

1 A E A V Q I Q F G L I N C G N K Y L T A E A F G F K V N A S A S S L K K K Q I W

UniRef90_H2PLE6
UniRef90_H2PLE6
UniRef90_G3U0M1
UniRef90_G3U0M1
UniRef90_G3U0M1
UniRef90_G3U0M1
UniRef90_D5LPR1
UniRef90_D5LPR1
UniRef90_D5LPR1
UniRef90_D5LPR1
UniRef90_L5L203
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UniRef90_UP10004574C0E
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UniRef90_H3B9W0
UniRef90_H3B9W0
UniRef90_H3B9W0
UniRef90_H3B9W0
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UniRef90_UP1000444218A
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UniRef90_UP1000444218A
UniRef90_H2RHW4
UniRef90_H2RHW4
UniRef90_W5MB65
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UniRef90_W5MB65
UniRef90_V9KC15
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UniRef90_V9KC15
UniRef90_UP10002C2EBB5
UniRef90_UP10002C2EBB5
UniRef90_UP100045D5CC3
UniRef90_UP100045D5CC3
UniRef90_L8J4I2
UniRef90_L8J4I2
UniRef90_UP1000388D96F
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UniRef90_UP10000EDA36A
UniRef90_UP10000EDA36A

10 20 30 40

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

QUERY	50	60	70	80
UniRef90_H2PLE6	L E A G S A A V C L R S H L G R Y L A A D K D G N V T C E R E V P G P D C R F			
UniRef90_H2PLE6	D I E W R D R I R I T L R A S N G K F V T S K K N G Q L L A A S V E T A G D S T G F			
UniRef90_G3U0M1	D I E W R D R I R I T L R A S N G K F V T S K K N G Q L L A A S V E T A G D S T G F			
UniRef90_G3U0M1	Q L E I I D T K K C A F R T H T G K Y W T L T A T G G V V Q S T A S T K N P S C Y F			
UniRef90_G3U0M1	Q L E I I D T K K C A F R T H T G K Y W T L T A T G G V V Q S T A S T K N P S C Y F			
UniRef90_D5LPR1	Q L E F F N D G A Y N I K D T T G K Y W M V G S E S S S V T S S S D T P V I D F			
UniRef90_D5LPR1	Q L E F F N D G A Y N I K D T T G K Y W M V G S E S S S V T S S S D T P V I D F			
UniRef90_D5LPR1	Q L E F F N D G A Y N I K D T T G K Y W M V G S E S S S V T S S S D T P V I D F			
UniRef90_D5LPR1	Q L E F F N D G A Y N I K D T T G K Y W M V G S E S S S V T S S S D T P V I D F			
UniRef90_L5L203	A L E Q S C A Q V V L Q A A N E R N V S T R Q G M D L S A N Q D E E T D D Q E T F			
UniRef90_L5L203	A L E Q S C A Q V V L Q A A N E R N V S T R Q G M D L S A N Q D E E T D D Q E T F			
UniRef90_L5L203	A L E Q S C A Q V V L Q A A N E R N V S T R Q G M D L S A N Q D E E T D D Q E T F			
UniRef90_UPI0004574C0E	Q L I F D N G G Y H I K G S N G K F W Y I S S S N G T V C T D G D M P P E D F			
UniRef90_UPI0004574C0E	Q L I F D N G G Y H I K G S N G K F W Y I S S S N G T V C T D G D M P P E D F			
UniRef90_UPI0004574C0E	Q L I F D N G G Y H I K G S N G K F W Y I S S S N G T V C T D G D M P P E D F			
UniRef90_UPI0004574C0E	Q L I F D N G G Y H I K G S N G K F W Y I S S S N G T V C T D G D M P P E D F			
UniRef90_UPI0004574C0E	Q L I F D N G G Y H I K G S N G K F W Y I S S S N G T V C T D G D M P P E D F			
UniRef90_H3B9W0	Q L E F T D G A Y N L R D S T G K Y W T V G S D D S I T T S S S N S P V I D F			
UniRef90_H3B9W0	Q L E F T D G A Y N L R D S T G K Y W T V G S D D S I T T S S S N S P V I D F			
UniRef90_H3B9W0	Q L E F T D G A Y N L R D S T G K Y W T V G S D D S I T T S S S N S P V I D F			
UniRef90_H3B9W0	Q L E F T D G A Y N L R D S T G K Y W T V G S D D S I T T S S S N S P V I D F			
UniRef90_H3B9W0	Q L E F T D G A Y N L R D S T G K Y W T V G S D D S I T T S S S N S P V I D F			
UniRef90_UP1000444218A	Q L E I I D T K K C A F R T H T G K Y W T L T A A G G V Q S T A S T R N A S C Y F			
UniRef90_UP1000444218A	Q L E I I D T K K C A F R T H T G K Y W T L T A A G G V Q S T A S T R N A S C Y F			
UniRef90_UP1000444218A	Q L E I I D T K K C A F R T H T G K Y W T L T A A G G V Q S T A S T R N A S C Y F			
UniRef90_H2RHW4	A L E Q S C A Q V V L Q A A N G R N V S T R Q G M D L S A N Q D E E T D D Q E T F			
UniRef90_H2RHW4	A L E Q S C A Q V V L Q A A N G R N V S T R Q G M D L S A N Q D E E T D D Q E T F			
UniRef90_W5MB65	Q L E F R N G A Y S L R D S T G K Y W M V G N E S S V V S S S D A P V I D F			
UniRef90_W5MB65	Q L E F R N G A Y S L R D S T G K Y W M V G N E S S V V S S S D A P V I D F			
UniRef90_W5MB65	Q L E F R N G A Y S L R D S T G K Y W M V G N E S S V V S S S D A P V I D F			
UniRef90_W5MB65	Q L E F R N G A Y S L R D S T G K Y W M V G N E S S V V S S S D A P V I D F			
UniRef90_V9KC15	V L H Q S Y P Q V V L T A A N G R N V S T R Q G M D L S A N Q D E E S D Q E T F			
UniRef90_V9KC15	V L H Q S Y P Q V V L T A A N G R N V S T R Q G M D L S A N Q D E E S D Q E T F			
UniRef90_V9KC15	V L H Q S Y P Q V V L T A A N G R N V S T R Q G M D L S A N Q D E E S D Q E T F			
UniRef90_V9KC15	V L H Q S Y P Q V V L T A A N G R N V S T R Q G M D L S A N Q D E E S D Q E T F			
UniRef90_UP10002C2EBB5	D L E E S H P Q V V L V A A N H R Y V V S V R Q G I N V S A N Q D E E E L D H E T F			
UniRef90_UP10002C2EBB5	D L E E S H P Q V V L V A A N H R Y V V S V R Q G I N V S A N Q D E E E L D H E T F			
UniRef90_UP100045D5CC3	D L E E S H P Q V V L M A A N H R Y V V S V R Q G I V N V S A N Q D E E E L D H E T F			
UniRef90_UP100045D5CC3	D L E E S H P Q V V L M A A N H R Y V V S V R Q G I V N V S A N Q D E E E L D H E T F			
UniRef90_L8J4I2	D I E W R D R R I I I L R A S N G K F V T A K K N G Q L A A S V E T A G S H			
UniRef90_L8J4I2	D I E W R D R I I I L R A S N G K F V T A K K N G Q L A A S V E T A G S H			
UniRef90_UP1000388D96F	Q L L F S D G A Y H I R G L G G K F W Y I A S S G A I C S D G E M S E D F			
UniRef90_UP1000388D96F	Q L L F S D G A Y H I R G L G G K F W Y I A S S G A I C S D G E M S E D F			
UniRef90_UP1000388D96F	Q L L F S D G A Y H I R G L G G K F W Y I A S S G A I C S D G E M S E D F			
UniRef90_UP1000388D96F	Q L L F S D G A Y H I R G L G G K F W Y I A S S G A I C S D G E M S E D F			
UniRef90_UP10003C2823F	Q M Q K E T K K C I L H S S A G N Y W T L V A H G G V Q A T A T E V V A N T M F			
UniRef90_UP10003C2823F	Q M Q K E T K K C I L H S S A G N Y W T L V A H G G V Q A T A T E V V A N T M F			
UniRef90_UP10003C2823F	Q M Q K E T K K C I L H S S A G N Y W T L V A H G G V Q A T A T E V V A N T M F			
UniRef90_UP10003C2823F	Q M Q K E T K K C I L H S S A G N Y W T L V A H G G V Q A T A T E V V A N T M F			
UniRef90_UP100029909D2	Q V E I I C N R K C A F R T A A G K Y W T L T A N G G L Q C T A S T K S A N C Y F			
UniRef90_UP100029909D2	Q V E I I C N R K C A F R T A A G K Y W T L T A N G G L Q C T A S T K S A N C Y F			
UniRef90_UP100029909D2	Q V E I I C N R K C A F R T A A G K Y W T L T A N G G L Q C T A S T K S A N C Y F			
UniRef90_G3WLZ7	D L E E S H P Q V V F M G S N G R Y V S I R Q G I N V S A N Q D E E E L D H E T F			
UniRef90_G3WLZ7	I T A H D D G R W S L Q S P H K R Y L L G G T E D R I T T C F A Q T I I S S I A E K W			
UniRef90_W5KS12	I T A H D D G R W S L Q S P H K R Y L L G G T E D R I T T C F A Q T I I S S I A E K W			
UniRef90_W5KS12	I T A H D D G R W S L Q S P H K R Y L L G G T E D R I T T C F A Q T I I S S I A E K W			
UniRef90_W5KS12	I T A H D D G R W S L Q S P H K R Y L L G G T E D R I T T C F A Q T I I S S I A E K W			
UniRef90_W5KS12	I T A H D D G R W S L Q S P H K R Y L L G G T E D R I T T C F A Q T I I S S I A E K W			
UniRef90_UP100042BA384	A I A T Q S G R W A L Q S P H R F F G G A E D R L S C C F A Q A V T T E A E L L W			
UniRef90_UP100042BA384	A I A T Q S G R W A L Q S P H R F F G G A E D R L S C C F A Q A V T T E A E L L W			
UniRef90_UP100042BA384	A I A T Q S G R W A L Q S P H R F F G G A E D R L S C C F A Q A V T T E A E L L W			
UniRef90_I3JPA4	Q M E I I C N R K C A F R T A A G K Y W T L T A N G G L Q C T A S T K S A N C Y F			
UniRef90_I3JPA4	Q M E I I C N R K C A F R T A A G K Y W T L T A N G G L Q C T A S T K S A N C Y F			
UniRef90_I3JPA4	Q M E I I C N R K C A F R T A A G K Y W T L T A N G G L Q C T A S T K S A N C Y F			
UniRef90_I3JPA4	Q M E I I C N R K C A F R T A A G K Y W T L T A N G G L Q C T A S T K S A N C Y F			
UniRef90_UP10004436650	E I E W R G R R I A L K A S N G R Y I C T K K N G H L A A I I S D F I G R G G K F			
UniRef90_UP10004436650	E I E W R G R R I A L K A S N G R Y I C T K K N G H L A A I I S D F I G R G G K F			
UniRef90_UP10004436650	E I E W R G R R I A L K A S N G R Y I C T K K N G H L A A I I S D F I G R G G K F			
UniRef90_G1KQU9	H I I F N D G A Y Q I K G L G G R F W Y V A S N G T V C S D G E M S E D F F			
UniRef90_G1KQU9	H I I F N D G A Y Q I K G L G G R F W Y V A S N G T V C S D G E M S E D F F			
UniRef90_G1KQU9	H I I F N D G A Y Q I K G L G G R F W Y V A S N G T V C S D G E M S E D F F			
UniRef90_G1KQU9	H I I F N D G A Y Q I K G L G G R F W Y V A S N G T V C S D G E M S E D F F			
UniRef90_H3BGR2	Q L M F N N G A Y Q V K G Q G G K L W Y I S N S G T V C S D G D M P E D F			
UniRef90_H3BGR2	Q L M F N N G A Y Q V K G Q G G K L W Y I S N S G T V C S D G D M P E D F			
UniRef90_H3BGR2	Q L M F N N G A Y Q V K G Q G G K L W Y I S N S G T V C S D G D M P E D F			
UniRef90_H3BGR2	Q L M F N N G A Y Q V K G Q G G K L W Y I S N S G T V C S D G D M P E D F			
UniRef90_UP1000440AD13	T L E L R S G K L A F K D H E G G Y L A P G P T G T L L K S G R T T K P G K D E L F			
UniRef90_UP1000440AD13	T L E L R S G K L A F K D H E G G Y L A P G P T G T L L K S G R T T K P G K D E L F			
UniRef90_H2UM56	Q M E M E D R K C A F R T A A G K Y W T L T A S G G L Q C T A S T K S S N G L F			
UniRef90_H2UM56	Q M E M E D R K C A F R T A A G K Y W T L T A S G G L Q C T A S T K S S N G L F			
UniRef90_H2UM56	Q M E M E D R K C A F R T A A G K Y W T L T A S G G L Q C T A S T K S S N G L F			
UniRef90_H2UM56	Q M E M E D R K C A F R T A A G K Y W T L T A S G G L Q C T A S T K S S N G L F			
UniRef90_UP10000EDA36A	H F F F C D N K V A I K T K E G K Y L K G D H A G V L K A S A Q G I A D A T L W			
UniRef90_UP10000EDA36A	H F F F C D N K V A I K T K E G K Y L K G D H A G V L K A S A Q G I A D A T L W			

QUERY	90	100	110	120
UniRef90_H2PLE6	L I V A H D D G R W S L Q S E A H R R Y F G G T E D R L S C F A Q T V S P A E K			
UniRef90_H2PLE6	F F E F F C D Y N K V A I I K V G G R Y L K G D H A G V K A S A E T V W D P A S S L			
UniRef90_G3U0M1	F F E F F C D Y N K V A I I K V G G R Y L K G D H A G V K A S A E T V W D P A S S L			
UniRef90_G3U0M1	D I E W R D R R I I T L L R A S N G K F V T A K K N G L A A S S V E T A G D A E E L			
UniRef90_G3U0M1	D I E W R D R R I I T L L R A S N G K F V T A K K N G L A A S S V E T A G D A E E L			
UniRef90_D5LPR1	F F E F F C D Y N K V A I I K I N G K Y L K G D H A G V K A S A D A I I D A S T L L			
UniRef90_D5LPR1	F F E F F C D Y N K V A I I K I N G K Y L K G D H A G V K A S A D A I I D A S T L L			
UniRef90_D5LPR1	F F E F F C D Y N K V A I I K I N G K Y L K G D H A G V K A S A D A I I D A S T L L			
UniRef90_D5LPR1	F F E F F C D Y N K V A I I K I N G K Y L K G D H A G V K A S A D A I I D A S T L L			
UniRef90_L5L203	Q L E I I D R D T K W T L Q S T A N G K F V T A K K N G L A A S S V E T A G D T E L L			
UniRef90_L5L203	Q L E I I D R D T K W T L Q S T A N G K F V T A K K N G L A A S S V E T A G D T E L L			
UniRef90_L5L203	Q L E I I D R D T K W T L Q S T A N G K F V T A K K N G L A A S S V E T A G D T E L L			
UniRef90_UP10004574C0E	Y F E F F R D H G R M A K A K N E K Y L R S D Q A G V K P D A V D V D S S S T L L			
UniRef90_UP10004574C0E	Y F E F F R D H G R M A K A K N E K Y L R S D Q A G V K P D A V D V D S S S T L L			
UniRef90_UP10004574C0E	Y F E F F R D H G R M A K A K N E K Y L R S D Q A G V K P D A V D V D S S S T L L			
UniRef90_UP10004574C0E	Y F E F F R D H G R M A K A K N E K Y L R S D Q A G V K P D A V D V D S S S T L L			
UniRef90_H3B9W0	L F E F F C D Y N K V A I I K V N G K Y L K G D H A G V K A S T D A V D S S S T L L			
UniRef90_H3B9W0	L F E F F C D Y N K V A I I K V N G K Y L K G D H A G V K A S T D A V D S S S T L L			
UniRef90_H3B9W0	L F E F F C D Y N K V A I I K V N G K Y L K G D H A G V K A S T D A V D S S S T L L			
UniRef90_H3B9W0	L F E F F C D Y N K V A I I K V N G K Y L K G D H A G V K A S T D A V D S S S T L L			
UniRef90_UP100044218A	D I E W R G R R I I T L L R A A N G K F L T A K K N G L A A S S V E A A G G D S E L L			
UniRef90_UP100044218A	D I E W R G R R I I T L L R A A N G K F L T A K K N G L A A S S V E A A G G D S E L L			
UniRef90_UP100044218A	D I E W R G R R I I T L L R A A N G K F L T A K K N G L A A S S V E A A G G D S E L L			
UniRef90_H2RHW4	Q L E I I D R D N K C A F C T H R G K Y W T L T A T G G V Q S T A S T K N A S C Y L L			
UniRef90_H2RHW4	Q L E I I D R D N K C A F C T H R G K Y W T L T A T G G V Q S T A S T K N A S C Y L L			
UniRef90_W5MB65	S L E F F C D Y N K V A I I K A S N G K Y L K G D H A G V K A I I A D D I I D S S S S L L			
UniRef90_W5MB65	S L E F F C D Y N K V A I I K A S N G K Y L K G D H A G V K A I I A D D I I D S S S S L L			
UniRef90_W5MB65	S L E F F C D Y N K V A I I K A S N G K Y L K G D H A G V K A I I A D D I I D S S S S L L			
UniRef90_W5MB65	S L E F F C D Y N K V A I I K A S N G K Y L K G D H A G V K A I I A D D I I D S S S S L L			
UniRef90_V9KC15	Q L E I I S R E T K C A F R T C T G K Y W T L T A N G G V Q S T A S T L L			
UniRef90_V9KC15	Q L E I I S R E T K C C A F R T C T G K Y W T L T A N G G V Q S T A S T L L			
UniRef90_V9KC15	Q L E I I S R E T K C A F R T C T G K Y W T L T A N G G V Q S T A S T L L			
UniRef90_V9KC15	Q L E I I S R E T K C A F R T C T G K Y W T L T A N G G V Q S T A S T L L			
UniRef90UPI0002C2EBB5	L M Q I W R G R R V A L K A S N G R Y V C M K K N G L A A I I S D F V G E D E E L L			
UniRef90UPI0002C2EBB5	L M Q I W R G R R V A L K A S N G R Y V C M K K N G L A A I I S D F V G E D E E L L			
UniRef90UPI00045D5CC3	L M I D Q E T K K C T F Y S S T G G Y W A L V T H G G I Q A T A T Q V S A N T M			
UniRef90UPI00045D5CC3	L M I D Q E T K K C T F Y S S T G G Y W A L V T H G G I Q A T A T Q V S A N T M			
UniRef90_L8J4I2				
UniRef90_L8J4I2				
UniRef90_UP1000388D96F	F F E F R E R G R V A V R G K N G K Y L R G D A G T L R A D A D A S L P R A T L L			
UniRef90_UP1000388D96F	F F E F R E R G R V A V R G K N G K Y L R G D A G T L R A D A D A S L P R A T L L			
UniRef90_UP1000388D96F	F F E F R E R G R V A V R G K N G K Y L R G D A G T L R A D A D A S L P R A T L L			
UniRef90_UP1000388D96F	F F E F R E R G R V A V R G K N G K Y L R G D A G T L R A D A D A S L P R A T L L			
UniRef90_UP10003C2823F	D I E W R G R R V A L K A S N G K Y I C T K K N G L A A V S D A A G G D D E E L L			
UniRef90_UP10003C2823F	D I E W R G R R V A L K A S N G K Y I C T K K N G L A A V S D A A G G D D E E L L			
UniRef90_UP10003C2823F	D I E W R G R R V A L K A S N G K Y I C T K K N G L A A V S D A A G G D D E E L L			
UniRef90_UP10003C2823F	D I E W R G R R V A L K A S N G K Y I C T K K N G L A A V S D A A G G D D E E L L			
UniRef90_UP100029909D2	D I E W R G K R L T L R A A N G K Y V A A K K N G L A A T I D S A G E T E E E L L			
UniRef90_UP100029909D2	D I E W R G K R L T L R A A N G K Y V A A K K N G L A A T I D S A G E T E E E L L			
UniRef90_UP100029909D2	D I E W R G K R L T L R A A N G K Y V A A K K N G L A A T I D S A G E T E E E L L			
UniRef90_G3WLZ7	Q M Q I D R E T K K C F H S N T G Y W T L V T H G G I Q S I I A T Q V A A K T M			
UniRef90_G3WLZ7	Q M Q I D R E T K K C F H S N T G Y W T L V T H G G I Q S I I A T Q V A A K T M			
UniRef90_W5KS12	S V H I A M H P Q V N I F S M T R K R Y L S S K E D E I A I D R D V P			
UniRef90_W5KS12	S V H I A M H P Q V N I F S M T R K R Y L S S K E D E I A I D R D V P			
UniRef90_W5KS12	S V H I A M H P Q V N I F S M T R K R Y L S S K E D E I A I D R D V P			
UniRef90_W5KS12	S V H I A M H P Q V N I F S M T R K R Y L S S K E D E I A I D R D V P			
UniRef90UPI00042BA384	T V H L A I H P Q A N L L S V S R R R Y L S A L E D E I S T D S			
UniRef90UPI00042BA384	T V H L A I H P Q A N L L S V S R R R Y L S A L E D E I S T D S			
UniRef90UPI00042BA384	T V H L A I H P Q A N L L S V S R R R Y L S A L E D E I S T D S			
UniRef90_I3JPA4	D I E W R G K R L T F R A A N G K Y V A A K K N G L A A T I D S A G E S E E E L L			
UniRef90_I3JPA4	D I E W R G K R L T F R A A N G K Y V A A K K N G L A A T I D S A G E S E E E L L			
UniRef90_I3JPA4	D I E W R G K R L T F R A A N G K Y V A A K K N G L A A T I D S A G E S E E E L L			
UniRef90_I3JPA4	D I E W R G K R L T F R A A N G K Y V A A K K N G L A A T I D S A G E S E E E L L			
UniRef90UPI0004436650	W F E F R E R G R V A I R G K N G K Y L G A S S G M L K A D G E S L A Q A T T L L			
UniRef90UPI0004436650	W F E F R E R G R V A I R G K N G K Y L G A S S G M L K A D G E S L A Q A T T L L			
UniRef90UPI0004436650	W F E F R E R G R V A I R G K N G K Y L G A S S G M L K A D G E S L A Q A T T L L			
UniRef90_G1KQU9	E F E R E C S R V A I K G K N G K Y L R G D A G T L R A D A E T L H R A T T L L			
UniRef90_G1KQU9	E F E R E C S R V A I K G K N G K Y L R G D A G T L R A D A E T L H R A T T L L			
UniRef90_G1KQU9	E F E R E C S R V A I K G K N G K Y L R G D A G T L R A D A E T L H R A T T L L			
UniRef90_G1KQU9	E F E R E C S R V A I K G K N G K Y L R G D A G T L R A D A E T L H R A T T L L			
UniRef90_H3BGR2	F F E F R E H G R V A I K G K N E K Y L R G D G G M L K A D A D T V E Q A T T L L			
UniRef90_H3BGR2	F F E F R E H G R V A I K G K N E K Y L R G D G G M L K A D A D T V E Q A T T L L			
UniRef90_H3BGR2	F F E F R E H G R V A I K G K N E K Y L R G D G G M L K A D A D T V E Q A T T L L			
UniRef90_H3BGR2	F F E F R E H G R V A I K G K N E K Y L R G D G G M L K A D A D T V E Q A T T L L			
UniRef90UPI000440AD13	D L E E S H P Q V V F Q A A N K R F V S I			
UniRef90UPI000440AD13	D L E E S H P Q V V F Q A A N K R F V S I			
UniRef90_H2UM56	E L E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q			
UniRef90_H2UM56	E L E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q			
UniRef90_H2UM56	E L E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q			
UniRef90_H2UM56	E L E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q			
UniRef90UPI0000EDA36A	E E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q			
UniRef90UPI0000EDA36A	E E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q			

QUERY WS **V** **H** **I** A M **H** **P**
 UniRef90_H2PLE6 W
 UniRef90_H2PLE6 W
 UniRef90_G3U0M1 F **L** M K **L** **I** N R **P**
 UniRef90_G3U0M1 F **L** M K **L** **I** N R **P**
 UniRef90_G3U0M1 F **L** M K **L** **I** N R **P**
 UniRef90_G3U0M1 F **L** M K **L** **I** N R **P**
 UniRef90_D5LPR1 W
 UniRef90_D5LPR1 W
 UniRef90_D5LPR1 W
 UniRef90_D5LPR1 W
 UniRef90_L5L203 F **L** M K **L** **I** N R **P**
 UniRef90_L5L203 F **L** M K **L** **I** N R **P**
 UniRef90_L5L203 F **L** M K **L** **I** N R **P**
 UniRef90_UPI0004574C0E W
 UniRef90_UPI0004574C0E W
 UniRef90_UPI0004574C0E W
 UniRef90_UPI0004574C0E W
 UniRef90_UPI0004574C0E W
 UniRef90_H3B9W0 W
 UniRef90_H3B9W0 W
 UniRef90_H3B9W0 W
 UniRef90_H3B9W0 W
 UniRef90_H3B9W0 W
 UniRef90_H3B9W0 W
 UniRef90_UPI000444218A F **L** M K **L** **I** N R **P**
 UniRef90_UPI000444218A F **L** M K **L** **I** N R **P**
 UniRef90_UPI000444218A F **L** M K **L** **I** N R **P**
 UniRef90_H2RHW4 F **H** **I**
 UniRef90_H2RHW4 F **H** **I**
 UniRef90_W5MB65 W
 UniRef90_W5MB65 W
 UniRef90_W5MB65 W
 UniRef90_W5MB65 W
 UniRef90_W5MB65 W
 UniRef90_W5MB65 W
 UniRef90_V9KC15
 UniRef90_V9KC15
 UniRef90_V9KC15
 UniRef90_V9KC15
 UniRef90_V9KC15
 UniRef90_UPI0002C2EBB5 F **I** **L** K **L** **I** N R **P**
 UniRef90_UPI0002C2EBB5 F **I** **L** K **L** **I** N R **P**
 UniRef90_UPI00045D5CC3 F E M
 UniRef90_UPI00045D5CC3 F E M
 UniRef90_L8J4I2
 UniRef90_L8J4I2
 UniRef90_UPI000388D96F W
 UniRef90_UPI000388D96F W
 UniRef90_UPI000388D96F W
 UniRef90_UPI000388D96F W
 UniRef90_UPI000388D96F W
 UniRef90_UPI0003C2823F F T **L** K **L** **I** N R **P**
 UniRef90_UPI0003C2823F F T **L** K **L** **I** N R **P**
 UniRef90_UPI0003C2823F F T **L** K **L** **I** N R **P**
 UniRef90_UPI0003C2823F F T **L** K **L** **I** N R **P**
 UniRef90_UPI0003C2823F F T **L** K **L** **I** N R **P**
 UniRef90_UPI00029909D2 F **V** M K **L** **I** N R **P**
 UniRef90_UPI00029909D2 F **V** M K **L** **I** N R **P**
 UniRef90_UPI00029909D2 F **V** M K **L** **I** N R **P**
 UniRef90_G3WLZ7 F E **I**
 UniRef90_G3WLZ7 F E **I**
 UniRef90_W5KS12
 UniRef90_W5KS12
 UniRef90_W5KS12
 UniRef90_W5KS12
 UniRef90_W5KS12
 UniRef90_UPI00042BA384
 UniRef90_UPI00042BA384
 UniRef90_UPI00042BA384 F **I** M K **L** **I** N R **P**
 UniRef90_I3JPA4 F **I** M K **L** **I** N R **P**
 UniRef90_I3JPA4 F **I** M K **L** **I** N R **P**
 UniRef90_I3JPA4 F **I** M K **L** **I** N R **P**
 UniRef90_I3JPA4 F **I** M K **L** **I** N R **P**
 UniRef90_UPI0004436650 W
 UniRef90_UPI0004436650 W
 UniRef90_UPI0004436650 W
 UniRef90_G1KQU9 W
 UniRef90_G1KQU9 W
 UniRef90_G1KQU9 W
 UniRef90_G1KQU9 W
 UniRef90_H3BGR2 W
 UniRef90_H3BGR2 W
 UniRef90_H3BGR2 W
 UniRef90_H3BGR2 W
 UniRef90_UPI000440AD13
 UniRef90_UPI000440AD13 F **L** M K **L** **I** N R **P**
 UniRef90_H2UM56 F **L** M K **L** **I** N R **P**
 UniRef90_H2UM56 F **L** M K **L** **I** N R **P**
 UniRef90_H2UM56 F **L** M K **L** **I** N R **P**
 UniRef90_H2UM56 F **L** M K **L** **I** N R **P**
 UniRef90_UPI0000EDA36A
 UniRef90_UPI0000EDA36A

This figure displays a large-scale multiple sequence alignment (MSA) of protein sequences from the UniRef90 database. The sequences are arranged vertically, and their relative positions are indicated by a scale at the top. The alignment highlights specific regions of conservation or interest using colored boxes, primarily yellow, which often enclose Cysteine (C) residues.

The UniRef90 entries shown include:

- UPI0000EDA36A
- B2LT49
- UPI000443BB77
- Q4T490
- V8PI62
- H3D9R9
- H0ZWR4
- B2LT50
- UPI00032AD481
- H2M0Y4
- UPI0003D6EA35
- U3KDVO
- H2LF21
- I3IUE0
- G3PAD8
- Q4S4K2
- M4A9M4
- UPI0003318255
- Q91837
- H3CWN2
- G3PW32
- G1MC40

The alignment uses a color scheme to group similar sequences and highlight specific motifs. Yellow boxes are frequently used to enclose Cysteine (C) residues, suggesting they are part of a conserved structural or functional element across the different proteins. The sequences are aligned along a vertical axis, with positions 10, 20, 30, and 40 marked at the top.

