| QUERY<br>UniRef90_UPI00042AEA04<br>UniRef90_F1R454   | 1   | Α                        |
|--|---|--------------------------|
| UniRef90_Q92051<br>UniRef90_Q3Y546<br>UniRef90_I3JGP6  | WGYGPADGPESWAESFPIANGPRQSPIDIVPTQAQHDPHWGYGEENGPAEWHKDFQIAKGERQSPIDIQPGEATYDAWGYKPNNGPOKWVENFPIADGVROSPIDIVPGQASYDA   | S<br>T<br>G              |
| UniRef90_UPI00029DA733<br>UniRef90_UPI0003F1181D<br>UniRef90_UPI0000E38790<br>UniRef90_C7FPZ1        | GTTGPEQWSKLYPIANGNNQSPVDIKTSETKHDTHWGYGKHNGPEQWHEIFPIAKGERQSPVDIDTKAAKHDPHWGYSKHNGPEHWHKTFPLADGERQSPVDIDTAAVKHDPWGYAEDNGPCKWAENFPLANGPRQSPVDIVPGDARCDA  | A<br>A                   |
| UniRef90_UPI0002BD04BD<br>UniRef90_F6PGF8<br>UniRef90_UPI0003C28505                                  | WGYGQEDGPSHWHKLYPII ARGDRQSPII NII VISRKAVIYSP<br>WGYGQEDGPSEWHKLYPII AQGDRQSPII DII VISSQAVYDP   | S<br>T<br>S              |
| UniRef90_K9IHZ8<br>UniRef90_A8KC11<br>UniRef90_G1NGT0  | WGYAEHNGPVHWNELFPIAEGDQQSPIEIKIKEVKYDS<br>HWGYGEDNGPSAWHKDYPIAEGNRQSPIDIVPSEAVFDA<br>TGPAHWKFVFPVANGDRQSPIDIKTFFTKYDP   | S<br>K<br>S              |
| UniRef90_F6ZUY9<br>UniRef90_G1NGS2<br>UniRef90_F7BGW4<br>UniRef90_S9WC05                             | GPEHWHEAEPILIARGARUSPIVIEILIHSASARYDP   | 1                        |
| UniRef90_G1KPK2<br>UniRef90_H3CKK1<br>UniRef90_G1KXA5  | H WG Y E E D N G P S H WK E V F P L A N G D R Q S P I D I K T Q E A K Y D P WG Y G P T N G P D K WA K D F P L A D G P R Q S P I N I V P A F A Q Y D P   | T<br>S<br>S              |
| UniRef90_G3W4E6<br>UniRef90_I3J4Q6<br>UniRef90_Q0IIV4<br>UniRef90_UPI00045DD5CC                      | T G P A H WH E N C P I A N G E R Q S P I D I Q H K S C K F D A H WG Y E G V N G P E K WH E A F P I A R G K R Q S P V E I E L S K T L Y D S H WG Y G K E D G P S S W Y K N Y P V A E G N R Q S P I D I V P N E A S R D R WG Y G P D N G P A T WH H A F P I A H G D H Q S P I D I K G R D C V Y D P WG Y G R N N G P D S WH K L F P I A N G R R Q S P I D I K L W S A K F D S         | D<br>H                   |
| UniRef90_G3WAT6<br>UniRef90_UPI00038C5254<br>UniRef90_UPI0003314EAB                                  | WT G P V S S L G G T R Q S P I N I Q W R D S V Y D P<br>WR Y E G R N G P E Q W S R L Y P I A N G N N Q S P I D I K T K E T K H D P  | S<br>Q<br><mark>C</mark> |
| UniRef90_UPI0003F0AE5E<br>UniRef90_UPI000333A6A7<br>UniRef90_F6QBV2<br>UniRef90_UPI0002742662        | WK D P P L A P G G T R Q S P I D I K WR D S V Y D P  E E E G H P R WT G Q V S M P G G T R Q S P I N I Q P R D S V Y D P  N WG Y E G V N G P E T WH K G Y P I A L G S K Q S P V E I Q S K D T E Y D S  WT G L V P M S G G S Q Q S P I N I Q G K D S V Y D P  | G                        |
| UniRef90_M3WS40<br>UniRef90_S9W715<br>UniRef90_W5M7A4  | WGYASHNGPDHWHELLYPII AKGDNQSPII ELLHTKDLIRHDP<br>WGYDGDNGPEQWGKLYPII ANGNNQSPII NII KTSETKHDT<br>WOTPII AVPGGSROSPII DII APKDSVFDD  | S<br>S                   |
| UniRef90_E1BAD9<br>UniRef90_K7G965<br>UniRef90_UPI0002C66F8F<br>UniRef90_G1KY16                      | WK GP A SV P G G  | S<br>R                   |
| UniRef90_G3H2Q3<br>UniRef90_F6QLE4<br>UniRef90_D2GWM4  | N WGY D G K N G P D Q W S K L Y P II A N G N N Q S P I D I K T S E A K H D S<br>WGY D G K N G P E Q WG K L Y P II A N G N N Q F P I D I K T S E A K H D T   | S<br>F                   |
| UniRef90_L9J9B1<br>UniRef90_UPI0003F11B94<br>UniRef90_UPI0004419178                                  | PEHWHKDFPIAKGERQSPVDIDTRSAKHDP<br>DGPDHWHQHYPIAKGNNQSPIFIHTKDIKHDP  | A<br>S<br>T              |
| UniRef90_P07452<br>UniRef90_V9L9U2<br>UniRef90_A2IBE0<br>UniRef90_UPI0003834B4A                      | H W G Y G K H N G P E Q W H K D F P I A K G E R Q S P V D I H T Q A A V H D P G N K Q S P V D I K S S E V K H D T Q G G S R Q S P I D I R S S E S V H D P H W T Y E G P H G Q D H W P A S Y P E C G G N A Q S P I D I Q T D G V I F D P W Q S P L T I P G G T R Q S P I N I Q W R D S V Y D P   | D                        |
| UniRef90_C1C1R3<br>UniRef90_UPI0003C1A27B<br>UniRef90_K7J542   | WGYDDNNGPDKWGDSFPLGKGVRQSPVEIITTSKVEAKPHWTYAGPHGQEHWASVYPNCGGTAQSPINIIETRHVKYDS<br>FGYSGPHGPAHWAEDYDTCFGKHQSPINII   | E<br>L<br>N              |
| UniRef90_UPI00020355EA<br>UniRef90_S4RL19<br>UniRef90_F6WLX6<br>UniRef90_UPI0003F0E227               | WGYDSHNGPAHWHEHFPIANGERQSPIAI STKAARYDPHWCYDSQDGPRTWYKNSPACSGTSQSPIDIHTGSVKRNAWRGEIEVPGGSRQSPINIRIRDSVFHPNWSYHGETGIDDWHNFFPAAKGKHQSPIGISSHQTKYDS  | T<br>Q                   |
| UniRef90_V4AHB6<br>UniRef90_Q9XZG6<br>UniRef90_H2TXA2  | WGYGNDNGPAT WVKSFPVAAGTRQSPI DI VPTAAK <mark>C</mark> DT<br>WGYGPNNGPSKWAKDFPAAAGARQSPI DI KTHDAQHDS<br>GPROSPI DI VPGAASYDA  | K<br>A<br>G              |
| UniRef90_UPI000388DB35<br>UniRef90_UPI0004419260<br>UniRef90_UPI0002C43030<br>UniRef90_UPI0003AF79C1 | H WT Y K G P H G Q A H WS D D Y P D C G G Q A Q S P I D I Q T K S V Q H D P WQ S P I T I P G G S R Q S P I N I Q WR D S V Y D P WT Y E G P V G Q E H WP D Y Y A A C G G Q R Q S P I K L Q K K T V R Y N P T G P D H WH E L Y P L A K G E N Q S P I E L N T K E I S H D P  | H<br>S                   |
| UniRef90_H3CSL2<br>UniRef90_UPI000386F695<br>UniRef90_F1NAI5   | WT YVGPAGQDHWEDNYPYCGGAFQSPINIMSDLMRFDPHWCYQSQEDPRQWHLIDSTCKGNKQSPINIVTRNVIYDKQWCYDSQDGPSHWKFIKATCGGDKQSPVNIDRRWIDRDG   | T<br>N<br>S              |
| UniRef90_UPI00039469B1<br>UniRef90_U3U9G8<br>UniRef90_B7T143<br>UniRef90_A0A023EQM0                  | H WC Y Q S Q E G P A Q W H Q S Y K D C K G D R Q S P V N I V T R N V V Y E K WG Y T Q A N G P S T W A A S F P G A G G S A Q S P V D I Q T N A V K H D G WG Y D K E N G P A N W Y K S C P A F G K R Q S P I D L I D N E V K R D S F G Y D G A K G P S H WG E Q Y N S C T G K H Q S P I N I N S L D V K K V WC Y D S Q D G P T H WQ E M A S A C G G P A Q S P I N I D L H L V Q R D P | G<br>S                   |
| UniRef90_UPI0003F14225<br>UniRef90_UPI0001DEB1F3<br>UniRef90_Q8CI85                                  | WCYDSQDGPTHWQEMASACGGPAQSPINIDLHLVQRDPWCYDSQDGPTHWKEMAPACGGPAQSPINIDLHLVQQDPWTYVGPAGEKNWSKKYPSCGGLLQSPIDLHSDILQYDAWTYFGPDGESHWSKYYPFCGGVFQSPIDFQTELLQYDS  | T<br>T                   |
| UniRef90_W5NCG8<br>UniRef90_V9KZE8<br>UniRef90_UPI00032A0E1F<br>UniRef90_F6XBZ7                      | WTYFGPDGESHWSKYYPFCGGVFQSPIDFQTELLQYDS<br>HWCYDSQSGPKHWKEIQSTCGGKSQSPINIDMSNVDRDN<br>TGPELWGLVSQTCNGRSQSPVNIVTRKVLPDE<br>WCYSSQDGPDHWKDLSHNCGGESQSPINIERSKVKRDS   | T<br>N<br>R              |
| UniRef90_A3FFY1<br>UniRef90_G1QEP0<br>UniRef90_R7V5W2  | WGYAKANGPSTWPAMFPVAGGSKQSPIDIIKRRG <mark>C</mark> PEDP<br>GPEHWHKDFPIAKGHRQSPVDIIDTKAAAHDP<br>WSYTGDHDPADWPSVAPLCGGNSQSPINIIIPSEADYDD   | R<br>A<br>D              |
| UniRef90_UPI0003EBD747<br>UniRef90_D6WET4<br>UniRef90_K1QPX3<br>UniRef90_U3JQR2                      | WTYEGPNDETHWPEEYPTCGGDRQSPIDVQRKKVRYNPWGYSQYNGPETWAKCYPEAAGDRQSPVDIQQVCIKSFNWGYEPGIGPSTWSLHYPQCGGSSQSPISVDTASAVLDK  | S<br>T<br>N              |
| UniRef90_UPI0004444774<br>UniRef90_R7V8T6<br>UniRef90_S7PKC8   | WCYYSQSTPEKWPGGYMDCGGKSQSPINIVTRKTVKDE<br>GFSGAQEPRTWTDHYAFCAADRQSPIDIQPALTIYEA<br>HWTYEGPHGQDHWPASFPECGGNAQSPINIETNSVTFDS  | S                        |
| UniRef90_UPI0003F0B8BC<br>UniRef90_Q5I053  | H WT Y E G P H G Q D H WP A S F P E C G G N A Q S P I NI E T N S V T F D S WT Y D G A V D Q K H WA K Y Y K T C G G K R Q S P I NL Q R R V V H Y N P H N S H H K P C P T H L Q S P I N I H T R T A K Y D P Q W S Y E G A L D Q E R W A E Q Y P T C G G K R Q S P I N L Q K K L I E Y N P   | T<br>S<br>T              |

| QUERY<br>UniRef90 UPI00042AEA04   | 50 60 70 80  LKPLSVSYDQATSLRILNDGHAFNVEFDDSEDKAVLKGGP LQPLSVCYDQATSKKILNNGHSFNVEFDDSQDCAVLKGGP  |
|---|---|
| UniRef90_F1R454<br>UniRef90_Q92051<br>UniRef90_Q3Y546   | L   |
| UniRef90_I3JGP6<br>UniRef90_UPI00029DA733<br>UniRef90_UPI0003F1181D<br>UniRef90_UPI0000E38790 | L K P L D L K Y D P S T C L D I L N N G H S V Q V T F A D D T D S S R L T D G P L K P I S V S Y N P A T A K E I I N V G H S F H V T F E D N D N R S V L K G G P L K P L H I G Y D P A T A R R L I N N G H S F N V E Y D D S Q D R S V L K G G P L Q P L S I H Y E E A S S Q K I L N S G H S F S V E F D D S Q D K A V L K G G P   |
| UniRef90_C7FPZ1<br>UniRef90_UPI0002BD04BD<br>UniRef90_F6PGF8                                  | L QPLSI HYEEASSQKI L NSGHSFSVEFDDSQDKAVLKGGPPLKPLRLQYDPKTSLEI LNNGHSFQVAFADDDDSSTLTSGPLRTLDLSYESCTSLSI ANNGHSVQVDFNDSDDRSVVTGGPLKPLVLAYESCMSLSI ANNGHSVMVEFDDVDDRTVVNGGPLKPLVL SYDSCMSLSI ANNGHSVMVEFDDSADKSVVMRGGA   |
| UniRef90_UPI0003C28505<br>UniRef90_K9IHZ8<br>UniRef90_A8KC11<br>UniRef90_G1NGT0               | L K P L S I S Y D P S T T R S I V N N G H S F N V E F D D S A D K S V M R G G A L R P L C I E Y D A S S A K I I R N S G H S F N V D F D D T E D K S V L H G G P L S P I S L S Y N N C T S L S I S N N G H S V V V E F V D T D E R S V I T G G P L R P L N P N Y D P A S A K I I L N N G H S T S V E F D D T V N K S V L R G G P   |
| UniRef90_F6ZUY9<br>UniRef90_G1NGS2<br>UniRef90_F7BGW4   | L K S L S L R Y N S D S L K S L V N V G H S F Q V L A E D K E N P S V V A Q G P L S S W H A S Y D P G A A K T I L N N G R T C R V V F D D S F D R S V L R G G P L Q P L T L S Y D P T T S K R V V N N G H A F N V E F E D S A D R S V L K G G P   |
| UniRef90_S9WC05<br>UniRef90_G1KPK2<br>UniRef90_H3CKK1<br>UniRef90_G1KXA5                      | L   |
| UniRef90_G3W4E6<br>UniRef90_I3J4Q6<br>UniRef90_Q0IIV4<br>UniRef90_UPI00045DD5CC               | LKPLHITYDPCDAKRIINNGHSFNVEFDDSTDTSVLCGGPLGPLMINYDHCTSINISNNGHSVVVEFNDSDDRSVIKGGPLKPISIKYDPSTAKVILNNGHAFNVEFDDSEDKSVLSGGALQPLRVSYDAATCLYVWNTGYFFQVEFDDSTGRSGISGGP  |
| UniRef90_G3WAT6<br>UniRef90_UPI00038C5254<br>UniRef90_UPI0003314EAB                           | LKPLNFNYDSSTAQGI VNKGYSFNVEFDDSSDKSVLSGGPLTPLRVSYDATSCRYLWNTGYFFQVEFDDSSEESGI SGGPLQPVCLCYDPATAKEMTNNGYTLQI TFKDHDNRSVLRNGP   |
| UniRef90_UPI0003F0AE5E<br>UniRef90_UPI000333A6A7<br>UniRef90_F6QBV2<br>UniRef90_UPI0002742662 | L Q P L H V S Y D A A T C R Y M W N T G Y L F Q V D F D D S A E G S G I S G G P L P P L M V S Y D A A S C R H V R N T G Y L C Q V E F D E A A E G S G I S G G P L K P L E F H Y D P S T A K R I V N N G H S F N V E F N D S S D K S V L C G G P L R P L Q V S Y T P T S C L H I W N T G Y F F Q V E F D S T E G S G I S G G P   |
| UniRef90_M3WS40<br>UniRef90_S9W715<br>UniRef90_W5M7A4   | L K P W S A S Y D P G S C K I I L N N G K I C R V V F D D I Y D R S I L K M S G<br>L K P I S V S Y N P A T A K E I V N V G H S F H V N F E D N D N R S V L K G G P<br>I D P L K I K Y D P K T C O O I WN N G Y S F I V I S D D T S D K S T I S G G P  |
| UniRef90_E1BAD9<br>UniRef90_K7G965<br>UniRef90_UPI0002C66F8F<br>UniRef90_G1KY16               | LQPLGVSYNAEACLYVWNTGYLFQVEFDDSTEGSGISGGPLLPWFVGYDPVGARTILNNGRTCKVVFDDTFDRSVLRSGPLKPLWVSYDASACLYVWNTGYLCQVEFDDSTQGAGISGGPLLPWFTGYDPGASKTIKNTGKGCRIAFDDTFDRSVLRGGP  |
| UniRef90_G3H2Q3<br>UniRef90_F6QLE4<br>UniRef90_D2GWM4<br>UniRef90_L9J9B1                      | LKPL SVKPATAKEI VNVGHSFQVLFDDSGNQSVLKGGP<br>LKPL SYKPATAKEI INVGHSFHVNFEDNDNQLVVKGGP  |
| UniRef90_UPI0003F11B94<br>UniRef90_UPI0004419178<br>UniRef90_P07452                           | LKPLCLCYDKPASRRI LNNGHSFNVEFDDSQDKTVLKEGPLLPFSVSYDPGSCKTILNNGHSFNVEFDDSQDKTVLKEGPLLPFSVSYDPGSCKTILNNGKTCRVVFDDTFDRSMLRGGPLKPLSLRYEQATSRRIINNGHSFNVEFDDSQDKAVLEGGPLKPFSVSYNPASAKEILNVGHSFHVNFEDDSQSVLKGGPLKPFSVSYNPASAKEILNVGHSFHVNFEDDSQSVLKGGP   |
| UniRef90_V9L9U2<br>UniRef90_A2IBE0<br>UniRef90_UPI0003834B4A<br>UniRef90_C1C1R3               | LKPLKUSYDPAT <mark>CLH</mark> I WNNGYSFLVEFDDSTDRSIIDGGP  |
| UniRef90_UPI0003C1A27B<br>UniRef90_K7J542<br>UniRef90_UPI00020355EA                           | LRPVKYGNPESDPFTLLNNGHTVEMALP ISMWLQGLPPLLFSGDLPRKVYLVNNGHTALLHASKDSEKAYMSGGPLKPLSFSYDAGTAKAIVNNGHSFNVEFDDSSDKSVALIVV  |
| UniRef90_S4RL19<br>UniRef90_F6WLX6<br>UniRef90_UPI0003F0E227<br>UniRef90_V4AHB6               | R P V K Y G N P E S D P F T L L N N G H T V E M A L P L S M W L Q G P L R P V K Y G N P E S D P F T L L N N G H T V E M A L P L S M W L Q G P L K P L S F S Y D A G T A K A I V N N G H S F N V E F D D S S D K S V A L I V V L Q K L K F L G Y D S T P W S I Q N N G H T V Q V D L Q G E L A V S G G G L A P L H T Q Y D P N T C L Y I W N N G Y S F F V E Y D D S T D K S T V S G G P L A P L H T Q Y D A G A T K S V T N N G H S F N V S V D S N E S E L C G G P L T P L T V N Y S P E P A M E L C N P G L S V K A N L K S K S V I K G G P L K P L K I Q Y S Q G N D F N V T N N G H S F N V S C S S T L T E G P L K P L K I Q Y S Q G N D F N V T N N G H S F Q V T S R K T S E G T N L S G G P L K P L K I Q Y S Q G N D F N V T N N G H S F Q V T S R K T S E G T N L S G G P L K P L K I Q Y S Q G N D F N V T N N G H S F Q V T S R K T S E G T N L S G G P L K P L K I Q Y S Q G N S P G F T I L N N G H S F Q V T S R K T S E G T N L S G G P L K P L R L K Y D P S T S L D I L N N G H S F Q V T S R K T S E G T N L S G G P L K P L R L K Y D P S T S L D I L N N G H S F Q V T S R K T S E G T N L S G G P L K P L R L K Y D P S T S L D I L N N G H S F Q V T S R K T S E G T N L S G G P L R P L P P L F P O G Y R S P G F T I L N N G H S F Q V T S R K T S E G T N L S G G P L P P S M F L R G S T T S L D I L N N G H S F Q V T S R G S P G F T I L N N G H S F Q V T S R G S P S T L T E G P S M F L R G S T T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R K T S E G T N L S G G P S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S F Q V T S R G S T S L D I L N N G H S T Q T S T S L D I L N N G H S P Q T S T S L D I L N N G H S P Q T S T S L D I L N N G H S T S T S T S T S L D I L N N G H S T S T S T S T S T S L D I L N N G H S T S T S T S T S T S T S T S T S T S |
| UniRef90_Q9XZG6<br>UniRef90_H2TXA2<br>UniRef90_UPI000388DB35<br>UniRef90_UPI0004419260        | L K P L K I Q Y S Q G N D F N V T N N G Y S L V I S R K T S E G T N L S G G P L K P L R L K Y D P S T S L D I L N N G H S F Q V T F A D D S D S S T L T E G P L P P I E P Q G Y R S P G F T L L N N G H T V E M S L P P S M F L R G L K P L E I R Y D P D T C L H M W N N G Y S F L V E F E D S T D K S I I T G G P L K E L K L K G Y E A Q Q G K F S M T N N G H T V Q I T L L P T M R M T A P D G   |
| UniRef90_UPI0002C43030<br>UniRef90_UPI0003AF79C1<br>UniRef90_H3CSL2                           | LKELKLKGYEAQQGKFSMTNNGHTVQITLLPTMRMTAPDGLKPWTASYDPGSAKTILNNGKTCRVVFDDTYDRSMLRGGPLRPVDVRNYNNEQLTLGNNGHSAQISLPSK MYLLGLKPLNFEGYNVKGSSKWNLGNNGHTVKVTLSTFPKIGGGG  |
| UniRef90_UPI000386F695<br>UniRef90_F1NAI5<br>UniRef90_UPI00039469B1<br>UniRef90_U3U9G8        |   |
| UniRef90_B7T143<br>UniRef90_A0A023EQM0<br>UniRef90_UPI0003F14225<br>UniRef90_UPI0001DEB1F3    | LEPLVVSYPPFSKGKFLNNGHSVQFVPDASNNLSELSGGPLPPLVFDGFPPQQTNLTNNGHTVAVTMK SDHIPTIAGGPLGPFIFQGYPPGPWTLENNGHTALLHVDTQGRLEMRGAGLLGPFIFQGYPPGPWTLENDGHTVLLHLDTQSRLEIRGAGL  |
| UniRef90_Q8CI85<br>UniRef90_W5NCG8<br>UniRef90_V9KZE8   | LAPLQFQGYNVSVENLTNDGHSVRLNLN SDMYNQGL<br>LKPLEVRDYNTEQLTLMNNGHSVQLSLPSR MHIAS<br>LQHEVFEGYPPGQWSLANNGHSVQVTLDTNVSL SGGG   |
| UniRef90_UPI00032A0E1F<br>UniRef90_F6XBZ7<br>UniRef90_A3FFY1<br>UniRef90_G1QEP0               | L A S MAVNYKAEAQYTATNTGTGFKVDLQNVSELS GGP LEPLVVSYPPFSKGKFLNNGHSVQFVPDASNNLSELSGGP LPPLVFDGFPPQQTNLTNNGHTVAVTMKSDHIPTLAGGP LPPLVFDGFPPQQTNLTNNGHTVAVTMKSDHIPTLAGGP LGPFIFQGYPPGPWTLENNGHTALLHVDTQGRLEMRGAGL LGPFIFQGYPPGPWTLENNGHTVLLHLDTQSRLEIRGAGL LAPLQFQGYNVSVENLTNDGHSVRLNLN SDMYIQGL LKPIEVRDYNTEQLTLMNNGHSVQLSLPSR MHIAS LQHFVFEGYPPGQWSIANNGHSVQVTLDSNSSIQIKGGN LGGISFQGYDPGRWKLINNGHSVQVTLDSSIQIKGGN LGGISFQGYDPGRWKLINDGHSVLLSLEVIQSHVNISGAG LNKIRAAYADIMISELSNSGASWKAQIGSGRSSLRGGPL LKPLTVCYEQVASKRILNNGHSFNVEFDDSQDTAVLKGGP LKALNLTGYEAQDFVMTNNGHSFNVEFDDSQDTAVLKGGP  |
| UniRef90_R7V5W2<br>UniRef90_UPI0003EBD747<br>UniRef90_D6WET4                                  | LTAFTFNYDKENPATFYANAHALKVTFNTSQEMPSISGGG<br>LKALNLTGYEAQDFVMTNNGHTVQISLPPTMRMTTAEG<br>NRKLTWRYVPENTEDVTNTGYCWKVHVN GKGSELCGGP<br>LTAFTFSGYDNVNMSMKNNGHT VQIDLTGKLMTISGGG  |
| UniRef90_K1QPX3<br>UniRef90_U3JQR2<br>UniRef90_UPI0004444774<br>UniRef90_R7V8T6               | LSAWHASYDPGAAKTII LNNGRP <mark>C</mark> RVVFDDTFDRSVLRGGP<br>LTPIEFNYQQTFKNSII TNNGHSVKVNIPI T <u>CTI</u> SGGD  |
| UniRef90_S7PKC8<br>UniRef90_UPI0003F0B8BC<br>UniRef90_Q5I053<br>UniRef90_UPI000333CCB4        | L P A L R P H G Y D Q P P L E L H N N G H T V Q L S L P P T L Y L E G L K R L N L S G Y E A Q E G L F P I T N N G H T V Q I E L P P T M V L T A P D G L K P L K F S Y D P K T A K R I V N V G H C F N V E F E D T C D R S V L G E G P L K G L N L V G Y E A Q N F S M L N N G H T V Q I S L P Q T M H M T T A D G   |

|  | 90 100 110 120  |
|--|---|
| QUERY<br>UniRef90 UPI00042AEA04                  | LDGTYRLIQFHFHWGSLDGEGSQHTVDKKKYAAELHLVHW  |
| UniRef90_F1R454<br>UniRef90_Q92051               | V T G T F R L K Q F H F H WG S A D D K G S E H T V N G K C Y P A E L H L V H W I T G Y R L R Q F H F H WG S S D D K G S E H T I A G T K F P C E L H L V H W   |
| UniRef90_Q3Y546                                  | L  P N  |
| UniRef90_I3JGP6<br>UniRef90_UPI00029DA733        | ILIS D S Y RIL IF Q F H F H W G S T N E H G S E H T IV ID GIV IK Y S A E IL IHIL IT H W   |
| UniRef90_UPI0003F1181D<br>UniRef90_UPI0000E38790 | L D G T Y R L I Q F H F H W S S S D E Q G S E H S V D K R K F A S E L H L V H W L T G T Y R L I Q F H F H W G S S D H E G S E H S V D K Q K Y A A E L H F V H W   |
| UniRef90_C7FPZ1                                  | II IS G L Y RII IK O F H F H W G A C D D R G S F H LIVID G A K Y P C F II IHII. VIH W   |
| UniRef90_UPI0002BD04BD<br>UniRef90_F6PGF8        | L D G P Y R L R Q L H F H W G K K H S E G S E H T V D G K S F P S E L H L V H W L D G P Y R L K Q F H F H W G K K H S L G S E H T V D G K S F S S E L H L V H W L D G T Y R L L Q F H I H W G S C E G Q G S E H T V D G V K Y D A E L H L V H W   |
| UniRef90_UPI0003C28505<br>UniRef90_K9IHZ8        |   |
| UniRef90_A8KC11<br>UniRef90_G1NGT0               | L T G R Y R L Q Q F H L H WG S A D D H G S E H V V D G V R S A A E L H V V H W L E N M Y R L K Q F H F H WG S K G C C G S E H T V A G K T F V S E L H L V H W L T G A Y R L R Q L H L H WG S A D D H G S E H V I D G V K Y A A E L H I V H W  |
| UniRef90_F6ZUY9<br>UniRef90_G1NGS2               | L  K A T Y R L  N Q <u>F H F H</u> W G A S N D F G S E H <u>T</u>  V D G <u>K</u> G Y A A E  L  H L V H W   |
| UniRef90_F7BGW4                                  | L T G A Y R L R Q L H L H WG S A D D H G S E H V I D G V K Y A A E L H L V H W L S G T Y R L I Q F H F H WG S C D D K G S E H T V D G V K Y A A E L H L V H W   |
| UniRef90_S9WC05<br>UniRef90_G1KPK2               | L T G A Y R L R Q F H L H WG S S D D H G S E H L V D G V K Y A A E L H L V H W L M G N Y R L R Q L H F H WG S S D D L G S E H A V D G T K F A A E L H V V H W I T G T Y R L K Q F H F H WG G S D D R G S E H T I N N V K F P C E L K L W  |
| UniRef90_H3CKK1<br>UniRef90_G1KXA5               |   |
| UniRef90_G3W4E6<br>UniRef90_I3J4Q6               | I E G T Y K L Q F H T H WG S C E G Q G S E H T V D G V K Y D A E L H L V H W L T G K Y R L T Q F H F H WG S S T N E G S E H L L D G K Q Y A A E L H L V H W L D N P Y R L K Q F H F H WG G K G H E G S E H T V S G K G F A S E L H L V H W  |
| UniRef90_Q0IIV4                                  | V S H P Y R L K Q F H F H W G S C D G H G S E H T V D G V K Y E A E L H L V H W   |
| UniRef90_UPI00045DD5CC<br>UniRef90_G3WAT6        | V S H P Y R L K Q F H F H W G S C D G H G S E H T V D G V K Y E A E L H L V H W L A D H Y R L K Q F H F H W G V V G K R G S E H T V D A H G Y P A E L H L V H W L T E R Y R L A H F S F H W G C R D D Q G S E H S I D D L K Y A A E L H L V H W   |
| UniRef90_UPI00038C5254<br>UniRef90_UPI0003314EAB | L G N H Y R L K Q F H F H W G A A N A W G S E H V V D G H A Y P A E L H L V H W V C E L Y R L R E L H F H W G C T D D C G S E H T V D G A N Y S G E L N L V H W L G S H H R L K Q F H F H W G S E D T W G S E H A L D S C V Y P A E L H V V H W   |
| UniRef90_UPI0003F0AE5E<br>UniRef90_UPI000333A6A7 | II IENHYRII IKOEHEHWGAIVIDMRGSEHTIVIDGHTEAAEII IHII VIHW  |
| UniRef90_F6QBV2<br>UniRef90_UPI0002742662        | LAEKYRLA QFHFH WGQKQPNGSEHTLNGKQFAAELHLVHW<br>LENHYRLQQFHFH WGAENEWGSEHTVDGQVYPAELHLVHW   |
| UniRef90_M3WS40                                  | VIGGKTWRRNSHILIPWILLIHSDOGILIKILIOLISILIEGIVVITHAHILVIHW  |
| UniRef90_S9W715<br>UniRef90_W5M7A4               | L S G S Y R L R Q F H F H WGI T D D Y G S E H L V D G V K Y S A E F H I V H W L K D Q Y R L C Q F H F H WG E N N A WG S E H T I D R K L F S A E L H L V H W   |
| UniRef90_E1BAD9<br>UniRef90_K7G965               | LENHYRLKQFHFHWGAVNEWGSEHTVDDRVYPAELHLVHW<br>LPGTYRLRQLHFHWGSSNDHGSEHNVDGVKYAAELHLVHW<br>LENHYRLKQFHFHWGAENEWGSEHTVDAHVYPAELHLVHW  |
| UniRef90_UPI0002C66F8F<br>UniRef90_G1KY16        |   |
| UniRef90_G3H2Q3<br>UniRef90_F6QLE4               | L S E S Y R L T Q F H F H W G N S N D H G S E H T L D G V K F S L S N S Y R L H Q L H F H R D S G S E H T V D G F K Y S G E L H I V H W   |
| UniRef90_D2GWM4                                  | LENHYRLKQCHFHWGAVNERGSEHTVDDDRVYPAELHLVHW   |
| UniRef90_L9J9B1<br>UniRef90_UPI0003F11B94        | ILIS G P Y RILIR Q F HILIH W G S A D D H G S E H I IVID GIVIK F A A E ILIHIL VIH W  |
| UniRef90_UPI0004419178<br>UniRef90_P07452        | L T G T Y R L I Q F H F H WG S S D E Q G S E H T V D K K K Y A A E L H L V H W L S D N Y R L S Q F H F H WG K T D D Y G S E H T V D G A K F S A E L H L V H W   |
| UniRef90_V9L9U2<br>UniRef90_A2IBE0               | IL IE N H Y K IL IK Q F H F H W G A E N N R G S E H T II IN S IL V IY P A E IL IH IL V IH W   |
| UniRef90_UPI0003834B4A<br>UniRef90_C1C1R3        | L PRKYTAAQLHLHWGQKGTKGSEHQINSEATAAELHVVHY<br>LENQYRLKQFHFHWGAINDWGSEHTVDCKFYPAEVXDEML<br>LKDNHELWQYHAHWGSDNSKGSEHRVDGKMYAAELHLVHW   |
| UniRef90_UPI0003C1A27B                           | ILIPARYTAIVIQILIHILIH WGSEYPGGSEHIL LIDGEIVIFPAEMHIVVIHY  |
| UniRef90_K7J542<br>UniRef90_UPI00020355EA        | LNGTYVFEQLHFHWGENDREGSEDLINNHSFAMELHAVFY<br>TFETRYTLHI  |
| UniRef90_S4RL19<br>UniRef90_F6WLX6               | L P G T F N A V Q M H F H W G N P H G P G S E H T I N G K Q F P V E L H I V H Y L E N P F R L K Q F H F H W G R N N D W G S E H T V D S R V F P A E L H L V H W L K Y R Y K M A G F H A H W G L T E A T G S E H T V D G I P Y A G E F H L V H W L E G E Y K L E Q F H L H W G S A D K Q G S E H T L N G K M F P A E L H L V H Y L E H N Y R F E Q F H F H W G K T S G S G S E H L L D G K A F P A E L H L V H W I T G I Y R L K Q F H F H W G A S D D K G S E H T V A G K M Y P A E L H L V H W |
| UniRef90_UPI0003F0E227<br>UniRef90_V4AHB6        | L K Y R Y K M A G F H A H WGL T E A T G S E H T V D G P Y A G E F H L V H W L E G F Y K L F Q F H L H WG S A D K Q G S F H T L N G K M F P A F L H L V H Y  |
| UniRef90_Q9XZG6<br>UniRef90_H2TXA2               | LEHNYRFEQFHFHWGKTSGSGSEHLLDGKAFPAELHLVHW  |
| UniRef90_UPI000388DB35                           | L P Q T Y A A V Q L H F H WG S R Q A G G S E H Q V N G E A F P A E L H I V H Y  |
| UniRef90_UPI0004419260<br>UniRef90_UPI0002C43030 | L P Q T Y A AVQL H F H WG S R Q A G G S E H Q V N G E A F P A E L H I V H Y L E N N Y R L K Q F H F H WG A V S D WG S E H T V D C K V F P A E L H L V H W T K Y L A E Q M H F H WG G R S S E M S G S E H T L D G R R F M E I H V V H Y  |
| UniRef90_UPI0003AF79C1<br>UniRef90_H3CSL2        | L H H R Y S A A QL H F H WG S S D D H G S G H S G D G G K Y A A E L H L V H W L H H R Y S A A QL H F H WG S S S S P G S E H MV N N K Q Y A A E M H I V H F  |
| UniRef90_UPI000386F695<br>UniRef90_F1NAI5        | L G S K Y K A   E F H L H W G V P G G Q G S E H S   D G E K Q A M E L H V V H   L P G R Y R A L Q L H F H W G S L S T N G S E H T V D G Q Q L P M E L H I V H I   |
| UniRef90_UPI00039469B1<br>UniRef90_U3U9G8        | LERKYKAVEFHFHWGLLAEQGSEHSIDGEKYPMEFHIVHL  |
| UniRef90_B7T143<br>UniRef90_A0A023EQM0           | LAKKYKFEQFHFHWGDKDSEGSEHRVNGKMYSAELHFIVHW   |
| UniRef90_UPI0003F14225                           | LAKKYKFEQFHFHWGDKDSEGSEHRVNGKMYSAELHFIVHW LNGTYQYSQLHFHWGDNDTFGSEDMIDNHLFPMELHVVFF PPPSYRALQLHFHWGTPASAGSEHSLDGQRSSMEMHVVHM PLPAYRALQLHFHWGGPGRAGSEHSLDGQRRPMEMHVVHM QPHHYRAEQLHLHWGNNDPHGSEHTVSGKHFAAELHIVHY LPNRYSAAQLHFHWGSSSPAGSEHAIDGKQFAVEMHVVHF  |
| UniRef90_UPI0001DEB1F3<br>UniRef90_Q8CI85        | QPHHYRAEQLHLHWGNNDPHGSEHTVSGKHFAAELHIVHY  |
| UniRef90_W5NCG8<br>UniRef90_V9KZE8               | L P N K Y S A A QL H F H WG S S S P A G S E H A II D G K Q F A V E M H V V H F L V G K Y K A L QL H F H WG N G L S Y G S E H T II N K K Q Y P M E L H I V H M   |
| UniRef90_UPI00032A0E1F<br>UniRef90_F6XBZ7        | L VGKYKALQLHFHWGNGLSYGSEHTINKKQYPMELHIVHM<br>L VDEYKAIQFHLHWGKDGGLGSEHTIDGEKFPMEMHIVHL<br>LPNTYRALQFHFHWGSSTRDGSEHLMDGKQYPMELHIVHM  |
| UniRef90_A3FFY1<br>UniRef90_G1QEP0               | GDDEYVLEQFHPHWGKTNERGSEHTVDGTCYPAELHLVHW<br>LADTYRLVQFHFHWGSCDGQGSEHTVDQEKYAAELHLVHW<br>LVGTYRFMQLHLHHGKSSAKGSEHTINAMHYAAELHLVHL  |
| UniRef90_R7V5W2                                  | L VG T Y R F MQLHLHHGKSSAKGSEHT I NAMHYAAELHL VHL   |
| UniRef90_UPI0003EBD747<br>UniRef90_D6WET4        | TEY   AVQMHFHWGGAE   SGSEHT   DGLRYAAE   HVVHY   LEGKY   LEQFHCHWGETNDQGSEHT   VNGQKFAGE LHLVHW   VSDLYRAKQFHFHWGSEDRRGSEHD   NDNHFPMEMHVVHY  |
| UniRef90_K1QPX3<br>UniRef90_U3JQR2               | V S D L Y R A K Q F H F H WG S E D R R G S E H D I N D N H F P M E M H V V H Y L T G A Y R L R Q L H L H WG S S D L H G S E H V I D G V K Y A A E L H M V H W   |
| UniRef90_UPI0004444774<br>UniRef90_R7V8T6        | LISTTYKAVQFHLHWGKDGGPGSEHTVDGEQYPMELHIVHM<br>GESVYKTHSLHFHWGDAAEYGSEHTVDGAAYPLEMHIVHY   |
| UniRef90_S7PKC8<br>UniRef90_UPI0003F0B8BC        | LTGYYRLRQLHLHWGSSDLHGSEHVIDGVKYAAELHMVHWLSTTYKAVQEHLHWGKDGGPGSEHTVDGEQYPMELHIVHMGESVYKTHSLHFHWGDAAEYGSEHTVDGAAYPLEMHIVHYLPRKYVAVQLHLHWGERGSMGSEHQINSKASAAELHIVHYTKYLAKQMHFHWGGGHSEMSGSEHTIDGIRFMLEIHVVHYLTGYYRLCQFHFHWGSSDKDGSEHNIDGKLYPAELHIVHW  |
| UniRef90_Q5I053                                  | LTGYYRLCQFHFHWGSSDKDGSEHNIDGKLYPAELHIVHW  |
| UniRef90_UPI000333CCB4                           | TVY MAQQMHFHWGGGSSEMRGSEHTI DKKRY MIEAHVVHY   |

| JUENY DP10042AEA04 NT K Y G D F G K A Y G G P D G L A V L G P F L K K G G A K P G L G K V V D Y L L MARKED P10042AEA04 NT K Y G S F G K A Y G G P F L K K G G A K P G L G K V V D A L MARKED P10042AEA04 NT K Y P N F G E A A S K P G E A K P K L G K V L D A L L MARKED P10042AEA04 NT K Y P N F G E A A S K P G E A K P K L G K V L D A L L MARKED P10042AEA04 NT K Y P N F G E A A S K P G E A A S K P G G L A K V G V F L K K G A A N P R L G K V L D A L L MARKED P10042AEA04 NT K Y P N F G E A A S K P G E A A S K P D G L A V L G V F L K K G A A N P R L G K V L D A L L MARKED P10042AEA04 NT K Y P N F G E A A S K A D G G L A V L G V F L K K G A A N P R L G K V L D A L L MARKED P10042AEA04 NT K Y P N F G E A A S K A D G G L A V L G V F L K K G G A A N P R L G K V L D A L L MARKED P10042AEA04 NT K Y G G F G K A A S K A D G G L A V L G G F F K K K G G A A N P R L G K K V L D A L L MARKED P10042AEA04 NT K Y G G F G K A A S K A D G G L A V L G G F F K K K G G A A N P R L G K K V L D A L L MARKED P10042AEA04 NT K Y G G F G K K A A S K A D G G L A V L G G F F K K K G G A A N P R L G K K V L D A L L MARKED P10042AEA04 NT K Y G G F G K K A A S K A D G G L A V L G G F F K K G G G W T P R G G L A V L G G F F K G G G W T P R G G G K W T P R G G K W T P R  |  | 130 140 150 160  |
|--|--|--|
| Jurkengo Grode  N T K Y P S S F K D A Y D K P D G L I A Y J G Y F L K II G A D N P K L D K Y L D A M Jurkengo Grode  N T K Y P S S F K D A Y D K P D G L I A Y J G Y F L K II G A D N P K L D K Y L D A M Jurkengo Grode  N T K Y A S F E A A N K B D G L I A Y J G Y F L K II G A D N P K L D K Y L D A M Jurkengo Grode  N T K Y S S F E A A N K B D G L I A Y J G Y F L K II G A D N P K L D K Y L D A M Jurkengo Grode  N T K Y S S F E A A S K A D G L I A Y J G Y F L K II G A D N P K L D K Y L D A F L JURKENG JURGOST IN THE STANDARD STANDAR | QUERY                                      | N T K Y G D F G K A V Q Q P D G L A V L G L F L K V G S A K P G L Q K V V D V L  |
| JARRENO DE CASA SA SA PARENT DE LA N. Y SA PARENT D | UniRef90_UPI00042AEA04<br>UniRef90_F1R454  | NTKYPSFKDAIVIDKPDGII IAIV VIGIVIFII IKII IGADNPKII IQKII I IDAM  |
| JIRREPO JUPIDOS 1917 191 191 191 191 191 191 191 191 19  | UniRef90_Q92051                            | N T K Y P N F G E A A S K P D G L A V V G V F L K I G A A N P R L Q K V L D A L  |
| JURIAGES JASKCTI NA N Y K S F S E A A A A P D G L A V V G I F L E T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E A R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M L M L M L M L M L M L M L M L  |  | N S K Y K S F A E A A N K S D G L A V L G V F L E A G A E N P G L K K V T D T L  |
| JURIAGES JASKCTI NA N Y K S F S E A A A A P D G L A V V G I F L E T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E A R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M L M L M L M L M L M L M L M L  | UniRef90_UPI00029DA733                     | N S K Y S S L A E A A S K A D G L A V I G V L M K V G E A N P K L Q K I L D A L  |
| JURIAGES JASKCTI NA N Y K S F S E A A A A P D G L A V V G I F L E T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E A R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E H R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H G I T D A L JURIAGE D A L M C S T G D E M R A L H M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R A L M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M M L T D A L JURIAGE D A L M C S T G D E M R M L M L M L M L M L M L M L M L M L  | UniRef90_UPI0003F1181D                     | NTKYGDFGKAVQQPDGVAVLGIFLKIGSAKPSLQKVIDVL   |
| Junkergo    |  | NTKYSSFGEAASQPDGLAVVGVFLQIIGDNHVGLQKVVD <u>VL</u>  |
| Junkergo    | UniRef90_UPI0002BD04BD                     | NKKYSTFGEAASAPDGLAVVGVFLETGDEHPSMNRLTDAL   |
| JURIAGES JASKCT1  NAME Y K S F S E A A A A P D G L A V V G B   F L E T G D E H R A L H G I T D A L L JINGRESS D FEBRUARY OF THE STANDARD S | · . · <del>_</del> <u>_</u> <u>_</u> · . · | NKKYKIFAEAAAAPDGLAVVGIFLEPRFR <mark>C</mark> AGWIPRQALF<br>NTRYGTFSFAVKHPDGIAVIGIIIKVGNAKPFIOKVVDAI  |
| 18   18   18   18   18   18   18   18  | UniRef90_K9IHZ8                            | N S N Y S S F VE A A H E P D GL A V L G V F L Q L G E F N P Q L Q K I L D L L  |
| 18   18   18   18   18   18   18   18  |  | NANYKSESEAAAAPDGLAVLGIFLEETGDEHRALHQITDAL  |
| JAMES   SAY   JAMES   SAY   JAMES   SAY   JAMES   JA   | UniRef90_F6ZUY9                            | NSDYSSFAEASKNPDGCAVVTVFTKVGSSHPGLQRVVEAL   |
| JAMES   SAY   JAMES   SAY   JAMES   SAY   JAMES   JA   |  | N P K H G N F A G A L IK Q P D GIV A IV V IGIV F L IKIV K T P K P E M K R I L L E E I I  |
| Junkel90   | UniRef90_S9WC05                            | NSKYNSFASAILIKKPDGIVIAIVI IGII IFILI   |
| Jinkel90   | UniRef90_G1KPK2                            | NDKYASFVEAACESGVEOOLGAANPRI ORVIDAL  |
| JAIRGEGO UPIONOSTADESC  N T K Y Q T Y G V F L K I Q G R A N K E E T L Q R I Y D Q L L J J J Q S J L A V Y G V F L K I Q G R A N K E L Q K I Y D Q L L J J J Q S J L A V Y G V F L K I Q G R A N K E L Q K I Y D Q L L J J J Q S J L J J Q S J L J J Q S J L J Q K I Y D Q L J J J Q S J L J Q  | UniRef90_G1KXA5                            | NTKYGSEGEAIVIKHPDGILIAIVVIGIVIEILIKIVIGSA <mark>C</mark> PGILIQKIVVIDAIL   |
| JAIRGEGO UPIONOSTADESC  N T K Y Q T Y G V F L K I Q G R A N K E E T L Q R I Y D Q L L J J J Q S J L A V Y G V F L K I Q G R A N K E L Q K I Y D Q L L J J J Q S J L A V Y G V F L K I Q G R A N K E L Q K I Y D Q L L J J J Q S J L J J Q S J L J J Q S J L J Q K I Y D Q L J J J Q S J L J Q  | UniRef90_G3W4E6                            | NTKYESFKWAWTKDDGLAVIGVELETGDDHRWIHMITDWI   |
| JAMESSO JUPIONO31905C5  N S K Y V D T Y D E A V E S E N E S E  | UniRef90_Q0IIV4                            | NTKVASMAEAWKHCDWLIAWWIGWEILIKWGEAHPGILIOKWLIDAIL   |
| JAMERSON UPHONOSSARADA  JAMERSON UPHONOSSARADA  N P M Y Q S Y Q D A M Y N S Y G E A M L G A R E G L A V I A V I A V I E L E L G T T H Q A L Q P L V D L L M S M S M S M S M S M S M S M S M S  | UniRef90_UPI00045DD5CC                     | NSKYQTYQEAIVLIGENGILIAIVI GIVIFILIKILIGARNKEILIQKIL VIDVLI   |
| JAMERSON UPHONOSSARADA  JAMERSON UPHONOSSARADA  N P M Y Q S Y Q D A M Y N S Y G E A M L G A R E G L A V I A V I A V I E L E L G T T H Q A L Q P L V D L L M S M S M S M S M S M S M S M S M S  | UniRef90_UPI00038C5254                     | NPKYENYKEAAVGEDGLAVIGVELKLGARHETLQRLVDLL   |
| JURIGESO UPI000333A6A7 JURIGESO MENDOUZC42662 JURIGESO MENDOUZC42662 JURIGESO MENDOUZC42662 JURIGESO MENDOUZC42662 JURIGESO MENDOUZC42663 JURIGESO MENDOUZC42664 JURIGESO MENDOUZC42665 JURIGESO MENDOUZC42665 JURIGESO MENDOUZC42665 JURIGESO MENDOUZC426665 JURIGESO MENDOUZC426665 JURIGESO MENDOUZC426665 JURIGESO MENDOUZC426666 JURIGESO MENDOUZC426667 JURIGESO MENDOUZC42667 JURIGESO MENDOUZC4267  | UniRef90_UPI0003314EAB                     | N S E K Y S F A E A V S Q A D G L V V L S V L M K I G R E N L H L Q R I V D A L D A R Y R S Y G E A A L G A E G L A V L A V E I K I G V D L A C L O T I V D A L  |
| Jürker90 (1900002742662) Jürker90 (190000274262) Jürker90 (1900000374262) Jürker90 (190000374262) Jürker90 (190000374622) Jürker90 (19000374622) Jürker90 (19000374622) Jürker90 (19000374622) Jürker90 (19000374622) Jürker90 (1900037462 | UniRef90_UPI000333A6A7                     | NPMYQSYQDAIVVIGEKGILIAIVLIAIVIEILIEILIGTTHQAILIQPILVIDILL  |
| JURIGE90 M3WS40  N   | UniRef90_F6QBV2                            | NTKYESMQNAVNK <mark>C</mark> DGLAVVGVLIEVSHPMPGLEKITNIL  |
| Jurice900 _W5M7A4  | UniRef90_M3WS40                            | NPKYNTFGEAILIKQPDGII IAIVVIGII IFILIKII IGREKGEFQILIFILIDAILI  |
| Jurikefop (18A09) Jurikefop (187096) Jurikefop (187096) Jurikefop (187096) Jurikefop (187096) Jurikefop (18716) Jurikefo | UniRef90_S9W715                            | N S K Y S S F A E A A S Q A D G L A L L G V L M K V G P A N P K L Q K L L D A L  |
| Jurikef90_C1KY16 Jurikef90_C1KY16 Jurikef90_C1KY16 Jurikef90_C1KY16 Jurikef90_C1KY16 Jurikef90_C2KYM4 Jurikef90_C2KYM4 Jurikef90_C9CMW4 Jurikef90_C9CMW4 Jurikef90_L9J9B1 Jurikef90_L9J9B1 Jurikef90_L9J9B1 Jurikef90_L9J9B1 Jurikef90_UP1000311B94 Jurikef90_UP1000311B94 Jurikef90_UP1000311B94 Jurikef90_UP100031B94 Jurikef90_UP1000335EA Jurikef90_UP1000335EA Jurikef90_UP1000335EA Jurikef90_UP1000385EA Jurikef90_UP1000386B35 Jurikef90_UP1000386B35 Jurikef90_UP1000386B35 Jurikef90_UP1000386B35 Jurikef90_UP1000386B35 Jurikef90_UP1000386B35 Jurikef90_UP1000386B35 Jurikef90_UP1000386B35 Jurikef90_UP1000380B35 Jurikef90_UP100380B35 Jurikef90_UP1 | UniRef90_E1BAD9                            | NAKYONYTDAIVITGADGII IAIV VIGIVIFII IKII IGARHEEII IOEII VIAIVII   |
| Junker90   | UniRef90_K7G965                            | Y S K Y S N Y A E A L R N Y D G V A I L G I F L Q V E T P K P E M K R I L E E I I  |
| Junkef90_C6QLE4 Junkef90_D6QLE4 Junkef90_D6QLE4 Junkef90_D6QLE4 Junkef90_D76DQ2 Junkef90_D76DQ3 Junkef90_D76DQ | UniRef90_G1KY16                            | CSKYSNY L DACRKNDGAA IL AMF L K V KNPKPEMKR II EE L  |
| Junikergo D. 25GWM4  | UniRef90_G3H2Q3                            | G E  V  G P A N P N  V  Q K  V L  D A  L   |
| JURIRE190 V219U2  N X K Y R T F E A L M Y B O S L N Y B X B D G L A V L G L L I E V E T E N P A Y D H I L S H L JURIRE190 V219U2  N X K Y R T F E A L M Y L D S L N Y B X B D G L A V L G M F I L E V G A K H D G L Q K L V L D A L JURIRE190 V219U003354844  N T K Y S S P E A A D K E D G L A V L G M F I L E V G A K H E G F Q K I V D A L JURIRE190 V219U00335544  N T K Y S S P E A A D K E D G L A V L G M F I L E V G A K H E G F Q K I V D A L JURIRE190 V219U003355544  N T K Y S S P E A A D K E D G L A V L G M F I L E V G A K H E F Q K I V D A L JURIRE190 V219U002355544  N T K Y S N I S A A K D K P D G L A V L G M F I L E V G A K H E F Q K I V D A L JURIRE190 V219U002355544  N T K Y S S P E A A D K E D G L A V L A F F F E D N K A N P M F D D L V E A L JURIRE190 V219U002355544  N T K Y S N I S A A K D K P D G L A V L A F F F E D N K A N P M F D D L V E A L JURIRE190 V219U002355544  N T K Y S S F G E A W K H P D G L A V L A F F F E D N K A N P M F D D L V E A L JURIRE190 V219U003365945  N T K Y S S F G E A W K H P D G L A V L G M F I V R V G K E H S Q I L Q K L V D D L L JURIRE190 V219U003467965  N T K Y S S F G E A A S K N D D G L A V L G M F I V Q I L G S E S A G I K T I T D L I JURIRE190 V219U003469815  N T K Y S S F G E A A S K N D D G L A V L G I L I E V G D V N P A Y D N I F D R L JURIRE190 V219U00346981  N T K Y S S F G E A W S K N G L A V L G V L G F L K V G G F R N F Y T Y Y S K L I S Q L JURIRE190 V219U00346981  N T K Y S S F S E A K G R P S G L A V L G V L G F F Q V S S E N N T T Y S K L I S Q L JURIRE190 V219U00346981  N T K Y S S F S E A K G R P S G L A V L G F F L K V I G A R P D N R F D A L JURIRE190 V219U003246981  N T K Y S S F S E A K G R P S G L A V L G F F L K V I G A R P D N R F D A L JURIRE190 V219U003246981  N T K Y S S F S E A K G R P S G L A V L A V L G F F L K V I G A R P D N R F S L V S G L JURIRE190 V219U003246981  N T K Y S S F S E A W S A S D S C A K R P D S G L A V L A V L G F F L K V I G A R P D N R F S L V S G L JURIRE190 V219U003246981  N T K Y S S F S E A W S S S S A K R R D D G L A V L  | UniRef90_D2GWM4                            | N S K Y R S Y K E A L T G E N G M A V I G V F L K L G A H H E A L Q K L V E V L  |
| JURIRE190 V219U2  N X K Y R T F E A L M Y B N S A D G L A V V G V F L R V G Q A N P A L Q K L V D A L JURIRE190 V219U2  N X K Y R T F E A L M S P D G L A V V G V F L R V G Q A N P A Y D H I L S H L JURIRE190 V219U00335484  N T K Y S S P E A A D K E D G L A V V G V F L Q V G A K H E G F Q K I V V D A L JURIRE190 V219U00323554  JURIRE190 V319U00335554  JURIRE190 V319U00354554  JURIRE190 V319U003 | UniRef90_L9J9B1                            | NTKYGDFGKAVQHPDGLAVLGVFLKIGNANPGLQKILDVL   |
| JURIRE190 V219U2  N X K Y R T F E A L M Y B N S A D G L A V V G V F L R V G Q A N P A L Q K L V D A L JURIRE190 V219U2  N X K Y R T F E A L M S P D G L A V V G V F L R V G Q A N P A Y D H I L S H L JURIRE190 V219U00335484  N T K Y S S P E A A D K E D G L A V V G V F L Q V G A K H E G F Q K I V V D A L JURIRE190 V219U00323554  JURIRE190 V319U00335554  JURIRE190 V319U00354554  JURIRE190 V319U003 | UniRef90_UPI0003F11B94                     | NTKYGEFGKAAQQPDGLAVLGIFLKIGDAKPGLQKVVDVL   |
| JORRE90_A2IBEO JORRE90_UP10003834B4A JORRE90_UP10003834B4A JORRE90_UP100031427B JORRE90_UP100020355CA JORRE90_UP100020355CA JORRE90_UP100020355CA JORRE90_UP100020355CA JORRE90_UP100020355CA JORRE90_UP100020355CA JORRE90_UP100020355CA JORRE90_UP100036CACZB JORRE90_UP1000AAABAAAABAAAABAAAABAAAABAAAABAAAABA                          | UniRef90_P07452                            | N S K Y P N L A D S V S K A D G L A I V A V F L K V G Q A N P K L Q K V L D A L  |
| Jurikef90  | UniRef90_A2IBE0                            | DSEYGSLSEAAQKPQGLAVLGILIEVETENPAYDHILSHL   |
| JNIRE990_UP100023C1A27B     N S K Y S N  | UniRef90_UPI0003834B4A                     | NDANACRYVECQLND SLIPVCLLQLGARHEGLQTLVDAL   |
| Juniker90  | UniRef90_UPI0003C1A27B                     | N S K Y S N  <u> </u>   S A A <u>K</u> D K P D G L  A  V L  G  <u> </u> L <u>L  </u> E G D T   <u>V</u>  N A A Y E <mark>H</mark>    <u>F</u> R Y  L   |
| Juire   Go   S4RL   9  | UniRef90_K7J542                            | K D D Y G S M N G A V A Y R D G L A V L A F F F E D N K A N P M F D D L V E A L  |
| DIIRef90   | UniRef90_S4RL19                            | NTKYLTFDGAKNEKDGLAVLG <u>FLY</u> AVGPTNNN <u>Y</u> NTI I N <u>A</u> L  |
| DIIRef90   | UniRef90_F6WLX6                            | N S K Y R T F E E A LL ME P N G L A V I G V F L K V G K H H E K L Q K L V D L L  |
| DIIRef90   | UniRef90_V4AHB6                            | NTKYSSFGEAVDKPDGLAVEGLFLKIDKPHQGLKSLTDVL   |
| DIIRef90   |  | NTDFSSFGEAASSKNG <u>LAV LGAFVQI GGESAGLKTI</u> TD <u>LI</u>  |
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| JNIREF90_UPI000386F695  JNIREF90_UPI000386F695  JNIREF90_UPI000386F695  JNIREF90_UPI00039469B1  JNIREF90_UPI00039469B1  JNIREF90_UPI00039469B1  JNIREF90_UPI00039469B1  JNIREF90_UPI00039469B1  NSKYSSFSEAVSQPDGLAVLAFFVEAGKENKNYETLLSKL  JNIREF90_UPI0003F14225  JNIREF90_UPI0003EBD747  NSBYPDFSTASDKKDGLAVLAVLAVLUTEQDADNANFSALVSGL  JNIREF90_UPI00032A0E1F  KEEYDSLAREARSHPDGLAVLAVLAVLUGEQDTDNANFSALVSGL  JNIREF90_UPI00032BD747  NSKYSSFAQAAASEGGLAVLGFFIEVGDPKPGLQKVVDAL  JNIREF90_UPI0003EBD747  NSKYESYDLAKDAPDGLAVLGFFLKVGDPKPGLQKVVDAL  JNIREF90_UPI0003EBD747  NSKYESYDLAKDAPDGLAVLGFLKARPELDKITAQL  JNIREF90_UPI0003EBD747  NSKYESYDLAKDAPDGLAVLGFLKARPELDKITAQL  JNIREF90_UPI0003EBD747  |  | N S  |
| JNIREF90_UPI000386F695  JNIREF90_UPI000386F695  JNIREF90_UPI000386F695  JNIREF90_UPI00039469B1  JNIREF90_UPI00039469B1  JNIREF90_UPI00039469B1  JNIREF90_UPI00039469B1  JNIREF90_UPI00039469B1  NSKYSSFSEAVSQPDGLAVLAFFVEAGKENKNYETLLSKL  JNIREF90_UPI0003F14225  JNIREF90_UPI0003EBD747  NSBYPDFSTASDKKDGLAVLAVLAVLUTEQDADNANFSALVSGL  JNIREF90_UPI00032A0E1F  KEEYDSLAREARSHPDGLAVLAVLAVLUGEQDTDNANFSALVSGL  JNIREF90_UPI00032BD747  NSKYSSFAQAAASEGGLAVLGFFIEVGDPKPGLQKVVDAL  JNIREF90_UPI0003EBD747  NSKYESYDLAKDAPDGLAVLGFFLKVGDPKPGLQKVVDAL  JNIREF90_UPI0003EBD747  NSKYESYDLAKDAPDGLAVLGFLKARPELDKITAQL  JNIREF90_UPI0003EBD747  NSKYESYDLAKDAPDGLAVLGFLKARPELDKITAQL  JNIREF90_UPI0003EBD747  | UniRef90_UPI0003AF79C1                     | NSKYNSYATALKHPDGIAVIGVELKIGREKGEFQLELDAL   |
| JniRef90_Q8Cl85         N S D Y P D F S T A S D K S E G L A V L A V L T E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I I I I I I I I I I I I I I I  |  | N S D Y S S I   S M A   V   D K S D G   L   A   V L   G   V L   I   E   V   G E F N P A F E Q F   L   K F   I<br>R F D   V   S D I   T F A K K N A D G   V   A V L   A F F   I   K   V   F F F N K N Y A T I L   N F   I |
| JniRef90_Q8Cl85         N S D Y P D F S T A S D K S E G L A V L A V L T E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I I I I I I I I I I I I I I I  | UniRef90_F1NAI5                            | NVKYRTLGEAKGHPSGLAVLGCFFQVSEPNSNYNTI I GGL   |
| JniRef90_Q8Cl85         N S D Y P D F S T A S D K S E G L A V L A V L T E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I I I I I I I I I I I I I I I  |  | N S K Y S S F S E A W S O P D GIL IAIV LIA F F IV E A G K E N K N Y E T LL IS K L<br>N S K Y S S F S E A W S O P D GIL IAIV I IAIV MII IE A G S A N Q A F O E MIV D A S  |
| JniRef90_Q8Cl85         N S D Y P D F S T A S D K S E G L A V L A V L T E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I I I I I I I I I I I I I I I  | UniRef90_B7T143                            | D C E T H A S T V K A N K R N G L C V L G F F L K V G A E N A A L K P L T D M L  |
| JniRef90_Q8Cl85         N S D Y P D F S T A S D K S E G L A V L A V L T E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I J I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I E I G S A N P S Y D K I F S H L L R Y I I I I I I I I I I I I I I I I I I  |  | N  |
| UniRef90_W5NCG8  JniRef90_UP100032A0E1F  JniRef90_G1QEP0  JniRef90_G1QEP0  JniRef90_UP10003EBD747  JN K K Y B E D A V K D A P D G L A V L G L M E V E E D N A N F S L I A A I L R D P N G V A V L G F F Y E V S K S P N R M Y T I I S G V U J I L D S R F P S L K E A A P E L D G L A V L G L M E V E T E N P A Y E H L L S R L UJNIREF90 UP10003F0B8BC  | UniRef90_UPI0001DEB1F3                     | NTRHQSLEEARSHPDGLAVLAVLQEQDTDNANFSALVSGL   |
| S  | UniRef90_Q8Cl85<br>UniRef90_W5NCG8         | N S D Y P N S S V A A D K K D G L   A   V L   A   V L   E   I   G S A N P S Y D K I   F S H L   N S D Y P N S S V A A D K K D G L   A   V L   G I   F I   E   V G Q F N P A F E H L L   R Y I I                          |
| N  | UniRef90_V9KZE8                            | SERYTDIR DALKKTDGLAVLGFMLEVTTDNPNYNTLTDVL  |
| UniRef90_A3FFY1  N S K F S S F A Q A A A S E G G L A V L G M F L T I G Q E H P E M S K I G N L L UniRef90_G1QEP0  N T K Y G D F G T A V K Q P D G L A V L G V F L E V G D P K P G L Q K V V D A L UniRef90_R7V5W2  N N K Y A T F E D S L G N S D A L A V L G I M I E V G E E D N A N F S L I A A I UniRef90_D10003EBD747  N S K Y E S Y D I A K D A P D G L A V L G I M I E V K D Y N S Y Y S N F I S H L UniRef90_K1QPX3  N S K Y D T F E D A V N E T N G L H V L A F L F E V G T V N H H F D E I I H H F UniRef90_U3JQR2  UniRef90_U910004444774  N P K H G N F A G A L K Q P D G V A V V G I F L K V N T P K P E M K R I L E E I UniRef90_R7V8T6  D S R F P S L K E A A P E I D G L A V L G I L M E V E T E N P A Y E H I L S R L UniRef90_U910003F088BC  N A K Y K S Y D I A K D A P D G L A V L G I L M E V E T E N P A Y E H I L S R L UniRef90_U910003F088BC  | UniRef90_UPI00032A0E1F<br>UniRef90_F6XBZ7  | N A K Y Q S       T E A K K D P Q G   L   A   V L   G F F F T   V   E   T D N P S Y N T   L V   A G M  |
| UniRef90_R7V5W2 UniRef90_UP10003EBD747 UniRef90_UP10003EBD747 UniRef90_UP10003EBD747 UniRef90_UP10003EBD747 UniRef90_UP10003EBD747 UniRef90_UP10004444774 UniRef90_USJQR2 UNIK Y A T F E D S L K Q P D G L A V L G L E U V V N S Y Y S N F L I S G V U V L E E S D Q E N A A N V I I E A L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E N P A Y E H I L S R L U U U L M E V L T E U U U U U U U U U U U U U U U U U U   | UniRef90_A3FFY1                            | NSKFSSFAQAAASEGGLAVLGMFLTIGQEHPEMSKI CNLL  |
| UniRef90_UPI0003EBD747       N S K Y E S Y D I A K D A P D G L A V L A A L I E V K D Y N S Y Y S N F I S H L         UniRef90_D6WET4       N T K Y H S F C E A A K H P D G L C V I G V F L K A G K R H P E L D K I T A Q L         UniRef90_K1QPX3       N S K Y D T F E D A V N E T N G L H V L A F L F E V G T V N H H F D E I I H H F         UniRef90_UPI0004444774       N P K H G N F A G A L K Q P D G V A V V G I F L K V N T P K P E M K R I L E E I         UniRef90_R7V8T6       D S R F P S L K E A A P E I D G L A V L G F F Y E V S K S P N R M Y T I I S G V         UniRef90_S7PKC8       D S D Y N S V S E A M K S P Q G L A V L G I L M E V E T E N P A Y E H I L S R L         UniRef90_UPI0003F088BC       N A K Y K S Y D I A K D A P D G L A V V A A I C F V I N D N T Y Y S F I I S H I   | UniRef90_G1QEP0<br>UniRef90_R7V5W2         | N  |
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| UNIRERSU_UPIUUU4444774 KSNYADILII IALKUPNGVAVLGFFYEIVSKSPNRMYTIISGV UNIRERSO_R7V8T6 DSRFPSLKEAAPEI DGLAVLGVFFEESDQENAANVIIEAL UNIRERSO_S7PKC8 DSDYNSVSEAMKSPQGLAVLGILMEVETENPAYEHILSRL UNIRERSO_UPIO003F0B8BC NAKYKSYDI AKDAPDGLAVVAAIIGFVINDNTYYSFIISHI   |  | NPKHGNEAGALKQPDGVAVVGLELKVNTPKPEMKRI LEEL  |
| UniRef90_S7PKC8 DSDYNSVSEAMKSPQGLAVLGILLMEVETENPAYEHI LSRL<br>UniRef90_UPI0003F0B8BC NAKYKSYDI AKDAPDGLAVVAAI CFVI NDNTYYSFI LSHI  |  | K S N Y A D L   I   A  L   R D P N G   V   A   V L   G F F Y E   V   S K S P N R M Y T   I   S G   V   D S R F P S   L   K E A A P E   D G   L   A   V L   G   V L   F E F S D O F N A A N   V L   F A   I               |
| UNIKETYU UPIUUU3F0B8BC NAKYKSYDII IAKDAPDGILIAIVVIAAII I <mark>C</mark> FIVI INDNTYYSFII I IS <mark>H</mark> II I  | UniRef90_S7PKC8                            | DSDYNSVSEAMKSPQGLAVLGLLMEVETENPAYEHI LSRL  |
| UniRei90 Q51053 NSKYTSFEEAAQHSDGVAVVGVFLKLLGDTNPVLESI I QNL  | UniRef90_UPI0003F0B8BC<br>UniRef90_Q5I053  | N A K Y K S Y D  |
| UniRef90_UPI000333CCB4 NSNYKNYDVAKDHPDGLAVLAFFFVESHDNPHYTEFLSHL  | UniRef90_UPI000333CCB4                     | NSNYKNYDVAKDHPDGLAVLAFFFVESHDNPHYTEFLSHL   |

