A K K E F T D R V P V E E L Y K R Y  
UniRef90\_UPI00037C8366 A T W G A E V A T R L Y P V L W G R L A R P I T L V S A A D S V I P A A L E H  
UniRef90\_W4N8P7 G G F G Q K I S A F Y A D S D M K V I S Y G M E K E F Y D R Y D S R R L L K D  
UniRef90\_UPI000359E3F4 G G I G E A V A A A V S G Q P N I I V K H L A V Q E I P R S A E L M D K  
UniRef90\_W9VCG9 G G L G S V V A E L M A E K G L G G R L R I G L R D T Y A H G A L M R E  
UniRef90\_H1ZE18 G G F G S V I A Q F V A Q H Y P G I P V E N L G V P D V F I E H A Q Q E I  
UniRef90\_F5YN45 G G L G C A V S E V L C K A T V I F D I M G F N D T F C N D Y G W H Q D L K R M  
UniRef90\_UPI0003FF4358 G G W G Q K V T A F Y A N E M P D A R M H V L N F G A D K E F T D A E L D S R  
UniRef90\_D4JS47 G G F G E K I A R F Y G S D V K T L C F G L E K K F Y D R Y D V N E L M H K A  
UniRef90\_N1W3T2 A G A S G F L L N E I P A N L L S K F L K T F A L P P E P I H H G E R H  
UniRef90\_B7RWB7 G G A G A V S E L L A G A G L I A T A V L H L G I P D G Y V E H A Q L A E  
UniRef90\_G5BHU9 G G I G E A V C A A V S R E P D I L V H Q L A V A E V P K A S E L L D M  
UniRef90\_UPI00040F87F2 G G L G E A V L S A L A G V A D R P P V R V L G V R D M P V S G S P A  
UniRef90\_D4W2V1 G G F G E K I S R F Y A D K E M K V L N Y G A T K E F T D R E D I N L L Y E R  
UniRef90\_G8S6H3 G G V G E G V L A A L V D G S F V G S A R R V A A A D A P V P L G A A Q H  
UniRef90\_Q9CF08 G G F G Q K V A S F L G K Y D V K V L N F G A K R E F N D S V P V T E L Y N R Y  
UniRef90\_R6SLS9 G G Y G Q N I S S F Y G T S D L L V K N F G I S K K F H T D F T A E D L L K E  
UniRef90\_UPI000370C29A G S L S E E L F T A L H E A R P G Y Y Q L S R I T A E D S F I A P L A A Y A  
UniRef90\_F5YEE0 G G L G Q A I A S I L M A N G P L A F E E V A I N D D F Y D E L L T R Y  
UniRef90\_T0T2M6 G G F G Q K I A A Y Y G R R N I K V M N Y G I Q K G F Y D R Y D P D E L L R D  
UniRef90\_B7RN61 G G Q A E G L M A L L A E R G I S R I A R L T A E D R Y D A T G A Y A A  
UniRef90\_X0RVV3 G G F G N I I A G V I A A G K K Y N T P L L L D M M G V D D Q F A S W E L L K T  
UniRef90\_I4YAU9 N G L G S R L L Q R G F H T K Y D F M G A H T E G C G G V E F Q I P H Q G  
UniRef90\_H7FFX5 G G F G T A I L Q E F A S H H N Y S A N I K T L G I P D E F I E H E L L Q Q Y  
UniRef90\_UPI0003B3542B G G I G S M I E E A L S A A E V D T P L R R L G F P R V F P K H A L L A D

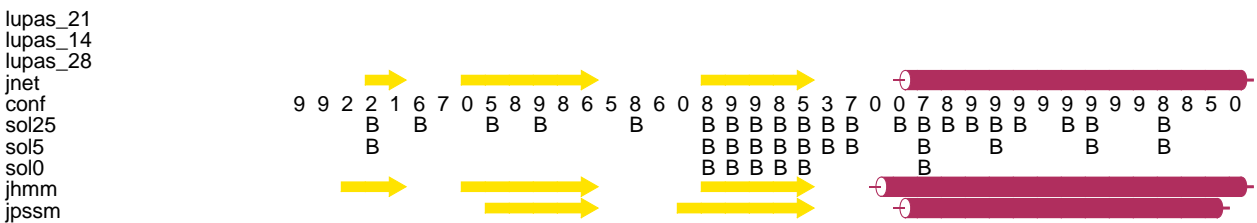
UniRef90\_UPI0002558392 S K P S H E D V F E G V Y N V  
UniRef90\_G2ECU3 T G I S A K Q I  
UniRef90\_R9JLW6 L G I D A D S I K K K I  
UniRef90\_R5XKU3 Y G M S A E K I F E R I S E  
UniRef90\_I5C3N6 S K P S V E D V V E R I Y L L M H  
UniRef90\_F2N735 C G M N A P D M V S N V L D M I  
UniRef90\_B8KWB8  
UniRef90\_V5BRC2 I D P V G I M A K V K E L V K  
UniRef90\_I4BBQ3 Y K L A A E T M V  
UniRef90\_B4XYB0  
UniRef90\_W7G0C0 G L P S D N A V I G A A L D L  
UniRef90\_G8DB21 M L P N K T N I L R N I L E I Y N  
UniRef90\_Q4RXX0 Y G I D R D A I I Q G V R K M L S  
UniRef90\_A6ELY7 A G I S V T A L C N R L Q K L L A  