UniRef90_UPI0000EDA36A H F E F C D N K V A I | K T K E G K Y L | K G D H A G V L | K A S A Q G I | A D A T L | W
 UniRef90_UPI0000EDA36A H F E F C D N K V A I | K T K E G K Y L | K G D H A G V L | K A S A Q G I | A D A T L | W
 UniRef90_UPI0000EDA36A H F E F C D N K V A I | K T K E G K Y L | K G D H A G V L | K A S A Q G I | A D A T L | W
 UniRef90_B2LT49 D | E W L G R R I A L K A S N G K Y V | C T K K N G Q L | A A V S D S L | G E D E Q F
 UniRef90_B2LT49 D | E W L G R R I A L K A S N G K Y V | C T K K N G Q L | A A V S D S L | G E D E Q F
 UniRef90_UPI000443BB77 L M Q I | D Q E K C T F Y S S T G S Y W A L | V T H G G I | Q A T A A Q V S A N T M F
 UniRef90_UPI000443BB77 L M Q I | D Q E K C T F Y S S T G S Y W A L | V T H G G I | Q A T A A Q V S A N T M F
 UniRef90_UPI000443BB77 L M Q I | D Q E K C T F Y S S T G S Y W A L | V T H G G I | Q A T A A Q V S A N T M F
 UniRef90_UPI000443BB77 L M Q I | D Q E K C T F Y S S T G S Y W A L | V T H G G I | Q A T A A Q V S A N T M F
 UniRef90_Q4T490 Q V E I | C N R K C A F R T A A G K Y W T L | T A N G G L | Q C T A S T K S A N C Y F
 UniRef90_Q4T490 Q V E I | C N R K C A F R T A A G K Y W T L | T A N G G L | Q C T A S T K S A N C Y F
 UniRef90_Q4T490 Q V E I | C N R K C A F R T A A G K Y W T L | T A N G G L | Q C T A S T K S A N C Y F
 UniRef90_Q4T490 Q V E I | C N R K C A F R T A A G K Y W T L | T A N G G L | Q C T A S T K S A N C Y F
 UniRef90_V8PI62 H L N F S D G A Y Q I | K G L N D R F W Y V | A S N G T V C S D G E T S E D F F F
 UniRef90_V8PI62 H L N F S D G A Y Q I | K G L N D R F W Y V | A S N G T V C S D G E T S E D F F F
 UniRef90_V8PI62 H L N F S D G A Y Q I | K G L N D R F W Y V | A S N G T V C S D G E T S E D F F F
 UniRef90_V8PI62 H L N F S D G A Y Q I | K G L N D R F W Y V | A S N G T V C S D G E T S E D F F F
 UniRef90_H3D9R9 Q V E I | C N R K C A F R T A A G K Y W T L | T A N G G L | Q C T A S T K S A N C Y F
 UniRef90_H3D9R9 Q V E I | C N R K C A F R T A A G K Y W T L | T A N G G L | Q C T A S T K S A N C Y F
 UniRef90_H3D9R9 Q V E I | C N R K C A F R T A A G K Y W T L | T A N G G L | Q C T A S T K S A N C Y F
 UniRef90_H0ZWR4 D L E E S P Q V V | F T A A N G R Y V S I | R Q G V N V S A N Q D E E L | N H E T F
 UniRef90_H0ZWR4 D L E E S P Q V V | F T A A N G R Y V S I | R Q G V N V S A N Q D E E L | N H E T F
 UniRef90_B2LT50 Q M E K D T R K C K F R T N E G N Y W T L | V A H G G I | Q S T A T E A G A N T M F
 UniRef90_B2LT50 Q M E K D T R K C K F R T N E G N Y W T L | V A H G G I | Q S T A T E A G A N T M F
 UniRef90_B2LT50 Q M E K D T R K C K F R T N E G N Y W T L | V A H G G I | Q S T A T E A G A N T M F
 UniRef90_B2LT50 Q M E K D T R K C K F R T N E G N Y W T L | V A H G G I | Q S T A T E A G A N T M F
 UniRef90_UPI00032AD481 H | S F S D G A Y Q I | R G R R G G F W N T | G S H G S V C S D G E R A E D F
 UniRef90_UPI00032AD481 H | S F S D G A Y Q I | R G R R G G F W N T | G S H G S V C S D G E R A E D F
 UniRef90_UPI00032AD481 H | S F S D G A Y Q I | R G R R G G F W N T | G S H G S V C S D G E R A E D F
 UniRef90_UPI00032B0630 H | S F S D G A Y Q I | R G R R G G F W N T | G S H G S V C S D G E R A E D F
 UniRef90_UPI00032B0630 H | S F S D G A Y Q I | R G R R G G F W N T | G S H G S V C S D G E R A E D F
 UniRef90_UPI00032B0630 H | S F S D G A Y Q I | R G R R G G F W N T | G S H G S V C S D G E R A E D F
 UniRef90_UPI00032B0630 H | S F S D G A Y Q I | R G R R G G F W N T | G S H G S V C S D G E R A E D F
 UniRef90_UPI00032B0630 H | S F S D G A Y Q I | R G R R G G F W N T | G S H G S V C S D G E R A E D F
 UniRef90_H2M0Y4 Q L E M D D R K C A F K T A A G K Y W T L | T V T G G L | Q C T A S T K S A N S Y F
 UniRef90_H2M0Y4 Q L E M D D R K C A F K T A A G K Y W T L | T V T G G L | Q C T A S T K S A N S Y F
 UniRef90_H2M0Y4 Q L E M D D R K C A F K T A A G K Y W T L | T V T G G L | Q C T A S T K S A N S Y F
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UniRef90_K1QEZ3	A F R T I D D N K Y W S L D A A S A G V Q A R S A S V T P Q A L F		
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UniRef90_K1QEZ3	A F R T I D D N K Y W S L D A A S A G V Q A R S A S V T P Q A L F		
UniRef90_UP1000333F9B8	K Y A F P T H T G K Y W T L T A T G G A L S T A S T K N A S C Y F		
UniRef90_UP1000333F9B8	K Y A F P T H T G K Y W T L T A T G G A L S T A S T K N A S C Y F		
UniRef90_UP1000333F9B8	K Y A F P T H T G K Y W T L T A T G G A L S T A S T K N A S C Y F		
UniRef90_B7PE75	T L S W S V G L L N G A H K Y L T A E T F G F K V N A N G A A L K K K Q L W		
UniRef90_B4H3U7	V H L K A H S G K Y W R I E G E S I S V D A E A P S D G F F L		
UniRef90_B4H3U7	V H L K A H S G K Y W R I E G E S I S V D A E A P S D G F F L		
UniRef90_B4H3U7	V H L K A H S G K Y W R I E G E S I S V D A E A P S D G F F L		
UniRef90_L7MAG2	Q A A F V G F N G K Y V S V K Q G V D V T A N Q D E V S D H E T F		
UniRef90_L7MAG2	Q A A F V G F N G K Y V S V K Q G V D V T A N Q D E V S D H E T F		
UniRef90_L7MAG2	Q A A F V G F N G K Y V S V K Q G V D V T A N Q D E V S D H E T F		
UniRef90_UP10003C91120		V Y A A S E R L T P M S L F	
UniRef90_UP10003C91120		V Y A A S E R L T P M S L F	
UniRef90_UP10003C91120		V Y A A S E R L T P M S L F	
UniRef90_B3TK44	A E F L Q W K V G L I N D T K Y L T A E T F G Y K V N A S G S G L K K K Q T W		
UniRef90_T1FNB1	L A L R D K S G K C L S G V G R D A I L Q A K N K N V G K D E L F		
UniRef90_T1FNB1	L A L R D K S G K C L S G V G R D A I L Q A K N K N V G K D E L F		
UniRef90_T1FNB1	L A L R D K S G K C L S G V G R D A I L Q A K N K N V G K D E L F		
UniRef90_I1GHG8	Q V A F R D N A G K Y L A G V G A N A V L Q S R K S S I S K D E L F		
UniRef90_I1GHG8	Q V A F R D N A G K Y L A G V G A N A V L Q S R K S S I S K D E L F		
UniRef90_UP10001CBC196	K V S F K D C E G C Y L S C I G Q K A T T M K S K N K S A G K D E L F		
UniRef90_UP10001CBC196	K V S F K D C E G C Y L S C I G Q K A T T M K S K N K S A G K D E L F		
UniRef90_UP10001CBC196	K V S F K D C E G C Y L S C I G Q K A T T M K S K N K S A G K D E L F		
UniRef90_UP100026573F5		G F K S S A S A K N K G T Y E T I	
UniRef90_UP100026573F5		G F K S S A S A K N K G T Y E T I	
UniRef90_UP100026573F5		G F K S S A S A K N K G T Y E T I	
UniRef90_R7VE03	M A L K D Y R G K Y L T T V G K D A V M Q S R N S F T K D E L F		
UniRef90_R7VE03	M A L K D Y R G K Y L T T V G K D A V M Q S R N S F T K D E L F		
UniRef90_T1E1F2	Q V G L K A H N G K Y A S I K Q G M D L Y A N Q A D A G E K E I F		
UniRef90_T1E1F2	Q V G L K A H N G K Y A S I K Q G M D L Y A N Q A D A G E K E I F		
UniRef90_T1E1F2	Q V G L K A H N G K Y A S I K Q G M D L Y A N Q A D A G E K E I F		
UniRef90_J3SI32	K Y G I R T S N G N L I C C N G K G P S S R S L Y		
UniRef90_J3SI32	K Y G I R T S N G N L I C C N G K G P S S R S L Y		
UniRef90_UP10002BCEE92	L R S A N G C Y L A Q R R H R T V M A D G H Q L E A E T F F		
UniRef90_UP10002BCEE92	L R S A N G C Y L A Q R R H R T V M A D G H Q L E A E T F F		
UniRef90_UP10002BCEE92	L R S A N G C Y L A Q R R H R T V M A D G H Q L E A E T F F		
UniRef90_UP10003AE7607	V S L R S K T R K F L S I I Y D V E I Y A A S E H V T P M S L F		
UniRef90_UP10003AE7607	V S L R S K T R K F L S I I Y D V E I Y A A S E H V T P M S L F		
UniRef90_UP10003AE7607	V S L R S K T R K F L S I I Y D V E I Y A A S E H V T P M S L F		
UniRef90_V3ZP01		D V T A Q T M Y	
UniRef90_V3ZP01		D V T A Q T M Y	
UniRef90_V3ZP01		D V T A Q T M Y	
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UniRef90_I3LZT2	L R S A N G Y Y L A Q R R H K S L M A D G H P M E S D T F F		
UniRef90_I3LZT2	L R S A N G Y Y L A Q R R H K S L M A D G H P M E S D T F F		
UniRef90_UP10003594ED2	L Q W K V G L I N S S K K Y L T A E S F G F K I V N V S G T T L K K K Q T F F		
UniRef90_K7J2C3	N Q R Y V S V K Q G V D V T A N Q D E I S G H E T F		
UniRef90_K7J2C3	N Q R Y V S V K Q G V D V T A N Q D E I S G H E T F		
UniRef90_K7J2C3	N Q R Y V S V K Q G V D V T A N Q D E I S G H E T F		
UniRef90_UP100038EDA94	V S L R S K A R K F I S V V Y G A E E V R A T S E C L T P M C L F		
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UniRef90_UP100038EDA94	V S L R S K A R K F I S V V Y G A E E V R A T S E C L T P M C L F		
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UniRef90_F5HLZ2	L A L R D R H G L Y L S P I G S K A V L K S R S Q T V T R D E L F		
UniRef90_V8PEM9	K Y G L R N G A G K L L S S N G S L V S D V T A Q T M Y		
UniRef90_V8PEM9	K Y G L R N G A G K L L S S N G S L V S D V T A Q T M Y		
UniRef90_E0VCB6	N S R Y V S V K Q G V D V T A N Q D E I S D H E T F		
UniRef90_E0VCB6	N S R Y V S V K Q G V D V T A N Q D E I S D H E T F		
UniRef90_E0VCB6	N S R Y V S V K Q G V D V T A N Q D E I S D H E T F		
UniRef90_B0W7V4	L A L R D R H G L Y L S P I G S K A V L K S R S Q T V T R D E L F		
UniRef90_B0W7V4	L A L R D R H G L Y L S P I G S K A V L K S R S Q T V T R D E L F		
UniRef90_UP1000333978E	V S L K S R A R K Y I S V F Y D V E V Y A A A E R L T P M S L F		
UniRef90_UP1000333978E	V S L K S R A R K Y I S V F Y D V E V Y A A A E R L T P M S L F		
UniRef90_M3XKA6	L R M G F I T A N K Y L N A E S F L F K V N A T A T C L R R K Q V W		
UniRef90_G1PW57	L R S A N G C Y L A Q R R H R T V L A N G H R L E C D T F F		
UniRef90_G1PW57	L R S A N G C Y L A Q R R H R T V L A N G H R L E C D T F F		
UniRef90_G1PW57	L R S A N G C Y L A Q R R H R T V L A N G H R L E C D T F F		
UniRef90_G3GZ82	V T L R S K T R R F I S V I Y D A E V C A A S E R L T P M S L F		
UniRef90_G3GZ82	V T L R S K T R R F I S V I Y D A E V C A A S E R L T P M S L F		
UniRef90_G3GZ82	V T L R S K T R R F I S V I Y D A E V C A A S E R L T P M S L F		
UniRef90_H9J859	I R T M Q D R Y W T L E T G G G I Q A S G D N K S S N A L F		

90 100 110 120

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UniRef90_F6WYV6	L I Q L T K N S K L A L K P E N G D V Y V T S D H V G I			
UniRef90_W5UM24	E			
UniRef90_W5K9U7	D L E W K D S K V T L K A S N G K Y L T A K K N G L T A S V D S A G D Q E L			
UniRef90_W5K9U7	D L E W K D S K V T L K A S N G K Y L T A K K N G L T A S V D S A G D Q E L			
UniRef90_W5K9U7	D L E W K D S K V T L K A S N G K Y L T A K K N G L T A S V D S A G D Q E L			
UniRef90_W5K9U7	D L E W K D S K V T L K A S N G K Y L T A K K N G L T A S V D S A G D Q E L			
UniRef90_H2ZLS8	I I Q L C K N S K I A L K P E N G D G Y V T S D H V G I			
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UniRef90_Q1XF14	L V L P Q P D G R W V L Q S E P H G R F F G G T E D R L S C F A T A I S P A E L			
UniRef90_K1QEZ3	K I R I V N R P L L V L K C E Y			
UniRef90_K1QEZ3	K I R I V N R P L L V L K C E Y			
UniRef90_K1QEZ3	K I R I V N R P L L V L K C E Y			
UniRef90_K1QEZ3	K I R I V N R P L L V L K C E Y			
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UniRef90_UP1000333F9B8	E F			
UniRef90_UP1000333F9B8	E F			
UniRef90_B7PE75	E F			
UniRef90_B4H3U7	E F			
UniRef90_B4H3U7	E F			
UniRef90_B4H3U7	E F			
UniRef90_L7MAG2	E C W Q P D G S V T L V A S N G K L V G A K S G H L F A N C E P G D P A A K			
UniRef90_L7MAG2	E C W Q P D G S V T L V A S N G K L V G A K S G H L F A N C E P G D P A A K			
UniRef90_L7MAG2	E C W Q P D G S V T L V A S N G K L V G A K S G H L F A N C E P G D P A A K			
UniRef90_UP10003C91120	F R M H W N C G R I I L Q S S T G C F L G I A G N G L L A N A T I P G P N E E			
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UniRef90_B3TK44	F V E Y A K D G R W A F K N C E H G N Y L G R K G E D V Q C F A K S V G D T E L			
UniRef90_T1FNBN1	Q V E Y D A S S M W N L L T S D N K F W S V E A G S G I Q A S S A V K S P K G L			
UniRef90_T1FNBN1	Q V E Y D A S S M W N L L T S D N K F W S V E A G S G I Q A S S A V K S P K G L			
UniRef90_T1FNBN1	Q V E Y D A S S M W N L L T S D N K F W S V E A G S G I Q A S S A V K S P K G L			
UniRef90_I1GHG8	Q I M A S G N V K W A V V C N K K L K F W			
UniRef90_I1GHG8	Q I M A S G N V K W A V V C N K K L K F W			
UniRef90_UP10001CBC196	Q L E E F D E T G K W A F R I S A D K Y W T L A S T S G I Q A T S T K N S P E A L			
UniRef90_UP10001CBC196	Q L E E F D E T G K W A F R I S A D K Y W T L A S T S G I Q A T S T K N S P E A L			
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UniRef90_UP100026573F5	E L R E P S R L G I K V A S T G C F L N A D K N G L F R I G P E P N K A T M			
UniRef90_UP100026573F5	E L R E P S R L G I K V A S T G C F L N A D K N G L F R I G P E P N K A T M			
UniRef90_UP100026573F5	E L R E P S R L G I K V A S T G C F L N A D K N G L F R I G P E P N K A T M			
UniRef90_R7VE03	Q C E F D Q S E K W R F R T T D N K Y W S L E S A S G I Q G V G N A Q S N T S L			
UniRef90_R7VE03	Q C E F D Q S E K W R F R T T D N K Y W S L E S A S G I Q G V G N A Q S N T S L			
UniRef90_T1E1F2	N V E S L A S G K I L L K A S N D M F V T S R K L G			
UniRef90_T1E1F2	N V E S L A S G K I L L K A S N D M F V T S R K L G			
UniRef90_T1E1F2	N V E S L A S G K I L L K A S N D M F V T S R K L G			
UniRef90_J3SI32	S P D P S P G Q V T R S L L N A K Y I S I R S D D L Q A N Q T E A K E S E I			
UniRef90_J3SI32	S P D P S P G Q V T R S L L N A K Y I S I R S D D L Q A N Q T E A K E S E I			
UniRef90_UP10002BCEE92	G I Q L A N R P F L A L R G R Y T S S R H D L L Q C N M D Q P			
UniRef90_UP10002BCEE92	G I Q L A N R P F L A L R G R Y T S S R H D L L Q C N M D Q P			
UniRef90_UP10002BCEE92	G I Q L A N R P F L A L R G R Y T S S R H D L L Q C N M D Q P			
UniRef90_UP10003AE7607	R V H W N C G K I I L Q S P N G R F L G I V D N G L L A N A T I P G P N E E			
UniRef90_UP10003AE7607	R V H W N C G K I I L Q S P N G R F L G I V D N G L L A N A T I P G P N E E			
UniRef90_UP10003AE7607	R V H W N C G K I I L Q S P N G R F L G I V D N G L L A N A T I P G P N E E			
UniRef90_V3ZP01	N V E W Q G D G T V T I K A C N N C Y I F N K P T G C L F A L S E T A T E K E R			
UniRef90_V3ZP01	N V E W Q G D G T V T I K A C N N C Y I F N K P T G C L F A L S E T A T E K E R			
UniRef90_V3ZP01	N V E W Q G D G T V T I K A C N N C Y I F N K P T G C L F A L S E T A T E K E R			
UniRef90_I3LZT2	G I R F A N R P F L V L R G R Y S S S E H D L L I Q C N M D E P			
UniRef90_I3LZT2	G I R F A N R P F L V L R G R Y S S S E H D L L I Q C N M D E P			
UniRef90_I3LZT2	G I R F A N R P F L V L R G R Y S S S E H D L L I Q C N M D E P			
UniRef90_UP10003594ED2	S V E Y N G S G R W A F R N L E H G N Y L G G S E D D N F K C F S K S V T E A D L			
UniRef90_K7J2C3	D L L W Q P D G T V A L R A N N G K Y L A T K S G H L Y A N A D N V			
UniRef90_K7J2C3	D L L W Q P D G T V A L R A N N G K Y L A T K S G H L Y A N A D N V			
UniRef90_K7J2C3	D L L W Q P D G T V A L R A N N G K Y L A T K S G H L Y A N A D N V			
UniRef90_UP100038EDA94	R V H W N C G K I I L Q S S N G R F L S I A P N G L I A N A T I P G P N E E			
UniRef90_UP100038EDA94	R V H W N C G K I I L Q S S N G R F L S I A P N G L I A N A T I P G P N E E			
UniRef90_UP100038EDA94	R V H W N C G K I I L Q S S N G R F L S I A P N G L I A N A T I P G P N E E			
UniRef90_F5HLZ2	Q L E F F W S A L R R W A L R T T Q D R Y W C L S T G G G I Q A T G N R R S A D A L			
UniRef90_F5HLZ2	Q L E F F W S A L R R W A L R T T Q D R Y W C L S T G G G I Q A T G N R R S A D A L			
UniRef90_F5HLZ2	Q L E F F W S A L R R W A L R T T Q D R Y W C L S T G G G I Q A T G N R R S A D A L			
UniRef90_V8PEM9	S V E T S P A Q V S L R S S S T N K F V C C K G A D L Y A T A M A V G N T E I			
UniRef90_V8PEM9	S V E T S P A Q V S L R S S S T N K F V C C K G A D L Y A T A M A V G N T E I			
UniRef90_E0VCB6	D L V W Q N D G S L C F R A N N G K F V A T K S G H L Y A N S D V V E D S			
UniRef90_E0VCB6	D L V W Q N D G S L C F R A N N G K F V A T K S G H L Y A N S D V V E D S			
UniRef90_E0VCB6	D L V W Q N D G S L C F R A N N G K F V A T K S G H L Y A N S D V V E D S			
UniRef90_B0W7V4	Q L E Y D C N G I V H F K G Q N G K Y W R V D G E G I A A D S D T P T D			
UniRef90_B0W7V4	Q L E Y D C N G I V H F K G Q N G K Y W R V D G E G I A A D S D T P T D			
UniRef90_UP1000333978E	R M H W N C G R I M L Q A A S G R F V G V M A N G L L A N A S V P G H N E E			
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UniRef90_M3XKA6	L L I Q H G D G K V S F Q S E Q S H R Y L G G A E E N I L C F A E T V T E S E K			
UniRef90_G1PW57	G I R L A N R P F L A L R G R Y I S S S G H D L M Q C N M D Q P			
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UniRef90_G3GZ82	F R V R W N C G K I I L Q S S N G R F L S I T S N G L L S A T A S I P G P N E E			
UniRef90_G3GZ82	F R V R W N C G K I I L Q S S N G R F L S I T S N G L L S A T A S I P G P N E E			
UniRef90_H9J859	Y F Y L I N R P I L V L K C E Q G F V G P K G V K L E C N			

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WT V H L A I H P

F	H	F	A	L	V	N	R	P
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WT V H L A A R P

F	S	I	R					
F	S	I	R					
F	S	I	R					
W	I	V	Q	L	A	I	H	P

F	Q							
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F	Q							

F	Q	V	H	I	A	L		
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W								
W								
W								

F	G	I						
F	G	I						

F	Q	I						
F	Q	I						

F	G	I	R	L	A			
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UniRef90_I3LZT2	W	I	V	Q	L	S	I	H	P

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F								
F								
F								

F	Q							
F	Q							

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UniRef90_B4USU9	Q	F	E	S	D	N	S	T	L	Q	L	R	S	A	T	G	C	Y	L	A	Q	R	R	H	R	T	V	L	A	N	R	Q	E	C	D	T	F			
UniRef90_B4USU9	Q	F	E	S	D	N	S	T	L	Q	L	R	S	A	T	G	C	Y	L	A	Q	R	R	H	R	T	V	L	A	N	R	Q	E	C	D	T	F			
UniRef90_UP10003F16B91	R	V	H	W	N	C	G	K	I	M	L	Q	S	S	N	G	R	F	L	G	V	T	A	N	G	L	L	V	A	N	A	T	I	P	G	P	N	E	E	
UniRef90_UP10003F16B91	R	V	H	W	N	C	G	K	I	M	L	Q	S	S	N	G	R	F	L	G	V	T	A	N	G	L	L	V	A	N	A	T	I	P	G	P	N	E	E	
UniRef90_UP10003F16B91	R	V	H	W	N	C	G	K	I	M	L	Q	S	S	N	G	R	F	L	G	V	T	A	N	G	L	L	V	A	N	A	T	I	P	G	P	N	E	E	
UniRef90_G5BHA7	R	V	H	W	N	C	G	K	I	I	L	Q	S	S	S	S	G	R	F	L	S	T	A	P	N	G	L	L	M	A	N	A	T	I	P	G	P	N	E	E
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UniRef90_G5BHA7	R	V	H	W	N	C	G	K	I	I	L	Q	S	S	S	S	G	R	F	L	S	T	A	P	N	G	L	L	M	A	N	A	T	I	P	G	P	N	E	E
UniRef90_UP100046B3D9F	R	V	H	W	N	C	G	K	I	S	L	Q	S	S	S	S	H	G	R	F	L	T	T	A	A	N	G	L	L	M	A	N	A	S	L	P	G	P	N	E
UniRef90_UP100046B3D9F	R	V	H	W	N	C	G	K	I	S	L	Q	S	S	S	S	H	G	R	F	L	T	T	A	A	N	G	L	L	M	A	N	A	S	L	P	G	P	N	E
UniRef90_UP100046B3D9F	R	V	H	W	N	C	G	K	I	S	L	Q	S	S	S	S	H	G	R	F	L	T	T	A	A	N	G	L	L	M	A	N	A	S	L	P	G	P	N	E
UniRef90_UP10003AB94FC	R	M	H	W	N	C	G	K	I	I	L	Q	S	C	R	G	R	F	L	G	I	A	P	N	G	L	L	M	A	N	A	T	I	P	G	P	N	E	E	
UniRef90_UP10003AB94FC	R	M	H	W	N	C	G	K	I	I	L	Q	S	C	R	G	R	F	L	G	I	A	P	N	G	L	L	M	A	N	A	T	I	P	G	P	N	E	E	
UniRef90_UP10003AB94FC	R	M	H	W	N	C	G	K	I	I	L	Q	S	C	R	G	R	F	L	G	I	A	P	N	G	L	L	M	A	N	A	T	I	P	G	P	N	E	E	
UniRef90_E9G247	Q	L	E	V	S	T	G	R	W	Y	I	R	T	M	G	D	R	Y	W	T	L	E	T	A	G	G	I	Q	A	S	S	K	K	S	S	N	A			
UniRef90_E9G247	Q	L	E	V	S	T	G	R	W	Y	I	R	T	M	G	D	R	Y	W	T	L	E	T	A	G	G	I	Q	A	S	S	K	K	S	S	N	A			
UniRef90_E9G247	Q	L	E	V	S	T	G	R	W	Y	I	R	T	M	G	D	R	Y	W	T	L	E	T	A	G	G	I	Q	A	S	S	K	K	S	S	N	A			
UniRef90_T1FM71	T	V	D	L	P	N	G	A	I	T	L	R	A	S	N	G	K	F	V	T	S	A	K	M	N	G	S	L	Y	A	Q	S	D	S	V	S	E	K	E	
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UniRef90_T1FM71	T	V	D	L	P	N	G	A	I	T	L	R	A	S	N	G	K	F	V	T	S	A	K	M	N	G	S	L	Y	A	Q	S	D	S	V	S	E	K	E	
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UniRef90_G3WQP5	C	V	N	W	N	C	G	K	I	I	L	R	A	A	N	G	R	Y	V	G	V	T	S	N	G	F	L	I	A	T	S</									

90 100 110 120

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UniRef90_H9J859	Y F Y L I N R P I L V L K C E Q G	F V G P K G V K L E C N	
UniRef90_A7RUD3	S M E I		
UniRef90_A7RUD3	S M E I		
UniRef90_A7RUD3	S M E I		
UniRef90_A7RUD3	S M E I		
UniRef90_F6RGS6	G V L L A N R P F I A L R	G R Y T S S E C D L M Q C N M D Q P	
UniRef90_F6RGS6	G V L L A N R P F I A L R	G R Y T S S E C D L M Q C N M D Q P	
UniRef90_F6RGS6	G V L L A N R P F I A L R	G R Y T S S E C D L M Q C N M D Q P	
UniRef90_D6WYE3	D L V W Q N D G S V A F R A	N N G R Y V M T K S G H Y A T A D A I D D N C K	
UniRef90_D6WYE3	D L V W Q N D G S V A F R A	N N G R Y V M T K S G H Y A T A D A I D D N C K	
UniRef90_D6WYE3	D L V W Q N D G S V A F R A	N N G R Y V M T K S G H Y A T A D A I D D N C K	
UniRef90_L5LFT1	L R M H W N C G R I I L Q S	P N G R F L G A P N S L I A N A T I P G P S E E	
UniRef90_L5LFT1	L R M H W N C G R I I L Q S	P N G R F L G A P N S L I A N A T I P G P S E E	
UniRef90_B2B993	G I L L A N R P F I V L R	G R Y T S S E H D L M Q C N M D Q P	
UniRef90_B2B993	G I L L A N R P F I V L R	G R Y T S S E H D L M Q C N M D Q P	
UniRef90_B2B993	G I L L A N R P F I V L R	G R Y T S S E H D L M Q C N M D Q P	
UniRef90_UP10003F16912	G I R L A N R P F I V L R	G R Y T S S E H D L M Q C N L D Q P	
UniRef90_UP10003F16912	G I R L A N R P F I V L R	G R Y T S S E H D L M Q C N L D Q P	
UniRef90_UP10003F16912	G I R L A N R P F I V L R	G R Y T S S E H D L M Q C N L D Q P	
UniRef90_UP10003347C03	G V R F T N R P F I A L R	G R Y T S S E H D L L Q C C N M D H P	
UniRef90_UP10003347C03	G V R F T N R P F I A L R	G R Y T S S E H D L L Q C C N M D H P	
UniRef90_UP10003347C03	G V R F T N R P F I A L R	G R Y T S S E H D L L Q C C N M D H P	
UniRef90_B4USU9	F R V H W S C G K I I M Q S	S N G R Y L G A N N G L L A N A T P G S N E E	
UniRef90_B4USU9	F R V H W S C G K I I M Q S	S N G R Y L G A N N G L L A N A T P G S N E E	
UniRef90_B4USU9	F R V H W S C G K I I M Q S	S N G R Y L G A N N G L L A N A T P G S N E E	
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UniRef90_UP10003F16B91	H M H W N C G K I M L Q T	A S G R F L S A P D G L L A N A T P G P N E E	
UniRef90_UP10003F16B91	H M H W N C G K I M L Q T	A S G R F L S A P D G L L A N A T P G P N E E	
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UniRef90_G5BHA7	A I R F A N R P F I V L R	G R Y S S S D H L R C C N L D Q P	
UniRef90_G5BHA7	A I R F A N R P F I V L R	G R Y S S S D H L R C C N L D Q P	
UniRef90_UP100046B3D9F	G I R L A N R P F I V L R	G R Y S S S D H D L R C C N L D Q P	
UniRef90_UP100046B3D9F	G I R L A N R P F I V L R	G R Y S S S D H D L R C C N L D Q P	
UniRef90_UP100046B3D9F	G I R L A N R P F I V L R	G R Y S S S D H D L R C C N L D Q P	
UniRef90_UP10003AB94FC	G I L F A N R P F I V L R	G R Y S S S G H D L I Q C C N Q D Q P D R I H L	
UniRef90_UP10003AB94FC	G I L F A N R P F I V L R	G R Y S S S G H D L I Q C C N Q D Q P D R I H L	
UniRef90_E9G247	Q M E W Q Q D G S I G F R A	N N G K F V G T K S G H L F A N T D S I D E S S K	
UniRef90_E9G247	Q M E W Q Q D G S I G F R A	N N G K F V G T K S G H L F A N T D S I D E S S K	
UniRef90_E9G247	Q M E W Q Q D G S I G F R A	N N G K F V G T K S G H L F A N T D S I D E S S K	
UniRef90_T1FM71	L V L K S E F G F V G F R T Q N N P R Y		
UniRef90_T1FM71	L V L K S E F G F V G F R T Q N N P R Y		
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UniRef90_G3WQP5	R I C L V I N R P F I A L R	G R Y T S S E H D Q L Q C N M D Q P	
UniRef90_M7BQ12	L L L L V N R P L L Q S E A		
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UniRef90_M7BQ12	L L L L V N R P L L Q S E A		
UniRef90_M7BQ12	L L L L V N R P L L Q S E A		
UniRef90_Q9NQT6	R M H W N C G R I I L Q S	C R G R F L G A P N S L L A N V I L P G P N E E	
UniRef90_Q9NQT6	R M H W N C G R I I L Q S	C R G R F L G A P N S L L A N V I L P G P N E E	
UniRef90_F6PL10	G V R L A N R N F L A L R	G R Y T L S G H E D L Q C N M D Q P	
UniRef90_F6PL10	G V R L A N R N F L A L R	G R Y T L S G H E D L Q C N M D Q P	
UniRef90_T1J1T6	D L N W Q S D G S V G F R A	N N G K Y V A A K S G H L Y A N S E C L D D T S K	
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UniRef90_UP100046C1D32	R A L W H C G K I F L Q A F N G R Y L G T M P V G V V A S A M H P G P G E A		
UniRef90_UP100046C1D32	R A L W H C G K I F L Q A F N G R Y L G T M P V G V V A S A M H P G P G E A		
UniRef90_UP100046C1D32	R A L W H C G K I F L Q A F N G R Y L G T M P V G V V A S A M H P G P G E A		
UniRef90_Q6EEB3	D I E W L G K R I T L K A A N G K Y V T A K K N G L A A A I E T P G E T E Q		
UniRef90_Q6EEB3	D I E W L G K R I T L K A A N G K Y V T A K K N G L A A A I E T P G E T E Q		
UniRef90_Q6EEB3	D I E W L G K R I T L K A A N G K Y V T A K K N G L A A A I E T P G E T E Q		
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UniRef90_C6EQ37	Q F I D S A T K K W S L R T C K S L F W G L Q P D G A I H A S V A P G N E F		
UniRef90_K7G9H0	Q L L I N E A T K E T F R S C S G N Y I G V D S S D I L V S T S A Q D K S V W		
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UniRef90_UP10003F1ACF3	D I E W N D R R I T L R A S N G K F V T A K K N G L A A S V E T A G D S E L		
UniRef90_UP10003F1ACF3	D I E W N D R R I T L R A S N G K F V T A K K N G L A A S V E T A G D S E L		
UniRef90_UP10003F1ACF3	D I E W N D R R I T L R A S N G K F V T A K K N G L A A S V E T A G D S E L		
UniRef90_E9BW04	T L T L K N R P Q L V L R C E Y G F V A T K A K E A I V A N		
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50 60 70 80