| OUEDV   |                            | 170<br>O K O A B E T N E  | 180  | 190 200   |
|---|----------------------------|---|--|---|
| QUERY<br>UniRef90_UPI00042AEA04<br>UniRef90_F1R454                  | GSI KTK                    | GKOTPFPNF   | DPRSLLPGS<br>DPSVIIPSS   | L D Y WT Y P G S L T T P P L L L D Y WT Y P G S L T T P P L L L D Y WT Y L G S L T T P P L L  |
| UniRef90_Q92051<br>UniRef90_Q3Y546                                  | D <u>D</u> IKSK            | GROTTEANE   | D P K T    I     P A S   | L D Y WT Y E G S L T T P P L L  |
| UniRef90_I3JGP6<br>UniRef90_UPI00029DA733                           |                            | G K Q T S F A N F<br>G K R A P F T N F                                  | DPSTLLPGC<br>DPSTLLPGC<br>DPSTLLPSS<br>DPSTLLPDN<br>DPSSLLPDN      | L D Y WT Y D G S L T T P P L Y  |
| UniRef90_UPI0003F1181D<br>UniRef90_UPI0000E38790                    | DSVKTK                     | GKSVDFSNF<br>GKSAAFTDF  | DPSSLLPDN<br>DPTGLLPEK   | L D Y WT Y P G S L T T P P L L  |
| UniRef90_C7FPZ1<br>UniRef90_UPI0002BD04BD                           | A A I K Y K<br>Y M V R F K | G N Q I I F M D F<br>G T K A Q F S <mark>C</mark> F                     | N P A L L L P K S I<br>N P K Y L L P A S                           | LDYWTYDGSLTTPPLL<br>RHYWTYPGSITTPPIT  |
| UniRef90_F6PGF8<br>UniRef90_UPI0003C28505                           | SAVSSQ<br>DAIQTK           | G T K A Q F N S F  <br>G K R A A F T S Y                                | N  | L   S Y W T Y P G S   L   T T P P   L   S<br>L   D F W T Y P G S   L   T T P P   L   L  |
| UniRef90_K9IHZ8<br>UniRef90_A8KC11                                  | DSIKEK<br>YMVRFK           | GKQTRFTDF   | D  | <u>W</u> D Y WT Y P G S L T <u>V P P L F</u><br>L E Y WT Y P G S L T T P P L Y  |
| UniRef90_G1NGT0<br>UniRef90_F6ZUY9                                  | FIIIAAK                    | GKOAAFTNE   |  | R D Y WT Y P G S L T T P P L H<br>M D Y WT Y Q G S L T H P P L L  |
| UniRef90_G1NGS2<br>UniRef90_F7BGW4                                  | DNI KTK<br>ESLKTK          | GKEAPFQHF<br>GKETVFTNF  | DPSILFPKS<br>DPTGLLPAS   | R D Y WT Y H G S F T T P P C E<br>R D F WT Y P G S L T T P P L L  |
| UniRef90_S9WC05<br>UniRef90_G1KPK2                                  | DAIKAK                     | G K Q H R F T N F   | N  | L D Y WT Y L G S L T T P P L L  |
| UniRef90_H3CKK1<br>UniRef90_G1KXA5<br>UniRef90_G3W4E6               | DSIKHK                     | GKRAAFTNY   | DPTSILIPAC   | RDYWTYILIGSILITTPPILLI  |
| UniRef90_I3J4Q6<br>UniRef90_Q0IIV4                                  | YTVKYK                     | GENTAFTNF<br>GSLTDFKGF<br>GNEAPFTDY                                     | N  | L H F WT Y L G S L T T P P L H<br>L D F WN Y K G S L T T P P L L  |
| UniRef90_UPI00045DD5CC<br>UniRef90_G3WAT6                           | PKIKYK<br>DAIKQR           | D T R A <u>A L S S F (</u><br>N M <mark>H</mark> A V F T D F            | Q  | PDYWTYPGSLTTPPLT<br>LDFWTYSGSLTUPPLL  |
| UniRef90_UPI00038C5254<br>UniRef90_UPI0003314EAB                    | P D V K H K<br>H A V K T K | DTQVTVGPF<br>GKTIPFTNF  | D  | R D Y WT Y P G S L T T P P L A<br>L D Y WT Y F G S L T S P P L C  |
| UniRef90_UPI0003F0AE5E<br>UniRef90_UPI000333A6A7                    | PQIKHK                     | D A R V A L G P F  <br>D T Q V A L S P F                                | Q  | Q D Y WT Y T G S L T T P P L A<br>R D Y WT Y A G S L T T P P L A  |
| UniRef90_F6QBV2<br>UniRef90_UPI0002742662                           | DKI QTK<br>PEIKHK          | G   | N  | L E F Y T Y P G S L T T P P L S<br>R D Y W T Y T G S L T T P P L A  |
| UniRef90_M3WS40<br>UniRef90_S9W715                                  | KS V KTK                   | GKSAPFTNF   | DPSCLFPAC<br>DPSVLLPSS   | <u>L</u>  D   |
| UniRef90_W5M7A4<br>UniRef90_E1BAD9<br>UniRef90_K7G965               | PTVRHK<br>PDIKHK<br>NGIKTK | D S V V E F T R F<br>D A R A A L G P F                                  | DAA <mark>C</mark> LLPT <mark>C</mark><br>QPS <mark>C</mark> LLPAC | Q D Y WT Y P G S L   T T P P L   T<br>Q D Y WT Y P G S L   T T P P L   S<br>WD Y WT Y H G S F T E P P C D   |
| UniRef90_UPI0002C66F8F<br>UniRef90_G1KY16                           | PEI RHK<br>DAI KTK         | D A R A A L G P F G K E A P F S N F G K E V P F P N F G K R A P F T N F | EPS <mark>C</mark> LLPT <mark>C</mark>                             | R D Y W T Y P G S L T T P P L T<br>R N Y Y T Y Q G S F T T P P C E  |
| UniRef90_G3H2Q3<br>UniRef90_F6QLE4                                  | NSVKTK<br>HAIKTK           | G K R A P F T N F<br>G K Q A P F T N F                                  | DPSCLLPSS<br>DPSTL_PSS   | L D Y WT Y F G S L T H P P L H<br>L N F WT Y S G S L T H P P L Y  |
| UniRef90_D2GWM4<br>UniRef90_L9J9B1                                  |                            | GARSAVGPF   | Q P A R L L P A C  | RDYWTYAGSLTTPPLS  |
| UniRef90_UPI0003F11B94<br>UniRef90_UPI0004419178                    | DSI KAK                    | GKSADFTNF   | D  | R D Y WT Y H G S F T T P P <mark>C</mark> E<br>L D Y WT Y P G S L T T P P L <u>L</u>  |
| UniRef90_P07452<br>UniRef90_V9L9U2                                  | PAVKYK                     | DSTVEFSNF   | DPSTLLPPS<br>DPS <mark>C</mark> MIPS <mark>C</mark>                | LDYWTYPGSLTTPPQT  |
| UniRef90_A2IBE0<br>UniRef90_UPI0003834B4A                           | H E V R Y K                | D Q K T S V P P F<br>D T V I E F D V F<br>G Q Q T V L A S V             | NVRELLPQQ<br>DPSCLMPSC   | E Q F F R Y N G S L T T P P C Y P D Y W T Y A G S L T T P P L T   |
| UniRef90_C1C1R3<br>UniRef90_UPI0003C1A27B<br>UniRef90_K7J542        | G N V K Y A                | G   | D V R L_L  <mark>P                                    </mark>      | K   |
| UniRef90_UPI00020355EA<br>UniRef90_S4RL19                           | NSIQTK                     | GKQASFTNF   | DPTGLLPAC  | RDYWTYPGSLTTPPLH  |
| UniRef90_F6WLX6<br>UniRef90_UPI0003F0E227                           | PSVRYK<br>QKIRFN           | DALTEFNYF<br>GDS <mark>C</mark> AVEGG                                   | DSS <mark>C</mark> LLPS <mark>C</mark><br>FDPSLPDNI                | GDYWTYSGSLTTPPLT  |
| UniRef90_V4AHB6<br>UniRef90_Q9XZG6                                  | SEVQYK<br>PQVQNI           | DKSINIKQE<br>GDKQDLKVP  | Y N P L L P D N L<br>F N L S L P S <u>N T</u>                      | N D Y W T Y S G S L T T P P C Y   |
| UniRef90_H2TXA2<br>UniRef90_UPI000388DB35                           | TRSKLF<br>KNIQYA           | LFLIQI GN<br>GQKVSI PPF   | K N E S L Q K V L<br>N V H E L L P G Q                             | DKFGT KGSLTTPPLL<br>GHYFRYNGSLTTPPCS  |
| UniRef90_UPI0004419260<br>UniRef90_UPI0002C43030                    | PSIKYK<br>QNIKYP<br>DKIKTK | G Q S T T L A G V   | DASCLEPSC<br>DIHDLLPNL   | PDYWTYSGSLTTPPLS<br>HDYYTYLGSLTTPPC<br>RDYWTYHGSFTTLCPT   |
| UniRef90_UPI0003AF79C1<br>UniRef90_H3CSL2<br>UniRef90_UPI000386F695 | TGI KYK                    | DEKVPVPGF   | NIRSLLPAQ  | LDYYRYDGSLTTPPCY  |
| UniRef90_F1NAI5<br>UniRef90_UPI00039469B1                           | RNI SHA<br>KNI ESK         | G Q A V D L A S T<br>G G S A R V D P L                                  | FRLGTLLPH<br>PLSSLLPPE   | SRYYRYQGSLTTPDCS<br>EDYYRYQGSLTTPDCY  |
| UniRef90_U3U9G8<br>UniRef90_B7T143                                  | KKVNAC<br>PKVKKA           | GT <mark>C</mark> SVKNSF<br>GSSEPLEFD                                   | N P S V L L P S T<br>M R S V M P K D L                             | SEFYTYHĠŚLTTPP <mark>C</mark> N<br>TDYYTYDGSLTTPP <u>LL</u>   |
| UniRef90_A0A023EQM0<br>UniRef90_UPI0003F14225                       | GNITNA<br>KNVSGL           | H K S T T F T S P<br>G L S A K L A S T                                  | P  | L H Y Y T Y D G S L T T P P C S<br>S P Y Y R Y P G S L T T P G C Q  |
| UniRef90_UPI0001DEB1F3<br>UniRef90_Q8CI85                           | K N V S E R<br>Q H V K Y K | G Q Q V L I P G F   | FPLASILLPG<br>NIEELLPES  | SKYYKYSGSLTTPGCQ<br>PGYYRYEGSLTTPPCY  |
| UniRef90_W5NCG8<br>UniRef90_V9KZE8<br>UniRef90_UPI00032A0E1F        | DAVKYK<br>EKVSHQ<br>KYISQP | G D K V WL S S T  | NIQELLPKRI<br>FQLNSILPK<br>SIDMEIDNE                               | L D I I K I D G S L T T P N C S T K V F P V K C S L T T P N C S   |
| UniRef90_UPI00032A0E1F<br>UniRef90_F6XBZ7<br>UniRef90_A3FFY1        | K N V S L K<br>P F I S H K | GEFIELDST   | F P L E M L L P P  | HDYYRYQGSLTTPDCS<br>GSYYTYSGSLTTPDC   |
| UniRef90_G1QEP0<br>UniRef90_R7V5W2                                  | CSIKTK<br>PEVTED           | G K S A P F T G F<br>G S M A E M T G K                                  | HPWGLLPKT<br>FPLRACLPF   | E D Y Y R Y E G S L T T P D C H S R Y Y R Y Q G S L T T P D C S Y S R Y Y R Y Q G S L T T P P C C N L T T P P C C N L T T P P C S L T T P P C C N L T T P P C S L T T P P C C Y L T T P P C C Y C S C S C S C S C S C S C S C S C |
| UniRef90_UPI0003EBD747<br>UniRef90_D6WET4                           | E D V R D L<br>P R V E Y K | GQSTVLSSL<br>GQRAKI VPL   | DVQDMLPDL<br>NPGLFIPEE   | R F Y Y T Y G G S L T T P P C T<br>S G Y Y T Y Q G S L T T P P C S  |
| UniRef90_K1QPX3<br>UniRef90_U3JQR2                                  | Y Q I A H K<br>E N I K T K | A D <mark>H V</mark> N L T T F<br>G K E A P F L <mark>H</mark> F        | PLSGLFPDD<br>DPSLLFPKS   | L K Y Y R Y H G S L T T P P C S<br>R D Y W T Y H G S F T T P P C E  |
| UniRef90_UPI0004444774<br>UniRef90_R7V8T6                           | ESVASK<br>SSVQQP[          | NVSFSLPSI<br>LGKENIIDV  | S L A Q L I P P E<br>A S G D L N H D T                             | E E F F R Y S G S L T T P P C F   |
| UniRef90_S7PKC8<br>UniRef90_UPI0003F0B8BC                           | HEI RYK<br>KNI KYA         | G Q K T S V P P F F G Q S T T L T G L                                   | S V E L L P P E L<br>D I R D M L P N N                             | A Q F F R Y N G S L T T P P C H<br>H N Y Y T Y L G S L T T P P C T  |
| UniRef90_Q5I053<br>UniRef90_UPI000333CCB4                           | DRIVIKIK                   | GKI <mark>C</mark> PFIEF  | D L I D L L  <del>P</del> K D                                      | LNYWTYMGSLTTKPYF<br>QDYYTYHGSLTTPP <mark>C</mark> T   |

|  | 210 220 230 240   |
|--|---|
| QUERY<br>UniRef90 UPI00042AEA04                  | ECVT WIVLKEPISVSSEQ <u>VLK</u> FRKLNFDGEGEPEELMVDN<br>ECVT WIVLKEPITVSSEQMSVFRKLNFNTEGEPE <u>EL</u> MVDN  |
| UniRef90_F1R454                                  | ESIVIT WILVI <mark>C</mark> KOSILISIVIS SAOMKRERSILLIES GDGEKA <mark>CC</mark> MIVIN N  |
| UniRef90_Q92051<br>UniRef90_Q3Y546               | ESVT WI VIKEPI SVSPAQMAKFRSLLFSSEGETPCCMVDN<br>ESVT WI VEKEPI PASKEQLARFRELLFTCEGDSENCMVDN  |
| UniRef90_I3JGP6                                  | ESVTWIVCKEPITASSGQMAKFRTLLFSADGAAPD <mark>C</mark> MVNN<br>ESVTWII <mark>C</mark> KESISVSSEQLAQFRSLLSNVEGDNAVPMQHN  |
| UniRef90_UPI00029DA733<br>UniRef90_UPI0003F1181D | FCVTWLVIKEPLSUSNEOVIKERSLNCNGEGEPEEOMLON  |
| UniRef90_UPI0000E38790<br>UniRef90_C7FPZ1        | ECVTWIVLKEPISISNEQVLKFRSLNCNGEGEPEEQMLQNECVTWILLREPISVSSEQLMKFRKLSFSGEDEPEEAMVDNESVTWIVCKQPISVSLEQMAKFRSLCFSAKGEDECCMVDN  |
| UniRef90_UPI0002BD04BD                           | ESIVIT WILVI IREPILISILISEROMEKERSILLIETTEEDERILI <mark>H</mark> MIVIN N  |
| UniRef90_F6PGF8<br>UniRef90_UPI0003C28505        | ECVI WHV LIREPIVIVISPEQMCKILIRGILICFSSENEPIVICHMIVIDN   |
| UniRef90_K9IHZ8<br>UniRef90_A8KC11               |   |
| UniRef90_G1NGT0                                  | ESVTWIVLKEPI YVSEKOMGKFRTLLFNGEEEEDNRMENN<br>ECVTWHVLKEPI TVSSEQMCKLRGLCFSAENEPVCRMVDN<br>ECVTWI FKEPI SASSEQUNLFRRI LSSAEGEEACPVLAN  |
| UniRef90_F6ZUY9<br>UniRef90_G1NGS2               | ESVITWI V L K E PI Y V S E K Q M G K F R T L L F N G E E E D N R M E N N E C V I W H V L K E PI T V S S E Q M C K L R G L C F S A E N E P V C R M V D N E C V T W I I F K E P I S A S S E Q I N L F R R I L S S A E G E E A C P V L A N E C I T W I L R E P I E V S P D Q M A R L R S L S K N G E N E P M C P L V D N E C V T W I V L R E P I T L S S E Q M S K L R C L Y F N C E G E T P C K M V D N E C I V W I L L K E P M T V S S D Q G T R L N E C L Y W I L L K E P M T V S S D Q G T R L N |
| UniRef90_F7BGW4<br>UniRef90_S9WC05               | ECITWILLREPIEVSPDQMARLRSLSKNGENEPMCPLVDN<br>ECVTWIVLREPITLSSEQMSKLRCLYFNCEGETPCKMVDN<br>ECIVWILLKEPMTVSSDQGTRLN   |
| UniRef90_G1KPK2                                  | ECVTWILEREPISASSEQINLFRRILSSAEGEEACPVLAN ECITWILLREPIEVSPDQMARLRSLSKNGENEPMCPLVDN ECVTWIVLREPITLSSEQMSKLRCLYFNCEGETPCKMVDN ECIVWILLKEPMTVSSDQGTRLN ESVIWIILKEPINVCSEQLSKFRNLLCTGEGEAACCLLKN ESVTWIVLKEPISVSPAQMAMFRALLFTGEGEDPCCMVDN ECVTWIVMKEPLNISKEQMEKLRCLCFNDENESHCAMVDN ECVTWIVMKEPLNISKEQMKEFYCLYFTGVGEPEKHMMCN  |
| UniRef90_H3CKK1<br>UniRef90_G1KXA5               | ESVIWIILKEPINV <mark>C</mark> SEQLSKFRNLL <mark>C</mark> TGEGEAACCLLKN<br>ESVTWIVLKEPISVSPAQMAMFRALLFTGEGEDPCCMVDN<br>ECVTWIVMKEPLNISKEQMEKLRCLCFNDENESHCAMVDN  |
| UniRef90_G3W4E6<br>UniRef90_I3J4Q6               | ECVTWIVIKEPICLSHAQMKEFYCLYFTGVGEPEKHMMCN<br>ESVTWLVLKEPIEVSEKQLGMLRMLLFTEEEDNQKRMENN  |
| UniRef90_Q0IIV4                                  | QCVLWHVLREPIAVSNQQLSQLRSLFFNAEGDTPCCMVDN<br>ESVTWVIHKQPVEVAPEQLSAFRTLLFSALGEEDKVMVDN  |
| UniRef90_UPI00045DD5CC<br>UniRef90_G3WAT6        | ECVTWIVEREPICLSHAQMKEFYCLVFTTGVGEPEKHMMCNESVIWLVLKEPIEVSEKQLGMLRMLLFTEEDNQKRMENNQCVLWHVLREPIAVSNQQLSQLRSLFFNAEGDTPCCMVDNESVTWVIHKQPVEVAPEQLSAFRTLLFSALGEEDKVMVDNECVVWIVLREPINITKEQLSKFRSLYSTTKGEPQRHMVEN  |
| UniRef90_UPI00038C5254<br>UniRef90_UPI0003314EAB |   |
| UniRef90_UPI0003F0AE5E                           | ESVT WMI CK MPI I I SPCQLAQFRSLLSNAECETVIPIWNN<br>ESVT WI I YKQPI EVAPDQLSAFRTLLFSVPGEEERPMENN<br>ESVT WI I HKRPI EVAPSQLSSFRTLLFSAKGEEEAAMVDN  |
| UniRef90_UPI000333A6A7<br>UniRef90_F6QBV2        | ESVTWIIHKRPIEVAPSQLSSFRTLLFSAKGEEEAAMVDN<br>ECVTWLVLNKPITVSHEQMSKFYNLYFTSEGEASKHMVNN<br>ESVTWMIQKQPIEVSPSQLSAFRRLLFTAVGEKEKMMVNN  |
| UniRef90_UPI0002742662<br>UniRef90_M3WS40        | FCI VIWI I LIKEPMTIVISSDOMAKII IRSII IESSAENEPPIVIPIL VIGN  |
| UniRef90_S9W715                                  | ESVIWI I LKESISI SSEQVTRFPNECLATSYSI SEPKFCA<br>ESVAWI VMKQPI EVSHDQLAVFRSLLFTAEEEVQKSMVNN  |
| UniRef90_W5M7A4<br>UniRef90_E1BAD9               | ESIVIT WILLIEKK PILIEIVIA O D OILIA A ERSILLIESIVIP GEEEK LMIVIN N  |
| UniRef90_K7G965<br>UniRef90_UPI0002C66F8F        | ECIVII WII L LIREPII I VISPDQII IA KILIR SILISIVIN GE I QPF RPIL VIDN   |
| UniRef90_G1KY16                                  | ESVTWIIQRKPIEVAQSQLAAFRTLLFSALGEEEKKMVNN<br>ECVTWLILKEPILVSEEQMAKFRTLSCNAANEPFSPLEDN  |
| UniRef90_G3H2Q3<br>UniRef90_F6QLE4               | ESVT WFI CKESISVS PEQLAQLRSVLS NAEGEAAVPILT NESVT WI I CKESISVS SEQLAQFRALLS NVEGDN PVPLQHN ESVT WV I QKQPLELAQS QLAAFRSLLF SALGEEERS MVD N   |
| UniRef90_D2GWM4<br>UniRef90_L9J9B1               | ESVT WV I QKQPIELAQSQLAAFRSL LFSALGEEERSMVDN<br>MSKFRELMFNGEGEPEELMVDN  |
| UniRef90_UPI0003F11B94<br>UniRef90_UPI0004419178 | E CI V WILL IKEPMT VISSDQMAKI IRSIL ISSAENEPPPQI IRGS   |
| UniRef90_P07452                                  | ESIVII WILLIUK DSILISILIS SEQILIA QER SILLIS NA EGEA AIVIPILLIA N   |
| UniRef90_V9L9U2<br>UniRef90_A2IBE0               | O SIV I IWTIVIE N R R A OIL IS M G OIL IE KII IO E TIL IS S T E E D P S E PIL VIO N   |
| UniRef90_UPI0003834B4A<br>UniRef90_C1C1R3        | ESVTWIIKKQPIEVDEDQLEAFRMLLFTSDGEEEKRMVDN<br>ESVTWIVFREPIQFSEEQINGMRNIAFCCKDEKHIAMVNN<br>QSVLWTVFKQQVQISWTQLDKLQRALFSTDTEPALPLVDN  |
| UniRef90_UPI0003C1A27B                           | QSV LWTVF KQQVQISWTQLDKLQRALFSTDTEPALPLYDN  |
| UniRef90_K7J542<br>UniRef90_UPI00020355EA        | ECVIWHVLKEPITVSSEQMCKLRGLCFSAENEPVCRMVDN  |
| UniRef90_S4RL19<br>UniRef90_F6WLX6               | EVVTWTVFEEPII IMDENQIIKKFSSVFFSTKEDPQQLMVNN<br>ESVTWI IMKKPIIEVDHSOLAVFRSILLFTAVGEEERYMVDN  |
| UniRef90_UPI0003F0E227<br>UniRef90_V4AHB6        | ETVSWIVFKEPIELSSSQLELFRTLHISAENQDNDHMVNN  |
| UniRef90_Q9XZG6                                  | ESVSWEVEKEPI HATENQMQQFRSLKANDGG CIVDN  |
| UniRef90_H2TXA2<br>UniRef90_UPI000388DB35        | Q N V L WT V F H Q R V R I S A S Q L E R L Q G G L Y S T K N S L P V P L V D N  |
| UniRef90_UPI0004419260<br>UniRef90_UPI0002C43030 | ESVTWLIKKKALEVDEDQLEVFRMLLFTSAEEDEKRMVDN<br>ENVRWEVIAEPLSISSAOVWKLENSIEDHONET   |
| UniRef90_UPI0003AF79C1                           | LSVRWGWTWCDUSPSRLQLAKLRTLYSSAENEPPVPLVRN  |
| UniRef90_H3CSL2<br>UniRef90_UPI000386F695        | E GV I WTV F E K P V E L S I S Q I S Q F S T V H F D G K N S T Y M A E N  |
| UniRef90_F1NAI5<br>UniRef90_UPI00039469B1        | E A V    W    V  F E E P V  G    S R E Q L  Q A F S T  V   H F P A S G A A P  L  K M T N N   Q G   V        W T        F E T P    V  Q L    S    L    R   Q      S   Q F A A   L      H F D G K N   S T P M M E N   |
| UniRef90_U3U9G8<br>UniRef90_B7T143               | ECVQWIVESQSVQYSSGQLSALRSLASC EAGGCITTN<br>ECVKWIVEKEPIEVSAAOMEAERAV   |
| UniRef90_B71143<br>UniRef90_A0A023EQM0           | E S V T WI V F R E P I Q F S E E Q I I N G M R N I A F C C K D E K H I A M V N N N Q S V L W T V F K E P I Q F S E S Q I I N G M R N I A F S T D T S E G G K T T D N N N N N N N N N N N N N N N N N  |
| UniRef90_UPI0003F14225<br>UniRef90_UPI0001DEB1F3 | PAVVWTVFEDAVPIGRAQVAGFQTVLQAGPGSSAAPLTDN  |
| UniRef90_Q8Cl85<br>UniRef90_W5NCG8               | PTVL WTV FRNP V Q     SQEQ L   A L  ETA L  YFTHMDDPTPMINNPS VL WTV FRNP V S     SQEQF L   A L   ATA L   YATSMTFPTPI   NGN   |
| UniRef90_V9KZE8                                  | EAV VWSVFEEPI SI SKAQLMKFNTLYFSARGESEQKMQNN   |
| UniRef90_UPI00032A0E1F<br>UniRef90_F6XBZ7        | EVVIWTVEEDPISISQKQLKIMTTAHFTANGETLVKMSDN  |
| UniRef90_A3FFY1<br>UniRef90_G1QEP0               | E S   V   T   W     V   F E   Q   P   I   Q   V   S E   A   Q   L   D   A   F   R   R   L   K   S   Y   H   P   D   E   L   Q   G   A   L   V   E   N   Y   P   V   E   G   K   L   Q   A   P   P   I   N   K   Q   N   N   K   I   N   T   F   R   Q   L   S   F   N   K   E   G   E   A   E   P   M   V   D   N   M   N   T   F   R   Q   L   S   F   N   K   E   G   E   A   E   P   M   V   D   N   M   T   T   T   T   T   T   T   T   T   |
| UniRef90_R7V5W2                                  | E   |
| UniRef90_D6WET4                                  | ECVIWLVFKEPIEVSHEQLMAFRNLKCYCEEEKCPCVKNN  |
| UniRef90_K1QPX3<br>UniRef90_U3JQR2               | ESVI WTI FKETI KI SEDQLMKFRHVHRNYANETDRDI SND<br>ECITWLL LREPI EVSSDQMAKLRSL SKNDENEPPSPL VDN   |
| UniRef90_UPI0004444774                           | ESVVWTVFETPIPLSMDQMKAFSKVQFYD GKSMANN   |
| UniRef90_R7V8T6<br>UniRef90_S7PKC8               | Q S V V W T V F S K A N Y V S R R Q L E E L R K L V S H L D D E H G E A M V N N<br>Q S V V W T V F S Q K V Q L S A G Q L E K L Q E T L L S R E M E P A Q V L E Q T  |
| UniRef90_UPI0003F0B8BC<br>UniRef90_Q5I053        | E N V L W F V L A D S V K L S R T Q I A T I E S S L L D Y Q N Q T   |
| UniRef90_UPI000333CCB4                           | ENVLWFLLAEPVKLPKKQILKLENSLLDNQNKT LQNA  |

| QUERY  | 250<br>WRPAQPLKNRQIKASF   |
|--|---|
| UniRef90_UPI00042AEA04<br>UniRef90_F1R454  | WRPAQPLKNRKIKASF<br>YRPPQPLKGRVVRASF  |
| UniRef90 Q92051  | YRPPQPLKGRKVRASF  |
| UniRef90_I3JGP6  | Y R P P Q P L G G R T V R A S F<br>Y R P P Q P L K G R T V R A S F  |
| UniRef90_UPI00029DA733<br>UniRef90_UPI0003F1181D   | NRPTQPLKGRTVRASF<br>CRPHQPLKNRQIRASF  |
| UniRef90_UPI0000E38790   | WRPVQPLKKRQI RAFF   |
| UniRef90_C7FPZ1<br>UniRef90_UPI0002BD04BD  | YRPPQPLKGRAVRASF<br>FRPPQPLKGRVVKASF  |
| UniRef90_F6PGF8  |   |
| UniRef90_K9IHZ8  | WR P C Q P L K G R Q V R A S F H R P L Q P L K G R M V R A S F WR P C Q P L K G R M V R A S F WR P C Q P L K G R E V R A S F WR P L Q P V K G R I V R A S F WR P C Q P L K N R E I R A S F WR P C Q P L K N R E I R A S F |
| UniRef90_A8KC11<br>UniRef90_G1NGT0   | WRPCQPLKGRMVRASF<br>WRPCQPLKSREVRASF  |
| UniRef90_F6ZUY9<br>UniRef90_G1NGS2   | HRPTQPLKGREVRASF<br>WRPTQPVKGRTVRASF  |
| UniRef90_F7BGW4  | WRPCQPLKNREIRASF  |
| LINIKAIGO SAVVUOS  |   |
| UniRef90_H3CKK1<br>UniRef90_G1KXA5   | F R P P Q P L R G R E<br>Y R P P Q E L K G R C V R A S F<br>WR P C Q P L K G R D V R A S F<br>WR P V Q P L Y D R T I K R S F<br>F R P P Q P L K G R R V R S S   |
| UniRef90_G3W4E6  | WRPVQPLYDRTIKRSF  |
| UniRef90_Q0IIV4  | FRP <u>P</u> QP L KSRH V RASF   |
| UniRef90_UPI00045DD5CC<br>UniRef90_G3WAT6  | Y R P L Q P L M D R K V H A S F<br>WR P C Q P L Q G R Q V R R   |
| UniRef90_UPI00038C5254   | YRPLQPLLDREVRASF  |
| UniRef90_UPI0003314EAB<br>UniRef90_UPI0003F0AE5E   | CRPPQPLKGRRVRS<br>YRPLQPLMGRTVRASF  |
| UniRef00_F6OB\/2   | FRQPQPLMSHKVCSSF<br>WRPVQNLSGRKIRRSF  |
| UniRef90_UPI0002742662   | Y R P L Q P L L N R K V R A S F<br>WR P P Q P L K G R V V R A S F   |
| UniRef90_S9W715  | ARPAQP  |
| UniRef90_W5M7A4<br>UniRef90_E1BAD9   | FRTQQPLKQRTVRSSF<br>YRPLQPLMNRKVRSSF  |
| UniRef90_K7G965  | Y R P L Q P L M N R K V R S S F W R P P Q P R H F R M V R A S F Y R P L Q P L M N R K V R S S F   |
| UniRef90_G1KY16  | WRPLQPLNQRMIRT  |
| UniRef90_K7G965<br>UniRef90_UP10002C66F8F<br>UniRef90_G1KY16<br>UniRef90_G3H2Q3<br>UniRef90_F6QLE4<br>UniRef90_D2GWM4<br>UniRef90_L9J9B1 | H R P T Q P L K G R T V T A S F<br>Y P T Q P V K G R T V R A S F  |
| UniRef90_D2GWM4<br>UniRef90_L9J9B1   | Y R P L Q P L M N R K V R S S F<br>WR P A Q P L K N R Q I K A S F   |
| UniRef90_UPI0003F11B94<br>UniRef90_UPI0004419178   | ∐R  |
| UniRef90_P07452  | NRPPQPLKGRTVKASF  |
| UniRef90_V9L9U2<br>UniRef90_A2IBE0   | FRQQQPLMNRVVRATI<br>YRVPQPLNQRTIFASF  |
| UniRef90_UPI0003834B4A<br>UniRef90_C1C1R3  | FRPLQPLMNRTVRSSF<br>FRPPVALGSRVVQGN   |
| UniRef90_UPI0003C1A27B   | FRAPQPLNHRTVYASF  |
| UniRef90_K7J542<br>UniRef90_UPI00020355EA  | FRPVQPLADRLVLHN<br>WRP <mark>C</mark> QPLKSR <u>E</u> VRASF   |
| UniRef90_S4RL19<br>UniRef90_F6WLX6   | FRPVQKLNSRIVYAS<br>FRPLQPLMNRTVHSSF   |
| UniRef90_UPI0003F0E227   | Y R P T Q E L N G R E V T S T F   |
| UniRef90_V4AHB6<br>UniRef90_Q9XZG6   | Y R P P L P L G N R Q L R A S F<br>Y R P V M D G S G R N V R A S F  |
| UniRef90_H2TXA2<br>UniRef90 UPI000388DB35  | Y R P P Q P L K G R S V R A S F<br>Y R A P Q P L N Q R V V F S S F  |
| UniRef90_UPI0004419260<br>UniRef90_UPI0002C43030   | FRPLQPIMDRTVRSSF<br>YRRTQPLNNRVVEANF  |
| UniRef90_UPI0003AF79C1   | WRPPQPIKGRIV <u>KA</u> SF   |
| UniRef90_H3CSL2<br>UniRef90_UPI000386F695  | Y R K P Q P L E G R V V L V S F<br>F R P V Q L L N E R K V Y W S  |
| UniRef90_F1NAI5<br>UniRef90_UPI00039469B1  | FRPPQPLRSRKVFSS<br>FRPAQPLNGREVLWS  |
| UniRef90_U3U9G8<br>UniRef90_B7T143   | CRPVMPLGGRPVAASF  |
| UniRef90_A0A023EQM0  | F R P [ Q P L G D R V V L Y N   |
| UniRef90_UPI0003F14225<br>UniRef90_UPI0001DEB1F3   | FRPQQPLRGRRVVAS<br>FRPQQPLRGRRVSAS  |
| UniRef90_Q8Cl85<br>UniRef90_W5NCG8   | FRQVQKFDERLVYISF<br>YRKLQDGDDRRILVSF  |
| UniRef90_V9KZE8  | FRSPQPLNGRRVSAS   |
| UniRef90_UPI00032A0E1F<br>UniRef90_F6XBZ7  | Y R P V Q P L N G R E V Y Y S<br>F R T P Q P L K G R K V W A S  |
| UniRef90_A3FFY1<br>UniRef90_G1QEP0   | YRPPCPLCDRVVRK<br>WRPTQPLHCRQVRASF  |
| UniRef90_R7V5W2  | FRPVQPLKSRKVKTS   |
| UniRef90_UPI0003EBD747<br>UniRef90_D6WET4  | Y R T A Q P L N G R V V E A N F F R P T L P L G K R E I R   |
| UniRef90_K1QPX3<br>UniRef90_U3JQR2   | FRPTQHLNHRFVYAS<br>WRPPQPLKGRIVRASF   |
| UniRef90_UPI0004444774   | FRPVQPLNGRLVYRS   |
| UniRef90_R7V8T6<br>UniRef90_S7PKC8   | YRVPQPLNQRKVLASF  |
| UniRef90_UPI0003F0B8BC<br>UniRef90_Q5I053  | Y R K T Q P L N N R L V Q A N F<br>H R P V Q P L D H R V V R S S  |
| UniRef90_UPI000333CCB4   | YRLTQPLNDRVVQANF  |

| UniRef90_B4LEI5 UniRef90_UPI000333C0D3 UniRef90_D3TM95 UniRef90_F7ADM5 UniRef90_A7RRH8 UniRef90_A7RRH8 UniRef90_I3KDY3 UniRef90_I4ZGZ4 UniRef90_K1RCM3 UniRef90_K1RCM3 UniRef90_K7FS21 UniRef90_I3K4L4 UniRef90_G6R4A1 UniRef90_B5SU02 UniRef90 G3H655   | 1   |
|--|---|
| UniRef90_Q2F607 UniRef90_A0A023F836 UniRef90_UPl00034FBB57 UniRef90_M4ABZ3 UniRef90_G1MPV7 UniRef90_G1MPV7 UniRef90_R7TB34 UniRef90_ISNG33 UniRef90_UPl0002063705 UniRef90_UPl0002063705 UniRef90_Q5M8Z5 UniRef90_Q5M8Z5 UniRef90_U5END8 UniRef90_U5END8 UniRef90_B3M7V5 UniRef90_M3W976 UniRef90_M3XUB4   | WGYTCENGPATWLEKFPQARGTRQSPVDIVTSRVKSGAS WGYTEENGPATWATKFPLAAGTRQSPVNIDTTLAKSDSS WCYDEECAPSHWYLHYPSCGGRSQSPVNIDTTLAKSDSS WCYQSQSGPDAWKTLVPQCGGRSQSPVNIVTKKSVKDER YGYEGNHGPSHWGDSYNTCIGKHQSPINIEEHNVKNLSL HWTYEGPHGQHHWPEGHPACGGRSQSPINIEEHNVKNLSL WCYDSQDGPTHWKELAPACGGRSQSPINIDLATQRVLPPDPS WSYSGNTGPSYWVNSYATCGGSSQTPINLEGGEYDPN WCYDSQDGPTHWKELAPACGGPTQSPINIDLHLVQKDST YGYEGNSGPSHWGDEYKQCLIGKFQSPIDIEEKNVTNMTF YWTYSGELDQKHWAEKYHDCGGQQQQSPIDIEEKNVTNMTF YWTYSGELDQKHWAEKYHDCGGQQQQSPIDIIQRRKVRYSPR WGYEE GVE WGLLYPEANGDYQSPININSREAMYDPS WGYAADNGPDKWADNFPVANGPRQSPIDILPGDASFDAA WGYTDVNGPKVWPSLFPQAAGSRQSPININSTSQTKQSSY QWTYEGALDQTQWSKEYPSCGGRRQSPININHVSVKQNSY  |
| UniRef90_K1QSG0<br>UniRef90_V9KKB5<br>UniRef90_UPI000395709A<br>UniRef90_UPI00038EE974<br>UniRef90_UPI00038EE974<br>UniRef90_UPI00045E44EB<br>UniRef90_UPI0003D0B559<br>UniRef90_A7SKA8<br>UniRef90_L5LY78<br>UniRef90_UPI0003B5AEF7<br>UniRef90_UPI0003B5AEF7<br>UniRef90_UPI0003C26141<br>UniRef90_UPI00042574F82<br>UniRef90_UPI00022F4F82<br>UniRef90_UPI00003871112   | H WS Y E G K  |
| UniRef90_V9KZL8 UniRef90_L9L5I6 UniRef90_UPI00042C6FB3 UniRef90_Q8MPH8 UniRef90_Q4VPE4 UniRef90_Q4FCT9 UniRef90_UPI0003C29182 UniRef90_UPI0003D0E55B UniRef90_UPI0001DEA19A UniRef90_UPI0001DEA19A UniRef90_F2X4U0 UniRef90_H2SZN4 UniRef90_H2SZN4 UniRef90_UPI000331641C UniRef90_V4BHF8  | WS H T G A D G Q A L WG K E F P D C G R K A Q S P I N I Q T Q Q V K Y D P T WT Y S G S L D E E H WP Q H Y P D C G G Q K Q S P I N L Q R K K V Q Y N P S WT Y I G S D G E E S WS K S Y P S C G G L T Q S P I D L H D D L L Q Y N A S WD Y E A N G P A T WA K S F P L A A G K K Q S P I D I D P A S V S K K S WS Y D S H K G P A A WN N I A S I C N G N R Q S P I D I D P A S V S K K S WS Y D S H K G P A A WN N I A S I C N G N R Q S P I S I P Y G H V T Y D P S WC Y D L Q D G P S H WK L D Y E S C G Y K K Q S P I N I V T R N A Q S N V H WS Y A D K P A WS Q G F P D C S G Q K Q S P I N I V T R N A Q S N V H WS Y A D K P A WS Q G F P D C S G Q K Q S P I N I I T E A T L F S P H N T Y E G E L D E E H WG R H F A D C A G K H Q S P I D L Q K R K V R Y N P Q P D G E K S W S K K Y P S C G G V L Q S P I D L H S D I L Q Y D A S N W C Y Q G C K E P R Q W A T L F R D C G K K D Q S P V N I L T Q Q V Q Y D N S P D Q WN Q A N G D C G G N S Q S P I N I V T K K T V K D E R WT Y E G M D E A H WP L E Y P K C G G R R Q S P I D L M S D I L L Y N A S G P S N W N N W S T C G G Q R Q S P I D L N S G L V T M A D M |
| UniRef90_A0A023GPD8 UniRef90_F4WZM6 UniRef90_UPI0003941685 UniRef90_G6D8Z4 UniRef90_UPI000383AE2B UniRef90_T1FNV0 UniRef90_A0A023FLX9 UniRef90_K1P7Z9 UniRef90_F7CQH3 UniRef90_UPI0004418E8E UniRef90_UPI0003504242 UniRef90_B4N3T1 UniRef90 W5MKX7  | WSYKGEFGPFNWDNVDTSCGLKHQSPIDLDERYAEFDPANFGYEGDQGPANWSKEYHTCLGKHQSPINIDEHNVTDVSLWQSPLTLPGGTRQSPINIQWRDSVYDPFFGYDGVIGPKYWGETYRECRGKHQSPINIDLRVKQVAL   |
| UniRef90_UPI0003597C50 UniRef90_UPI0003597C50 UniRef90_UPI0003EC2A8A UniRef90_UPI0002657328 UniRef90_W5UF12 UniRef90_H0VSR1 UniRef90_B3RXW0 UniRef90_J9K0P1 UniRef90_H2M394 UniRef90_H2M394 UniRef90_UPI00038F08F4 UniRef90_UPI00038F08F4 UniRef90_UPI00038F08F4 UniRef90_UPIX3 | ELSPAFWKDVSATCDAQRQSPINLYEGDAVQNPFWSYTGALNQKNWGKKYPTCNSPKQSPINLDEDIAQVNVNNNWSYGEDGGEKGWPKRFPFCGGAFQSPIDFHSDVLQYDSTWSYEGPTGPKYWADLKNQCGLQKQSPIDIDVLKTRYDGSQWCYQSQYSPSQWDKDFPVCGGQNQSPIDIDVLKTRYDGSQWCYQSQYSPSQWDKDFPVCGGQNQSPINLQRRKVHFNPAWNYEDPNSWYKTYPSASGNRQSPINLQRRKVHFNPAWNYEDPNSWYKTYPSASGNRQSPINLDTSEEVFDHKFGYDGELDPSHWANEYKTCSGKYQSPIDIEENVTKVNLPHWCYELQLGPSHWGEDCQKNRQSPIDIEENVTKVNLPHWCYELQLGPSHWGEDCQKNRQSPIDIEPAKMLYDPNWTYEGDLDEEHWPLEYPACGGTSQSPIDIEPAKMLYDPNWTYEGDLDEEHWPLEYPACGGRRQSPIDIEPAKMLYDPNWTYEGDLDEEHWPLEYPACGGRRQSPIDIEPAKMLYDPNWTYEGDLDEEHWPLEYPACGGRRQSPINLQRQKVRFNPANWGYGKHNGPVTWEGACKTGLRQTPIDIRSTDTDYSFMWTYDDDPEQWPVNFPMCGGEQQSPINLDPFTALEFDYWGYEFNPANWGYGKHNGPVTWEGACKTGLRQTPIDIRSTDTDYSFMWTYDDDPEQWPVNFPMCGGEQQSPINLDPFTALEFDYWGYEFNPANGKTGLRQTPIDIRSTDTDYSFMWTYDDDPEQWPVNFPMCGGEQQSPINLDPFTALEFDYWGYEFNPANGKTGLRQTPIDIRSTDTDYSFMWTYDDPEQWPVNFPMCGGEQQSPINLDPFTALEFDYWGYEFNPANGKTGLRQTPINIETSKSTNDMT  |