UniRef90\_B9MRT4 L G M D R E N L T K I V M E L I E  
UniRef90\_A0A011UBG2 L G I T P E K I A A D I A A M L K  
UniRef90\_M4RDD6 Y G L T A P Q V E Q A I R S A L  
UniRef90\_UPI00032B1A59 Y G I S A R H I I M S V K R I L S  
UniRef90\_L9U6Z4 Y G I S T K E V I K T L K Q  
UniRef90\_UPI00041F1C20 H L R V D L I I E D V K N L  
UniRef90\_W0BBV9 L L P N R D K I I A E V I R M M E  
UniRef90\_F4A1F5 L K M T P Q G I A S R I Y E R I N  
UniRef90\_K8AKA3 Y G I S T A M M V Q K L K S R L  
UniRef90\_D2Q001 V L L G E P A I E A A A Q R L L A  
UniRef90\_R5YH52 H L T K D Q I V A D I T E V L A  
UniRef90\_S7WTM9 Q K L D V T S I K K E I K  
UniRef90\_UPI000383C192 F G V S A R H I I A A V K Y T L  
UniRef90\_Q14HJ1 S K L C V E N I S Q E L D K L I  
UniRef90\_R7R198 H L T A E Q I A E D V A R M L A  
UniRef90\_E4QZS8 Y G L T V E Q V T E A I T R  
UniRef90\_F2K4H7 M L L D A D G V L T A I E T K L K  
UniRef90\_D1AHU6 Y G L S K E K I L I A A E D I M K  
UniRef90\_B3KS14 F G I D R D A I A Q A V R G L I  
UniRef90\_Q0BVN3 A G L D H Q A I R D T V L K L V D  
UniRef90\_B5DWE4 F G I S A R N V V L A V N A I L K  
UniRef90\_C4FBR8 N G M T L E A I T A D I R V A L S  
UniRef90\_J6DE16 A R L D G E G I A D F L R E K L  
UniRef90\_K1R513  
UniRef90\_D3PKB8  
UniRef90\_C9CND1 G I T A E A I T K D I I E Q L  
UniRef90\_F3ZYU4 F G L T S E A I I Q A A Q R L  
UniRef90\_G8UYN8 Y L P S Q E S I I D A V I A L  
UniRef90\_X8K687 L G M D D E S I L N D I K E M L S  
UniRef90\_H7F4B8 N G V T V E N I C N Q I L N V  
UniRef90\_C7MDC2 A G I D A D H I A S A A R A T L E  
UniRef90\_Q07RG6 H G L T V D R I L A  
UniRef90\_U2TM40 A R I T P D K L T E D V L A V L N  
UniRef90\_A3J2J4 C K I D V T S I I Q  
UniRef90\_UPI0003733A16 T L I S A D D I E A A V Y E E L A  
UniRef90\_V5UBJ8 E G L D A A G I A K S I C E  
UniRef90\_R5C108 Y G F S A E N I A D V V K  
UniRef90\_J9YP30 Y L L E E Y G L A V K D I V Q H  
UniRef90\_UPI00047DCAB9 I G L S P S K I A D K I K S L  
UniRef90\_T1A7S4 A G L D H A S L S A S L E  
UniRef90\_UPI00047725F5 C G L D V N G V V Q K M N H F L H H  
UniRef90\_C5CRX9 Y G I S A Q M M S R Q T K  
UniRef90\_UPI0002B48A90 F G I S S N H I T A A V K  
UniRef90\_X1Y0U2 K L P V I E R C V H K  
UniRef90\_U2IRW7 N G L T A N N I A Q Q A L K A L N  
UniRef90\_A6NUY9 C G L D G E S L C R K A M E V  
UniRef90\_UPI00036035DB L G L D G P G I I S R I E  
UniRef90\_UPI00037F6CE6 F G L T V D E L S N K L L E I F E  
UniRef90\_D4MTV3 H L T V Q Q I V  
UniRef90\_A3X6Y9 T L P S K E S I L A A A L N L V G  
UniRef90\_E6PFI9 V G L D A R S L A R R I A A R L  
UniRef90\_UPI000361C6A5 V L L G E E M I E E A A E R L  
UniRef90\_K8CXC9  
UniRef90\_R6JRP1 H L T P E L I A A D I L K A  
UniRef90\_UPI00037C8366 V L V H A D T I R L A V L E A L A  
UniRef90\_W4N8P7 L G I D P E M I A E T  
UniRef90\_UPI000359E3F4 Y G I S A P C I V K A V Q S M L S  
UniRef90\_W9VCG9 Y G L D A M A L V R A A E D L  
UniRef90\_H1ZEI8 C G I D I D S I V K L I S E  
UniRef90\_F5YN45 Y G L S P L H I Y E K C K  
UniRef90\_UPI0003FF4358 Y G M T V E A I V A R I R G L  