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UniRef90_UPI0004436520	Q Y E P N S N A I Q L R S V T G Q Y L A Q R S H R A I I G D G K K L E A A A I F
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UniRef90_F7IN79	E E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I S D F V G K D E E F
UniRef90_F7IN79	E E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I S D F V G K D E E F
UniRef90_UPI0003990A9D	D I E W R G R R V A L R A S N G X Y V C T K R N G Q L A A V S D T V G E D E E F
UniRef90_UPI0003990A9D	D I E W R G R R V A L R A S N G X Y V C T K R N G Q L A A V S D T V G E D E E F
UniRef90_UPI0003990A9D	D I E W R G R R V A L R A S N G X Y V C T K R N G Q L A A V S D T V G E D E E F
UniRef90_F2UQD9	V L E E N K D G F Y H L K T Q D G K Y W G V D V D G V T A N S S A P T D F
UniRef90_F2UQD9	V L E E N K D G F Y H L K T Q D G K Y W G V D V D G V T A N S S A P T D F
UniRef90_F2UQD9	V L E E N K D G F Y H L K T Q D G K Y W G V D V D G V T A N S S A P T D F
UniRef90_F2UQD9	V L E E N K D G F Y H L K T Q D G K Y W G V D V D G V T A N S S A P T D F
UniRef90_A9V2D1	T L V A Q D G G I H T H L N K F L Y G D R D G N V K A D A D A P S A E T Q W
UniRef90_UPI0003C8CBD1	Q L E I I D T K K C A F R T H T G K Y W T L T A T G G V Q S T A S T K N A S C Y F
UniRef90_UPI0003C8CBD1	Q L E I I D T K K C A F R T H T G K Y W T L T A T G G V Q S T A S T K N A S C Y F
UniRef90_UPI0003C8CBD1	Q L E I I D T K K C A F R T H T G K Y W T L T A T G G V Q S T A S T K N A S C Y F
UniRef90_J9JR23	Q L E F D P S T W Y I R T M Q D R Y W T L E T G G G I Q A V A D K K S S N A L F
UniRef90_J9JR23	Q L E F D P S T W Y I R T M Q D R Y W T L E T G G G I Q A V A D K K S S N A L F
UniRef90_J9JR23	Q L E F D P S T W Y I R T M Q D R Y W T L E T G G G I Q A V A D K K S S N A L F
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UniRef90_UPI000292A5FE	H L S F S D G A Y H I R G R D G G F W Y T G S H G S S V C S D G E R A E D F
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UniRef90_Q6EE45	T L E F R S G K V A F R D C E G K Y L A S G P T G T M K A G S T K V G K D E L F
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UniRef90_F7IKY0	E L E W R G R R V A L L K A S N G R Y V C M K K N G Q L A A I S D F
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UniRef90_F7IKY0	E L E W R G R R V A L L K A S N G R Y V C M K K N G Q L A A I S D F
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UniRef90_C6EQ38	Q L E A G S G K I A F K S N N K Q Y W S V T G D G T V S A V A P A K N A T E Y F
UniRef90_C6EQ38	Q L E A G S G K I A F K S N N K Q Y W S V T G D G T V S A V A P A K N A T E Y F
UniRef90_A9V487	Q L E F F N E K L A L R A S N G A Y I T A K K N G S M A A N G H E P T E E A L F
UniRef90_A9V487	Q L E F F N E K L A L R A S N G A Y I T A K K N G S M A A N G H E P T E E A L F
UniRef90_A9V487	Q L E F F N E K L A L R A S N G A Y I T A K K N G S M A A N G H E P T E E A L F
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UniRef90_H3ATM8	L F E E N T G R V R L K T S N G K Y I Q E G R S S I L A N G K G T E K E C G F
UniRef90_H3ATM8	L F E E N T G R V R L K T S N G K Y I Q E G R S S I L A N G K G T E K E C G F
UniRef90_K1QE63	R L E E C H P Q V I I V G N G G K T A S V G M E V V M L K I I R V P T Q S E I F
UniRef90_K1QE63	R L E E C H P Q V I I V G N G G K T A S V G M E V V M L K I I R V P T Q S E I F
UniRef90_G7YM25	R L E E C H P Q V I I V G N G G K T A S V G M E V V M L K I I R V P T Q S E I F
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UniRef90_H2R9C3	H L S F S D G A Y H I R G R D G G F W Y T G S H G S S V C S D G E R A E D F
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UniRef90_UPI0004419F63	H L S F S D G A Y H I R G R D G G F W Y T G S H G S S V C S D G E R A E D F
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UniRef90_K1QMU8	S I E T Y E G T F W G V G Q R G R I D A N A K T V S D D D N L F
UniRef90_K1QMU8	S I E T Y E G T F W G V G Q R G R I D A N A K T V S D D D N L F
UniRef90_K1QMU8	S I E T Y E G T F W G V G Q R G R I D A N A K T V S D D D N L F
UniRef90_U6IE90	T L P S K P T A F L L Q N H Q G N F L S A D G N G K V S T S Q K P G A E E R F
UniRef90_Q5C7Y0	T L R K H P D T L F L Q N S L G R F L S V N K D G K V S A S L K P S D S E E R F
UniRef90_D2V5I4	T V E L H N G K I A L L K S N H N T Y V C V E P S G Q I V V N R T A V G P W E Q
UniRef90_D2V5I4	T V E L H N G K I A L L K S N H N T Y V C V E P S G Q I V V N R T A V G P W E Q
UniRef90_D2V5I4	T V E L H N G K I A L L K S N H N T Y V C V E P S G Q I V V N R T A V G P W E Q
UniRef90_D2V5I4	T V E L H N G K I A L L K S N H N T Y V C V E P S G Q I V V N R T A V G P W E Q
UniRef90_T2MCK3	K L E W N S E K V A L L K S F N G K Y L V S S S G G Q L S P V G E S P S D N A L F
UniRef90_T2MCK3	K L E W N S E K V A L L K S F N G K Y L V S S S G G Q L S P V G E S P S D N A L F
UniRef90_T2MCK3	K L E W N S E K V A L L K S F N G K Y L V S S S G G Q L S P V G E S P S D N A L F
UniRef90_T2MCK3	K L E W N S E K V A L L K S F N G K Y L V S S S G G Q L S P V G E S P S D N A L F
UniRef90_UPI000265171C	S L E D D S Q I Y A L Y S T N G H Y L S V D K S G K V T A D A E E I G E E E Q R F
UniRef90_UPI0002B4296D	H F E K S K S S Y L R S P H L K Y L E S D K N G I V T C N S D T K C D S F L F
UniRef90_UPI0003BB79E5	D L E E S H P Q V V L V A A N R R Y V S V R Q G V N V S A N Q D E E L D H E T F
UniRef90_W5QAV2	E M E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I I S D V A G E D E E F
UniRef90_W5QAV2	E M E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I I S D V A G E D E E F
UniRef90_W5QAV2	E M E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I I S D V A G E D E E F
UniRef90_W5QAV2	E M E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I I S D V A G E D E E F
UniRef90_D2W3R3	L I H I S G N D Y A F K S A H G K F M C A E P S G E I I A N R D A L G P W E T F
UniRef90_D2W3R3	L I H I S G N D Y A F K S A H G K F M C A E P S G E I I A N R D A L G P W E T F
UniRef90_D2W3R3	L I H I S G N D Y A F K S A H G K F M C A E P S G E I I A N R D A L G P W E T F
UniRef90_M7AWS1	H Y E F N P D T V Q L K T V N N H Y L A Q R K F K S I V A N G R R M E P E T N F
UniRef90_M7AWS1	H Y E F N P D T V Q L K T V N N H Y L A Q R K F K S I V A N G R R M E P E T N F
UniRef90_M7AWS1	H Y E F N P D T V Q L K T V N N H Y L A Q R K F K S I V A N G R R M E P E T N F
UniRef90_L8GCR8	V T T E T K V H L K S H H G K F L C A E Q S G K V V A D R A D C R E W E T W
UniRef90_L8GCR8	V T T E T K V H L K S H H G K F L C A E Q S G K V V A D R A D C R E W E T W
UniRef90_L8GCR8	V T T E T K V H L K S H H G K F L C A E Q S G K V V A D R A D C R E W E T W
UniRef90_L8GCR8	V T T E T K V H L K S H H G K F L C A E Q S G K V V A D R A D C R E W E T W
UniRef90_L8GFL5	I I S T E S K V H L K S H H G K F L C A E P S G K V V A D R S D C K E W E T W
UniRef90_L8GFL5	I I S T E S K V H L K S H H G K F L C A E P S G K V V A D R S D C K E W E T W
UniRef90_S9YNQ9	M A E A L Q I Q F G L I N C S N K Y L T A E T F G K V N A S A S S L K K K Q I W
UniRef90_S9YNQ9	M A E A L Q I Q F G L I N C S N K Y L T A E T F G K V N A S A S S L K K K Q I W
UniRef90_S9YNQ9	M A E A L Q I Q F G L I N C S N K Y L T A E T F G K V N A S A S S L K K K Q I W
UniRef90_W5S5A4	D L I G P S N Q W A Y K S Y H G K Y M V A S A N G V L S S S L T P S S N W T R I
UniRef90_W5S5A4	D L I G P S N Q W A Y K S Y H G K Y M V A S A N G V L S S S L T P S S N W T R I

	90	100	110	120
UniRef90_F7B7H7	C Q W N C D	R I T L Q A	A S G R Y V G V T S N G L I	A T S L Q P G P C E E
UniRef90_F7B7H7	C Q W N C D	R I T L Q A	A S G R Y V G V T S N G L I	A T S L Q P G P C E E
UniRef90_UPI0004436520	C Q W N C D	R I T L Q A	A S G R Y V G V T S N G L I	A T S L Q P G P C E E
UniRef90_UPI0004436520	C Q W N C D	R I T L Q A	A S G R Y V G V T S N G L I	A T S L Q P G P C E E
UniRef90_UPI0004436520	C Q W N C D	R I T L Q A	A S G R Y V G V T S N G L I	A T S L Q P G P C E E
UniRef90_F7IN79	I L	I L	I L	I L
UniRef90_F7IN79	I L	I L	I L	I L
UniRef90_F7IN79	I L	I L	I L	I L
UniRef90_UPI0003990A9D	T L K N R P M L V L R G E	H G Y H R G S N		
UniRef90_UPI0003990A9D	T L K L I N R P M L V L R G E	H G Y H R G S N		
UniRef90_UPI0003990A9D	T L K L I N R P M L V L R G E	H G Y H R G S N		
UniRef90_F2UQD9	V F E F V R P T H A L I K H V E S G K Y L Q G Q Q N G F K A E G T S A G V N T L			
UniRef90_F2UQD9	V F E F V R P T H A L I K H V E S G K Y L Q G Q Q N G F K A E G T S A G V N T L			
UniRef90_F2UQD9	V F E F V R P T H A L I K H V E S G K Y L Q G Q Q N G F K A E G T S A G V N T L			
UniRef90_F2UQD9	V F E F V R P T H A L I K H V E S G K Y L Q G Q Q N G F K A E G T S A G V N T L			
UniRef90_A9VD21	T I L P Q A D G T W A L K S A A G F F F H G T G D K L T A F G D D V P A D G R			
UniRef90_UPI0003C8CBD1	D M E W R D R R R V T L R A S N G K F V T A T K K N G L A A S S V E T A G D A E L			
UniRef90_UPI0003C8CBD1	D M E W R D R R R V T L R A S N G K F V T A T K K N G L A A S S V E T A G D A E L			
UniRef90_UPI0003C8CBD1	D M E W R D R R R V T L R A S N G K F V T A T K K N G L A A S S V E T A G D A E L			
UniRef90_J9JR23	E L A W Q G D G S V C F R A N N G K Y V S T K S G H Y A N V D A I D D A			
UniRef90_J9JR23	E L A W Q G D G S V C F R A N N G K Y V S T K S G H Y A N V D A I D D A			
UniRef90_J9JR23	E L A W Q G D G S V C F R A N N G K Y V S T K S G H Y A N V D A I D D A			
UniRef90_UPI000292A5FE	V F E F R E R G R L A I R A R S G K Y L R G G A S G L R A D A D A P A G T A L			
UniRef90_UPI000292A5FE	V F E F R E R G R L A I R A R S G K Y L R G G A S G L R A D A D A P A G T A L			
UniRef90_UPI000292A5FE	V F E F R E R G R L A I R A R S G K Y L R G G A S G L R A D A D A P A G T A L			
UniRef90_Q6EE45	V L E Q S H P Q V V L K A A N G R H V S I Q G M D L S A N Q D E E S D Q E T			
UniRef90_Q6EE45	V L E Q S H P Q V V L K A A N G R H V S I Q G M D L S A N Q D E E S D Q E T			
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UniRef90_L9KX85	F R M H W N C G R I I L Q S S T G C F L G I A G N G L L A N A T I P G			
UniRef90_L9KX85	F R M H W N C G R I I L Q S S T G C F L G I A G N G L L A N A T I P G			
UniRef90_F7IKY0	V V R G P P R P A W T G K V T T G G T A Q Q T L S P P G K D E E			
UniRef90_F7IKY0	V V R G P P R P A W T G K V T T G G T A Q Q T L S P P G K D E E			
UniRef90_F7IKY0	V V R G P P R P A W T G K V T T G G T A Q Q T L S P P G K D E E			
UniRef90_C6EQ38	T V Q W N G T R V K F V G S N G K Y I T V K P N G L I A N G N G S D A T S L			
UniRef90_C6EQ38	T V Q W N G T R V K F V G S N G K Y I T V K P N G L I A N G N G S D A T S L			
UniRef90_C6EQ38	T V Q W N G T R V K F V G S N G K Y I T V K P N G L I A N G N G S D A T S L			
UniRef90_A9V487	V Y E M T N R P R L V L R T K Y G F L N M A G E N L M C N R A Q P T V F H M			
UniRef90_A9V487	V Y E M T N R P R L V L R T K Y G F L N M A G E N L M C N R A Q P T V F H M			
UniRef90_A9V487	V Y E M T N R P R L V L R T K Y G F L N M A G E N L M C N R A Q P T V F H M			
UniRef90_H3ATM8	N A E W R L G R V S F Q A I N G R Y L R V K P G V I T A S A L K P G L N E E			
UniRef90_H3ATM8	N A E W R L G R V S F Q A I N G R Y L R V K P G V I T A S A L K P G L N E E			
UniRef90_H3ATM8	N A E W R L G R V S F Q A I N G R Y L R V K P G V I T A S A L K P G L N E E			
UniRef90_K1QE63	Q L E Y S G K K K W S I E T Y D G T F W G V T Q D G R I E A V T K T L S D N N M			
UniRef90_K1QE63	Q L E Y S G K K K W S I E T Y D G T F W G V T Q D G R I E A V T K T L S D N N M			
UniRef90_G7YM25	L L E P Q A T G E W S F R S E A H S Y S Y L S G S E T Q I S C F S K S P V W			
UniRef90_H2R9C3	V F E F R E R G R L A I R A R S G K Y L R G G A S G L R A D A D A P A G T A L			
UniRef90_H2R9C3	V F E F R E R G R L A I R A R S G K Y L R G G A S G L R A D A D A P A G T A L			
UniRef90_H2R9C3	V F E F R E R G R L A I R A R S G K Y L R G G A S G L R A D A D A P A G T A L			
UniRef90_UPI0004419F63	V L R F T N R S F L V L R G R Y S S T C Q E M L Q C N L L E P D P V E			
UniRef90_UPI0004419F63	V L R F T N R S F L V L R G R Y S S T C Q E M L Q C N L L E P D P V E			
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UniRef90_UPI0003C2A33A	R I T W H H G Q V V L Q A F N G R Y L G T L P V G V V A S A A Q P G P N E V			
UniRef90_UPI0003C2A33A	R I T W H H G Q V V L Q A F N G R Y L G T L P V G V V A S A A Q P G P N E V			
UniRef90_K1QMU8	E I T W L S N G M A A I K G S N G K P L V S T G T G L L A A N L P D D A I D E G			
UniRef90_K1QMU8	E I T W L S N G M A A I K G S N G K P L V S T G T G L L A A N L P D D A I D E G			
UniRef90_K1QMU8	E I T W L S N G M A A I K G S N G K P L V S T G T G L L A A N L P D D A I D E G			
UniRef90_U6IE90	I I H F D P S G E I A L Q S E A H G F Y L H W S G T E I I R C F S K E P V W			
UniRef90_Q5C7Y0	R L E F A P D G T W A F K S D T Y G F Y S G S D T Q V S C F S K S P V W			

UniRef90_T2MCK3	T L V L V N R P I I V F R G E	N G Y I G S S T N K I Q C N R		
UniRef90_T2MCK3	T L V L V N R P I I V F R G E	N G Y I G S S T N K I Q C N R		
UniRef90_T2MCK3	T L V L V N R P I I V F R G E	N G Y I G S S T N K I Q C N R		
UniRef90_T2MCK3	T L V L V N R P I I V F R G E	N G Y I G S S T N K I Q C N R		
UniRef90_UPI000265171C	E V D A G G N G A W V I R S V A H H D T Y M G I K S S K K V L C M R E S S S S D Q R			
UniRef90_UPI0002B4296D	E V E L T D E G N W M F K D C S G K Y L S G T S K N I N C Q L K E A G L N A I			
UniRef90_UPI0003BB79E5	L M Q I D R E T K C T F Y S S T G G Y W T L V T H G G I Q A T A T Q V S A S T M			
UniRef90_W5QAV2	T L			
UniRef90_W5QAV2	T L			
UniRef90_W5QAV2	T L			
UniRef90_D2W3R3	S L V Q S G N Q V A F K S A H G K F L C A E P S G V I A N R D A L G P W E Q			
UniRef90_D2W3R3	S L V Q S G N Q V A F K S A H G K F L C A E P S G V I A N R D A L G P W E Q			
UniRef90_D2W3R3	S L V Q S G N Q V A F K S A H G K F L C A E P S G V I A N R D A L G P W E Q			
UniRef90_M7AWS1	R A I L W H C G K I F L Q A F N G R Y L G T M P V G V V A S A V H P G P G E A			
UniRef90_M7AWS1	R A I L W H C G K I F L Q A F N G R Y L G T M P V G V V A S A V H P G P G E A			
UniRef90_M7AWS1	R A I L W H C G K I F L Q A F N G R Y L G T M P V G V V A S A V H P G P G E A			
UniRef90_L8GCR8	T M R T T N G K T T F Q S H H G K Y L C A E S G K L V A D R S S P A E W E H			
UniRef90_L8GCR8	T M R T T N G K T T F Q S H H G K Y L C A E S G K L V A D R S S P A E W E H			
UniRef90_L8GCR8	T M R T T N G K T T F Q S H H G K Y L C A E S G K L V A D R S S P A E W E H			
UniRef90_L8GCR8	T M R T T N G K T T F Q S H H G K Y L C A E S G K L V A D R S S P A E W E H			
UniRef90_L8GFL5	T M R T T N G R A T F Q S A H G K Y L C A E S G K L V A D R S S P S D W E H			
UniRef90_L8GFL5	T M R T T N G R A T F Q S A H G K Y L C A E S G K L V A D R S S P S D W E H			
UniRef90_S9YNQ9	T L E Q P P D G S A A L C L C S H G R Y L A A D K D G			
UniRef90_S9YNQ9	T L E Q P P D G S A A L C L C S H G R Y L A A D K D G			
UniRef90_S9YNQ9	T L E Q P P D G S A A L C L C S H G R Y L A A D K D G			
UniRef90_W5S5A4	Q Q			
UniRef90_W5S5A4	Q Q			

UniRef90_F7B7H7 F R | V | R | L | V | N | R | P
 UniRef90_F7B7H7 F R | V | R | L | V | N | R | P
 UniRef90_UPI0004436520 F R | V | R | L | V | N | R | P
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 UniRef90_F2UQD9 W
 UniRef90_F2UQD9 W
 UniRef90_A9VD21 W | V | V | H | L | A | M | H | P
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 UniRef90_UPI000292A5FE W
 UniRef90_UPI000292A5FE W
 UniRef90_Q6EE45 F | Q | L | E | I |
 UniRef90_Q6EE45 F | Q | L | E | I |
 UniRef90_Q6EE45 F | Q | L | E | I |
 UniRef90_L9KX85
 UniRef90_L9KX85
 UniRef90_F7IKY0 F | I | L | K | L | I | N | R | P
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 UniRef90_C6EQ38 F | T | L | T | L | I | N | R | P
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 UniRef90_C6EQ38 F | T | L | T | L | I | N | R | P
 UniRef90_A9V487
 UniRef90_A9V487
 UniRef90_A9V487
 UniRef90_H3ATM8 F | T | L | R | L | A |
 UniRef90_H3ATM8 F | T | L | R | L | A |
 UniRef90_H3ATM8 F | T | L | R | L | A |
 UniRef90_K1QE63 F | E | I | R |
 UniRef90_K1QE63 F | E | I | R |
 UniRef90_G7YM25 W | A | V | R | L | A | V | H | P
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 UniRef90_H2R9C3 W
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 UniRef90_UPI0004419F63
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 UniRef90_UPI0003C2A33A F | G | V | R | L | S | N | R | P
 UniRef90_UPI0003C2A33A F | G | V | R | L | S | N | R | P
 UniRef90_UPI0003C2A33A F | G | V | R | L | S | N | R | P
 UniRef90_K1QMU8 F | Q | I | R | L | L | N | R | P
 UniRef90_K1QMU8 F | Q | I | R | L | L | N | R | P
 UniRef90_K1QMU8 F | Q | I | R | L | L | N | R | P
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 UniRef90_Q5C7Y0 W | S | I | R | L | A | T | H | P
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 UniRef90_T2MCK3
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 UniRef90_T2MCK3
 UniRef90_UPI000265171C W | Y | V | R | L | S | I | H | P
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 UniRef90_UPI0003BB79E5 F | E | V |
 UniRef90_W5QAV2
 UniRef90_W5QAV2
 UniRef90_W5QAV2
 UniRef90_W5QAV2
 UniRef90_D2W3R3 F | Q | F | S | L | A |
 UniRef90_D2W3R3 F | Q | F | S | L | A |
 UniRef90_D2W3R3 F | Q | F | S | L | A |
 UniRef90_D2W3R3 F | Q | F | S | L | A |
 UniRef90_M7AWS1 F | G | V | R | L | A |
 UniRef90_M7AWS1 F | G | V | R | L | A |
 UniRef90_M7AWS1 F | G | V | R | L | A |
 UniRef90_L8GCR8 F | H | V |
 UniRef90_L8GFL5 F | H | V | H | V | A | L | R |
 UniRef90_L8GFL5 F | H | V | H | V | A | L | R |
 UniRef90_S9YNQ9
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1 10 20 30 40

UniRef90_L0AUJ2	I	R	S	H	H	G	K	Y	L	C	V	E	Q	N	G	N	V	V	C	N	R	D	N	P	A	Q	W	E	T	F				
UniRef90_L0AUJ2	I	R	S	H	H	G	K	Y	L	C	V	E	Q	N	G	N	V	V	C	N	R	D	N	P	A	Q	W	E	T	F				
UniRef90_L5KR42																																		
UniRef90_D2VYP7	A	F	R	S	A	H	G	K	L	M	C	A	E	P	S	G	L		L	V	A	N	R	D	A	V	G	P	W	E	Q	F		
UniRef90_D2VYP7	A	F	R	S	A	H	G	K	L	M	C	A	E	P	S	G	L		L	V	A	N	R	D	A	V	G	P	W	E	Q	F		
UniRef90_D2VYP7	A	F	R	S	A	H	G	K	L	M	C	A	E	P	S	G	L		L	V	A	N	R	D	A	V	G	P	W	E	Q	F		
UniRef90_D2VYP7	A	F	R	S	A	H	G	K	L	M	C	A	E	P	S	G	L		L	V	A	N	R	D	A	V	G	P	W	E	Q	F		
UniRef90_S4W293	A	F	R	S	A	H	G	K	L	M	C	A	E	P	S	G	L		L	V	A	N	R	D	A	V	G	P	W	E	Q	F		

UniRef90_S4VR2																																			
UniRef90_S4VRR2																																			
UniRef90_G9I460	I	R	S	H	H	G	K	Y	L	S	V	E	Q	N	S	K	V	V	A	N	R	D	K	P	Q	Q	W	E	T	F					
UniRef90_G9I460	I	R	S	H	H	G	K	Y	L	S	V	E	Q	N	S	K	V	V	A	N	R	D	K	P	Q	Q	W	E	T	F					
UniRef90_I0D415	S	W	T	V	A	I	Q	A	A	N	L	Q	Y	V	S	A	E	P	S	G	N	V	V	A	N	P	S	A	V	N	K	W	E	K	F
UniRef90_S9YAT8	V	R	L	R	S	L	Q	G	L	Y	L	L	C	E	A	N	G	S	V	V	C	A	A	S	E	H	V	I	P	V	S	L	F		
UniRef90_S9YAT8	V	R	L	R	S	L	Q	G	L	Y	L	L	C	E	A	N	G	S	V	V	C	A	A	S	E	H	V	I	P	V	S	L	F		
UniRef90_S9YAT8	V	R	L	R	S	L	Q	G	L	Y	L	L	C	E	A	N	G	S	V	V	C	A	A	S	E	H	V	I	P	V	S	L	F		
UniRef90_UP10003C28766	T	F	A	L	K	A	S	N	G	K	Y	V	S	F	E	P	N	G	R	V	V	A	D	R	T	S	I	G	A	W	E	K	F		
UniRef90_UP10003C28766	T	F	A	L	K	A	S	N	G	K	Y	V	S	F	E	P	N	G	R	V	V	A	D	R	T	S	I	G	A	W	E	K	F		
UniRef90_UP10003C28766	V	A	L	R	S	H	N	G	R	Y	V	C	A	E	N	A	G	A	P	L	I	A	N	R	T	A	V	G	P	W	E	T	F		
UniRef90_UP10003C28766	V	A	L	R	S	H	N	G	R	Y	V	C	A	E	N	A	G	A	P	L	I	A	N	R	T	A	V	G	P	W	E	T	F		

UniRef90_S4VY88	S	Q	L	V	T	L	V	S	I	S	G	R	Q	L	T	P	Q	D	D	G	S	V	A	L	W	V	G	A	T	Y	K	E	K	W	T					
UniRef90_S4VY88																																								
UniRef90_L8H2S9	D	F	G	R	G	A	A	A	G	G	V	G	V	S	L	S	A	G	P	G	S																			
UniRef90_L8H2S9	D	F	G	R	G	A	A	A	G	G	V	G	V	S	L	S	A	G	P	G	S																			
UniRef90_L8H2S9	D	F	G	R	G	A	A	A	G	G	V	G	V	S	L	S	A	G	P	G	S																			
UniRef90_L8H129	Q	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W				
UniRef90_L8H129	Q	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W				
UniRef90_S4VTA8	Q	V	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W			
UniRef90_S4VTA8	Q	V	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W			
UniRef90_V8NB4	F	S	G	F	R	S	A	T	G	K	Y	V	T	A	Q	D	E	K	Q	P	L	S	A	N	K	S	E	N	P	E	S	S	K	T	F					
UniRef90_S4WC9	P	V	S	P	T	Q	S	G	R	S	A	T	G	K	Y	V	T	A	Q	D	E	K	Q	P	L	S	A	N	K	S	E	N	P	E	S	S	K	T	F	
UniRef90_L8GD25	Q	V	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W			
UniRef90_L8GD25	Q	V	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W			
UniRef90_G1TFJ0	Q	V	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W			
UniRef90_S4VXV2	Q	V	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W			
UniRef90_UP1000248EA64	Q	V	V	L	K	I	Q	F	G	L	V	N	D	S	D	R	Y	L	T	A	E	S	F	G	K	V	N	A	S	P	L	K	R	K	Q	V	W			
UniRef90_L9L5B3	A	D	A	G	N	G	R	V	A	V	L	S	R	S	G	R	Y	L	V	N	S	G	A	I	L	P	N	S	P	A	V	T	D	E	Q	T	F			
UniRef90_L9L5B3	A	D	A	G	N	G	R	V	A	V	L	S	R	S	G	R	Y	L	V	N	S	G	A	I	L	P	N	S	P	A	V	T	D	E	Q	T	F			
UniRef90_L9L5B3	A	D	A	G	N	G	R	V	A	V	L	S	R	S	G	R	Y	L	V	N	S	G	A	I	L	P	N	S	P	A	V	T	D	E	Q	T	F			
UniRef90_UP1000289B492	K	I	S	L	Q	A	S	N	G	Q	Y	V	C	A	E	G	G	G	Q	L	V	A	N	R	G	T	V	G	S	W	E	T	F							
UniRef90_UP1000289B492	K	I	S	L	Q	A	S	N	G	Q	Y	V	C	A	E	G	G	G	Q	L	V	A	N	R	G	T	V	G	S	W	E	T	F							
UniRef90_M5P138	A	D	A	G	N	G	R	V	A	V	L	S	R	S	G	R	Y	L	V	N	S	G	A	I	L	P	N	S	P	A	V	T	D	E	Q	T	F			
UniRef90_S4VYP6	A	D	A	G	N	G	R	V	A	V	L	S	R	S	G	R	Y	L	V	N	S	G	A	I	L	P	N	S	P	A	V	T	D	E	Q	T	F			
UniRef90_UP1000372D78A	T	V	S	F	P	Q	S	G	F	R	S	A	T	G	K	Y	V	T	A	Q	D	E	K	Q	P	L	S	A	N	K	S	E	N	P	E	S	S	K	T	F
UniRef90_S4W3T2	T	V	S	F	P	Q	S	G	F	R	S	A	T	G	K	Y	V	T	A	Q	D	E	K	Q	P	L	S	A	N	K	S	E	N	P	E	S	S	K	T	F
UniRef90_S4W3T2	T	V	S	F	P	Q	S	G	F	R	S	A	T	G	K	Y	V	T	A	Q	D	E	K	Q	P	L	S	A	N	K	S	E	N	P	E	S	S	K	T	F
UniRef90_E5ERD6	T	L	E	W	K	V	A	I	K	S	I	N	G	K	F	V	C	A	E	K	N	G	S	Q	L	I	A	N	K	D	S	F	G	L	W	E	T	F		
UniRef90_E5ERD6	T	L	E	W	K	V	A	I	K	S	I	N	G	K	F	V	C	A	E	K	N	G	S	Q	L	I	A	N	K	D	S	F	G	L	W	E	T	F		
UniRef90_Q2FBK2	T	L	E	W	K	V	A	I	K	S	I	N	G	K	F	V	C	A	E	K	N	G	S	Q	L	I	A	N	K	D	S	F	G	L	W	E	T	F		
UniRef90_Q2FBK2	T	L	E	W	K	V	A	I	K	S	I	N	G	K	F	V	C	A	E	K	N	G	S	Q	L	I	A	N	K	D	S	F	G	L	W	E	T	F		
UniRef90_S4VRX4	P	F	S	P	T	V	I	L	K	S	S	S	N	K	Y	L	T	A	H	S	Y	G	G	V	S	A	S	A	V	N	R	T	S	I	E	K	F			
UniRef90_E8S558	A	D	A	G	N	G	R	V	A	V	L	S	R	S	G	R	Y	L	V	N	S	G	A	I	L	P	N	S	P	A	V	T	D	E	Q	T	F			
UniRef90_E8S558	A	D	A	G	N	G	R	V	A	V	L	S	R	S	G	R	Y	L	V	N	S	G	A	I	L	P	N	S	P	A	V	T	D	E	Q	T	F			
UniRef90_E8S558	A	D	A	G	N	G	R	V	A	V	L	S	R	S	G	R	Y	L	V	N	S	G	A	I	L	P	N	S	P	A	V	T	D	E	Q	T	F			
UniRef90_D5G5C8	K	Y	S	F	K	S	H	H	G	R	Y	L	S	C	D	K	F	G	G	L	S	A	T	R	E	A	I	S	P	E	E	F								
UniRef90_D5G5C8	K	Y	S	F	K	S	H	H	G	R	Y	L	S	C	D	K	F	G	G	L	S	A	T	R	E	A	I	S	P	E	E	F								
UniRef90_D5EKZ8	Q	V	A	L	K	G	S	N	N	Q	Y	V	S	S	E	N	G	V	S	F	M	N	C	N	R	A	S	L	G	A	W	E	K	F						
UniRef90_D5EKZ8	Q	V	A	L	K	G	S	N	N	Q	Y	V	S	S	E	N	G	V	S	F	M	N	C	N	R															