|  | 50 60 70 80   |
|--|---|
| UniRef90_B4LEI5                                  | P Y P D Y F N F D K P K S V K L T N N G H T V L V T M D F E P G K E P R L R G G   |
| UniRef90_UPI000333C0D3<br>UniRef90_D3TM95        | L P A L Q P H G Y E Q P G T E L H N N G H T V Q L S L P P S L Y L E G L P P L K WR Y V P E H T K S L V N P G Y C WR V D V D G A K S Q L T G G P L                     |
| UniRef90_F7ADM5                                  | L P A V Q P H G Y D Q P G T E L H N N G H T V Q L S L P P T L Y L G G   |
| UniRef90_V4AH85<br>UniRef90_A7RRH8               | LGTVTLTYGGSIAMNMSNTGYTAKVVFNGDLYVEN GG<br>LGKLQFNNFDRIPIMVRNNGHAFQVNF MTPNLFYVHGGG  |
| UniRef90_Q9MZ30                                  | L T P L E F Q G Y NVK Q F N L T N D G H S V R L NL P P D MY L Q G   |
| UniRef90_I3KDY3                                  | II IR PII IFIVIQ N Y N N F QII ITII IG N N G H SIVIQII ISII I S P M M SII IS S  |
| UniRef90_H2ZGZ4<br>UniRef90_K1RCM3               | PK LELCYDCRDTTTVKNTGTTÄK FISAAKNSYTKGGP<br>LNPLQFSYGVCQGAKVHNTGRSLKIDINQQSEVT GGP   |
| UniRef90_K7FS21                                  | II IQ PIVIFII IA G Y RII ID P R RII IF N N G H TIV V I IFII IP S SII ITII IA S G  |
| UniRef90_I3K4L4<br>UniRef90_Q6R4A1               | L T P L K F N Y E E I F R S T I T N N G H S A Q V Q I P T V S T I S R G D L T P F T F T Y Q E A F H S L I T N N G R T V Q V D L P A T A K V H G G D                   |
| UniRef90_B5SU02                                  | ILIA DIL V VIN Y E K SIVIS A KIL IF N N G H T IVIQ A T F IL IT G K S NII IS G G N   |
| UniRef90_G3H655<br>UniRef90_Q2F607               | SI TNNGHSVQVDFNDSDDKTVVTGGP<br>LPPLKWRYSVNHPRSI VNPGYCWRVD ENGYDSELKGGPL  |
| UniRef90_A0A023F836                              | II IR AII IT WK F G N N H A Y R II V IN T G Y G W R IV   D T N G Q G T F II IK G G P  |
| UniRef90_UPI00034FBB57<br>UniRef90_M4ABZ3        | L G P I V V E G D A T S E G E L T N N G H S V E V T L T S K Y T L S G A G L T P L Q Y D Y Q E A S D V L L K N N G H T V Q L D L P P G L V I S G G Q                   |
| UniRef90_A0A026VYY7                              | PSIKLVGIDNPCSSFVTNNGHTVVLKTNDSKAATLYGGPL<br>LPPIRPMGYDHPTFSLTNNGHTVVLALPPTLHLE G  |
| UniRef90_G1MPV7<br>UniRef90_R7TB34               | L P P I R P M G Y D H P T F S L T N N G H T V V L A L P P T L H L E G L G N L T F T G Y S A T T Y L L E N N G H T A K V G F Q S S T S M S I S D G G                   |
| UniRef90_I3NG33                                  | IL IQ P F II IF Q G Y N P G P W S IL IE N D G H T IV L L IH M D T Q N G IL IE II IW G A G IL I  |
| UniRef90_UPI0002063705<br>UniRef90_E7F742        | PKLQFSDTENSHVAYMINNGHTVMIR SFDPDLPTISGGPMQQLELTGYEDIRGSFLMKNNGHSVEIQLPSTMKITKGFP  |
| UniRef90_Q5M8Z5                                  | L LRLT PSYVVCRDCEVINDGHVVQILLKSKSVLKGGPL P  |
| UniRef90_O93587                                  | LKPLSLKYDPPTARSI LNNGHSFQVTFIDDTDSSTLKDGP   |
| UniRef90_U5END8<br>UniRef90_B3M7V5               | LAPLKWKYVPENTRSLVNPGY <mark>C</mark> WRVDVNGQG SELTGGPL<br>PKLEFHNFNEPKAMLVTNNGHTVLVKMSFNEGKPRVKGGP   |
| UniRef90_M3W976<br>UniRef90_M3XUB4               | LKALKLTGYKSQQFPMTNNGHTAQISLPPTMRMTAADG  |
| UniRef90_K1QSG0                                  | LKALKLTGYKSQQFPMTNNGHTAQISLPPTMRMTAADG<br>LKPLTISYDPTTCLHVWNNGYSFLVEFEDSTDKSVIEGGP<br>LKPFQINYSTEKNAEVSNTGSSIKVQIKEVSEI KGGP<br>LVPITVEGYNADLLTLSNNGHTVQLSLPDT MSLTSG |
| UniRef90_V9KKB5                                  | L VPI TVE G Y N A DL LTLS N N G H T VQL S L P D T M S LT S G  |
| UniRef90_UPI000395709A<br>UniRef90_E4Y355        | LQLQLGGYDGSLQGHFRMTNTGHSVQLDLPPTLNISRGLP<br>LSPLEYSYPDNFKY MVNDGKNIRIHWRGETALS GGP  |
| UniRef90_UPI00038EE974                           | LGPFIFQGYPPGPWTLENDGHTVHVDTGPQNPLKTWGAGL  |
| UniRef90_T1FN58<br>UniRef90 UPI00045E44EB        | II IGPEILE GGYPPGPWIILENNGHIVRIINII IDGSRRIIEMRGAGII  |
| UniRef90_UPI0003D0B559                           | L  A P  L  R  V  S Y D A A S <mark>C</mark> R Y  L  WN T G Y F F Q  V  E F D D S <mark>C</mark> E E S G  I  S G G P   |
| UniRef90_A7SKA8<br>UniRef90_L5LY78               | II IP PII IRIVIS Y D A A A <mark>C</mark> R Y A WN T G YII IF QIVIF F D D AII IF G A GII IS G G P   |
| UniRef90_S4RNX9                                  | L  A P  L   <mark>C  </mark> L  S Y   <u>L  </u> T  |
| UniRef90_UPI0003B5AEF7<br>UniRef90_UPI0003C26141 | II I IPII IFII I IGYNMSTTDII ITNNGHSIVIRIVIGII IP PTMYII IRN  |
| UniRef90_UPI000443176D                           | L  K  P  L  K     Y  Y  D  P  S    C  C   L  H  V  R  N  T  G  Y  F  F  E  V  V  F  D  D  S  T  D  R  S  G  G  F  |
| UniRef90_UPI00022F4F82<br>UniRef90_UPI0003871112 | IL LIRILIEILIS GYDGPDFTMTNNGHSIVIQII IDILIP PTMRII IS RG  |
| UniRef90_V9KZL8                                  | L   G   P   I   E   L   E   G   Y   E   <u>D  </u> P   W   F   T   <u>L   A</u>   N   N   G   H   T   V   E   <u>M</u>   A   L   P   S   S   L   G   L   T   A        |
| UniRef90_L9L5I6<br>UniRef90_UPI00042C6FB3        | IL VIPILIG F Q G Y S N Q Q F IV L II N N G H S IV IK IV IK IL IP K D M H II IQ G  |
| UniRef90_Q8MPH8                                  | T S A   L V   A S Y N P A A S N T   L   T N T G   L   S F Q   V   S   V   D G T   L   S G G P   |
| UniRef90_Q4VPE4<br>UniRef90_Q4FCT9               | IL IT PIL I IF E G Y D D D K W T II IT N N G H S IV IQIV IT IL IK G D II IA II IK G G D   |
| UniRef90_UPI0003C29182                           | L   Q P   I   <mark>H</mark>   L   S G Y N S E Q   L   T   L   K N N G H T   V V L   Q   L   P A T   L   T M S G S N G  |
| UniRef90_B3RKE2<br>UniRef90_UPI0003D0E55B        | L TI DLFGFEETI T QT L LNNGHT A QVNI GGHT T PSI YSP L L MELELSGYDGPNFT MT NNGH SVQI DLPP T MR LT K GLP   |
| UniRef90_UPI0001DEA19A                           | L VPL GFQGYNNEQFILTNDGHSVRLNL IPDMHLQG  |
| UniRef90_F2X4U0<br>UniRef90_H2SZN4               | LITAFQFHYQQLFRGMIKNNGHSVQVDVPHLS IISGGG   |
| UniRef90_P08060                                  | L  R A  L  N  L  T G Y G  L   W   G   E   F   V   T   N   N   G   H   T   V   Q   I   S   L   P   S   T   M   S   M   T   S   D   G                                   |
| UniRef90_UPI000331641C<br>UniRef90_V4BHF8        | G Q II I F F T N Y F N P A II I <mark>C</mark> D IV I T N N G H T V IV I Q F D II I S A N II I M T M Y G G G  |
| UniRef90_A0A023GPD8                              | LTEITFSGYDRDSPSITNNGHTVQVSASEDPNRYIE GAN<br>SPLKLSGINNPHQSYVTNTGHTVTLK TNESKAVMLSGGP  |
| UniRef90_F4WZM6<br>UniRef90_UPI0003941685        | ILIK PILIKII IS Y D P T T <mark>C</mark> ILIHII IWN N G Y S FIL VIE F D D S A D R SII I VIG G P   |
| UniRef90_G6D8Z4<br>UniRef90_UPI000383AE2B        | PDIVFIGFDDPIDDHVTNNGHTVLIEVENEPHPRV SGGP MLRGGP   |
| UniRef90_T1FNV0                                  | IGOFIFS PDY FNYYNI SNNGH SVMIT PDS SAOIT VIS GGG  |
| UniRef90_A0A023FLX9<br>UniRef90_K1P7Z9           | L T P L R W T Y T G L Q C T S L L N T G S G W R V D V S A P G P N L R G G P L G R L V V N S P P V Q G K L Q N T G N D L T L T L N D V K N Q V N V T G G P             |
| UniRef90_F7CQH3                                  | II IP PILIF P F G Y N N Q P F T II IT N N G H SIVIFII ISII IP S S M T II IR G   |
| UniRef90_UPI0004418E8E<br>UniRef90_UPI0003504242 | L P I E L E G Y N A V K F L L T N N G H S V K M N L S S A M R I R N L R P I Q L S G Y S S Q M L A L K N N G H T V V L K L P E S L A L T G G                           |
| UniRef90_B4N3T1                                  | SPLEFTNFDKPTGLQVSNNGHTVLVRMTFEGDEPRVFGGP  |
| UniRef90_W5MKX7<br>UniRef90_UPI0003597C50        | LIPAIL V LIE G Y DLIS D K KIL Q N N G H T IL QIL N LIP S T M H IL V Q G T P F T F T N Y D A T F N A T IL K N N G Y G V K V D Y S G A T F IL T M O G G G               |
| UniRef90_UPI0003EC2A8A                           | SPLEFTNFDKPTGLQVSNNGHTVLVRMTFEGDEPRVFGGPLPALVLEGYDLSDKKLQNNGHTLQLNLPSTMHLVQGTPFTFTNYDATFNATLKNNGYGVKVDYSGATELTMQGGGLKKLKFQGWDKENTFLHNNGKTVELNLTNDYQLSGGV              |
| UniRef90_H9GII6<br>UniRef90_UPI0002657328        | LSPIELQGYNVEQFVLTNNGHSVKMSL LPSMLIRS<br>MSQLYFKSYDKATPNITLVNTGHSLQLNSPNWRQSVSGGP  |
| UniRef90_W5UF12                                  | II IT PILLIF G Y T O T II INII ITIVIO NII IGN T AIVIF AII IP P SILLI IR G G D   |
| UniRef90_H0VSR1<br>UniRef90_B3RXW0               | L T P L E L M G Y Q A G Q F P M T N N G H T V Q I T L P E SMR L A G P L R P L D L D Y V C C E K G E L S N T G H S F M V S T G K N C V I R G G P L                     |
| UniRef90_J9K0P1                                  | II I IR F H NII ID TII IP T S T TII IT N N G H TIV V I IQII IN Y T A PIVIMII I S G G P  |
| UniRef90_M3YUH5<br>UniRef90_H2M394               | L G P F S F S Y D K K Q K W K V Q N N G H S V M V L L E G E A S L A G G G L R P L G Y S Q H G N Q P F T L Y N N G H T A I L V M P E W MG L E G L P                    |
| UniRef90_E9FWT4                                  | LRPLSVDKHKVVSGVLHNTGQSLVFRPPKHSLAVNVSAGP  |
| UniRef90_UPI00038F08F4                           | LRPLSVDKHKVVSGVLHNTGQSLVFRPPKHSLAVNVSAGPLTALHLTGYQAGQFSMTNNGHTVQISLPSSMRLAAPDRLSFANYDQTDTATMQNNGHSISIDFHEWDNPPFITGGA  |
| UniRef90_H3FHA2<br>UniRef90_E9FXL3               | PIFNFFNYDKAFIVIE I IVI INNGHIII IMILIQIVIK ENQDILIPYILII GGG  |
| UniRef90_C4WW84                                  | L K PLY WNY CPEMCTKII I NTGYGWKIVIDATGGEGSELISGG P  |
| UniRef90_M7BYJ1<br>UniRef90_B4M267               | L K P L H V H Y D P S T A K N I V N N G H S F N V E F D D S A D K S V L R G G A L R Q V H L D K H R L S G I I S N T G H S V L F N Y D G M Q T P V N L S G G P         |
|  |   |

| JAMES DE JUSTISSA DE LA TARRES  |  | 00 400 440 400  |
|--|--|---|
| June      | UniRef90_B4LEI5                                  | RKTDYQFEQ <del>FHFH</del> WGENDTVGSEDLINNQSYPAELHVVMR   |
| JRR899 JV34H855  JRR99 JV34H85 | UniRef90_UPI000333C0D3                           | FPRRYIVITAQILIHILIH WGQQSPGGSEHQII INSEATAAEILIHII VIHY   |
| JRR899 JV34H855  JRR99 JV34H85 |  | LPRNYVAVQLHLHWGRKQPGGSEHQVNSEATAAELHI VHY   |
| JARKSON PAZESZA  JARKSO | UniRef90_V4AH85                                  | II IP A K Y KII ID O E H E H WG S A N T N G S E H T II IN G N A Y P M E IV IH E IV IH E   |
| JARKSON PAZESZA  JARKSO |  | L G A N F T T A Q F H M H L G E D D T R G A E H L I D G Q R N A A C I H I V N Y   |
| JARKSON PAZESZA  JARKSO | UniRef90_I3KDY3                                  | L H N Q Y T A A Q L H F H WG S S R P A G S E H T V N N K Q Y A A E L H V V H Y  |
| JANSON KTPS21  JANSON KTPS22  JANSON | UniRef90_H2ZGZ4                                  | L E G T Y N L V Q F H F H W G A V D C R G S E H T I I N G R P Y S A E A H L V H Q   |
| JAMESEO GENERAL L. P. D. E. Y. K. A. V. G. E. H. H. W. G. A. N. G. G. P. G. S. E. H. T. V. D. G. E. R. Y. P. M. E. H. J. V. H. W. J. M. W. | UniRef90_K7FS21                                  | VPOEVRASOII IHII IH WGSPEGPGSEH TIVIDGRRYDGEII IHIV VIVV  |
| Jankenson B.SSU005  Jankenson D.SSU005  Janken | UniRef90_I3K4L4                                  | L P D E Y K A V Q F H L H W G A N G G P G S E H T I D G E Q Y P M E L H I V H M   |
| Junkengo (234655  LE G PY R L K Q L JIF H W G K K H D L W G S E H M W D G K S F P S E L H L V H W J M W J Junkengo (2246578366)  Junkengo (2466578366)  Junkengo (246657866)  Junkengo (246657866 | UniRef90_B5SU02                                  | II II SHERAII IQMHEHWGSENSRGSEHQIVIGGRKEPII IEII IHII VIHY  |
| JARRESO, ADAZZSERSES  LT G XLY Y L LE Q E M EN W G S S D E G S E H T I V D G K S Y A A E L M L V H V M V M K M RESO, ADAZGSEPSES  JARRESO, ADAZGSEPSES  A N T J Y L F E Q L M F F W G S N D E G S E H T I V D G K G P M A E L M V H V M V M V M V M M M RESO, ADAZGSEPS AD | UniRef90_G3H655                                  | LEGPYRLKQLHFHWGKKHDVGSEHMVDGKSFPSELHLVHW  |
| Jimengo Grimony  | UniRef90_A0A023F836                              | LT GVY KLEQFHCH WGSSSDEGSEHTVDGKSYAAELHLVHW   |
| JURINGERIO GAMMOY JURINGERIO GAMMOY JURINGERIO GAMOY JURINGERIO SETTA SA JURINGERIO SETA SETA SA JURINGERIO SETA SETA SETA SETA SETA SETA SETA SETA  | UniRef90_UPI00034FBB57                           | LTDAYTLAGFHIHFGNSNPTGSEHQINGNAFPLEVHFVFY  |
| Junkelso D-100320837  Junkelso D-277425  JUNKelso D | UniRef90_A0A026VYY7                              |   |
| Junkelso D-P100J20537  Junkelso D-F7742  Junkels |  | L P R S F A A A QL H F H WG H S H P E G A E H L L D G R R A P A E M H L V H Y   |
| Junkelso D-100320837  Junkelso D-277425  JUNKelso D | UniRef90_I3NG33                                  | PPPAYRALQLHFHWGAPGHTGSEHSLDGQRYSMEMHLVHI  |
| Junkelgo Qss8878 Junkelgo Qss878 Junkelgo Qss878 Junkelgo Qss878 Junkelgo Qss878 Junkelgo MsxUb4 Junkelgo Qss878 Junkelgo MsxUb4 Junkelgo Qss878 Junkelgo Qss8788 Junkelgo Qss |  | ILIN N I Y V F Q Q L H F H W G Q N D N L G S E D L I N N R S F S M E L H A V F W H Q Y T A V Q M H L H W G G W D L E A S G S E H T M D G L R Y M A F L H V V H Y  |
| Jankergo Mysyg Mys | UniRef90_Q5M8Z5                                  | RGHEYEILINEIVIREHWGKENORGSEHTIVINEKAEPMEILIHILLIHW  |
| Jinkelson, MSV19/6 Jinkelson, MSV19/6 Jinkelson, MSV19/6 Jinkelson, MSV19/6 Jinkelson, MSV19/6 Jinkelson, MSV19/8 Jinkelson, MS | UniRef90_O93587<br>UniRef90_U5END8               | L   |
| Jinkergo Upino0355709A Jinkergo Lay 1000355709A Jinkergo Lay 10003565709A Jinkergo Lay 1000356709A Jinkergo Lay 100035670A Jinkergo Lay 1000 | UniRef90_B3M7V5                                  | LAEKYQFKQFHFHWGENDTVGSEDKIDNHAYPAELHVVLR  |
| Jinkergo UP100035709A Jinkergo Lynolo395709A  | UniRef90_M3W976<br>UniRef90_M3XUB4               | LEHNYRLKQFHFHWGGEELSGSEHTIJDGLKYMAEVHIVHW   |
| JAIRGESO LOPIO0035E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E597   | UniRef90_K1QSG0                                  | LEGTWRLEQFHLHWGSSNDRGSEHTIDGKTYAAELHLVHW  |
| JAIRGESO LOPIO0035E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E5974  JAIRGESO LOPIO0036E597   | UniRef90_UPI000395709A                           | GVYTAVQMHL HWGGLDLETSGSEHTIDGMRYFAELHIVHY   |
| JAINGEROU CATSKAB JAINGEROU ATSKAB JAINGEROU CATSKAB JAINGEROU CAT | UniRef90_E4Y355                                  | II IK G T Y EIL VIQII I <mark>H E H</mark> W G S A E G K G A E HIL VIN G E SIVIE G E A HIL VIH W  |
| JAINGEROU CATSKAB JAINGEROU ATSKAB JAINGEROU CATSKAB JAINGEROU CAT | UniRef90_T1FN58                                  | FPHRYRAAQFHFHWGMNNNMGSEHMVDGRYFAAELHLVHW  |
| Jinker90   | UniRef90_UPI00045E44EB                           | PPPAYRALQLHFHWGAPARAGSEHSLAGLRSSMEMHMVHV  |
| Jinker90   | UniRef90_A7SKA8                                  | L G A T Y S TVQF HLH WG S K N E Q G S E HLI D G K A F A G A L H L V S Y   |
| JAIRGE90_UP1000343115 JAIRGE90_UP1000343115 JAIRGE90_UP1000343112 JAIRGE90_UP1000343116 JAIRGE90_UP1000343116 JAIRGE90_UP1000343112 JAIRGE90_UP10003431112 JAIRGE90_UP10003431112 JAIRGE90_UP10003431112 JAIRGE90_UP100034066F33 JAIRGE90_UP10003406F3 JAIRGE90_UP1000329182 JAIRGE90_UP1000329182 JAIRGE90_UP1000329182 JAIRGE90_UP100030331641C JAIRGE90_UP10003106558 JAIRGE90_UP10003106558 JAIRGE90_UP10003106558 JAIRGE90_UP100031665 JAIRGE90_UP100031665 JAIRGE90_UP100031665 JAIRGE90_UP1000331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP1000351655 JAIRGE90_UP1000351655 JAIRGE90_UP1000351655 JAIRGE90_UP10003531641C JAIRGE90_UP1000 | UniRef90_L5LY78                                  | II IE N H Y RIL IK O E H E H WG A IVIN E WG S E H T IVIE D R IVIY P A   |
| JAIRGE90_UP1000343115 JAIRGE90_UP1000343115 JAIRGE90_UP1000343112 JAIRGE90_UP1000343116 JAIRGE90_UP1000343116 JAIRGE90_UP1000343112 JAIRGE90_UP10003431112 JAIRGE90_UP10003431112 JAIRGE90_UP10003431112 JAIRGE90_UP100034066F33 JAIRGE90_UP10003406F3 JAIRGE90_UP1000329182 JAIRGE90_UP1000329182 JAIRGE90_UP1000329182 JAIRGE90_UP100030331641C JAIRGE90_UP10003106558 JAIRGE90_UP10003106558 JAIRGE90_UP10003106558 JAIRGE90_UP100031665 JAIRGE90_UP100031665 JAIRGE90_UP100031665 JAIRGE90_UP1000331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP10003331641C JAIRGE90_UP1000351655 JAIRGE90_UP1000351655 JAIRGE90_UP1000351655 JAIRGE90_UP10003531641C JAIRGE90_UP1000 | UniRef90_UPI0003B5AEF7                           | LPNQFTATQLHLHWASSNWTGSEHLVDSRQFAAELHLVHY  |
| JAIRERGO_UPI0003871112  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00032D65B3  JAIRERGO_UPI00032D65B3  JAIRERGO_UPI00032D65B3  JAIRERGO_UPI00032D65B3  JAIRERGO_UPI0003D0E5B3  JAIRERGO_UPI0003B16B45  JAIRER | UniRef90_UPI0003C26141<br>UniRef90_UPI000443176D |   |
| JAIRERGO_UPI0003871112  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00042C6FB3  JAIRERGO_UPI00032D65B3  JAIRERGO_UPI00032D65B3  JAIRERGO_UPI00032D65B3  JAIRERGO_UPI00032D65B3  JAIRERGO_UPI0003D0E5B3  JAIRERGO_UPI0003B16B45  JAIRER | UniRef90_UPI00022F4F82                           | QEYRALQLHLHWGTSDHPGSEHTVNGHRFPAEIHVVHL  |
| JAIRE990_UR00042C6FB3  | UniRef90_UPI0003871112<br>UniRef90_V9KZL8        | II IP GIVIY T AIVIQ M HILIH WG DILIF T S G S F H TILID G M R YILIA FILIHIL VIH Y  |
| JniRef90_Q4VPE4 JniRef90_Q4VPE4 JniRef90_Q4VPE4 JniRef90_Q4VPE4 LD_GEYYAAQLHYHWGADDSVGSEHTILDGERYPMELHIVHY JniRef90_B3RKE2 JniRef90_LP10003D0E55B JniRef90_LP10003D0E55B JniRef90_LP10003D0E55B JniRef90_LP10003D0E55B JniRef90_LP10003D0E55B JniRef90_LP10003D0E55B JniRef90_LP10003D0E55B JniRef90_LP10003D0E55B JniRef90_LP2SZN4 JniRef90_LP10003B0E55B JniRef90_RESZN4 JniRef90_LP10003B0E55B JniRef90_RESZN4 JniRef90_LP10003B0E5B JniRef90_RESZN4 LT S S Y K A W Q F H F H W W G P D N S W G S E H T V N G R N Y F A E L H I V H Y JniRef90_LP10003B0E5B JniRef90_RESZN4 LT S S Y K A W Q F H F H W W G S Q E S P G S E H S I D G E R Y A M E A H I V H W JniRef90_LP10003B0E5B JniRef90_F4WZM6 LT S S Y K A W Q F H F H W G S Q E S P G S E H S I D G E R Y A M E A H I V H Y JniRef90_LP10003B3AE2B JniRef90_LP10003B3AE2B JniRef90_UP10003B3AE2B JniRef90_LP10003B3AE2B J | UniRef90_L9L5I6                                  | DGTQYTALQMHFHWGSSELSGSEHTUDGFRFVIEI HVVVHY  |
| JniRef90_Q4FCT9  | UniRef90_UPI00042C6FB3<br>UniRef90_Q8MPH8        | L   G A K Y N A S Q   L   H   L   H   W G Q K E P H G S E H T   V   G G K H F A A E   L   H   M   V   Y Y   L   G N E Y K A A S F H F H W S K T S A E G S E H T   V   A G K A Y A A E A H I V   H Y   |
| Julikefop  | UniRef90 Q4VPF4                                  | L D G E Y Y A A QLHY H WG A D D S V G S E H A I D N R Y S P L E V H L V H Y   |
| JAIRE690_B3RKE2 JAIRE690_UP10003D65558 S_FF_T A V Q M H L H W G G L D L T S G S E H T I D G M R Y F A E L H I V H Y J J M R S F J A G M R Y F A T Q L H L H W G G L D L T S G S E H T I D G M R Y F A E L H I V H Y J J M R S F J M A T Q L H L H W G G L D L T S G S E H T I D G M R Y F A E L H I V H Y L T G R Y K A M Q F H F H W G Q N D P H G S E H T I D G M R Y F A E L H I V H Y L T G R Y K A M Q F H F H W G Q N D P H G S E H T I D G M R Y F A E L H I V H Y L T G R Y K A M Q F H F H W G Q N D P H G S E H T I D G M R Y W A M E L H I V H Y L T G R Y K A M Q F H F H W G Q N D P H G S E H T I D G E Q Y P M E L H I V H Y L T G R Y K A M Q F H F H W G Q N D P H G S E H T I D G E Q Y P M E L H I V H Y L T G R Y K A M Q F H F H W G Q N D P H G S E H T I D G E Q Y P M E L H I V H Y L T G R Y K A M Q F H F H W G Q N D P H G S E H T I D G E Q Y P M E L H I V H Y L T G R Y K A M Q F H F H W G G N S S E I S G S E H T I D G E Q Y P M E L H I V H Y Y Y L T G R Y K A M Q F H F H W G G N S S E I S G S E H T I V D G M R Y W I E I H V V H Y Y Y M G R S F P L E I H V V H Y Y Y M G R S F P L E I H V V H Y Y Y M G R S F P L E I H V V H Y Y Y M G R S F P L E I H V V H Y Y Y M G R S F P L E I H V V H Y Y Y M G R S F P L E I H V V H Y Y M G R S F P L E I H V V H Y Y M G R S F P L E I H V V H Y Y M G R S F P L E I H V V H Y Y M G R S F P L E I H V V H Y M G S D D D T T L G S E D L I N N R S F P M E M H AIV F Y M G R S F P M E M H AIV F Y M G R S F P M E M H AIV F Y M G R S F P M E M H AIV F Y M G R S F P M E M H AIV F Y M G R S F P M E M H AIV F Y M M R M T M T M T M T M T M T M T M T M  | UniRef90_Q4FC19<br>UniRef90_UPI0003C29182        | QQYQAVQLHLHWGSPAGPGSEHTVDGEQYPMELHII VHM  |
| JinRef90_LP100031D4319  JinRef90_ESZA4U0  JinRef90_P08060  JinRef90_P08060  JinRef90_P08060  JinRef90_P08060  JinRef90_LP100031B41C  JinRef90_LP100031B41C  JinRef90_LP100031B41C  LTGRYKAMQFHFHWGGQESPGSEHSIIDGERYAMEAHIVHY  JinRef90_LP1000331641C  LTGRYKAMQFHFHWGGGASSELLSGSEHTVDGGRYYLLEIHVVVHY  JinRef90_LP1000331641C  LTGRYKAMQFHFHWGGASSELLSGSEHTVDGGRYYLLEIHVVVHY  JinRef90_F4WZM6  LNGWYLLEIHWGKSSPGSEHTIDGERYAMEAHIVVHY  LNGWYLLEIHWGKSSPGSEHTVDGGRYYLLEIHWVVHY  JinRef90_LP10003941685  JinRef90_LP1000338AE2B  JinRef90_LP1000338AE2B  JinRef90_LP10003504242  LAAPYRLRQFHLHWGSSDDHGSEHTVDGGRYYAAELHUVHY  JinRef90_LP10003504242  LAAPYRLRQFHLHWGSSDDHGSEHTVDGGSEHTVDGGLYKYAAELHUVHY  JinRef90_LP10003504242  LAAPYRLRQFHLHWGSSDDHGSEHTVDGGSEHTVDGGSEHTVDGGVLYAAELHUVHY  JinRef90_LP10003507C50  JinRef90_LP10003507C50  JinRef90_UP10003507C50  JINREf90_UP1000 | UniRef90_B3RKE2                                  | TKGRYRLVQFHYHWGPDNSVGSETFLNNLQYPLEEHIVFA  |
| JniRef90_F2X4U0 JniRef90_P08060 T_QY_LAKQMHFH_HWGSQSSPGSEHT DGEQYPMELH VHM JniRef90_P08060 T_QY_LAKQMHFHWGSQSSSSSHT DGERYAMEAH VVH M JniRef90_V4BHF8 LNIRef90_V4BHF8 LNIREf90_V4BHF8 LNIREf90_V4BHF8 LNIREf90_V4BHF8 LNIREf90_V4BHF8 LNIREf90_V4BHF8 LNIREf90_UP1000331641C LPFRYSASQLHLHWGRSNPRGSEHT LAGEFHFHWVVHY JniRef90_UP1000334628 LNIREf90_UP1000334628 LNIREf90_UP10003941685 LKNQYRLKQFHFHWGANSSRGSEHT VQGFQFPLELHVVHW JNIREf90_UP1000334628 LNIREf90_T1FNV0 JNIREf90_T1FNV0 JNIREf90_T1FNV0 JNIREf90_UP10003504242 JNIREf90_UP10004118E8E LNIREf90_UP10004118E8E LNIREf90_UP10004118E8E LNIREf90_UP10003504242 LSYMFRLTDVKFHFGRRRRFFHWGANSRFALLHLVHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFFGRRRRFRFHVSGSFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFRFRFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFFRFRFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFFRFRFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFFRFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFHWGANSRFALLHUVLHY JNIREf90_UP10003504242 LSYMFRLTDVKFHFHWGANSRFALLHUVLHY LSYMFRRTDVKHMANSRFALLHUVLHY LSYMFRRTDVKHMANSRF | UniRef90_UPI0003D0E55B                           | LRSRYTATQLHLHWGQNDPHGSEHTVGGKHFAAELHIVHY  |
| Jinker90   | UniRef90_F2X4U0                                  | LITGRYKAMQFHFHWGSQESPGSEHSIIDGERYAMEAHIVHI  |
| Dirikef90_V4BHF8   | UniRef90_P08060                                  | TQYLAKQMHEHWGGASSELSGSEHTVDGMRYVIELHVVHY  |
| Diriker90  | UniRef90_UPI000331641C<br>UniRef90_V4BHF8        | L   P   F   K   Y   S   A   S   Q   L   H   L   H   W   G   R   S   N   P   R   G   S   E   H   T   L   A   G   E   H   F   A   A   E   L   H   L   V   V   Y   Y   L   N   G   V   Q   V   A   Q   F   H   F   H   W   G   A   N   D   T   T   G   S   F   H   T   V   N   G   R   S   F   P   T   T   H   V   V   H   Y   Y   T   T   T   T   T   T   T   T |
| DIREGO   D   | UniRef90_A0A023GPD8                              | LPGRFQFAQFHFHWGANSSRGSEHTIQGFQFPLELHLVHF  |
| JniRef90_G6D8Z4  JniRef90_G6D8Z4  JniRef90_UP1000383AE2B  JniRef90_T1FNV0  JniRef90_A0A023FLX9  JniRef90_A0A023FLX9  JniRef90_F7CQH3  JniRef90_UP10004418E8E  JniRef90_UP10003504242  JniRef90_UP10003504243  JniRef90_UP10003504244  JniRef90_UP10003504244  JniRef90_UP10003504244  JniRef90_UP10003504245  JniRef90_UP10003 | UniRef90_F4WZM6<br>UniRef90_UPI0003941685        | L K N Q Y R L K Q F H F H W G E N D F E G S E D L I N N R S F P M E M H A V F Y L K N Q Y R L K Q F H F H W G A V N D W G S E H T V D C K F Y P A E L H I V H W   |
| Dirikef90  | UniRef90_G6D8Z4                                  | L D G N Y V F S Q M H F H W G D N D T L G S E D K I N H R S F P M E L H M V F Y   |
| JniRef90_A0A023FLX9  | UniRef90_UPI000383AE2B<br>UniRef90_T1FNV0        | L P G T Y R L A Q F H F H WG G P S S A G S E H T L N N K Q Y Q A E V H L V H Y  |
| Dinker90_UP10004418E8E   | UniRef90_A0A023FLX9                              | L H N N Y Q MVQ F H S H WG T C S E T G S E H T V D G E H Y A G E L H L V H Y  |
| JniRef90_UP10004418E8E JniRef90_UP10003504242 YAQQYRAVQLHLHWGSPSNPGSEHTVDHKRFAGELHVVHY JniRef90_W5MKX7 JniRef90_UP10003597C50 FDNMFIAAQLHFHWGTKEVPGSEHTIIDNVHFAELHVVLR JniRef90_UP10003EC2A8A SETVFKASKITFHWGTKEVPGSEHTIIDNVHFAELHVVHY JniRef90_UP10003EC2A8A SETVFKASKITFHWGKCNMSGSEHSLEGQKFPLEMQIYCF JniRef90_UP10002657328 JniRef90_UP10002657328 JniRef90_UP10002657328 JniRef90_B3RXW0 JniRef90_B3RXW0 JniRef90_B3RXW0 JniRef90_B3RXW0 JniRef90_B3RXW0 JniRef90_HVMSH UPATYKAIQLHLHWGVDDGFGSEHTVVDGKFFPLELHWVHY JniRef90_HVMSH UPATYKAIQLHLHWGVDDDGPGSEHTVVDGKFFPLELHWVHY JniRef90_HVMSH UPATYKAIQLHLHWGVDDDGPGSEHTVVDGKFFPLELHWWFS JniRef90_HVMSH UPATYKAIQLHLHWGVDDDGPGSEHTVVDGRRVMELHVVHY JniRef90_HVMSH UPATYKAIQLHLHWGVDDDGPGSEHTVVDGRRFAMELHVVHY JniRef90_HVMSH UPATYKAIQLHLHWGVDDDGPGSEHTVVDGRRFAMELHVVHY JniRef90_HVMSH UPATYKAIQLHLHWGVDDDGPGSEHTVVDGRRFAMELHVVHY JniRef90_HVMSH UPATYKAIQLHLHWGVDDDGPGSEHTVVDGRRFAMELHVVHY JNIRef90_HVMSH UPATYKAIQLHLHWGVDDNDHGSEHDVVDHTPFPMELHHVVHY JNIRef90_HVMSH UPATYKAIQLHLHWGVDDNDHGSEHTVVDGRRFAMELHVVHY JNIRef90_HVMSH UPATYKAIQLHLHWGVDDNDHGSEHTVVDGRRFAMELHVVHY JNIRef90_HVMSH UPATYKAICHWHY JNIREFYOLWHANA UPATYKAICHWHY JNIREFYO | UniRef90_F7CQH3                                  | L P N T F K A A QL H L H WGS P A K Q G S E H R L D G E E F P A E L H I V H Y  |
| JniRef90_B4N3T1  JniRef90_W5MKX7  JniRef90_UPl0003597C50  JniRef90_UPl0003EC2A8A  JniRef90_UPl0003EC2A8A  JniRef90_UPl0003EC2A8A  JniRef90_UPl0002657328  JniRef90_UPl0002657328  JniRef90_H9GII6  JniRef90_H9GII6  JniRef90_H9GII6  JniRef90_B3RXW0  JniRef90_B3RXW0  JniRef90_B3RXW0  JniRef90_J9KOP1  LTPTYRFTQLHFHWGVNDSFSGSEHTVDGGRRFAAELHVVHJ  JniRef90_J9KOP1  LTPTYRFTQLHFHWGVNDSFSGSEHTVDGGRRFAAELHWVVHY  JniRef90_H2M394  JniRef90_UPl00038F08F4  JniRef90_UPl00038F08F4  JniRef90_UPl00038F08F4  JniRef90_H3FHA2  JniRef90_B9FXL3  JniRef90_C4WW84  JniRef90_C4WW84  JniRef90_C4WW84  JniRef90_C4WW84  JniRef90_C4WW84  JniRef90_C4WW84  JniRef90_M37BJ1  | UniRef90_UPI0004418E8E                           | LISFQYSAAQL HILH WGNRNKQGSEHTIVSGRHFAAEL HI VHY   |
| JniRef90_W5MKX7  | UniRef90_B4N3T1                                  | LADRY QFEQFHFH WGENDTIGSEDRINNHAY PAELHV VLR  |
| SET V  F K A S K   T F H W G K C N M S G S E H T V G G K H F A A E L H L V H Y D G R R Y P L E L H MV H S D S F S G S E H T V D G W R R Y P L E L H MV H S D S F S G S E H T V D G W R R Y P L E L H MV H S D S F S G S E H T V D G W R R Y P L E L H MV H S D S F S G S E H T V D G W R R Y P L E L H MV H S D S F S G S E H T V D G W R R Y P L E L H MV H S D S F S G S E H T V D G W R R Y P L E L H MV H S D S F S G S E H T V D G W R R V M E I H V D H Y D S F S G S E H T V D G W R R V M E I H V D H Y D S F S G S E H T V D G W R R V M E I H F V H W S D D N D D R G S E D L I N N H S Y P M E L H M V F S D S R S E D L I N N H S Y P M E L H M V F S D W R R S E D L D D R R R V R A T Q L H L H W S E K L D R G S E D L I N N H S Y P M E L H M V F S D W R R S E D M    | UniRef90_W5MKX7<br>UniRef90_UPI0003597C50        | FDNMFILAAQLHFHWGTKEVPGSEHTIIDNVHFPAEIIHVVHY   |
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| JNIKET9U_C4WW84   L   G H K Y K   L   E Q F H C H W G C S S A K G S E H T   V   D G   I   P Y A G E   L   H   L V   H W<br>JNIRET9O M7BYJ1   L   E G T Y R   L   D F H I H W G S C E G Q G S F H I V   D G   V O Y F A F I I H I V   H W   | UniRef90_E9FXL3                                  | LPGVYRFHQLHFHWGSDVSRGSEHRIADQPFPAELHIVHY  |
| >:::::\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\   | UniRef90_C4WW84<br>UniRef90_M7BY.I1              | LIGHKYKLEQFHCHWGCSSAKGSEHTVDGI PYAGELHLVHW  |
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|  | 130 140 150 160   |
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| UniRef90_V4AH85                                  | K D S II IG S II IG A A IV IS E P E G II IA IV II IG E E E E II IN G T D N T IV ID N II I I D H II I  |
| UniRef90_A7RRH8<br>UniRef90_Q9MZ30               | N S D Y P D    S T A S N K S E G L  A  V L  A  V L I    E K G Y F N P Y Y D R     F S F  L  |
| UniRef90_I3KDY3<br>UniRef90 H2ZGZ4               | NIKYASASEAILIQHPDGMAIVLIGAFIVIEII II DIKNEFDAII VIENILI   |
| UniRef90_K1RCM3<br>UniRef90_K7FS21               | NIL IK Y G N F IL IE A A Y H P D G IL IS IV V IT Y MIV IK IV IG S E H A E F K K IL IT D A C   |
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| UniRef90_B5SU02                                  | NAKYPSIVISEAIVIDKGDGILIAIVLIGII LVIEILIQQDNPIVIEDIVIMIVIDNILI   |
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| UniRef90_A0A023F836<br>UniRef90_UPI00034FBB57    | NCKYSSFSEAASQPDGLAVLGVFLQVDDTEENERKIASLINSIYIDLTEAKQQSDGLAVVGVLFQLGSFNSALDHFLGQLKANYNSLSEATGDPSGIAVLGFFEESASENKKYSLVDAL   |
| UniRef90_M4ABZ3<br>UniRef90_A0A026VYY7           | KEDYKSMDEAILIKHHDGILIIVI AYILIYEIVIN PPN PIVIYESILI IEIVI   |
| UniRef90_G1MPV7<br>UniRef90_R7TB34               | DARYANASEAQHHAAGLAVLGI LEVGDEPNAYANI LNHL<br>RNSYADSTAAVDQPEGLAVLGI ELEQGSVENTKYPEI NAL   |
| UniRef90_I3NG33<br>UniRef90_UPI0002063705        | NKKYOSMEEARR <mark>HP</mark> DGII IAIVI IAIVI IEODODNANESAII VI IGII I  |
| UniRef90_E7F742<br>UniRef90_Q5M8Z5               | N S K Y P S F E E A K N K P D G L A V L A F F F E D G H F E N T Y Y S F L S N L   |
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| UniRef90_U5END8<br>UniRef90_B3M7V5               | NTKYKTFIEAAAQPDGLAVLGVLLKVGEKHPELDQIANLL<br>NLEYPSFASALGKDHGIAVMAFFFQISSTATGYSNFTSLL  |
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| UniRef90_K1QSG0<br>UniRef90_V9KKB5               | NKKYASFGEAADKPDGLAVLGFMVNVGKEHAGFKTITDVCAAKYGSLQEAMHKDDGLAVLGAFFEVGPQENEHYHIFKKLNSNYSSFEEAKDKPQGLAVLAFLYTDGHFENTYYSFISKL  |
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| UniRef90_UPI00038EE974<br>UniRef90_T1FN58        | STKYQSMGEARCHPDGLAVLAVLLEQEQDNSNFSAIVSVL<br>NCEYSSIEEAVKSANGLAVLGAFIKPGKHHHEMEKLTSML  |
| UniRef90_UPI00045E44EB<br>UniRef90_UPI0003D0B559 | NIRYRNIQEALIGHPDGILIAIVLIAIVLLIAEQDIVIENANESAII VISIV   |
| UniRef90_A7SKA8                                  | N T K Y P N L  S A A  V  D K S D G  L  A  V V  G  L L   K  V  G T E S A A  L  K K <u>F M</u> E <u>N</u>   |
| UniRef90_L5LY78<br>UniRef90_S4RNX9               | NATYKNIE DAMGKENGIAI I ALFVQI GREHLGLKGLTDIL<br>NSDYPDI NTALDKSDGLAVLGVLIKI GDFNPAYEQI LRFI   |
| UniRef90_UPI0003B5AEF7<br>UniRef90_UPI0003C26141 | N S D Y P DIVIT A A M D K S D G F AIV L IAII IFII IEII IG P F N P S Y E KII IF S H F  |
| UniRef90_UPI000443176D<br>UniRef90_UPI00022F4F82 | ELGVENKELQKLVNVL<br>STAFSELHEALGRPGSLAVLAFLQESPEENSAYEQLLSHL<br>NSDYSSFEEAKDKPNGLAVLAFLYTDGHFENTYYSLISKL  |
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| UniRef90_Q8MPH8<br>UniRef90_Q4VPE4               | NAKYASEODAWKADDGILAWLATELIOPGATNAGWOKILIDILI  |
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| UniRef90_B3RKE2                                  | N M D V K D E E E A A N C C D C L A V L C N L V K V C K V N C C L N D V L C N L   |
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| UniRef90_F2X4U0<br>UniRef90_H2SZN4               | KHHYT DLA TALA DPE GVAVL GFFTKA GNKNANYEPLTSNF  |
| UniRef90_P08060<br>UniRef90_UPI000331641C        | NSKYNSYEEAQKEPDGLAVLAALVEVKDYNAYYSKFIISHL<br>NSDYPNASVASDKAEGLAVLAVFLEMGSFNPSYDRIIFSSL  |
| UniRef90_V4BHF8<br>UniRef90_A0A023GPD8           | K Q S Y G S L A D A A T Q P D G L A V L A A L F D I V S D N P A F N G L L T T L N A K Y G S A S E A M K Y K D G L A V V A I Y F E V S P T P N E D L S V L K N V K E D Y K S F K E A L N Y S D G L A I L A Y L Y E V P Q P N P T Y E P I V K V L   |
| UniRef90_F4WZM6<br>UniRef90_UPI0003941685        | K E D Y K S F K E A L N Y S D G L A I L A Y L Y E V P Q P N P T Y E P I V K V L<br>N A E Y P S F E E A V M E G N G L A V I G V F L K I G A R H E G L Q T L V D A L  |
| UniRef90_G6D8Z4<br>UniRef90_UPI000383AE2B        | NAEYPSFEEAVMEGNGLAVIGVFLKIGARHEGLQTLVDAL<br>KEVYKSVKEAVKHPDGLTVLAFFYEDRHNHPAYDDITSAL<br>NSKYNSYATALKHADGIAVVGVFLKIGREKGEFQLLLDAL  |
| UniRef90_T1FNV0<br>UniRef90_A0A023FLX9           | NLNYDNIGSAATSKDGLAVIGVFLEGNVVIEKIANRLSNS<br>NVDKYNKSEAA <mark>C</mark> SDKGLSVVAVFFKEGKPHHELKKITD <mark>C</mark> M<br>NSEYRTMDEAVNGVRGLVAIAVFIEIGLVSNYPLELITKR  |
| UniRef90_K1P7Z9<br>UniRef90_F7CQH3               | N S E Y R T M D E A V N G V R G L V A I A V F T E I G L V S N Y P L E L I T K R<br>N S D Y A D I S E A K N K P D G L A V L G V F F E I G T D N P A Y A N I L H H L  |
| UniRef90_UPI0004418E8E                           | NSRYPDPKSAVDKSSGLAVLAVLTETGQFNPSYEKI FSHF   |
| UniRef90_UPI0003504242<br>UniRef90_B4N3T1        | NTKYENFEAAVTQPDGLAVLGVFLEVPRENPYYQQLLEHL<br>NLEYRDFASALGQDHGIAVLAFFQIQGDNPNYNEFVQLL   |
| UniRef90_W5MKX7<br>UniRef90_UPI0003597C50        | NLEYRDFASALGQDHGIAVLAFFQIQGDNPNYNEFVQLL NSKYASLQEAATKPDGLAVLGGFIGIGLENENYNILSSL NSKYASLQEAATKPDGLAVLGGFIGIGLENENYNILSSL NSKYSDLGEALKHADGVAVLGFMYEV DDQFSSFEEAVKGKGKIRALSILFEIGMEENLDYKIIDGV NSRYPDLQAAMDKSDGLAVLAVLEIGSFNPSYDKIFHHI QAAEPGHSAS GRLAVIGIFFDLTEGESNAQKITQVI KEQYTTLKEAMNDIEGVAGLAFFYQVSTEENQFNQVIQAL NSKYESYDIAKDAPDGLAVLAAFFYQVSTEENQFNQVIQAL NSKYESYDIAKDAPDGLAVLAAFFYQVSTEENQFNQVIQAL NKTYKDAAEATKSPDGLAVVGIFATVGKENYQLKNVTSEL NKTYKDAAEATKSPDGLAVVGIFATVGKENYQLKNVTSEL NTDYDDEKIALTKNDGLVVLAAFLLENYGFQPLVEALASVP NSEYPNMSAAMTQKDGLAVLGILITGEETNPAFNKILNYL NAEYANASEARHKSQGLVAVAVMVQIETPNPELRSLSSLF NVKYESYDVAKDAPDGLAVVGIFINIDNNSGPLSAVTKSI NEKYGDFATASGYPDGLAVVGIMIETPNPELRSLSSLF  |
| UniRef90_UPI0003EC2A8A<br>UniRef90_H9GII6        | NSRYPDLQAAMDKSDGLAVLAV LEI GSFNPSYDKI FHHI  |
| UniRef90_UPI0002657328<br>UniRef90_W5UF12        | Q A A E P G H S A S G R L A V I G L F F D L T E G E S N A Q K I T Q V I K E Q Y T T L K E A M N D L E G V A G L A F F Y Q V S T E E N Q F N Q V I Q A L   |
| UniRef90_H0VSR1<br>UniRef90_B3RXW0               | N S K Y E S Y D L A K D A P D G L A V L A A F M E E D A E N T Y Y S S F L S H L<br>N K T Y K D A A E A T K S P D G L A V V G I F A T V G K E N Y Q L K N V T S E L  |
| UniRef90_J9K0P1<br>UniRef90_M3YUH5               | NTDYDDEKIALTKNDGLVVLAMFFELTQEDNPVYSELVNQ<br>KEKGTSRNEAODPKDELAVLAFILIENYGEOPLVEALASVD   |
| UniRef90_H2M394<br>UniRef90_E9FWT4               | N S E Y P N M S A A M T Q K D G L A V L G T L T G E E T N P A F N K L L N Y L N A E Y A N A S E A R H K S O G L V A V M V O L E T D N D E L D S L E S L L S L S |
| UniRef90_UPI00038F08F4                           | NVKYESYDVAKDAPDGLAVLAAFVEVEDYNTYYSSFISHL  |
| UniRef90_H3FHA2<br>UniRef90_E9FXL3               | NEKYGDFATASGYPDGLAVLGIMIETEAHDNIAFRHIQHE  |
| UniRef90_C4WW84<br>UniRef90_M7BYJ1               | NEKYGDFATASGYPDGLAVLGIMIETEAHDNIAFRHIQHF<br>NDKYNSFTEAIAHPDGLAVLGVFLQGTETHDELEKIVSLI<br>NTKYGRFDEAVKHPDGLAVVGVFLQ<br>NSQYANFSDALNRAQGIVGVSILLQGDLSNPELRMLTDQL   |
| UniRef90_B4M267                                  | N S Q Y A N F S D A L N R A Q G II V G V S II L L   Q G D L S N P E L R M L T D Q L   |

| UniRef90_B4LEI5<br>UniRef90_UPI000333C0D3<br>UniRef90_D3TM95<br>UniRef90_F7ADM5  | 170 180 190 200  D K I S H K G Q S A E L A Q P L P L N K F L E Y D T Y F T Y T G S L T T P P C A  H E I R H K D Q K T S V P P F N L R L L P P Q M G Q F F R Y N G S L T T P P C Y  R F I K H K G D R V T L Y G C D P A K L L P S V T T Y W T Y E G S L T T P P C S  E K I R H K G Q T T L V P P F D V G L L P P E M G E F Y R Y N G S L T T P P C Y   |
|--|---|
| UniRef90_V4AH85<br>UniRef90_A7RRH8<br>UniRef90_Q9MZ30<br>UniRef90_I3KDY3<br>UniRef90_H2ZGZ4<br>UniRef90_K1RCM3                             | EKIRHKGQTTLVPPFDVGLLPPEMGEFYRYNGSLTTPPCYANITDPSGSSEVTQILEDLLPSKLANFYRYSGSLTTPPCSENVTKVGNVSDLQEFSLGSLLPSNTDFFRYKGSLTTPPCYRYVKYKGQNVRIPTFNIELLPERTRLDYYRYGSLTTPPCYRYVKYKGQNVRVVKVPGFNIRALLPTRLDYYRYDGSLTTPPCYQNIQDGHTEAEVMGHPELLLPNEIGSYACYGGSLTTPPCYQNIQDGHTEAEVMGHPELLLPTSRYWTYPGSLTTPPLSSRLVEAHTSVALEEPFDKLLKDDLTRYWTYPGSLTTPPLLPEVQEKGKKTTVDGFDIKGLLFTSRYYRYSGSLTTPPCYQNIQATNGNTSLSPISLAQLIPSEKNYYRYKGSLTTPPCTNSINMPSSNTTLSDVSLDMFIPNMTSYFRYQGSLTTPPCTNSINMPSSNTTLSDVSLDMFIPNMTSYFRYQGSLTTPPCEDKARYKGNEVLLPSLQPFSFLPHDAQYYTYRGSLTTPPCEDKARYKGNEVLLPSLQPFSFLPHDAQYYTTYRGSLTTPPCE |
| UniRef90_K7FS21<br>UniRef90_I3K4L4<br>UniRef90_Q6R4A1<br>UniRef90_B5SU02<br>UniRef90_G3H655<br>UniRef90_Q2F607                             | Y MIVIR F K D T K A Q F N Y F N P K CL L IP T S L Q Y W T Y P G S L T T P P L S P F IVIO H K G D K IVIT F C P I D P A K I I I P T K T A Y W T Y P G S I T T P P C T   |
| UniRef90_A0A023F836<br>UniRef90_UPI00034FBB57<br>UniRef90_M4ABZ3<br>UniRef90_A0A026VYY7<br>UniRef90_G1MPV7<br>UniRef90_R7TB34              | SQVAYSGQKTSVQANLRKFLPNNPHYWIYLGSLIIIPPCN<br>SQVAYSGQKTSVQANLRKFLPAKIGYYFKYNGSLTTPTCS<br>KRIVRPSSNATLPGISLEMLIPPQSSYFRYDGSLTTPGCA<br>PDVEAVGKEKTLKEPLLLERITTMQNYFTYNGSLTTPPCL<br>GSIRYAGQTTSIPSFSVQELLPERDRYYRYNGSLTTPPCL<br>SNIPPSGONFTMSGFALGDUIPDTSKYFRYSGGITTPPCY  |
| UniRef90_I3NG33<br>UniRef90_UPI0002063705<br>UniRef90_E7F742<br>UniRef90_Q5M8Z5<br>UniRef90_O93587<br>UniRef90_U5END8                      | QUI FINGNONI I FOFINFINI LE FUFNUI WVI EGOLI WF FOO   |
| UniRef90_B3M7V5<br>UniRef90_M3W976<br>UniRef90_M3XUB4<br>UniRef90_K1QSG0<br>UniRef90_V9KKB5<br>UniRef90_UP1000395709A                      | NNI RYPGQSTVLSDLDIRDMLPNVHHYYSYKGSLTTPPCT PSI KHKEYI LKKGFLKPNGI I PFCSSFFFFAGGI PLPKVT SKI QEAGSSVKLDDFSPSCMLGKLDHYWTYLGSLTTPPLF   |
| UniRef90_E4Y355<br>UniRef90_UPI00038EE974<br>UniRef90_T1FN58<br>UniRef90_UPI00045E44EB<br>UniRef90_UPI0003D0B559<br>UniRef90_A7SKA8        | PKILYSGESÄELDGFDPÄSLLPKHTDYWTYSGSLTTPPCY<br>LKNVSRRGESPGLSVELASTFPLASRYYRYSGSLTTPPGCE<br>PEVRHKDTQVTMGPFDPSCLLPACRDYWTYPGSLTTPPLA<br>GSVTKVNTSDFFQPAKUGDULPSNKNFYRYQGSLTTPPGCQ  |
| UniRef90_L5LY78<br>UniRef90_S4RNX9<br>UniRef90_UPI0003B5AEF7<br>UniRef90_UPI0003C26141<br>UniRef90_UPI000443176D<br>UniRef90_UPI00022F4F82 | QNVKYKGQKAQVPGFNLQELLPNMNEYYRYEGSLTTPPCY<br>PEIKHKDTHVALNRFDPSCLLPSCQDYWTYGGSLTTPPLT<br>FELAFEGTKLELPGUVSALLPDUSRYYRYEGSLTTPPCS   |
| UniRef90_UPI0003871112<br>UniRef90_V9KZL8<br>UniRef90_L9L5I6<br>UniRef90_UPI00042C6FB3<br>UniRef90_Q8MPH8<br>UniRef90_Q4VPE4               | QYIKYKGQKIMIPTESUNVQAMLPENSHFYRYQGSLITPPCS<br>QYIKYKGQKIMIPTESVQRLLPKQLDYYTYHGSLTTPPCF<br>VNVKYPGQSTILTGLDVQDMLPEDHHYYSYKGSLTTPPCT<br>EDVKYKGQEVSIPGFSLEELLPKRPEYYRYRGSLTTPPCY<br>PSVPTKGDTATIPGGFDCLLPGDQSKYWYYPGSLTTPPCF<br>TEVLYKNGETNIAMNEAHTMPEDWSSYYRYIGSLTTPTCD  |
| UniRef90_Q4FCT9<br>UniRef90_UPl0003C29182<br>UniRef90_B3RKE2<br>UniRef90_UPl0003D0E55B<br>UniRef90_UPl0001DEA19A<br>UniRef90_F2X4U0        | KTVPQPGDSKPLEPFLLKEMILDQKKYYRYHGSLTTPPGCFEVSEEDDDTLVAGFNIAGLLPNLSRYFRYNGSLTTPPCYKYVRYQGQSHSFSGLKIRSLVDEDDRFFAFNGSLTTPPCSAKIRYAGQSMRLTSLDVQGMLPENSHFYRYPGSLTTPPCSQDVRYKGQAVLIPGFSIEELLPERPDYYRYKGSLTTPPCH  |
| UniRef90_H2SZN4<br>UniRef90_P08060<br>UniRef90_UPI000331641C<br>UniRef90_V4BHF8<br>UniRef90_A0A023GPD8<br>UniRef90_F4WZM6                  | EDIRYAGQSTVLRGLDIEDMLPDLRYYYSYLGSLTTPPCT<br>QGVKYKGQEMLVPAFDIEELLPERPDYYRYQGSLTTPPCH<br>EKVRNPKETTQYTIASLGSILPSVRRYLGSLTTPPCS   |
| UniRef90_UPI0003941685<br>UniRef90_G6D8Z4<br>UniRef90_UPI000383AE2B<br>UniRef90_T1FNV0<br>UniRef90_A0A023FLX9<br>UniRef90_K1P7Z9           | PDIEKKDMGKVLQKPLLLGNILKMQDYFTYFGSLTTPPCLPAVRHKDTVIEFDVFDPSCLLPSCPDYWTYAGSLTTPPCTTNVTDPHSTVVMPFSFLNILPLDLRRYFTYKGSLTTPPCSDKIKTKGKEAPFNNFNPSCLFPACRDYWTYHGSFTTPPCSCATVLSSNCTIDNMRLIDILPFNHDNYFRYQGSLTTPPCSSKVTFKGMKCPLQDIDINSIIPANSSYWTYEGSLTTPPCYRNIPTKGNNTNISGFTLTDLIPNTTEYMTYEGSLTTPPCYRNIPTKGNNTNISGFTLTDLIPNTTEYMTYEGSLTTPPCQQQ  |
| UniRef90_F7CQH3<br>UniRef90_UPI0004418E8E<br>UniRef90_UPI0003504242<br>UniRef90_B4N3T1<br>UniRef90_W5MKX7<br>UniRef90_UPI0003597C50        | DNI RYKDQTVSVPSFNVRHL LPENEEYFRYQGSLTTPPCFQHVKYKDQETI VPGFNVQDL LPDRDDYYRYEGSLTTPPCYRSI QEEDGEVFVPGFNI AGL LPDNLHYFHYNGSLTTPPCLSTI ERKDMSANYTRPVRLQDFLSYMNYYSYI GSLTTPPCSTDVSLEETNTEIPGFNVRL LPPNLERFYRYNGSLTTPPCFSLSKGSKI DLAGFALNTL LQNSFSNFFRYDGSLTTPDCQ   |
| UniRef90_UPI0003EC2A8A<br>UniRef90_H9GII6<br>UniRef90_UPI0002657328<br>UniRef90_W5UF12<br>UniRef90_H0VSR1<br>UniRef90_B3RXW0               | QNVKYKDQETFIPGFNVQALLPNSIDYYIYNGSLISPPCI<br>QNVKYKDQETFIPGFNVQALLPDQLDYFRYEGSLTTPPCF<br>RDMRTHDSVDLRGALSPGELLPGTKHFFTYQGSLTTPPCS<br>GRIPYDGNTSLVPEFRMTDLLPKLSSYYRYSGSLTTPPCN<br>ANIKYPGQSTMISGLPVLDMLPENHFYYTYHGSLTTPPCT  |
| UniRef90_J9K0P1<br>UniRef90_M3YUH5<br>UniRef90_H2M394<br>UniRef90_E9FWT4<br>UniRef90_UPI00038F08F4<br>UniRef90_H3FHA2                      | RPKMNTTMKESI SLFNLIPKKEKLRHYYRYLGSLTTPPCL RPKMNTTMKESI SLFNLIPKKEKLRHYYRYLGSLTTPPCQ SRIKHFGQKVFIPAFDIQSLLPEDGRYYRYNGSLTTPPCY GQVIYRGQSADLRHVSLHALLPETDHYMTYEGSTTHPGCW ANIKHPGQSTVLSDLTVLDMLPEDLHYYSYWGSLTTPPCT NEVINAGNETELKEMRPRSILPSVTDEYRYEGSLTTPGCQ   |
| UniRef90_E9FXL3<br>UniRef90_C4WW84<br>UniRef90_M7BYJ1<br>UniRef90_B4M267   | ETIANPTYDVAVPIPLEDLLPDDPTAFFRYDGSLTTPECNPQVALRNQTAEINSIDPTNLLPEDKTYWTYHGSLTTPPCSGKQASFTNYNPKNLLPASLDYWTYQGSLTTPPLFERIRYGGDEVFVKRLSIRGLLPDTDHYMTYDGSTTAPACH  |