UniRef90\_D4JS47 H L T P E Q I A E D T I A L L K  
UniRef90\_N1W3T2 Y G L T A A Q I A D E L T Q T L K  
UniRef90\_B7RWB7 L G L D S A G I E I S V Q S R L S  
UniRef90\_G5BHU9 F G I S A K H I I T A V K Y T L  
UniRef90\_UPI00040F87F2 E L T H A A G I  
UniRef90\_D4W2V1 Y R L R E D L I V E D L K R L L  
UniRef90\_G8S6H3 V L V G E D A I T Q G A H A L L A  
UniRef90\_Q9CF08 H L T P E L M V A D I L S L L K  
UniRef90\_R6SLS9 N G M S V E N I S N I I E N M L  
UniRef90\_UPI000370C29A V L P S K Q Q I I E K V Q Q L L N  
UniRef90\_F5YEE0 G L M S E D V Y K A V K K A L N  
UniRef90\_T0T2M6 N H M G I D Q I L Q D L  
UniRef90\_B7RN61 T L P S R E G I V A A A S D L L N  
UniRef90\_X0RVV3 F E L T A E H I A K R T K A L  
UniRef90\_I4YAU9 L D S P S I Q A R I K K V  
UniRef90\_H7FPX5 C N I D V K S L E  
UniRef90\_UPI0003B3542B V G L S P E G I A N S V R E



```

UniRef90_B6BR37      F G K I R R I I E G K D I C F L T Y G N I R K S F T A V D A L K K
UniRef90_G9YNI6     V P V E P A T L L R T G A D I T L A G Y G M M L N Q L L D C A D R L A R
UniRef90_F7JHJ7      K V E E A G E K V A I L A L G D F Y Q R G E Q L S A K I K A E
UniRef90_L1J2M8      Y T F V P G K D D V I R K G T K G Y I V S Y G D S L Y R S L D A V E R L R A E
UniRef90_H0UQW6      P Y E V E P F K P Q I I N E K G E T L L I S A G H I F D E A S K V Y E E L K A D
UniRef90_D3PCU3      F E P G G L H V I S P G D D L A I I A A G Y M V H V A K Q A V E L L A K
UniRef90_X0XQH2      E M L V Q G E D A C I L A I G N M V Q E A L N A A V S L R N E
UniRef90_C7H0C6      Y S F E P G R D E V I R E G R D G Y I V T Y G E M L Y R C L D A V E Q L R T
UniRef90_K1YRA7      H V P I G R A R G Y G V G S D I T I I T F G N G V R L S L R A A A V L A E E
UniRef90_A8LZ48      F V I E F G K A K V M M P G T N V T V V A F S R T V G E A L M P L L R G
UniRef90_W2KC64      G R V D V L R R G A E V L L V A V G S L V P I C L A A A E R A A D
UniRef90_I4F106      F E M G K A V R Y R D G G D G A V L A I G H S V V E A L A A A Q A L E Q
UniRef90_B0P7Z9      P I G K G R E L R Q G K T V C F L N F G V L L P D A I A V A E A N N
UniRef90_Q21F93

```



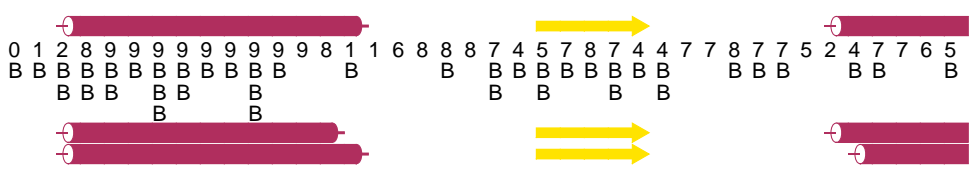


UniRef90\_B6BR37  
 UniRef90\_G9YNI6  
 UniRef90\_F7JHJ7  
 UniRef90\_L1J2M8  
 UniRef90\_H0UQW6  
 UniRef90\_D3PCU3  
 UniRef90\_X0XQH2  
 UniRef90\_C7H0C6  
 UniRef90\_K1YRA7  
 UniRef90\_A8LZ48  
 UniRef90\_W2KC64  
 UniRef90\_I4F106  
 UniRef90\_B0P7Z9  
 UniRef90\_Q21F93

```

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

lupas\_21  
 lupas\_14  
 lupas\_28  
 jnet  
 conf  
 sol25  
 sol5  
 sol0  
 jhmm  
 jpssm



UniRef90\_B6BR37  
 UniRef90\_G9YNI6  
 UniRef90\_F7JHJ7  
 UniRef90\_L1J2M8  
 UniRef90\_H0UQW6  
 UniRef90\_D3PCU3  
 UniRef90\_X0XQH2  
 UniRef90\_C7H0C6  
 UniRef90\_K1YRA7  
 UniRef90\_A8LZ48  
 UniRef90\_W2KC64  
 UniRef90\_I4F106  
 UniRef90\_B0P7Z9  
 UniRef90\_Q21F93

130

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

lupas\_21  
 lupas\_14  
 lupas\_28  
 jnet  
 conf  
 sol25  
 sol5  
 sol0  
 jhmm  
 jpssm