80

	50	60	70	
UniRef90_L0AUJ2	E L K N K G D G I S I K S W Q G K F L S A Q P N G S V E A N R D K A N E W E I F			
UniRef90_L0AUJ2	E L K N K G D G I S I K S W Q G K F L S A Q P N G S V E A N R D K A N E W E I F			
UniRef90_L5KR42	E V H D T Q A V V R L R S L K G L Y L L C E A D G T L C Y G R P R T S H H G C F			
UniRef90_D2VYP7	T V E L H N G N I A L K S A H N T Y V C C V E P P S G Q I V V N R S A V G A W E Q L			
UniRef90_D2VYP7	T V E L H N G N I A L K S A H N T Y V C C V E P P S G Q I V V N R S A V G A W E Q L			
UniRef90_D2VYP7	T V E L H N G N I A L K S A H N T Y V C C V E P P S G Q I V V N R S A V G A W E Q L			
UniRef90_D2VYP7	T V E L H N G N I A L K S A H N T Y V C C V E P P S G Q I V V N R S A V G A W E Q L			
UniRef90_S4W293	S Q Y V T F V S P T G R Q L T A Q D D G S V A S L W V G A T Y K E K W			
UniRef90_S4W293	S Q Y V T F V S P T G R Q L T A Q D D G S V A S L W V G A T Y K E K W			
UniRef90_S4VRR2	S A Q P L S Q L V T L V S P S G Q K Q L T P Q E D G S V K S L W Y G A S Y K E K W			
UniRef90_S4VRR2	S A Q P L S Q L V T L V S P S G Q K Q L T P Q E D G S V K S L W Y G A S Y K E K W			
UniRef90_G9I460	E L E K K G D G I S I K T W Q G K F I S A Q P N G T I E A N R D K A Q E W E F F			
UniRef90_G9I460	E L E K K G D G I S I K T W Q G K F I S A Q P N G T I E A N R D K A Q E W E F F			
UniRef90_10D415	E L P T G E L Y T F K S N G K Y V S F E P N G R V V A D R T S I G A W E K F			
UniRef90_S9YAT8	Q F E G E S P N L Q I R S A N G C Y L A Q R R H R T I L A D G H P L E S D T F F			
UniRef90_S9YAT8	Q F E G E S P N L Q I R S A N G C Y L A Q R R H R T I L A D G H P L E S D T F F			
UniRef90_S9YAT8	Q F E G E S P N L Q I R S A N G C Y L A Q R R H R T I L A D G H P L E S D T F F			
UniRef90_UP10003C28766	Q L E K D T K K C A F R T Y T G K Y W T L T P P N G G I Q S T A S T K N S S C Y F			
UniRef90_UP10003C28766	Q L E K D T K K C A F R T Y T G K Y W T L T P P N G G I Q S T A S T K N S S C Y F			
UniRef90_UP10003C28766	Q L E K D T K K C A F R T Y T G K Y W T L T P P N G G I Q S T A S T K N S S C Y F			
UniRef90_C3FDE6	I L Y G D N R I Y V L Q A S N G R F I S A N G G R E L T A N S Y V A G S W E R F			
UniRef90_C3FDE6	I L Y G D N R I Y V L Q A S N G R F I S A N G G R E L T A N S Y V A G S W E R F			
UniRef90_UP1000363B979	T R V P N G G S V G L R A H N D R Y V T A G S G P L I A S A A T L G A A E S F			
UniRef90_UP1000363B979	T R V P N G G S V G L R A H N D R Y V T A G S G P L I A S A A T L G A A E S F			
UniRef90_S4VY88	Q P L S Q L I T L V S P S G R N L T P Q E D G S V K S L W V G T S Y K E K W			
UniRef90_S4VY88	Q P L S Q L I T L V S P S G R N L T P Q E D G S V K S L W V G T S Y K E K W			
UniRef90_L8H2S9	M H E S K V Y L K S Y H G R F I C A E P S G H V V A D R T D C A E W E T W			
UniRef90_L8H2S9	M H E S K V Y L K S Y H G R F I C A E P S G H V V A D R T D C A E W E T W			
UniRef90_L8H2S9	M H E S K V Y L K S Y H G R F I C A E P S G H V V A D R T D C A E W E T W			
UniRef90_L8H129	M P K K F T I K T H H G K Y I C S E P S H T I V G N R D S A D A W E H W			
UniRef90_L8H129	M P K K F T I K T H H G K Y I C S E P S H T I V G N R D S A D A W E H W			
UniRef90_S4VTA8	V T F V S P T G Q L T A Q D D G S V A S L W Y G A S P K E K W			
UniRef90_S4VTA8	V T F V S P T G Q L T A Q D D G S V A S L W Y G A S P K E K W			
UniRef90_V8NBB4	K L Q G K Q D V V A L V G H Q G Q H L L A E A D G T V H C G R P V A E K Q S R F			
UniRef90_S4VWC9	V T R L S N G K Y T F K G F N R Y L G A N P G G W V R A E A T V G S W E Q W			
UniRef90_L8GD25	P Y I P S E S V V F L L S S H G L F L S A E P S G R V V A D K E E P K E G E T W			
UniRef90_L8GD25	P Y I P S E S V V F L L S S H G L F L S A E P S G R V V A D K E E P K E G E T W			
UniRef90_G1TFJ0	P Y I P S E S V V F L L S S H G L F L S A E P S G R V V A D K E E P K E G E T W			
UniRef90_S4VXV2	L L E P D P G A V L L R S H L G R Y L S A G E D G R V A C E A Q R P G K D E L F			
UniRef90_UP1000248EA64	V A R L A S G K Y T F Q A F N G Y Y L G A N P G G W V R A E A T T V G S W E Q W			
UniRef90_L9L5B3	K L I A G H G F F A L K G S N G R F I S S E N G K K M T C N R K S I G W W E K F			
UniRef90_L9L5B3	Q L E I D T K K C A F R T H T G K Y W T L T A T G G V Q S T A S T K N A S C Y F			
UniRef90_L9L5B3	Q L E I D T K K C A F R T H T G K Y W T L T A T G G V Q S T A S T K N A S C Y F			
UniRef90_UP1000289B492	H K I P I H A V I A L K S N N S R Y I S S E N G V K I T S N R N K I G H W E K F			
UniRef90_UP1000289B492	H K I P I H A V I A L K S N N S R Y I S S E N G V K I T S N R N K I G H W E K F			
UniRef90_M5P138	D L A D G D G Y T L R A A N G R Y A S L H E D G S V V P D Q K Q P N G W E T F			
UniRef90_S4VP6	T I R L D S G K Y I F R S W Q N Y V L K A N P T D S V E A S A T V A S T W E Q F			
UniRef90_UP1000372D78A	T L T D G N G K I A L Q A S N Q G Y V C A E S G G Q V L V A N R G A I G S W E T F			
UniRef90_S4W3T2	S Q L I T L V S P S G Q Q L T A Q D N F F N V A S L W Y G A S P K E K W			
UniRef90_S4W3T2	S Q L I T L V S P S G Q Q L T A Q D N F F N V A S L W Y G A S P K E K W			
UniRef90_E5ER6	Y M K G S G P K S D E K P H D G Y C A D E G N S G T K C N R P T I G G W E A F			
UniRef90_E5ER6	Y M K G S G P K S D E K P H D G Y C A D E G N S G T K C N R P T I G G W E A F			
UniRef90_Q2FBK2	E I C C F D T Q A I A L K S Y N G K F V V T A T D T N L L I A N K D Q A T V W E T F			
UniRef90_Q2FBK2	E I C C F D T Q A I A L K S Y N G K F V V T A T D T N L L I A N K D Q A T V W E T F			
UniRef90_Q2FBK2	E I C C F D T Q A I A L K S Y N G K F V V T A T D T N L L I A N K D Q A T V W E T F			
UniRef90_S4VRX4	V I R L D D G R Y A F R S W Q N Y L K V N P T G S V E A T A T S A S D W E K F			
UniRef90_E8S558	L V T N A D G T I S L R W S G R A Y V V G V D G N A Q L V A T A T A I G T R E K F			
UniRef90_E8S558	L V T N A D G T I S L R W S G R A Y V V G V D G N A Q L V A T A T A I G T R E K F			
UniRef90_E8S558	L V T N A D G T I S L R W S G R A Y V V G V D G N A Q L V A T A T A I G T R E K F			
UniRef90_D5G5C8	L N E L L G S G R W A L Q T V R D K F L S V D E V G A I R G D A E A V G F K E T F			
UniRef90_D5G5C8	L N E L L G S G R W A L Q T V R D K F L S V D E V G A I R G D A E A V G F K E T F			
UniRef90_D5EKZ8	T A V D G N G Q I A L K G T N N K Y V S S E N G K S M N C N R A S L G A W E K F			
UniRef90_D5EKZ8	T A V D G N G Q I A L K G T N N K Y V S S E N G K S M N C N R A S L G A W E K F			
UniRef90_D5EKZ8	T A V D G N G Q I A L K G T N N K Y V S S E N G K S M N C N R A S L G A W E K F			
UniRef90_D5ER18	T V Q Q S D G T V A I K A S N G K Y L S S D K Y L N V A A N R A A V G A W E K F			
UniRef90_D5ER18	T V Q Q S D G T V A I K A S N G K Y L S S D K Y L N V A A N R A A V G A W E K F			
UniRef90_C6D6C8	T K S T N D G T V S F K S A N N K Y V V S A D L L N G M L I A N R D S V S G W E A F			
UniRef90_C6D6C8	T K S T N D G T V S F K S A N N K Y V V S A D L L N G M L I A N R D S V S G W E A F			
UniRef90_UP1000365DEF2	T V V P N D G T I S L L A A N G K Y V V S A D N A G T L I A N R T T I G A A E K F			
UniRef90_UP1000365DEF2	T V V P N D G T I S L L A A N G K Y V V S A D N A G T L I A N R T T I G A A E K F			
UniRef90_J0L7H8	T I I N N S G T I S L R A A N G R Y V V A E S K G T L I A N R T S I S S W E K F			
UniRef90_J0L7H8	T I I N N S G T I S L R A A N G R Y V V A E S K G T L I A N R T S I S S W E K F			
UniRef90_D5EIK8	T I I N N S G T I S L R A A N G R Y V V A E S K G T L I A N R T S I S S W E K F			
UniRef90_D5EIK8	T I I N N S G T I S L R A A N G R Y V V A E S K G T L I A N R T S I S S W E K F			
UniRef90_UP10004774F99	Q R E G G Y N I V A V L K G A N G K Y V V T A E D Y G R L I A R S D N V S T W E R F			
UniRef90_UP10004774F99	Q R E G G Y N I V A V L K G A N G K Y V V T A E D Y G R L I A R S D N V S T W E R F			
UniRef90_S4VRK7	E V V K G T D R W S L K N H Y G K Y V V A A A D G F V L S T T D A N			
UniRef90_S4VRK7	E V V K G T D R W S L K N H Y G K Y V V A A A D G F V L S T T D A N			
UniRef90_S4VRK7	E V V K G T D R W S L K N H Y G K Y V V A A A D G F V L S T T D A N			
UniRef90_UP1000359EE0C	E P V F Q D G K V A L N G C N C F V S C D D E G D I E C V S R T A G R G E M V			
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UniRef90_L8GQ75	G F T T V R K R V K L L G S H H R Y L S A E L N R S V I A N R E R A G P W E T W			
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UniRef90_G8TAA7	L V V D G G K V A L Q S M G K Y V V S S E N G V N I T C N R A T V G A W E Q F			
UniRef90_C8XKT9	Q L V D H D G T V S L R S A N N A F V C A D S A G A L I A N R Q A V G D W E K F			
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UniRef90_UP100046FD351	E I V P P G D G Y V Y L K G N N G K Y L S E G S G D Y L R F D Q D A I E N A T K L			
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UniRef90_L5KR42	L L R F H R N G K W T	L Q C I I S S R Y	L E S D G E D	V F C N S R V L S A Y H M
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UniRef90_S4W293	T V A R L S N G K Y T I	R S Y A N R Y	L G A D P G G	V R A D A T A V G S W E Q
UniRef90_S4VR2	A V S R L S N G K Y T F K G F	N G Y Y L T A N P	G G G V R A E T T T	V G S W E Q
UniRef90_S4VR2	A V S R L S N G K Y T F K G F	N G Y Y L T A N P	G G G V R A E T T T	V G S W E Q
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UniRef90_S9YAT8	R M H W N C G R I I I L Q S	P N G R F L G I A P N G L	L L A N A T I P G P N E E	
UniRef90_S9YAT8	R M H W N C G R I I I L Q S	P N G R F L G I A P N G L	L L A N A T I P G P N E E	
UniRef90_S9YAT8	R M H W N C G R I I I L Q S	P N G R F L G I A P N G L	L L A N A T I P G P N E E	
UniRef90_UP10003C28766	D I E W C D R R I T L K A	T N G K Y V T A K K N G L	A A T V E T A G E T E L	
UniRef90_UP10003C28766	D I E W C D R R I T L K A	T N G K Y V T A K K N G L	A A T V E T A G E T E L	
UniRef90_UP10003C28766	D I E W C D R R I T L K A	T N G K Y V T A K K N G L	A A T V E T A G E T E L	
UniRef90_C3FDE6	V I V Y			
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UniRef90_UP1000363B979	Q L I P			
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UniRef90_S4VY88	T A A R L S N G K Y T F R G F	N G R Y L G A N P G G	V R A D A T A A A N S W E Q	
UniRef90_S4VY88	T A A R L S N G K Y T F R G F	N G R Y L G A N P G G	V R A D A T A A A N S W E Q	
UniRef90_L8H2S9	T M R T T H C G Q A T F Q S F	H G K Y L C A E S G R L	V A D R S S P A E W E H	
UniRef90_L8H2S9	T M R T T H C G Q A T F Q S F	H G K Y L C A E S G R L	V A D R S S P A E W E H	
UniRef90_L8H2S9	T M R T T H C G Q A T F Q S F	H G K Y L C A E S G R L	V A D R S S P A E W E H	
UniRef90_L8H129	E V I K L G G G G K V Y L	K S A H G K Y L S A T N G T	V V A N R D T P K E W E T	
UniRef90_L8H129	E V I K L G G G G K V Y L	K S A H G K Y L S A T N G T	V V A N R D T P K E W E T	
UniRef90_S4VTA8	T V T R L S N G K Y T I	K S Y A N R Y L T A N P	G W V V R A E A T S V G A W E Q	
UniRef90_S4VTA8	T V T R L S N G K Y T I	K S Y A N R Y L T A N P	G W V V R A E A T S V G A W E Q	
UniRef90_V8NBB4	L L E V H P S G A W T L Q Q	E S Q K F L E S D G E D	V F C V A R G L T A H H L	
UniRef90_S4VWC9	V L I N N A G N Q W T L K S	T H G T Y M G T T A A G	V V	
UniRef90_L8GD25	Y M T R T N Q R V T L L M S	A H G K Y L C A E S G R L	V A D R D R P V V W E Y	
UniRef90_L8GD25	Y M T R T N Q R V T L L M S	A H G K Y L C A E S G R L	V A D R D R P V V W E Y	
UniRef90_L8GD25	Y M T R T N Q R V T L L M S	A H G K Y L C A E S G R L	V A D R D R P V V W E Y	
UniRef90_G1TFJ0	D L E E S P P Q V V L L	A A N R R Y V S V		
UniRef90_S4VXV2	D I L I N N G N Q W T F K S	V H G T Y M G T T V D G	V I	
UniRef90_UP1000248EA64	R I V R L K N G Q F A L K	G T N G R F V S S E N G N L K C	N R K N V G P W E K	
UniRef90_L9L5B3	D M E W R D R R R V T L L R A	S N G K F V T A K K N G L	A A S V E T A G D A E L	
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UniRef90_UP1000289B492	K I V N A G N G M I A L K	G N N G R Y I S S E N G K M T A N R K F I	G W W E K	
UniRef90_UP1000289B492	K I V N A G N G M I A L K	G N N G R Y I S S E N G K M T A N R K F I	G W W E K	
UniRef90_M5P138	Q L E K Q P D G T Y A I K	T A N G K Y I T A K K D G L T A S A D T P T A A E K		
UniRef90_S4VYP6	E V I E Q A P D R W S L N H	Y G K Y V V A A D D G F V L S T T D A G	H Y	
UniRef90_UP1000372D78A	T L T D L G N G K I A L Q A	S N G Q Y V G G G Q Q L V A N R S A I G P W E T		
UniRef90_S4W3T2	T A T R L S N G K Y T F Q S F	T G R Y L G A H P G G V R A E A T A V G D W E R		
UniRef90_S4W3T2	T A T R L S N G K Y T F Q S F	T G R Y L G A H P G G V R A E A T A V G D W E R		
UniRef90_E5ER6	K S I K N S D G T Y S L K G G Y H G R Y C	A D E G N T I K C D R T K I D R Q E K		
UniRef90_E5ER6	K S I K N S D G T Y S L K G G Y H G R Y C	A D E G N T I K C D R T K I D R Q E K		
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UniRef90_Q2FBK2	T L V P S F G T F G F K S H G N S K L V T A E E A G L T A N R D V L D V W E M			
UniRef90_Q2FBK2	T L V P S F G T F G F K S H G N S K L V T A E E A G L T A N R D V L D V W E M			
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UniRef90_D5EKZ8	T V G Q H			
UniRef90_D5EKZ8	T V G Q H			
UniRef90_D5ER18	S S Q Q Q			
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UniRef90_UP1000365DEF2	L M Q			
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UniRef90_UP1000359EE0C	R L R S N A N			
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WT	I							
WD	V							
WD	V							
F	I	I						
F	G	I	R	[]	A	N	R	P
F	G	I	R	L	A	N	R	P
F	G	I	R	L	A	N	R	P
F	L	M	K	L	I	N	R	P
F	L	M	K	L	I	N	R	P
F	L	M	K	L	I	N	R	P
W	D	V						
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F	R	V						
F	R	V						
F	R	V						
F	H	V	H					
F	H	V	H					
WD	I							
WD	I							
WM	P	Q	[]	A	E	H		
F	L	I						
F	L	I						
F	L	I						
F	S	I	K	I	L	S	K	P
F	L	M	K	L	I	N	R	P
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F	L	M	K	L	I	N	R	P
F	R	I						
F	R	I						
F								
WT	V							
F	I							
WD	V							
WD	V							
F	I	V	Q		M	H		
F	I	V	Q		M	H		
F	S							
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F	S							
WT	V							
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W								
F	G	V	N					

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 G T F | V S S E N G G D I T A N R D E V G T W E E F

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

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

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

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

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

T R Q | V F
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 T R Q | V F
 W V I

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

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

V S | L | R S H A N N | I V | T A D N A G A P | L I | A N R T S | I G P | W E E F
 V S | L | R S H A N N | I V | T A D N A G A P | L I | A N R T S | I G P | W E E F

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

		50	60	70	80
UniRef90_UPI00046FD351	E I V P G D G Y V Y L K G N N G K Y L S E G S G D Y L R F D Q D A I E N A T K L				
UniRef90_UPI00046FD351	E I V P G D G Y V Y L K G N N G K Y L S E G S G D Y L R F D Q D A I E N A T K L				
UniRef90_E0I5J6	N V S I Q G A N G L Y V S A D N Y N N N L T A S R Q T A S T W E K F				
UniRef90_E0I5J6	N V S I Q G A N G L Y V S A D N Y N N N L T A S R Q T A S T W E K F				
UniRef90_A3Y6K6	E W V N K G N R K G F G C N G K H V C A E E G G G A L I I A N R D N F D V W E S F				
UniRef90_A3Y6K6	E W V N K G N R K G F G C N G K H V C A E E G G G A L I I A N R D N F D V W E S F				
UniRef90_A3Y6K6	E W V N K G N R K G F G C N G K H V C A E E G G G A L I I A N R D N F D V W E S F				
UniRef90_UPI000248F8A2	T W G T N R G G V T L K G N N N K F V S S E S G R S M N C C N R D N A N L F E R F				
UniRef90_UPI000248F8A2	T W G T N R G G V T L K G N N N K F V S S E S G R S M N C C N R D N A N L F E R F				
UniRef90_UPI000248F8A2	T W G T N R G G V T L K G N N N K F V S S E S G R S M N C C N R D N A N L F E R F				
UniRef90_F0S659	G I I P L N N T L Q F M G S N G K Y I S A Q N T S S M C N V S T P P G N A E K F				
UniRef90_F0S659	G I I P L N N T L Q F M G S N G K Y I S A Q N T S S M C N V S T P P G N A E K F				
UniRef90_S0AZK2	G E Q I T T I K N N F G K Y L S A Q P N G T V I A N R D L P P Q Q W E T F				
UniRef90_S0AZK2	G E Q I T T I K N N F G K Y L S A Q P N G T V I A N R D L P P Q Q W E T F				
UniRef90_S0AZK2	G E Q I T T I K N N F G K Y L S A Q P N G T V I A N R D L P P Q Q W E T F				
UniRef90_S0AZK2	G E Q I T T I K N N F G K Y L S A Q P N G T V I A N R D L P P Q Q W E T F				
UniRef90_R6FP85	I V N N N D G T V S L R S S N G K Y V C A D E N N Q L P R S E R V G T W E K F				
UniRef90_E4SCQ4	H V V D N G G T K S L K S M N G K Y V T I A S N S L L T A T A E T I G E N E K F				
UniRef90_E4SCQ4	H V V D N G G T K S L K S M N G K Y V T I A S N S L L T A T A E T I G E N E K F				
UniRef90_E4SCQ4	H V V D N G G T K S L K S M N G K Y V T I A S N S L L T A T A E T I G E N E K F				
UniRef90_F5LID1	E L V D G G G K V A L R A L N N R Y V S A D N A G G L I A N R E A I I G T W E T F				
UniRef90_UPI0003B5ACCC	T V V D G G G K V A L Q S M G K Y V S S E N G T I T C C N R T T I G D W E T F				
UniRef90_UPI00035FC4FE	A T G G G G G T A L A Q A N G K Y V S A P A N G N L I A S A T A V V G A T E R F F				
UniRef90_UPI00035FC4FE	A T G G G G G T A L A Q A N G K Y V S A P A N G N L I A S A T A V V G A T E R F F				
UniRef90_UPI00035FC4FE	A T G G G G G T A L A Q A N G K Y V S A P A N G N L I A S A T A V V G A T E R F F				
UniRef90_C7Q396	Y V P S T A S L V S L K A H H N G Q Y V D A A G S G S L I A N A A S T G K A E T T F				
UniRef90_C7Q396	Y V P S T A S L V S L K A H H N G Q Y V D A A G S G S L I A N A A S T G K A E T T F				
UniRef90_C7Q396	Y V P S T A S L V S L K A H H N G Q Y V D A A G S G S L I A N A A S T G K A E T T F				
UniRef90_C7Q396	Y V P S T A S L V S L K A H H N G Q Y V D A A G S G S L I A N A A S T G K A E T T F				
UniRef90_U4LN77	V P V R R D G R R W A W T T V R E K F L G V E E T S K V R G D R D D V G F R E G W				
UniRef90_U4LN77	V P V R R D G R R W A W T T V R E K F L G V E E T S K V R G D R D D V G F R E G W				
UniRef90_F2LKB6	V G L A T V V S L R S T N N L Y V T A E N A G A L I A N R Q A V G Q W E Q F				
UniRef90_F2LKB6	V G L A T V V S L R S T N N L Y V T A E N A G A L I A N R Q A V G Q W E Q F				
UniRef90_W7HI54	T R V P S S T K F A F K G H H G R Y L A C D K C G L S A T R D A I G P E E E F F				
UniRef90_UPI0003AFC3A2	E M E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I I S D F V G E D E E E F F				
UniRef90_UPI0003AFC3A2	E M E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I I S D F V G E D E E E F F				
UniRef90_UPI0003AFC3A2	E M E W R G R R V A L K A S N G R Y V C M K K N G Q L A A I I S D F V G E D E E E F F				
UniRef90_Q2FB9	T V A I K S F N G K F V C A E N N G N L I A N R D S I G L W E T F				
UniRef90_Q2FB9	T V A I K S F N G K F V C A E N N G N L I A N R D S I G L W E T F				
UniRef90_Q2FB9	T V A I K S F N G K F V C A E N N G N L I A N R D S I G L W E T F				
UniRef90_Q2FB9	T V A I K S F N G K F V C A E N N G N L I A N R D S I G L W E T F				
UniRef90_Q2FB9	T V A I K S F N G K F V C A E N N G N L I A N R D S I G L W E T F				
UniRef90_M3AFX8	T L T A S E A V T F D I G A Y E R F V S V D E D G E V R G D A E T A S E				
UniRef90_M3AFX8	T L T A S E A V T F D I G A Y E R F V S V D E D G E V R G D A E T A S E				
UniRef90_D5EL19	T I I N N S G T V S L K A G N G K Y I C A D K G V N L L S N R T A I G A W E K F				
UniRef90_D5EL19	T I I N N S G T V S L K A G N G K Y I C A D K G V N L L S N R T A I G A W E K F				
UniRef90_A6FY56	A V V H D N Q R V A F R S H H G R K V L S A N P S G A L S N L V T H V K S W E H F				
UniRef90_A6FY56	A V V H D N Q R V A F R S H H G R K V L S A N P S G A L S N L V T H V K S W E H F				
UniRef90_A6FY56	A V V H D N Q R V A F R S H H G R K V L S A N P S G A L S N L V T H V K S W E H F				
UniRef90_Q9P7X3	L L S I L N N T I L L K S C L G K Y M C S K S G D L Y C T Q E A V G S Q E Q W				
UniRef90_K4QVU1	Q L I Q N P G T V S L K A A A N G R Y V C A E N A G A L I A N R D A I I G P W E K F				
UniRef90_K4QVU1	Q L I Q N P G T V S L K A A A N G R Y V C A E N A G A L I A N R D A I I G P W E K F				
UniRef90_S9PZL6	V A S D M N G N V V L K S F L M K Y L S A G K E G D L F S K R A E A G E E Q W				
UniRef90_S7QE09	T R V A G A S T I N L R T G E G K F L S C D K H G I V S A D R E A R G D W E H F				
UniRef90_UPI0003B3EB4E	G T V I S L K G F N G K Y V S G E E N G T M T C T R A T A G D W E H F				
UniRef90_UPI0003B3EB4E	G T V I S L K G F N G K Y V S G E E N G T M T C T R A T A G D W E H F				
UniRef90_C7PFB6	T V V D G G G R V A L R L N Q G N Y V C S E E N G T M T C T R A T A G D W E H F				
UniRef90_R4V0V6	E V K S K E N S I F L K T W K K Y V S A Q P N G T I Q C N R E K G A W E A F				
UniRef90_R4V0V6	E V K S K E N S I F L K T W K K Y V S A Q P N G T I Q C N R E K G A W E A F				
UniRef90_V4AA71	E P V F Q D G K M A I N G C N G R F V S V T K D G D I I C S S S K T A G D T E E				
UniRef90_V4AA71	E P V F Q D G K M A I N G C N G R F V S V T K D G D I I C S S S K T A G D T E E				
UniRef90_C7QB12	T F S T T A S V I S L K A H N G R Y V A P N T T T S L I A D A T S I G K A E E Q F				
UniRef90_C7QB12	T F S T T A S V I S L K A H N G R Y V A P N T T T S L I A D A T S I G K A E E Q F				
UniRef90_C7QB12	T F S T T A S V I S L K A H N G R Y V A P N T T T S L I A D A T S I G K A E E Q F				
UniRef90_U5VYX5	T F S T T A S V I S L K A H N G R Y V A P N T T T S L I A D A T S I G K A E E Q F				
UniRef90_U5VYX5	S T T P V P T T V G L K S A N G K F V G G S P L L L A S L S T A S E R Y				
UniRef90_U5VYX5	S T T P V P T T V G L K S A N G K F V G G S P L L L A S L S T A S E R Y				
UniRef90_G1XE07	T V I P T S T R F A F K G H H G R Y L A C D K F G I L S A T K D A I P E E F				
UniRef90_D2V8N6	I Y L K A S N G M Y L C S E E N G K V V V A N R P V V A S I W E T F				
UniRef90_D2V8N6	I Y L K A S N G M Y L C S E E N G K V V V A N R P V V A S I W E T F				
UniRef90_D2V8N6	I Y L K A S N G M Y L C S E E N G K V V V A N R P V V A S I W E T F				
UniRef90_D5ER24	D L H N S G S V S F R S H N N D I V T A D N A G L I A N R T A V G G W E K F				
UniRef90_D5ER24	D L H N S G S V S F R S H N N D I V T A D N A G L I A N R T A V G G W E K F				
UniRef90_C7Q6P5	D L H N S G S V S F R S H N N D I V T A D N A G L I A N R T A V G P W E E F				
UniRef90_C7Q6P5	D L H N S G S V S F R S H N N D I V T A D N A G L I A N R T A V G P W E E F				
UniRef90_I3ILP6	K M L A T E E E I A L R A Y N R Q Y L C A E M G G E V V A N R N E A H E W E T F				
UniRef90_I3ILP6	K M L A T E E E I A L R A Y N R Q Y L C A E M G G E V V A N R N E A H E W E T F				
UniRef90_Q2FBK3	T L V Q N K E G V A F K S H H N G K L V T A E N A G N L I A N R D I P D I W E R F				
UniRef90_Q2FBK3	T L V Q N K E G V A F K S H H N G K L V T A E N A G N L I A N R D I P D I W E R F				
UniRef90_Q2FBK3	T L V Q N K E G V A F K S H H N G K L V T A E N A G N L I A N R D I P D I W E R F				
UniRef90_D6RKL7	T L V Q N K E G V A F K S H H N G K L V T A E N A G N L I A N R D I P D I W E R F				
UniRef90_UPI00035E466E	Q L R N A D G T V V S L R A A D N N Y V T A E N A G A L I A N R A S I G A W E K F				
UniRef90_UPI00035E466E	Q L R N A D G T V V S L R A A D N N Y V T A E N A G A L I A N R A S I G A W E K F				
UniRef90_AOA016PR06	I V V A G T E S F R F K G H H G R Y V S C D K I G M L S A D S E A V P L E S F				
UniRef90_K1Q8R2	E P V F Q D G K M A L N G S N G K F L S A N R D D E I V C L S S S K A G E Q E I I				
UniRef90_K1Q8R2	E P V F Q D G K M A L N G S N G K F L S A N R D D E I V C L S S S K A G E Q E I I				
UniRef90_1ZIA9	T M I P D K T A F F I X S H L N R Y L T F R Q E V F H V K X T K M V L K N R F				
UniRef90_D0LMN4	G S T V V W L Q G N N G K F V S S E D G L M M C D R D S V Q G W E S F				
UniRef90_D0LMN4	G S T V V W L Q G N N G K F V S S E D G L M M C D R D S V Q G W E S F				

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 UniRef90_Q2FBJ9
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 UniRef90_UPI0003B3EB4E
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 UniRef90_R4V0V6
 UniRef90_R4V0V6
 UniRef90_V4AA71
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 UniRef90_K1Q8R2
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 UniRef90_11ZIA9
 UniRef90_D0LMN4
 UniRef90_D0LMN4