|  | 040   |
|--|---|
| UniRef90_B4LEI5                                  | 210 220 230 240<br>EK VV W DFYQP I D I SEYQ L NHFRLLTAND DH L KNN   |
| UniRef90_UPI000333C0D3                           | OSIVI WTIVIENORIVIOLIS RDOLIKKII IOETILIESTE DPSELLIA ON  |
| UniRef90_D3TM95<br>UniRef90_F7ADM5               | E   |
| UniRef90_V4AH85                                  |   |
| UniRef90_A7RRH8<br>UniRef90_Q9MZ30               | E S   V   T   W T   V   M   K   T   K   T   T   T   S   H   D   Q   L   M   K   L   R   S   L   M   E   K   D   G   V   H   K   L   T   D   N   P   S   V   L   W T   V   F   R   N   P   V   T   I   S   Q   E   Q   L   A   L   Q   T   A   L   Y   F   T   R   A   D   D   P   A   P   M   N   N   N   M   T   T   T   T   T   T   T   T   T |
| UniRef90_I3KDY3                                  | PSVLWTVFRNPITLSRKQFLSLATALYSSNAQDSAPMPNN  |
| UniRef90_H2ZGZ4<br>UniRef90_K1RCM3               | ESVTWTVMKTKTTI SHDQLMKLRSIM EKDGVHKLTDN PSVLWTVFRNPVTI SQEQLLALQTALYFTRADDPAPMINN PSVLWTVFRNPI TI SRKQFLSLATALYSSNAQDSAPMPNN ECVQWI NFHEPI TMSEHQI NQFRSLHSTKEGEPHRPL VDN ESVTWI I FQEPVEI SQQQMDALRKLKF PEGQCMMDN  |
| UniRef90_K7FS21                                  | QTVNWTVFNQTVLLSQKQISLLETTLQ GDHEELLQNN  |
| UniRef90_I3K4L4<br>UniRef90_Q6R4A1               | QTVNWTVFNQTVLLSQKQISLLETTLQ GDHEELLQNN<br>ESVIWTLFENPIPLSIEQLQAFSKLQFND GKQMTGN<br>EAVVWTVFKNTIPLSRQQLDAFSRLQFAD GKPMVGT<br>ESVQWFVFNHTFPISQAQLDKFRDLFDSEKQDTKKPLVDN  |
| UniRef90_B5SU02                                  | ESVQWFVFNHTFPISQAQLDKFRDLFDSEKQDTKKPLVDN  |
| UniRef90_G3H655<br>UniRef90_Q2F607               | ESVTWIVLREPIRISERQMEKFRSLLFTSEDDERIHMVNN<br>ESVIWLLFKEPVQVSAEQLSLMRKLK <mark>C</mark> AS <mark>C</mark> GVEAMELLHN  |
| UniRef90_A0A023F836                              | ESVIWIVFKD <u>SI</u> NVS <u>E</u> EQLN <u>IYRQMK</u> SVGREET <u>VEPLR</u> SN  |
| UniRef90_UPI00034FBB57<br>UniRef90_M4ABZ3        | E N V T W L V A G N V Q P I S L S Q Y T Q I I S N L Y F S G A A N P V P M L D N<br>E A V V W T L F E S T I P L S G S Q L S A F W Q L Q F P E G E E M V Q N  |
| UniRef90_A0A026VYY7                              | ELVTWIDFKTHQQLSHEQLAAFRDLRT PEGNKLTHN   |
| UniRef90_G1MPV7<br>UniRef90_R7TB34               | Q S   V   |
| UniRef90_I3NG33                                  | PSV LWTVFENAVPI GRVQVAQFQTVPQAGMGLHPEPLTDN  |
| UniRef90_UPI0002063705<br>UniRef90_E7F742        | ESVMWTVEDTPUTLS HNOLPKIESTUMD HDNKT   |
| UniRef90_Q5M8Z5                                  | F GIVIT WILLIF R Y PILITIVIS Q T QILIF F F R RILIR T HILIK G A D D GILIM A D N  |
| UniRef90_O93587<br>UniRef90_U5END8               | RASPGLSAREPISVSAEQMAKFRSLLFSAEGEAE <mark>CC</mark> MVDK<br>E <mark>C</mark> VIWIJFKEPLEVAHEQLVAFRNMKCFDKTFETGLVINN  |
| UniRef90_B3M7V5                                  | EEVIWMDFRTPIDITEKQLNAFRLLTAHD DHLKNN  |
| UniRef90_M3W976<br>UniRef90_M3XUB4               | E N V Y W F V L A S P I M F S R A Q G W K L E N S I L D H Q N K T L H N I P C T A F P T M P S E V P R I K D E L E Q F R T L L F T S E G E K E K R M V D N   |
| UniRef90_K1QSG0<br>UniRef90_V9KKB5               | ESVTWTLFSDVIEISQAQMDALRSLKFNN GK <mark>C</mark> MMDN<br>QTVNWTIFKDTIQISQLQLHRLKSSLRTSDNQI LS <mark>C</mark> N   |
| UniRef90_UPI000395709A                           | ESVĪWŢI FHSPI VLSHTQLQLLEN <u>SL</u> DGHNRT LRND  |
| UniRef90_E4Y355<br>UniRef90_UPI00038EE974        | E C V Q W V L L K P L V V T K R E M D L F R S L E G S F G N N F T D N P T V L W T I F E S A V P I G R A Q V T Q F Q T L P R A S L G L L T D N   |
| UniRef90_T1FN58                                  | PTVLWTIFESAVPIGRAQVTQFQTLPRASLG LITDN<br>ESARFVIFKEPIQISEDQLNSFRQLRSHADDEFGGKILQN<br>PAVLWTVFQEPVPIGRAQVXQFQTALQAGPGSRPALLTDN<br>ESVTWLVHKMPIEVSPSQLSTFRTLLFSGRGEDEEVMVNN   |
| UniRef90_UPI00045E44EB<br>UniRef90_UPI0003D0B559 | P A V L   W T V   F Q E P   V   P   I   G R A Q   V   X Q F Q T A   L   Q A G P G S R P A L L   T D N E S V   T W   V   H K M P   I E V   S P S Q L   S T F R T   L L   F S G R G E D E E V   M V   N N   |
| UniRef90_A7SKA8                                  | ESVT WSV MANPITVS EAQLALLRGLKQ KOGVAVIQON   |
| UniRef90_L5LY78<br>UniRef90_S4RNX9               | E S V T WI I Q K K P I E V A A N Q L A A F R T L L F T A L G E E E K T M V N N<br>E N V L W L L F R Y P L T L S H A Q I E E F R R L R T H S K G V A P G Q L G D N   |
| UniRef90_UPI0003B5AEF7                           | PSVLWTVFRNHVTISHQQYLALATSLSSVQDPEVNPLNNN  |
| UniRef90_UPI0003C26141<br>UniRef90_UPI000443176D | P S V L   W T V   F R H P   V   H     S E E Q L L   A L   E T A L   Y <mark>C</mark> T R F D D P E P M V   N N<br>E S V T W I   I K K K P I   E V G N N Q L A E F R R L <u>L   F</u> S <u>A L G</u> E E E K K <u>M V N</u> N  |
| UniRef90_UPI00022F4F82                           | OGVIWTVENOTVKIS AKOLHTISVSIWGPHDSRIOIN  |
| UniRef90_UPI0003871112<br>UniRef90_V9KZL8        | ESVLWTIFHSPIVLSHTQISLLENSLLDWQN KMLRNDQSVLWIIFHQKVLLSPDQFENLITQLYSSEVSDNIPLIDNQNVQWFVLKDYVKMSRTQALMLENSLLDHENKT LHNDPTVLWTVFRNPVEISQQQLMDLETALYCTRVDDPSPMINN  |
| UniRef90_L9L5I6                                  | QNVQWFVLKDYVKMSRTQALMLENSLLDHENKT LHND  |
| UniRef90_UPI00042C6FB3<br>UniRef90_Q8MPH8        | PTVLWTVFRNPVEISQQQLMDLETALYCTRVDDPSPMLNN<br>ESVTWLVYKDPIQLCENQLAALRKITGC  |
| UniRef90_Q4VPE4                                  | E A   V V   W T   V   F E N R   I   P   I   S T A Q   L   A K F R E   L   K Q   V   S T A P Q N Y P   L   T Y N   |
| UniRef90_Q4FCT9<br>UniRef90_UPI0003C29182        | EAVIWTVFEEPIRLSKGQLDAFSETLFYNASQHKAL N<br>QTVMWTVFNQTVRLSLDQILKLEETLY GDHNKLLQNN  |
| UniRef90_B3RKE2                                  | ENVAWHVMAEPLELSQAQLEEFRKLYSTNNTVGTQNLVKN  |
| UniRef90_UPI0003D0E55B<br>UniRef90_UPI0001DEA19A | PTVLWTVFRNPVQISQEQLLALETALYYTYVDDPSPMVNN  |
| UniRef90_F2X4U0<br>UniRef90 H2SZN4               | EEVIWTLFEKPIELGSQQIQEFWKKLYFDTNTKFSMM DN  |
| UniRef90_P08060                                  | ENVHWEVVADTVKLSKTQVEKLENSLLNHQNKT IQND  |
| UniRef90_UPI000331641C<br>UniRef90_V4BHF8        | PIVLWIIIFKN PIVQIIS QEQLLALETALY CTHID DPLPMVN N<br>ESVIWTISS QSIPISS YOMOAFRRIISS FIDS NGOYIVN N   |
| UniRef90_A0A023GPD8                              | EAVTETVMTTTMPI SEEQLQQFR LLRTGSDESSPPL VDN  |
| UniRef90_F4WZM6<br>UniRef90_UPI0003941685        | ESVTWI LKKKPI EVDEDQHDAAF LWREGKKGRFCEMEVV  |
| UniRef90_G6D8Z4                                  | EVVIWLDFEQPVRLAHEQUEFRELR SANGKÜRHN   |
| UniRef90_UPI000383AE2B<br>UniRef90_T1FNV0        | ESV VWTVFQKPI SVTKEQLQSFFRI QDSHSHELHNN   |
| UniRef90_A0A023FLX9<br>UniRef90_K1P7Z9           | ESVTWIVER KEPI EVSREQFEAFRELMSYKE   |
| UniRef90_F7CQH3                                  | QSVLWTVFYHPVEISRSQLEKLQTTLYSTTATPPEVLGNN  |
| UniRef90_UPI0004418E8E<br>UniRef90_UPI0003504242 | PT VL WT V FRKP V Q I SAEQ LL A L ETT L YCTQSNDPAPM V DN<br>FS V KWT V FNQT V MI SKFQ V CWMS VIV SS  QTDDNH IIIMNN  |
| UniRef90_B4N3T1                                  | E E V T W D F E T P I D I S E Y Q L N G F R Q L T A H D E   |
| UniRef90_W5MKX7<br>UniRef90_UPI0003597C50        | QTVMWTVFNQTVRLSSQQQLEEFRXXLLYYTY  |
| UniRef90_UPI0003EC2A8A                           | DTVDWLVFKNTVSI SENQLAVFCTMQQSGYVMLMDYLQNN   |
| UniRef90_H9GII6<br>UniRef90_UPI0002657328        | EVVTWLVLKKPVQVSEEQLLALFRTTLF CTQPDDPSPMVNN  |
| UniRef90_W5UF12                                  | EALLWILEQESETI SQQQLVNVTKQMWFKKG KPMLDN   |
| UniRef90_H0VSR1<br>UniRef90_B3RXW0               | ENIVIX WEIV LIQUSIVIKILIS KA QIVIWKII EN SILLII HUNKI LIHNG<br>ENIVIT WII MILIR HPII EII SEEQILLEII RSILE <mark>C</mark> HEGGE MIVIN N  |
| UniRef90_J9K0P1                                  | EVVTWLDEKHPIQLSHNQVQAERMLR SKHGQLTHN  |
| UniRef90_M3YUH5<br>UniRef90_H2M394               | EI   V V   W   V   F Q E K   I   K   L   K K D Q   I   F A F S K N   L   Y Y D K E Q T   L   S M T E N<br>Q S   V   M W T   V   F H E R   V   Q   I   S K A Q   L   K   L   E T   I L   Y S S K A E D P E K M O D N   |
| UniRef90_E9FWT4                                  | ETTS WELV NKPLYLTRQEL YALRRLVQGDSETPKGALGNN   |
| UniRef90_UPI00038F08F4<br>UniRef90_H3FHA2        | ENVKWEVLEDSVKLSKAQVWKIENSLLIHHNRI LHNG<br>EAVQWILLAEPVSITRDQLDELRKVR NTEGEVHEHN   |
| UniRef90_E9FXL3                                  | ESVEWTVEQTELAUSERQLAKERGVE DDELRELENN   |
| UniRef90_C4WW84<br>UniRef90_M7BYJ1               | ECVIWHVLREPISVSEKQLNAFKSMRIWIPEEGGPPLVNN<br>ECVIWHVLREPISVSPEQGSDIR   |
| UniRef90_B4M267                                  | E TVT WVI LNKPI YI T K Q QÜHAL R R LM Q G S P D H P K A P L G N N   |

| UniRef90_B4LEI5                                       | 250<br>F R P T Q P   L   N N R   <u>V</u> V   <u>Y</u> F N         |
|---|--|
| UniRef90_UPI000333C0D3<br>UniRef90_D3TM95             | HRAPQPLNQRKVLASF<br>FRPPLPLGNRELR                                  |
| UniRef90_F7ADM5                                       | Y R A P Q P L N H R L V V A S F                                    |
| UniRef90_V4AH85<br>UniRef90_A7RRH8                    | Y R P V Q L L H S R K V Y S S<br>Y R H I Q P L N G R T V K S N F   |
| UniRef90_Q9MZ30                                       | FRPIQNFGVRLV <mark>HA</mark> SF                                    |
| UniRef90_I3KDY3<br>UniRef90_H2ZGZ4                    | Y R K T Q P V D S R L I L V S F<br>Y R P V Q P I N G R A V F       |
| UniRef90 K1RCM3                                       | Y R P P T P I H Q R T V R A S F                                    |
| UniRef90_K7FS21<br>UniRef90_I3K4L4                    | FRPTQSLHGRKVLASF<br>FRPVQPLNGRKVYR<br>YRPVQPLNGRPVYRS              |
| 11-1D-100 DEOLIOO                                     |  |
| UniRef90_B35002<br>UniRef90_G3H655                    | FRPPQPLKGRVVKASF   |
| UniRef90_Q2F607<br>UniRef90_A0A023F836                | Y R P T L P L G N R E L R<br>Y R P P L P L G N R V L R             |
| UniRef90_UPI00034FBB57                                | FRPTQPLNGRTVL  |
| UniRef90_M4ABZ3<br>UniRef90 A0A026VYY7                | Y R P V Q P L N S R R V L Y S<br>F R P V Q P L E D R I V F H N I   |
| UniRef90_G1MPV7                                       | FRDPQDLNQRPVLASF   |
| UniRef90_R7TB34<br>UniRef90_I3NG33                    | E P P I O P I G G P S I I A S                                      |
| UniRef90_UPI0002063705<br>UniRef90_E7F742             |  |
| UniRef90_Q5M8Z5                                       | FRPTQPLSDRLIRAAF   |
| UniRef90_093587<br>UniRef90_U5END8                    | Y R P P Q P L K G R A V R A S F<br>Y R P P L D L G N R E L R       |
| UniRef90_B3M7V5                                       | FRPTQPLNDR <u>P</u> VYSN   |
| UniRef90_M3W976<br>UniRef90_M3XUB4                    | Y R M T Q P L N N R V V E T N F<br>F R P L Q P L M N R T V R S S F |
| UniRef90_K1QSG0<br>UniRef90_V9KKB5                    | YRP <mark>PC</mark> AL <mark>C</mark> GRSVKAS<br>YRDVQPLNRRPVFVSF  |
| UniRef90_UPI000395709A                                | Y R H V Q P L Q G R V V E A S F                                    |
| UniRef90_E4Y355<br>UniRef90_UPI00038EE974             | FRPQQPLEGRRIFAS  |
| UniRef90_T1FN58                                       | Y R P P N P L N D R K I V S S                                      |
| UniRef90_UPI00045E44EB<br>UniRef90_UPI0003D0B559      | FRPQQPLGGRRVAAS<br>FRPLQPLRGRNVRSSF                                |
| UniRef90_A7SKA8<br>UniRef90_L5LY78<br>UniRef90_S4RNX9 | FRNTMPLNGRAVKSNF<br>YRPLQPLMNRKLRASF                               |
| UniRef90_S4RNX9                                       | FRPTQQLNDRVIRASF   |
| UniRef90_UPI0003B5AEF7<br>UniRef90_UPI0003C26141      | FRKPQPIDSRVVLVSF<br>FRHIQEFEERLVYVSF                               |
| UniRef90_UPI000443176D                                | FRPLQPLMNRTI RSSF  |
| UniRef90_UPI00022F4F82<br>UniRef90_UPI0003871112      | YRHAQPLNGRVVESSF   |
| UniRef90_V9KZL8<br>UniRef90_L9L5I6                    | VR MVQ PL NHRVVKASF<br>YRRTQPLNHRVVEANF                            |
| UniRef90_UPI00042C6FB3                                | FRQVQKFEERLVYVSF   |
| UniRef90_Q8MPH8<br>UniRef90_Q4VPE4                    | F R P T L G L C G R Q V S S S F<br>Y R P L Q P L G N R E V K K N F |
| UniRef90_Q4FCT9<br>UniRef90_UPI0003C29182             | FRPVQKRNGRIVYVS<br>FRLPQAMHGRRVLASF                                |
| UniRef90_B3RKE2                                       | FRPIQMLNGRSILASF   |
| UniRef90_UPI0003D0E55B<br>UniRef90_UPI0001DEA19A      | Y R H A Q P L N D R V V E S S F<br>F R R V Q E F E E R Q V Y I S F |
| UniRef90_F2X4U0<br>UniRef90_H2SZN4                    | FRPVQPIIYSRTVYKS<br>FRPVQPLNGRQVFHS                                |
| UniRef90_P08060                                       | Y R R T Q P L N H R V V E A N F                                    |
| UniRef90_UPI000331641C<br>UniRef90 V4BHF8             | FRRVQKFDERLVYVSF<br>FRPVQNLYGRRILTN                                |
| UniRef90_A0A023GPD8                                   | F R P <u>T</u> F P L  N G R R  V  F K S <u>F</u>                   |
| UniRef90_F4WZM6<br>UniRef90_UPI0003941685             | F R P V Q S L E G R E V F H N L<br>N R E L Q P L N                 |
| UniRef90_G6D8Z4<br>UniRef90_UPI000383AE2B             | FRPIQPIGDRTVFYN<br>WRPPQPIKGRIVKASF                                |
| UniRef90_T1FNV0                                       | FRPVQK YKKPVTKSF   |
| UniRef90_A0A023FLX9<br>UniRef90 K1P7Z9                | TRAVMPLNQRVIRTNI   |
| UniRef90_F7CQH3                                       | VREAQLLNSRTVY <u>S</u> SF  |
| UniRef90_UPI0004418E8E<br>UniRef90_UPI0003504242      | FRRVQEFDERLVSVSF<br>FRQDQSL <mark>H</mark> RRWVLASF                |
| UniRef90_B4N3T1<br>UniRef90_W5MKX7                    | FRPIQPLNDRTIYK<br>FRAAQLLHGREVYSSF                                 |
| UniRef90_UPI0003597C50                                | F R P P M P L N Q R V V Q S S F                                    |
| UniRef90_UPI0003EC2A8A<br>UniRef90_H9GII6             | FREQQYKFSRQVFTSY<br>FRKIQEFDERLVSVSF                               |
| UniRef90_UPI0002657328<br>UniRef90_W5UF12             | FRPIQMLNNREV<br>FRPVQKLNGRIVYKS                                    |
| UniRef90_H0VSR1                                       | Y R S V Q P L H D R V V E A S F                                    |
| UniRef90_B3RXW0<br>UniRef90_J9K0P1                    | FRPVQALHGREIRTTF<br>SRPVQELSGRPVWYN                                |
| UniRef90_M3YUH5                                       | VRPLQPQGQRPVFKS  |
| UniRef90_H2M394<br>UniRef90_E9FWT4                    | YRSTQALNQRVIYTSF<br>VRALQPLHHRTVRTNI                               |
| UniRef90_UPI00038F08F4<br>UniRef90_H3FHA2             | YRKAQPLHGRVVEANF<br>FRPTYPLNGRRIR                                  |
| UniRef90_E9FXL3                                       | Y R P V Q E L H N R V V  |
| UniRef90_C4WW84<br>UniRef90_M7BYJ1                    | YRPPLGNRVLR  |
| UniRef90_B4M267                                       | Y R P P Q P L L H R P I R T N I                                    |

|  | 40 00 00 40   |
|--|---|
| UniRef90 M3XJ23                                  | 1   |
| UniRef90_B0WFA1                                  | Y D Y A Y G E S T Q E W G D T S P F C N G K L Q S P T A L Y T K S S M P V A N   |
| UniRef90_Q7SYW3<br>UniRef90_H9GLZ6               | HWCYETQCGPRFWNNANTFCGEKEQSPINILTKKAVFMES<br>HWCYLSQKCPRQWDEITPACGGKQQSPINIVTSKIEYDWN  |
| UniRef90_H9GL26<br>UniRef90_UPI0002C66426        | H W C Y E S C L IG P T E W G G D C H K H R Q S P I I N I IN T S Q A Q IV IN K S   |
| UniRef90_UPI000443EE4A                           | HWRYGGDII PWPQAFPK <mark>C</mark> AGRFQSPIVIDII IRPFII IAAFSRA  |
| UniRef90_G8QPH9                                  | HWSYEGEGGPDFWGRLKPCDKGRRQSPIDIWDGIRV  |
| UniRef90_H2Z000<br>UniRef90_UPI000443D80B        | GPSNWSAAFPICNLTRQSPI NI KSNVQTASNP<br>WCYQSQTDPSRWAALFPRCGGLRQSPI NI VTNKVHFSSA   |
| UniRef90_F7GGG0                                  | WT Y E <u>G</u> A <u>L</u> D E A <del>H</del> WP Q <del>H</del> Y P A <mark>C</mark> G G Q R Q S P   I N L <u>Q</u> R T K <u>V</u> R Y N P A  |
| UniRef90_UPI000359E6B6                           | H WCY E LQQGPADWTGD CKKTHQSPLNLVTTEAKMNPD   |
| UniRef90_UPI0001D55185<br>UniRef90_UPI00036D6A4F | HWEYEGENGPAAWGKMQPCSLGRRQSPVHITDADTLVGPA  |
| UniRef90_UPI0003D09E65                           | D S N G P A H WK E IL IA P A <mark>C</mark> G G P T Q S P IV IN II ID IL IR IL V IQ R D Y A   |
| UniRef90_H0WS17                                  | WTYEGÅLDQAHWPKEYPA <mark>C</mark> ĞĞKRQSPINLQTRKVHYNPS<br>MQSPVDIRSSLVTQDPQ   |
| UniRef90_T1E193<br>UniRef90 K1QLS9               | F P S K S P S N WH T US F S CU G M Y Q S PU NU D R F M T U Y N P D  |
| UniRef90_UPI00045431F1                           | EPSKSPSNWHTLSES <mark>CLGMYQSPINIDREMTIY</mark> NPD<br>WSYAGTWNQKNWGKKYPA <mark>C</mark> NGPKQSPINIDEGLTQVNVN   |
| UniRef90_W5PUV4                                  | H WCY E QLGPSQWGED CQKNRQSPINIVTTKAQVDPD  |
| UniRef90_UPI0002C5494A<br>UniRef90 H2TBA0        | H W C Y E L Q L G P S Q W G E D C Q K N R Q S P I N I V T T K A Q V D P D H W T Y E G A L D Q M H W P T K Y P A C G G K Q Q S P I D I Q R R N V R F N P D   |
| UniRef90_V8PC05                                  | F SILIP G S D G O A H WP F R Y P D C G WO A O S PILIDILIO T HILI VIO Y D P S  |
| UniRef90_A8JX25<br>UniRef90_UPI0003F13719        | WDY AANGPATWAKSFPAAAGQKQSPI DI NPG SAAKES<br>GPIHWKEFFPIADGDRQSPI EI KTEEARYDSS   |
| UniRef90_B7QEN3                                  | C G G K Y Q S P V D I  S E R Y T D Y D G N  |
| UniRef90_K1QML6                                  | WSYGGOTGPDHWAKNEPO <mark>C</mark> GGKROSPII NII IMTSRII IHHIVITW  |
| UniRef90_E9ISZ9<br>UniRef90_T1K4A8               | WTYDGISGPAFWGLINP <mark>C</mark> NKGRRQSPVNLEPTQLLFDPN<br>WTYDGKNGINDW <u>YQL</u> YPK <mark>C</mark> KGQFQSPINIDTRLVD <u>Y</u> NSS  |
| UniRef90_G4VP62                                  | Y D Y G E K N G P H T WIV L IR F P N A G G T K Q S P II IN L IN T M S M R IL ID E S   |
| UniRef90_UPI0003EAB0DE                           | W S Y A G T  L  N Q K N W G K K Y P S <mark>C</mark> N N A K Q S P     N     D E N     T Q   V   K E Q  |
| UniRef90_UPI00042C3427                           | W <mark>C</mark> YDSQNGPTHWKEMAPA <mark>C</mark> GGPGQSPININLHRVQQDPT<br>FSYNEKNGPTNW <u>Y</u> RLAP <u>QC</u> GGRYQSPIMLN <u>T</u> SS <u>A</u> MYVRN  |
| UniRef90_B0WFA3<br>UniRef90_K7IYD1               | HFGYTR PDDWLADFPILCSGPRQSPI NII ELIQDVK MMES  |
| UniRef90_E9FXN1                                  | HFGYTR PDDWLADFPICSGPRQSPINIELQDVKMMES WREHESHCGGQHQSPINIESATAIIANY WTYEGISGPEYWGLVNPCGRGKKQSPINIELDLLLFDPK HWRYGGPHSPKY DEVSPACAGRFQSPVDLRPELTAFCPA  |
| UniRef90_T1FZE7<br>UniRef90_S9Y3G2               | WTYEGLISGPEYWGL VNPCGRGKKQSPI NI ELDL LLFDPK  |
| UniRef90_UPI00038713C4                           | HWRIGGPHSPKI DEWSPACAGREQSPWDIIRPELIAPCPA   |
| UniRef90_H0WAL8                                  | HWCYQ Q Q Q B P Q D Q W G G E C Q K S Q Q S P I D I V T N K A R L D Y N   |
| UniRef90_UPI0003F1204F<br>UniRef90_P22748        | HWCYE VQAESSNYPCL VPVCQKDRQSPI NI VT SLAQLDHK<br>HWCYE VQAESSNYPCL VPVCQKDRQSPI NI VT TKAKVDKK  |
| UniRef90_F22748<br>UniRef90_E9FXM9               | H F D Y T N P Q K W E E H E S N C A G Q H Q S P II   N II   N T D E IV I V IT N Y   |
| UniRef90_H2UM88                                  | G Q T E W S Q H F P A <mark>C</mark> G G S S Q S P   V   D   V   A T T R T R F D P G  |
| UniRef90_UPI00045D6423<br>UniRef90_A0A011Q3I6    | HWTYEGPHGQDHWPASYPECGNNAQSPIDIQTDSVTFDPD<br>HWAYEGEGGPENWGKLRPCDTGKRQSPIDIRDGFRV  |
| UniRef90_A0A011Q316<br>UniRef90_C3YR32           | WGYSGNNGPANWATVNTSCGANSQSPI NI VISASATQETF  |
| UniRef90_UPI00026578A7                           | WTYSGISGPEFWGVLNPCSRGRSQSPINLYPELLLFSPH   |
| UniRef90_UPI0004422673<br>UniRef90_W5JEJ7        | WESVDLVPGGERQSPINVRWRNSVYDPG<br>DKNGPSNWY <u>RI</u> DAR <mark>C</mark> GGRYQSPI <u>L</u> LNTSSA <u>LVV</u> NR   |
| UniRef90_C3XTT7                                  | WG L  N WP Y A N G D Q Q S P V  N   I   N S R T A T F D E T   |
| UniRef90_X1Y3H5                                  | WTYSIDDGPPNWGIVAPACSGTYQSPINIVSKESIEVRR   |
| UniRef90_H2LB46<br>UniRef90_H2IMI6               | QWCYQRQKDPSSWETEFPRCGGLHQSPINIVTRKVHVTNN<br>NWGYEGNHGPEHWGEFASCAQGKNQSPIDIQSAVQAE   |
| UniRef90_G1KFX3                                  | WSYSGA L  N Q T S W G K K Y P A C N G A K Q S P   I  N   I   D E D   L   T Q   V   N   V   N  |
| UniRef90_K1QUN4                                  | G P S R W G S Y N T C D K G R F Q S P I   D I   N P A R M I   F D P N   |
| UniRef90_Q95323<br>UniRef90_E4XVW1               | HWCYQIQVKPSNYTCLEPSCQNNRQSPVNIVTAKTQLDPN<br>WTYADQG ANW EAPDCSGSAQSPIDI TGDFKHEDH   |
| UniRef90_E9FXL0                                  | HFSYD DPNKWKEHNSLCAGEHQSPINIDTRKSKTAKF  |
| UniRef90_Q16RN8                                  | YSY GPNGESEWGNMYPECNGTMQSPI PLSAMTARPGFE  |
| UniRef90_V9KXX9<br>UniRef90_H3CRJ6               | H S Y D D P N K W K E H N S L C A G E H Q S P I N I D T R K S K T A K F Y S Y G P N G E S E W G N M Y P E C N G T M Q S P I P L S A M T A R P G F E P S F W G L V N S C S V G K R Q S P I N I E T S H M I F D P F G L G Q T E W S E H F P D C G G A S Q S P V D V A T L Q T R F D P G H W S Y E G N T G P S N W T G S P V D I L T Q T K V D K T W T S Y S Y E G N T G P S N W T G S P V D I L T Q T K V D K T W T S Y S Y E G N T G P S N W T G S P V D I L T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T T S Y S Y E D C T S Y S Y E D C T S Y S Y S Y E D C T S Y S Y S Y E D C T S Y S Y S Y E D C T S Y S Y S Y E D C T S Y S Y S Y S Y S Y S Y S Y S Y S Y S |
| UniRef90_F8FGR8                                  | HWSYEGNTGPAHWAELDACANGTEQSPVDIELTQTKVDKT  |
| UniRef90_H0WMS5                                  | II WO I E II IQILIGE SIN WIGS O CANIN QSE II IDII VII SKAKEDQI  |
| UniRef90_UPI00032B047D<br>UniRef90_E9FX50        | HWCYSSCLGPEKWGGS CQQNLQSPI NI VTTKAKVNSN<br>WTYKDQ MNWPRLFPTCGTRRQSPI DI QPKETVLASF   |
| UniRef90_E5RQ31                                  | F R E A N G K C Q S P I N L V S E C A C F D Q Q   |
| UniRef90_W4F2N2<br>UniRef90_U5NEN9               | WSYEGDTAPNKWASLDPCSKGTAQSPI NI DLEDVMLDKN<br>HWSYSGDTGPHAWGRLKPCATGKRQAPI NI ETSSTLLGPA   |
| UniRef90_UPI00038706EC                           | Y W A Y S G T Y G P F H WIVIT S S F K <mark>C</mark> G G S H Q S PII IDII I ID H Q A HIVIG D F  |
| UniRef90_UPI0001758161                           | WTYDGUSGPGYWGUMNP <mark>C</mark> SKGRROSPUNVEPEKUUEDPH  |
| UniRef90_UPI0004442F30<br>UniRef90_UPI00026587DC |   |
| UniRef90_B6A7R3                                  | WGYADHNGPDHWHE L YP I AKGDNQSP I E L HTKD I KHDPS   |
| UniRef90_E2AGD1                                  |   |
| UniRef90_U3BVC4<br>UniRef90_R7TGJ8               | WGYWGKYGPKIWSEL CAIGRRQSPINIVIEDAILRIDL WGYEGNHGPAHWGEFASCAKGQNQSPINIESATE AK GPRCWAEEWKYCADRSQSPINIESATE NWKYTGNSGPQFWEENSPKCGENKQSPINIETKSVLPDKQ PAFWGLINPCNRGRRQSPVNLEPDKLLFDPN WDYSVQNGPSTWVSKFPMAAGSRQSPVNIETDKVESDHS PSFWGLVNSCSVGKRQSPVNIETRRLTFDPF WTYHGPTGPRHWCSLFDTCCGRSQSPLNLRKHDVTLKQN HWSYEGQTSPSHWGDLSPCKIGHRQSPINIEAAQ KAD   |
| UniRef90_UPI0002B8E7CF                           | N WK Y T G N S G P Q F WE E N S P K C G E N K Q S P I NI E T K S V L P D K Q  |
| UniRef90_E0VXZ0                                  | PAFWGLINPCNRGRRQSPVNLEPDKLLFDPN   |
| UniRef90_H9KFP8<br>UniRef90_W5UDS8               | WDYSVQNGPSTWVSKFPMAAGSRQSPVNIETDKVESDHS<br>PSFWGLVNSCSVGKRQSPVNIETRRLTFDPF  |
| UniRef90_T1IRQ8                                  | PSFWGLVNSCSVGKRQSPVNIETRRLTFDPF<br>WTYHGPTGPRHWCSLFDTCCGRSQSPLNLRKHDVTLKQN  |
| UniRef90_UPI000361A0A3                           | H W S Y E G Q T S P S H W G D L S P C K I G H R Q S P I D I E A A Q K A D F G Y R G A I G P D K W G G L C P C S K G K H Q S P I N I V K D D V V Y D P T   |
| UniRef90_M0S5S5<br>UniRef90 H9GIJ2               | FGYRGALGPDKWGGL <mark>C</mark> PCSKGKHQSPINIVKDD <u>VV</u> YDPT<br>W <mark>C</mark> YEAH <mark>C</mark> GPNTWLSL GH <mark>C</mark> GGKRQSPINILSHD <u>SIL</u> NSK  |
| UniRef90_I3MIF8                                  | WSYSASEGEDIL IWPQEYPA <mark>C</mark> GGHRQSPII IDIL IQQNKIV IRFNPA  |
| UniRef90_UPI00045E3F8F                           | WT GPVSVPGGTROSPIINIOWRDSIIYDSR   |
| UniRef90_I3BNI7<br>UniRef90_H0ZF36               | H WT Y E G A E G P E H WG E L A E C A L G K N Q S P V N L D S K A E V E A E Q W C Y D S Q D G P S H W K E L K A T C G G D K Q S P V N L D R R R L H R D G G   |
| UniRef90_F1Q4V8                                  | Y WAYSGIYGPDIWAAAFPECOFRNOSPIINIIADODIKWSME   |
| UniRef90_UPI000464CB90                           | H W S Y I V I G E T S P E H W A E II I N S D C G G K F Q S P II I N II V I S I L I N A II V I D T N   |
| UniRef90_Q7QKJ5                                  | F G Y S K P D Q R R W S K A H Q S C A G A H Q S P I A I H S H R A V Y M P A WI S T G P L D Q K N W G R K Y P T C N G A K Q S P I N I D D D L T Q V N V N  |
| UniRef90_H2ZXN2<br>UniRef90 A0A016XEC4           | WI STGPLDQKNWGRKYPTCNGAKQSPINIDDDLTQVNVN<br>HWSYEGLGGPQNWHKLKPCGKGKMQSPIAIRDDDTLKGPA  |
| J 10100_/ 10/ 10 10/\LOT                         |   |

|  | 50 60 70 80   |
|--|---|
| UniRef90_M3XJ23<br>UniRef90_B0WFA1               | L   S   K P E G Y D Q E K K L T L L N N G H T V Q L N L P D S M T I H D S F<br>  V P P L F L S G Q N P K K V T V Q N T G K T V M Y E F E F L R P L L A R G A A  |
| UniRef90_Q7SYW3                                  | L K E F D L Y G V S I R Q L N V T N N G H S A Q V D L P P G I E I S G G G   |
| UniRef90_H9GLZ6<br>UniRef90_UPI0002C66426        | L L P F H F E K Y N A E Q W H I V N N G H T V Q V N L D G S A K L S S G G L G P F S F S Y D Q K H Y W K V E N N G H T V V V W L E D K P T I A G G G L Q P P E L M G P P L P E L R L R N N G H T V Q L T L P P G L E M A L G P G |
| UniRef90_UPI000443EE4A<br>UniRef90_G8QPH9        | LQPPELMGPPLPELRLRNNGHTVQLTLPPGLEMALGPG<br>LPPLEFSY RPTRFRLVDNGHTLQASFGHGSLTH  |
| UniRef90_H2Z000                                  |   |
| UniRef90_UPI000443D80B<br>UniRef90_F7GGG0        | L P H F S F I G H T D I N I T V E N K G H S A H F A L P E S V R L T G G A L K G L K L T G Y E T Q E G E F P M V N N G H T V Q I S L P S T M R M T A A D G   |
| UniRef90_UPI000359E6B6<br>UniRef90_UPI0001D55185 | LKPFTFHYDQKKKWVVKNDGHSVKMMLGDGSFL AGGD<br>GGP   |
| UniRef90_UPI00036D6A4F                           | EPLQLRY MPSTASVVNNGHTIQVDLDPASPNTLTVRG  |
| UniRef90_UPI0003D09E65<br>UniRef90_H0WS17        | LKPFIFHGYDSDPWILENDGHTVLLRVHSCNCPAIRGAGL<br>LKALNLTGYDTQEGEFSMVNNGHTVQISLPPTMHLRAPDG  |
| UniRef90_T1E193                                  | IL IR PIL IS WT YIVIP K N C K S MIVIN T G E S W K IV I V IE G Q D S C IL IT G G P   |
| UniRef90_K1QLS9<br>UniRef90_UPI00045431F1        | I N N FIF WY D P P A P F Y V F N N G H T V Q V N T I G P Y Y V A N G G L K K L K F Q G W D K V A A E L H N T G K T V E L N L T N D Y R L S G G G  |
| UniRef90_W5PUV4<br>UniRef90_UPI0002C5494A        | G G P   |
| UniRef90_H2TBA0                                  | MLQLKLSGYNAQRGDFLMTNNGHTVQIIDLPPTMMITEGLP   |
| UniRef90_V8PC05<br>UniRef90_A8JX25               | LPPIEPEGYRSGSLTLTNNGHTVQLSLPENLRLH GVGALSVNY KAGNNTLTNTGLSFAVSLDGS LSGGPLQPLSLQYDPRSARIISNNGHSFSVDFDDTEDKSVLRGGP  |
| UniRef90_UPI0003F13719<br>UniRef90_B7QEN3        | LQPLSIQYDPRSARIISNNGHSFSVDFDDTEDKSVLRGGPMGPLRFNNYHPIIVNNGHTGRTEPMVSGTPDREVYVEGNSLPQFEFLNYDPAFLHLRNNGHTASMTIDDDVYLRGSNLGE  |
| UniRef90_K1QML6                                  | LPQFEFINYDPAFLHLRNNGHTASMTIDDDDVYLRGSNLGE   |
| UniRef90_E9ISZ9<br>UniRef90_T1K4A8               | MKI DFI GFOKLYOAFI ENNGHTVQLGVEESTKPVLTGSAV   |
| UniRef90_G4VP62<br>UniRef90_UPI0003EAB0DE        | LTPINVDFNELQNQTLHVKDHNFSVEVKGNA VLSGGP<br>FQKLNFEGWTSDKTFIHNDGKTVAVNLDGE YYISGG   |
| UniRef90_UPI00042C3427                           |   |
| UniRef90_B0WFA3<br>UniRef90_K7IYD1               | KRPLQLVGQTPQAIRLQNDGHSAKFTYVWNEDRPYIRGGP<br>KRPPLGRYGYPKKMTITNNGHSVQLSVWPARDTPTVYGGP  |
| UniRef90_E9FXN1                                  | PEFIVIFHNYDILVIFPERILIENNGHTIVIEILIKII IEEQGII ISPFII ITGGG   |
| UniRef90_T1FZE7<br>UniRef90_S9Y3G2               | IL IR PIL IE F EIL IR PIL IP EIL IRIL L IN N G H T IV IQIL IS IL IP P GIL IE M A IL IG P G  |
| UniRef90_UPI00038713C4<br>UniRef90_H0WAL8        | MLQGGA<br>LGDFSFSYDKKHSRLVQNNGHSVMVSLEPDVTIN GGG  |
| UniRef90_UPI0003F1204F                           | IL IK P F S F S Y D K K H M W T IV IK N N G H S IV IMIV IS IL IE N K A S II I A G G G   |
| UniRef90_P22748<br>UniRef90_E9FXM9               | LGRFFFSYDKKQTWTVQNNGHSVMMLLENKASI SGGGPKFIFQNYDLVFPESLENNGHTVELKIDNEDDLPSISGGGLTPLTYDQHGHKPFTLHNNGHTAVVELPDW MGLSGLP  |
| UniRef90_H2UM88<br>UniRef90_UPI00045D6423        | L T P L T Y D Q H G H K P F T L H N N G H T A V V E L P D W M G L S G L P L P A L Q P H G Y D Q P G T E L H N N G H T V Q L S L P S T L Y L G G   |
| UniRef90_A0A011Q3I6                              | I FAI FFNYROSPFRVVDN GHTI OVFVSGNS I RI   |
| UniRef90_C3YR32<br>UniRef90_UPI00026578A7        | SAFSFTGYDAVPNMTMSNNGHSVVVSLTPASTAISVSGGG<br>LKPFRLE SVKTSATMINTGHDILLQLSESASVNLT GGP  |
| UniRef90_UPI0004422673<br>UniRef90_W5JEJ7        | II IEII I ITIVIS Y DII IT T <mark>C</mark> II IRIVIWN N R Y S EII VIEII IE D S A D N S G E S O T <mark>C</mark>   |
| UniRef90_C3XTT7                                  | I IR PILL LIS Y CILIC R F W FILIS N D G H A IVIQIVI IVIP K P K T IVIT S G G PILIP   |
| UniRef90_X1Y3H5<br>UniRef90_H2LB46               | KLPLELDGNLPGAMKVENEGTSVKFTPQWNGRTRPARGGPLPPLIFGYTDLINITVENKGHSAHFALPPSVRLTGGALAKLELDYNGKALA LTNNGHTLQTSLEGDNN   |
| UniRef90_H2IMI6<br>UniRef90_G1KFX3               | LAKLELDYNGKALA LTNNGHTLQTSLEGDNN LLV<br>LKDLKFQDWEKETSKI FNTGKTVEIKLINE Y <u>FVTGG</u> G  |
| UniRef90_K1QUN4                                  | II IQ PIL INII IT N F KIL ID GIV I IM N T G H DII IRII ISII IN K S H G S QIL INII IG G P  |
| UniRef90_Q95323<br>UniRef90_E4XVW1               | L G R F S F S Y N M K H Q W V V Q N N G H T V M V L L E N K P S I A G G G V P F E R V N Y D A A G N W T L V N S G Y T I K M T P S S S D I K V S G G A L   |
| UniRef90_E9FXL0<br>UniRef90_Q16RN8               | VPFERVNYDAAGNWTLVNSGYTIKMT PSSSDIKVSGGALAPFNFHNYEKSLPENLENNGHTVQLTIDNIKDLPTISGGGTQPLEIANYQPTQVIVNNDGKLAIYRFEFPGGENVIRGGP  |
| UniRef90_V9KXX9                                  | LTPLRINGSRKVSGTMYNTGRHVSLRLDK EHLVNVSGGP  |
| UniRef90_H3CRJ6<br>UniRef90_F8FGR8               | LTPLTYDQHGHKPFTLHNNGHTAVVELPDW MGLSG<br>AVQVELHY QPSAFTLMNNGHTIQANAAAGNGNTITVDG   |
| UniRef90_H0WMS5<br>UniRef90_UPI00032B047D        | LGHFIFSYDKKEKRNVSNNGHSVEVTLKNDNI EISGGGLGLFEFHYDLKKTWPVTNNGHSVMVSLDSQVFIE GGGPNFVFHNYGHLNNMTMVNNGHTVTINLPEDYPKHKMPGGG   |
| UniRef90_E9FX50                                  | PNFVFHNYGHINNMTMVNNGHTVTI NLPEDYPKHKMPGGG   |
| UniRef90_E5RQ31<br>UniRef90_W4F2N2               | LIGDIKI NY QPTITEKI MNNG <mark>H</mark> TI QATDDSGKNSI ETDG   |
| UniRef90_U5NEN9<br>UniRef90_UPI00038706EC        | EPLQFDYH PSGGTVTNNGHSUQVDVYGENULVVRGVA  |
| UniRef90_UPI0001758161                           | L   Q R   I   <mark>H</mark>   L   D K <b>H</b> K   V   S G M   L   <del>H</del> N T G Q S   L V   F K   V   D K D T K Q <del>H</del>   V   N   I   G G P   |
| UniRef90_UPI0004442F30<br>UniRef90_UPI00026587DC | II IO PILIRII IE I GERIVIGIGIVI <mark>C</mark> II I IN I GOGIV VIE RIVIN EN SESIVI <mark>H</mark> II IA GOE   |
| UniRef90_B6A7R3<br>UniRef90_E2AGD1               | LLPWTASYDPGSAKTILNNGKT <mark>C</mark> RVVFDDTYDRSMLRGGPGAIKEDRYDEAESGKILNNGHTLOUKUD GUPUHUSGGS  |
| UniRef90_U3BVC4                                  | LEKLNFDYEGKA LSLLNNGHTLQIGLEGKNTLTIDG   |
| UniRef90_R7TGJ8<br>UniRef90_UPI0002B8E7CF        | LEKLNFDYEGKA ISLLNNGHTLQI GLEGKNTLTI DG<br>FEPLTLGYNETDDFSI TNNGHTVEV APPGGFEAVISGME<br>LSQLQFTGYNQNLT MLINNGHSAQLNFP AGKSFQLLSSV   |
| UniRef90_E0VXZ0<br>UniRef90_H9KFP8               |   |
| UniRef90_W5UDS8                                  | LTPLRTTGGRKTSGVMYNTGRHVILRVDGSKRVCVS GGP  |
| UniRef90_T1IRQ8<br>UniRef90_UPI000361A0A3        | ERFSFIKYNVPESVTLQNTGHTAMLSITNKTISPKISGGR<br>LPALQFDYKAAPLHIIDN GHTIMINYAPGSSIKVGD   |
| UniRef90_M0S5S5<br>UniRef90_H9GIJ2               | LEPLQRDY AATNATLVDNGFNIALRYDSGVGHVIVGG<br>LGAVNLTGYEDRKKELKNTGKTVDVELEDGLSLS GHG  |
| UniRef90_I3MIF8                                  | II IK AII INII IT G Y O E D R E T MII IN N G <mark>H</mark> T IV IOII INII I <mark>P P T                              </mark>   |
| UniRef90_UPI00045E3F8F<br>UniRef90_I3BNI7        | LKPLRVSYDAVS <mark>C</mark> LYVWNTGYLFQVEFDDVTEASGISGGP<br>LSPLTLAY QAGGNEVLNNGHTLQVKYEPGST   |
| UniRef90_H0ZF36<br>UniRef90_F1Q4V8               | LGDI LFEGYPPGKWRLTNNGHTGALASESASEHITISGGG<br>YQELTLDGFDSNKTSMKNTGKTVALFLKDD YFVRGAG   |
| UniRef90_UPI000464CB90                           | LKPLALHYSNTKLHDVVNNGHSIQYNFEEGDYLMYKD   |
| UniRef90_Q7QKJ5<br>UniRef90_H2ZXN2               | LKPLAIHYSNTKIHDVVNNGHSIQYNFEEGDYLMYKD IELVGYNNLLPGPMTIHNNGHSVSLSIPKTDPHPYIFGGK FRKLKFEGWESENTFIHNNGKTVEINLTNE YYVSGGG   |
| UniRef90_A0A016XEC4                              | E P L L F T Y K P S K G T V T D T G H G I E V K V Y N T D N V L S V   |