90 100 110 120

Y | L | Y R S G G G T Y G | I | Q S A N S G M Y L | S
 Y | L | Y R S G G G T Y G | I | Q S A N S G M Y L | S
 E | L | I D A G S G K V A L L A L M N Y K Y A S G G G N G Q | I T A N Q S A | G P S E T
 E | L | I D A G S G K V A L L A L M N Y K Y A S G G G N G Q | I T A N Q S A | G P S E T
 D | V |
 D | V |
 D | V |
 T | I | D A G S G K V A L | K | Y N G K Y | V S S E N G T M T | C T R S T | I | G N W E K
 T | I | D A G S G K V A L | K | Y N G K Y | V S S E N G T M T | C T R S T | I | G N W E K
 E | I | V E A P Q N K V A L | K | T | C H G K Y | L S | I N P N T L | E V | C A P H | K E W E F
 E | I | V E A P Q N K V A L | K | T | C H G K Y | L S | I N P N T L | E V | C A P H | K E W E F
 E | I | V E A P Q N K V A L | K | T | C H G K Y | L S | I N P N T L | E V | C A P H | K E W E F
 E | I | V E A P Q N K V A L | K | T | C H G K Y | L S | I N P N T L | E V | C A P H | K E W E F
 T | I | E K I | S N G E Y A L | Y S | L A N G K Y | V | Q A D G G K | L | F A T S E T | V | G A W E V
 T | F |
 T | F |
 T | F |
 E | L | G K T A D G K Q T | L | K | A | L | A N N Q Y | V | C | A D N E G | L | I | A | N | R | A | T | A | S | K | W | E | S
 D | W | V | P | T A D G K V | T | F | R | G | N | N | G | K | F | I | S | S | E | N | G | T | M | T | C | T | R | T | T | A | S | G | W | E | A
 D | I | V | D | L | G | G | G | N | V | A | L | R | S | R | A | N | N | M | Y | V | C | A | E | A | N | P | L | I | A | N | R | A | A | A | G | S | W | E | T
 D | I | V | D | L | G | G | G | N | V | A | L | R | S | R | A | N | N | M | Y | V | C | A | E | A | N | P | L | I | A | N | R | A | A | A | G | S | W | E | T
 D | I | V | D | L | G | G | G | N | V | A | L | R | S | R | A | N | N | M | Y | V | C | A | E | A | N | P | L | I | A | N | R | A | A | A | G | S | W | E | T
 D | L | I | T | N | P | D | G | T | A | S | L | R | A | H | S | D | G | E | Y | V | T | A | G | T | S | P | L | I | A | D | R | T | T | I | G | S | A | E
 D | L | I | T | N | P | D | G | T | A | S | L | R | A | H | S | D | G | E | Y | V | T | A | G | T | S | P | L | I | A | D | R | T | T | I | G | S | A | E
 D | L | I | T | N | P | D | G | T | A | S | L | R | A | H | S | D | G | E | Y | V | T | A | G | T | S | P | L | I | A | D | R | T | T | I | G | S | A | E
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UniRef90_A0A021W9C0	D M V D A G G G I A L L S H N A K F V T V D A Q N A L I I A S R D S I G A R E R F
UniRef90_C8X8E2	D L I V S S G T V T L R S H N G A F V C A E N G G S L I A N R G A A D L W E T F
UniRef90_V5HQM7	T A V K L S T K I A L L K S G Y G K Y L C V Q P D G A V V G R S D A I G P L E H W
UniRef90_M3CP2	K I V G N E N T F T F K G H H G K Y L G C D Q Y G I L S S T R E A V S P E E T F
UniRef90_K9WXT1	T L I T G D G K I A L K T D H D R Y V S A Q E S P S L I A D R I E V Q G W E K F
UniRef90_K9WXT1	T L I T G D G K I A L K T D H D R Y V S A Q E S P S L I A D R I E V Q G W E K F
UniRef90_K9WXT1	T L I T G D G K I A L K T D H D R Y V S A Q E S P S L I A D R I E V Q G W E K F
UniRef90_C8XIK2	M M I N R G G A V A L R S A N N M Y C A D N G G A L I A N R S S V L G W E T F
UniRef90_G2WT41	V A N K V I S G T F R F K G H H G K Y L G C D K N G T L S A A S D A V S P L E C F
UniRef90_A5Z3Z1	Y A E K Q S S G T Y A L K T Y D N Y Y V Q A D I D G I L H A Y G A S V G T W E K F
UniRef90_A5Z3Z1	Y A E K Q S S G T Y A L K T Y D N Y Y V Q A D I D G I L H A Y G A S S V G T W E K F
UniRef90_10K2D7	D I E V S S G G Q V A F R G N N G Q Y I S S E N G G P M T C T R T S I S G W E A F
UniRef90_10K2D7	D I E V S S G G Q V A F R G N N G Q Y I S S E N G G P M T C T R T S I S G W E A F
UniRef90_C7Q6P4	D L L T N D G S V V S L R A H N G D I V T A D N A G A L I A N R T A I G P W E E F
UniRef90_C7Q6P4	D L L T N D G S V V S L R A H N G D I V T A D N A G A L I A N R T A I G P W E E F
UniRef90_C7Q6P4	D L L T N D G S V V S L R A H N G D I V T A D N A G A L I A N R T A I G P W E E F
UniRef90_F9FJZ4	N R V A G T E N F R F K G H H G R Y L S C D K I G L L S A T S E A V S P L E S F
UniRef90_V5FSY1	T K V A G S E G V S F K G H H G R Y L S C D K Y G I L S A T S S A I S P F E S F
UniRef90_V9GDN5	N R V N L S G T I A L Q A A N N L Y V T C C E N G G R L I A N R T A V V G A W E A F
UniRef90_V9GDN5	N R V N L S G T I A L Q A A N N L Y V T C C E N G G R L I A N R T A V V G A W E A F
UniRef90_K7FF1	M K Q G K E T V V E L L G H G R Y L L V D P D G S V R C T
UniRef90_G8TA84	D V V N A D N T I S L R G S N G L Y V S S E N G A Q M T C T R T T I I Q G W E K F
UniRef90_G8TA84	D V V N A D N T I S L R G S N G L Y V S S E N G A Q M T C T R T T I I Q G W E K F
UniRef90_G8TA84	D V V N A D N T I S L R G S N G L Y V S S E N G A Q M T C T R T T I I Q G W E K F
UniRef90_F4F5A7	Q I I N H D G T V V S L L K S I N G K Y V T A P K S G T L K A S K T S I G S S E K F
UniRef90_F4F5A7	Q I I N H D G T V V S L L K S I N G K Y V T A P K S G T L K A S K T S I G S S E K F
UniRef90_F4F5A7	Q I I N H D G T V V S L L K S I N G K Y V T A P K S G T L K A S K T S I G S S E K F
UniRef90_G4TC17	V V I A G T E T I N F R T P K G K F L S S D R V G L V S A N R E A R G P Q E E W
UniRef90_A5C4T4	L V E G S G H V I R L S C H G R Y L T A S T G K K V T Q T V P G N T S D A I L I
UniRef90_N4UQ48	N R I A G T E Q F R F K G H H G K Y L G C D K N G T L S A T S A A V S P L E S F
UniRef90_I4IQE4	G N S I R V A F K A N N G K Y I T S N S D G N V L A S S D A I G S N E N F
UniRef90_I4IQE4	G N S I R V A F K A N N G K Y I T S N S D G N V L A S S D A I G S N E N F
UniRef90_K2QW22	N R V A G T E N F S F K G H H G K Y L G C D K F G V L S A H R E A I S P E E S F
UniRef90_C4RHK2	D L E A P N P V V S V K A A N G K F V A A D G A G S L L A R S T S V G A W E K Y
UniRef90_C7QF2	D A V N A D G S V V S L L R A H N G E I V T A D N G G A L I A N R F T I G Q W E S F
UniRef90_C7QF2	D A V N A D G S V V S L L R A H N G E I V T A D N G G A L I A N R F T I G Q W E S F
UniRef90_C7QF2	D A V N A D G S V V S L L R A H N G E I V T A D N G G A L I A N R F T I G Q W E S F
UniRef90_C7QF2	D A V N A D G S V V S L L R A H N G E I V T A D N G G A L I A N R F T I G Q W E S F
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UniRef90_H9JN72	I V E D I T G S V S I E F G G N N C Y V S A L D N G L F T G D G E G P S P E E I F
UniRef90_H9JN72	I V E D I T G S V S I E F G G N N C Y V S A L D N G L F T G D G E G P S P E E I F
UniRef90_L8GD68	E V M I V N D K V S I K S H L G K Y L S A D S D A V A A Q S D K A Y S W T L N
UniRef90_L8GD68	E V M I V N D K V S I K S H L G K Y L S A D S D A V A A Q S D K A Y S W T L N
UniRef90_C7YJ31	V A N R V S G T F R F K G H H G R Y L G C D K I G S L S A T S E A V S P L E S F
UniRef90_E2B5Y2	A F P I N E T K I A L K S G Y G K Y L G V D K K G I V I G R S D A V G P L E Q W
UniRef90_R5ZH78	N N K Y V C A D N Y G N L V A N R D S A G A W E Q F
UniRef90_R5ZH78	N N K Y V C A D N Y G N L V A N R D S A G A W E Q F
UniRef90_UPI000427421A	K I I L S D G E Y Y F K D S Q G L V V C A E N T G A L V A N K N S C G A W E T L
UniRef90_UPI000427421A	K I I L S D G E Y Y F K D S Q G L V V C A E N T G A L V A N K N S C G A W E T L
UniRef90_UPI000427421A	K I I L S D G E Y Y F K D S Q G L V V C A E N T G A L V A N K N S C G A W E T L
UniRef90_X1NZ22	E L I D G N D I I A L L R A Y N G Q Y L V V A E G G G M V Y A N R D S I G A W E T F
UniRef90_X1NZ22	E L I D G N D I I A L L R A Y N G Q Y L V V A E G G G M V Y A N R D S I G A W E T F
UniRef90_C4WV9	A I I V N E T R I A L L K S G Y G K Y L G V D K D G T I V G R S D A I G P L E Q W
UniRef90_R0J2T3	N R V A G T E Q L S L K G H H G R Y L S C D K F G I L S A T A I S P E E T F
UniRef90_UPI000373FA27	V L T G N S D E V W L Q S T D G Y Y Y S A Q Q S G A L D V D R T A R Y S W E T F
UniRef90_14YH5	V A S R L S G T I T L R S P D G K F L A A D K H G S V S A M N E A R G P N E Q W
UniRef90_UPI0004685D86	T I I D G G G K I A L L R S M N V V S S E N G A T I T C N R T T I S D W E K F
UniRef90_UPI0002C3DF42	S I V T T S G Y M A F R T E D G K Y L K V G E G E G V V T G N I I F P E E S T Y F
UniRef90_UPI0002C3DF42	S I V T T S G Y M A F R T E D G K Y L K V G E G E G V V T G N I I F P E E S T Y F
UniRef90_UPI0002C3DF42	S I V T T S G Y M A F R T E D G K Y L K V G E G E G V V T G N I I F P E E S T Y F
UniRef90_UPI0002C3DF42	T V V D G G G K V A L R S Q G M Y V V S S E N G A Q M T C S R P T I Q D W E K F
UniRef90_C7PQY8	T V I D G G G K V A L R S M G K Y V V S S E N G T V T C S R A T I S D W E K F
UniRef90_UPI00046A40A3	N R I T G T E Q F R F K G H H G Q Y L G C D K N G V L S A T S A A V S P L E S F
UniRef90_A0A010QI02	N I V E I T G T V A I E F G N Q V Y M K A L D D N G L F T A E G E S P L P E E I L
UniRef90_A0A026WP63	N I V E I T G T V A I E F G N Q V Y M K A L D D N G L F T A E G E S P L P E E I L
UniRef90_A0A026WP63	Q D G K Y Y L S S A N N K V V T A E D A G N L A A N R D N G G A W E T L
UniRef90_D7UWC7	Q D G K Y Y L S S A N N K V V T A E D A G N L A A N R D N G G A W E T L
UniRef90_D7UWC7	N R V A G T E Q V S F K G H H G S Y L G C N K F G I L S A S A T A I S P E E S F
UniRef90_B2W4T8	A F P I S E T K I A L K S G Y G K Y L G V D K N G I V I G R S D A V G S D I E Q W
UniRef90_F4WBU2	V A T R V A G A I N F K G H H G R Y L S C D K Y G I L S A N P A V S A Y E S F
UniRef90_T5BRP8	E V Y Q M K D G I A L K A H N G K F V V Q A T E N G K L V A C C D Q P G W W E T F
UniRef90_J6EXJ0	E V Y Q M K D G I A L K A H N G K F V V Q A T E N G K L V A C C D Q P G W W E T F
UniRef90_J6EXJ0	E V Y Q M K D G I A L K A H N G K F V V Q A T E N G K L V A C C D Q P G W W E T F
UniRef90_J5JTK4	N R I A G T E H F R F K G H H G R Y L A C D K I G L L S A H S E A V S P L E T F
UniRef90_G2Q434	N R I V G T E H Y R F K G H H G R Y L S C D R I G L L T A T A D A I S P L E T F
UniRef90_D7EJW1	V L I D E R K V A F K S G Y G K Y L R V E K N G V V T G R S D A I G A M E Q W
UniRef90_UPI000428F849	D L A D G G D V Y T L R A A N R R Y V S L Q D D G G R L I A N Q K Q P N G W E T F
UniRef90_R5LBA9	N G K Y V C A E N Y G T L I S D R T S V G E W E Q F
UniRef90_R5LBA9	N G K Y V C A E N Y G T L I S D R T S V G E W E Q F

90 100 110 120

UniRef90_D2VQQ1	Y L M S D T D W A L R T W W H T Y L C C D N D N S I V D N R I A I G G W E K
UniRef90_D2VQQ1	Y L M S D T D W A L R T W W H T Y L C C D N D N S I V D N R I A I G G W E K
UniRef90_D2VQQ1	Y L M S D T D W A L R T W W H T Y L C C D N D N S I V D N R I A I G G W E K
UniRef90_G8T7B2	D W I V N T D G S I S L R G N G N G F F V S S E E E A M T C N R P T A S G W E K
UniRef90_UPI0004679302	T R E D L G G G L V A F K S V A N G K Y V V S A D G G V L Y A N R N V V G A W E Q
UniRef90_UPI000304D2A9	E L N R L D E D H I T L K A H N G Q Y L C G G G T I I V A N R G E A H E W E K
UniRef90_UPI000304D2A9	E L N R L D E D H I T L K A H N G Q Y L C G G G T I I V A N R G E A H E W E K
UniRef90_UPI000304D2A9	E L N R L D E D H I T L K A H N G Q Y L C G G G T I I V A N R G E A H E W E K
UniRef90_F8PE74	T P V I M P D G M I A F M N V Y E K Y L S V D E V Q L R G D S E E V G F G E R
UniRef90_W7V107	E V V S V G D G F F A L R A L A N N Q F V T A D A G G L I A K A T V I D A W E V
UniRef90_W7V107	E V V S V G D G F F A L R A L A N N Q F V T A D A G G L I A K A T V I D A W E V
UniRef90_L7M7W9	E P V F Q D G K V A L L A S N N C F I T T V V D G T D I K A N C R S A G S D E M
UniRef90_A0A021W9C0	L V E I L P G G A I A L R A R A N D R Y V T A T N E A K G P L I P T A T P V G G
UniRef90_C8X8E2	I L I P N A D S T I S L R S A V N Y R L V T A E N G G L I A N R T A V D T W E K
UniRef90_V5HQ7M	E P V F Q D G K M A L Q A S N S C F L T V S D G T D I L J A N A V T A G D N E M
UniRef90_M3CP2	K V V P A E S S Q F E I Q T M M R K T Y L S V D G D K V R G D A E A A D E T C
UniRef90_K9WXT1	T V I D A S N G T L D F S A T T T K T
UniRef90_K9WXT1	T V I D A S N G T L D F S A T T T K T
UniRef90_K9WXT1	T V I D A S N G T L D F S A T T T K T
UniRef90_C8XIK2	D L I R N S N G T V S L R S W A N G K F V C A E Y G G L R A N R D V A Q T W E Q
UniRef90_G2WT41	H I L P T A D T P G T F Q Q T L R D T F V T A T A H E V R G D A D A V S F A S T
UniRef90_A5Z3Z1	L L E P A S D
UniRef90_A5Z3Z1	L L E P A S D
UniRef90_10K2D7	N W G V A G S A R M A
UniRef90_10K2D7	N W G V A G S A R M A
UniRef90_C7Q6P4	D L I
UniRef90_C7Q6P4	D L I
UniRef90_C7Q6P4	D L I
UniRef90_F9FJZ4	N V I P T G D T P G T F Q Q T L R D T F L S S K A V D V R G D A D T I S F D T T
UniRef90_V5FSY1	R I L P A P D G L F S L Q T V D S E T F L S V K E D E V R G D A K T L G F E T S
UniRef90_V9GDN5	R V Q N N
UniRef90_V9GDN5	R V Q N N
UniRef90_K7FF1	WT L Q L L D S R K Y L E S D G E D V F C I S R R P S P S H R
UniRef90_G8TA84	N F G I I S G A R I A
UniRef90_G8TA84	N F G I I S G A R I A
UniRef90_G8TA84	N F G I I S G A R I A
UniRef90_F4F5A7	N I E A P A P V I S I K S K A S G K Y V V A G S K P L I A S S S K V T K S A K
UniRef90_F4F5A7	N I E A P A P V I S I K S K A S G K Y V V A G S K P L I A S S S K V T K S A K
UniRef90_F4F5A7	N I E A P A P V I S I K S K A S G K Y V V A G S K P L I A S S S K V T K S A K
UniRef90_G4TC17	T P Q V L E D G T L A F Q N V Y G N Y L G L D E V A L R A D A E T V G F Q E K
UniRef90_A5C4T4	E W E P I R D G Q V K F K T R G G K F L R A N G G T
UniRef90_N4UQ48	N V I A T A D T P G T F Q Q T L R D T F L S V T T S D V R G D E E N I T F N T T
UniRef90_I4IQE4	Q M Y L Q G E D R V V A L M A S N G K Y V S N Q Q D G L A A I A D A I S P T E Q
UniRef90_I4IQE4	Q M Y L Q G E D R V V A L M A S N G K Y V S N Q Q D G L A A I A D A I S P T E Q
UniRef90_K2QW22	M C I P V A D G T F A I Q T Q R E K F I S V S E N E V R G D S E T I D F S S T
UniRef90_C4RHK2	E L V D L G L G S G W V A F R A L V N N K Y V T A Q S G G L L A K A S S V G D W E A
UniRef90_C4RHK2	E L V D L G L G S G W V A F R A L V N N K Y V T A Q S G G L L A K A S S V G D W E A
UniRef90_C7QFU2	D L I Y
UniRef90_UPI0004705F56	T L I E E N G K Y A F R G N N G R L I S S E N G T M T C N R S D P G A W E L
UniRef90_H9JN72	T A F P A G E N K F A L K S G Y G K Y L G V S K D G V V V R S D A V G P M E Q
UniRef90_H9JN72	T A F P A G E N K F A L K S G Y G K Y L G V S K D G V V V R S D A V G P M E Q
UniRef90_L8GD68	F L S V T S G V Y A T F R S Q R E G L F M S A T S D G V L V A R D E P G P Q E K
UniRef90_L8GD68	F L S V T S G V Y A T F R S Q R E G L F M S A T S D G V L V A R D E P G P Q E K
UniRef90_C7YJ31	N V I P T A D T P G T F Q
UniRef90_E2BY2	E P I F Q P Q D N K L A I L H S T G C F V S V T S D D D V I C Q N R T A G P S E Y
UniRef90_R5ZH78	R V I Y N S D G T V S F Q S R A N N K Y L C A K E N P V I P R S N A I G T W E K
UniRef90_R5ZH78	R V I Y N S D G T V S F Q S R A N N K Y L C A K E N P V I P R S N A I G T W E K
UniRef90_UPI000427421A	R V I Y N N A D G T I S L K S R A N D K Y V C A E Q N Q L L A R S D S I G T W E K
UniRef90_UPI000427421A	R V I Y N N A D G T I S L K S R A N D K Y V C A E Q N Q L L A R S D S I G T W E K
UniRef90_X1NZ22	E K I
UniRef90_X1NZ22	E K I
UniRef90_C4WV9	E P I F Q P Q D N K L A I L S S T G C F I S I R D E D D S L V A K T V G P N E L
UniRef90_R0J2T3	L A I P V P D N A F S L Q T A R D K F L S V E E H K
UniRef90_UPI000373FA27	K L I I H S D N S G C L Q N G D H G N Y I V A E S D R A N R K A L G S W E K
UniRef90_I4YHY5	R P I I Q Q D S S I A W M S I Y D K F L S L D E V A L R A D S D T V G F G E T
UniRef90_UPI0004685D86	D W V V N A N G K I S L K G N N G K Y I S S E D G Q M K C N R A T I A G W E A
UniRef90_UPI0002C3DF42	V V E R A K D E K Y R V R S V F G M Y L V A S S D G
UniRef90_UPI0002C3DF42	V V E R A K D E K Y R V R S V F G M Y L V A S S D G
UniRef90_UPI0002C3DF42	V V E R A K D E K Y R V R S V F G M Y L V A S S D G
UniRef90_UPI0002C3DF42	V V E R A K D E K Y R V R S V F G M Y L V A S S D G
UniRef90_C7PQY8	N W I D N G D G T F S L R G N N G S Y V S S E N G T Q M T C N R P T I Q G W E K
UniRef90_UPI00046A40A3	D W V V A A D G K I A F K G N N G K Y L S S E N G T Q M T C N R P T I Q G W E K
UniRef90_A0A010QI02	N I I A T A D T P G T F Q Q T L R D T F L S V T T S D V R G D E E S I T F N S T
UniRef90_A0A026WP63	T A F P I S E T K V A L K S G Y G K Y L G V D K N G V V I R S D A V G S I E Q
UniRef90_A0A026WP63	T A F P I S E T K V A L K S G Y G K Y L G V D K N G V V I R S D A V G S I E Q
UniRef90_D7UWC7	L V K N N S D G T V S F Q S E A N G K Y V T A E Q S Q L L A R A S T I G D W E K
UniRef90_D7UWC7	L V K N N S D G T V S F Q S E A N G K Y V T A E Q S Q L L A R A S T I G D W E K
UniRef90_B2W4T8	L V K N N S D G T V S F Q S E A N G K Y V T A E Q S Q L L A R A S T I G D W E K
UniRef90_F4WBU2	I I I P V P D G A F S L Q T A R D K F L S T D G A E I R G D T E H I N F N T T
UniRef90_T5BRP8	E P I F Q P S P D G T F S F Q V A G G D R F L S I K E P R G T S A S T P A S A V E
UniRef90_J6EXJ0	D I V E N
UniRef90_J6EXJ0	D I V E N
UniRef90_J5JTK4	S L V V A T A D T P G T F Q Q T L R D T F L S V K S T T T R A S R
UniRef90_G2Q434	S I L L P T A D T P G T F Q I T L R D T F L T V R P S R S A K A S A P P E
UniRef90_D7EJW1	E P V F Q E G K I A L Q S Y S D C F M S V N D E D D V V A V D K K A G P E H M
UniRef90_UPI000428F849	Q F E K I L S D G T F A I K N K A G F I S A T D G L T A S E K P S A A E R
UniRef90_R5LBA9	R V V Y N S D G T V S F Q S R A N N K Y L C A T E N P I L P R S N N I G T W E K
UniRef90_R5LBA9	R V V Y N S D G T V S F Q S R A N N K Y L C A T E N P I L P R S N N I G T W E K

UniRef90_D2VQQ1	F T V
UniRef90_D2VQQ1	F T V
UniRef90_D2VQQ1	F T V
UniRef90_G8T7B2	F
UniRef90_UPI0004679302	F I V
UniRef90_UPI000304D2A9	F
UniRef90_UPI000304D2A9	F
UniRef90_UPI000304D2A9	F
UniRef90_F8PE74	F WV K I
UniRef90_W7V107	F
UniRef90_W7V107	F
UniRef90_L7M7W9	I K V R
UniRef90_A0A021W9C0	WE V
UniRef90_C8X8E2	F
UniRef90_V5HQM7	I K V R
UniRef90_M3CJP2	I R I R M
UniRef90_K9WXT1	
UniRef90_K9WXT1	
UniRef90_K9WXT1	
UniRef90_C8XIK2	F Q M Q
UniRef90_G2WT41	L R I R M
UniRef90_A5Z3Z1	
UniRef90_A5Z3Z1	
UniRef90_I0K2D7	
UniRef90_I0K2D7	
UniRef90_C7Q6P4	
UniRef90_C7Q6P4	
UniRef90_C7Q6P4	
UniRef90_F9FJZ4	F R I R M
UniRef90_V5FSY1	F R V R M
UniRef90_V9GDN5	
UniRef90_V9GDN5	
UniRef90_K7FFI1	W L P Q T A L Y
UniRef90_G8TA84	
UniRef90_G8TA84	
UniRef90_G8TA84	
UniRef90_F4F5A7	F Q I
UniRef90_F4F5A7	F Q I
UniRef90_F4F5A7	F Q I
UniRef90_G4TC17	W W V K V
UniRef90_A5C4T4	
UniRef90_N4UQ48	W R I R M
UniRef90_I4IQE4	F T V
UniRef90_I4IQE4	F T V
UniRef90_K2QW22	F R I R M
UniRef90_C4RHK2	F F V
UniRef90_C4RHK2	F F V
UniRef90_C7QFU2	
UniRef90_C7QFU2	
UniRef90_C7QFU2	
UniRef90_C7QFU2	
UniRef90_UP10004705F56	F T I
UniRef90_H9JN72	WE P
UniRef90_H9JN72	WE P
UniRef90_L8GD68	WT L H
UniRef90_L8GD68	WT L H
UniRef90_C7YJ31	I V I R
UniRef90_E2B5Y2	F Y V
UniRef90_R5ZH78	F Y V
UniRef90_R5ZH78	F Y V
UniRef90_UP1000427421A	
UniRef90_UP1000427421A	
UniRef90_UP1000427421A	
UniRef90_X1NZ22	
UniRef90_X1NZ22	
UniRef90_C4WVV9	V K V R L
UniRef90_R0J2T3	
UniRef90_UP1000373FA27	F V V
UniRef90_I4YHY5	WS V K V
UniRef90_UP10004685D86	F
UniRef90_UP10002C3DF42	
UniRef90_UP10002C3DF42	
UniRef90_UP10002C3DF42	
UniRef90_UP10002C3DF42	
UniRef90_C7PQY8	F T
UniRef90_UP100046A40A3	F S
UniRef90_A0A010QIQ2	WR I R M
UniRef90_A0A026WP63	WE P
UniRef90_A0A026WP63	WE P
UniRef90_D7UWC7	F
UniRef90_D7UWC7	F
UniRef90_B2W4T8	F R I R M
UniRef90_F4WBU2	V V V R
UniRef90_T5BRP8	
UniRef90_J6EXJ0	
UniRef90_J6EXJ0	
UniRef90_J5JTK4	
UniRef90_G2Q434	
UniRef90_D7EJW1	V Q V R
UniRef90_UP1000428F849	F
UniRef90_R5LBA9	F Y V
UniRef90_R5LBA9	F Y V

The figure displays a sequence alignment of UniRef90 entries, showing the conservation of amino acid residues across different positions. The x-axis indicates positions 1, 10, 20, and 30. The y-axis lists UniRef90 entries. Residues are color-coded: blue for hydrophobic, red for polar, green for acidic, yellow for basic, and purple for aromatic. Conserved residues are highlighted in yellow boxes.

Key features of the alignment include:

- Position 1:** Most entries start with a hydrophobic residue (blue).
- Position 10:** A transition from hydrophobic to polar residues (red) is observed.
- Position 20:** A significant cluster of basic residues (yellow) is present.
- Position 30:** A transition back to hydrophobic residues (blue) is observed.
- Conservation:** Basic residues (yellow) are highly conserved at position 20 across many entries.
- Color Coding:** Hydrophobic (blue), Polar (red), Acidic (green), Basic (yellow), and Aromatic (purple).

50 60 70 80

UniRef90_Q0UA03	N R V A G T E G L S L K G H H G R Y L S C N K Y G I L S A N A T A M S P E E S F
UniRef90_UP10004790F28	F I Y A D K N M V A L K T S L N K Y L T A E G E G R L S A N A E A V G E W Q T F F
UniRef90_UP10004790F28	F I Y A D K N M V A L K T S L N K Y L T A E G E G R L S A N A E A V G E W Q T F F
UniRef90_S2JJ28	K P A V T E S G I A F E S V H G K F L M V D E G V R I R A D A E D V G F C E S F
UniRef90_UP10003C91450	E V E W R G R R V A L R A S S N G R Y V V C M K R N G Q L A A V S D F A G E D E E F F
UniRef90_UP10003C91450	E V E W R G R R V A L R A S S N G R Y V V C M K R N G Q L A A V S D F A G E D E E F F
UniRef90_G7K8C0	T V E T H H H V I R L K S H N G K Y L T S T E G K R V I L T E L E N G V D G K N
UniRef90_I0L3S1	Q L I R N S G T V S L R A T N S R Y V V A A D N G G S L I A N R T S I G Q W E K F F
UniRef90_I0L3S1	Q L I R N S G T V S L R A T N S R Y V V A A D N G G S L I A N R T S I G Q W E K F F
UniRef90_U2Q5Z7	K V I N N S G T I S L Q S V N N K Y V V A C A D Q G T K L I A R S T S I Q W E K F F
UniRef90_G3JQX0	N R I A G T E H F R F K G H H G R Y L L A C D R I G L L S A H S E A V S P L E T F F
UniRef90_A0A017SCI6	T R V A G T E G F S F K G H H G K Y L L S C D T H G I P S A T S S A I S H R E S F F
UniRef90_UP1000455DC03	T R V A G S S T I N L R T G E G K F L L S C D K H G I V S A D R E A R G P E E E W
UniRef90_Q4SMJ7	Q M E M S E R K C A F R T A A G K Y W T L L T A S G G L Q C T A S T K S N N G L F F
UniRef90_Q4SMJ7	Q M E M S E R K C A F R T A A G K Y W T L L T A S G G L Q C T A S T K S N N G L F F
UniRef90_Q4SMJ7	Q M E M S E R K C A F R T A A G K Y W T L L T A S G G L Q C T A S T K S N N G L F F
UniRef90_Q4SMJ7	Q M E M S E R K C A F R T A A G K Y W T L L T A S G G L Q C T A S T K S N N G L F F
UniRef90_E9DSI0	V A N K V S G T F R F K G H H G R Y L A C D K I G F L S A T S E A I S P L E C F F
UniRef90_Q096F7	Q V V D G S G T I A L R S E T Q K Y V V S A D T N G R L V A D R T T I G D W E R F F
UniRef90_V9GFY8	F I N L G N G N Y A F K S A N G R F V T A E N A G A L I A R S G S V G T W E T F F
UniRef90_G0LBFB3	I I T L K N N K A Y V S S E N G S K M T C F R T T A G D W E K F F
UniRef90_G0LBFB3	I I T L K N N K A Y V S S E N G S K M T C F R T T A G D W E K F F
UniRef90_G0LBFB3	I I T L K N N K A Y V S S E N G S K M T C F R T T A G D W E K F F
UniRef90_D1BCV8	V V D G S D R V G L R A R S T G T Y L S V E P D G T V T A T A D R C G P A E E L
UniRef90_D1BCV8	V V D G S D R V G L R A R S T G T Y L S V E P D G T V T A T A D R C G P A E E L
UniRef90_D5ER36	Q V K D A G G A I S L T S G N G K T V A S D Q R L S L A A N R T A V G A W E R F F
UniRef90_UP1000361821B	T L I T N P G T V S L R A T N N R Y V V A E N A G A L I A N R T G I G A W E K F F
UniRef90_UP1000361821B	T L I T N P G T V S L R A T N N R Y V V A E N A G A L I A N R T G I G A W E K F F
UniRef90_D9T423	N G R Y V T A E S A G T L I A R G T S I G A W E K Y
UniRef90_D9T423	N G R Y V T A E S A G T L I A R G T S I G A W E K Y
UniRef90_D9T423	N G R Y V T A E S A G T L I A R G T S I G A W E K Y
UniRef90_UP10001CBA976	E P V F Q E G K M A L C C Y N G C F L L S S N D E G E V I A K S R T A G E N E F F
UniRef90_UP10001CBA976	E P V F Q E G K M A L C C Y N G C F L L S S N D E G E V I A K S R T A G E N E F F
UniRef90_G0RND8	N R V A G T E H F R F K G H H G R Y L A C D K I G Q L S A T S E A V S P L E S F F
UniRef90_F0XN16	V R I V G T E H F R F K G H H G R Y L G C D K Y G L S A T A I A V S P P V E S F F
UniRef90_M4G543	V A N K V A G T F R F K G H H G K Y L G C D K L G M L S A T A D A V S P P L E S F F
UniRef90_W9CWU3	N K V A G T E T Y S F K G H H G K Y L G C D K F G I L S A N T E A V S P P L E S F F
UniRef90_W8YH28	AN N S Y V S A D N Y G S L V A N R T S A S A W E Q F F
UniRef90_W8YH28	AN N S Y V S A D N Y G S L V A N R T S A S A W E Q F F
UniRef90_C4JVL5	T K V A G S E G V I N F K G H H G R Y L S C D K Y G I L R A T S P A V S G F E S F
UniRef90_U5H7H1	L I E P S S G T V V L K S C H G K L L S I D A G G K V E V S A D T I G P T E E W F
UniRef90_U5H7H1	L I E P S S G T V V L K S C H G K L L S I D A G G K V E V S A D T I G P T E E W F
UniRef90_A0A034WKS4	T F S I N E T K I S I K S G Y G K Y L V A A E N G G S I V A N R D N S G S W E T F F
UniRef90_R6FWU8	T V K L P N G K Y S I K S A N E K Y V V A A E N G G S I V A N R D N S G S W E T F F
UniRef90_R6FWU8	T V K L P N G K Y S I K S A N E K Y V V A A E N G G S I V A N R D N S G S W E T F F
UniRef90_R6FWU8	T V K L P N G K Y S I K S A N E K Y V V A A E N G G S I V A N R D N S G S W E T F F
UniRef90_F9WZU7	I I V G S E N S F T F K G H H G K Y L G C D K Y G I L S S T R E A V S P E E T F F
UniRef90_I1CNJ1	R P V I T T D A G F A F E S V H G K F L M I D E G G R I R A D A D D A G F C E T F F
UniRef90_I1CNJ1	R P V I T T D A G F A F E S V H G K F L M I D E G G R I R A D A D D A G F C E T F F
UniRef90_UP10003C9428	T F P I N D R K V S F K S G Y G K Y L K I E K D G M V T G R S E A V G S L E Q W
UniRef90_UP10004407A18	T R V A G S D T L T L R S G E T K F L S C D D H G I L S A F R E A R G P Q E S W
UniRef90_Q9VWA8	T F P I N D R K V A F K S G Y G K Y L K I E K D G M V T G R S E A V G G M E Q W
UniRef90_A9AX10	G A N N S Y V S A D N Y G N L V A N R P S I Q G W E K F F
UniRef90_A9AX10	G A N N S Y V S A D N Y G N L V A N R P S I Q G W E K F F
UniRef90_G4N753	N K I V G T E N Y R F K G H H G K Y L G C D K M G I L S A T S D A V S P L E C F F
UniRef90_K1SHU9	I K I I E N N G T V S L K S A N G K Y V C A D E Q N Q L L P R S S S A S D W E K F F
UniRef90_K1SHU9	I K I I E N N G T V S L K S A N G K Y V C A D E Q N Q L L P R S S S A S D W E K F F
UniRef90_K1SHU9	I K I I E N N G T V S L K S A N G K Y V C A D E Q N Q L L P R S S S A S D W E K F F
UniRef90_F8N1C9	M A N K G T E N Y R F K G H H G K Y L S C D K I G L F T A N S D A I T S L E S F F
UniRef90_T0QY36	D V H P T S G G V A L R S F H G N Y L G L D S A R G L T I S A E P I A W D G
UniRef90_T0QY36	D V H P T S G G V A L R S F H G N Y L G L D S A R G L T I S A E P I A W D G
UniRef90_G2RFN0	N R I A G T E H F R F K G H H G K Y L S C D K I G L T A T A D A V S P L E T F F
UniRef90_I0L3S0	Q I I I N N S G T I G L R A A N N Q I V A A E N A G A L I A N R T S V G S W E R F F
UniRef90_I0L3S0	Q I I I N N S G T I G L R A A N N Q I V A A E N A G A L I A N R T S V G S W E R F F
UniRef90_I0L3S0	Q I I I N N S G T I G L R A A N N Q I V A A E N A G A L I A N R T S V G S W E R F F
UniRef90_B8MGN8	T R V A G T E G V A F K S G H H G R Y L S C D K Y G I L S A T A T A I S P F E M F F
UniRef90_UP100019258AC	T V A I K S T N G K F V C A E N G G K L I I A N R D H A L L W E T F F
UniRef90_UP100019258AC	T V A I K S T N G K F V C A E N G G K L I I A N R D H A L L W E T F F
UniRef90_UP100019258AC	T V A I K S T N G K F V C A E N G G K L I I A N R D H A L L W E T F F
UniRef90_S7ZCG8	I A T K V A G T F T F K G H H G R Y L S C D S H G I L F S A D S A A V S H Y E T F F
UniRef90_UP10004560EC7	N R I E G T S S W T L R G A E G K Y L G C D R F G V V K A S A E A R G P Q E E W F
UniRef90_X8JVW1	T R V A G S L T I N L R T P E G K F L S C D A L G L V S A D R E A R G P Q E E W F
UniRef90_R9AP09	V A S K L S G T L T L R S A D G R F L S A A D R H G C V S A L S E A R G P N E Q W
UniRef90_J8NL18	I I Y G D N R V Y V L Q A S N G R F I S A N G G R E L T A N S Y V A G S W E R F F
UniRef90_J8NL18	I I Y G D N R V Y V L Q A S N G R F I S A N G G R E L T A N S Y V A G S W E R F F
UniRef90_M2SS21	T R V A G T E Q L S L K G H H G R Y L S C D K F G V L S A T A T A I S P E E T F F
UniRef90_T1FL2	T A I P V N T K V A F K S G Y D K Y L G V S K D G M V I G R A D A I G T L E Q W
UniRef90_H3HC44	Q V V Q N S G G V A L R S F H G S Y L C I D P L E K R V Q V S D L P V P W
UniRef90_H3HC44	Q V V Q N S G G V A L R S F H G S Y L C I D P L E K R V Q V S D L P V P W
UniRef90_Q47PH7	D L F D W G G A W A L R A V N G R Y V S E D E N G H L T N D Q P G P N G W E T F F
UniRef90_K3X733	C M L T L K T S D G T C L M A S E D G A I E A R K E K S N P E S L W
UniRef90_K3X733	C M L T L K T S D G T C L M A S E D G A I E A R K E K S N P E S L W
UniRef90_R5LLE7	A I V V S E T K I A L R S A N G F Y L S V S E D G V V I G R A D A I G P R E Q W
UniRef90_C3XXG6	T F P A G E N K F A L K S G Y G K Y L G V T K E G T V I G R S D A V G T M E Q W
UniRef90_G6DAL6	K V S K V T G S I I A I Q F G K R A Y I R A L D D N G S F T L L G A P H P D P E E I F F
UniRef90_Q174P0	K V S K V T G S I I A I Q F G K R A Y I R A L D D N G S F T L L G A P H P D P E E I F F
UniRef90_Q174P0	K V S K V T G S I I A I Q F G K R A Y I R A L D D N G S F T L L G A P H P D P E E I F F
UniRef90_C7Q6P2	D L I S N D G S V S F R S H N N E I V C A D G G G A L I A N R T A V G P W E S F F
UniRef90_C7Q6P2	D L I S N D G S V S F R S H N N E I V C A D G G G A L I A N R T A V G P W E S F F

Sequence alignment of UniRef90 entries showing conservation across various species. The alignment highlights identical residues with black boxes and similar residues with yellow boxes. The UniProt ID, protein name, and sequence position are provided for each entry.

UniProt ID	Protein Name	Position	Sequence
UniRef90_Q0UA03		90	I V I P V P D N P F S L Q T A R D K F L S I D E S E V R G D V E T I T F N T T
UniRef90_UPI0004790F28			E L I D L G N K Q F A F K T H Y G T Y V Q V D
UniRef90_UPI0004790F28			E L I D L G N K Q F A F K T H Y G T Y V Q V D
UniRef90_S2JJ28			R V
UniRef90_S2JJ28			R V
UniRef90_UPI0003C91450			T L L
UniRef90_UPI0003C91450			T L L
UniRef90_G7K8C0			E W Q P I R D G Q V K L R S C C G R F L K G N G
UniRef90_I0L3S1			D F V T N
UniRef90_I0L3S1			D F V T N
UniRef90_UPI02Q5Z7			K K V Q L A D G T I A Q A M A N N K Y V C T D G A V L Y A N K D S V G A W E A
UniRef90_G3JQX0			A L V A T A D T P G T F Q Q T L R D T L L C V T S D E V R G D A D T I S F A T T
UniRef90_A0A017SCI6			L V I P S P D G T F A Q T H G G D K F L S I T E S D
UniRef90_UPI000455DC03			T P V F M P G G M V A F M N V Y E K Y I S I D E V T L R G D S E E V G F K E R
UniRef90_Q4SMJ7			E L E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q
UniRef90_Q4SMJ7			E L E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q
UniRef90_Q4SMJ7			E L E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q
UniRef90_Q4SMJ7			E L E W R D G R V C V R A A N G K Y V V A K K N G L A A T V D N A A E A E Q
UniRef90_E9DSI0			N V I A T A D T P S T F Q Q T L R E T F V T V K P N T S S K S T S P A E
UniRef90_Q096F7			T W V E F A D G N I I G L I A K S T G K Y V S T D T N R L Y A D R T T A G C W E A
UniRef90_V9GFY8			Q V V A N V S G G V T L R A A A N N R F V S A D N S G L I A N R T S A S G W E T
UniRef90_G0LBF3			K V V D A G E G K I A L K G N N N K Y V S A E N G N R M T C N K S T I G H T E K
UniRef90_G0LBF3			K V V D A G E G K I A L K G N N N K Y V S A E N G N R M T C N K S T I G H T E K
UniRef90_G0LBF3			K V V D A G E G K I A L K G N N N K Y V S A E N G N R M T C N K S T I G H T E K
UniRef90_D1BCV8			D V T D W G H G V V T L R S V A T G A L L S G G R W I V R A D A S R V G G W A Q
UniRef90_D1BCV8			D V T D W G H G V V T L R S V A T G A L L S G G R W I V R A D A S R V G G W A Q
UniRef90_D5ER36			T W I E N S D G T V S L K A H G N G R F L D A T N W P L A A N R S A I G A W E K
UniRef90_UPI000361821B			D L V T G G
UniRef90_UPI000361821B			D L V T G G
UniRef90_D9T423			D V V D A G G G G L F G L R A R V T N K F V T A E S A G L T A R S A T I G A W E K
UniRef90_D9T423			D V V D A G G G G L F G L R A R V T N K F V T A E S A G L T A R S A T I G A W E K
UniRef90_D9T423			D V V D A G G G G L F G L R A R V T N K F V T A E S A G L T A R S A T I G A W E K
UniRef90_UPI0001CBA976			L K I R S S A P R V
UniRef90_UPI0001CBA976			L K I R S S A P R V
UniRef90_G0RND8			N V I A T A D T P G T F Q
UniRef90_F0XN16			V L V E T E D T P G T F Q I K T R D T Y L S V Q L S T S S K A G S A P E
UniRef90_M4G543			V L V P T P D S P A T F Q
UniRef90_W9CWU3			L A I P T A D T P G T F Q
UniRef90_W8YH28			Q V I N N S D G T I S L L S M A N N R Y V A A D G A K L I A R S A S I Q Q W E K
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 R | I L L K N H H Q K W L C A D K N G K L R I D R E Q S S S W E V E
 T | V R L K S H H D K Y L T A E S D E E T V V Q D R S G S S T S A R W P E Q F T
 V | R L R S H H D K Y L L A D E D E E S V T Q D R N G S S R N A K W
 V | R L R S H H D K Y L L A D E D E E S V T Q D R N G S S R N A K W
 K | I T L L S T N H R Y I S V D K E R G L L I A N K T E A G E R E T F
 K | I T L L S T N H R Y I S V D K E R G L L I A N K T E A G E R E T F
 V | R L R S H H D K Y L L A D D D E E T V S Q E R N G T I R N A K W
 V | R L R S H H D K Y L L A D D D E E T V S Q E R N G T I R N A K W
 G | P L P E E V L T
 N G R Y V S V K Q G V D V T A N Q D E N G E N E T F
 N G R Y V S V K Q G V D V T A N Q D E N G E N E T F
 Y | L T F S E Q S K S R L A T H Q I L
 V | R F K S H H D K Y L L A E E D E E S V T Q H R N G S S N N A K W
 V | R F K S H H D K Y L L A E E D E E S V T Q H R N G S S N N A K W
 K | V T L R T S N G R F L A V D E V G V I S A D R E A R G L Q E E W
 K | V T L R T S N G R F L A V D E V G V I S A D R E A R G L Q E E W
 T | V R L R G H H D K Y L L A E E D E S R V S Q D R S A S S P N A R W
 V | R L R S H H D K Y L L A E E D E D S V T Q D R N G S S K N A R W
 V | R L R S H H D K Y L L A E E D E D S V T Q D R N G S S K N A R W
 V | R L R S H H D K Y L L A E E D D Q E T V R Q S R N G S S R I A R W
 K | Y V C A E N G G G M V S V N R D A A S S W E T F
 N N T N Y V S A R T D Q S P L D A N V T Q V Q A W E E F
 D | P E T N A V Q L K T V N N R Y L A Q R K F K S I M A N G R R M E P E T N F
 T | A E P H D V R Q V W
 G | K Y L C A E N G G G T V V A N R T S A S G W E T F
 S T S G E P L G T F D
 S T S G E P L G T F D
 S A D K N L S A D A P L V A N R A A A A G W E Q F
 V | T L R A A N G R F A G A D D G G S P L V A L V N V A G T W E A F P F T
 Q | V Q L K S T K N K Y L T S E N G G G A V V A N R G S A S G W E T F
 D | A H G K V F A S E N I V D G D S S T A E P H D V R Q V F
 N | K Y V V A A E N G G G A V V A N R P Q A S G W E T F
 C | T D N I V T A V N S G N P L S A N K S S Y S S T D L E
 N | N M Y L A A E Q G G S A I V A N R D K A F G W E T F
 I | P F G L K A N Q G K Y V V A E R N D A P L K A N R N R L G Q W E K F
 K | V G F K S G Y G K Y I S V N A R G D V L A R S D A V G P Q E Q L
 K | V G F K S G Y G K Y I S V N A R G D V L A R S D A V G P Q E Q L
 T | V A L K G N N G L Y V K A G N P V F C T G T A L D S S T C F
 T | V A L K G N N G L Y V K A G N P V F C T G T A L D S S T C F
 V | R L L K S H H G K Y L T A A A D G E S L V Q D R S S S S N S G E W
 I | A L R A C S Q Q F V S A D Q N N T A L V A N R A T A Q G W E Q F
 A | Q P L Q Y T V N F K T W S G H Y L V A D K G G G A L M A Y S T Q A L E W E T F
 D | G N P A S A E P H D V R Q V W
 K | F V T G E R N G S Q L L A R A G S V R G W E K F
 L | I A Q A N Q Q V S A E N Q G N Q L V A D R T T A G D W E L F
 L | I A Q A N Q Q V S A E N Q G N Q L V A D R T T A G D W E L F
 T | V A L K I K S I N G K F V C A E K N G N Q L I A N K D S F G L W E I F
 G | E H V S F E C G S G N S C Y L S A M D N G F T I G L P H P E G E E P S I I F
 R | I A L R V A G R Y V C P D D D G G P L T V D V E P A W F D
 P | V L L R S D T G Q W L R I N P D G T V D G T R D R S D P G I Q W
 R | S H Y G A Y L R A N C G P N W L V D M A P H C K E C E H W
 F | A I E T D S M R Y M E A I D N G F K L H E K G E G P G P E E I F
 Q | V Q L K S V T Q K Y I S A Q N G G G N V S V D R D N P L E W E T F
 Y | V K A L D N G F T L G A E G E G P A P E E I T
 I | K S S H G R Y L R G W E G G N S D V G T G S T C G K C E Q W
 I | K S S H G R Y L R G W E G G N S D V G T G S T C G K C E Q W
 A | S T T T K K V A F K T S N G T Y L T A D K L G T L S A K A T A V G P Q Q T F
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R | V | E | S | H | P | G | G | I | A | L | K | A | L | N | N | K | Y | V | Q | V | D | □ | Q | A | S | V | R | P | N | G | N | K | F | A | W | E | R | F
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UniRef90_UPI00047D34B8 T | L | T | D | G | W | G | S | F | T | L | K | S | H | N | G | K | Y | V | T | T | D | D | K | D | I | M | A | S | A | E | D | I | W | G | W | E | I | F
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UniRef90_T2MCW5 E | V | V | T | E | N | G | K | V | A | L | L | Q | G | H | N | G | Y | F | L | T | F | T | D | D | G | E | V | S | L | S | R | V | A | K | E | K | E | I | I | F
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UniRef90_U2S3R5 Q | V | V | D | G | G | G | T | V | A | L | R | S | S | S | T | L | F | V | S | A | D | T | N | G | Q | L | V | V | A | N | R | A | S | A | S | D | W | E | H | F
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UniRef90_S3C981 N | R | V | V | G | T | E | Q | F | R | F | K | G | H | H | G | K | F | L | G | C | D | K | Y | G | L | F | S | A | T | S | □ | A | V | S | P | L | E | S | F
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UniRef90_U6P5B4 A | V | V | K | T | P | D | K | T | S | F | K | T | G | Y | G | K | Y | I | G | V | D | A | N | G | A | L | V | A | T | A | E | A | I | G | Q | R | E | R | F
UniRef90_H2VZP7 A | L | V | K | T | P | K | A | I | S | L | K | T | G | F | G | R | Y | V | G | V | D | S | E | F | Q | L | V | A | F | S | E | A | I | G | V | R | E | Q | F
UniRef90_T1KLL4 T | A | I | K | I | S | E | T | H | A | F | K | S | G | Y | D | K | Y | L | S | I | D | S | N | N | R | V | V | G | R | S | D | A | I | G | Q | R | E | Q | F
UniRef90_F4F1F9 V | F | D | W | G | R | D | T | V | A | L | R | A | G | N | G | R | H | V | G | V | D | D | D | G | V | L | V | N | D | R | P | G | P | G | G | W | E | T | F
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UniRef90_H3EUM6 H | I | E | D | H | G | G | K | V | V | F | R | A | Y | P | A | K | Y | I | G | V | D | A | N | Q | D | G | S | V | D | L | A | G | H | A | Q | A | W | E | M | W
UniRef90_G3PXH8 S | G | S | V | A | I | E | M | Q | N | N | A | Y | I | H | A | M | D | S | G | L | F | T | L | G | A | P | H | P | D | P | P | E | Q | F
UniRef90_G3PXH8 S | G | S | V | A | I | E | M | Q | N | N | A | Y | I | H | A | M | D | S | G | L | F | T | L | G | A | P | H | P | D | P | P | E | Q | F
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UniRef90_W4FSV8 T | I | C | L | □ | S | V | F | Q | F | R | T | S | E | G | Q | F | L | T | C | S | G | D | G | S | V | M | A | T | A | E | S | P | S | D | S | E | T | F
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UniRef90_H3FY76 Y | I | E | E | H | H | G | K | V | A | F | K | S | F | C | G | K | Y | I | S | V | D | K | N | D | L | V | I | G | R | S | D | A | V | G | L | L | E | Q | W
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UniRef90_M1C2D3 L | V | E | E | N | S | H | F | I | R | L | K | S | S | S | S | G | K | Y | I | T | V | E | K | D | G | S | L | S | A | D | G | D | S | V | G | F | Q | Q | S | F
UniRef90_M1C2D3 L | V | E | E | N | S | H | F | I | R | L | K | S | S | S | S | G | K | Y | I | T | V | E | K | D | G | S | L | S | A | D | G | D | S | V | G | F | Q | Q | S | F
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UniRef90_E3LW78 A | L | V | K | T | P | N | K | I | S | L | K | T | G | F | G | R | Y | V | G | V | D | S | E | F | Q | L | V | A | F | S | E | A | I | G | V | R | E | Q | F
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UniRef90_F1KR59 T | L | I | K | T | P | D | K | I | S | L | K | T | G | Y | G | K | Y | V | G | V | D | A | E | G | S | L | V | A | T | A | D | A | I | G | T | R | E | R | L
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	90	100	110	120
UniRef90_UPI000248EB58	E W E S R G N G K V A F K S V H T G R Y L Q W T E D N G V I R A R G G S A K G W	T A I K L S D S R I A L K S G Y G K Y L G I N S D A V V I R S D A I G S R E Q	T A I K L S D S R I A L K S G Y G K Y L G I N S D A V V I R S D A I G S R E Q	
UniRef90_V9LA28	R L T R A S N L F N I C S L S G D Y L Y F G L R G E V R S T S G V P K E F N T	R L T R A S N L F N I C S L S G D Y L Y F G L R G E V R S T S G V P K E F N T	R L T R A S N L F N I C S L S G D Y L Y F G L R G E V R S T S G V P K E F N T	
UniRef90_V9LA28	E W E P V R D G Q V K L K S R Y G N F L R A N G G	E P V F Q D G K M A L M A A N S C F V S Y N D E G D I V A K N K A A G E G E M	E P V F Q D G K M A L M A A N S C F V S Y N D E G D I V A K N K A A G E G E M	
UniRef90_L8H8N0	E W E P V R D G Q V K L K T R Y G N F L R A N G G	E W E P V R D G Q V K L K T R Y G N F L R A N G G	E W E P V R D G Q V K L K T R Y G N F L R A N G G	
UniRef90_A0A022R4Z0	N F N L E D D G S Y T L R T W N G R Y V A V S D E D L R V S E K A V A Y D A K	N F N L E D D G S Y T L R T W N G R Y V A V S D E D L R V S E K A V A Y D A K	N F N L E D D G S Y T L R T W N G R Y V A V S D E D L R V S E K A V A Y D A K	
UniRef90_W5N8Z7	E W E P V R D G Q V K L K T R Y G N F L R A N G G	E W E P V R D G Q V K L K T R Y G N F L R A N G G	E W E P V R D G Q V K L K T R Y G N F L R A N G G	
UniRef90_I1KXN9	E W E P V R D G Q V K L K T R Y G N F L R A N G G	E W E P V R D G Q V K L K T R Y G N F L R A N G G	E W E P V R D G Q V K L K T R Y G N F L R A N G G	
UniRef90_I1KXN9	UniRef90_UPI00047D34B8	N F N L E D D G S Y T L R T W N G R Y V A V S D E D L R V S E K A V A Y D A K	N F N L E D D G S Y T L R T W N G R Y V A V S D E D L R V S E K A V A Y D A K	N F N L E D D G S Y T L R T W N G R Y V A V S D E D L R V S E K A V A Y D A K
UniRef90_B8BGH5	K L W R I N E T T F N L R V F N N Q F V S I G G N G A V I A T A T V P G P N E T	K L W R I N E T T F N L R V F N N Q F V S I G G N G A V I A T A T V P G P N E T	K L W R I N E T T F N L R V F N N Q F V S I G G N G A V I A T A T V P G P N E T	
UniRef90_B8BGH5	E L I I A G K N N N L I R L K S C Y G L Y L T A T E Q	E L I I A G K N N N L I R L K S C C Y G L Y L T A T E Q	E L I I A G K N N N L I R L K S C C Y G L Y L T A T E Q	
UniRef90_M0ZLD8	E L I I A G K N N N L I R L K S C C Y G L Y L T A T E Q	E L I I A G K N N N L I R L K S C C Y G L Y L T A T E Q	E L I I A G K N N N L I R L K S C C Y G L Y L T A T E Q	
UniRef90_M0ZLD8	E L I I A G K N N N L I R L K S C C Y G L Y L T A T E Q	E L I I A G K N N N L I R L K S C C Y G L Y L T A T E Q	E L I I A G K N N N L I R L K S C C Y G L Y L T A T E Q	
UniRef90_I0IA93	E L V P S G P G R F G L L A N A N N R L V A S E S D G L K A R T D S L G A W E A	E L V P S G P G R F G L L A N A N N R L V A S E S D G L K A R T D S L G A W E A	E L V P S G P G R F G L L A N A N N R L V A S E S D G L K A R T D S L G A W E A	
UniRef90_Q1RQC8	T E K R V N G K Y A F M S H H K T H L R A D S K G F P N L T K T I D T W E E	T E K R V N G K Y A F M S H H K T H L R A D S K G F P N L T K T I D T W E E	T E K R V N G K Y A F M S H H K T H L R A D S K G F P N L T K T I D T W E E	
UniRef90_M7NUE4	E C F L R E N G L A I Q S V Y E K N F I S V H E D I R G D A E T I G F C E S	E C F L R E N G L A I Q S V Y E K N F I S V H E D I R G D A E T I G F C E S	E C F L R E N G L A I Q S V Y E K N F I S V H E D I R G D A E T I G F C E S	
UniRef90_B9H3Y5	E W E P I R E G Q V R L R T R Y Q G Q Y L R A N G G	E W E P I R E G Q V R L R T R Y Q G Q Y L R A N G G	E W E P I R E G Q V R L R T R Y Q G Q Y L R A N G G	
UniRef90_B9H3Y5	E W E P I R E G Q V R L R T R Y Q G Q Y L R A N G G	E W E P I R E G Q V R L R T R Y Q G Q Y L R A N G G	E W E P I R E G Q V R L R T R Y Q G Q Y L R A N G G	
UniRef90_T1JA96	E V F F Q E G K M A I Q G S N N N C F L S C N E D D I V C Q S K V A G D D E V	E V F F Q E G K M A I Q G S N N N C F L S C N E D D I V C Q S K V A G D D E V	E V F F Q E G K M A I Q G S N N N C F L S C N E D D I V C Q S K V A G D D E V	
UniRef90_S2YQS9	R L E A H D G G H L R H H V G T G R H V R V A A D G V Q V A D T D P E P F E	R L E A H D G G H L R H H V G T G R H V R V A A D G V Q V A D T D P E P F E	R L E A H D G G H L R H H V G T G R H V R V A A D G V Q V A D T D P E P F E	
UniRef90_T1GLL0	D L V W H G D G S L S F R A N N G K Y L A A K S G H H L F A V S D T I D E D	D L V W H G D G S L S F R A N N G K Y L A A K S G H H L F A V S D T I D E D	D L V W H G D G S L S F R A N N G K Y L A A K S G H H L F A V S D T I D E D	
UniRef90_D8QQF3	E V I K Q I D S N T Y S F K S V L N G K Y L G G	E V I K Q I D S N T Y S F K S V L N G K Y L G G	E V I K Q I D S N T Y S F K S V L N G K Y L G G	
UniRef90_UPI00032A5C28	E W E P V R D G R V K L K T R Y G N F L R G N G G	E W E P V R D G R V K L K T R Y G N F L R G N G G	E W E P V R D G R V K L K T R Y G N F L R G N G G	
UniRef90_G7E1M7	L I R M Q A	L I R M Q A	L I R M Q A	
UniRef90_B8B850	E W V P V R D G A H A R L R T R Y G N Y L R A N G G	E W V P V R D G A H A R L R T R Y G N Y L R A N G G	E W V P V R D G A H A R L R T R Y G N Y L R A N G G	
UniRef90_UPI00042B5EFC	E W E P I R E G Q V K L K T R Y G N F L R A N G T H D I P H R T A T Q D W V L	E W E P I R E G Q V K L K T R Y G N F L R A N G T H D I P H R T A T Q D W V L	E W E P I R E G Q V K L K T R Y G N F L R A N G T H D I P H R T A T Q D W V L	
UniRef90_UPI00042B5EFC	E W E P I R E G Q V K L K T R Y G N F L R A N G T H D I P H R T A T Q D W V L	E W E P I R E G Q V K L K T R Y G N F L R A N G T H D I P H R T A T Q D W V L	E W E P I R E G Q V K L K T R Y G N F L R A N G T H D I P H R T A T Q D W V L	
UniRef90_UPI0001982AC4	E W Q P T W D G Q V K L R A R S G Q Y L R A N G G T	E W Q P T W D G Q V K L R A R S G Q Y L R A N G G T	E W Q P T W D G Q V K L R A R S G Q Y L R A N G G T	
UniRef90_UPI00042AFEE4	Q I E R N N N G R V H I K T K S G T Y L Q A T G N Q L T A D	Q I E R N N N G R V H I K T K S G T Y L Q A T G N Q L T A D	Q I E R N N N G R V H I K T K S G T Y L Q A T G N Q L T A D	
UniRef90_D6TQY5	R W L P Q S N G N T V A L Q A I A N N N Y V S A R T D Q L D A N V T Q V Q G W E Q	R W L P Q S N G N T V A L Q A I A N N N Y V S A R T D Q L D A N V T Q V Q G W E Q	R W L P Q S N G N T V A L Q A I A N N N Y V S A R T D Q L D A N V T Q V Q G W E Q	
UniRef90_UPI0003C434EE	W S L S A D G T F R T W P N G Y Y M R G D S G T L L A D S E E V T S E C L	W S L S A D G T F R T W P N G Y Y M R G D S G T L L A D S E E V T S E C L	W S L S A D G T F R T W P N G Y Y M R G D S G T L L A D S E E V T S E C L	
UniRef90_Q2UKA8	V V I P S E P G S F C L Q T G G G D K F V S V T E G K S S K A A S	V V I P S E P G S F C L Q T G G G D K F V S V T E G K S S K A A S	V V I P S E P G S F C L Q T G G G D K F V S V T E G K S S K A A S	
UniRef90_V4SHW0	E I V R N S N S R V R I K A P N G F F L Q A T E E L V T A D Y E G A T S W	E I V R N S N S R V R I K A P N G F F L Q A T E E L V T A D Y E G A T S W	E I V R N S N S R V R I K A P N G F F L Q A T E E L V T A D Y E G A T S W	
UniRef90_W7SP45	R L E R D G D A V V L L R S V L T G R Y A A V D G D R V T V T A E T P A D A E R	R L E R D G D A V V L L R S V L T G R Y A A V D G D R V T V T A E T P A D A E R	R L E R D G D A V V L L R S V L T G R Y A A V D G D R V T V T A E T P A D A E R	
UniRef90_W7SP45	R L E R D G D A V V L L R S V L T G R Y A A V D G D R V T V T A E T P A D A E R	R L E R D G D A V V L L R S V L T G R Y A A V D G D R V T V T A E T P A D A E R	R L E R D G D A V V L L R S V L T G R Y A A V D G D R V T V T A E T P A D A E R	
UniRef90_S9PDL9	Q W V D Y G N G N T I G L K A R S N G Q F V S S D G N Q A G A F A N R A A S G G C	Q W V D Y G N G N T I G L K A R S N G Q F V S S D G N Q A G A F A N R A A S G G C	Q W V D Y G N G N T I G L K A R S N G Q F V S S D G N Q A G A F A N R A A S G G C	
UniRef90_R4LLS6	H L V D N H D G T V S I L A R S N G Q F V T V T G E P L T N T Q T A I G T A E K	H L V D N H D G T V S I L A R S N G Q F V T V T G E P L T N T Q T A I G T A E K	H L V D N H D G T V S I L A R S N G Q F V T V T G E P L T N T Q T A I G T A E K	
UniRef90_UPI00037ECBB0	U N I R I R N N N D P F K I R I K A N G R F L Q V R S E T L V I	U N I R I R N N N D P F K I R I K A N G R F L Q V R S E T L V I	U N I R I R N N N D P F K I R I K A N G R F L Q V R S E T L V I	
UniRef90_K7KYLO	L L I I P I P D N P F S I L Q T P R D K F L A I S D S D I I R G D A E D I T F N T T	L L I I P I P D N P F S I L Q T P R D K F L A I S D S D I I R G D A E D I T F N T T	L L I I P I P D N P F S I L Q T P R D K F L A I S D S D I I R G D A E D I T F N T T	
UniRef90_E5A1Q1	R L L V R S P G D K Y M M R I I M A N G R F L Q A N E D G L T A N Y D Q S T S W	R L L V R S P G D K Y M M R I I M A N G R F L Q A N E D G L T A N Y D Q S T S W	R L L V R S P G D K Y M M R I I M A N G R F L Q A N E D G L T A N Y D Q S T S W	
UniRef90_F2DRU3	E P V H V T G N Q Y A L R S I A N G K Y V K A D F D D L K A V S D N I G A W E C	E P V H V T G N Q Y A L R S I A N G K Y V K A D F D D L K A V S D N I G A W E C	E P V H V T G N Q Y A L R S I A N G K Y V K A D F D D L K A V S D N I G A W E C	
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UniRef90_G0SBW1	D A N G K V F T I E N D G N P S S A E P H D V R Q V W
UniRef90_W1PGI0	
UniRef90_W1PGI0	
UniRef90_A0A022Q4A8	V R L K S H L N K Y L V A G E D Q I S T R Q S K N G A A R K A R W
UniRef90_A0A022Q4A8	V R L K S H L N K Y L V A G E D Q I S T R Q S K N G A A R K A R W
UniRef90_H3FCY4	L K S W N G K Y L S E A T G L E E Q W T F
UniRef90_B3RXJ2	R Y L F A M D N G F K L G D P R P S V A E E V F T
UniRef90_B9H758	G K Y L C A E A G G N I I V A N R T S A S G W E T F
UniRef90_G7J373	
UniRef90_G7J373	
UniRef90_A0A022R3Y0	V R L Q S H L G K Y L V A D D D E E T V R Q S R N G A S N R A R W
UniRef90_11HKR7	Q L Q F K S A A G M Y L A A E Q G G G A V S A N R A Q A S G W E T F
UniRef90UPI000472A89D	V T L Q S A A N R Y V G P K G Y D G T L A A D K P A A G S G E W F
UniRef90_H3FCE3	D K Y V V S A E N G G G A V S V S R D V A S S W E T L
UniRef90UPI0002C3346C	K Y L C A E D G G G T I V A N R T S A S G W E T F
UniRef90_G7IYK7	K Y L S S E N G G G T V V A N R T S A S G W E T F
UniRef90_U5G487	V R F R S H L N K Y L V A D D D Q R T I R Q S R N G L S R K A R W
UniRef90_K4BWK5	V R F R S H L N K Y L V A D D D Q R T I R Q S R N G L S R K A R W
UniRef90_K4BWK5	V R F R S H L N K Y L V A D D D Q R T I R Q S R N G L S R K A R W
UniRef90UPI0002BCB496	V R L K G H L N K Y L V A D D D D E R T V R Q S R N G S S K K A G W
UniRef90_A0A059AH8	V R L R S F H G K Y L V A N E D E E T V R Q S K N G S Y R R A Q W
UniRef90_A0A059AH8	V R L R S F H G K Y L V A N E D E E T V R Q S K N G S Y R R A Q W
UniRef90UPI000273E845	T I A I E M D E G T Y I Q A L D N G F T L G A P R K E T D E G E Q F
UniRef90_K4ACP8	T I A I E M D E G T Y I Q A L D N G F T L G A P R K E T D E G E Q F
UniRef90_I2G6Q4	V R L K S H H D K F L Y A D D E D V H V T Q D R N G A S P N A R W
UniRef90UPI00027F6E1C	S A E S S G I D T A T I T P Q S V Y Q V W
UniRef90UPI0002B41448	G T Y I H A L D N G F T L G S P H K E E Q L T
UniRef90UPI0002B41448	T V R L R S H H H N K Y L V A D D D Q D S V N Q E R S G S S K S A H W
UniRef90_H2KQG5	T V R L R S H H H N K Y L V A D D D Q D S V N Q E R S G S S K S A H W
UniRef90UPI00042B55D5	T Y L S A T D E G F V V G A S G E P P A P E E F
UniRef90_F4J8C8	V R L R S H H D K Y L S A D E D Q E S V H Q D R R G T T K N T R W
UniRef90_K2N5B3	
UniRef90_Q4WJW0	D A N G K V F A S E L E N E G D A A T A E P H D V R Q V W
UniRef90UPI000248E85B	T I W L K A N N G S Y V T A D A A R T P L R A N R N R V A R W E Q F
UniRef90_C1L3Y6	Y L S A T D E G L L V I G Y G E A P A P E E F
UniRef90_R7L1H3	T I R L R S H H K K Y L S A D E D E S V V Q D R N G S S K N V R W
UniRef90UPI0002B4809E	T I R L R S H H K K Y L S A D E D E S V V Q D R N G S S K N V R W
UniRef90UPI0002B4809E	T I R L R S H H K K Y L S A D E D E S V V Q D R N G S S K N V R W
UniRef90_M5XAJ0	V R L R S H H D K Y L S A D E D H E S V C Q D R D G T V R N A R W