|  | 90 100 110 120   |
|--|--|
| UniRef90_M3XJ23<br>UniRef90_B0WFA1               | EQLYRAAQLHFHWGSKGEPGSEHMVDGKRFPAELHVVHF<br>LDGEFQFNHLHFHWGSTSDKGAEHEVNGQRFPLEMHLVFF  |
| UniRef90_Q7SYW3                                  | L S G T Y D A L Q F H F H W G S E E F P G S E H T I D G E K Y P M E L H I V H R L S G K Y K A M Q F H F H W G N D A E K G S E H S I D G E R Y P M E L H I V H L  |
| UniRef90_H9GLZ6<br>UniRef90_UPI0002C66426        | L S G K Y K A M Q F H F H W G N D A E K G S E H S I D G E R Y P M E L H I V H L  |
| UniRef90_UPI0002C66426                           | REYRACQLHLHWGTPGSPGSEHTVGGHRFAMEMHIVVHL  |
| UniRef90_G8QPH9                                  | LGKTYDLVQVHFH RPSEERVNGKAFDMVAHMVHR  |
| UniRef90_H2Z000<br>UniRef90 UPI000443D80B        | L P G H Y R A A Q F H F H W G S S F G S E H T II D G E R F P M E L H II V H I  |
| UniRef90_F7GGG0                                  | TVY A QQMHFHWGGASSKIRGSEHTVDGIRHVIELHVVHY  |
| UniRef90_UPI000359E6B6<br>UniRef90_UPI0001D55185 | LENHYRLKQFHFHWGAVNEAGSEHTVDGHAYPAELHLVHW   |
| UniRef90_UPI00036D6A4F<br>UniRef90_UPI0003D09E65 | L S G K Y K A M Q F H F H W G N D A E K G S E H S I D G E R Y P M E L H I V H I L A T Q Y R A Q Q L H L H W S K M M N E G S E H S L D G H R F A M E M H I V H Q R E Y R A L Q L H L H W G T P G S P G S E H T V D G H R F P A E I H V V H L G K T Y D L V Q V H F H R P S E E R V N G K A F D M V A H M V H R Y D F Q F T A M Q F H F H W G S S F G S E H T V D S T R Y F G E M H I V H Y L P G H Y R A A Q F H F H W G E R G T P G S E H T I D G E R F P M E L H I V H I T V Y A Q Q M H F H W G G A S S K R G S E H T V D G I R H V I E I H V V H Y L P A Q Y Q A V Q L H L H W S Q E F D K G S E H S I D G K H F A M E M H V V H E L E N H Y R L K Q F H F H W G A V N E A G S E H T V D G H A Y P A E L H L V H W S T Y K L L Q L H F H W G S P G H K G S E H S V D E K H G S M E M H M V H M  |
| UniRef90_H0WS17                                  | P S S E Y R L L Q L H F H W G S P G H K G S E H S V D E K H G S M E M H M V H M<br>T K Y L A Q Q M H F H W G G G S S E M S G S E H T V D G A R H M S E I H V V H Y   |
| UniRef90_T1E193<br>UniRef90 K1QLS9               | PSSEYRLLQLHFHWGSPGHKGSEHSVDEKHGSMEMHMVHM TKYIAQQMHFHWGGGSSEMSGSEHTVDGARHMSEIHVVHY LEHSYQLVQFHCHWGKCANSGSEHTVDGKQFAAELHLVHW LSSVYSTAQFHFHWGAENSFGSEHQIDGQSFPLELHVVNY  |
| UniRef90_UPI00045431F1                           | L   S  |
| UniRef90_W5PUV4<br>UniRef90_UPI0002C5494A        | LETUFKASKUMFHWGK <mark>C</mark> NMSGSEHSLEGQKFPLEMQIÝ <mark>C</mark> Y<br>LSESYRLRQFHFHWGSTDD <mark>C</mark> GSEHLVDGATFSAELHLVHW<br>LPGQYRATQLHLHWSEVPDGGSEHTIDGRRFAMEMHIVHE  |
| UniRef90_H2TBA0                                  | GKYTAVQMHLHWGGWDLEASGAEHTIDGDRYMAELHVVHY   |
| UniRef90_V8PC05<br>UniRef90_A8JX25               |  |
| UniRef90_UPI0003F13719                           | LAGTYRERQFHEHWGRSDDHGSEHRVDG <mark>VC</mark> FAAEVSPWPS  |
| UniRef90_B7QEN3<br>UniRef90 K1QML6               | GKYTAVQMHLHWGGWDLEASGAEHTIDGLRYMAELHVVHY LPSLYSAVQLHFHWGSSNSRGSEHRVDGQAFPAELHVVHF LGSEFKAASFHFHWDKSSAAGSEHTIGGKAYASEVHLVHY LAGTYRLRQFHLHWGRSDDHGSEHRVDGVCFAAEVSPWPS LSGKYQFAQLHFHWGANSSRGSEHTFSGTTYPLEMHLVHF LYRAVEIHFHWGANSSRGSEHVIDNHRHPLEVHIVHY   |
| UniRef90_E9ISZ9                                  | ESTRIQENE INCHESADORI GSENTIVOGNAFFAELQI FGF   |
| UniRef90_T1K4A8<br>UniRef90_G4VP62               | ILIT S E Y KILIT O E HILIH WG S G N N WG S E H MILIN GILIS C P A EILIH CIVIEILI  |
| UniRef90_UPI0003EAB0DE<br>UniRef90_UPI00042C3427 | LRSRYKAGRITFHWGK <mark>C</mark> NASGSEHGLNGQKFPLEMQIF <mark>C</mark> F<br>PPPAYRALQLPYHWGGPGRAGSEHSLDGQHRPMEMHVVQM   |
| UniRef90_B0WFA3                                  | TKTKYEEEOEHEHWGSNDTTGSEHVLDYHREPMETHI VEY  |
| UniRef90_K7IYD1<br>UniRef90_E9FXN1               | LTGLYELAQVHFHWGADNDAGSEHTVANHSFPLEMHMVHW<br>LTDRYNFVQLHFHWGQSF SGSEHRIDGEQYPAELHMVHY<br>LSYQYRLSEVIFHVGKDDRDGSEHSIQNVSFPAEIQLVGY   |
| UniRef90_T1FZE7                                  | LISYQYR SEVIF HÜGK DDRDGSEHSI QNVSFPAEI QLVGY  |
| UniRef90_S9Y3G2<br>UniRef90_UPI00038713C4        | QEYRALQLHLHWGAAGRPGSEHTVVGGHRFPAEIQLVGY QEYRALQLHLHWGAAGRPGSEHTVVGGHRFPAEIHVVHL LDGVYRLAQFHVHWGSCEGQGSEHTLDGVKYDAELHIVHW LATLYQATQLHLHWSEDLNNGSEHALDGERFAMEMHIVHQ LTTHYLAKQLHLHWSEVLNKGSEHSLDGKRFAMEMHIVHE LPAPYQAKQLHLHWSEVLNKGSEHSLDGEHFAMEMHIVHE LDDRYNFAQLHFHWDEGLLGSEHTINRQKYSAELHVVHY WLFTAVQMHLHWGSGGPSHGGSEHTINRQKYSAELHVVHY LPRKYVAAQLHLHWGQKSPGGSEHTINGLSADAELHLVHY LPRKYVAAQLHLHWGQKSPGGSEHQINSE  |
| UniRef90_H0WAL8                                  | LATLYQATQLHLHWSEDLNNGSEHALDGERFAMEMHIVHQ   |
| UniRef90_UPI0003F1204F<br>UniRef90_P22748        | L P A P Y Q A K Q L H L H W S E V L N K G S E H S L D G K R F A M E M H I V H E<br>L P A P Y Q A K Q L H L H W S D L P Y K G S E H S L D G E H F A M E M H I V H E   |
| UniRef90_E9FXM9                                  | LDDRYNFAQLHEHW DEGLLGSEHTI NRQKYSAELHVVHY  |
| UniRef90_H2UM88<br>UniRef90_UPI00045D6423        | LPRKYVAAQLHLHWGSGGPSHGGSEHQINSE  |
| UniRef90_A0A011Q3I6<br>UniRef90_C3YR32           | HGKTYDLIQFHFH RPSEERVNGKSFDMVAHLVHK  |
| UniRef90_UPI00026578A7                           | HGKTYDLIQFHFH  RPSEERVNGKSFDMVAHLVHK LTGSYIAAQFHFHWGSDLTVGSEHTLDGNSYPGELHIVHY LQYSYVISQIRIHHGDDSSQGSEHSIGRRFFPAEIQLLGF   |
| UniRef90_UPI0004422673<br>UniRef90_W5JEJ7        | WSHII IEII IKG QEHAIVI II VVIEQII IYII VI <mark>H</mark> QN  |
| UniRef90_C3XTT7                                  |  |
| UniRef90_X1Y3H5<br>UniRef90_H2LB46               | LKNKY I FEQFHFHWGPDNTVGSEHT LDGKQFPLEVHLVFY LPGYYRAAQFHFHWGGKGRPGSEHT LDGKQFPLEVHLVFY LPGYYRAAQFHFHWGKGRPGSEHT LDGKQFPLEHLVHL TPSENHVDGKSYPLEAHYVH LEGVFKASKIMFHWGKCNISGSEHSLDGQKYPLEMQIYCY  |
| UniRef90_H2IMI6                                  | DGKSFNLKQFHFH TPSENHVDGKSYPLEAHYVH   |
| UniRef90_G1KFX3<br>UniRef90_K1QUN4               | ILISYKY I II IY QII KILI <mark>H</mark> ILIG I ENDKGSEHKIVIAGKAFPAEII IQILLIAY   |
| UniRef90_Q95323<br>UniRef90_E4XVW1               | LSTRYQATQLHLHWSRAMDRGSEHSFDGERFAMEMHIVHE   |
| UniRef90_E9FXL0                                  | LEGPYEFAQMHEHWG EAEFGSEHKI NRKQYAGEVHI VHW   |
| UniRef90_Q16RN8<br>UniRef90 V9KXX9               | LQGI FQFDSLHFHWGAASDRGSEHVIDSMRFAMEMHLVFF<br>MAYSHRIFFIRIHFGSFDSQGSFHIINGQAFSGFVQIIHY  |
| UniRef90_H3CRJ6                                  | LP WLF T AA QMHLH WG E R P E P G S E H T V N G L S A D A E L H V V H Y   |
| UniRef90_F8FGR8<br>UniRef90_H0WMS5               | LPTGYQATQLHLHWSSEMNAGSEHSII DGKRFAMEMHII VIHN  |
| UniRef90_UPI00032B047D<br>UniRef90_E9FX50        | L D A E Y Q A T QLHLH WS S G Y N N G S E H S V D G K H F A M E M H V V H Q   |
| UniRef90_E5RQ31                                  | SGYEFELSE REHWGRYSTRGSEHKVNGKAFPME VQL VHW   |
| UniRef90_W4F2N2<br>UniRef90_U5NEN9               | DKYTFILIRMHFH TPSEHQII NGQHFAMEAHLVHE YRLI QEHEHA PSEEQII NERSEPMIVIAHII VIHK  |
| 11 'D (00 11D100000700E0                         | LSTRYQATQLHLHWSRAMDRGSEHSFDGERFAMEMHIVHE EDDPYMLAQFHLHWGSAEEGGSEHVLEGKRFYSELHIVHY LEGPYEFAQMHFHWG EAEFGSEHKINRKQYAGEVHIVHW LQGIFQFDSLHFHWGAASDRGSEHVIDSMRFAMEMHLVFF MAYSHRLEELRLHFGSEDSQGSEHLLNGQAFSGEVQLIHY LPWLFTAAQMHLHWGERPEPGSEHTVNGLSADAELHVVHY TDYTLAQMHFH HPSENQINGKNFEMEGHLVHK LPTGYQATQLHLHWSSEMNAGSEHSIDGKRFAMEMHIVHN LDAEYQATQLHLHWSSEMNAGSEHSIDGKRFAMEMHVVHQ LNGTYNFAQMHMHWGVDSTLGSEHSVDGKHFAMEMHVVHQ SGYEFELSEIRFHWGRYSTRGSEHKVNGKAFPMEVQLVHW SGYEFELSEIRFHWGRYSTRGSEHKVNGKAFPMEVQLVHW DKYTFLRMHFH TPSEHQINGQAFFAMEAHLVHE YRLIQFHFHAA PSEEQINFRWGRYFY  |
| UniRef90_UPI0001758161<br>UniRef90_UPI0004442F30 | LPGRFKAEKVEFHWGQSNGSGSEHSINGKRFPVEMQIYFY LAYRYQFEELYIHYGVENQKGSEHSINGKRFPVEMQIYFY LAYRYQFEELYIHYGVENQKGSEHLLHUYHW LPGRSDRGGSEHLLAGTAFPAEIQIYGY LTAAYRLRQFHLHWGSSDDRGGSEHTVDGVKHAAELHLVHW LPSVYVLEQMHFHWS AEHTVDGVRDPLELHLVHY NSELYLALQLHFHWSSKNVSGSEHTVDGGRFPMEAHFVHY NSELYLALQLHFHWTSKNVSGSEHSVDGEFPMEAHFVHY NSELYLALQLHFHWTSKNVSGSEHSVDGEFPMEAHFVHW LSYRYQFHEMHMHYGLHDDSGSEHSINDYAFPAEIQIFGF MDDVYKLEQPIRLHFGSDDTHGSEHLINDYAFPAEILHLVHW LSYRYQFHEMHMHYGLHDDSGSEHSINDYAFPAEILHLVHW LSYRYQFHEMHMHYGLHDDSGSEHSINDYAFPAEILHLVHW NSELYLALQLHFHWGSSDSRGSEHFLINGRAFPGEVQLIHY LNKTYVFEALHFHWGSSDDTHGSEHLINGRAFPGEVQLIHY LNKTYVFEALHFHWGSSDDTHGSEHLINGRAFPWELHLVHS KRYELKQFHFH SPSEERIKGKRYDMVVHLVH LPSSYTAKSFHLHWGDGVKPGSEHTIDSKRYSMELHIVHS TEYIAKQMHYHWGGGSSEVSGSEHTIDSKRYSMELHIVHS LPSSYTAKSFHLHWGDGVKPGSEHTIDGGRAFPVEHLVHS LPSSYTAKSFHLHWGSPAGSEHTIDGGRAFPVEHLVHT LPSSYRALQLHFHWGSPAGSEHTIDGGRAFPVEMHIVH LPSSYRALQLHFHWGSPAGSEHTIDGGRAFPVEMHIVH LPSSYRALQLHFHWGSPAGSEHTIDGGRAFPVEMHIVH LPGRFKAEKVEFHWGQSNGSGSEHSINGIRRYPIVIHMVHIL LPGRFKAEKVEFHWGDKNNRGAEHVLNDLRYPIVIHMVHIL LPGRFKAAEKVEFHWGDKNNRGAEHVLNDLRYPIVIHMVHIL LSRFKASRITFHWGKCNASGSEHSLDGRRFPVEMHIIHRY LISRFKASRITFHWGKCNASGSEHSLDGRRFPLEMHIIHRY LISRFKASRITFHWGKCNASGSEHSLDGRRFPLEMHIIHRY |
| UniRef90_UPI00026587DC                           | LAYSYRIYELQLHFGRSDRGGSEHLLAGTAFPAEI QI YGY   |
| UniRef90_B6A7R3<br>UniRef90_E2AGD1               | L P S V Y V L E Q M H F H WS A E H T V D G V R D P L E L H L V H Y   |
| UniRef90_U3BVC4<br>UniRef90_R7TGJ8               | KEFTLKQFHFH TPSENHVDGKEYPLEVHFVH   |
| UniRef90_UPI0002B8E7CF                           | N'S ELLY LALOCHE H WT SKNVSGSEHSVDGEFYDAEMHI VHI   |
| UniRef90_E0VXZ0<br>UniRef90_H9KFP8               | LISYRYQFHEMHMHYGLIHDDSGSEHSIINDYAFPAEII QI FGF   |
| UniRef90_W5UDS8                                  | ÜSYTYTLQE REHFGSDDTHGSEHLINGNAFPGEVQLIHY   |
| UniRef90_T1IRQ8<br>UniRef90_UPI000361A0A3        | LINKIYVE EALIHEHWGSSDVVJGSEHEII EGRRYPLEMHLVHY KRYELKQFHEH RPSEERIIKGKRYDMVVHIVH   |
| UniRef90_M0S5S5                                  | KNYTLTOMHWH SPSEHTIDGERFPWELHLVHS  |
| UniRef90_H9GIJ2<br>UniRef90_I3MIF8               | LIPSSYIAKSFHLIHWGDGVKPGSEHTIIDSKRYSMEILHIVHT<br>TEYIIAKQMHYHWGGGSSEIVSGSEHTIIDGIIRHVIIFIIHVVHY   |
| UniRef90_UPI00045E3F8F                           | LENHYRLK QFHFHWGAVNEAGSEHTVDGHAY   |
| UniRef90_I3BNI7<br>UniRef90_H0ZF36               | LPGRYRALQLHFHWGSPAGNGSEHTLDGRQLPMEMHI VHM  |
| UniRef90_F1Q4V8                                  | LPGRFKAEKVEFHWGQSNGSGSEHSINGRRFPVEMQLEMY   |
| UniRef90_UPI000464CB90<br>UniRef90_Q7QKJ5        | I K Y NIL IK QII IH F H E S S E H I JI N GII IR Y P II V I H M V H II L E N E Y E L E G L H F H W G D K N N R G A E H V L N D II R Y P L E M H I I H R   |
| UniRef90_H2ZXN2                                  | LISRFKASRITFHWGKCNASGSEHSLDGRKFPLEMQLYCY   |
| UniRef90_A0A016XEC4                              | KNIKYK <u>LLJQFHFH</u> A PAEEIIINGQRFPLGAHF <u>VJH</u> K   |

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| UniRef90_H9GLZ6<br>UniRef90_UPI0002C66426<br>UniRef90_UPI000443EE4A<br>UniRef90_G8QPH9               | S E I P F N G N N K D M P P L R L D S L I P K A D D F Y R Y T G S L T T P A C N S D I P R P G M N T T M K K F D L L P K E E K L R N Y F R Y L G S L T T P P C C E E I T E E G S E T W I P G L D V S T L L P S D L S Y F R Y E G S L T T P P C A P L E K N Q E V L P P D A A V D L N Q L L P E K R G Y Y T Y M G S L T T P P C S  |
| UniRef90_H2Z000<br>UniRef90_UPI000443D80B<br>UniRef90_F7GGG0   | GOVKNNGSNTVIPNERIISYLIPELIHSYYRYVGSMTTPGCE   |
| UniRef90_UPI000359E6B6<br>UniRef90_UPI0001D55185<br>UniRef90_UPI00036D6A4F<br>UniRef90_UPI0003D09E65 | ANI KYPGQTTTLTGLDIRDMLPKNQHYYSYDGSLTTPPCTSHISTPNTNTTMKESCLQDMLPKKEHYFRYLGSLTTPNCDPEIKHKDARAAVGPFNPSSLLPACRDYWTYAGSLTTPPLTPLDNQDRVQMPPGALNVADLLPPDLRYYQFLGSLTTPPCTKNVSSPGVSVNLTSTFALASLLPSLRYYRYSGSLTTPPCTANIKYAGQSTTLTGLDLKDMLPDLAHYFSYNGSLTTPPCT  |
| UniRef90_H0WS17<br>UniRef90_T1E193<br>UniRef90_K1QLS9<br>UniRef90 UPI00045431F1                      | A N  |
| UniRef90_W5PUV4<br>UniRef90_UPI0002C5494A<br>UniRef90_H2TBA0   | CPLKRTLCCFFLHSLDMRSMLPENNHFFRYQGSLTTPPCY   |
| UniRef90_V8PC05<br>UniRef90_A8JX25<br>UniRef90_UPI0003F13719<br>UniRef90_B7QEN3                      | PSCGSNGASAALPGGFNASLPGDKASYWYYPGSLTTPPCS<br>DSLKEKGKQTRFTNFDPSSLLPPSWDYWTYPGSLTVPPLL<br>ISRVRTFFANGVEIPNPDILPAFSSFYYRYNGSLTTPPCS   |
| UniRef90_K1QML6<br>UniRef90_E9ISZ9<br>UniRef90_T1K4A8<br>UniRef90_G4VP62                             | DQVIEYNQRII VIGIRPII DML PNDISYYHYAGSEJI IPPCY<br>DKI KYGGAMEI KREGVREL LPDTKHYMTYDGSTT MPACH  |
| UniRef90_UPI0003EAB0DE<br>UniRef90_UPI00042C3427<br>UniRef90_B0WFA3                                  | NSVSRYGKNAVLESLNLMSLLPNSTKYFIYNGSLTTPPCT<br>KNVSARGASVNLASTFPLSLLLGASGLSRFYRYAGSLTCG<br>LQEVITPESTFTIQFIDTFPLYEEWPYFSYEGSLTTPPCL   |
| UniRef90_K7IYD1<br>UniRef90_E9FXN1<br>UniRef90_T1FZE7<br>UniRef90_S9Y3G2                             | LSHLIGETTA E E GLIDIVIS ALL PSDLIS RYFRYEGSLIT TPPCA   |
| UniRef90_UPI00038713C4<br>UniRef90_H0WAL8<br>UniRef90_UPI0003F1204F<br>UniRef90_P22748               | NSI QTKGKQASFTNFDPTGL LPACRDYWTYPGSLTTPPLL DKI PKPGMNVT MEASSLTDLLPQEKHYFRYQGSLTTPTCD TGI PLPNNATT MTELELLPKQEKLRHYFRYLGSLTTPTCD SNI PKPEMSTTMAESSLLDLLPKERHYFRYLGSLTTPTCD DKI LDPSRTI QFSVPLVDLLPDSTESFFRYNGSLTTPTCD DKI LDPSRTI QFSVPLVDLLPDSTESFFRYNGSLTTPPCH   |
| UniRef90_E9FXM9<br>UniRef90_H2UM88<br>UniRef90_UPI00045D6423<br>UniRef90_A0A011Q3I6                  | -  |
| UniRef90_C3YR32<br>UniRef90_UPI00026578A7<br>UniRef90_UPI0004422673                                  | QNVNDSGDSYQFTTEFSLDLPSSKTNFFRYSGSLTTPTCD<br>SKVVYRDQRASIERIDVSRLFPNTKEYMTYSGSLTQPSCN<br>ASITHEDMLVEFGSFDPSCLMPTCPDYWTYSGSLTIPPLS   |
| UniRef90_W5JEJ7<br>UniRef90_C3XTT7<br>UniRef90_X1Y3H5<br>UniRef90_H2LB46                             | Y N V V Q P N S E Y T I S F I D T F P L Y D I E W P Y F S Y E G S L T T P P C L E D I Q Y K G K S K T I F N P A A F L P D P A L R E Y W T Y E G S L T S P P C Y P Q V R Q P H S K A Q L S Y S K S F S L A H M G W P F Y S Y S G S L T T P P C L G L V Q N N G S T T V I P N F R L S D I I P P A H H Y Y R Y V G S M T T P G C E P A K D S N V T L S V P F D A S A L I P S E K D Y Y R F N G S L T T P P C S    |
| UniRef90_H2IMI6<br>UniRef90_G1KFX3<br>UniRef90_K1QUN4<br>UniRef90_Q95323                             | PA KDSNVTLSVPFDASALIPSEKDYYRFNGSLTTPPCS ARVSRFGKKSELEPFLLSNLLPNTNKYYTYNGSLSTPPCS EKLKEKGLFTDLYKFSLSELLPTTLSYLTYEGSLTQPGCQ  |
| UniRef90_E4XVW1<br>UniRef90_E9FXL0<br>UniRef90_Q16RN8  | ARVSRFGKKSELEPFILSNLLPNTNKYYTYNGSLSTPPCS EKLKEKGLFTDLYKFSLSELLPTTLSYITYEGSLTQPGCQ SDIPRPNMNTTMKEFDLLPEEESLRHYFRYLGSLTTPTCD KTVAKKSTMEIKDFSMNKLLPSELKDFYRYAGSLTTPTCN DGIKTASKKNEKLPYSVPLLPSNTASFFRYEGSLTDARCN EVRTAGTQYTLPDPSVFNLIGARRRPYFSYHGSLTTPVCY  |
| UniRef90_V9KXX9<br>UniRef90_H3CRJ6<br>UniRef90_F8FGR8<br>UniRef90_H0WMS5                             | SRVRHADQTVYIPAFDI RSL LPRDRRYYRYNGSLTTPPCH<br>PKQETKEDVKLEQPVDLPGL VPSTAHAFRYEGSLTTPPCS<br>AHIPKPGMDTEMREFSLWDMLPKERHYFRYQGSLTTPNCD  |
| UniRef90_UPI00032B047D<br>UniRef90_E9FX50<br>UniRef90_E5RQ31<br>UniRef90_W4F2N2                      | S NIV S T P G T N A T V NIL S L WD L L P P E D K H Y F R Y F G S L T T P E C S G E V T K N G D E T V L R K P V A L N L P K Q K S S Y F R Y F G S V T T P L C H N E L A Y K G Q K T T N A P F N P S C L L P D L R D Y W T Y E G S I T L P P C S P S N I T E T D I P L T N T I N L A K L L P T D K K V Y R Y S G S L T T P P C S P L D M G D T V R M P Q D L V D V N E L L P K D R R Y Y Q F L G S L T T P P C T |
| UniRef90_U5NEN9<br>UniRef90_UPI00038706EC<br>UniRef90_UPI0001758161<br>UniRef90_UPI0004442F30        | PLDMGDTVRMPQDIVDVNELLPKDRRYYQFLGSLTTPPCTKGVVHHEKETFLDPFVLRDLLPTSGSYYRYTGSLTTPPCSSTVMYKGASTPIKHLSLKNMLPDTEHFMTYEGSTTHPGCWPEIKYKDARAPVGSFQPSWLLPTCPHYWTYPGSLTTPPLT   |
| UniRef90_UPI00026587DC<br>UniRef90_B6A7R3<br>UniRef90_E2AGD1   | QYI LIH K G D S V S LI R S LI S V S D LI I P P K S S M LI T Y D G S LI T S P G C E<br>D K I K T K G K E A P F T N F N P S<br>N W V G K N T A S M R N K LI I P L L L L P K D H T T Y Y R Y E G S LI T T P G C O   |
| UniRef90_U3BVC4<br>UniRef90_R7TGJ8<br>UniRef90_UPI0002B8E7CF<br>UniRef90_E0VXZ0                      | P TKDQDVTIKVPFDADALIPSDKDYYRFNGSLTTPPCS LDDVTFKDTSNVSITLDDLLRPRMDEFFRYSGSLTTPPCY LCEYAGDTHILEDGPELINLLPSSVSYYRYHGSLTTPPCY EKIKYGGEEVEVKRISLKNLLPETEYYMTYDGSTTMPACH   |
| UniRef90_H9KFP8<br>UniRef90_W5UDS8<br>UniRef90_T1IRQ8<br>UniRef90_UP1000361A0A3                      | EKI KYGGEEVEVKRISI KNL LPETEYYMTYDGSTTMPACH<br>PYVSHKGEI VEI TPI DPSKL LPDDNGYWTYLGSLTTPPCN<br>ERI TYKQDAYELAGLDLEELYPETWRFITYEGSLTVPPCL<br>LDAIRHRNEKI VVKTSLRLMPSDTSQFFRYQGSLTTPACN<br>PKEKNKEGFLDSVQI NVANLLPADRGYYTFAGSLTTPPCT<br>CAGDEEAHVPVGI VQTRAMKRHSRKYFRYVGSLTTPPCT   |
| UniRef90_M0S5S5<br>UniRef90_H9GIJ2<br>UniRef90_I3MIF8  | A DI R Y P G Q R T I L R G L D L Q D M L P D L Y H Y Y T Y E G S L T T P P C T   |
| UniRef90_UPI00045E3F8F<br>UniRef90_I3BNI7<br>UniRef90_H0ZF36<br>UniRef90_F1Q4V8                      | E A D N T <u>V A L L T D K V D V S A L L L P</u> A D H D Y Y R F N G S L T T P P C T<br>R N V <u>S</u> H A G D S V D L A S T F R L S T L L P R S G Y F R Y Q G S L T T P P C S<br>R G V V H H E K E T F L L E P F V L R D L L P S L G S Y Y R Y L G S L T T P P C S  |
| UniRef90_UPI000464CB90<br>UniRef90_Q7QKJ5<br>UniRef90_H2ZXN2<br>UniRef90_A0A016XEC4                  | LPVKNGETKTIGMPFNLSYNLPKDKGYYTYVGSLTTPPCTGQIVDYDQTNHTFTLQSLIDGIDLTRFYTYKGSLTTPPCSNSVSRFGKRAQLEPFVLFSLLPNTEKYYTYNGSFTTPPCTPLGPSDSVRLPPDLVDINDILPKDQRYYSYFGSLTTPPCT   |

| UniRef90 M3XJ23   | 210 220 230 240 Q S   V   T W T   V   F N N T   I   Q   I   S Q D Q L   S Q   L   S Q   L   E N T L   K M K H Q Q L L   S Q N   |
|---|---|
| UniRef90_B0WFA1<br>UniRef90_Q7SYW3                                  |   |
| UniRef90_H9GLZ6<br>UniRef90_UPI0002C66426                           | ETVTWTLFNTTIKLSQQLRAFYNSLNFTENQ RMVEN<br>ENVVWTLFEKPIELQLGQIQEFWMQLYFGTTKNDSWIVDN<br>EKVVWTVFKEPIQLHEDQLFAFSEKLYYDNGQ KQKMTDN<br>QGVIWTVFNQTVRLS AKQLHTLSSSLWGPDASRLQLT<br>EGVLWLVMQQPVQVSAQQIAIFSRLY   |
| UniRef90_UPI000443EE4A<br>UniRef90_G8QPH9                           | QGVIWTVFNQTVRLS AKQLHTLSSSLWGPDASRLQLT<br>EGVLWLVMQQPVQVSAQQIAIFSRLY  |
| UniRef90_H2Z000<br>UniRef90_UPI000443D80B                           |   |
| UniRef90_F7GGG0<br>UniRef90_UPI000359E6B6                           | ENVHWFVLADFVKLSRTQVWKLENSLLDHHNKT IQND<br>ETVIWTVFKEPIKLHKDQFLKFSKELYYDEDKSLT MKDN  |
| UniRef90_UPI0001D55185<br>UniRef90_UPI00036D6A4F                    | QAVAWTVFHRMLSIS SRQLDAIVKQCRFWTGQPMKNIENVHWFVLADFVKLSRTQVWKLENSLLDHHNKT IQNDETVIWTVFKEPIKLHKDQFLKFSKELYYDEDKSLT MKDNESVTWI QKEPVEVAPSQLSAFRSLLFSALGEEEKMMVNNEGVLWLVLKTPVTLSSEQLRLFSKLFP NNPAVLWTVFENTVPIGHAQVVQFQAVPQTGPGLHPRPLTDN  |
| UniRef90_UPI0003D09E65<br>UniRef90_H0WS17                           | PAVLWTVFENTVPIGHAQVVQFQAVPQTGPGLHPRPLTDN<br>ENVHWFVMADYVKLSKEQILKLESSLLDHRNKT IRND  |
| UniRef90_T1E193<br>UniRef90_K1QLS9                                  | PAVLWTVFENTVPIGHAQVVQFQAVPQTGPGLHPRPLTDNENVHWEVWAADYVKLSKEQILKLESSLLDHRNKT IRNDESVTWILFKQPVELSEEQLEKFKSLQSSTNEPVHGKLTENESVTWIVFEDKQTLSHRQMEEFRKLLQHETVDWIVFKDTISISENQLASFCTMQQSGYVMLMDYLQNNESVTWIIFKETISVSAEQLAQFRSLLANAEGDKEVCIKQNEMVVWTVFQERIQLHRDQILTFSKKLYYDKEQTLRMTDNESILWTVFDTPITLSHNQIEKLESTLMDLDNKT LWNDQSVLWTVFRQPARISATQLEKLQKSLYSTKDTPSELLVSN  |
| UniRef90_UPI00045431F1<br>UniRef90_W5PUV4                           | ETVDWIVFKDTISISENQLASF <mark>C</mark> TMQQSGYVMLMDYLQNN<br>ESVTWLIFKETISVSAEQLAQFRSLLANAEGDKEV <mark>CI</mark> KQN  |
| UniRef90_UPI0002C5494A<br>UniRef90_H2TBA0                           | E MV V WT V F Q E R I Q L H R D Q I L T F S K K L Y Y D K E Q T L R M T D N<br>E S I L WT V F D T P I T L S H N Q I R K L E S T L M D L D N K T L W N D<br>Q S V L WT V F R Q P A R I S A T Q L E K L Q K S L Y S T K D T P S E L L V S N   |
| UniRef90_V8PC05<br>UniRef90_A8JX25<br>UniRef90_UPl0003F13719        |   |
| UniRef90_B7QEN3<br>UniRef90_K1QML6                                  | QAVIFNI LTNTVPI SEQQMEQFRQLRAGSQ DDSPLLVDN  |
| UniRef90_E9ISZ9<br>UniRef90_T1K4A8                                  | ETTTWI LAFPVNI SEGOTELERQLMOGDEKQPNÄPLANN   |
| UniRef90_G4VP62<br>UniRef90_UPI0003EAB0DE                           | ECVTWIVLDEPVVMTIDQIETIRQMHANCVTCGQ TDN EKVQWIVEKHTVSUSEDQUEVECTMQQAGYVMUMDYUQNN   |
| UniRef90_UPI00042C3427<br>UniRef90_B0WFA3                           | PVVLWTVFEDTVPI GRAQVAQFRI VVAQAPSSRPAPLTEN<br>ETVTWI VSAKPLLI TAKEI REFRRI RTRSGG LIMMNN  |
| UniRef90_K7IYD1<br>UniRef90_E9FXN1                                  | ESVISWYI MHEGI KI I QDQI NRI RHIKDHHINKANQYI RYNETTTWI I LNKPI YI TKQQAKELRQLMQGDEKQPNAPLANNEI VTWI I LAEPVNI SEGQTEI FRHNMI SSKTGEYAYLNHNE VTWI V LDEPV VMTI DQLETLRQMHANCVT CGQ  EKVQWL VFKHTVSI SEDQLEVFCTMQQAGYVMLMDYLQNNPV V LWTVFEDT VPI GRAQVAQFRI VVAQAPSRPPLTENETV TWI VSAKPLLI TAKEI REFRRI RTRSGG LMMNNESVI WI VSAKPLLI TAKEI REFRRI RTRSGG LMMNNESVI WI VSAKPLLI TAKEI REFRRI RTRSGG LMMNNNESVI WI VSAKPLLI TAKEI REFRRI RTRSGG LMMNNNESVI WI VSAKPLLI TAKEI REFRRI RTRSGG LMMNNNESVI WI VSAKPLLI VEN   |
| UniRef90_T1FZE7<br>UniRef90_S9Y3G2                                  | E T V T W V I M N R P I Y M S E N Q L Q K L R S L R S G S E E N P K G P L V D N<br>Q G V I W T V F N Q T V K L S A K Q L H T L S D S L W G P D D S R L Q L N  |
| UniRef90_UPI00038713C4<br>UniRef90_H0WAL8_                          | E   |
| UniRef90_UPI0003F1204F<br>UniRef90_P22748                           | Q G V I WT V F N Q T V K L S A S L Q L H K L S D S L W G P D D S R L Q L N E C V I WH V L K E P I T V S P E Q M C K L R G L C F S A E N E P V C H M V D N E T V V W T V F K E R I Q L H K D Q I L A F S Q K L Y Y D E E Q K L K M T D N E T V V W T V F K E P I Q L H E D Q I L A F S Q K L Y Y D H L K K L K M T D N E K V V W T V F R E P I Q L H R E Q I L A F S Q K L Y Y D K E Q T V S M K D N E D V I W T V F E T P I A I S V R Q L A K F R L L N D E N G M P L R K N   |
| UniRef90_E9FXM9<br>UniRef90_H2UM88                                  | Q 3   V   W     L   F   H   E   K   V   Q   I   S   N   A   Q   L   L   N   M   E   I   I   L   I   S   S   S   A   D   A   D   K   M   Q   D   N   M   Q   D |
| UniRef90_UPI00045D6423<br>UniRef90_A0A011Q3I6                       | F GIV LIWIL V LIR Q A Q QILIS P F Q F A ILIF T RILIY R H N  |
| UniRef90_C3YR32<br>UniRef90_UPI00026578A7<br>UniRef90_UPI0004422673 | EVVVWTVFQETIKI SQSQLNTLVAGAYFTSGQAAAVMENN<br>EGVRWIVINKALHISRLQISSLRKLMQGDILNPKASLSNN<br>ESVTWIIKKQPIEADHDQLEQFRTLLFTSEGEKEKRMVNN   |
| UniRef90_UP10004422673<br>UniRef90_W5JEJ7<br>UniRef90_C3XTT7        | ETVTWIVATKPLLVTEKEMNQFRRLRSTT GLLVNN<br>ENVQWIIFRYPLTISHVQMEEFRRLRCHAKGQPPPPLCDN<br>ETVTWLVASKRLAVTEREMKLFRATL  |
| UniRef90_X1Y3H5<br>UniRef90_H2LB46                                  | ETVTWLVASKRLAVTEREMKLFRATL<br>HAVAWTVEHRTLSISSRQLDALIKQCRFWTG LPMTDL  |
| UniRef90_H2IMI6<br>UniRef90_G1KFX3                                  | E GIVIR WIL V LIK D P Q T II IS A E QII IA T F E Q A M G E N  |
| UniRef90_K1QUN4<br>UniRef90_Q95323                                  | ESVEWIIFKDTVNISENQLSVFCTMQQSDYVMMMDYLQNN<br>ETATWVILNRPMYISNYQLEKLRGLTR GNGIGDPLMENN<br>EKVVWTVFQKPIQLHRDQLLAFSQKLFYD DQQKVNMTDN  |
| UniRef90_E4XVW1<br>UniRef90_E9FXL0                                  | FAIV VIWTIVIESEPII IKII ITKSTMEYMNSETKDAEGEII III II IENN   |
| UniRef90_Q16RN8<br>UniRef90_V9KXX9                                  | EDVIWTVFETPVHISHKQLEKFRQL SDDHGKPLSKN<br>ETVSWLVQRKPLQISEAQLDTFRSLR DSDGEPLVDN<br>ETVSWLIMNKPVYITRMQMHSLRLLSQNQPSQLFLSMSDN  |
| UniRef90_H3CRJ6<br>UniRef90_F8FGR8                                  | QGVTWTLFHERVQISKAQLLKMETTLYSSKDADMVLLQDN EHVKWIVLADPIEVSKEQIEAFAAIFP DN ETVVWTVFQESIELRRDQILVFSQKLWYDAEQRVN MTDN ENVVWTVFQQHISLHRNQILAFSTKLFYDDHQQHN MTDN EVTWTVFDNFIDISEKQLAKLRNL KDERGERLVNN  |
| UniRef90_H0WMS5<br>UniRef90_UPI00032B047D<br>UniRef90_E9FX50        | ENVVWTVFQQHISLHRNQILAFSTKLFYDDHQQHN MTDN  |
| UniRef90_E5RQ31<br>UniRef90_W4F2N2                                  | EKVTWIIFRYPLMLSGDQVDDFRRLYLYQKGETPGRLLDN<br>EGVKWSIMQQPLEMSKEQIDAFKAI<br>EGVLWMVLKQATTLSREQIRMFQQLYPQ   |
| UniRef90_U5NEN9<br>UniRef90_UPI00038706EC                           | E GV LWMV LK QATTLS REQI RMFQQLYPQ  N FLVEWLVERKPVPLSYHQUEAFYSUETTFQQDHVFYLRNN  |
| UniRef90_UPI0001758161<br>UniRef90_UPI0004442F30                    | E VEWI VERKPVPI SYHQLEAFYSI FTTEQQDHVEYLRNN<br>ETTVWI I LNKPI YI TRQEMYQLRKLMQGSKEAPKAPLGNN<br>ESVTWI I HKEPVEVAVTQLAAFRLLLFSALGEEDRTMVNN<br>ETVNWI I LNKPLYI TQDQLGQMRKLKQGESSTPMAPLGDN  |
| UniRef90_UPI00026587DC<br>UniRef90_B6A7R3                           |   |
| UniRef90_E2AGD1<br>UniRef90_U3BVC4                                  | ESVT WFVMT EKLPISEAQMNMFKHVQSN NGTLKYNEGVRWLVMKEAQTISPEQIKSF SEVMGKN  |
| UniRef90_R7TGJ8<br>UniRef90_UPI0002B8E7CF                           | E S V V W T V F D S P I E I S E L Q L A A F R T K L F L G Y D E N S G L L D I N<br>E T V Q W T V Y K E P I Y I S H Q Q L R L L Q Q L S A D S R E S N D V K L S D N  |
| UniRef90_E0VXZ0<br>UniRef90_H9KFP8                                  | EIVIWVILINKPIIVIIKQQLHGLIKKLMQGDANHPKAPLGNN<br>ESVTWILFKK <mark>C</mark> IEVSHHQLNIFRNLKFSRGEE <mark>PCH</mark> EN  |
| UniRef90_W5UDS8<br>UniRef90_T1IRQ8<br>UniRef90_UPI000361A0A3        | E G V R W L V M K E A Q T I S P E Q I K S F  E S V V W T V F D S P I E I S E L Q L A A F R T K L F L G Y D E N S G L L D L N  E T V Q W T V Y K E P I Y I S H Q Q L R I L Q Q L S A D S R E S N D V K L S D N  E T V T W V I L N K P I Y I T K Q Q L H G L R R L M Q G D A N H P K A P L G N N  E T V T W I L F K K C I E V S H H Q L N I F R N L R K F S R G E E C P C H E N  E T V T W I L M N K P V Y V S Q I E L Q S L R L L S Q N A V S Q I F L S L S D N  E V V T W T L F G L P S Y V S K Q Q M A K F R R L L A S E K S E E P Q E M S D N  E N V T W Y V L K H P V T L S A A E I T E Y S K L Y R D D  E N V I W N I L G K V R E M T A E Q L A E L K A P L H  E A V I W T I F T D P I L V P P K V V E A F P S E L R S S D S S S G P P I K N N  E N V H W F V L A D S V K L S R S Q V W K L E N S L L N F R N E T  E S V T W I Q K E P V E V A P S Q L S A F R T L L F S A L G E E E K M M V N N  E G V T W L V M K Q P V V A T A D Q V K I F A D I M G H  E A V V W T V F E E P V E I G R E Q  K V V E W L V F S R P V L L S Y K Q L E A F Y S I F T T E Q Q D H V E Y L R N N  Q G V N W F I F K E P I T I S L R Q V K L L R D L M P  E A V T W V V F P D L L E L S V N Q M K R F R T L D T G I H G S P M V D N  E G V L W L V L K Q P V Q I S P E Q L Y M Y N Q L Y S K T  |
| UniRef90_UPI000361A0A3<br>UniRef90_M0S5S5<br>UniRef90_H9GIJ2        | ENVIWNILGKVREMTAEQLAELKAPLH  EEYYNN EAVIWNILGTDPILVPPKVVEAEPSEIRSSDSSSGPPIKNN   |
| UniRef90_I3MIF8<br>UniRef90_UPI00045E3F8F                           | ENVIWIOREPVEVAPSOISAFRTITESAIGFFFKMMVNN   |
| UniRef90_I3BNI7<br>UniRef90_H0ZF36                                  | EGVTWLVMKQPVVATADQVKIFADLMGH<br>EAVVWTVFEEPVEIIGREQ   |
| UniRef90_F1Q4V8<br>UniRef90_UPI000464CB90                           | KVVEWEVFSRPVLLSYKQLEAFYSEFTTEQQDHVEYLRNN<br>QGVNWFIFKEPITISLRQVKLLRDLMP   |
| UniRef90_Q7QKJ5<br>UniRef90_H2ZXN2                                  | EAVTWVVFPDLLELSVNQMKRFRTL DTGTHGSPMVDN<br>EMVEWIVFKDTVTLSKSQLEVFCTMQKSGYVMVMDYVONN  |
| UniRef90_A0A016XEC4   | E GIV LIWL V LK Q PIV QIT IS P E QIL IY M Y N QILIY S K T   |

| UniRef90_M3XJ23                                  | 250<br>F R   V   P Q S   L   H G R K   V   L   A S F  |
|--|---|
| UniRef90_B0WFA1                                  | FRVPQSLHGRKVLASFHRPLRDLNGRRV<br>FRPVQRLGDRTVYIS<br>FRPTQPLGDRIVFKS  |
| UniRef90_H9GLZ6                                  | FRPTQPLGDRIVFKS   |
| UniRef90_UPI0002C66426                           | VRPLQELGQRLVFKS   |
| UniRef90_G8QPH9                                  | VRPLQELLGQRLVFKS FRATQPLNGRVVETSF ARPVQPSNGRLIKES YRPVQGLNGRTVR   |
| UniRef90_H2Z000                                  | Y R P V Q G L N G R T V R<br>F R P T O P L D G R V V Y S S  |
| UniRef90_F7GGG0                                  | YRRTQPLNHRVVESNF  |
| UniRef90_UPI000359E6B6<br>UniRef90_UPI0001D55185 | Y R P L Q Q L G N R Q V F R S<br>Y R P L Q P L M N R K V W A S F  |
| UniRef90_UPI00036D6A4F                           | FRPTQPLDGRVVSS<br>YRRTQPLNHRVVESNF<br>VRPLQQLGNRQVFRS<br>YRPLQPLMNRKVWASF<br>ARPTQPLNNRVVR<br>FRPQQPLGGRRISAS   |
| UniRef90_H0WS17                                  | Y R R T Q P L N D R V V E A N F   |
| UniRef90_T1E193<br>UniRef90 K1QLS9               | YRRTQPLNDRVVEANF<br>CRPVQPLNGRIIR   |
| UniRef90_UPI00045431F1                           | FREQQY <u>N</u> LPRQVFSSY   |
| UniRef90_W5PUV4<br>UniRef90_UPI0002C5494A        | F R E Q Q Y NL P R Q V F S S Y N R P P Q P L K G R T V K A S F V R P L Q D Q G Q R L V F K S Y R I A Q P L N D R M V E S F R V P Q S L N Q R F R P V Q S V G G R K V C C S F  |
| UniRef90_H2TBA0                                  | YRIAQPLNDRMVES  |
| UniRef90_V8PC05<br>UniRef90_A8JX25               | FRUPUSIVIGERKVICESF   |
| UniRef90_UPI0003F13719                           | V P D V I D I N C P O V E P S E   |
| UniRef90_K1QML6                                  | YRPSQPLYERKVYCS   |
| UniRef90_E9ISZ9<br>UniRef90_T1K4A8               | FRPPQPILHHRPVRTNIL<br>YRFQSPIINHRRVTASF   |
| UniRef90_G4VP62                                  | FRPICPIGSRSVRCSF  |
| UniRef90_UPI0003EAB0DE<br>UniRef90_UPI00042C3427 | FREQQDIVIFII GQIVIESSY<br>FREQQPILIGIVIRIVIVAS  |
| UniRef90_B0WFA3                                  | FRPVQKLYNRRVFR  |
| UniRef90_E9FXN1                                  | FRPUQSLOGGRKVCCSF  YRPVQSVGGRKVVCCSF  YRPVLPLNGRKVYYTSS  YRPSQPLLHRRPVTASSF  YRPPQSPLHRRPVTASSF  FREQQDVFJAS  FRPQGPLHRRPVTASSF  FREQQDVFJAS  FRPQQPLLGGRRVVFR  FRPPQQKLLNNRF  YRPTQPLLKSREVYLLSSF  YRPTQPLLKSREVYYLSSF  VRPLQQSLLRGQRRVVLITSSF  VRPLQQSLLRGQRRTVVLITSSF  VRPLQQSLLRGQRRVVLITSSF  VRPLQQSLLRGQRRTVVLITSSF  VRPLQQSLLRGQRRVVVLITSSF  VRPLQQSLLRGQRRVVVLITSSF  VRPLQQSLLRGQRRVVLITSSF  VRPLQQSLLRGQRRVVVLITSSF  VRPLQQSLLNNRRVVVLITSSF  YRPQQSLLNNRRVVVLITSSF  YRPQQSLLNNRRVVVFR  YRPQQSLLNNRRVVFR  YRPQQSLLNNRRVVFR  YRPQQSLLNNRRVVFR  YRPVQALLNNRRVVFR  YRPVQALLNNRRVF  FRPLQPLLNNNRRVF  YRPVQALLNNNRRVF  FRPLQPLLNNNRRVF  YRPVQALLNNNRRVF  YRPVQALLNNNRRVF |
| UniRef90_T1FZE7<br>UniRef90_S9Y3G2               | N R G S Q P L N R R P L R T N L<br>F R A T Q P L N G R L L F A S F  |
| UniRef90_UPI00038713C4                           | WRPCQPLKSREVRASF  |
| UniRef90_UPI0003F1204F                           | FRPQQSLNQRVVLKS   |
| UniRef90_P22748                                  | VRPLQULGQRTVIKS   |
| UniRef90_H2UM88                                  | FRSTQPLNHRVVLTSF  |
| UniRef90_UPI00045D6423<br>UniRef90_A0A011Q3I6    | ARPVQPSFGRMIKES   |
| UniRef90_C3YR32                                  | Y R P V L A L N G R T V   |
| UniRef90_UPI0004422673                           | FRPLQPLMNCTVSSSF  |
| UniRef90_W5JEJ7<br>UniRef90_C3XTT7               | Y R P V Q K L N N R R V F<br>F R P T Q P I K S R V I R A S F  |
| UniRef90_X1Y3H5                                  | Y R P T Q P L D G R I V Y S<br>N R P V Q P L N A R L I L T<br>F R D Q Q L K F S G Q V F S S Y   |
| UniRef90_H2IMI6                                  | NRPVQPLNARLILT  |
| UniRef90_G1KFX3<br>UniRef90_K1QUN4               | FRPIVICIPIDIRRI VIRI NII I  |
| UniRef90_Q95323                                  | VRPVQSLGQRQVFRS   |
| UniRef90_E4XVW1<br>UniRef90_E9FXL0               | Y R V L Q P R N E R D I  <br>V R P T Q H E H D R I V T Y S  |
| UniRef90_Q16RN8<br>UniRef90_V9KXX9               | FRSLQPVNDRPIF<br>FRPVQLLNNR <mark>C</mark> IRTNI  |
| UniRef90_H3CRJ6                                  | Y R S T Q P L N R R M V L A S F   |
| UniRef90_F8FGR8<br>UniRef90_H0WMS5               | H R P V Q P L N Q R T V V S N V R P V Q R L G D R T V F K S   |
| UniRef90_UPI00032B047D<br>UniRef90_E9FX50        | VRPLQSLGDREVYTS<br>FRTPQPLHDRTVYRSF   |
| UniRef90_E5RQ31                                  | F R P V Q P L N D R T V R S S F   |
| UniRef90_W4F2N2<br>UniRef90_U5NEN9               | N R P V Q P L N N R K V<br>A R P V Q P L N G R V V R  |
| UniRef90_UPI00038706EC                           | F R P Q Q S   L   N N R K   V   S K S   |
| UniRef90 UPI0004442F30                           | F R P L Q P L M N R K V L S S F   |
| UniRef90_UPI00026587DC<br>UniRef90_B6A7R3        | FRPVQPLTRRVVRINI  |
| UniRef90_E2AGD1<br>UniRef90_U3BVC4               | Y R P T Q E L G N R K V<br>N R P L Q P L N A R M V L T  |
| UniRef90 R7TGJ8                                  | Y R P P L S L G E R   |
| UniRef90_UPI0002B8E7CF<br>UniRef90_E0VXZ0        | FRPIQQLNGRIVSAYY<br>FRPPQPLHHRPLRTNI  |
| UniRef90_H9KFP8                                  | Y R P Q Q S L N Q R C I H T N I   |
| UniRef90_W5UDS8<br>UniRef90_T1IRQ8               | YRPIQDENEREIF   |
| UniRef90_UPI000361A0A3<br>UniRef90_M0S5S5        | SRPTQPLNGRTV  |
| UniRef90_H9GIJ2                                  | FRPLQKIGDR <u>K</u> VERS  |
| UniRef90_I3MIF8<br>UniRef90_UPI00045E3F8F        | Y R K T Q P L H R R V V E A N F<br>Y R P L Q P L T N R K V W A S F  |
| UniRef90_I3BNI7<br>UniRef90_H0ZF36               | NRPVQPLDARVV  |
| UniRef90_F1Q4V8                                  | FRPLQSLDNREVFKS   |
| UniRef90 Q7QKJ5                                  | Y R N E Q P L N G R E V K<br>Y R A L Q P L G N R R V F  |
| UniRef90 H2ZXN2                                  | FREQQYQFVGQVLSSY<br>ARPLQPRNSRTIR   |
| OHINGIBU_AUAUTOAEU4                              |   |

| UniRef90_G3N8Z9   | 1   |
|---|---|
| UniRef90_E4X681<br>UniRef90_D3PJZ7<br>UniRef90_E1G722               | WGYTQQGN EWGDSVLACNGDRQSPIDIPKKYSAAD F CNSGVKQSPINLEDRSTVKGKG NWDYEGECGPKYW PNADGHNQSPINLDLCLMKYSTV   |
| UniRef90_UPI0002A4C3B1<br>UniRef90_F6WI07<br>UniRef90_C4SGU0        | F P F T G L Y G P E G W E S A F P E C R E K N Q S P I N I V D K D A K V S T E P R N W K H L Y S E C D G L Q Q S P V N I K T K N T T Y N S L H W G Y E G Q E D P A H W G K L S P C E T G K N Q S P V N I Q G A L K T H H G Q   |
| UniRef90_UPI000298B0C3<br>UniRef90_Q31FD6                           | H WG Y F G E E G P Q Y WG E L A P C K T G K N Q S P I NIL K P Q T A V G T T S   |
| UniRef90_A0A026WEW3<br>UniRef90_F1S1C3<br>UniRef90_G7NFD4           | F G Y A H Q N G P H T W K D L Y P D S S G S Y Q S P I N I T R L A I V V Q P H W C Y Q T Q L G P D K W G S C Q K D N Q S P I N I A T A K A Q V D P K D K E G D P P W P Q V S P A C A G R F Q S P V D I R P Q L A A F C P A H W G Y T G D T G P E N W A Q L T P S C S G K N Q S P I N L A G F T E A D |
| UniRef90_I3BW91<br>UniRef90_UPI00045725A1                           | WSYLIGNLINQNAWGNRYPILICDGILKQSPIINIDDGFTQAHVA   |
| UniRef90_UPI0003C35813<br>UniRef90_F6UPK3<br>UniRef90_UPI0003166223 | H WCYEII IQQGPSILIWGDD CQKDRQSPII INII IDTTKA EIVINILID   |
| UniRef90_R7UH28<br>UniRef90_A0A026X185<br>UniRef90_D5CAD1           | N WS Y E GTT G P E H W G E L K P C L N G Q E Q S P I N I K T E Q I K H K N D  W G K T F P G C N A E N Q S P I D I D T T T L T Y D S G  W E Y W G K Y G P K N W P G V C T T G H K Q S P I D I V T E D A E R T D L  H W T Y E G K S G P E N W G E L S T C K T G K F Q S P I D I R N AY N A T          |
| UniRef90_B0X4Z9<br>UniRef90_UPI00046D6B51                           | WRYPGPDGPENWGG  |
| UniRef90_UPI0003061EF9<br>UniRef90_E9FX49<br>UniRef90_A2VD39        | H W G Y S G E S G P E N W A K L T P A C G G K N Q A P V D L S G F V E A E H W I Y G K S N K G T S W N K W Y A S C G G K Q Q S P I N I N P R S S V R K T F W C Y N N P L C N T T W P E L S P Y C N G S S Q S P I N I V T A Q V L E N S N   |
| UniRef90_Q64444<br>UniRef90_A7S2D8<br>UniRef90_UPI00031A116A        | WCYEIQTGPEKWPG ACKENQQSPINIVTARTKVNPR<br>GPGKWSVKFPIASGKRQSPIDIVSNETKFDST<br>WSYSGHTGPEHWGDLAPCKNGKSQSPFDIQGAKPE Q  |
| UniRef90_A0A059A2E1<br>UniRef90_UPI0002234B81                       | FAYAGPQGPSHWGSLSP <mark>C</mark> AQGQRQSPVNLVRNATVLNKN<br>WTYEGALDQEHWPSYYPA <mark>C</mark> GGKRQSP   |
| UniRef90_H3MBN4<br>UniRef90_B0XGA9<br>UniRef90_H3CYI8               | H W G Y E G E G S P E H W G A L S E C L S G M N Q S P I N I D T T F K A H Y F T Y G L G V E Q W G M I S K Y C D G Q R Q S P I D L D T S I A K N V T E W S Y A G T L N Q N H W A K K F P S C S N A K Q S P I N I E E N L A Q V Q R Q   |
| UniRef90_F1QTX6<br>UniRef90_D0Z0I1                                  | WCYNNPACNPNWPNII APYCNGSSQSPII DII VITA QVIQGNPN<br>WGYGEANGPEHWGEIVAPCATGVINQSPII NII TKATQ AN   |
| UniRef90_B6BNC3<br>UniRef90_UPI000444821D<br>UniRef90_Q27504        | H W G Y T G H E A P E N W G N L S A C K S G K S Q S P I N I T S S V T V E S K S W S Y A G G L N Q K H W A K K F P L C S S A K Q S P I N I N E D L A P V K L Q H W S Y D D E C G P N R W P T G Q H Q S P I N I D L E V E R K D T H   |
| UniRef90_G4VIP7<br>UniRef90_K8B3E4<br>UniRef90_A6DCH2               | WHYKEMGGPSHWGDVWPACYGKMQSPISISTKHLLYDPNHWSYEGEGAPEHWGELAPCQKGMNQSPIDIDNTLKAHVVPWSYSGKTGPEYWGDLKKCKIGKNQSPIDIKTSTQTFNTN  |
| UniRef90_B1XY18<br>UniRef90_T1IM50                                  | H W S Y Q G D A G P A A W A S L K P C G N G Q R Q S P I D I R D G L K V E N Y R P V H N Q K K W C E I S D S C C G K Y Q S P I E L W D N E R K T Q M T   |
| UniRef90_E9G343<br>UniRef90_I3Y9R0<br>UniRef90_H2S427               | AKHFLHAPGHRQSPINIRPDEVKLDPR<br>HWGYSGTEGPEHWGELDPCQTGKNQAPIDL TNVVDSQ<br>WCYHGHCDPSHWHLLHSKCGGERQSPVNIEKKSVVVDER  |
| UniRef90_UPI0004419F9C<br>UniRef90_J9NXZ2<br>UniRef90_UPI0002063ED7 | GPEHWVTSNADCGRTHQSPIDIIDHQARVGEE WCYDSQDGPTHWKEMAPACGGPAQSPINIDLHLVQQDPA WSYSGEHGPTYWPGL CVTGKKQSPINIVTEDTFNTDI   |
| UniRef90_F7CPH5<br>UniRef90_F6THJ0                                  | W S Y S G E   V   N Q K E W P T Y F R S C G G E E Q S P     D     Q T D K   V   T   V   D T S G P A F W G L V   N S C T     G K R Q S P     N     N T S Q       F D P F   |
| UniRef90_J6UHL3<br>UniRef90_H2TVI0<br>UniRef90_UPI0003837241        | WCYTGAHTPSHWGDII AAFCSEKRQSPII DII VISSL VIKTNHS<br>WGYEE GIVIE WGL LIFPEANGEY QSPII NIL IN SREARY DPQ  |
| UniRef90_H2M0K9<br>UniRef90_W5KAG6<br>UniRef90_UPl000464929E        | WQFPII IAII IPGGFRQSPII IDII ISIVIRKSMFDPQ  |
| UniRef90_V7W112<br>UniRef90_M5VTA8                                  | F S Y S G A T G P F K WG S L S P C S N G K L Q S P V N L [I G M V K G L L S P S K R   |
| UniRef90_S9WPT1<br>UniRef90_B8K8G9<br>UniRef90_UPI000443C813        | E G P T H W K E M A P A C E G P A Q S P I N I D L H L V Q Q D L T<br>Q W G Y E G Q H G P S H W G E F A S C A N G V N Q S P I N I E S A T E A K<br>W C Y S G C H T P E H W E A L D S H C G G Q K Q S P I D I V T S V V T I D P N   |
| UniRef90_E9GSS6<br>UniRef90_T1KUV6<br>UniRef90_A7S762               | WNEQRSHCGGQHQSPINIESNKGFLANY HFTYTDQKEWLTFNG SQCGNDRQSPINLDSSLATIDES GPLRWHKCYIGAEPGHQSPIDIVTKDVTQDSS   |
| UniRef90_W5U8N7<br>UniRef90_C1C0I2                                  | F C Y N S P G C N A T W P T L A P Y C N G T R Q S P I N I V T A D V K A D N N C R E G Q K Q S P I D I R E S K T K A K T G   |
| UniRef90_UPI00042AB4A2<br>UniRef90_UPI0003838E0E<br>UniRef90_A8GK76 | WCYELQAKEPNSHCQRPACQKTHQSPINIITTEAKENPD WSYAGTLNQNNWAKKYPSCNNAKQSPINVEESLAQVKIQ HWGYEGQEDPAHWGKLSPCETGKNQSPVNVKGALKTQHDK FCYQDPSGPGMWVTYFPKCNGTHQSPIDIDTNSVQHNQS  |
| UniRef90_K4G033<br>UniRef90_G2SD05<br>UniRef90_UPI0003EACADF        | FCYQDPSGPGMWVTYFPKCNGTHQSPIDIDTNSVQHNQSHWSYQGEGAPEHWGELDTCQSGMNQSPVNIDS TAKAHFGYSGSTGPKYWGSLSPCSKGRYQSPINILKDDSVYNPK  |
| UniRef90_U6NSY7<br>UniRef90_UPI0002378314                           | WSYDYDTGPQNWGLLFKCHNGKMQSPIIDIIPPGRLLFDPN<br>HWEYKG <u>KH</u> GATHW <u>GAL</u> EP <u>C</u> ARGAAQSPIIDIIR KTVKEA  |
| UniRef90_A3KNU9<br>UniRef90_F1QLX7<br>UniRef90_B4JTY5               | P S H W G K H Y A K C N G H N Q S P I N I D T Q K T I K S Q E  F S Y D E P Q K W Q Y S Y P Q C G G S E Q S P I A L N P H K V I P I G L  |
| UniRef90_Q4V4S9<br>UniRef90_UPl000463F9D7<br>UniRef90_UPl00037A0849 | PERWPEKYPNCGGSEQSPIAI SRRKAI PLNL HWSYMGKEGPDYWGDLSPCKTGKNQSPVNLMTDAAVGTTS HWAYDGKDGPKKWATLDPCKQGHHQSPIDIR HTEKAD HWGYTGHESPEHWAQLSPCGEGKSQSPVNIV NTLDGK  |
| UniRef90_C9PMF1<br>UniRef90_G3NYN9                                  | WCYSGYHSPGQWADILIGHPCGGKRQSPII IDII VII AEIVIK I DPH  |
| UniRef90_C3YR33<br>UniRef90_B5DYL3<br>UniRef90_W8CBE3               | WTYSGNTGPTHWANANNSCGGNSQSPINIQYSPAKRQSYHWNYE YNGND WGG TCRTGLRQSPIRLAVQKSLLAAMFHYDNSN NWYLDYPECGGDKQSPIIIKTNKTLEVSI   |
| UniRef90_K9NT61<br>UniRef90_U6PI84                                  | WSYSAPNGPQNWGELKS <mark>C</mark> SSGKTQSPIDIRDA IKTD<br>WGYVDKSA WKGL CKTGSKQSPIDLDLNEAVIVD <u>W</u>  |
| UniRef90_M3XJL0<br>UniRef90_I0HMP7<br>UniRef90_V5SFX3               | H WAYAGEGGPAR WGAII KP CATGQRQS PII DII R GGII AV DWTYEGAS GPDHWGTIL SPCSIL GIL QQT PII DIL SNAAAGDAGA  |
| UniRef90_W8ADY5   | FGYSEPN QRRWARHHGH <mark>C</mark> AGKTQSPIAVHSAKSIPMPA  |