50 60 70 80

UniRef90_D6TRK6	D V D G N G L I A L R A H N N N Y V S A Q T N V P L Q A T A Q V Q G W E Q F
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UniRef90_UPI00031E5F8D	E G V L T L R A P D G L Y V S V A E D G L L R A S A Q P G G W E A F
UniRef90_W9QW02	R L R V N E N T Y N L R V F N K Q F V V Q K D R V T R V V A V N N V P G G W E T F
UniRef90_E0UD28	Q I I Q D D G K I A L Q T F N N T Y M R A N S A W N V D Q A G S I G D W E K F
UniRef90_E0UD28	Q I I Q D D G K I A L Q T F N N T Y M R A N S A W N V D Q A G S I G D W E K F
UniRef90_Q1DAH2	T V T R L S R T I T L R A S N G D Y L V A E G G G M V D A N R V A V G P W E R F
UniRef90_Q1DAH2	T V T R L S R T I T L R A S N G D Y L V A E G G G M V D A N R V A V G P W E R F
UniRef90_Q8R5P9	V I P L D N G R I A L K S V N N K F V V S A E N A G S L V A N R E S I G N W E I F
UniRef90_H3ED92	T I E Q M N N N V A I K S H R D L Y I G H G S G G W A V I E A E V P D K W E M L
UniRef90_U5FJE2	T V E G H S N V I R L K S C F G R Y L T A S N G K K V L Q T L P E R L D S S V
UniRef90_U5FJE2	T V E G H S N V I R L K S C F G R Y L T A S N G K K V L Q T L P E R L D S S V
UniRef90_F5H5R5	A V K L S D S R I A L K S G Y G K Y L G I N S D E L V G H S D A I G P R E Q W
UniRef90_F5H5R5	A V K L S D S R I A L K S G Y G K Y L G I N S D E L V G H S D A I G P R E Q W
UniRef90_UPI000248E818	R I E N H P G G I A L K A S N N K Y V Q V P D K S T T A S V R N R G D W E Q F
UniRef90_M0TGW4	D V E F V D G A L R L R S C H G R F L A A T A T G K K V I Q A P A A G S D S S L
UniRef90_H2CYQ6	D L V Q G D G S V G F M A N N G K F I S A K K S G H L F A N S D K M D E V E R F
UniRef90_H2CYQ6	D L V Q G D G S V G F M A N N G K F I S A K K S G H L F A N S D K M D E V E R F
UniRef90_E5SD41	T L I R P P D A F A L K S G Y G K Y L S V D G K G F L V A M T D A S T R E R W
UniRef90_U2LX40	S S V V A L Q S V V E G K Y L C T V S A D G T L R A A A E Q I G E R E T F
UniRef90_A8XAZ6	Y V E D W G C K V V F K A I H G R F L R A L S C G N V V P T H P N G C P E L L W
UniRef90_E3FN09	T L T D V N G V V T L Q S I S S Q W G S A G G G G A I R F T A P A P Q A W E Q F
UniRef90_A0A022QL53	T V E F V E N I L I R L K S C Y G K Y L L T A S N G R K V L Q T L P K R D S S V E W
UniRef90_W9R1J8	D L F R N A N A V R L Q S H L D K Y L L A E E D E T V T Q D R K G S S K N A K W
UniRef90_W9R1J8	D L F R N A N A V R L Q S H L D K Y L L A E E D E T V T Q D R K G S S K N A K W
UniRef90_UPI00047194A4	I V D R K S G R V A L R S G G R Y V V K V A E D G G V T L A A G Q P G T A Q S F
UniRef90_C6W170	T F A E G V D R I T L R G A D G R H L A V V D G R V E T T A E P G E G F
UniRef90_U6ZDU5	F A F R S I Q G K Y L S V T A N G N L L A S A D N I T S S E T F
UniRef90_Q4W516	Y I E D W K G S V V F K A I H G K F L S A H E G S K V V S L V M H H P K S W E M W
UniRef90_B9S2E4	L V E R V E G T I R L K T I D G R Y L T A S T G K R V I Q T K P E K I T D W N L
UniRef90_UPI000248FCA3	S L Q K S G G N K N Y V V T A D A N N S V I A R A N R V D A W E R F
UniRef90_UPI000248FCA3	S L Q K S G G N K N Y V V T A D A N N S V I A R A N R V D A W E R F
UniRef90_UPI000467CB1D	D G V L T L R A P D G L Y L S V A E A G F V V R A S A D E P G R W E T F
UniRef90_UPI00037A57E8	L F D W G G G A Y A R L S T T G R Y V V S V D A G T L V N D Q P G P N G W E T F
UniRef90_D8QU18	K L W R V S S T L F F R V S V S N N Q F I S A P D S S V S A V T V D S P G Q S E T F
UniRef90_UPI0004784930	D R V A L R T S S G R Y V V S V T D A G E V V S V H A A D A G V I A H L
UniRef90_UPI0004784930	D R V A L R T S S G R Y V V S V T D A G E V V S V H A A D A G V I A H L
UniRef90_S4V33	M T R L P N G N F T F K S F Y G R Y L S A Q S G G S F I A D R L V A D D W E E F
UniRef90_B6K2C8	V C R E L D G N Y Q L K N S N G Y L S A Q P D G T L V C D K T A I S I T E E W
UniRef90_UPI00034FE302	A V K L S D S R I A L K S G Y G K Y L G I N S D G L V V G R S D A I G P R E Q W
UniRef90_UPI00034FE302	A V K L S D S R I A L K S G Y G K Y L G I N S D G L V V G R S D A I G P R E Q W
UniRef90_G0GE19	Y E E G S S R V R F R S A A Y H R W R L W A S D E K G N I S L S G E I P A A E G L W
UniRef90_G0GE19	Y E E G S S R V R F R S A A Y H R W R L W A S D E K G N I S L S G E I P A A E G L W
UniRef90_S8CC19	P Q G K Y V V S A E N G G T V V S V D K D S P S S W E T F
UniRef90_S8CC19	P Q G K Y V V S A E N G G T V V S V D K D S P S S W E T F
UniRef90_J3N249	K L R I D E N T F N L R V F D N H F V T V V A S D G T V V A T V A S P G A G E A F
UniRef90_M7T505	N K I A G T E K F R F K G R Y C N C D Q Y G I L T A T S E A V S P P E T W
UniRef90_UPI0003C86E62	A V K L S D S R I A L K S G Y G K Y L G I N S D G L V V G R S D A I G P R E Q W
UniRef90_UPI000273D64A	A V K L S D S R I A L K S G Y E K Y L G I N S D E L V E C S D A I G P R E Q W
UniRef90_UPI000273D64A	A V K L S D S R I A L K S G Y E K Y L G I N S D E L V E C S D A I G P R E Q W
UniRef90_V4S9T9	T V E E D A G V L R L K S C Y G K Y L S A S N T G K V V Q S L P K R L D A S L
UniRef90_G0SBW1	V A N K I P G T E H F R V Y Y L S C D K I G V L S A T A D A V S P L E T W
UniRef90_W1PGI0	G T Q V Q F K S Q L G K Y L S A E N G G I V A N R T S A S G S E T F
UniRef90_W1PGI0	G T Q V Q F K S Q L G K Y L S A E N G G I V A N R T S A S G S E T F
UniRef90_A0A022Q4A8	L V E T N P H V V R L K S C H G Y L L S A S G D G Q I T P E N H H G G K D L T I
UniRef90_A0A022Q4A8	L V E T N P H V V R L K S C H G Y L L S A S G D G Q I T P E N H H G G K D L T I
UniRef90_H3FCY4	E Y I P E R G E V A L K G N D G R F L G P H D N D R M A A P W A A A D E W E Y L
UniRef90_B3RXJ2	A V N L S E R R I A L K S G Y G K Y V V S V R K E G N I V G R A D A I G P L E H L
UniRef90_B9H758	S L R I N E T N F N F R V F N K Q F A G L D T N G N I V V A V S S T P G R S E T F
UniRef90_G7J373	D G T E V Q L K S V L Q K Y V V S A D N G G N V V T V D R D A P S S W E T F
UniRef90_G7J373	D G T E V Q L K S V L Q K Y V V S A D N G G N V V T V D R D A P S S W E T F
UniRef90_A0A022R3Y0	S V E F V D G K I R L K S C H G L Y L T A T T G K V V L Q T M P E R K N D V A I
UniRef90_A11HKR7	K L R I N E T T F N F K V F G G Q F V V S V G S D G T V V A T A A L P G P S E A F
UniRef90_UPI000472A89D	Q V I D G W G S H T L R A A N G N Y M T T N D R V V S A A S Q E I I W G W E Q F
UniRef90_H3FCE3	K T G Y G K Y I G V D S S G M L I A I T E A I G V R E R F
UniRef90_UPI0002C3346C	R L R V S E S E F Q F R T S L G Q F L T C D E G C S V S A T A V S P S T S G T F
UniRef90_G7IYK7	K L R V N D S F F N F R V F N K F V G L N N I G T I V S F S D P G N R E T F
UniRef90_U5G487	R L R I N E T Y F N F R V F N K F V G L E D Q G K V T A V S D T V G N S Q T F
UniRef90_K4BWK5	L V E E N S H L I R L R S S S G M Y L T A T G E K K V L Q T S P E N M E D V K I
UniRef90_K4BWK5	L V E E N S H L I R L R S S S G M Y L T A T G E K K V L Q T S P E N M E D V K I
UniRef90_UPI0002BCB496	M V E M V Q G L I R L R S C N D K Y L S A S E D K R V L Q A L P G S T A D G L I
UniRef90_A0A059AH8	A V E G N S H V V R L R S C Y G K Y L A A S E G K K V V Q S S P Q S K N D K S V
UniRef90_A0A059AH8	A V E G N S H V V R L R S C Y G K Y L A A S E G K K V V Q S S P Q S K N D K S V
UniRef90_UPI000273E845	M A V K L S P R I A L K S A Y G K Y L G I N S D E L L V E R S D A T G P R E Q G
UniRef90_K4ACP8	S V E Q A P G V V R L R S R Y G R Y L T A S N G R K V L Q T A P R P D S S V
UniRef90_I2G6Q4	V A T K V P G H F T F K S A E G K F L G A D K I G S L Q A S M A A R G P Q E E W
UniRef90_UPI00027F6E1C	A V K L S D S R I S L K S G Y G K Y L G I N S D G L V V G L S D A I G P R E Q W
UniRef90_UPI0002B41448	S V E F P N F T I R L K S C Y G K Y L T A S N T G R K V L Q T L P R R L D S S I
UniRef90_UPI0002B41448	S V E F P N F T I R L K S C Y G K Y L T A S N T G R K V L Q T L P R R L D S S I
UniRef90_H2KQG5	T A I K V S T K V A F K S G Y G K Y L G V T T G A N L V A V A D A I G P R E Q F
UniRef90_UPI00042B55D5	R L R I N G T A L N F R V F E K Q F L G L D T N G N M V A V S K T P G N S E T F
UniRef90_F4J8C8	T V E P G S N V I R L Q S C Y G K Y L T A T N G E K V L Q T L P E K D S S A E W
UniRef90_K2N5B3	E T E G T Y A I Q A W S S L F L S A H R D G S V G M D R P K A R S A E M W
UniRef90_Q4WJW0	T R V A G T E S L S F K G H H G R Y L S C D T Y G I L S A S A S I S H Y E S F F
UniRef90_UPI000248E85B	R V E D G N G K V H L R A A N N K Y V Q A N E E G Q L I T N S N N K L G W E T F
UniRef90_C1L3Y6	T M Q V S D T K V A F K S G Y G R Y L S T K P D A L T A T A D A V G V F E Q F
UniRef90_R7L1H3	T V E F V S A I I R L Q S C Y G K Y L T A A N G K V L Q T L P K R L D S S L
UniRef90_UPI0002B4809E	T V E F V S A I I R L Q S C Y G K Y L T A A N G K V L Q T L P K R L D S S L
UniRef90_UPI0002B4809E	T V E F V S A I I R L Q S C Y G K Y L T A A N G K V L Q T L P K R L D S S L
UniRef90_M5XAJ0	T V E K N S N T L R F K S C Y G K Y L T A A N G K V L Q T L P K R L D S S L

90 100 110 120

UniRef90_D6TRK6	S WL P Q S N G T I A L Q S A A N G N Y V S A R T D Q [] D A N [] T Q [] Q G W E Q
UniRef90_D3YBD8	E V R N N D N R V K I R T P N G [] F L Q A I S S E S I V N A E T V Y E E S S
UniRef90_UPI00031E5F8D	T L E P H G D G Q G L R H R G T G R L V A V T E A G L S V A E D A G D G A V
UniRef90_W9QW02	E I V R K P D D K Y R V R I K A N G [] F V Q V K S D T
UniRef90_E0UD28	R V I D R G S G Q I A L E A H Y R N T Y I Q A T N T G L I T T Q T N N [] D S W E T
UniRef90_E0UD28	R V I D R G S G Q I A L E A H Y R N T Y I Q A T N T G L I T T Q T N N [] D S W E T
UniRef90_Q1DAH2	Q L V D L D G N L V Q L Q T I N G N F V Q A T N G G G S T L N A W E M
UniRef90_Q1DAH2	Q L V D L D G N L V Q L Q T I N G N F V Q A T N G G G S T L N A W E M
UniRef90_Q8R5P9	D V I L E R E N D I A L K S L A N N K Y V C A E N D P L I A N R D K V G A W E A
UniRef90_H3ED92	T P V K N A G G T W S F K S R Y G K W L S G
UniRef90_U5FJE2	E W E P I R E G Q V V R L R T R Y G Q Y L R A N G G
UniRef90_U5FJE2	E W E P I R E G Q V V R L R T R Y G Q Y L R A N G G
UniRef90_F5H5R5	E P V F Q N G K M A L L A S N S [] C F I R C C N E A G D I E A K S K T A G E E E M
UniRef90_F5H5R5	E P V F Q N G K M A L L A S N S [] C F I R C C N E A G D I E A K S K T A G E E E M
UniRef90_UPI000248E818	E W K S K G N G R V A F K S [] H S G K W L Q S A
UniRef90_M0TGW4	E W E P V R D G Q V K K S Y S G H F R A N G T H D V P H R T A T Q D W [] V L
UniRef90_H2CYQ6	R F F L L M N K V T L G L K C E
UniRef90_H2CYQ6	R F F L L M N K V T L G L K C E
UniRef90_H2CYQ6	R F F L L M N K V T L G L K C E
UniRef90_E5SD41	E L V F E D G K M A L M G H N N [] C F Y D N D A E G Y M V N S K K A K E N E M
UniRef90_U2LX40	L L H D W L D F G S M N L R A C C N G K Y V T E N G T Y Q A V S D T P Y E W
UniRef90_A8XAZ6	K P F K N P D G T W S F L S T Y G T W L S G H E N G S [] V C
UniRef90_E3FN09	S V I V N G D K I A L K T T V T G Q F V S V N A G G S T V T A A G A S A R E W
UniRef90_A0A022QL53	E P V K E R G A V K L K T R Y G Q Y L R A N G G L P P W R N S V T E W [] V L
UniRef90_W9R1J8	T V V P G S D S I V R L K S C Y G K Y L T A S
UniRef90_W9R1J8	T V V P G S D S I V R L K S C Y G K Y L T A S
UniRef90_W9R1J8	T V V P G S D S I V R L K S C Y G K Y L T A S
UniRef90_UPI00047194A4	Q W I E T P T G E L V L M S [] A T H R F L R I D P Q T G D I R A D S P G P
UniRef90_C6W170	D R F D W G D G A W T L R S A A N R R F L G V T E D D L V A E A L A P G G W E L
UniRef90_U6ZDU5	S Y S D S G N G N G T L Q A L S N G R Y V V M N A D T Y Q I S A T A T G
UniRef90_Q4W516	K P F K N D N G S W S F L S V H G A W L S A D V D G R V Y T V E K C R E W E Q
UniRef90_B9S2E4	Q W E P A R D G Q V R L Q S W C G K F L R A N G T
UniRef90_UPI000248FCA3	L V E N N P K G G A A L K A L S N N N Y L Q S V G N G I I R A A G K N K G D W E R
UniRef90_UPI000248FCA3	L V E N N P K G G A A L K A L S N N N Y L Q S V G N G I I R A A G K N K G D W E R
UniRef90_UPI000467CB1D	R I A T H G D G H L L V H L G T G G Y V S V A A D G V K V A A D
UniRef90_UPI00037A57E8	R M E E R P R G T L A L R H S T G G Y V G A A G D G V L R L V D D A D Q A V W
UniRef90_D8QU18	E I S R N G G L V M L A R P N G M Y L Q A N E
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 R|N|S|H|N|K|Y|L|T|A|D|D|D|E|T|V|T|Q|N|R|N|G|S|T|K|N|A|R|W
 R|N|S|H|N|K|Y|L|T|A|D|D|D|E|T|V|T|Q|N|R|N|G|S|T|K|N|A|R|W
 |V|R|L|R|S|H|H|D|K|Y|L|H|A|E|D|D|E|S|V|N|Q|E|R|N|G|S|S|K|N|A|K|W
 R|I|R|L|R|H|K|S|G|Y|V|T|A|A|E|D|G|S|A|L|T|I|T|D|T|G|V|A|A|Q|F|
 G|M|Y|L|S|A|E|Q|G|G|G|A|V|A|N|R|A|S|A|S|G|W|E|T|F

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

		50	60	70	80
UniRef90_M5XAJO	T V E K N S N T L R F K S C Y G K Y L T A A N G K K V L Q T L P K R I L D S S L				
UniRef90_F0Z7K8	H L D H H H G K V F I R G H H H Y I G V D H H G H V R S T H E R G H D E L F				
UniRef90_W9Y5L2	V A V A G T G Q I N L S H G S H G Y V S C D S I G V L G A R R E A R G V E E G F				
UniRef90_UPI0004073400	D L F D G N E A V T L R A A N A R Y V A A H P D G H L L N D R V T P G E W T F				
UniRef90_I1D3Q9	D R I A L R T A D G R Y V T A T E P G A L R A T T D P V E R A A H F				
UniRef90_I1D3Q9	D R I A L R T A D G R Y V T A T E P G A L R A T T D P V E R A A H F				
UniRef90_UPI000287F730	K V E A G N G K V H F K A A N N K Y V Q A R D G G K M L A N T N N K L G G W E T F				
UniRef90_F6HV74	E V E I N N V I R L K S C Y G K Y L T A T A G K K V L Q T V P P R L D S S V				
UniRef90_V7D1X4	D G T E V Q F K S T T Q K Y V S A E N G G N V T V D R D V P S S W E T F				
UniRef90_V7D1X4	D G T E V Q F K S T T Q K Y V S A E N G G N V T V D R D V P S S W E T F				
UniRef90_D8SWU6	D G T Q I A L K S N L G T Y V C A E D G G K M V V D R Q M A S G W E T F				
UniRef90_D8SWU6	D G T Q I A L K S N L G T Y V C A E D G G K M V V D R Q M A S G W E T F				
UniRef90_J0WRM7	K L D D G E A Y V L M A G S N K R Y V C V G A S G A L M P C G E A R S A A A R F				
UniRef90_J0WRM7	K L D D G E A Y V L M A G S N K R Y V C V G A S G A L M P C G E A R S A A A R F				
UniRef90_F6FR64	D G L L T L R S C L T G R L L T G A G W I V R A E A D R V G W E S F				
UniRef90_SOEHU2	S S A Y V P N A G T L Q L A R N K Y V T A D Q S G T L S A A R A V A S T W E R F				
UniRef90_H3E1D0	Y I D E H K G T T L R S A G G K Y L R G N P G G H V D L A D W R L E G E T W				
UniRef90_UPI00026578CD	T V I R P N E T I A L K T G Y G K F I S V D N Q C K L E A L T E A I G P L E H F				
UniRef90_I1GNC5	T L V Q L S E K V A L K S G Y G R Y L G V N S S G E V I G K A E A V A R E Q W				
UniRef90_K4AKA6	U I R E R K N K Q F A I R S A N G K Y L S T T Q N R Y L V V D Q G G A I L A D R I Q A S S W E T F				
UniRef90_UPI0004154DCA	K L R V S D S E F Q F R C F C F N G Q F L T A S N G D T I S A T A D S P G D P T F				
UniRef90_I117Y5	K L R V S D S E F Q F R C F C F N G Q F L T A S N G D T I S A T A D S P G D P T F				
UniRef90_I117Y5	Y V E Y V P N V V R L K S C Y G K Y L T A S N N H F L L G A T E				
UniRef90_G7K8C1	V L A K S G S Y Y T L K S N N G K Y L T V G S N S L T A S S D T T N D N Q F W				
UniRef90_M4fdf7	T L T E S T E V A I L L S K A T G K Y V V A E G D G V L L A N R A A I G P W E K F				
UniRef90_C6CY55	Y V E D W R G K V F K S T H G R F L R A L P S G K V V P T H P H N C P A L M W				
UniRef90_UPI00036A5189	T L L H T D G S K I S L R A S N G M F V S A D D N N K L R A Q D H G S W E G F				
UniRef90_UPI00036A5189	V D R G D G V L T L R A P D G R Y L S V A G D G F V T L A A G P S G A A Q T F				
UniRef90_K7HSB9	V I E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_H2KAC3	V I E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_F2RHH4	T L E I G N K L Y T F K S E T F Y L S V G D D Q L L T A G S A T A G D A E K F				
UniRef90_UPI0003626CA6	T V E P V R G A I R L K S C Y G S Y L T A S A T G R K V V V L S K L S G S D S S V				
UniRef90_A5Z345	F V E G K S H V I R L R N C Y G K Y L A A S T G K K I L L Q T V P E I T D I C K M				
UniRef90_A5Z345	F V E G K S H V I R L R N C Y G K Y L A A S T G K K I L L Q T V P E I T D I C K M				
UniRef90_UPI000472C1C0	R L R I N E S T F N F V R S N K Q F I L T N R D G N L V A D S D S P S D L T F				
UniRef90_L7FIY5	U I R E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_M9MDT9	T V E P V R G A I R L K S C Y G S Y L T A S A T G R K V V V L S K L S G S D S S V				
UniRef90_M4DIC9	F V E G K S H V I R L R N C Y G K Y L A A S T G K K I L L Q T V P E I T D I C K M				
UniRef90_UPI00032A8E45	V A I P G T G Q I S F K G S H G G Y L S C D S M G I L G A R R E A R G V E E G F				
UniRef90_UPI00032A8E45	A V K L S D S R I A L K S G Y G K Y L G I N S D E L L V V E R S D A I E P R E Q G				
UniRef90_W2RNL7	T V E F V D G I R L K S H G G Y L T A S N G K V L Q T L P S R L N S S L P R R L				
UniRef90_UPI0001D5F672	T V E I L E S N I R L K S C Y G K Y L T A S N G K V L Q T L P S R L N S S L P R R L				
UniRef90_G7IK68	Q G V C T L R A P D G R H S V A D D R F V R A S A R E P G G W E T F				
UniRef90_UPI00042B28C7	F V E G K S H V I R L R N C Y G K Y L A A S T G K K I L L Q T V P E I T D I C K M				
UniRef90_S4AKN7	T V E F D S H H V R L K S F S G K Y L T A T E D G Y L R A S A D Q P G G W E T F				
UniRef90_B9HLW9	T V E F D S H H V R L K S F S G K Y L T A T E D G Y L R A S A D Q P G G W E T F				
UniRef90_B9HLW9	T V E F D S H H V R L K S F S G K Y L T A T E D G Y L R A S A D Q P G G W E T F				
UniRef90_I14KL7	U I R E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_B1VS29	U I R E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_B1VS29	U I R E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_UPI000287F6A1	N G V L T L R A P D G R Y V S V A E D G Y L R A S A D Q P G G W E T F				
UniRef90_B9RUK5	T V E F D S H H V R L K S F S G K Y L T A T E D G Y L R A S A D Q P G G W E T F				
UniRef90_B9RUK5	T V E F D S H H V R L K S F S G K Y L T A T E D G Y L R A S A D Q P G G W E T F				
UniRef90_UPI000273E5CB	K L R I N E D T F D L R V F D N L F V T V A G D G T V V A T G R K V V V L S K L S G S D S V				
UniRef90_I1QTW1	T V E P V R G A I R L K S C Y G S Y L T A S A T G R K V V V L S K L S G S D S V				
UniRef90_M3FPC3	U I R E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_M4DH9	T I E P V S N V I R L K S C Y G K Y L T A S N G K V L Q T L P S R V D S C V				
UniRef90_L7UJD9	V T R L F T R T F T L R A P D G R Y V V A E G G G T V N A N R V A V G P W E R L				
UniRef90_L7UJD9	V T R L F T R T F T L R A P D G R Y V V A E G G G T V N A N R V A V G P W E R L				
UniRef90_W1NY14	G V E F V E G T L R K S C Y S L Y L T A S D T G K V K L Q S S K V K L A S S V				
UniRef90_UPI000248EBCE	L V E D G N G K V F L K A A A N Q Y V Q A N E Q S Q L L A S I N N K R G W E T F				
UniRef90_A5B2F5	D G T E V Q F K S M L Q K Y V S A E N G G V V T V D K D V P S S W E T F				
UniRef90_A5B2F5	D G T E V Q F K S M L Q K Y V S A E N G G V V T V D K D V P S S W E T F				
UniRef90_D1C037	D L T D G D G I V T L R S Q A S T R L L T G A G W P A R A D A D R V G W E S F				
UniRef90_UPI0002ADB8DD	L V E S H S G C V A L K S S S T G K Y L G I N S D E L V V G R S D E I G P R E Q W				
UniRef90_UPI000471F1CF	L V E S H S G C V A L K S S S T G K Y L G I N S D E L V V G R S D A I G S R E Q W				
UniRef90_UPI000471F1CF	L V E S H S G C V A L K S S S T G K Y L G I N S D E L V V G R S D A I G S R E Q W				
UniRef90_A9JRR7	A I K L S D S R I A L K S G Y G K Y L G I N S E G V V V G R S D A I G S R E Q W				
UniRef90_A9JRR7	V A T P E S Q T W T F K S A Q G T F G S S S Y G A V V I A S N E A R G P Q E E W				
UniRef90_A8PUM4	U I R E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_B5HAN4	U I R E R K N K Q F A I R S A N G K Y L C V D P S G A V L S T S T T I G G W E T F				
UniRef90_M5EAV4	V A T Q M S D K W T L K S A Q G T F Y V A C D R Y G E V T A T N E A R G P Q G G W E T F				
UniRef90_L7EGI2	L V V G K D G T V S L K S L K N T Y V G V N E K G K L S A N S F E I N N A E K F				
UniRef90_L7F785	V S E W G D G V L T L R A A T G R Y L T R R D D D S L A A D H E V I K T W E S F				
UniRef90_UPI00032A6A03	S V E L V E T K I R L R N C Y G R C L T A T A G N K V V I Q A N F D A G L S W K Y				
UniRef90_R4K5Y3	L V V E N D G A V S L S C N N K Y V S V N E D G K L I A D S I H I N T Y E K F				
UniRef90_UPI00036C1B5E	V I E R H D D K V A L K T C C G G K Y L R S N L E R Y V D L A D T A Q A H E L W				
UniRef90_H3E4G1	I I E R H D D K V A L K T C C G G K Y L R S N L E R Y V D L A D T A Q A H E L W				
UniRef90_H3E4G1	I I E R H D D K V A L K T C C G G K Y L R S N L E R Y V D L A D T A Q A H E L W				
UniRef90_F4H7F4	D L T S G E G I R T L R A C R T G L W S G S R W I L H A D A S R R V G G W E S F				
UniRef90_G7KA56	K L R I N K E T F R F V F N Q F V G I D G Y N V V A V S N S S I D S E T F				
UniRef90_O04559	T V E P V R D V I R L K S C Y G K Y L T A S N G R K V V Q T M P R R L D S S V				
UniRef90_O04559	T V E P V R D V I R L K S C Y G K Y L T A S N G R K V V Q T M P R R L D S S V				
UniRef90_UPI00032A6253	I V E P I I R L K S C Y G K Y L T A S N G R K V V Q T M P R R L D S S V				
UniRef90_UPI000477A5C6	E L V E P V R D V I R L K S C Y G K Y L T A S N G R K V V Q T M P R R L D S S V				
UniRef90_UPI00041D9792	D L F D W G G Y A A R N A A T G K F I A G R P D G T V T A D S K G P S E W T F				
UniRef90_J3N251	K L R I N D D T F N L K V F D N H F V T I A G D G T V T A T V G S P G P G E A F				
UniRef90_D2PPF7	L V R I N E T A F H F R V F N Q F V G I D G Y N V V A V S N S S I D S E T F				
UniRef90_J9VNR8	R L R I N E T A F H F R V F N Q F V G I D G Y N V V A V S N S S I D S E T F				
UniRef90_E0CRH7	V I S R L S G V V S S L R T S T G T G L T A S P S G S L T A T T P S R G P L E A F				