| JAINSHORD CANDED  Y O D K F N A E S S N O TT M K N T G K T V A Y L K D D  N Y F V R G A G  A D M Y F V R G A G  A  |   | 50 60 70 80  |
|--|---|--|
| Interest   Propriet    | UniRef90_G3N8Z9                               | YQQ L KFNAESSNQTTMKNTGKT V A VLL KDD YF V RGAG   |
| Interest   |   | KAFELSNFDEEQTWTLKNNGHAVQMTASELNMKT NGGD<br>SPITEMNYDVAHNESMKNTGKTAKIJSIKDTNVPTITSSHI   |
| Interest   | UniRef90_E1G722                               | EPLKFUNY DVKUT GEUVNNGHSVQVKPHURSSAPEUR GGG  |
| Interest   |   | Y Q E L T L E G F D S N R T T M K N T G K T V A I T L K D E Y F V Q G G G  |
| Interest   | UniRef90_C4SGU0                               | LELAF QPGKQQI VNNGHTQVNVSAGNTLK  |
| MINISTREAM ANALOGY   | UniRef90_UPI000298B0C3                        | YQNLQFEGWTAESSTI HNNGKTVAI AVDGD FFVSGGG   |
| Interest   |   | SELLIOWS NENDLISMILLIND GHAIVI I REWISTMWPOLIOGGP  |
| J. P. P.   | UniRef90_F1S1C3                               | L IG D F H F S Y D T K Q K WAII  Q N N G H S  V  M  V L L  E D K A T   I   S G G G   |
| June      | · · · · · · · · · · · · · · · · ·             | IL R PIL E F E L P E L IP E LIRIL IR N N G H S V QL I I L IP S G D T I K V D S I L   |
| James  | UniRef90_UPI00045725A1                        | FRSII IRFEGWETKTGDII I <mark>H</mark> N N G K TIVIFII INII   MGD Y YII IS G G G  |
| James  |   | MAPLIKEGYYDAGNILII KNNGHSV <u>DEEVPPNGRRPEVI GSI</u>   |
| JRR890 DSCADY  JRR90 DP100040060861 SP   | UniRef90_UPI0003166223                        | NKNHLQMSYQPISFSIKNNGHS I EGKANSSDNYLTL   |
| JRR890 DSCADY  JRR90 DP100040060861 SP   |   | LTAFDWSNYGALPWELINNGHSAQLVLDGDYQLWD GG<br>GALKEHRYDEAESSTLVNTGHSVOLLLD GVPLHUSGGS  |
| JAMERSO DIPOLOGO 1900 1900 1900 1900 1900 1900 1900 190  | UniRef90_D5CAD1                               | LPPLEMNFHTAA EKL VNNGHTLQVTASDEDEFR  |
| JAMERSO DIPOLOGO 1900 1900 1900 1900 1900 1900 1900 190  |   | PEFI FDSYDSPDSAYI VNNGHTVQI NLDSSASSSVY GGG  |
| Junkers   Junk   | UniRef90_UPI0003061EF9                        | LTPLQLSYS AGASNVVNLGYTVQVVYEPGSHLTL  |
| Jimerego   | UniRef90_E9FX49                               | PKFRFHNYGNLDRMLLMNNGHTAMYSLQPKGRIPYITGGG   |
| JAMESSO JAMASSONS JAMESSONS JAMESSON JA | UniRef90_Q64444                               | LTPFILIGYDQKQQWPIKNNQHTVEMTLGGGACII GGD  |
| JAMESSO JAMASSONS JAMESSONS JAMESSON JA | UniRef90_A7S2D8                               | I PPVKVHYDPFTKGKLTNTGHSVSFSGESDASVPTPDIIGP   |
| Junkergo D. DHO002234881  JUNE RESOLUTION S  JUNE R | UniRef90_0P100031A116A<br>UniRef90_A0A059A2E1 | II IK PILIT RIDY R PANATII VINNGII INITIGIV VIYEEE IVIG NITISIVI   |
| Junkergo   BOXCA9  | UniRef90_UPI0002234B81                        | HHPAEENGG VQIKLPSTMRLAASDD   |
| Junker90   H3CY19   H   G E   T   F   E   G   W   D   G   R   T   S   T   N   G   G   D   T   G   G   G   G   G   G   G   G   G  | UniRef90_H3MBN4<br>UniRef90_B0XGA9            | PKRILIQIL VINIVIN PTKIVITIVIKN N GILITIVIA FAILITY PPSK QIVLIR G G P   |
| Jinker90   D02011  | UniRef90_H3CYI8                               | HQELITFEGWDQPRTSI KNDGKTVAVNV GGDFYVSGGA   |
| Jinker90   | UniRef90_F1Q1X6<br>UniRef90_D0Z0I1            | II I I I I I I I I I I I I V O G K I V I T O I I I V I N N G H T I I I F A I I V I S G K N D I V I I I N G   |
| JAIRGERO CAZF504  JAIRGERO CASUPZ  JAIRGERO CASUPZ  JAIRGERO CASUPZ  LIKTHYVD B P P S L DV N N G Q D L Q K I L P E T N G S V T I D G D J J N N N G Q D L Q K I L P E T N G S V T I D G D J N N N G Q D L Q K I L P E T N G S V T I D G D K J N N G Q D L Q K I L P E T N G S V T I D G D K J N N G Q D L Q K I L P E T N G S V T I D G D K J N N G Q D L Q K I L P E T N G S V T I D G D K J N N G M T V V K M C K D K N G V R I D G D G D M N M G M T V V K M C K M G V R I D G D G D M N M G M T V V K M C K M G V R I D G D M N M G M T V V K M C K M G V R I D G D M N M M M M M M M M M M M M M M M M M   | UniRef90_B6BNC3                               | LEKI GFDYS TGUSSVINNGHTVQVNFDKGSSLTVDGU  |
| Jinker90   |   | DGIKFVNYDHPIIQGDIVNNGHSVQMTPELRSEHPEIIYGGG   |
| Jinker90, ABDCH2 Jinker90, Till XY18 Jinker90, | UniRef90_G4VIP7                               | L VPLKI S G D K QI DVE V V N T G Q D L QVK I LD S T A S V V F S E G P  |
| Jinkelso   19343    Jinkelso   19348    Jinkelso   19448    Jink   |   | LKPFKIKYLGKG YEVINNGHTIKVKTEGKNCVRIDGI   |
| Jinkelso   19343    Jinkelso   19348    Jinkelso   19448    Jink   | UniRef90_B1XY18                               | L D A V Q Y D Y R P S R F T V I D N G H T V Q V N V A P G N S I E V  |
| Jinkel90   JY9R0   |   | II INII IK RII II WK Y P K I II IFII I IN I G Y C WK A HIVIP   |
| Jinker90 JP10004419F9C JP1007419F9C JP1007419F9C JP10074059C JP10072053ED7 JP10072053E | UniRef90_I3Y9R0                               | ILIPPII IGFHYSPGGSDEII I NNGHTII IQIVIDYQAGSS II IAIL I  |
| Jinker90 J9NXZ2  |   | Y Q E   G F D N E S S N K T WM K N T G K T V A I L L K D D Y F I S G A G   |
| Jinke90  | UniRef90_J9NXZ2                               | LGPFIFQGYHPGPWTLENDGHTVRMDTDPQSRLEIRGAGL   |
| Jinkef90   | UniRef90_F7CPH5                               | LKPLQLKNFGLQHGKMSNTGHTATVQLPDNMKIY_ DG   |
| Jinkef90   | UniRef90_F6THJ0                               | L PPLRLSMTGTTVSTMHNTGRHVSFRLDKEQPVNIS GGP  |
| JniRef90 UP10003837241 JniRef90 UP10003837241 JniRef90 UP10003837241 JniRef90 W5KAG6 JniRef90 UP10004649295 JniRef90 UP10004649295 JniRef90 UP100034849295 L K P L VJM K Y D P R T C Q Q I WN N G Y S FL V E Y D D T T D K S T L Q G G P L I R P I N G W N Y A P G S T L E L N R W N Y D N R G S T S T L N G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G H T I Q W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A S N A T L F N N G F N I G W N Y A P G S T L E L K P L T R W Y G A G W Y P P G P W T L E N D G H T V L L H V D T G S Q S P V R G A G L L E K L S F D Y Q G Q W V S L L N N S H T L Q L T G S G S P V R G A G L L E K L S F D Y Q G Q W V S L L N N S H T L Q L T F A N N N N W V L S G G G L H W N T Y S P W T A S T T L T N D G R T V L L N L D F X W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T G S A W T Y S W T T T N D G R T V W L W T Y S W T G S A W T Y S W T G S A W T Y S W T T T N D G R T V W T W T T A R T F W M N T Y T T T A P T W T T T T A P T W T T T T T T T T T T T T T T T T T   | UniRef90_H2TVI0                               | L IG S F T F IL IN F G S Q Q K S IV I IN N G H T V IV K F M L IA P D E IV E IV IS G G G  |
| Jirikef90  | UniRef90_UPI0003837241                        | L L D L N P N Y V V C R D C E V I N D G H T V R I M L K S K S V V T G G P L P  |
| JniRef90   | UniRef90_H2M0K9                               | II K PIL VIMKY D P R T C O OII IWN N G Y S FIL VIE Y D D T T D K S T II IO G G P   |
| Jinkef90   | UniRef90_UPI000464929E                        | LIGDI ATSFGSST TEILVINNGHTII KEILYNSGSTSTLLNGLLT   |
| JniRef90   | UniRef90_M5VTA8                               | LKPLTRVYG ASNATLFNNGFNIGVHFEGHVGTLDVDG   |
| JniRef90   | UniRef90_S9WPT1                               | L G P F I F Q G Y P P G P WT L E N D G H T V L L H V D T G S Q S P V R G A G L   |
| JniRef90   | UniRef90_B8K8G9<br>UniRef90_UPI000443C813     | LGNFTFVNFSSQSAIKNUTNNGHSVQCDLEVDMVEVSGGG   |
| JniRef90   | UniRef90_E9GSS6                               | PEFILFHQYDRVFPELLKNDGHTVELKDEEQEELPFILTGGG   |
| JniRef90   | UniRef90_A7S762                               | L G S L WN T Y E P VA N S T L T N D G R T L Q L T F A N N N N V L S G G P  |
| JniRef90   | UniRef90_W5U8N7                               | LITAFSFTGDSSTFLINLQNTGKSVKI HLD DQKMSVSGGG   |
| JniRef90_  | UniRef90_UPI00042AB4A2                        | LKPFTFTYNQKKKWVVKNDGHSVKMML GDGLFIIDGGD  |
| JniRef90_K4G033 JniRef90_G2SD05 JniRef90_UPl0003EACADF JniRef90_UPl0003EACADF JniRef90_UPl0002378314 JniRef90_B4JTY5 JniRef90_B4JTY5 JniRef90_B4JTY5 JniRef90_UPl000463F9D7 JniRef90_UPl000463F9D7 JniRef90_UPl000463F9D7 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_C3NYN3 JniRef90_B5DYL3 JniRef90_B5DYL3 JniRef90_B5DYL3 JniRef90_UPl000463F9D7 JNIREf90_UPl000463F9D | UniRef90_UPI0003838E0E                        | FQKILRLEGWTSDSTTVKNDGKTVAIIDVGGE FYVSGGG   |
| JAIREF90_UP10003EACADF   | UniRef90_K4G033                               | LRAFNFYNYNVT GTTTDUTNNGHTVGLYFEDGSVKUSAGG  |
| JniRef90_UP10002378314 JniRef90_F1QLX7 JniRef90_B4JTY5 JniRef90_UP1000463F9D7 JniRef90_UP1000463F9D7 JniRef90_UP100037A0849 JniRef90_UP100037A0849 JniRef90_UP1000463F9D7 JniRef90_UP1000463F9D7 JniRef90_UP100037A0849 JniRef90_UP100037A0849 JniRef90_UP100037A0849 JniRef90_UP1000463F9D7 JniRef90_UP1000463F9D7 JniRef90_UP1000463F9D7 JniRef90_UP1000463F9D7 JniRef90_UP100047A JniRef90_UP100047A JniRef90_UP100047A JniRef90_UP100047A JniRef90_UP100463F9D7 JniRef90_UP100047A JniRef90_UP100047A JniRef90_UP100463F9D7 JniRef90_UP1000463F9D7 JNIRef90_UP1000463FPD7 JNIRef90_UP1004445 JNIRef90_UP100445 JNIRef90_UP100463FPD7 JNIRef90_UP100445 JNIRef90_UP100445 JNIRef90_UP100445 JNIRef90_UP100445 JNIRef90_UP100445 JNIRef90_UP100445 JNIRef90_UP1 | UniRef90_G2SD05                               | II IE PII IE M D Y T A A N T T II V ID N IVIE NII IAII IR <mark>C</mark> D D T A G T IVIKIVI   |
| JniRef90_B4JTY5 JniRef90_Q4V4S9 JniRef90_UPl000463F9D7 JniRef90_UPl00037A0849 JniRef90_UPl00037A0849 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_B5DYL3 JniRef90_W8CBE3 JniRef90_W8CBE3 JniRef90_W8CBE3 JniRef90_W8CBE3 JniRef90_W8CBE3 JniRef90_UPl00037A0849 JniRef90_W8CBE3 JNIREF   | UniRef90_U6NSY7                               | L K P I H D R I S V M S E M L N T G Q M P R I R I G N S A R R P S A N G G P  |
| JniRef90_B4JTY5 JniRef90_Q4V4S9 JniRef90_UPl000463F9D7 JniRef90_UPl00037A0849 JniRef90_UPl00037A0849 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_G3NYN9 JniRef90_B5DYL3 JniRef90_W8CBE3 JniRef90_W8CBE3 JniRef90_W8CBE3 JniRef90_W8CBE3 JniRef90_W8CBE3 JniRef90_UPl00037A0849 JniRef90_W8CBE3 JNIREF   | UniRef90_UPI0002378314                        | L PAL D F Q Y A A G A P T L V N N G H T V Q V N M P A G S K L V V D G  |
| JniRef90_UP1000463+9D/   | UniRef90_F1QLX7                               | LGPF DLINFNLPHT MKMLRNNGHTVECKLKAGVVGVQGGG   |
| JniRef90_UP1000463+9D/   | UniRef90_B4JTY5                               | PPILYFGLYDEPFDESIRNNGHTVEFGVPPFGERPYLTGGL  |
| JniRef90_W6CES JniRef90_K9NT61  IEPLNVAY QPSKVTVSNNGHTLQVT PVDAGGLTL JniRef90_U6Pl84  JniRef90_M3XJL0  LTDFTFYDDNTKLTMIENVGTNVKIEID QSIKLSGG JniRef90_I0HMP7  LEPVQFDYRPVGFAVLDNGHTVQVNVGPGNFIAVGG JniRef90_V5SFX3  LGF  DYRPLPLRIVNNGHTIQLNADRGSALTIGE  | UniRef90_UPI000463F9D7                        | LPGFDVHYRDTVLKVI NNGHTLQVNVPLGSYIKINN  |
| JniRef90_W6CES JniRef90_K9NT61  IEPLNVAY QPSKVTVSNNGHTLQVT PVDAGGLTL JniRef90_U6Pl84  JniRef90_M3XJL0  LTDFTFYDDNTKLTMIENVGTNVKIEID QSIKLSGG JniRef90_I0HMP7  LEPVQFDYRPVGFAVLDNGHTVQVNVGPGNFIAVGG JniRef90_V5SFX3  LGF  DYRPLPLRIVNNGHTIQLNADRGSALTIGE  | UniRef90_UPI00037A0849                        | LIPPII QFDY APSPLNII VIDNGHTVMVTYESGSFLTVGD  |
| JniRef90_W6CES JniRef90_K9NT61  IEPLNVAY QPSKVTVSNNGHTLQVT PVDAGGLTL JniRef90_U6Pl84  JniRef90_M3XJL0  LTDFTFYDDNTKLTMIENVGTNVKIEID QSIKLSGG JniRef90_I0HMP7  LEPVQFDYRPVGFAVLDNGHTVQVNVGPGNFIAVGG JniRef90_V5SFX3  LGF  DYRPLPLRIVNNGHTIQLNADRGSALTIGE  | UniRef90_G3NYN9                               | LLNFTFVNFSSPRKS VNDGQTTQLKCVLENNEVEVSEGG   |
| JniRef90_W6CES JniRef90_K9NT61  IEPLNVAY QPSKVTVSNNGHTLQVT PVDAGGLTL JniRef90_U6Pl84  JniRef90_M3XJL0  LTDFTFYDDNTKLTMIENVGTNVKIEID QSIKLSGG JniRef90_I0HMP7  LEPVQFDYRPVGFAVLDNGHTVQVNVGPGNFIAVGG JniRef90_V5SFX3  LGF  DYRPLPLRIVNNGHTIQLNADRGSALTIGE  | UniRef90_C3YR33                               | A D F A F Q G Y S T A P T M E L Y N T G H A L NV N L G S A S K G F S V S G G G P R L T F G N Y D T K P P L T L V N N G H S A H M D L D F D N S P D E L T C C L |
| JniRef90_M3XJL0  | UniRef90_W8CBE3                               | PPLTFGSYDFSNYAVLKNNGHSIKFNVPDTIEFIRPFIGP   |
| JniRef90_M3XJL0  | UniRef90_K9NT61                               | LEPLNVAY QPSKVTVSNNGHTLQVT PVDAGGITL   |
| JniRef90_10HMP7  | UniRef90_06Pl84<br>UniRef90_M3XJL0            | LIT D F T F Y D D N T KIL IT MII IE NIVIG T NIVIKII IEII ID Q SII IKIL IS G G G  |
| JniRef90 W8ADY5 VD MUGY H NIL LP H PIL VMV N N G H T IV ALI IS I P N G D F M P Y A R G G K   | UniRef90_I0HMP7                               | LEPVQFDYRPVGFAVLDN GHTVQVNVGPGNFIAVGG  |
|  | UniRef90_V5SFX3<br>UniRef90_W8ADY5            | VDMIGYHNLLPHPLVMVNNGHTIVALSIPNGDFMPYARGGK  |

| UniRef90_              | _G3N8Z9   | 90 100 110 120  L P G R F K A E K M E F H W G H S N G S G S E H S I N G R R F P V E M Q I Y L Y L P G E Y T L A Q F H F H W G S S D H G G S E H T L E G K Q F F S E V H L V H F S N D T Y K F A Q L H F H W G D M D K Y G S E H I I D G F Q Y P I E A H L V H F F D Q A Y R L V Q Y H F H W G L H D N E G S E H T L A G L H Y P A E L H L V H L P G R F K A E K L E F H W G P V N G S G S E H S I D G R R F P V E M Q I F M Y L S G V Y K A K Q L H F H W G S A G V A G S E H T V D G E R Y L M E L H V V H R D D D T F T L Q F H F H A P S E N E I D G K Q F P L E A H F V Y K L S S R F R V G R I T F H W G H C N T T G S E H S L N G R T Y P L E M Q I Y C H H R Y E L L Q Y H F H T P S E H Q R D G F N Y P M E M H L V H L T G A Y D F F N I L F H W G P S N E E G S E H T L D Y V R Y P M E L Q V I H T L A A R Y R A K Q L H L H W S N V L D M G S E H S F D G E R F A M E M H I V H E P G R E Y R A L Q L H L H W S N V L D M G S E H S F D G E R F A M E M H I V H E Q F A L K Q F H F H A P S E N H I N G K S F P M E A H L V H K L T S R Y K V G K I T F H W G C N A S E G S E H T L N G Q N F P L E M Q I F C Y L H S K Y E A V G V H F H W S N K M D R G S E H T I D D R R F D V E M H I V H K G N N R Y T L K Q F H F H T P S E H Q I E G K P A D M E L H L V H Q L D G I Y K A V H A S L S W G S E D H I G S E H L I D G R G F P A E L Q I V H Y L P S V Y L L E Q M H F H W S   |
|------------------------|---|---|
| UniRef90_<br>UniRef90_ | _E4X681<br>_D3PJZ7                              | L   |
| UniRef90_<br>UniRef90  | _E1G722<br>UPI0002A4C3B1                        | FDQAYRLVQYHFHWGLHDNEGSEHTLAGLHYPAELHLVH   |
| UniRef90<br>UniRef90   | _F6WI07<br>_C4SGU0                              | LSGVYKAKQLHFHWGSAGVAGSEHTVDGERYLMELHVVHR  |
| UniRef90               | _UPI000298B0C3                                  | LSSRFRVGRUTFHWGHCNTTGSEHSLNGRTYPLEMQIYCH  |
|                        | _Q31FD6<br>_A0A026WEW3                          | LT GAYDFFNI LFHWGPSNEEGSEHTLDYVRYPMELQVIHT  |
| UniRef90_<br>UniRef90_ | _F1S1C3<br>_G7NFD4                              | PGREYRALQLHLHWSNVLDMGSEHSFDGERFAMEMHIVHE<br>PGREYRALQLHLHWGAVGRPGSEHTVEGHRFPAELHVVHL  |
| UniRef90_<br>UniRef90_ | _I3BW91<br>_UPI00045725A1                       | QFALKQFHFHA PSENHINGKSFPMEAHLVHK<br>LTSRYKVGKITFHWGCNASEGSEHTLNGQNFPLEMQIFCY  |
| UniRef90<br>UniRef90   | _UPI0003C35813<br>F6UPK3                        | L   |
| UniRef90<br>UniRef90   | _UPI0003166223<br>_R7UH28                       | GNNRYTLKQFHFH TPSEHQIEGKPADMELHLVHQ<br>LDGIYKAVHASLSWGSEDHIGSEHLIDGRGFPAELOIVHY   |
| UniRef90<br>UniRef90   | _A0A026X185<br>_D5CAD1                          | LPSVYILEQMHFHWS AEHTVDGQRDPLELHLVHY DDQLFTLRQYHFH TPSENRINGKSFPLEAHFVHA FRSKYVLEQLHFHWS SEHTIEDRRYALEMHLVHR   |
| UniRef90               |   | FRSKYVLEQLHFHWS SEHTIEDRRYALEMHLVHR   |
|                        | _UPI0003061EF9                                  | DGKDYELLQFHFHM PSENLIKGQSYPLEGHLVH  |
| UniRef90_<br>UniRef90_ | _A2VD39   | LPGLYVSKQFHLHWGNSSFPGSEHTVDGKQYAMELHIVNV  |
| UniRef90_              | _A7S2D8   | LSHKYKFAQFHFHWGKDEKEGSEHRVDGKMYPSEMHIVHY  |
| UniRef90               | _UPI00031A116A<br>_A0A059A2E1<br>_UDI0003334B81 | NGKNFSLKQMHWH SPSEHSI DGLQFPAELHLVHK  |
| UniRef90_              | _UPI0002234B81<br>_H3MBN4                       | LPSVYLLEQMHFHWS DDQIFTLRQYHFH TPSENRINGKSFPLEAHFVHA FRSKYVLEQLHFHWS MDDVYKLEQYHCHWGCSDSRGSEHTIVDGQAFAGELHLVHW DGKDYELLQFHFHM PSENLIKGQSYPLEGHLVHW DGKDYELLQFHFHM PSENLIKGQSYPLEGHLVH LNGTYEFAQFHLHWGNDSTRGSEHLIASKSYPGELHLVHF LPGLYVSKQFHLHWSNSSFPGSEHTVDGKQYAMELHIVNV LPARYEAVQLHLHWSNGNDNGSEHSIDGRHFAMEMHIVHK LSHKYKFAQFHFHWGKDEKEGSEHRVDGKMYPSEMHIVHY YQLVQFHFHA PSEYTIDGKQYPLAAHLVHR NGKNFSLKQMHWH SPSEHSIDGLQFPAELHLVHK TEYIAEQMHFHWGGGSLEMSGSEHTIDGRRFFLIEIHVVHK TEYIAEQMHFHWG  |
| UniRef90_<br>UniRef90_ | _BUXGA9<br>_H3CYI8                              | TPFTLQQFHFHA  CEHSEDHQRHPMEMHLVFY  LRSKFKVGRLTFHWGRCNASGSEHSVDGARYPLEMQIYCY  LPGLYVSVQFHLHWGSSSSPGSEHTVDGKRYAMEMLVNL  DTYHLKQFHFH  TPSENQIDGKNFPLEGHFVH  LRSMFKVGRLTFHWGRCNASGSEHSLNGVKYPLEMQIYCY  LDQVYRLVQYHFHWGENDNEGSEHTLUGGKRYPLEMQIYCY  LDQVYRLVQYHFHWGENDNEGSEHTLUGGKRYPLEMQIYCY  LVYNYKFFGALIKFGSRSDRGSDHRLUGGLAFPAELLQLYAF  AYRLQQFHFHA  FSENTINGKHYPMEAHYVH  TGRRYELLQFHFHA  TPSENTINGKHFPMEAHYVH  TGRRYELLQFHFH  TPSENTINGKHFPMEAHYVH  TGRRYELLQFHFH  TPSENTINGRQFDMVAHLVHK  KFKLAQLHFH  TPSENTINGRQFDMVAHLVHK  LRHTYLLSSLHFHWGVNNYQGAEHIVVNGQSYGAELHFVNNW  DGHDYELKQFHFH  TPSENHIGGREFPMEAHLVHA  LKHVYSTLQFHFHWGSGDSDGSEHTVDSHRYPMEMHIVS  PLPGRFKAEKVEFHWGQSNGSGSEHSVDGGRFFPMEAHLVHA  LKHVYSTLQFHFHWGSGDSDGSEHTVDSHRYPMEMHIVS  PLPGRFKAEKVEFHWGQSNGSGSEHSVDGGRFFPMEMHIVS  PLPGRFKAEKVEFHWGGSRGSEHSVDGGRFFPMEMHIVS  LPGRFKAEKVEFHWGGSRGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGGSRGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGGSRGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGGSRGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGGSRGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGGSRGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGGSRGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHSVDGGRRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDSHRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDNRRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDNRRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDNRRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDNRRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDNRRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDNRRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDNRRYPMEMHIVS  LPGRFKAEKVEFHWGRFGRAGSEHTVDNRRYPMEMHIVS  LPGRFYAMATH |
| UniRef90_<br>UniRef90_ | _F1Q1X6<br>_D0Z0I1                              | DTYHLKQFHFH  TPSENLIDGKQYPLEAHFVN   |
| UniRef90_<br>UniRef90_ | _B6BNC3<br>_UPI000444821D                       | K F S L V Q F H F H T P S E N Q I D G K N F P L E G H F V H L R S M F K V G R L T F H W G R C N A S G S E H S L N G V K Y P L E M Q I Y C Y   |
| UniRef90_<br>UniRef90  | _Q27504<br>G4VIP7                               | LDQVYRLVQYHFHWGENDNEGSEHTLGGLRYPAELHLVHQ<br>LVYNYKFFGALIKFGSRSDRGSDHRIDGIAFPAELQLYAF  |
| UniRef90<br>UniRef90   | _K8B3E4<br>_A6DCH2                              | A Y R L Q Q F H F H A P S E N T L H G K H Y D L E M H L V H K K F K II A Q L H F H T P S F N T I N G K H F P M F A H Y V H  |
| UniRef90_<br>UniRef90  |   | T G R R Y EL L QFH F H R P S E E R I N G R Q F D M V A H L V H K  |
| UniRef90_<br>UniRef90_ | _F9G343<br>_I3V0P0                              | LSHDYRLAQYHCHWGENDHIGSEHVVNGQSYGAELHFVNW  |
| UniRef90               | _H2S427<br>_H2S0004410E0C                       | LKHVYSTLQFHFHWGSGDSDGSEHTVDSHRYPMEMHIVS   |
| UniRef90               | _UPI0004419F9C<br>_J9NXZ2<br>_UDI0003063FD7     | PLPAYRALQL HFHWGGPGRAGSEHSVDGQRYPMEMHVVHM   |
| UniRef90               | _UPI0002063ED7<br>_F7CPH5                       | QSSFYTAVQFHLHWEGEKPSGSEHTMNGMHSNAELHVVFD  |
| UniRef90_<br>UniRef90_ | _F61HJ0<br>_J6UHL3                              | GDQTYQLLQFHFH RPSEHTVAGKHFPMEVHFVHK   |
|                        | _H21VI0<br>_UPI0003837241                       | S D H E Y E L S E V R F H W G N E N Q R G S E H T V N F K A F P M  L T S R F Q V A R L L F H W G R C N A T G S E H S L N G M K Y P L E M Q L Y C Y  |
|                        | _1 12101013                                     | LISKEQVAKELIFIWOKONATOSLINGWKTFELIWQIITOT   |
| UniRef90               | _UPI000464929E<br>_V7W112                       | YTLKQFHLH TGSEHTVDGVRSPMEAHLVHQ<br>DGMRFELKQFHFHA PSENLIEGKSYPLEGHLVHA  |
| UniRef90_<br>UniRef90_ | _M5VTA8<br>_S9WPT1                              | K N Y D L K Q M H W H S P S E H R L N G V Q F P A E L H L L H Q P P P A Y R A L Q L H F H W G C P G Q A G S E H S L D G Q H R P M E M H V V H M   |
| UniRef90_<br>UniRef90_ | _B8K8G9<br>_UPI000443C813                       | K S F T L K Q F H F H T P S E N H V D G K E Y P L E A H F V H L D G E Y S V L Q F H F H W D V A N N S G S E H T L D G H R Y P M E M H I V T A   |
| UniRef90_<br>UniRef90_ | _E9GSS6<br>_T1KUV6                              | LIGDRYNFVQL HFRWG ESVRGSEHI I NGKQYPAEMHI VHY<br>EGHLMELYQLHLHWGINSMSGSEHAI DGERFAAEVHFVHL  |
| UniRef90<br>UniRef90   | _A7S762<br>_W5U8N7                              | L T D E Y QL A ML K F H WA A T E E S G S E H MI D S Q G H A L E V Q L V H W L Q N K Y K S K E F H L H WG N S S F S G S E H T V D G K Q Y A M E M H I V N L  |
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|                        | _UPI0003838E0E<br>_A8GK76                       | LRSKFKVGRUSFHWGLCNASGSEHGLNGEKYPLEMQUYCY<br>DNDTETUQQEHEHA  |
| UniRef90_<br>UniRef90  | K4G033<br>_G2SD05                               | UNGHYFAKQUHFHWGNNSHSGSEHTLLNGKQYSUSMHIVHT   |
|                        | _UPI0003EACADF                                  | DGKKYKLKQLHWH<br>SPSEHTIINGQRFAWELHMVHY   |
| UniRef90               | _U6NSY7<br>_UP10002378314<br>_A3KNI IQ          | KPMDL LQFHFH TPSEEAI GGKHAAMVAHFVH  |
| UniRef90_<br>UniRef90_ | _A3KNU9<br>_F1QLX7                              | L K H K Y T V L Q F H F H W G P R Q Q P G S E H S L N R H R W P V E M H I V S R   |
| UniRef90_<br>UniRef90_ | _D4J115<br>_Q4V4S9                              | LRDCYDAEAVHFHWGSPESKGSEHLLNGRRFDLEMHIVHR  |
| UniRef90               | _UPI000463F9D7<br>_UPI00037A0849                | LEDQFRL CQFHFHWGENNKWGAEHTVDHLLYPAELHYTGF YTLKQFHLH TGSEHTVDGVRSPMEAHLVHQ DGMRFELKQFHFHA PSENLIEGKSYPLEGHLVHA KNYDLKQMHWH SPSEHRLNGVQFPAELHLLHQ PPPAYRALQLHFHWGCPGQAGSEHSLDGGHRPMEMHVVHM KSFTLKQFHFH LDGEYSVLQFHFHWDVANNSGSEHTLDGHRYPMEMHLVTA LGDRYNFVQLHFRWGESVRGSEHLINGKQYPAEMHLVHY EGHLMELYQLHFHWGNSMSGSEHAIDGHRYPMEMHLVHY EGHLMWELYQLHFRWGESWRGSEHLINGKQYPAEMHLVHY LTDEYQLAMLKFHWAATEESGSEHMIDSQGHAIEVQLVHW LQNKYKSKEFHLHWGNSMSGSEHTLDGKQYAMEMHLVNL NNTTYEFAQLHFHWGGENKYGSEHLINGKQYPAEMHLVHY LPTQYQAVQLHFHWGGENKYGSEHLINGKQYPAEMHVVHF LPTQYQAVQLHHHWGNSSFSGSEHTLINGKQYAMEMHLVNL NNTTYEFAQLHFHWGNSMSGSEHTLINGKQYAMEMHVVH LRSKFKVGRISFHWGLCNASGSEHGLNGEKYPLEAHFVY DNDTFTLQQFHFHA PSENEIDGKQFPLEAHFVY LNGYYRIQRIDHHGREELNGSEHSLNGRRFPMELQMLAY KPMDLLQFHFHA SPSENTINGGRRFPMELQMLAY LRSRFKVGRITFHWGSSQSKGSEHLINGKKYAMEMHLVHK LRSRFKVGRITFHWGSSQSKGSEHLINGRRFPLEAHFVY LNGYYRIQRIDHIGREELNGSEHSLNGRRFPMELQMLAY KRPMDLLQFHFHA PSENTINGGRRFPMELQMLAY LRSRFKVGRITFHWGSSQSKGSEHLINGRRFPLEAHFVH LRSRFKVGRITFHWGSSQSKGSEHLINGRRFPLEAHFVH LRSRFKVGRITFHWGSSQSKGSEHLINGRRFPLEAHIVHR HRYQLTQFHFH HWGSPESKGSEHLINGRRFPLEMHIVHR HRYQLTQFHFH   |
| UniRef90_<br>UniRef90_ | _03111113                                       | LINGI I SALLEINI K WODDLIIII OSLII I VDOIN I I WL WII V V   |
| UniRef90_<br>UniRef90_ | _C3YR33<br>_B5DYL3                              |   |
| UniRef90               | _W8CBE3<br>_K9NT61                              | LINGMYEAILEVHFHWGSPLCKGSEHQI NQRRYDLEMHI VHL<br>DSGRYSFVQMHFH TPSEEMI QGRTFPLDAHLVHR  |
| UniRef90_<br>UniRef90_ | _U6PI84<br>_M3XJL0                              | LIGTYHTAGEHENGS SVADLEAGGG LKGRYLAEGLHFHWGSPNWRGSEHSIQDHRYDVEMHIVHR LNGMYEAIEVHFHWGSPLOKGSEHQINQRRYDLEMHIVHL DSGRYSFVQMHFH TPSEEMIQGRTFPLDAHLVHR LVGRYYLQQFHFHWDGNDRFGSEHTLDGLHYPLEVHFVHI LHGSYTGYHLHFHWSGSSSFGSEHTFNGNQFAAELHIVHV RRYELVQFHFH RPSEERIDGRQTDMVAHLVHK TRYELVQMHFH HPSEHLVDGRAYDMEAHLVHR LPGDFEVESLHFHWGDKNNRGAEHVINDIRYTMEMHIVHR   |
| UniRef90_<br>UniRef90  | _I0HMP7<br>V5SFX3                               | RRYELVQFHFH RPSEERIDGRQTDMVAHLVHK<br>TRYELVQMHFH HPSEHLVDGRAYDMFAHIVHR  |
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| UniRef90 G3NYN9 PKKGFSVQNAANDSEGIAILAVLAFFINANDNEEPWSELTÄYLUniRef90 C3YR33 PKGFSVQNAANDSEGIAILAVLGFFLEDDNDNPGLNPIVNNI  |        |
| Uniker90_B5DYL3  N S R Y A D L P E A L K Y K D G V A V L G V M F K I V Q F F P G L N K II F A Q L Uniker900_W60PE3   |        |
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| UniRef90_U6Pl84 RQDLNESTAQGLADGII AVVAVQFQLATKGEALFNLEKVTUniRef90_M3XJL0 KEGL TFDAAKDDFEGII AVLAFFI MVSPENNPAWALI GNV  | 1      |
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|---|--|
| UniRef90_D3PJZ7<br>UniRef90_E1G722<br>UniRef90_UPI0002A4C3B1<br>UniRef90_F6WI07                               | NEVGDAVKQVEVKFSMSDILPAKLDNYYRYLGSLTTPTCN KDIQSEGTKVDVKGLALEKLLPDLNTFFSYEGSLTTPRCN NKIIDPAQSQPIQEILLDDKLPKNRSFWRYTGSLTTPPCS KGVVHHEKETFLEPFVLKDLLPPSGSYYRYSGSLTTPPCS VTIPHKGDTTCL NLTLQEFIPEKDYYRYQGSLTTPPCS KPI  |
| UniRef90_C4SGU0<br>UniRef90_UPI000298B0C3<br>UniRef90_Q31FD6<br>UniRef90_A0A026WEW3                           | NTVSRFGKSGSLEAFSLRSLLPNTDKYFILYNGSLTAPPCS<br>PQTLKKQELHESVKLHPAKFFPADKKFYKYSGSLTTPPCS<br>WRITCPGSKVYIPPFPLEWMFPFDRNYYTYNGSFSOPPCS  |
| UniRef90_F1S1C3<br>UniRef90_G7NFD4<br>UniRef90_I3BW91<br>UniRef90_UPI00045725A1                               | TYI PRPNMNTMMNQSFSISDLLPKKHYFRYLGSLTTPDCD EELAEEGSETQVPGLDVSALLPDLSRYFRYEGSLTTPPCA DTQVDASK LPQNRDYYRFNGSLTTPPCT DSVSRYGKSAALKPFVPLNLLPNSTDYYRYNGSLTTPPCS PDLVEMDSNSTLPGGNMTLGHINTKTFFTYTGSLTTPGCA   |
| UniRef90_UPI0003C35813<br>UniRef90_F6UPK3<br>UniRef90_UPI0003166223<br>UniRef90_R7UH28<br>UniRef90_A0A026X185 | DSVSRYGKSAALKPFVPLNLLPNSTDYYRYNGSLTTPPCS PDLVEMDSNSTLPGGNMTLGHINTKTFFTYTGSLTTPGCA SEIPKPEMRTTMKESISLWDLLPQRHYFRYLGSLTTPGCQ PTITVKQDDVQNVIDIQRILPLDQSSFRYT GSLTTPPCT ERIPYKDEKVIVRLPLLSLLPLNLNNYFRYSGTFTSPPCT HWVGKNAVPLRSKLIPFLLLPKDHTTYYHYQGSLTTPGCQ  |
| UniRef90_D5CAD1<br>UniRef90_B0X4Z9<br>UniRef90_UPl00046D6B51<br>UniRef90_UPl0003061EF9                        | T S PILK A K V D D R Q P S L H L N D L L P K D R T Y F R Y E G S L I T P V C A P Y V S H K D D C L F L N F P L D P S W O V D D N G Y W T Y L G S L T T P P C N   |
| UniRef90_E9FX49<br>UniRef90_A2VD39<br>UniRef90_Q64444<br>UniRef90_A7S2D8                                      | LIGQNHDETIL LTNL VISFK DL LIPK QTTSFYRYSGSLTTPFCQRNITYSGNATVDI MMNSL LEGVNKTKYYRYRGSLTTPSCNPSI SKPHSTSTVRESSL QDMLPPMYTYFRYNGSLTTPNCDLEVKEDAFLLINI CTCTI HILFFSCVLECWTYPGSLTTPPLS  |
| UniRef90_UPI00031A116A<br>UniRef90_A0A059A2E1<br>UniRef90_UPI0002234B81<br>UniRef90_H3MBN4                    | DCSDDEESHIPLGI F DPRQI RRN I RKYYRYAGSLII I PPCS<br>QNI RHPGQSTTL AGLDI KDML PENHDYYTYLGSLIT PPCT<br>MPEKAEQNAKI STQMDL NAL LPADKTYWRFSGSLIT PPCS  |
| UniRef90_B0XGA9<br>UniRef90_H3CYI8<br>UniRef90_F1QTX6<br>UniRef90_D0Z0I1<br>UniRef90_B0DNC3                   | SILKKI GSSY I FVHPQY MNIL VIGSDILRPY FSYDGSL I I PPCY<br>RAVSRYGKSAQVSAFTLIGGIL LPNTEKY FTYSGSL I TPPCS<br>NSGNTYTDII MDOI I TMNSIL LEGIV NKTKYYRY QGSL I TTPPCN   |
| UniRef90_B6BNC3<br>UniRef90_UPI000444821D<br>UniRef90_Q27504<br>UniRef90_G4VIP7<br>UniRef90_K8B3E4            | NEIPEKGQTIEIQDLTPGALLPRDREYYQFNGSLTTPPCTPHEAGGKNALSISAKEVNTLLPTNKDYYRFSGSLTTPPCSNSVSRYGKSAAVSPFTLQGLLPNTEKYFIYNGSLTTPTCDGKLCNPETVTRVENVRLSEKLPNKRSFWRYEGSLTTPTCDGKLCNPETVTRVENVRLSEKLPNKRSFWRYEGSLTTPPCSEQVQLKGQSKRLHGLLDAVLPSTMQYITYQGSLPFPACYPEHTDASQPLTTAIDINKLLPQDKTYYRFSGPLTTPPCS   |
| UniRef90_A6DCH2<br>UniRef90_B1XY18<br>UniRef90_T1IM50<br>UniRef90_E9G343                                      | PI KVGEENKVMGNLNPMELLPKNKAYYRFNGSLIIPPCS PLEQNDETPAPV PLDLNMLLPEDRRYYTYMGSLITPPCS RYVKYNGQSTQIKSFSLRKLIPASTTYFFYWGSLITPTCD NDIKHKDECTPFHTLDPNKLLPQKGAYYTYLGSLITPPCN  |
| UniRef90_I3Y9R0<br>UniRef90_H2S427<br>UniRef90_UPI0004419F9C<br>UniRef90_J9NXZ2                               | A A L A S A E K  K N I T N A G T S V D M T S L D A L L E G V D R T K Y Y R Y L G S L T T P P C T  K G V V H H E K E T F L D P F V L R D L L P A S G S Y Y R Y A G S L T T P P C S  K N V S F R G V P A N I A P T F P I A S I L P G S R Y Y R Y S G S I T T P G C O   |
| UniRef90_UPI0002063ED7<br>UniRef90_F7CPH5<br>UniRef90_F6THJ0<br>UniRef90_J6UHL3<br>UniRef90_H2TVI0            | SKI RHVGQSTNLTSLNLKGMMPPNTNMFTYNGSLTTPPCT<br>ETLTRRNEATYLQDLSLEDLYPDTFGFLTYQGSMTLPPCY<br>PREAGK SAALDGDLHPEDLLPKARSYYRYTGSLTTPPCS  |
| UniRef90_UPI0003837241<br>UniRef90_H2M0K9<br>UniRef90_W5KAG6<br>UniRef90_UPI000464929E                        | QDLQYKGKTKI I PCFNPNTL L PDPRDYWVYEGSL TTPPCS DSVSRFGKSASVEAFTLRSL L PNNTDYYI YNGSL TAPPCS QGI ENRDTTVGI GI ESPFI TL CLCYDFWLYEDMLKQQKXT PVNGGGHYNSSFTFNVEDI L PADMNYYTYNGSL TTPPCS LPAKAGESHGLKEPVSAEQL LPAKRDYYRFSGSL TTPPCS   |
| UniRef90_V7W112<br>UniRef90_M5VTA8<br>UniRef90_S9WPT1<br>UniRef90_B8K8G9                                      | E H RVG G A S M K L A S T F P L A S L L P G T S G L Y R Y V G S L T M P C C R P F K G A D S P L D V P F N A S A L L S D T N D Y Y R F S G S L T T P P C S  |
| UniRef90_UPI000443C813<br>UniRef90_E9GSS6<br>UniRef90_T1KUV6<br>UniRef90_A7ST62                               | DNI VNPST TNQFSVPLSELLPDNTSSFFRYNGQLTTGNCN   |
| UniRef90_W5U8N7<br>UniRef90_C1C0I2<br>UniRef90_UPI00042AB4A2<br>UniRef90_UPI0003838E0E<br>UniRef90_A8GK76     | DLLSKDEHKVVKAAIDPKIFFPAESEYWTYEGSLTTPPLT SNIPKKGDLLDIMNVDSLLEGVDRTKYYRYLGSLTTPPLT SNIPKKGDLLDIMNVDSLLEGVDRTKYYRYLGSLTTPACN TTIKEEGSKAETMNLALEKFLPNIDTFFSYEGSLTTPRCQ SRISIPNTNTTTMKESRLQDMLPKEHYFRYLGSLTTPNCD NSVSRYGKSGSISPFTMQGLLPSTEKYFLYNGSLTTPPCS PTAVD Q O SVLTTPLDIKALLPQNFNFYRFSGSLTTPPCS   |
| UniRef90_K4G033<br>UniRef90_G2SD05<br>UniRef90_UPI0003EACADF<br>UniRef90_U6NSY7                               | PE QAGQSVALKQDLDLNKLLPKNKTYWRFSGSLTTPPCS   |
| UniRef90_UPI0002378314<br>UniRef90_A3KNU9<br>UniRef90_F1QLX7<br>UniRef90_B4JTY5<br>UniRef90_04/450            | A SI I Y K G Q R V E L A D L E P W R L L P Y T R D L V T Y E G S M T A P G C H P R V G E Q V T V D G L S L D A S T L L P A K K G Y Y S F A G S L T T P P C S N N V S R F G K S S A V E E F S L L A L L P N T E K Y F M Y N G S L T A P P C S L L V V L L G D T V R I T D D I S L Q Q L L T R Y Y R Y S G S L T T P P C D G E F N N S Y T P A A F L T L G S L L G N L D R G N F Y A Y K G S L T T P P C S |
| UniRef90_Q4V4S9<br>UniRef90_UPI000463F9D7<br>UniRef90_UPI00037A0849<br>UniRef90_C9PMF1<br>UniRef90_G3NYN9     | GEFNNSYTPAAFLITLGSLLGNLDRGNFYAYKGSLTTPPCSGNFNASYTVQERLTLGSLLGSLDRGNFYTYKGSLTTPPCSPKKKGKQELFSGVTFNPNVFFPESKKFFKYSGSLTTPPCSPKEKDKEATVEGVFVTAADLLPVKRGYYTYSGSLTTPPCSPKEKDKEATVEGVFVTAADLLPVKRGYYTYSGSLTTPPCTPQ KAGEKYTPDTAFDPSTLIPEKRDYYRFSGSLTTPPCSTNDNGTVAMNHNISIDDLIGNVDPTKFYRYMGSLTIPDCS  |
| UniRef90_G3NYN9<br>UniRef90_C3YR33<br>UniRef90_B5DYL3<br>UniRef90_W8CBE3<br>UniRef90 K9NT61                   | GGAAYAGNRSAFTFTFDSFLPADRSRFYRYSGSLTTPGCNPKIKKYKEEATILGSITLGQNLNTRDFFTYRGSLTTPGCPFFVNSSATTNOLFTLGSMLANINRDNFYTYQGSLTTPPCS   |
| UniRef90_U6Pl84<br>UniRef90_M3XJL0<br>UniRef90_I0HMP7<br>UniRef90_V5SFX3                                      | EDTHNLESKSGVPSYTPSLLPPDTSTFFRYYGSLTTPPCS STEGTKKPVRVSFTLNDLISHVDLTKYYRYMGSLTTPDCA PLEKNEEARAP GALEIDRLLPVDRGYYTYMGSLTTPPCT PANEGPEMSVE GAFDPLAVLPSGRAAFRYSGSLTTPPCS  |
| UniRef90_W8ADY5   | PEANDAVNLTVTFSLASLIANVDVDKFYTYKGSLTTPP <mark>C</mark> S  |

|  | 040   |
|--|---|
| UniRef90_G3N8Z9                                  | 210 220 230 240 KVVEWLVFSRPVYLSHSQLEAFYSLFTTEQQDHVEYLRNN  |
| UniRef90_E4X681                                  | FAIV VIWT NEKESII IKII ISSKTKEEMT OFAKDDHGADII VIKN   |
| UniRef90_D3PJZ7<br>UniRef90_E1G722               | EVVAWTVFKKKQMI SEEQLGEFRKLIGEGE PLVNN<br>EI VTWTI FTEPI VI TKFQLALFRSLH DRTGNVMKKN<br>KVVEWLI FSRPI YI SYKQLEAFYSLFTTEQQDHVEYLRSN   |
| UniRef90_UPI0002A4C3B1                           | KVVEWLIFSRPIYISYKQLEAFYSLFTTEQQDHVEYLRSN  |
| UniRef90_F6WI07<br>UniRef90_C4SGU0               | ELVIT WTLETKTI KLSRRQFQALYTSLYYHGNM SMVEN<br>FGVSWLVLDQPVSASAFQLTQFRSAVHHT  |
| UniRef90_UPI000298B0C3                           | ETVEWLVFKQTVALSETQLEVFCEVMTAGYVMLTDYLQNN  |
| UniRef90_Q31FD6<br>UniRef90_A0A026WEW3           | E GIVIY WMV F K Q PII Q A S V T Q L E K M H E Y L G S N   |
| UniRef90_F1S1C3                                  | E I V T WTL F T K T I K L S R R Q F Q A I Y T S L Y Y H G N M S M V E N E G V S W L V L D Q P V S A S A E Q I T Q F R S A V H H T N E T V E W L V F K Q T V A I S E T Q L E V F C E V M T A G Y V M L T D Y L Q N N E G V Y W M V F K Q P I Q A S V T Q L E K M H E Y L G S N E I V T W I I Q Q E P I A I S S S Q M E Q F R K I C S M D G P L L L N E K V V W T V F Q E P I Q L H E N Q L L T F S E K L Y Y D K E Q K V S M T D N Q G V I W T V F N Q T V M L S A K Q L H A L S D A L W G P G D S R L Q L N E G V R W I V M K Q P V T A S K E Q I E F C T V Q Q S G Y V M L I D Y L Q N N E A V T W H V F P E P L P I A F E H I E K F W N I Q D A N G D Q M T D N E K V V W T V F K E P I Q L H E D Q I L A F S Q K L Y Y D N E Q K L S M T E N E G V Q W L M K Q E I E M S K E Q I E A F H A L E P P N G V Q V L M K Q E I E M S K E Q I E A F H A L E P N G S V W W T V F K E D H I D I S L S Q R L R K L L H T T E H S S N A P M L N N E S V M W F V M T E K L T I S E V Q M D V F R H L E G S N G T L K F N E G L R W L V M K N T V T L S E K Q L E M F K Q A L E H S E C P C V I N N E S V T W I L F K R Y I E V S H Q L N I F R N L R K F P R G E E C P C V I N N E G V R W L V L K Q P L V A S E E Q I Q A L T K A V G H A Q L V I W T V F D T P V E V S E K Q M N K F R K L E N L E S L E G E H L V N N Q L V I W T V F D T P V E V S E K Q M N K F R K L E N L E G E H L V N N Q L V I W T V F D T P V E V S E K Q M N K F R K L E N L E G E H L V N N L E G V R W L V L K Q P L V A S E E Q I Q A L T K A V G H A Q L V I W T V F D T P V E V S E K Q M N K F R K L E N L E S L E G E H L V N N L E G V R W L V L K Q P L V A S E E Q I Q A L T K A V G H A Q L V I W T V F D T P V E V S E K Q M N K F R K L E N L E S L E G E H L V N N L E G V R W L V L K Q P L V A S E E Q I Q A L T K A V G H A Q L V I W T V F D T P V E V S E K Q M N K F R K L E N L E S L E G E H L V N N L E C T T T T T T T T T T T T T T T T T T |
| UniRef90_G7NFD4<br>UniRef90_I3BW91               | Q G V I WT V F N Q T V M L S A K Q L H A L S D A L W G P G D S R L Q L N  |
| UniRef90_UPI00045725A1                           | ELVE WLVFRDTVPISDGQLELFCTVQQSGYVMLIDYLQNN   |
| UniRef90_UPI0003C35813<br>UniRef90_F6UPK3        | EAVIWHVE PEPLOI A FEHI EKF WNI QDANGDQMT DN   |
| UniRef90_UPI0003166223                           | E GIV Q WILL MK Q E I E MS K E Q I E A F H A L F P P N  |
| UniRef90_R7UH28<br>UniRef90_A0A026X185           | PGVIWSVFEDHIDISLS QRLRKLLHTTEHSSNAPMLNN   |
| UniRef90_D5CAD1                                  | EGLRWLVMKNTVTLSEKQLEMFKQALEHS NGTERTN   |
| UniRef90_B0X4Z9                                  | ESVVWTVFPESLPISLGQVQDFMTIH DADNRTLVVN   |
| UniRef90_UPI00046D6B51<br>UniRef90_UPI0003061EF9 | E GV R WL V L K Q P L V A S E E Q L Q A L T K A V G H A N   |
| UniRef90_E9FX49                                  | QUVIWTVFDTPVEVSEKQMNKFRKL ENLEGEHLVNN   |
| UniRef90_A2VD39<br>UniRef90_Q64444               | QIVIWTVFDTPVEVSEKQMNKFRKL ENLEGEHLVNN<br>EAVIWTVFKEPIKVNNNLINLFSTTVFAKNASAPVLNVNN<br>ETVIWTVYKQPIKIHKNQFLEFSKNLYYDEDQKLN MKDN   |
| UniRef90_A7S2D8                                  | ELL VIN WIL V LIK N TILELIS HHQLKLFHGL QNAKGECLTHN  |
| UniRef90_UPI00031A116A<br>UniRef90_A0A059A2E1    | ENV VWNV LGKVRSI SKEQVEALKAPLPTDDKT   |
| UniRef90_UPI0002234B81                           | ENVLWEVLAEPVRLSSAQVWKLENSLFDHQNE MLHND  |
| UniRef90_H3MBN4<br>UniRef90_B0XGA9               | ETVTWLVHREPLLITNKQLKLFQSLRG KFGYMRDN  |
| UniRef90_H3CYI8                                  | ETVEWLVFRNPAALSEQLETFMTMQQAGYVMLMDYLQNN   |
| UniRef90_F1QTX6<br>UniRef90_D0Z0I1               | ETVIWTVYKQPIKIHKNQFLEFSKNLYYDEDQKLNMKDNEUVNWUVLKNTIEISHHQLKLFHGL QNAKGECITHNEGVQWYVLKQPVTVSHAQLEAFRKLYPMNNEGVQWYVLKQPVTVSHAQLEAFRKLYPMNNENVVWNVLGKVRSISKEQVEALKAPLPTDDKTNENVVWNVLGKVRSISKEQVEALKAPLPTDDKTNENVLWFVLAEPVLLILSAAQLAKFSHTMHHDDNEGVTWIVLKHPLTLSAAQLKLFQSLRGKFGYMRDNETVTWLVHREPLLITNKQLKLFQSLRGKFGYMRDNETVTWLVFRNPAAISEEQLETFMTMQQAGYVMLMDYLQNNEDVIWTVFKEPIKVNNLINRFCTKVVFAKTAKASDLNVNNNEGVRWYVMQEHQTSSKEQTEMLHAVFMKASDLNVNNNEGVRWYVMQEHQTSSKEQTEMLHAVFNOGNNEGVRWYVMQEHQTSSKEQTEMLHAV   |
| UniRef90_B6BNC3<br>UniRef90_UPI000444821D        | EGVRWLVLKNYTTISKSQVKEFIHLFHDHS N  |
| UniRef90_Q27504                                  | E VT WTI FT E PVTVT H D Q L E L F R Q V Q D L E K R P L K K N   |
| UniRef90_G4VIP7<br>UniRef90_K8B3E4               | ETATWILLNQPIVITETQLKSLRQLRL APFRGSGSMADN<br>EGIAWLVVKHPLTLSAAQLDKFKQLMHH  |
| UniRef90_A6DCH2                                  |   |
| UniRef90_B1XY18<br>UniRef90_T1IM50               | EGVLWMVLKQPAQLSPEQVAVFARLYP  MN   |
| UniRef90_E9G343                                  | ECVI WI VEVEPIEVS HEQLESFREMMSMKKGGCSQPLLNN   |
| UniRef90_I3Y9R0<br>UniRef90_H2S427               | EGVIWLVLKEPVTASAEQIGKFARVMGH PN EAVVVWTVEKDSIKVSKNIIDDESTTVVKNTSTNSPIMTNV   |
| UniRef90_UPI0004419F9C                           | E GIV L WMV L K Q P A Q L S P E Q V A V F A R L Y P  E V V V WTV F R E P G F L T N A Q M N A F R A T Y S T G E N E A A T E I A N N  E C V I WI V F V E P I E V S H E Q L E S F R E M M S M K K G G C S Q P L L N N  E G V I WL V L K E P V T A S A E Q I G K F A R V M G H  E A V V W T V F K D S I K V S K N L I D L F S T T V Y F N T S T N S P L M T N V  E I V E W L V F R M P V P I S Y R Q L E A F Y S I F T T E Q Q D H V E Y L R N N  |
| UniRef90_J9NXZ2<br>UniRef90_UPI0002063ED7        | FAIVIIVVIII   |
| UniRef90_F7CPH5                                  | ETVMWYI LTEKLSVSEQQLNVFKSV ETSNGTLSFN<br>QNVRWMI FANLATI STNQ LEKLQDTLLGHNGQPLTSN   |
| UniRef90_F6THJ0<br>UniRef90_J6UHL3               | ETVTWIVIDRPLNITSMQMHSLRLLSQNQPSQIFQSMSDN<br>ETVEWLLMTEPVEVASSDVDAFAKLYA   |
| UniRef90_H2TVI0                                  | FAIV VIWTIVIF Q F PILINII IH K TILLI Q Q F P T K T KILIS NIVI   |
| UniRef90_UPI0003837241<br>UniRef90_H2M0K9        | ENVTWILYRYPLTISQMQIEEFRRERSHVKGAEDGMLGDN<br>ESVQWVVFKHTVAISEAQLEVFMTMEQAGYVVLTDYLQNN  |
| UniRef90_W5KAG6                                  | CRLSWFYKYSIGSVSGNELAVFRSLLFTSAEEDQKSMVNN  |
| UniRef90_UPI000464929E<br>UniRef90_V7W112        | E GIV R WL V M K E PIV QIV S Q A QIL D A F K AIV M H H  P N   |
| UniRef90_M5VTA8                                  | ENVVWNI LGKVRTI SKDQLNALKAPLDSAC  |
| UniRef90_S9WPT1<br>UniRef90_B8K8G9               | EGVRWLVLKTPQTVSAKQAALFNKI MGNN  |
| UniRef90_UPI000443C813                           | QAVVWTIFQEPIKVHKDLLLRF STDNGIAPN  |
| UniRef90_E9GSS6<br>UniRef90_T1KUV6               | E A V N WI V M K D F I T V S N D Q I D R L R S L V D E H G D E M K T V  |
| UniRef90_A7S762<br>UniRef90_W5U8N7               | ENVITWVICOSSILILISEDQMNVFRNIR NSHGDIMAKN  |
| UniRef90_C1C0I2                                  | EVVÁWTVFESRŇQMSQAKLEQFRKLMA GNKPLVNN  |
| UniRef90_UPI00042AB4A2<br>UniRef90_UPI0003838E0E | ETV VWTV FKEPIKL HKDQFLQFSSKLYYDKDQKLN MKDN   |
| UniRef90_A8GK76                                  | E GVS WMV LDK PVS AS A E QI A QFR A VVQ HA  |
| UniRef90_K4G033<br>UniRef90_G2SD05               | E S V Q W V V F K H T V A I S E A Q L E V F M T M E Q A G Y V V L T D Y L Q N N C R L S W F Y K Y S L G S V S G N E L A V F R S L L F T S A E E D Q K S M V N N E L V T W Y V L K N P V E A S Q E Q L H S F E T I E M H E N E G V R W L V M K E P V Q V S Q A Q I D A F K A V M H H P N E N V V W N I L G K V R T I S K D Q L N A L K A P L D S A C K N N L A V L W T I S E D T V P I G R A Q V A Q F Q T L A Q A P G S H P A P L R E N M G N N Q A V V W T I F Q E P I K V H K D L L L R F S T D N G I A P N E D V T W T I F D T P F A I S E R Q L A K F R L L L I D D N G N R L R Q K E A V N W I V M K D F I T V S N D Q I D R L R S L V D E H G D E M K T V E N V T W V I F K D P V K V S K D L I D L F S N T V H I D T T A D P F I T N N E I V V W T V F K D P V K V S K D L I D L F S N T V H I D T T A D P F I T N N E V V A W T V F K E P I K L H K D Q F L Q F S S K L Y Y D K D Q K L N M K D N E T V W W V V F K E P I K L H K D Q F L Q F S S K L Y Y D K D Q K L N M K D N E T V E W L V F K N T V A I S D D V Q L E M F M T M Q Q V G Y V M L M D Y L Q N N E G V S W V V F R E H I V L N A S V V E G L Y N N K T D G K K L L N N E G V T W L V F R E H I V L N A S V V E G L Y H D L Y V N K T D G K K L L N N E G V T W L V F R E H I V L N A S V V E G L Y H D L Y V N K T D G K K L L N N E G V T W L V L Q Q P L T L S A A Q L A K F T H T M H H   |
| UniRef90_UPI0003EACADF                           | FNIVI IWNII IFGEII IREMSKEOAGAII IMAPII IH GSYRHN   |
| UniRef90_U6NSY7<br>UniRef90_UPI0002378314        | ETVTWIILNQPIHITKDHMAEWAKMVQTAQSDDPQFLAPNEGVQWMVLKEPVKLGAQQIKAFRQLYNANNENVEWIVFKNTVGISETQLEVFMTIQQAGYAMLTDYLQNNNENVEWIVFKNTVGISETQLEVFMTIQQAGYAMLTDYLQNNNENVEWIVFKNTVGISETQLEVFMTIQQAGYAMLTDYLQNNNEAVQWTVFKDPILISTDQVQLLHMNLHTFKGTQQVQHTYVPAVLWHVFAEVLPISHRELPKFWQLRDERGRPLLNTPVVQWHVFGEVLPISHQDLPKFWQLRDERGRPLLNTPVVQWHVFGEVLPISHQDLPKFWNLRDERGRPLLKNNEGVTWFVMKTPEEISRGEVEVFAKLHPHDEGVNWLVLKQYDKVSQSQVDAFSAVMKGNNEGVTWFVMKTPEEISRGEVEVFAKLHPHDEGVNWLVLKQYDKVSQSQVDAFSAVMKGNNESVVWTVFQDPINVHTSLVAGGYKHTYMVERFPAKTGLTDVELVAGGYKHTYMVERFPAKTGLTDVELVAGGYKHTYMVERFPAKTGLTDVELVAGGYKHTYMVERFPAKTGLTDVELVAGGYKHTYMVERFPAKTGLTDVELVAGGYKHTYMVERSSDGYRLVNNNEAVTWIVFSQPLPISFAAVSRFWNLRSSDGYRLVNNNQAVTWIVYPEVIPIPIPFQLQNFWFVR DDRGRKLLNNNEGVLWIVYPEVIPIPIPFQLQNFWFVR DDRGRKLLNNNEGVLWIVYFEEPISVNGATLDKFAMTVYS NSTTGEKMRNNEGVLWIVYFREPITASPEQIRAFAALFP   |
| UniRef90_A3KNU9                                  | ĔŇVĔŴĹŶĔĸŇŢŶĠĨĔĔŤŎĿĖŴĘMŤĹQQÂĠYAMĹŢŊŶĹQNŇ  |
| UniRef90_F1QLX7<br>UniRef90_B4JTY5               | E A V Q W T V F K D P I I I S T D Q V Q L L H M N L H T F K G T Q Q V Q H T Y V P A V L W H V F A E V L P I S H R F I P K F W O I R D R I G R P I I N T   |
| UniRef90_Q4V4S9                                  | PVVQWHVFGEVLPLSHQDLPKFWNLR DERGRPLLKN   |
| UniRef90_UPI000463F9D7<br>UniRef90_UPI00037A0849 | E GIVIY WMIVIF Q Q PIVIE A S A E QILIE K M N E IL I M G S N E GIVIT WEIVIMKT PEELIS R G EIVIEIVIF A KILI <mark>H</mark> P   |
| UniRef90_C9PMF1                                  | ĒĞVŅWLVLKQYDKVŠQŠQVDĀFSAVMKGNN  |
| UniRef90_G3NYN9<br>UniRef90_C3YR33               | ESIV VIWTIVIF Q D PII INIVI <mark>H</mark> T SIL VIA G Y K H T Y MVIE R F P A K T GIL T D VI<br>FII VIA WT VIF F D T II KII S R N OII N T II I R A T Y F F A G H F P F A M A N N  |
| UniRef90_B5DYL3                                  | EAVIT WIVESQPLPI SEAAVSREWNERSSD GYRLVNN  |
| UniRef90_W8CBE3<br>UniRef90_K9NT61               | QAVTWUVYPEVIPIPLFQLQNFWFVR  FGVRWNVITTPVQUSRAQUFAFQAUYP  MN   |
| UniRef90_U6PI84                                  | ENVINTILVQPNYVSEEQLHILRREDGSLLIDN   |
| UniRef90_M3XJL0<br>UniRef90_I0HMP7               | EAVVWTVFEEPIISVNGATLDKFAMTVYS NSTTGEKMRNN<br>EGVIWIVMROPVAISOFOIDIFARIVP  |
| UniRef90 V5SFX3                                  | E GIL A WIV FREPITAS PEQITRAFAAL FP   |
| UniRef90_W8ADY5                                  | E A   I   T W   V L   Y P D P   I   P   I   S P K Q   I   A R F R Q   L Q D T Q D G A   L V D N   |

| UniRef90 G3N8Z9 UniRef90 E4X681 UniRef90 E4X681 UniRef90 E4X681 UniRef90 E4X681 UniRef90 E10002A4C3B1 UniRef90 E10002A4C3B1 UniRef90 E100002A4C3B1 UniRef90 G4SCU UniRef90 G4SCU UniRef90 G4SCU UniRef90 G7NED4 UniRef90 F151C3 UniRef90 G7NED4 UniRef90 J9NED4 UniRef90 J9NED |  |  |
|--|--|--|
| Unike190   | UniRef90_G3N8Z9                                | 250<br>F R P L Q D L D S R K V F K S                         |
| Unike190   | UniRef90_E4X681                                | FRNVQALNGRDV SF  |
| Unike190   | UniRef90_E1G722                                | FRPVQKLYDREIQ  |
| Unike190   | UniRef90_UPI0002A4C3B1<br>UniRef90_F6WI07      | FRPVQSLDNRUVFKS<br>FRPVNKLGARHVFTS                           |
| Unike190   | UniRef90_C4SGU0                                | NRPVQPLNGRVI   |
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| UniRef90_H2M0K9  | UniRef90_H2TVI0<br>UniRef90_UPI0003837241      | FRPTQNLNNRQVFAS<br>FRPTQPLSDRVVRAAF                          |
| UniRef90   | UniRef90_H2M0K9                                | F R E Q Q Q F M G Q V F A S Y                                |
| UniRef90_M5VTA8 UniRef90_B8K8G9 UniRef90_UPl000443C813 UniRef90_E9GSS6 UniRef90_T1KUV6 UniRef90_A7S762 UniRef90_C1C012 UniRef90_UPl00042AB4A2 UniRef90_UPl00042AB4A2 UniRef90_UPl0003838E0E UniRef90_UPl0003838E0E UniRef90_UPl0003838E0E UniRef90_UPl0003838E0E UniRef90_UPl0003838E0E UniRef90_UPl0003838E0E UniRef90_UPl0003838E0E UniRef90_UPl00038ACADF UniRef90_UPl00038ACADF UniRef90_UPl00038ACADF UniRef90_UPl00038ACADF UniRef90_UPl00038ACADF UniRef90_UPl00038ACADF UniRef90_UPl00038ACADF UniRef90_UPl00038ACADF UniRef90_UPl00038ACADF UniRef90_UPl00037A0849 UniRef90_UPl00037A | UniRef90_UPI000464929E                         | FRPVQALNGRVVSTN  |
| UniRef90_S9WPT1 UniRef90_B8K8G9 UniRef90_UPl000443C813 UniRef90_E9GSS6 UniRef90_T1KUV6 UniRef90_A7S762 UniRef90_W5U8N7 UniRef90_UPl00042AB4A2 UniRef90_UPl00042AB4A2 UniRef90_UPl00042AB4A2 UniRef90_UPl00042AB4A2 UniRef90_UPl0003838E0E UniRef90_UPl0003838E0E UniRef90_UPl0003EACADF UniRef90_UPl0003EACADF UniRef90_UPl0003EACADF UniRef90_UPl0003EACADF UniRef90_UPl0003EACADF UniRef90_UPl0003EACADF UniRef90_UPl0003FANNU9 UniRef90_UPl00037A0849 UniRef90_UPl0037A0849 UniRef90_UPl0037A0849 UniRef90_UPl0037A084 |  |  |
| UniRef90_UPI000443C813 UniRef90_E9GSS6 UniRef90_T1KUV6 UniRef90_A7S762 UniRef90_W5U8N7 UniRef90_UP100042AB4A2 UniRef90_UP100042AB4A2 UniRef90_UP10003838E0E UniRef90_UP10003838E0E UniRef90_UP10003EACADF UniRef90_UP10003AKNU9 VR P T Q P L N G R V V T S VR R Q Q E Q F M G Q V F K S S Y N R P L Q A L N G R V V W A S N R P L Q A L N G R V V W A S N R P L Q A L N G R V V W A S N R P L Q A L N G R V V W A S N R P L Q A L N G R V V W A S VR P T Q P L H G R V V W A S N R P L Q P L N G R V V W A S N R P L Q P L N G R V V W K E S V R P T Q P L N G R V V W A S N R P V Q S L N K R T V Y UniRef90_B5DYL3 UniRef90_UP100037A0849 UniRef90_C3NYN9 H R T T Q A L N G R S V F A S UniRef90_C3NYN9 H R T T Q A L N G R S V F A S UniRef90_G3NYN9 H R T T Q A L N G R S V F A S UniRef90_C3NYN9 H R T T Q A L N G R S V F A S UniRef90_B5DYL3 UniRef90_W8CBE3 F R P V L V L N S R E V H R S F V R N I Q P R N N R P V Y UniRef90_W8CBE3 F R P V Q P L N G R S V Y UNIREf90_UP100037A0849 UniRef90_W8CBE3 F R P V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R D V Q P L N G R S V Y V R P T Q L N G R S V Y V R P T Q L N G R V V R P L G R V V Y V R D V Q P L N G R N V Y V R D V Q P L N G R N V Y V R D V Q P L N G R N V Y V R D V Q P L N G R N V Y V R D V Q P L N G R N V Y V R P L Q A L N G R V V R P L N R R V V I N S R E V Y V R P L Q A L N G R V V R P L N R R V V I N S R E V Y V R P L Q A L N G R V V R P L N R R V V I N S R E V Y V R P L Q A L N G R V V R P L N R R V V I N S R E V Y V R P L Q A L N G R  | UniRef90_S9WPT1                                | V L P Q Q P L G G R R V S A S                                |
| UniRef90_T1KUV6 UniRef90_A7S762 UniRef90_W5U8N7 UniRef90_C1C0I2 UniRef90_UP100042AB4A2 UniRef90_UP10003838E0E UniRef90_UP10003838E0E UniRef90_C2SD05 UniRef90_UP10003EACADF UniRef90_UP10003EACADF UniRef90_UP10003EACADF UniRef90_UP10003EACADF UniRef90_UP10002378314 UniRef90_A3KNU9 UniRef90_A3KNU9 UniRef90_B4JTY5 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP1000463F9D7 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_UP1000463F9D7 UniRef90_UP100037A0849 UNIREf90_UP10037A0849 UNIREf90_UP10037A0849 UNIREf90_UP10037A0849 UNIREf90_UP1 | UniRef90_UPI000443C813                         | YRPLQPLNGRNITAS  |
| UniRef90_A7S762 UniRef90_W5U8N7 UniRef90_UP100042AB4A2 UniRef90_UP10003838E0E UniRef90_UP10003838E0E UniRef90_UP10003838E0E UniRef90_A8GK76 UniRef90_UP10003EACADF UniRef90_UP10003EACADF UniRef90_UP10003EACADF UniRef90_UP1000378314 UniRef90_UP10002378314 UniRef90_B4JTY5 UniRef90_UP100037A0849 UniRef90_UP1000463FD77 UniRef90_UP100037A0849 UNIRE |  | VRDVQPLKGRTIYQS  |
| UniRef90_UP100042AB4A2 UniRef90_UP10003838E0E UniRef90_A8GK76 UniRef90_G2SD05 UniRef90_UP10003EACADF UniRef90_UP10003EACADF UniRef90_UP10003EACADF UniRef90_UP10003EACADF UniRef90_UP10002378314 UniRef90_UP10002378314 UniRef90_UP10002378314 UniRef90_UP10003EACADF UniRef90_UP1000378314 UniRef90_UP10002378314 UniRef90_UP10003740849 UniRef90_UP1000463F9D7 UniRef90_UP1000463F9D7 UniRef90_UP100037A0849 UNIREf90_UP100 | UniRef90_A7S762                                | SRPVCPINGRTIRSS  |
| UniRef90_UPI0003838E0E         YRNQQEQFMGQVFSSY           UniRef90_A8GK76         NRPLQALNGRVI           UniRef90_K4G033         FRPTMARNGRAV           UniRef90_G2SD05         NRPVQSLHGRV           UniRef90_UPI0003EACADF         NRPVQSLHGRV           UniRef90_UPI0002378314         NRPVQEFNSRLVRTNI           UniRef90_A3KNU9         YRPQQSLNGRTV           UniRef90_B4JTY5         YRPQQSLNKRTV           UniRef90_UPI000463F9D7         YRPQQSLNKRTV           UniRef90_UP1000463F9D7         ARPVQNLNARS           UniRef90_C9PMF1         ARPVQPINARS           UniRef90_G3NYN9         ARPVQPINARS           UniRef90_G3NYN9         ARPVQPINARS           UniRef90_W8CBE3         FRPVQPRNNRPV           UniRef90_W8CBE3         FRPVQPLNGRSV           UniRef90_M3XJL0         FRPVQPLNGRSV           UniRef90_I0HMP7         ARPVQSAAGRL           UniRef90_V5SFX3         ARPVQSAAGRL   | UniRef90_C1C0I2                                | YRSTQPLNGRKV   |
| UniRef90_A8GK76 UniRef90_K4G033 UniRef90_G2SD05 UniRef90_UPl0003EACADF UniRef90_UPl0003EACADF UniRef90_UPl0002378314 UniRef90_A3KNU9 UniRef90_B4JTY5 UniRef90_B4JTY5 UniRef90_UPl000463F9D7 UniRef90_UPl00037A0849 UniRef90_UPl00037A0849 UniRef90_C3NYN9 UniRef90_C3NYN9 UniRef90_C3NYN9 UniRef90_C3NYN9 UniRef90_C3NYN9 UniRef90_C3NYN9 UniRef90_C3NYN9 UniRef90_UPl000463F9D7 A R P V Q N L N A R Q V F S S Y V Y R P Q Q S L N K R T V Y V Y R P Q Q S L N K R T V Y Y Y R P Q Q S L N K R T V Y Y Y Y R P Q Q S L N K R T V Y Y Y Y Y R P Q Q S L N K R T V Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y   |  | Y R N Q Q E Q F M G Q V F S S Y                              |
| UniRef90_G2SD05 UniRef90_UPI0003EACADF UniRef90_UPI0003EACADF UniRef90_UPI0002378314 UniRef90_UPI0002378314 UniRef90_A3KNU9 UniRef90_B4JTY5 UniRef90_Q4V4S9 UniRef90_UPI000463F9D7 UniRef90_UPI00037A0849 UniRef90_UPI00037A0849 UniRef90_UPI00037A0849 UniRef90_UPI00037A0849 UniRef90_C3YR33 UniRef90_C3YR33 UniRef90_G3NYN9 UniRef90_G3NYN9 UniRef90_G3NYN9 UniRef90_B5DYL3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_UPI000AG9F9D7 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_W8CBE3 FR P V L V L N S R E V H R S F V L V L N S R E V H R S F V L V L N S R E V H R S F V L V L N S R E V H R S F V L V L N S R E V H R S F V L V L N S R E V H R S F V L V L N S R E V L L L K S V L L L L K S V L L L L K S V L L L K S V L L L K S V L L L K S V L L L L K S V L L L K S V L L L L K S V L L L L K S V L L L L K S V L L L L K S V L L L L K S V L L L L K S V L L L L K S V L L L K S V L L L L K S   | UniRef90_A8GK76                                | NRPLQALNGRVI   |
| UniRef90_UP10002378314 UniRef90_UP10002378314 UniRef90_A3KNU9 UniRef90_F1QLX7 UniRef90_B4JTY5 UniRef90_UP1000463F9D7 UniRef90_UP1000463F9D7 UniRef90_UP100037A0849 UniRef90_UP100037A0849 UniRef90_G3NYN9 UniRef90_G3NYN9 UniRef90_G3NYN9 UniRef90_G3NYN9 UniRef90_G3NYN9 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_UP10004F4 UNIREf90_UP1004F4 UNIREF90_UP10004F4 UNIREF90_UP1004F4  | UniRef90_G2SD05                                | <u>N</u> R P <u>V</u> Q S L <u>H</u> G R <u>V</u> V          |
| UniRef90_UPI0002378314 UniRef90_A3KNU9 V R E Q Q Q Q F M G Q V F S S Y UniRef90_B4JTY5 UniRef90_Q4V4S9 UniRef90_UPI00037A0849 UniRef90_UPI00037A0849 UniRef90_C3YR33 UniRef90_C3YR33 UniRef90_C3YR33 UniRef90_C3YR33 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_UPI00037A0849 UniRef90_UPI00037A0849 UniRef90_W8CBE3 F R P V Q P L N A R V I R E S UN R P V Q P L N A R V I R E S UN R P V Q P L N A R V I R E S UN R P V Q P L N A R V I R E S UN R P V Q P L N A R V I R E S UN R P V Q P L N A R V I R E S UN R P V Q P L N A R V I R E S UN R P V Q P L N A R V I R E S UN R P V Q P L N A R E V Y UN R K T Q P M N G R T L Y L N C R E V Y UN R K T Q P M N G R T L Y L N C R E V Y UN R K T Q P M N G R T L Y L N C R E V Y UN R K T Q P M N G R T L Y L N C R E V Y UN R K T Q P M N G R T L Y L N C R E V Y UN R K T Q P M N G R T L Y L N C R E V Y UN R K T Q P M N G R T L I K Q S UN R F P V Q S L N S R I V I A UN R K T Q P M N G R T L I K Q S UN R F P V Q S A A G R L I K Q S UN R P V Q P M N E R V L I E S  |  | RRAVQEFNSRLVRTNI   |
| UniRef90_F1QLX7  | UniRef90_UPI0002378314                         | A R P L Q P L N G R V V K E S                                |
| UniRef90_UP1000463F9D7 UniRef90_UP100037A0849 UniRef90_C9PMF1 UniRef90_G3NYN9 UniRef90_G3NYN9 UniRef90_B5DYL3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_UP100A7A0849 UniRef90_UP10A A R P V Q P L N G R S V F A S F R P V Q P L N G R S V F A S F R P V Q P L N G R S V Y R N I Q P R N N R P V Y Y UNIRef90_UP10A A R P V Q P L N G R S V Y L N G R S V Y R N I Q P M N G R T L Y L N G R S V Y R N I Q P M N G R T L Y L N G R S V Y R N I Q P M N G R T L Y L N G R S V Y R N I Q P M N G R T L Y L N G R S V Y R N I Q P M N G R T L Y L N G R S V Y R N I Q P M N G R T L Y L N G R S V Y R N I Q P M N G R T L Y L N G R S V Y R N I Q P M N G R T L Y L N G R S V Y R N I Q P M N G R T L I K Q S UNIRef90_U0HMP7 A R P V Q S A A G R L I K Q S UNIRef90_V5SFX3 A R P V Q P M N G R T L I K Q S UNIRef90_V5SFX3  | UniRef90_F1QLX7                                | Y R P Q Q S L N K R T V Y                                    |
| UniRef90_UPI000463F9D7 UniRef90_UPI00037A0849 UniRef90_C9PMF1 UniRef90_G3NYN9 UniRef90_C3YR33 UniRef90_B5DYL3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_U6PI84 UN A R S L L K S UN A R V L B G R V L I B S   | UniRef90_Q4V4S9                                | F R P L Q S Q E N R L I F                                    |
| UniRef90_C9PMF1 UniRef90_G3NYN9 UniRef90_C3YR33 UniRef90_B5DYL3 UniRef90_W8CBE3 UniRef90_W8CBE3 UniRef90_U6Pl84 UniRef90_U6Pl  | UniRef90_UPI000463F9D7                         | ARPVQNLNARSLLKS  |
| UniRef90_C3YR33  | UniRef90_C9PMF1                                | NRPVQPINARVI   |
| UniRef90_B5DYL3  |  | F R P V L V L N S R E V H R S F                              |
| UniRef90_K9NT61  | UniRef90_B5DYL3                                | Y R N I Q P R N N R P V Y                                    |
| UniRef90_M3XJL0  | UniRef90_K9NT61                                | ARPVQPLNGRSV   |
| UniRef90_I0HMP7  |  |  |
|  | UniRef90_I0HMP7                                | ARPVQSAAGRLI <u>K</u> QS                                     |
|  | UniRef90_V5SFX3<br>UniRef90_W8ADY5             |  |

| UniRef90_T1G2I2<br>UniRef90_K9RLW0<br>UniRef90_H5V5N0<br>UniRef90_E4SRT0   | 1 10 20 30 40 WTYEGISGPQYWSLVNNCAKGKRQSPINIIDPRELLYDPN NWGYIGKEGPENWGNLSSCQLGKTQSPLNLESA VDAN HWSYEGHSSPEHWGELSECQAGKNQSPVDISHP LEAH QWGYTGITGPEHWGDLSKSKNGKEQSPINIITGAE   |
|--|--|
| UniRef90_Q7LZP1 UniRef90_U6HBY0 UniRef90_B0WFA2 UniRef90_F0V1B0 UniRef90_UPl0001924B51 UniRef90_UPl0002B444A4 UniRef90_Q2W9U0 UniRef90_UPl0001FE6E02               | GTRQSPIN QEAKFDSN DLTTCKHGKRQSPIDIVTDALIFDLS STGGMQSPIELTSLTARPLEN WGYEGQQGPAHWGKVAKCSTGQNQSPINIAS TTKAK YWDFSKNHGPKQWLKTWSFTT RQSPIDIVLQNVQYDSN FTYEGSHGPQKWGSLSPCSNGKLQSPVDISKDHSVFGKE HWAYEGHGGPKEWGMLSPCSMGREQSPVDLTRPLAAILGD WSYSHGGGPDQWSRLSRCGHGERQAPVSITTSKAAYNPA  |
| UniRef90_B5FFJ2<br>UniRef90_A0A059KL89<br>UniRef90_H5WIY7<br>UniRef90_G2E1B1<br>UniRef90_U4UA19<br>UniRef90_J3HJ03<br>UniRef90_H2U7M3                              | WGYTGDTGPNHWHGV CQTGVNQSPIDII TNAIIESE HWTYEGKDGPAHWGELSPCSKGRNQSPLNL TGAIKGQ HWSYQGEGGPNDWGNLKPCAVGKRQSPIDIRGGVKV EWGYVGAEGPVHWGELDPCASGKNQSPIDLS GFIEAD HWSYDHE EHWAPL WSYEA PAEWGNLSTCKSGVNQSPVDIR QAVNGQ PSFWGLVHSCAIGKRQSPINIETSHMIFDPY   |
| UniRef90_V3ZJX8<br>UniRef90_UPI0003772653<br>UniRef90_F4W4B9<br>UniRef90_A0A026WAC8<br>UniRef90_I2FLL8<br>UniRef90_A0A034WLW9<br>UniRef90_I3LA69                   | WPGKYSYCSGNRQSPVDIDDDRNLLYTPNHWSYAGESGPEYWAKLNPCANGRAQSPINLVGSFEHGWPKKYKLCAGKRQSPVAICTSKAIVKPAPQWSLCTKGRRQSPINIEPDKLLFDRHYNYGAANGPNNWGMLSTCGNGTKQTPIDIVRASATRQTYFDYEHQSKWYDDFRQCSFNRQSPIELNSNEAVISPSWGYGQNDAPXSDERSHSYFSGERQPPIRIQPSCVLTXPS  |
| UniRef90_G3NY17 UniRef90_C1BPC8 UniRef90_B0WFA0 UniRef90_D7TJ76 UniRef90_D5C531 UniRef90_UPI00036E1EBE UniRef90_D3FRE5 UniRef90 UPI0003502E25                      | S T WP T I A T I C N G S R Q S P I N I V S G S A Q I D P N L K T C R T G I S Q S P I D I K E R D T M A K T G F S Y R D E D G P S N W G A L N S N C N G L Y Q S P I D L V T N R T L V V R Q F S Y A G Q M G P A N W G K L H P C V V G K S Q S P V D I I T N K T E L N P N W G Y E D F N G P D K W A E L D P C S E G M S Q S P V D I D P M T V I P Q A H W T Y E G A E G P A H W A D L A K C E A G H E Q S P V D L T H A V K A E W S Y E G E S G P E H W G H L H A C V D G S E Q S P I N I D L A E M E A N Q Q H W C Y D S C Q G P D H W G G D C Q K S H Q S P I D I T N K T R L D H S |
| UniRef90_M4ZKE1<br>UniRef90_G7YT97<br>UniRef90_C1C0P8<br>UniRef90_C5YFV4<br>UniRef90_E6ZFK5<br>UniRef90_H0YBE2   | H WS Y E G E T G P A K WG D L D A C G V G T Q Q S P V D I E H P T R A Q L P D P E T WG T I WP L C Q G H Q Q S P I D I Q T E R L L F D H T Q G E P N T E Y WE S L K I C R E G M K Q S P I D I K E S E T E A K T G F G Y I G S M G P A H WG S L S P C A R G T H Q S P I D I S T A E A V L N P G G P D E WA L A Y P E C R E R N Q S P I D M D R F VD A K  |
| UniRef90_A6Q1X3<br>UniRef90_UPI00047CBCE3<br>UniRef90_H9KAK5<br>UniRef90_UPI00034F40EB<br>UniRef90_E3ECH2<br>UniRef90_G7YBG2<br>UniRef90_W5JJ58                    | H WG Y A G E E G P A A WA S L S P C G E G K G Q S P I N I A K T N W K V D Y K H WG Y Q G D N A P E N WG N L Q T C A S G K T Q S P I D I F D S K N N K Q D Q R R WA V L H P A C G G R Q Q S P I N I S A R Q A I P I P A H WS Y E G D E G P E H WG E L E A C G N G Q E Q S P I N I E H S H L E A S H T W N L S F P S C S G H Y Q S P V D L R S R N A V Y N S Q W H Y P S P N E P E A WG G Q C D S G R R Q S P I A L S R A A A V R G E F  |
| UniRef90_A0A059DGG9 UniRef90_N6TPD1 UniRef90_Q13D16 UniRef90_C6DIJ8 UniRef90_X2GV63 UniRef90_W4T211 UniRef90_W5FU75 UniRef90_C3KI41                                | SKKGPRHWGELEACKKGEMQSPIDLSSRRVKVIPK YGYDNHNGPSLWKNLFEAAKGHKQSPINLLTPCALAVPS HWGYEGESGPAKWGELDSCTIGVQQSPIDI GATVSAN NWGYEGNGDPAHWGKLSPCETGKNQSPINIRQALNAQHDP HWGYEGQEKPENWGKLSPCENGKNQSPINIDHVLKTQHDPN FNYEGEHGPDRWGEIHACKNGTMQSPIDLLNERVVVVSH FGYSGRTGPKHWGSLSPCAKGIYQSPINIVRDCVVRDPR WCYEDEYEPSHWHLLHSECGGKSQSPINIETRETVSDEH  |
| UniRef90_R1DB40<br>UniRef90_UPl000401D098<br>UniRef90_B9S0D9<br>UniRef90_A0A059DF21<br>UniRef90_UPl0003B631D3<br>UniRef90_H9JEU5<br>UniRef90_UPl0002B48330         | WGYRGYNGPENWALLSPAATGKEQCPVDILPSTCVPCPAHWSYEGAHGPDHWADLDTCGFGDQQSPVAIDETIEAELPLFDYGSEKGPEKWGELASCKNGTLQSPIDMSNQRVKIIPKFSYGSERGPENWGEWRACSEGRMQSPIDLARENVEVIPHWGYDGPEGPTAWAKMAPCGSGHRQSPIDLRDGLPVQSPIDIRDGLPV   |
| UniRef90_B4LVZ4 UniRef90_U5GK55 UniRef90_H2U5X0 UniRef90_C1BPN9 UniRef90_C1BPN9 UniRef90_Q89VB0 UniRef90_Q89VB0 UniRef90_F0M025                                    | HFNYDQH GKDWQVNGGKQQSPISLIKDKAVLSPK FDYNSERGPAHWGRIHPCSNGSMQSPIDLLNERVDLVSY HWSLESY PIHWAAQFPSCGGLRQSPINIVTSKVHMNNA CNSGTKQSPIDINELAEPGPF HWSYSGEGGPENWAKLTPACDGRNQTPINL TGFIEAA HWSYEGAGAPAKWGDLDACAVGLQQSPIDIEATIKSQLPT WGYEGEHGPAHWGNVSSCAAGVNQSPIDIK QTVSAK  |
| UniRef90_UPI000454324A<br>UniRef90_UPI000454324A<br>UniRef90_M4CRV0<br>UniRef90_Q7VHP3<br>UniRef90_W5KFG4<br>UniRef90_I3S0Z1<br>UniRef90_V8CD88<br>UniRef90_G6D0D2 | WCYDLPCGPKTWPRKH CSGRRQSPVALWADRSVPASH FGYGGRNGPKQWGHLNPCSLGKLQSPIDIQRTQTFYNST HWGYGLDDGAEKWASLSPCKTGKRQSPINITRSHLKPTEN WGYEEG AEWGLLFPEANGDNQSPINLNSREARYDPG FDYDSKLGPSHWGKIKKCKDGKMQSPIDMSSHRVKVVPK WSYKGTNAPAKWGDLSPCKKGVQSPIDIKMENVFQANT WSYDYET KWPGV   |
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| Junkerson   Daskess   Dask   | UniRef90_C1BPC8<br>UniRef90_B0WFA0         | LKTDYLFQQFHYHLG SEHTFFGKRYAAFAHFIVFF  |
| Junkerson   Daskess   Dask   | UniRef90_D7TJ76                            | KNYSLKQMHWH SPSEHRIDGÜQYPAEÜHLVHR   |
| Junkerson   Daskess   Dask   |  | EGEKYDIL IN QIL IN FIN SYSEN I IL IAIL IGAR FD MEMHL VINLI<br>DGKSYVI ROFN FN TPSFNAI DGKKAPMFAHFIVIN   |
| Interest   | UniRef90_D3FRE5                            | TPSEHQENGEHYDMELHLVHQ   |
| JniRef90_G7YBG2  | UniRef90_UPI0003502E25                     | TTYKI I OVHEH  RPSEHOLGGKN V PMEA HEIVILD   |
| JniRef90_G7YBG2  | UniRef90_G7YT97                            | LSYYYQLFSARIKFGSASSKGSDHRI DGRSSPGELQIFAY   |
| JniRef90_G7YBG2  | UniRef90_C1C0P8                            | NNDVYQFAQLRFHWGSDDKYGSEHLINGHQSPIEVHLVHF  |
| JniRef90_G7YBG2  | UniRef90 E6ZFK5                            | LPGRFKAEKVEFHWGPSNGSGSEHSII NSRRY PIVIELIH MIVIHA   |
| JniRef90_G7YBG2  | UniRef90_H0YBE2                            | FSDSYRLFQFHFHWGSTNEHGSEHTVDGVKYSAELHVAHW  |
| JniRef90_G7YBG2  |  | K P F MIL IM Q F H F H I P S E N K II   A G K Q F P M E A H F IV   H K  G D K A Y D IL IK Q F H F H T P S F H T II D G K N II P M F M H I V I H O   |
| JniRef90_G7YBG2  | UniRef90_H9KAK5                            | KTYKL VQFHAH EPAEHTI NĞVHYPLEÜHEVHQ   |
| JniRef90_G7YBG2  | UniRef90_UPI00034F40EB                     | TKETI KOEHEH HPSEHOI DGKNAEMEI HEIVI O  |
| Tilkef90   | UniRef90_G7YBG2                            | DGDQYEII MQMHFHWGSTDGRGSEHLLEGRRFPMETHI VISY  |
| JniRef90_N6TPD1  | UniRef90_W5JJ58                            |   |
| JAIREF90_C6DJJ8  | UniRef90_N6TPD1                            | POEIVIY NEILINIVIR ERWGPDNHEGSEHMIVIDTKRYAIVIEMOIVIA EM   |
| JniRef90_C3Kl41  | UniRef90_Q13D16                            | RPSEHEI DGRNFPMEVHFVHR  |
| JniRef90_C3Kl41  | UniRef90_C6DIJ8<br>UniRef90_X2GV63         | DEQLETING CHECK OF THE TENER OF THE CONTROL OF THE |
| JniRef90_C3Kl41  | UniRef90_V4T211                            | TKYVLQQCHWH SPSEHTIDGKRFACEAHMVHE   |
| JniRef90   | UniRef90 C3KI41                            | IGYVYSTIOEHEHWGSENSDGSEHKVDSKRYPMEMHIV N  |
| JniRef90   | UniRef90_R1DB40                            | TTFEAAQFHFH TASETTI RGMQYPLEMHVVHV  |
| Inire   Inir   | UniRef90_UPI000401D098<br>UniRef90_B9S0D9  | EQYKILVQFHFH HPSEHLIDDKRFRMEAHFIVHR<br>TGYFIIDQCHWH SPSEHTIINGRRYDMFITHMIVHF  |
| Jinkef90   | UniRef90_A0A059DF21                        | REYFLQQCHWH HPSEHAIIDGKRYQLELHMVHS  |
|  | UniRef90_UPI0003B631D3                     | NGHRYDLVQFHFH KPSEERJINGRNFDMVIHLVHK  |
| Jirikef90  | UniRef90_UPI0002B48330                     | LKNRYAFREMHFHWGEKCCHGCEHTIDGNSYSAEMHIVHW  |
| P G Q Y E F S H F L F H WG G M G R P G S E H T L D G E R F P M E M H V H E J J I J J J J J J J J J J J J J J J J   | UniRef90_B4LVZ4                            | LKSLYKAVQLHFHWGSLENKGSEHTINYQRYDGELHILLHQ   |
| JniRef90   | UniRef90_H2U5X0                            | LPGQYRAAQFHFHWGGMGRPGSEHTIIDGERFPMEMHIVHII  |
|  | UniRef90_C1BPN9                            | R G Y Q Y E F S H F L F H W G G D N T V G S E H L L D G A A P L E V Q P V H F   |
| JniRef90_F0M025 JniRef90_UPl000454324A JniRef90_UPl000454324A JniRef90_WSKFG4 JniRef90_WSKFG4 JniRef90_WSKFG4 JniRef90_V8CD88 JNIREF90_V8CM8 JNIREF90_V8CM8 JNIREF90_V8CM8 JNIREF90_V8CM8 JNIREF90_V8CM8 JNIRE | UniRef90_K1Y9U3<br>UniRef90_Q89VB0         | KYKLLQVHFH RPSEHMII GGKNFPMEAHFIVHR   |
| Driller   Drillou   Dril   | UniRef90_F0M025                            | KTFTLQQFHFH TPSENLINTHQYPMEAHFVNA   |
| JniRef90   | UniRef90_UPI000454324A<br>UniRef90_M4CR\/0 | NKNYTI I QMHWH TPSFHHI HGVOYAAFI HMVHO  |
| JniRef90   | UniRef90_Q7VHP3                            | TYYSL VQCHFH SPSETQLEGKNFPMEMHIVHQ  |
| D  | UniRef90_W5KFG4                            | S D H E Y E L H E V R F H W G K E N Q R G S E H T V N F K A F P M E L H L I H W T E F E I H O C H W H A  P S E H T I N G P P V D I E I H M V I E  |
| L R G N Y S F V Q F H L H W L  | UniRef90_V8CD88                            | DKTQYDLVQLHFH TPAEHKVAGKSFQMEAHLVH  |
| D   D   D   D   D   D   D   D   D   D  | UniRef90_G6D0D2                            | LRGNYSFVQFHLHWL SEHALDGMKYPMELHMVHM   |
| JniRef90_K4DAC0  | UniRef90_UPI000360A2E1<br>UniRef90_M0Z842  | D G V K Y K L D N I H WH S P S E H T II N G E R F A V E Q H M V H F   |
| NILKE190   | UniRef90_K4DAC0                            | TKYQLNQAHWH SPSEHTINGRREDLEVHLVHE   |
| JniRef90_C1LFP9  | Uniker90_F2B9H8<br>UniRef90_K1QWG5         | KITILK QFHFHVI PSENQLK GRIFPMEAHFVH<br>EKELYVEDQLHFHFGNDLEHGSEHSMDGKFFPLFLHMVHY   |
| JniRef90_UP10002B47E66   | UniRef90_C1LFP9                            | SSYPYRIDFMQIKFGSASTQGSEHTIDGKAFPGELQIYAF  |
| Juirikef90_UP10003EAC6D0  M P D W Y K A V N F H L H W G W E A G P G S E H T I D G E Q F P M E  Juirikef90_K9QTD3  Juirikef90_M1AHU3  Juirikef90_A5EYZ0  Juirikef90_C5LCR7  Juirikef90_C5LCR7  Juirikef90_UP1000273A560  Juirikef90_D6DMU7  Juirikef90_D6DMU7  Juirikef90_D3A3G5  M P D W Y K A V N F H L H W G W E A G P G S E H T I D G E Q F P M E  H P S E H T I D G N R Y A A E L H L V H F  T P S E N L L K G K Q F P L E A H F V H  T P S E N L L K G K Q F P L E A H F V H  Juirikef90_D6DMU7  D K Q R W T L Q C F H F H W G D P T A N G S E H L L H G M S Y P M E M H L V H K  Juirikef90_D3A3G5   | UniRef90_UPI0002B47E66                     | LKYNYAFREMHFHWGEKCNLGCEHTFNGKRFAAELHVVHW  |
| JniRef90_K9QTD3  | UniRef90_UPI0003EAC6D0                     | MPDWYKAVNFHUHWGWEAGPGSEHTIIDGEQFPME_  |
| T  | UniRef90_K9QTD3                            | K G E L F N L L Q F H F H  H P S E H Q I T G Q P F D L E I H L V H R  |
| JniRef90_C5LCR7  ESDIFVLDQFHAHWGLTDEAGSEHLLHGMSYPMEMHFVHH  JniRef90_UP1000273A560  LPHVYRALQLHFHWGDPTANGSEHTLDGQRQPMEMHVVHM  JniRef90_D6DMU7  DKQRWTLQQFHFHA  PSENTVHGKKYAMEMHLVHK  JniRef90_D3A3G5  KTYTLKQFHFH  TPSEHTFKGKHFPMEAHFVHQ  | UniRef90_M1AHU3<br>UniRef90_A5EYZ0         | KTFQLKQFHFH TPSENLLKGKQFPLEAHFIVH   |
| JniRef90_D6DMU7 DKQRWTLQQFHFHA PSENTVHGKKYAMEMHVVHM  JniRef90_D3A3G5 KTYTLKQFHFH TPSEHTFKGKHFPMEAHFVHQ   | UniRef90_C5LCR7                            | ESDIFVLDQFHAHWGLTDEAGSEHLLHGMSYPMEMHFVHH  |
| JniRef90_D3A3G5 KTYTLKQFHFH TPSEHTFKGKHFPMEAHFIVHQ   | UniRef90_UPI000273A560<br>UniRef90_D6DMLI7 | L PH V Y RA L Q L H FH WG D P T A N G S E H T  L  D G Q R Q P M E M H   V   H M D K Q R W T   |
|  | UniRef90_D3A3G5                            | <u>KTYTLKÕFHFH</u> TPSEHTFKGKHFPMEÄHFIVHQ   |

|  | 130 140 150 160   |
|--|---|
| UniRef90_T1G2I2                                  | N T D Y G N V IS H A IL IE S T N G IT A II. I I IS IL IG Q II ID K R S N T E D T IL L IK K IV I   |
| UniRef90_K9RLW0<br>UniRef90 H5V5N0               | N EKGALAV V G V F L K E G K A N P T L Q K V W K A M<br>K E S N G D V V V V A V M F E V G A E N P A L A T L W Q K I  |
| UniRef90_E4SRT0                                  | K T D N G K II T IV V IS IV T IY N Y G D K N Q A IL IQ T I I W D K M  |
| UniRef90_Q7LZP1                                  | FKYSDFAFAII  KAPDG    A V AG V M    M V  <mark>C</mark> DSNPA     K   V  <mark>C</mark> S   |
| UniRef90_U6HBY0<br>UniRef90_B0WFA2               | NSDYQSFADAVDRPNGIAFSSMLQMSTETNKDLMGIVMAANQIYGSFDNAKTQCNGLAVLGVFFQNSTAEPDYRWIPALYADKMGHLAVVAVFFTLGQENPNLAALLKNV  |
| UniRef90_F0V1B0                                  | ADKMGHLAVVAVFFTEGQENPNLAALLKNV  |
| UniRef90_UPI0001924B51<br>UniRef90_UPI0002B444A4 | NTDYATESDAIANPDGLAVIGVLIESYDDNEEFEVFLEMF<br>AEDGTLSVIALL LQIGEPEPLLAKIQDKLVELANE  |
| UniRef90_Q2W9U0                                  | K A A D G GIL IAIV L IGIV IMII IA K G A A N P A IL IE A II IWQIV IM   |
| UniRef90_UPI0001FE6E02                           | S D R F A S S T E A Q A S P R G L A V V A V F L R V G D A P N A A F D R L L G S<br>A D K D G N L A V V G V M F K E G K A N P E L A K L W S Q M  |
| UniRef90_B5FFJ2<br>UniRef90_A0A059KL89           | NRD GOILAIV VIAIVIMEEP GDT NA EILIEK A WRIVIM   |
| UniRef90_H5WIY7                                  | D P E G R L A V V A V <u>L L D</u> R G S A <u> </u>   |
| UniRef90_G2E1B1<br>UniRef90_U4UA19               | D Q K H R N L T E A V K H P H G V A V L  G V L F D S P D D D E D F Q P L L E L L  |
| UniRef90_J3HJ03                                  | S KDGHILIAIV VIGIVIM FEAGAIVIN PAILIA EII LIREM   |
| UniRef90_H2U7M3<br>UniRef90_V3ZJX8               | N Q D Y A N Y S E A A K S P H G I A V V S I F T K L S E N S N S F L N R M L N R<br>A T K Y G D L K N A M Q Y R D G L G V L G V L F D L G V S T F E Q N F E S F S S  |
| UniRef90_UPI0003772653                           | S D D G K II I V V IGIV I I IN K G K D N II V I IK P IV IF D N II I   |
| UniRef90_F4W4B9<br>UniRef90_A0A026WAC8           | N M A Y G N Y V N A A Q H D D G I AV V A S F F Q L Q D E D N E R L Q P F I S K<br>N A E Y H N M S E A Q H K S Q G L V A I S L M V Q G E T L H P E L Q L I T S V F   |
| UniRef90_I2FLL8                                  | D R T F S NII  G E A  V  A S N R G D A  V L  F Q A Q T G Q T Y D A G I  T S  L I  N M A   |
| UniRef90_A0A034WLW9<br>UniRef90_I3LA69           | N T K Y A T [V]E E A R E H E D G L  A  V L  A  V L  Y A  V  N A T [V]T E D F E  V I  N  V L   N K K Y S T E G E A A S A P D G L  A  V V G  V   F  L   F T G D E H P S M N R I.  T D A   L   |
| UniRef90_G3NYI7                                  | SSYKRNTTLAVADSTGLAALGFMLEVRKYSFIFFFYNGNM<br>NTKYGSTLEEALAMDNLAVLGILFDIIPCVVELNTLYSEL  |
| UniRef90_C1BPC8<br>UniRef90_B0WFA0               | N T K Y G S T     E E A L   A M D N L   A V L   G     L   F D     I   P <mark>C  </mark> V V E L   N T L V S E L   N S L Y E <u>T</u> F <u>G E A R G Q V D G L A V I A V V Y D V L K S D R   K S L N N W T</u>                    |
| UniRef90_D7TJ76                                  | T D D G NII IAIV VIGII L IY Q Y G D A D PIL L IS KIL IK N KIL ID E IL IA K DIVI   |
| UniRef90_D5C531<br>UniRef90 UPI00036E1EBE        | STDPGSDT PVAVVTAFIREGEENQVLKRVWKNL<br>QAEDGTLAVVGALIEPGGENDLFKAVMDKA  |
| UniRef90_D3FRE5                                  | DINGN LAVLGVMIEEGAENEELAPAWGEL NEGFWPLVEALDSRQGRRLPFPRKEGAGWWGSCSQREVCE   |
| UniRef90_UPI0003502E25<br>UniRef90_M4ZKE1        | A A S GGILALV VIGIV LIMITIT GRIPNIPA FA OIL VIA TIM   |
| UniRef90_G7YT97                                  | N N E Y K N <u>S</u> S Q A <u>S I                                 </u>  |
| UniRef90_C1C0P8<br>UniRef90_C5YFV4               | N A K Y G T     E E A     A K P G V N D N     A V L   G   L   F D   L V P   C P L   F G F D L   S D D G N V T V V A M L   Y R F G S R P D P L L W Q I   Q D K L A A L   Y A E G C   |
| UniRef90_E6ZFK5                                  | N S D D F D S L IG A A L IK R II I I IA A M A IV IF F Q IV IG G K D N P A IV ID P II I I IH G IL I  |
| UniRef90_H0YBE2<br>UniRef90_A6Q1X3               | N S K Y S S L A E A A S K A D G L A V I G V L M K V G E A N P K L Q K V L D A L S K D G E Y L V I A L M F K E G R K N S A L Q K V L N D L   |
| UniRef90_UPI00047CBCE3                           | G E D G S   L   A   V   |
| UniRef90_H9KAK5<br>UniRef90_UPI00034F40EB        | A A D H S N L V T A V F V Q E G K E N S Y F E K L S V F<br>N K K Y R N T A E A M Q H P D G L C V L A F F Y Q L P H T  |
| UniRef90_E3ECH2                                  | SDTGST AVLGVLI QSGKENKAFNRI WSKL  |
| UniRef90_G7YBG2<br>UniRef90_W5JJ58               | NKRYSTRVDAIAGPNGLAVFGILHTLDDRAPIMIHIEEAL<br>STLYPTLNDAVAVKNGVAVIGVLFHVAAQPNMHIGTIIDI  |
| UniRef90_A0A059DGG9                              | T T D P <u>D V</u>  K N <u>K</u>  I  A V <u>V</u>  G L <u>L</u>  Y <u>K</u> T G <u>Q</u> P N A F L  S K L <u> M</u> G N V   |
| UniRef90_N6TPD1<br>UniRef90_Q13D16               | DNPKCDLLDAALSGDLLMLSYVFMVTPIDNPYLEPITQAL<br>AESGTLGVLGVLMQAGKANATF <u>G</u> KLVATM  |
| UniRef90_C6DIJ8                                  | D A S G A IL IT IV I IA IL IM F Q E G E A N Q P IL IA T A W Q Q   |
| UniRef90_X2GV63<br>UniRef90_V4T211               | NKAGELTVVALMFNSGEANSETEKAWQQMPTEVNNKTILN<br>SHDGKVAVVGIVYKIGRPDSFLASISDHL   |
| UniRef90_W5FU75                                  | TDDGNII ITIV VISIL I IY R H G K P D H F II I COI I K D K II IA F II IS A F  |
| UniRef90_C3KI41                                  | KRKDII ITII IFFAII IFTPNGII IAIVI IGFII I IFAKDAHNSNSFII I ISAII I  |
| UniRef90_R1DB40<br>UniRef90_UPI000401D098        | T P G A N E R V S E P M R I A V L A V L F E T R T D V E E V F L S Q F F D Q L P N A S D S L A V V G V L I S A G K A N A E F A E L I K A I P A S E G A P V K L E S T D P N V K N K L A V T G I L Y K I G Q P D A F L S K L L G N V |
| UniRef90_B9S0D9<br>UniRef90_A0A059DF21           | STDPNVK NKIAVTGILYKIGQPDAFLSKLLGNV TLDAEVA GNTVVVGLLYELGEPNAFLSEVLRRV   |
| UniRef90_UPI0003B631D3                           | DAFGHII AVVANVI I IORGFA OPOII IOSIVIWNA  |
| UniRef90_H9JEU5<br>UniRef90_UPI0002B48330        | NSKYESLETAVGHPDGLAVVGFLLETVDAPNPRFDRLVQG  |
| UniRef90_B4LVZ4                                  | N D L Y K T E L E A L K S P N G V A V L G L F I D I N K Q N E S F E L V I N M F N S A Y K E Q K E A L R F P D G F V V L A V M L K I V Q G P K I Q P R A L N Q I S L D G K V A V V G L L Y K L G R P D S F L S S L T E Q L         |
| UniRef90_U5GK55<br>UniRef90_H2U5X0               |   |
| UniRef90_C1BPN9                                  | NSNEKTFEEALAKKETI LVLGALFEEGSENKVLSKI WKSM NDA GGLAVVGVLMAEGKPNPAFGKI VKTM DAQ GHLAVLAVMFEVGEANTALNQLTATL KDGLP MNKAVKLKDGVVVLAFMTNVSDPWNDFTSFLGLV AKDGSFAVVASLFKIGSEEPFLSQMKDKLVKLKEERLKGN                                       |
| UniRef90_K1Y9U3<br>UniRef90_Q89VB0               | VDREGNIAVVGVLMAEGKENKVLSKI WKSM   |
| UniRef90_F0M025                                  | DAQ GHLAVLAVMFEVGEANTALNQLTATL  |
| UniRef90_UPI000454324A<br>UniRef90_M4CRV0        | K D G L P M N K A V K L K D G V V V L A F M T N V S D P W N D F T S F L G L V   |
| UniRef90_Q7VHP3                                  |   |
| UniRef90_W5KFG4<br>UniRef90_I3S0Z1               | NSTLFNSVEAMGKKNGILITALFVQVGKEHLGLKAVTEVL<br>SAK VNGKSKLAVIGLMYKIGRPDRLLSKLSKYI  |
| UniRef90_V8CD88                                  | KAKNGQL LVI A LFNAGLE HPALAEI QKVM  |
| UniRef90_G6D0D2                                  |   |
| UniRef90_UPI000360A2E1<br>UniRef90_M0Z842        | SEDGNUSVVSI LYRUGRQDPFLMQUQDKUSE UYVE   |
| UniRef90_K4DAC0<br>UniRef90_F2B9H8               | SEDGNISVVSI LYRLGRQDPFL MQLQDKLSE LYVE SEDGKT AVVGI MYKI GRADSFL SMI ESDLKALAH LDENKQPL VLAV LYEAGRT NNRLSSI WN AM NAKYGDAKNASKYMDGTVALSI LFEIGHNGPGDTFI QNYV NTEYNNFSDASYRPNGI LAVSVFFKGNAT NKDLLGVVA A A                        |
| UniRef90_K1QWG5                                  | NAKYGDAKNASKYMDGTVALSI LFEIGHNGPGDTFI QNYV  |
| UniRef90_C1LFP9                                  | NTEYNNFSDASYRPNGILAVSVFFKGNATNKDLLGVVAAAA   |
| UniRef90_UPI0002B47E66<br>UniRef90_C5Y4Q2        | SADGAVAVIGILYQLGAPDSFY YQLKRQLVEVAEDK   |
| UniRef90_UPI0003EAC6D0                           | E S S Q <u>D</u> N P <u>Y Y K   V L I   D A   L</u>   |
| UniRef90_K9QTD3<br>UniRef90_M1AHU3               | SAA<br>AQDNT[AVLS  LFHLGHPD PLMTKLQNKLNELAR   |
| UniRef90_A5EYZ0                                  | A DE QGNLAVVAVMY QVGSENPLLKVLTADM<br>NEKYGTLDDAKGKTGGLAVLGVLFGI GEANEEWGKI LKAV   |
| UniRef90_C5LCR7<br>UniRef90_UPI000273A560        | N T R Y K S   L   G E A R G H P G G   L   A   V L   A F F F K   V   Q T E D N N Y H T   I V   T G   L   |
| UniRef90_D6DMU7                                  | N A D G E L T V V A V M F D Q G A A N T E L D K L W G V M   |
| UniRef90_D3A3G5                                  | A E D G T LAVIGS VF K P G K N N P A L S A L I   |