90 100 110 120

UniRef90_M5XAJ0	E W E P R E G Q V R L K T P Y Q G F L R A N G G		
UniRef90_F0Z7K8	E V I E P V E E T R W R L R T S A T K L S E G V K G S R Y L C A V V G A G P		
UniRef90_W9Y5L2	E L R A G P G G T R R R L R N R A L D R W V R C D P D G V		
UniRef90_UP10004073400	D V V D W G E G I V T L R A V A N G R Y V S F G P D R T L V N D A E Q P H D		
UniRef90_I1D3Q9	D V V D W G E G I V T L R A V A N G R Y V S F G P D R T L V N D A E Q P H D		
UniRef90_UP1000287F730	T W E S R G N G K V A L K A F N N K Y V L N L A T N E L A A I A D N V Q G W E T		
UniRef90_F6HV74	E W E P I R D G Q V K L K T R Y G N F L R A N G G		
UniRef90_V7D1X4	R L W R V S E S E F Q F R T S V G Q F L T C D G G G V S A T A K S P S T S E T		
UniRef90_D8SWU6	R L W R V S S S E F Q F R T S V G Q F L T C D G G G V S A T A K S P S T S E T		
UniRef90_D8SWU6	K L W R V S S S T K F Q L R V F N N N F V S V A N Q S G V D S T K D T P G E W E T		
UniRef90_J0WRM7	K L W R V S S S T K F Q L R V F N N N F V S V A N Q S G V D S T K D T P G E W E T		
UniRef90_J0WRM7	A L T Q N P T G D Y F L Q D A A S G L W V T S D G A R L A A S A K S V T E A T R		
UniRef90_F6FR64	A L T Q N P T G D Y F L Q D A A S G L W V T S D G A R L A A S A K S V T E A T R		
UniRef90_S0EHU2	R R R H Q H A D G T W S L Q H V G S G R W L R V Q H G S G S L V A D A L T A D		
UniRef90_H3E1D0	I I R R Q K S E G V Y S I K A A S N G K Y V R V G G D G		
UniRef90_UP100026578CD	T P I Q T A E G S W S C F K S A Y G H Y L A A R A N G		
UniRef90_I1GCN5	E P V F Q E G K T A M L S G A K N N F V T A C C R G E L F A S A P S V		
UniRef90_K4AKA6	E A I F E E E R F A L C G C H N H R F L T L T S D N R I M A I S E K A K D K E I		
UniRef90_K4AKA6	R L W R I N E T T F N F R V Y G G Q F W G V D S N G L V A T A T T P G P S E T		
UniRef90_UP10004154DCA	R L W R I N E T T F N F R V Y G G Q F W G V D S N G L V A T A T T P G P S E T		
UniRef90_I117Y5	R L E A H A G G H R L L H V G T G R Y V S V A A D G V K V A A		
UniRef90_I117Y5	Y I E R R N N T T L L H I K N G N Y L L Q V T D N N		
UniRef90_G7K8C1	Y I E R R N N T T L L H I K N G N Y L L Q V T D N N		
UniRef90_M4FDF7	E W E P I R D G R V K L K T R Y G N F L R G N G G		
UniRef90_C6CY55	E P I S D N G K H V R F K S R Y G Q Y L R A N K T H D I P S R T V T Q D W V L		
UniRef90_UP100036A5189	S I T T N S D G T V S F Y S L G K S R Y M S T T S		
UniRef90_K7HSB9	D L S		
UniRef90_H2KAC3	D L S		
UniRef90_F2RHH4	K P F R N S D D T W S F L S H G T W L S G L K N G V V		
UniRef90_UP10003626CA6	T L K Y Q G S D T Y A L H S E N A N A F V T A D Y E V L R A R S A S V G S W E K		
UniRef90_A5Z345	R L E A H G N G H L L H L G T G Y V S V A A E G V K V A A		
UniRef90_A5Z345	Q W I E T P T G E L L A M S L A T N R F L R I D P K T R D I R A D S P G P		
UniRef90_UP1000472C1C0	H M W I V P D G T V L A D S A Y R D A F S K I E A E		
UniRef90_L7FIY5	H M W I V P D G T V L A D S A Y R D A F S K I E A E		
UniRef90_M9MDT9	I V S Q A A N G L I T Q S Q K Q K Q F V S I T S D N L R A S A S A S T D N E R		
UniRef90_M4DIC9	R L E P H G S G R H H L R H V G T G R H V S V A A D G V K V		
UniRef90_UP100032A8E45	T L E P S G Q R Q W M L R S V H G Q Y L A G G K T V V R A D A E R P E A S		
UniRef90_UP100032A8E45	E W E P V R E G K V K L K T R H G H F L R G N G D S V T H D S R R S S D S F L		
UniRef90_W2RNL7	R L W R V S K S E F Q F R T T Q G Q F L G V G G G T V S A T A K L P S T S E T		
UniRef90_UP10001D5F672	R L W R V S K S E F Q F R T T Q G Q F L G V G G G T V S A T A K L P S T S E T		
UniRef90_G7IK68	T L I Q S D E G R W I F Q T A A T K T D Q G E A G K R L S A T A D V P R K E E		
UniRef90_UP100042B28C7	E P V F Q N G K M A L L A S N S C F I R C N E A G D I E A K S K T A G E E E M		
UniRef90_S4AKN7	E W E P I R E G Q I R L R T R Y G Q F L R A N G G T V S V A A D G V K V A D K G E L		
UniRef90_B9HLW9	E W E P V R D G Q V K F K S W C G N F L R A N G G T V S V A A D G V K V A D K G E L		
UniRef90_B9HLW9	E W E P V R D G Q V K F K S W C G N F L R A N G G T V S V A A D G V K V A D K G E L		
UniRef90_I114L7	E I L R N D D N R V R I R A P N G Q F L Q A I S E T V V		
UniRef90_B1VS29	A F E W H E T G T Y A L K S L A N N R Y V A V E G N Y L R A R S T A A G T W E R		
UniRef90_B1VS29	A F E W H E T G T Y A L K S L A N N R Y V A V E G N Y L R A R S T A A G T W E R		
UniRef90_UP1000287F6A1	C L E P H E Q G H V K L R H L G T G L L V Q V A A D G V K V A A E D P E I F E L		
UniRef90_B9RUK5	L L S V S G K K V L Q T M P		
UniRef90_B9RUK5	L L S V S G K K V L Q T M P		
UniRef90_UP1000273E5CB	M A V K L S D S R I A L K S G Y G K Y L G I N S D E L L V V S S S D A I G P R E Q		
UniRef90_I1QTWT1	Q I V R N R G D K T R A R I R A P N G M F L Q A T S D S V T A D		
UniRef90_M3FPC3	R L E P C P H G K G H L K H L G T G R Y V T V G A D G V K V		
UniRef90_M4DIH9	E W E P V R E G K I K K L K T R Y G N Y L K A N G G		
UniRef90_L7UJD9	Q L V D L D G G A V Q L Q T I N G N Y V Q G G G S G V N A N P L V P G E W E T		
UniRef90_L7UJD9	Q L V D L D G G A V Q L Q T I N G N Y V Q G G G S G V N A N P L V P G E W E T		
UniRef90_W1NYI4	E W E P I R D G H V K L K G L Y G N F L R A N G T H D I P L R T A T Q D W V L		
UniRef90_UP1000248EBCE	T W E S K G N G V K A L K A F N N K Y V S N T A D K A L I A N A N E A R G W E T		
UniRef90_A5B2F5	R L W R V S D S E F Q F R T S Q G Q F L X C D G E G V S A M A G S S S I K E T		
UniRef90_A5B2F5	R L W R V S D S E F Q F R T S Q G Q F L X C D G E G V S A M A G S S S I K E T		
UniRef90_D1C037	R R H L H P D G T V S L Q H L G S N R W L R V T R G T L L C D G T S V E E A E R		
UniRef90_UP10002ADB8DD	E R V F Q N G K M A L L A S D S C F I R C N E A G D I E A K S K T A G E E M		
UniRef90_UP1000471F1CF	G W N E I G E N Q V A L K S L F N S G W I Q A D N T S L F P L G L A V G S W E T		
UniRef90_UP1000471F1CF	G W N E I G E N Q V A L K S L F N S G W I Q A D N T S L F P L G L A V G S W E T		
UniRef90_A9JRR7	E P V F Q K Q D S W		
UniRef90_A9JRR7	E P V F Q K Q D S W		
UniRef90_A8PUM4	T V I P G P R A G F A L Q S K Y G G W L A T E D A S S V R A D A K E L T P A C V		
UniRef90_B5HAN4	R L E E H G E H L A H V G T G R Y V S V A A D G L K V		
UniRef90_M5EAV4	T L Q P V D V T V P F A L Q S H Y G G Y L T L D E		
UniRef90_L7EGI2	I F I W Q E Q G A Y V I I A L A N N K V V S A D E G T L M A N H D Y I G A A E R		
UniRef90_L7F785	L L E P D P L G T V L L R N V R T G R Y A V V D P A D G R A T A D T P Q E A E R		
UniRef90_UP100032A6A03	E W E P I K E G F V K L R S W C G K Y L R G N G G T		
UniRef90_R4K5Y3	I F I W Q D Q G A Y A I V A L A N N R V V S A A E G C L M A N R D Y I S T A E R		
UniRef90_UP100036C1B5E	A L I R N S N G T V S F R A Q A N G R Y V V J A E N G G L I J A N R T A I G L W E Q		
UniRef90_H3E4G1	T P I K N D A S T W S F K S H H G T Y L R A Q H G R V S M Q V E A H G D E E E E		
UniRef90_H3E4G1	T P I K N D A S T W S F K S H H G T Y L R A Q H G R V S M Q V E A H G D E E E E		
UniRef90_F4H7F4	R V H D N G D D T V S V Q H V G S G R W L V V Q R D G G V L V A D A P T P A E R		
UniRef90_G7KA56	H I V K V K N D N S T R V R I K A N G Y F L Q V T E E V V T A D V S L V N E W		
UniRef90_O04559	L L G A T G K K V I Q L K K L G A T G K K V I Q L K K		
UniRef90_O04559	L L G A T G K K V I Q L K K L G A T G K K V I Q L K K		
UniRef90_UP100032A6253	E W E P I R D G Q V K L K T R Y G N F L R A N G G		
UniRef90_UP1000477A5C6	T L L Q D E D D Y V V A I K A V A N S Q Y V T A N D A P L Q A R A A S I R S W E K		
UniRef90_UP100041D9792	K I V E V E G G K V A L R T A E T G K W F A V Q G Q D G		
UniRef90_J3N251	Q F Q M L R N S N N V L T H L P N G R F L Q A K T K G S V T A D Y D G E S T S		
UniRef90_D2PPF7	E L C Y P A G E T S A V L R H R N S G R F V T V Q P D G V T A T A E D A D S A T A		
UniRef90_J9VNR8	I P I N S R P S T F A L Q I Q H N S K Y F S A T K A E L R A D A D D V G E F E		
UniRef90_E0CRH7	Q I V P N D S K R V R I K A P N G F F L Q A K T E E L V		

UniRef90_M5XAJO
 UniRef90_F0Z7K8
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 UniRef90_UPI0004073400
 UniRef90_I1D3Q9 WF V Q
 UniRef90_I1D3Q9 WF V Q
 UniRef90_UPI000287F730 F
 UniRef90_F6HV74
 UniRef90_V7D1X4 Y E I
 UniRef90_V7D1X4 Y E I
 UniRef90_D8SWU6 F E I
 UniRef90_D8SWU6 F E I
 UniRef90_J0WRM7 F
 UniRef90_J0WRM7 F
 UniRef90_F6FR64
 UniRef90_S0EHU2
 UniRef90_H3E1D0
 UniRef90_UPI00026578CD M T L R
 UniRef90_I1GCN5 F Q I
 UniRef90_K4AKA6 F Q I
 UniRef90_K4AKA6 F Q I
 UniRef90_UPI0004154DCA
 UniRef90_I117Y5
 UniRef90_I117Y5
 UniRef90_G7K8C1
 UniRef90_M4FDF7 WS V
 UniRef90_C6CY55
 UniRef90_UPI00036A5189
 UniRef90_UPI00036A5189
 UniRef90_K7HSB9
 UniRef90_H2KAC3 F
 UniRef90_F2RHH4
 UniRef90_UPI0003626CA6
 UniRef90_A5Z345
 UniRef90_A5Z345
 UniRef90_UPI000472C1C0 F I V
 UniRef90_L7FIY5
 UniRef90_M9MDT9
 UniRef90_M4DIC9 WD V
 UniRef90_UPI00032A8E45 F E V
 UniRef90_UPI00032A8E45 F E V
 UniRef90_W2RNL7
 UniRef90_UPI0001D5F672 I K I R
 UniRef90_G7IK68 WD I D L
 UniRef90_UPI00042B28C7
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 UniRef90_B9HLW9
 UniRef90_B9HLW9
 UniRef90_I1K4L7
 UniRef90_B1VS29 F T
 UniRef90_B1VS29 F T
 UniRef90_UPI000287F6A1 V T V
 UniRef90_B9RUK5
 UniRef90_B9RUK5
 UniRef90_UPI000273E5CB W E P
 UniRef90_I1QTW1
 UniRef90_M3FPC3
 UniRef90_M4DIH9
 UniRef90_L7UJD9 F R I
 UniRef90_L7UJD9 F R I
 UniRef90_W1NYI4 W E V E I
 UniRef90_UPI000248EBCE F
 UniRef90_A5B2F5 F Y V
 UniRef90_A5B2F5 F Y V
 UniRef90_D1C037 F V L R
 UniRef90_UPI0002ADB8DD I K I R
 UniRef90_UPI000471F1CF F
 UniRef90_UPI000471F1CF F
 UniRef90_UPI000471F1CF F
 UniRef90_A9JRR7
 UniRef90_A9JRR7
 UniRef90_A8PUM4 WD V
 UniRef90_B5HAN4
 UniRef90_M5EAV4
 UniRef90_L7EGI2 F Y I
 UniRef90_L7F785 W Q
 UniRef90_UPI00032A6A03
 UniRef90_R4K5Y3 F F I
 UniRef90_UPI00036C1B5E F
 UniRef90_H3E4G1 WT V
 UniRef90_H3E4G1 WT V
 UniRef90_F4H7F4 F T V R
 UniRef90_G7KA56
 UniRef90_O04559
 UniRef90_O04559
 UniRef90_UPI00032A6253 F D I S L
 UniRef90_UPI000477A5C6
 UniRef90_UPI00041D9792
 UniRef90_J3N251 W
 UniRef90_D2PPF7 F A V
 UniRef90_J9VNR8
 UniRef90_E0CRH7

The figure displays a sequence alignment of UniRef90 entries, focusing on the first 40 positions. The alignment is color-coded to highlight conservation: yellow boxes indicate highly conserved residues, while black boxes indicate semi-conserved or variable residues. The UniRef90 entries listed on the left include:

- UniRef90_B9HFS1
- UniRef90_M4E7A6
- UniRef90_UP10002C2F5B4
- UniRef90_UP10002C2F5B4
- UniRef90_V4L3M5
- UniRef90_V4L3M5
- UniRef90_A0A059ALE9
- UniRef90_A0A059ALE9
- UniRef90_UP100027452CF
- UniRef90_UP100027452CF
- UniRef90_K3Z533
- UniRef90_L8PI14
- UniRef90_B8I454
- UniRef90_B8LKR6
- UniRef90_J7KXS8
- UniRef90_UP10003511C08
- UniRef90_UP10003511C08
- UniRef90_UP10003511C08
- UniRef90_R7FDE4
- UniRef90_G1S007
- UniRef90_G1S007
- UniRef90_D8TDU5
- UniRef90_D8TDU5
- UniRef90_M5G4J1
- UniRef90_C7Q364
- UniRef90_W5FNK9
- UniRef90_W9R7H1
- UniRef90_Q9U310
- UniRef90_B9H556
- UniRef90_K7MRQ5
- UniRef90_S8CAD8
- UniRef90_S8CAD8
- UniRef90_G7LAD4
- UniRef90_A8WNP7
- UniRef90_UP1000255870E
- UniRef90_F4SA47
- UniRef90_D2BD52
- UniRef90_H2VNE3
- UniRef90_D9TCH5
- UniRef90_F2DRN7
- UniRef90_H3EYU5
- UniRef90_P13231
- UniRef90_P13231
- UniRef90_A9TSC3
- UniRef90_G2NRG8
- UniRef90_UP100042BD5F5
- UniRef90_G3S0E4
- UniRef90_G3S0E4
- UniRef90_V4MAM6
- UniRef90_Q9CAS2
- UniRef90_UP100032A6D46
- UniRef90_A0A059D7T0
- UniRef90_C3YC51
- UniRef90_UP1000347C8A3
- UniRef90_F2UOX2
- UniRef90_F2UOX2
- UniRef90_H3E1C6
- UniRef90_T0QN16
- UniRef90_U1HSF1
- UniRef90_UP10003815F13
- UniRef90_F9G851
- UniRef90_I1QJK4
- UniRef90_F2EC66
- UniRef90_A9UTE4
- UniRef90_K9PBP4
- UniRef90_UP1000248F27A
- UniRef90_L8GD03
- UniRef90_L8GD03
- UniRef90_A9NNF8
- UniRef90_M4CIE2
- UniRef90_UP100035D149E
- UniRef90_UP100042B175C
- UniRef90_D0N9Y3
- UniRef90_H5XMT4
- UniRef90_D4AFK6
- UniRef90_UP10002AB7FAB
- UniRef90_UP10002AB7FAB
- UniRef90_V9DTK6
- UniRef90_F8DD72
- UniRef90_A0A02Q2Q237
- UniRef90_M4D7E5
- UniRef90_B6TTA1
- UniRef90_B6TTA1
- UniRef90_M4DIC8
- UniRef90_W8AG36
- UniRef90_A5BJA1
- UniRef90_C7MC88
- UniRef90_A0A059BL09
- UniRef90_UP1000234E8B2
- UniRef90_B2H8Y8
- UniRef90_UP10002B46A8D

UniRef90_B9HFS1
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 UniRef90_UPI0002C2F5B4
 UniRef90_V4L3M5
 UniRef90_V4L3M5
 UniRef90_A0A059ALE9
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 UniRef90_K3Z553
 UniRef90_L8P14
 UniRef90_B8I454
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 UniRef90_J7KXS8
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 UniRef90_UPI0003511C08
 UniRef90_UPI0003511C08
 UniRef90_R7FDE4
 UniRef90_G1S007
 UniRef90_G1S007
 UniRef90_D8TDU5
 UniRef90_D8TDU5
 UniRef90_M5G4J1
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 UniRef90_W9R7H1
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 UniRef90_B9H556
 UniRef90_K7MRQ5
 UniRef90_S8CAD8
 UniRef90_S8CAD8
 UniRef90_G7LAD4
 UniRef90_A8WNP7
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 UniRef90_F2DRN7
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 UniRef90_V4MAM6
 UniRef90_Q9CAS2
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 UniRef90_A0A059D710
 UniRef90_C3YC51
 UniRef90_UPI000347C8A3
 UniRef90_F2U0X2
 UniRef90_F2U0X2
 UniRef90_H3E1C6
 UniRef90_T0QN16
 UniRef90_U1HSF1
 UniRef90_UPI0003815F13
 UniRef90_F9G851
 UniRef90_I1QJK4
 UniRef90_F2EC66
 UniRef90_A9UTE4
 UniRef90_K9PB4P
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 UniRef90_M4CIE2
 UniRef90_UPI00035D149E
 UniRef90_UPI00042B175C
 UniRef90_D0NJY3
 UniRef90_H5XMT4
 UniRef90_D4AFK6
 UniRef90_UPI0002AB7FAB
 UniRef90_UPI0002AB7FAB
 UniRef90_V9DTK6
 UniRef90_F8DD72
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 UniRef90_B6TTA1
 UniRef90_B6TTA1
 UniRef90_M4DIC8
 UniRef90_W8AG36
 UniRef90_A5BJA1
 UniRef90_C7MC88
 UniRef90_A0A059BL09
 UniRef90_UPI000234E8B2
 UniRef90_B2H8Y8
 UniRef90_UPI0002B46A8D
 UniRef90_K4A8Q1

50 60 70 80

90 100 110 120

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UniRef90_M4E7A6	Q W E P V R D G F V K L K S W C G K W M R A N G G T			
UniRef90_UPI0002C2F5B4	E W E P V R E G Q V R L K T R Y G H F L R A N G T H D I P H R T A T Q D W V L			
UniRef90_UPI0002C2F5B4	E W E P V R E G Q V R L K T R Y G H F L R A N G T H D I P H R T A T Q D W V L			
UniRef90_V4L3M5	Q W E P E R D G F V K L K S W C G K W M R A N G G T			
UniRef90_V4L3M5	Q W E P E R D G F V K L K S W C G K W M R A N G G T			
UniRef90_A0A059ALE9	L M T I V A N N			
UniRef90_A0A059ALE9	L M T I V A N N			
UniRef90_UPI00027452CF	D I E W R D R R I T L R A S N G K F V T S K K N G Q L A A S V E T A G D S E L			
UniRef90_UPI00027452CF	D I E W R D R R I T L R A S N G K F V T S K K N G Q L A A S V E T A G D S E L			
UniRef90_K3Z553	Q I V P F D K N K V R I K A A N G Y F V Q G A T G E V I A D Y G E P T R W S D			
UniRef90_L8P1I4	R L E P Q P D G T E L L R N N S N G R Y A A V D P G R V T L S A E A P E Q A E R			
UniRef90_B8I454	D F I C L G M N K V A I R A H N G K F V S F Q K D K L C A S D T I G P D E I			
UniRef90_B8LKR6	Q I L I R N P S N K			
UniRef90_J7KXS8	I Y T D S G N G N G T L L A V S N K R F L I M D P D T Y Q I S A T			
UniRef90_UPI0003511C08	F F E F C D Y N K V A I K I N G K Y L K G D H A G V K A S A D A I D A S T L			
UniRef90_UPI0003511C08	F F E F C D Y N K V A I K I N G K Y L K G D H A G V K A S A D A I D A S T L			
UniRef90_UPI0003511C08	F F E F C D Y N K V A I K I N G K Y L K G D H A G V K A S A D A I D A S T L			
UniRef90_R7FDE4	R C H D W D F G S M N L Y A C C N D R Y V T E D G A Y R A T S A T P Y A W			
UniRef90_G1S007	D I E W R D R R I T L R A S N G K F V T S K K N G Q L A A S V E T A G D S E L			
UniRef90_G1S007	D I E W R D R R I T L R A S N G K F V T S K K N G Q L A A S V E T A G D S E L			
UniRef90_D8TDU5				
UniRef90_D8TDU5				
UniRef90_M5G4J1	V A E V S P E G E V G F K S V H G G W L G L D E V G V R G D A E K P E P			
UniRef90_C7Q364	E F H Q T D D G Q R L V R S N A T G R Y L V G D D G R L V I A D A D S A E E A T A			
UniRef90_W5FNK9	R L V R N A G Q N R M R I M A A N R L F L Q A N K D S T V T A D			
UniRef90_W9R7H1	Q I V R N D P N R V R I R A A N G L F L Q T Q T E T L V			
UniRef90_Q9U310	S P F E N G N G T W S F L S S N G T W L S A H E D G Q V C T V K D R Q A C E E			
UniRef90_B9H556	Q I R K N D D R V R L Q A S N G Q F L Q A I S E T L V			
UniRef90_K7MRQ5	E W E P V R D G Q V K L K T R Y G N F L R A N G T H D I P H R T T T Q D W V L			
UniRef90_S8CAD8	R W Q P I R D G Q V K L K S F K G S Y L Q A N G G			
UniRef90_S8CAD8	R W Q P I R D G Q V K L K S F K G S Y L Q A N G G			
UniRef90_G7LAD4	E I V R N D D N K V R I R A P N G L F L Q A I S E T Q V S T K T V Y E E S S			
UniRef90_A8WNP7	Q P S K N S D G T W S F L S T Y G T W L S G L G N G V V C C M P H W R S S E K			
UniRef90_UPI000255870E	E M V D N N D G T Y S F K C S N G L Y M S S E N G N K A T C N R T S I G A W E K			
UniRef90_F4SA47	T F E P T L D G V F S I R S I A Y N K Y I S I E E L S I R C O D S T T S D P S C Q			
UniRef90_D2BD52	R M E D P R P G A L A L R H I S T G R Y V A L D G E V F R I L V D D A D A A V W			
UniRef90_H2VNE3	K P F R N S D G T W S F L S I Y G T W L S G G N D V V C C M W E C K S W E K			
UniRef90_D9TCH5	R L H H R P D G T A L L H H L A T G R H V G V A P D G			
UniRef90_F2DRN7	E W E P V R D G Q V R L K S R A G G K Y L R A N G T H D V P H R T A T Q D W V L			
UniRef90_H3EYU5	E A Y H N S D G S W S F S V H G T Y L C A Q G T R F S L H S H I G P N E K			
UniRef90_P13231	H L E H G G K V S I K G H H H H Y I S A D H H G H V S			
UniRef90_P13231	H L E H G G K V S I K G H H H H Y I S A D H H G H V S			
UniRef90_A9TSC3	K I H R N P S S M V H I Q A Y N G M Y L Q A D R N I L T A D L K D V P G W			
UniRef90_G2NRG8	R R E A H E D G H R L V H G T G G Y V S V A A D G V K V			
UniRef90_UPI00042BD5F5	L M			
UniRef90_G3S0E4	T A V K L S D S R I T L K S G Y R K C L G I N S D E L L V V G S D A I G P R E Q			
UniRef90_G3S0E4	T A V K L S D S R I T L K S G Y R K C L G I N S D E L L V V G S D A I G P R E Q			
UniRef90_V4MAM6	D W E P I R D G P V K L M S W N G K Y L R G N G D R E P S T S T T K K W I L			
UniRef90_Q9CAS2	L L I G A T G			
UniRef90_UPI00032A6D46	E W E P I R D G H V R L R T R Y G Q F L R A N G G			
UniRef90_A0A059D7T0	E W E P V R N G Q V Q L K S W C G K Y L R A N G G			
UniRef90_C3YC51	T F K L V N R P L L V L R G P H G F V A V G K G E R L E C			
UniRef90_UPI000347C8A3	R M E E A G D G R V R L T Q V H T G R H V G A G D G V L R I L T G D A D E A L A			
UniRef90_F2U0X2	Q P I F D D E G L V L F Q G P N K K V L E V A G E K A K C S S			
UniRef90_F2U0X2	Q P I F D D E G L V L F Q G P N K K V L E V A G E K A K C S S			
UniRef90_H3E1C6	D A Y Q N A D G S W S F R S V H G S Y L R A Q P S G R V S L Q S H V G A D E K			
UniRef90_T0QN16	T C V D L G N G K I G L Q S R C N N C V R G A D V T M H V S N P K L G A W S Q			
UniRef90_U1HSF1	R V S V A D A E E N V G K G R F L V G T			
UniRef90_UPI0003815F13	E L L A I G E T T S V L R H R N T G R F V A V A A D G V I A T A T D A D S A T V			
UniRef90_F9G851	I I R Q K V G G I Y S I K A A S N G K Y L R V G D G			
UniRef90_I1JQK4	R L W R V S Y R E Y Q F R C I K G Q F L T A S N G D V I S A T A D S P G D T E T			
UniRef90_F2EC66	E W V P V G N G R H A R L Q T R Y G N F L R A N G T H D V P H R T A T Q D W V L			
UniRef90_A9UTE4	Q A V W T D E T H V S L R G P N K K F L S I			
UniRef90_K9PBP4	N V K V L D G G K V A L Q A D N G K F L G G N G G K I E A A K D A I D P Y S Q			
UniRef90_UPI000248F27A	T W E S K A G N R V V L K A F N D K Y L G I T S K E L G A I S N K I G G W D T			
UniRef90_L8GD03				
UniRef90_A9NNF8	E W E P I K D G H V K L K T R Y G N Y L R A N G G			
UniRef90_M4CIE2	E W E P V R E G K I K L K T R H G N L L R A N G G			
UniRef90_UPI00035D149E	R L E P Q G N G H L L L H L G T G R H V C V A A D G V R V			
UniRef90_UPI00042B175C	Q I V R N D G N R V R L R A A N G L F L Q A Q S E T L V T A A S A A E			
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Q R E L L R D G			
T L E P Q A D G T V A L R Y T G Y K Y V T V G D G G A L T L G A S T A A D A T H			
L M S T T G D G T W T W V N A A T G R L L S A D G A K V S T Y T P T S A D N Q R			
M A V K L S D S R I A L N S G Y G K Y L G I N S D E L V V G S D A I G P K E Q			
L M Q T D R E T K C T F Y A S T G G Y W T L V T H G G I Q A T A T Q V S A S T M			
Q W I E T P T G E L A L M S L V T N R F L R I D P Q K D N V V A D S P G P			
E W E P V R E G Q V R L K T R Y G Q Y L R A N G G			

A R E V V R D G R

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

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

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

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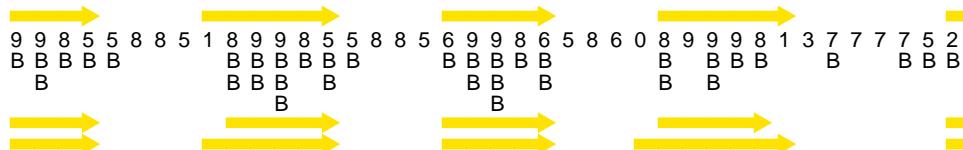
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