| UniRef90 T1G2I2                           | 170 180 190 200  ELIKEQGE <mark>C</mark> INVEN ISIHGLLPNTENYVTYEGS IPFPG <mark>C</mark> Q   |
|---|---|
| UniRef90_K9RLW0                           | PRKOGREKI I SNVSI NASEL I PENODYYRYEGSI TTPPCS  |
| UniRef90_H5V5N0<br>UniRef90_E4SRT0        | PQNTDKSVALDAQIDMNALL PTDRTYWRFSGSLTTPPCSPQAANTETDLS QALSPDDFYPENKDYYNFEGSLTTPPCT  |
| UniRef90_Q7LZP1                           | E SLK A K G D E F K D F S P C S L L P S C L Q Y W T Y L G S L T T P P L   |
| UniRef90_U6HBY0                           | EKTQFLGNKFHLKGLELQALFPALDEYMTYEGSLPFPSCA  |
| UniRef90_B0WFA2<br>UniRef90_F0V1B0        | ESLKAKGDE FKDFSPCSLLPSCLQYWTYLGSLTTPPLEKTQFLGNKFHLKGIELQALFPALDEYMTYEGSLPFPSCAEVQTAGTSYTLPDPTAFNLIGARRKPYFSYHGSLTTPPYYPGSEQRMPLSEPIETGSLLPASRDYYRFNGSLTTPPYSCSEKVPYMNNTASFMVDPYLLLPKNTNHYFTYPGSLTTPPCS  |
| UniRef90_UPI0001924B51                    | EKVPYMNNTASFMVDPYLLLPKNTNHYFTYPGSLTMPPLT  |
| UniRef90_UPI0002B444A4<br>UniRef90_Q2W9U0 |   |
| UniRef90_UPI0001FE6E02                    | S T <u>   </u>   A A <u>   </u>   A E <u>A G A A   V  </u> S   V   P <u>A</u> E W   L <u>  P</u> A S T E Q Y F H Y P G S   L   T A P P <mark>C</mark> Y   |
| UniRef90_B5FFJ2<br>UniRef90_A0A059KL89    | P ESGEVTLDKKLTLTNLLPNDQAYYRFNGSLTTPPCS<br>PREAG GKQALSTPVDARMLLPRERSYYWFSGSLTTPPCS  |
| UniRef90_H5WIY7                           | II IPII IF K G D FIVIR A A A SII IDII IN GII I IP H D R R Y Y T Y M G SII IT T P P C S  |
| UniRef90_G2E1B1<br>UniRef90_U4UA19        | I P ME A GT K V A L A G Q L D A R D L L P R K R A Y Y R F N G S L T T P P C S D N L K E K G D P R H L S D F S A K S F I P R D K G F Y R Y H G S L T T P G C N   |
| UniRef90_J3HJ03                           | PAFVNKE MALKHSINISAI I PGDKHYYRESGSI TTPPCT   |
| UniRef90_H2U7M3<br>UniRef90_V3ZJX8        | DTITRINYRHDLMGLNIADLYPDTTRYITYEGSITIPP <mark>C</mark> Y<br>AKYGFKEDIVFVSGTSAPLPTINVRNYFRYYGSLTTPP <mark>C</mark> Y  |
| UniRef90_UPI0003772653                    | PKEEGSERPI A SGKL D A GKL VA A N A P Y Y H F E G S L T T P P C T  |
| UniRef90_F4W4B9<br>UniRef90_A0A026WAC8    | LS WAHTELS VNI YLTLASLIPSNTDVFYAYKGSLTTPPCN<br>SKVIHRGDTAPVRHLSLKNLLPETDGYMTYEGSTTHPGCW   |
| UniRef90_I2FLL8                           | ÁNLTYAĞDY <u>VDĞL</u> DF <u>ST</u> MV <u>S</u> ALDLQQYYSYMĞSLTTPĞ <mark>C</mark> A  |
| UniRef90_A0A034WLW9<br>UniRef90_I3LA69    | E S       S E F N R S T E       D N F   L     S   V L D M D   V D E F Y T Y A G S L T T P P C S<br>Y M V R F K G T K A Q F S C F N P K C L L P A S R H Y W T Y P G S L T T P P L S  |
| UniRef90_G3NYI7                           | LKSGDKVLMQPGVSLTDLLPGVDLTRYYRYLGSLTTPS <mark>C</mark> N   |
| UniRef90_C1BPC8<br>UniRef90_B0WFA0        | A N   K N P Q S K A S     S G   T   E R F   P D T D T F F S Y S G S   T T P K C Q<br>R F   T K V V K D G S V Y E V S P Y G   F P V Q W P Y Y A Y E G S F T T P P C A  |
| UniRef90_D7TJ76                           | C A S N E Q S Q V S L G T M D T K L I  R R N T R R Y Y R Y M G S L T T P P C S  |
| UniRef90_D5C531<br>UniRef90_UPI00036E1EBE | PKHEGDEFYLPFSLNIDDALPTDRRTYR YKGSFTTPP <mark>C</mark> T<br>PA KAGE <u>EVKV</u> GA <u>A</u> D <u>A</u> AT <u>M</u> LPGTRHFFRYEGSLTTPP <mark>C</mark> S   |
| UniRef90_D3FRE5                           | P E E E T E N E   V   A   L   E E P   I   N   L   Q N   L L   P D D Q S S F H Y N G S   L   T T P P C T   |
| UniRef90_UPI0003502E25<br>UniRef90_M4ZKE1 | RLCPPPDMSTTMEPSSIMDLLPKKRHYFRYQGSLTTPNCD<br>PDKEGPAVKADAR INPNMMLPARRTYYRYAGSLTTPPCS  |
| UniRef90_G7YT97                           | _ E K <u>T                                   </u>   |
| UniRef90_C1C0P8<br>UniRef90_C5YFV4        | K A       K E Q G S K A   V   T M N   L   A   L   E T F   L   P N N   L   D F F S Y E G S F T T P R C Q R A E E G G G Q   V   P A G D   V   S   L   R   L   H S H T Y Y R Y   V   G S F T T P P C T   |
| UniRef90_E6ZFK5                           | K G <u>V V H H</u> E K E <u>T V L</u> E <u>P F V L</u> K <u>D</u> L L P S S <u>G</u> S Y Y R Y T G S L T T P P <mark>C</mark> S   |
| UniRef90_H0YBE2<br>UniRef90_A6Q1X3        | QALKTKGKRAPFTNFDPSTLLPSSLDFWTYPGSLTHPPLY<br>STEVGKKRMLREM <u>FNP</u> GDF <u>F</u> PRKLDYYRY <u>D</u> GS <u>F</u> TTPP <mark>C</mark> T  |
| UniRef90_UPI00047CBCE3                    | PNAKGENKHII IT DANILIEILIKAHILIPKDNFGYHYII IGSILITTPPCS   |
| UniRef90_H9KAK5<br>UniRef90_UPI00034F40EB | K QLA K N S S E N T D L F N P E H L Y P K N H S Y Y R Y T G S L T T P P C S<br>F S L S S L L S G L D T E R F Y T Y K G S L T T P P C A  |
| UniRef90_E3ECH2                           | PKDII   SQEA   VL  DED  V  N  L  AA  LL  PKD  L  HS  V  RYNGS  L  TTPPCT  |
| UniRef90_G7YBG2<br>UniRef90_W5JJ58        | R S A T Y A G Q S WYI P G F S L T D L Q V N T S T Y F R Y H G S L T T P P C T<br>R S V P G Q V A P L K A K L A P N S L L P V N R T A Y F R Y E G S L T T P A C A  |
| UniRef90_A0A059DGG9                       | R\$ <u>MVDKKGERKMGALDPRE</u> I KMGGKSYLRYMG\$LT <u>V</u> PP <mark>C</mark> T  |
| UniRef90_N6TPD1<br>UniRef90_Q13D16        | K S L K F P M S C A L L C P F P L R L L T P F S K N Y F Y Y E G S L T F P P C T<br>P Q R E G P A V K A D P A I D P N A L L P E K R S Y Y R Y E G S L T T P P C S  |
| UniRef90_C6DIJ8                           | I P A QVN Q A E E VR T P I A I Q S L L P T S L N Y Y R F S G S L T T P P C S  |
| UniRef90_X2GV63<br>UniRef90_V4T211        | KTV DINTLEPKKLDYYRFSGSLTTPP <mark>C</mark> T<br>R <u>NI</u> SGSNER <u>A</u> TVGVIDPRAIKLGSSKYYRYIGSLTVPP <mark>C</mark> T   |
| UniRef90_W5FU75                           | GCKAEKGDPLPVGVVNMKELMQDEDRYFRYVGSLTAPPCT  |
| UniRef90_C3KI41<br>UniRef90_R1DB40        | RNISSEVHVTDGISIDDLLGSVNRVEYYRYNGSLTTPSCN<br>SHVAHQDDAFTLTRPVDLSSLSLDGGYYRLRGSLTTPPCT  |
| UniRef90_UPI000401D098                    | D P K A L L P K K R G Y Y R Y S G S L T T P P C S   |
| UniRef90_B9S0D9<br>UniRef90_A0A059DF21    | TCETHGEEMEAVGVIDPREILIRGEHSYYRYMGSLITTPPCT  |
| UniRef90_UPI0003B631D3                    | RNI SSEVINVI DGI SI DDL LGSVNRVIEYYR YNGSL I I PSCN SHVA H QDDAET LTRPVDLSSI SLDGGYYR RGSL TTPPCT SSI DPKAL LPKRGYYRYSGSL TTPPCT SSI SMTDHKQDRNMGMI NPNEI KMGGKRYYRYEGSL TVPPCT TCETHGEEMEAVGVI DPREI I RGEHSYYRYMGSL TTPPCT LPLERGSSLDSPVPI DLPALLPKDPHYLTYMGSL TTPPCT LPLERGSSLDSPVPI DLPALLPKDPHYLTYMGSL TTPPCT LEGI QKRESVIMNVTSESL LWMDRI GNYVTYKGSL TTPPCT NKVPYMNYKTKLEVSPYFL VPI CTENFYTYPGSL TTPPLT CSENKASTFVIANFTLRDVLTGI ERQEFFTYMGSL TTPPLT CSENKASTFVIANFTLRDVLTGI ERQEFFTYMGSL TTPPCS  |
| UniRef90_H9JEU5<br>UniRef90_UPI0002B48330 | NKVPYMNYKTKLEVSPYFLVPII CTENFYTYPGSLITTPPILIT   |
| UniRef90_B4LVZ4                           | C S E N K A S T F V A N F T L R D V L T G I E R Q E F F T Y M G S L T T P P C S   |
| UniRef90_U5GK55<br>UniRef90_H2U5X0        | GRVQNNGSSTVIPNFRLSDLVPDLHSYYRYVGSMTTPGCE  |
| UniRef90_C1BPN9<br>UniRef90_K1Y9U3        | EDVVSPGSEAEFTGLKLEDLLPDKNKVFVYQGSLTMPRCE  |
| UniRef90_Q89VB0                           | GRVQNNGSSTVIPNFRLSDLVPDLHSYYRYVGSMTTPGCEEDVVSPGSEAEFTGLKLEDLLPDKNKVFVYQGSLTMPRCEPQNGGEKNALPAPFDLAQLLPSNHDHYRFNGSLTTPPCTPAADGPAVKADASIDPLAMLPTRLSYFRYPGSLTTPPCSPKPGQSQPLSTTFSVGDLLPQASDYYRFNGSLTTPPCSPKPGQSQPLSTTFSVGDLLPQASDYYRFNGSLTTPPCSPKDNFSLKGLLGAVKTLHYYFYQGSLTTPPCS  |
| UniRef90_F0M025<br>UniRef90_UPI000454324A | P K P G Q S Q P L S T T F S V G D L L P Q A S D Y Y R F N G S L T T P P C S   |
| UniRef90_M4CRV0                           | Q TAQVEVGKINTRHIERKTRKYFRYFGSLTTPPCS  |
| UniRef90_Q7VHP3<br>UniRef90_W5KFG4        | Q TAQVEVGKINTRHIERKTRKYFRYFGSLTTPPCS P QKVNQSKPFGTLNINNLLPKQNGYYAFDGSLTTPPCN QDLQYKEPVVKLHYLLNIPQPTVSDLITQWKSDSVLCQC  |
| UniRef90_I3S0Z1                           | K T MM D N E VE R S I G V F D P S E I K L G G K K Y Y R Y I G S L T V P P C T   |
| UniRef90_V8CD88<br>UniRef90_G6D0D2        | K T MMD N E VE R S I GVF D P S E I K L G G K K Y Y R Y I G S L T V P P C T P Q K E G E K A N L A K L D M S T L T K G L D S Y I R L N G S L T T P P C T P S L P K V G A V P P T V L D L T R L F S P N M Q S F Y T Y H G S I T T P L C Q  |
| UniRef90_UPI000360A2E1                    | PKTAGGEAAVDV DPNGLLPKELTYWSYEGSLITTPPCS   |
| UniRef90_M0Z842<br>UniRef90_K4DAC0        | A C R A E K G A PILIP A GIV VISILIWPILIR S Y A N M Y Y R Y V G S IL IT T P P C T  |
| UniRef90_F2B9H8                           | PSLPKVGAVPPTVLDLTRLFSPNMQSFYTYHGSITTPLCQPKTAGGEAAVDVDPNGLLPKELTYWSYEGSLTTPPCSACRAEKGAPIPAGVVSLWPLRSYANMYYRYUGSLTTPPCTTKNVERKIGIIDPKKVKLGSRKYYRYLGSLTVPPCTTKNVERKIGIIDPKKVKLGSRKYYRYLGSLTVPPCTPMTAGKVKLDQPFNAASLLPRNLRYYRFAGSLTTPPCTPKVRNPSHEGVQALIDLSGVLPYNREFYTYYGTKTTPPCTPKVRNPSHEGVQALIDLSGVLPYNREFYTYYGTKTTPPCEQKKVLYPNDHTLINISPYFLFPLCVQNYYTYSGSLTIPPLSCNSAEEESQVEVALIHLRSLQKRTGSYFRYTGSLTVPPCTDEVKHAGNRTIITALQLVSILPKPRKYYYYSGSVTVPDCDPSQPQPEQLFENISINVSQLLPSDRSFYEYRGSLTTPPCSDVAALHKETQVQLGIIDTHELRKHSHKYYYYYSGSLTTPPCSDVAALHKETQVQLGIIDTHELRKHSHKYYYYRFNGSLTTPPCSKVGENTVDSIDLYGLIPKDS |
| UniRef90_K1QWG5<br>UniRef90_C1LFP9        | PKVRNPSHEGVQALIDLSGVLPYNREFYTYYGTKTTPPCE  |
| UniRef90_UPI0002B47E66                    | KKVLYPNDHTLINISPYFLFPLCVQNYYTYSGSLTIPPLS  |
| UniRef90_C5Y4Q2<br>UniRef90_UPI0003EAC6D0 | CNSAEEESQVEVALIHLRSLQKRTGSYFRYTGSLTVPPCT  |
| UniRef90_K9QTD3                           | PSQPQPEQLEENISI NVSQL LPSDRSFYEYRGSLTTPPCS  |
| UniRef90_M1AHU3<br>UniRef90_A5EYZ0        | DVATHKETQVQLGLIDTHELRKHSHKYYSYTGSLTTPPCS  |
| UniRef90_C5LCR7                           | KVGENTVDSIDLYGLIPKDASIKLFGY DGSLTTPTWD  |
| UniRef90_UPI000273A560                    | K V G E N T V D S I D L Y G L I P K D A S I K L F G Y D G S L T T P T W D K N I S H Q G Q T V E L A S T F R L D K L L P G R R Y Y R Y S G S L T T P A C D P G Q V D Q N V T I K P T L D M N K L L P T D K T Y W R F S G S L T T P P C S   |
| UniRef90_D6DMU7<br>UniRef90_D3A3G5        | AKKLKAGESVDLKNLNLQALLPKDSKSFQLKGSLTTPPCS  |
|   |   |

| UniRef90_T1G2I2                           | 210 220 230 240<br>ET V T WMI  FNK P V Y V  N E ES L  K   L   R E M   L   R E D S   L   N R T S   V   A N N  |
|---|--|
| UniRef90_K9RLW0                           | FTIVINIWII VIIKEPIVIIISSOOIVIOOFAKIVIEP MN   |
| UniRef90_H5V5N0                           | EG V_I W LV MKHP L T L SDAQ L KTFKA L MHH DN   |
| UniRef90_E4SRT0<br>UniRef90_Q7LZP1        | EGVNWIVFKSQETVSKEQVEKFSQTLGFE N<br>ESVIWLVIKEPISLGPDQLAKFRG RGLEFGPNEPMQNN   |
| UniRef90_U6HBY0                           | ETVTWLVIKEPISLGPDQLAKPRG RGLEFGPNEPMQNN<br>ETVTWI I LNRSI QI SLKEMKVLRQLRTD KTLWSTSMADN  |
| UniRef90_B0WFA2                           | ESVT WLVMKKPLQVSENQMSAFRSLL KDEDGNPLVDN  |
| UniRef90_F0V1B0                           | EGVRWLVMKDPLVMSRAQLQLFMQAMGSN  |
| UniRef90_UPI0001924B51                    | ESVIWLVIKEPISLGPDQLAKFRG RGLEFGPNEPMQNNETVTWI LNRSIQISLKEMKVLRQLRTD KTLWSTSMADNESVTWLVMKKPLQVSENQMSAFRSL KDEDGNPLVDNEGVRWLVMKDPLVMSRAQLQLFMQA MGSNENVTWTLFTESIKISIDQLKRMSKSYPFQRQSDSITIITNNENVTWTLFTESIKISIDQLKRMSKSYPFQRQSDSITIITNNENVTWNVLGKVRTISQQQLEALKA PLDPVYKNNENVIWNVLGKVRTISQQQLEALKA   |
| UniRef90_UPI0002B444A4<br>UniRef90_Q2W9U0 | ENVIOWNVERVET AS A GOLLA A FAKIFP  |
| UniRef90_UPI0001FE6E02                    | ĒŚŲŔŴŲVMRĖPI TŪŠQĖQLDRŪRŠVRTD PTŪSŠN   |
| UniRef90_B5FFJ2                           | E N V T W T L F T E S I K I S I D Q L K R M S K S Y P F Q R Q S D S I T I T N N E N V I W N V L G K V R T I S Q Q Q L E A L K A P L D P V Y K N N E V V Q W V V Y R Q A I T A S A E Q L A A F A K L F P N S S V R W V V M R E P I T I S Q E Q L D R L R S V R T D P T I S S N E G V T W L V M K N P I E I S S E Q L A Q F R E L Y N G N E G V L W M V M A S D V A S K A Q V E A F M H A I H H K N E G V L W M V M A S D V A S K A Q V E A F B H V M H H P N E G V R W L V M K E P V S V S K A Q I E A F E H V M H H P N E G I I W T V F T S T L P I S K K Q V K I F E A L Q T E E K M P L I K N E G V R W L V L K Q P V Y A S A E Q L K K F T S L L G E H G N Q S V L W T I F E Q R Q T I S P N Q V R D H F W S P N A V I F G E A L I D N  |
| UniRef90_A0A059KL89<br>UniRef90_H5WIY7    | EGVHWFVMASDIVASKAQVEAFMHALHHK  |
| UniRef90 G2E1B1                           | E GIV R WL V M K E PIV SIV S K A QII E A F E H V M H H   |
| UniRef90_U4UA19                           | EGI TWTVETSTLPLSKKQVKTFEALL QTEEKMPLIKN  |
| UniRef90_J3HJ03                           | E GVR WL V L K Q P V Y AS A E QLLK K F T SL L IGE H  |
| UniRef90_H2U7M3<br>UniRef90_V3ZJX8        | OSVIWTI FEOROTI SPNOVRDHEW SPNAVIEGEALIDN  |
| UniRef90_UPI0003772653                    | E GVQWFVMKDA ASVSPKQFAAFTALYPF N   |
| UniRef90_F4W4B9                           | EVVTWHIFANPIPISFHQMNMFRKLL NGEGLLGDN   |
| UniRef90_A0A026WAC8<br>UniRef90_I2FLL8    | EVVS WIVANRIHYVS PAALDOU MSIKAGMS AT PGIDU OGN   |
| UniRef90_A0A034WLW9                       | QAVIT WV VESHPITTI TPSQMERFRRIL SDGHGATLENN  |
| UniRef90_I3LA69                           | ESVI WLV LREPI SI SEKQMEKFRSLLFI SEGEQSAWYVPG  |
| UniRef90_G3NYI7<br>UniRef90_C1BPC8        | EAJV VJWSJV JE K D I JE K I V S K D V I D R F S I ME R V S N S T S P L I V D N   |
| UniRef90_C1BPC8 UniRef90 B0WFA0           | ETVQWIVASERVPLTKSELVRMRNL FGRGGRWVON   |
| UniRef90_D7TJ76                           | EKVAWHILGKIRDISKDQVAALKAPLNSDC KDN   |
| UniRef90_D5C531                           | E GIVIQ WIV V LIK Q PII E MS Q E QII E K F R KII LIN H S C C D N N   |
| UniRef90_UPI00036E1EBE<br>UniRef90_D3FRE5 | FFIVIK WI VEKEPI OKSAFOI OAFOFI Y  |
| UniRef90_UPI0003502E25                    | ETSTWLLINKPVYVTQMQMHSLRLISQNEPYKIFLSMSDN QSVLWTIFEQRQTISPNQVRDHFW SPNAVIFGEALIDN EGVQWFVMKDAASVSPKQFAAFTALYPF EVVTWHIFANPIPISFHQMNMFRKLL NGEGLLGDN ETALIWLILNKPIYITARELYALRAFKLL SDGHGATLENN EVVSWIVANRLHYVSPAAIDQLMSLKAGMSATPGDDLQGN QAVTWVVFSHPITITPSQMERFRRL SDGHGATLENN ESVTWIVLREPISISEKQMEKFRSLLFTSEGEQSAWYVPG EAVVWSVFKDTIKVSSPADIDRFSTMLRVS NSTSPLIVDN ETVQWLVASERVPLTKSELVRMRNL EGRGGRWVQN EKVAWHILGKIRDISKDQVAALKAPLNSDC EGVQWVVLKQPIEMSQEQIEKFRKILNHSCCD NN ETVVWTVMKQPIEMSQEQIEKFRKILNHSCCD NN ETVVWTVMKQPIEMSQEQIEKFRKILNHSCCD NN ETVVWTVMKQPIEMSQEQIEKFRKILNHSCCD NN EEVKWIVFKEPIQKSAEQIQAFQEIY ETVVWTVMKQPIEMSQEQIEKFRKILNHSCCD NN ETVVWTVFKEPIQKSAEQIQAFQEIY ETVVWTVFKEPIQKSAEQIQAFQEIY ETVVWTVFKEPIQKSAEQIQAFQEIY ETVVWTVFKEHIQLHKDQILAFSQKLYYDK ERSMRMTDN EVVEWLLSEPVSVAEADVAKFAKLYP ETVVWTVFKEHIQLHKDQILAFSQKLYYDK ERSMRMTDN EVVEWLLSEPVSVAEADVAKFAKLYP |
| UniRef90_M4ZKE1                           | EVVEWLL SEPVSVAEADVAKFAKLYP MN   |
| UniRef90_G7YT97<br>UniRef90_C1C0P8        | EIVI WEILINHPELI SPAELKILKKEK VAQILWSGSMADN  |
| UniRef90_C5YFV4                           | E DV I WSV MAQVREMTVEQAAALMA PLEKAYRHN   |
| Unikei9U_E6ZFK5                           | KVVEWTIENRPIYVSYKQLEAFYSLFTTEQQDHVEYLRSN   |
| UniRef90_H0YBE2                           | ESVI WI I CKESI SVSSE QHN  |
| UniRef90_A6Q1X3<br>UniRef90_UPI00047CBCE3 | E GIVIQ WIL V LIR D RIVISILIT A D QIL A A F  |
| UniRef90_H9KAK5                           | EPVTWILFRQPITLSKDELEELSHYLP KNN  |
| UniRef90_UPI00034F40EB                    | E A V T WV I E S D Y L PL S V F Q M D N F R G L L S N L N L P L V D N  |
| UniRef90_E3ECH2<br>UniRef90_G7YBG2        | E DV I WS V M A Q V R E M T V E Q A A A L M A  |
| UniRef90_W5JJ58                           | ESVÎWTVE PESVALSÎD QVDQEKVÎ <mark>H</mark> DQSGHELVN N   |
| UniRef90_A0A059DGG9                       | EGVIWTINKKLGTVSKDQIKLLREAVHDYAEK   |
| UniRef90_N6TPD1<br>UniRef90_Q13D16        | EUVDWMVIASPITVADEDIAGEAKIVP  |
| UniRef90_C6DIJ8                           | E GI R WL V L D H P V T A S A E QI N Q F R S V M H H A N   |
| UniRef90_X2GV63                           | E GI R WL V L D H P V T A S A E QI N Q F R S V M H H A N E G V R WI V L E Q A T T A S D E Q I Q K F H S I M H H D N E N V T W T I V R K V R S V T R E Q V R V L R V A V H D E S N T N  |
| UniRef90_V4T211<br>UniRef90_W5FU75        | ENVI WTI VRKVRSVT REQ <u>VRV</u> LRVAV <mark>H</mark> DESNT NENVI WNI LGELREMTKEQAVALMA PLEKSYRQN  |
| UniRef90_C3KI41                           | E A V VWT V F K E S V K V D E N L M M M F P T L A G Y H N V  |
| UniRef90_R1DB40                           | EGLEWSVLASPLPILPAQLETFRKALGKT VRN  |
| UniRef90_UPI000401D098<br>UniRef90_B9S0D9 | E  |
| UniRef90_A0A059DF21                       | E GVKWI VNKQPSSVTEEQI WSLRHLVDDGAW NN  |
| UniRef90_UPI0003B631D3                    | EGVLWLVMKQPVTVSQTQIDIFARLYP  |
| UniRef90_H9JEU5<br>UniRef90_UPI0002B48330 | ECVTWIIYEKPVQIGSEQLGLTRQL EGPDSQPTERN  |
| UniRef90_B4LVZ4                           | ENVTWILLAEPIKISIDQLKRM TTCTSDCGYITNN<br>EVVNWFVFPKHIELSKKYLQNLWLL TDERGKPLVNN  |
| UniRef90_U5GK55                           | ENVLWTI VKKVRTATREQVRLLRVAVHDDSDT N  |
| UniRef90_H2U5X0<br>UniRef90_C1BPN9        | QAVAWTVFHRTLSIS EGVEWVVFKQKSYISQEQLEKFRGL KNSQGTPMSNN EGVRWLVIKKPVSVSKEQVAAFSHIMHH EVVEWLLLTTPIQVSAADVAAFAKLYP MN EGVRWLVLKQPQVLSAQQEAVLTT HMGHN   |
| UniRef90 K1Y9U3                           | E GVR WL V I K K P V S V S K E Q V A A F S H I M H H   |
| UniRef90_Q89VB0                           | EVVEWLLLTTPLQVSAADVAAFAKLYP  |
| UniRef90_F0M025<br>UniRef90_UPI000454324A | EGJVK WIL V LJK Q P QJV LJS A Q Q E A IV LJI I HM G HN FIV VIS WIL VER F PILL VIS P DIV VIR N F T S SITE V T T A S F G R R MIVIN N   |
| UniRef90_M4CRV0                           | EVVEWLLLTTPILQVSAADVAAFAKLYP  EGVRWLVLKQPQVLSAQQEAVLTT  HMGHN EVVSWIVFREPILVSPDVVRNFTSSLFYTTASEGRRMVNN ENVSWTILGKVRSMSKEQVELLRS  PLDISYKKN ENVQWVVFVNPIQISKKQIETFQAVLH  HN   |
| UniRef90_Q7VHP3                           | ENVQWVVFVNPLQISKKQIETFQAVLH  |
| UniRef90_W5KFG4<br>UniRef90_I3S0Z1        | ENVSWTILGKVRSMSKEQVELLRS PLDISYKKNENVQWVVFVNPIQISKKQIETFQAVLH HNKITEWGIYRKQSKIQQMQIEEFRRLRSHVKGAEDGMLGDNEGVIWTINKKVRSVSRAQLELLREAVHDHAEK NEGVIWIVNTMPLEASKAQVAAFTKVF GQN   |
| UniRef90_V8CD88                           | E GIV I WI VINT MPLEASKA QIVIA A FT KIVIF GON  |
| UniRef90_G6D0D2                           | E V V I W L_V MDK P L_I  SDIQYK L FSK V D V GG  L DN   |
| UniRef90_UPI000360A2E1                    | E   V   D W M V L   R Q P M E V   D E R D   L G A F T T L   Y P  |
| UniRef90_M0Z842<br>UniRef90_K4DAC0        | ENI I WNI L GRVREMT ME QAAALIA PLEEGYRRN<br>QDV VWTI VRKVRTVT KEQMKLIREAVHDESET N  |
| UniRef90_F2B9H8                           | EGIVIS WILVLIKS YD HILIDOAOAEKETRAIVIGS HN   |
| UniRef90_K1QWG5                           | FNTRWIILKQHRTIITRKSHRLLFLLLNKHGERISRY GN   |
| UniRef90_C1LFP9<br>UniRef90_UPI0002B47E66 | FNTRWIILKQHRTITRKSHRLLFLLNKHGERISRY GN<br>ETVTWIILNHPITITETELKTLRRLR VAHTLWSGSMADN<br>ENVTWYLIPDPIRISFNQLRSLQKARHLSTESGSTLITNN   |
| UniRef90_C5Y4Q2                           | ENV VWSV LGKVRQI SKEQLQLLKAPLP GND   |
| UniRef90_UPI0003EAC6D0                    | EAV V WAV FET PI RISREQLTAFS QKLLF RTEKPMKMT   |
| UniRef90_K9QTD3                           | E DJV LJWF V M Q Q PI JE V S W Q QII Q Q F A A II F P  EII V S W V I J G K V R S II S R E O V E E II P A DI I D D T C  |
| UniRef90_WTAHU3                           | ENVIWVLIPDPIRISFNQLRSIQKARHLSTESGSTITINN ENVVWSVLGKVRQISKEQLQLLKAPLP EAVVWAVFETPIRISFRQLTAFSQKLLF EDVLWFVMQQPIEVSWQQIQQFAAIFP HN ELVSWYILGKVRSISREQVEELRAPLDPT GVRWLVLKEPAHLSNQQ EQQLSAVMGHN ENVTWVVFEEPVPIGRAQLAQFSALQASPPGARPVSMTNN EGVTWLVLKHPLTVSAEQLQKFTHTMHHE ENVTWVVLKTPVQADAAQFKAMRDLIG  |
| UniRef90_C5LCR7                           | ENL LWHVTKTTMTI SEEQMKMLRSIV GPSGDI TAPN   |
| UniRef90_UPI000273A560                    | EVVLWTVFEEPVPI GRAQLAQFSALQASPPGARPVSMTNN  |
| UniRef90_D6DMU/                           | FNVT WV V I K T PV Q A D A A Q F K A M R DI I I G  |
| 5   | E 11 TI TI V E IN T I V SANDAASI KAWKULI IO GEN  |

| UniPof00 T1C2I2  | 250   |
|--|---|
| UniRef90_K9RLW0  | 250  F R P L Q M T H S R P V R T N I  A R P V Q L V K R R  N R P T Q P L H G R V V  N R P I Q D A N G R K I K A  Y R P P Q P L K G R E I R K N F  F R P V N P L N N R S V R T N I  Y R E L Q P I N G R T I  S R P V Q P V N A R L I L A  Y R L T Q P L N D R L V K S S Y  A R P V Q P L N G R K I E  A R P V Q P L N R R K  |
| UniRef90_H5V5N0<br>UniRef90_F4SRT0                           | N R P T Q P L H G R V V V N R P I Q D A N G R K I K A   |
| UniRef90_Q7LZP1  | YRPPQPLKGREIRKNF  |
| UniRef90_U6HBY0<br>UniRef90_B0WFA2                           | Y R E L Q P I N G R T I   |
| UniRef90_F0V1B0  | SRPVQPVNARLILA  |
| UniRef90_UPI0001924B51<br>UniRef90_UPI0002B444A4             | ARPIVIQPILINDRILVIKSSY  |
| UniRef90_Q2W9U0  | ARPVQPLNRRK   |
| UniRef90_B5FFJ2  | N R P T Q A I N A R P I   |
| UniRef90_A0A059KL89  | NRPVQPLNARLI  |
| UniRef90_G2E1B1  | NRPVQPVNARPV  |
| UniRef90_U4UA19<br>UniRef90_J3HJ03                           | Y R S L Q P L N G R T L Y<br>S R P V Q P L N G R V L  |
| UniRef90_H2U7M3  | IRPTQPLLQRCIRTNI  |
| UniRef90_V3ZJX8<br>UniRef90_UPI0003772653                    | ARPVQAVNGRKV  |
| UniRef90_F4W4B9  | FRELQDIGQRKIY   |
| UniRef90_I2FLL8  | TRPLQALNGRTVSRSF  |
| UniRef90_A0A034WLW9  | Y R A L Q A K G N R S V W R   |
| UniRef90_G3NYI7  | Y R N L Q P   |
| UniRet90_C1BPC8<br>UniRet90_B0WFA0                           | Y K S I Q A L N G R N V  <br>A R P T Q A R N Y R R V F  |
| UniRef90_D7TJ76  | Y R L I Q P L N G R K V E A R P V Q P L N G R K V E A R P V Q P L N G R K V V S R P L Q P L N G R V V N R P T Q A I N A R P I N R P V Q P L N G R T L V Y R S L Q P L N G R T L V Y R S L Q P L N G R K V V Y R S L Q P L N G R K V V Y R S L Q P L N G R T L V S R P V Q A V N G R K V V F R P T Q A V N G R K V V F R L L Q D I G Q R K I V F R P L Q A L N G R T S V W R Y R N L Q A L N G R R R S W R Y R N L Q A L N G R R R I Y R S T Q A L N G R R R I Y R S T Q A L N G R R R I Y R S T Q A L N G R R R I Y R P T Q P L N G R R I A R P L Q P L N G R I A R P L Q R I A R P L Q R I A R P L Q R I A R P L Q R I A R P L Q R I A R P L Q |
| UniRef90_D5C531<br>UniRef90_UPI00036E1EBE                    | A R P L Q P L N G R Q I<br>H R P V Q P L N E R  |
| UniRef90_D3FRE5  | HRPVQPLNER  |
| UniRef90_M4ZKE1  | ARPVQKLDRRFV  |
| UniRef90_G7YT97  | FRPIQPLNNRSIRTNL  |
| UniRef90_C5YFV4  | N R P T Q P M N G R V V Q   |
| UniRef90_E6ZFK5<br>UniRef90_H0YBF2                           | FRPI QSLDNRHVYKS<br>NRPT QPI KGRTVRASE  |
| UniRef90_A6Q1X3  | ARPLQPLNGRFL HRPVQPLNER VRPLQDLGDRLVYTS ARPVQKLDRRFV FRPIQPLNNRSIRTNI YRSVQKLNGRKV NRPTQPMNGRVVQ FRPIQSLDNRHVYKS NRPTQPLKARVIRASF SRPVQPLKARVI  |
|  |   |
| UniRef90_UPI00034F40EB                                       | FRQLQPLFGRRVF   |
| UniRef90_E3ECH2<br>UniRef90_G7YBG2                           | R P V Q P L N N R L I E N N F R Q L Q P L F G R R V F H R P V Q Q L G T R E L K A Y R P T Q L I N G R C V F K S Y R S V Q P L N A R L V Y A S R P V Q P L N R R E I S R P V Q M A N G R E I F A R P P Q K D N R R F V L Q S N R P I Q P L N G R V I N R P V Q P L N G R V I A R P L Q P L N M R S V K   |
| UniRef90_W5JJ58  | Y R S V Q P L N A R L V Y A   |
| UniRef90_N6TPD1  | SRPVQMANGREIF   |
| UniRef90_Q13D16<br>UniRef90_C6DIJ8                           | N R P I Q P L N G R V I   |
| UniRef90_X2GV63  | N R P V Q P L N G R V I   |
| UniRef90_W5FU75  | S R P L Q S L N G R T V Q   |
| UniRef90_C3KI41<br>UniRef90_R1DB40                           | Y R P T Q S L H N R L I Y T<br>F R P T Q P L N G R S I  |
| UniRef90_UPI000401D098                                       | A R P A Q K L D R R F V L R S   |
| UniRef90_B9S0D9<br>UniRef90_A0A059DF21                       | S R P V Q P L N E R E V Q<br>A R P I Q P L N G R D I Q  |
| UniRef90_UPI0003B631D3                                       | ARPVQPADGRLIK   |
| UniRef90_H9JEU5<br>UniRef90_UPI0002B48330                    | VRPTQPPGHSVIY<br>YRPIQP   |
| UniRef90_B4LVZ4<br>UniRef90_U5GK55                           | Y R N L Q R L C N R T V Y<br>A R P L Q P L N G R S V K  |
| UniRef90_H2U5X0  |   |
| UniRef90_C1BPN9<br>UniRef90_K1Y9U3                           | Y R S V S K L N D R T V F R<br>N R P L Q P L G A R L V  |
| UniRef90_Q89VB0  | A R P V Q K D N R R Y V L R S   |
| UniRef90_F0M025<br>UniRef90_UPI000454324A                    | NRPLQPHHARVILSN<br>FRPAQPLGRRKV   |
| UniRef90_UPI000454324A<br>UniRef90_M4CRV0<br>UniRef90_Q7VHP3 | A R P C Q P L N G R R V E<br>A R N V Q P L G D R V I E  |
| UniRef90_W5KFG4  | FRP <u>IQP</u> LSDR <u>V</u> VRAAF  |
| UniRef90_I3S0Z1<br>UniRef90_V8CD88                           | A R P V Q L L N R R E I Q<br>N R P L Q S P N N R V I  |
| UniRef90 G6D0D2  | YRSILIQA NNRIVILIYR   |
| UniRef90_UPI000360A2E1<br>UniRef90 M0Z842                    | ARPVLAANRRFILSSF<br>NRPTQPLNGRTVQ   |
| UniRef90_K4DAC0  | S R P V Q A T N K R T I R   |
| UniRef90_F2B9H8<br>UniRef90_K1QWG5                           | SRPVQPLNARVV<br>FRPVQDNS <mark>C</mark> RLIEAN <u>F</u>   |
| UniRef90_C1LFP9<br>UniRef90_UPI0002B47E66                    | FRPTQT    NNRS V RTN  |
| UniRef90_C5Y4Q2  | Y R P T Q P <u>T</u> N G R <u>K</u> V <u>Q</u>  |
| UniRef90_UPI0003EAC6D0<br>UniRef90_K9QTD3                    | FRPTQPLNGRVVLRS<br>SRPIQPLNSRKLLGN  |
| UniRef90_M1AHU3  | A R P T Q P L N G R Q I Q   |
| UniRef90_A5EYZ0<br>UniRef90_C5LCR7                           | N R P V Q P H N A R L V<br>H R E V Q P L N G R K I Y  |
| UniRef90_UPI000273A560                                       | F R P V Q P L G A R R V L A S   |
| UniRef90_D6DMU7<br>UniRef90_D3A3G5                           | S R P V Q P L H G R L V<br>N R P V Q P L N D R E V  |
|  | 1 1 1   |

| UniRef90_B9HC91 UniRef90_M0SW01 UniRef90_V7CZU1 UniRef90_V4NF13 UniRef90_B3P7Q7 UniRef90_UPl00032AD2E2 UniRef90_UPl00032ABA01 UniRef90_UPl00032ABA01 UniRef90_UPl0003EDE8C4 UniRef90_UPl0003EDE8C4 UniRef90_W7ZMJ3 UniRef90_U5EY71 UniRef90_B3M085 UniRef90_B3M085 UniRef90_B4N9V2 UniRef90_UPl0004638DFB | 1   |
|--|---|
| UniRef90_Q0QBU9 UniRef90_Q0QBU9 UniRef90_Q084UV8 UniRef90_Q84UV8 UniRef90_R0FD14 UniRef90_UPl0002A4CA15 UniRef90_UPl0002B4325D UniRef90_L8MUM8 UniRef90_S8D8D0 UniRef90_S8D8D0 UniRef90_UPl000462DAFC UniRef90_UPl0003512165 UniRef90_UPl0003512165 UniRef90_W9QKB8 UniRef90_W9QKB8 UniRef90_W9QKB8 UniRef90_E1W3U0 UniRef90_E1W3U0 UniRef90_E1W3U0 UniRef90_E1W3U0 UniRef90_L9UH00032A7512 UniRef90_L9UH00032A7512 UniRef90_D4BK10 UniRef90_D4BK10 UniRef90_D4BK10 UniRef90_UPl00032A7512 UniRef90_UPl00035E3933 UniRef90_UPl0003E3933 UniRef90_UPl0003E3933 UniRef90_UPl0003E3933 UniRef90_UPl0003C13106 UniRef90_UPl00032P53E0 UniRef90_UPl00032P5T9 UniRef90_UPl00032P5T9 UniRef90_UPl00032P5T9 UniRef90_UPl00032P5T9 UniRef90_UPl00032P5T9 UniRef90_UPl0003E9STU9   | F S Y D E E N G P A N W G N   W K E C S G K K Q S P   D   F D K K A T A D A N W G N   W K E C S G K K Q S P   D   F D K K A T A D A N W G N   W K P C G T G T R Q S P   N   V S A N A T A D A A N W G N   W K P C G T G T R Q S P   N   V S A N A T A D A N W G N   P D C   G T G T R Q S P   N   N   A R D   V   T T D C T W G A L Y P D C   G T G T R Q S P   N   A R D   V   T T D C T W G A L Y P D C   G T G T R Q S P   N   A R D   V   T T D C T W G A L Y P D C   G T G T R Q S P   N   A R D   V   T T D C T W G A L Y P D C   G T G T R Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S Q S P   D L K A C D S A G S D S A C G S C K A Q S P   D L K A C D S A G S D S A C G S C K A C D S A G S D S P   D L K A C D S A G S D S A C G S C K A C D S A G S D P R D S C D S A C S A G S D S P   D L K A C D S A G S D S P   D L K A C D S A G S D S P   D L K A C D S A G S D S P   D L K A C D S A G S D S P   D L K A C D S A G S D S P   D L K A C D S A G S D P   D L K A C D S A G S D P   D L K A C D S A G D S P   D L K A C D S A C G T R C G S C C S A G S P   D L K A C D S A C G T R C G S C C S A C S P   D L K A C D S A C G T R C G S C C S A C S P   D L K A C D S A C G T R C C S A G S D P   D L K A C D S A C G T R C C S A G S A C D S A C G T R C S A G S A C D S A C G T R C S A G S A C D S A C G T R C S A G S A C D S A C G T R C S A G S A C D S A C G T R C S A G S A C D S A C G T R C S A G S A C D S A C G T R C S A G S A C D S A C G T R C S A C S A G S A C D S A C G T R C S A C S A G S A C D S A C G T R C S A C S A G S A C S A C T S A C S A G S A C S A |
| UniRef90_C6WWH4 UniRef90_C6WWH4 UniRef90_E6QKU4 UniRef90_E6QKU4 UniRef90_C3XFH2 UniRef90_F2E480 UniRef90_B7KGJ9 UniRef90_B7KGJ9 UniRef90_H3DQ54 UniRef90_H3DQ54 UniRef90_H3DQ54 UniRef90_H3DQ54 UniRef90_H3DQ54 UniRef90_H3UF0001924FBD UniRef90_B3LV08 UniRef90_B4BH7 UniRef90_UP100034FE861 UniRef90_UP1000365CF2F UniRef90_UP100033AF394 UniRef90_UP10003AFA9E7 UniRef90_UP10003AFA9E7 UniRef90_UP10003AFA9E7 UniRef90_UP10003AFA9E7 UniRef90_UP10003AFA9E7 UniRef90_UP10003AFA9E7 UniRef90_UP10003AFA9E7 UniRef90_UP10003AFA9E7 UniRef90_UP10003AFA9E7   | WG Y D G K E G P E H WA K L S D C S A G S T Q S P I D I D E S   |

|  | 50 60 70 80   |
|--|---|
| UniRef90_B9HC91                                  | ILIT PICT R D Y K R A N A T IL V N N G F N I I A C S Y E G N P G V L I V D  |
| UniRef90_M0SW01<br>UniRef90_V7CZU1               | L G R L R R S Y H P A E A II L K N R G H D I M L K W E E E A G G L WI N G L G S L V Y W T Y N P Q Y A T V S N R G H D V A V E W G G G A G S I D I D G S P   |
| UniRef90_V4NF13                                  | LGSLVYWTYNPQYATVSNRGHDVAVEWGGGAGŚIDLDGSPMTL DYTSSAAKIQNLGHVVQVSPTDGGGVIMDNV   |
| UniRef90_B3P7Q7<br>UniRef90_UPI0004433D31        | LRFNYYDQPLQTPLVIINNGHTANMVIPQTRQRPSINGSL<br>LTPLRINGGRKVSGTMYNTGRHVSLRLDK EHLVNISGGP  |
| UniRef90_UPI00032AD2E2                           | <u>LIGPILIQII</u> R SKPSN <u>A</u> JI <u>L</u> IKNRGHDI <u>I</u> KL <u>I</u> EFTENSNY <u>LLI</u> DG <u>I</u>  |
| UniRef90_A0A016S773<br>UniRef90_UPI00032ABA01    | EPLKFHNYDARGDIVAENNGHT GGN<br>LKSLDRHY LPTNATLVNNIYNIGVRFEGKVGDINING  |
| UniRef90_UPI0003EDE8C4                           | L   G P F   I   F Q G Y N P G P W I L   E N D G H T   V L L   <mark>C</mark> M D T Q S H   L   G I     R G A G   L  |
| UniRef90_W7ZMJ3<br>UniRef90_U5EY71               | AKWPLINTYQPTTFSVQNNGHTIQADVHGSTGSTLRLAGV<br>APFSFRNYVNPLRKKITNTGHSLQLNNNDNNVLIV GGG   |
| UniRef90_B3M085                                  |   |
| UniRef90_B4N9V2                                  | P R         R F N N Y N Q S T P   L V L   T N N G H T A N M   V L   P R G G Q R P Y   I   N G G   L   |
| UniRef90_UPI0004638DFB<br>UniRef90_G2E3S5        | LAPLAVHYTEGPAA LLNNGHTIQASFTHNDANTIMLDG<br>LPPIGFHY QPGGEEEENNGHSIQIDYAKGSNISL  |
| UniRef90_M3C8M9                                  | PIVIAIVIH Y R PIVIT A EIV VIN N G H TIVIQ A NIVIS A G S TIL V VID   |
| UniRef90_W4W7P6<br>UniRef90_A9NP26               | LELI GYHDFFPMPQLLKNNGKTVILSIDYRTLPYIFGGIL<br>LGTLHRIYH PANATLVNRGHDI MVNWSEGAGSVEI KG   |
| UniRef90_F1LP13                                  | YQE L QFDNESSNKTWMKNTGKT V A ILL KDDYF V SGAG   |
| UniRef90_T1FSN8<br>UniRef90_U6NLD5               | LPNIEFVGDFSSDATIVNNGHTVNIILKNPVRL VGGG<br>PSSMKLTYHEGDCEVIVAEPTTWRIK TGDNCKSSLTASH  |
| UniRef90_S4RNX7                                  | DGILLEFEGWDIVIPITITITIKHDGKTIVIVIHILISGDYHILI RGGG  |
| UniRef90_F9SZV5<br>UniRef90_L8GPJ9               | L G D L K F T Y P T N A S G T L WN N G H T L Q G V V E G D N T F T V D G L G D L K F T Y P T N A S G T L WN N G H T L E F H S E T N L WS H I S G G P L  |
| UniRef90_G7YCA4                                  | ILIG PIVINII IF PILIT E R K F TILIF N T G H S A E T F AIVIS F G D S   |
| UniRef90_Q0QBU9<br>UniRef90_I0FX45               | EVSNDGHTLKVSTEG MYVLKGGG  |
| UniRef90_Q84UV8                                  | LRILQKDY KP <u>S</u> NA <u>TIL</u> NRG <mark>H</mark> DIMLRLDDGGY <u>LKIN</u> E   |
| UniRef90_R0FD14                                  | <u>S</u> TE <u>ILIQTYYKPV</u> EALLKNRGFD <u>M</u> KVK <u>W</u> EDDAGKI <u>V</u> IN  |
| UniRef90_UPI0002A4CA15<br>UniRef90_H6WB77        | L   A P F D M G A <mark>C</mark> M   L   D D   L   D Y K A D G K G W T   V   T F D G Y   C Q T T P T   L   T   L  |
| UniRef90_F6EC75                                  | L T A   |
| UniRef90_UPI0002B4325D<br>UniRef90_L8MUM8        | L G E L K R S Y Y   |
| UniRef90_S8D8D0                                  | PAKIDFDY KSSPLVVVNNGHTIQVNYAPGSSVTING LKALIRDY RAVNVTLVDYKFTVGIEYPDGTGSLFVYG LEPLEVRYDPATCLHIWNNGYSFLVEFEDTSDKSLITGGP   |
| UniRef90_UPI000462DAFC<br>UniRef90_F1QZG9        | L   E   P   L   E   V   R   Y   D   P   A   T   C   L   H   I   W   N   G   Y   S   F   L   V   E   F   E   D   T   S   D   K   S   L   I   T   G   G   F   C   L   Q   L   H   G   F   N   L   T   N   Q   G   H   S   V   V   L   E   V   G   D   G   M   Q   V   S   G   G   G   G   G   G   G   G   G   |
| UniRef90_C5YM92                                  | LIGVI HHSY RPAFASI VNRGHDI MVREFGDAGSI VI NG  |
| UniRef90_UPI0003512165<br>UniRef90_W9QKB8        | LRPLNPNYDPASAKTI LNNGHSTSVEFDDTTTTFVLTGGP<br>LGGLQTNYS PAPATLENRGNETEVNWNGSDAGNLTVNG  |
| UniRef90_K4C9M1                                  | ILIGII LIQKILIY KPSNATILLINRGHDII IMILIRWDDGGFILIKII ING  |
| UniRef90_G2T963<br>UniRef90_E1W3U0               | LAPA YQAQSAVVVNNGHTLQVNVSPGSS LDF<br>K <u>PLK</u> MNY FPAA <u>Y</u> QVENNGHTVQVSVAQENA <u>P</u> F LTL   |
| UniRef90_K9ZQ32                                  | <u>T P                                    </u>  |
| UniRef90_H2S0J9<br>UniRef90_E0UHC8               | ILI VIFNYQNT PILINII VINNG H TII IQII INYAK G S RIVI I IG D   |
| UniRef90_A3UG46                                  | <u>P</u> AL <u>H</u> WEDGEGS   VITDNG <mark>H</mark> T     K V DL EDAGSL <u>H</u> L   |
| UniRef90_UPI00032A7512<br>UniRef90_D4BK10        | II IP AIL IN M Q Y IV ID S P T R F W S II ID H T II IR A T M S S Y S A N AII IF IV I  |
| UniRef90_G6EY53                                  | IL IT F H Y QIL IT T E HII VIN N T H T IV IQIV I VIS S D K D Y IL I IF H  |
| UniRef90_UPI000475C0C6<br>UniRef90_E0VKF0        | L PETSLQYSGKA TEVVNNGHTI QVNYAPGSTLE LRHIHLD KHKVSGTLQNTGQSLVFRLDKETKHHVNIGGP   |
| UniRef90_M4DQ67                                  | III C DII IP S H V II ID S N A TII IK N P C H DII IMII IE E E C C N A C M CII ITII IN C   |
| UniRef90_UPI0003EE3933<br>UniRef90_K3YIY2        | T MYNT GRHVSLRLDK EHLVNI SGGPLGYLDHSY RPAQASIVNRGHDI MVRFKGDAGSVVI NGHGVE WTYSVQLSLPSTMSMTTSLAPIKFHYH ATGFRIRDTGNTLQVDVGGGMGMEVRGV  |
| UniRef90_UPI0003C13106                           | H GVE WTYSVQUSLPSTMSMTTS  |
| UniRef90_N6YE17<br>UniRef90_I1M4I7               | L   A   P   I   K   F   H   Y   H   A   T   G   F   R   D   T   G   N   T   L   Q   V   D   V   G   G   G   M   G   M   E   V   R   G   V   L   Q   T   L   G   R   L   G   R   L   G   M   G   A   G   T   T   G   T   T   G   T   T   T   |
| UniRef90_W0DWJ7                                  | YTPLLFRY RSHQLELVNTGRGVRLLTPPGSALVI   |
| UniRef90_UPI000329F3E0<br>UniRef90_A0A022PQT7    | L G F II H Y D V P Y M K A V K I E N N G H I A N I Q L P T T R S D A A Y I S G P L W D L N T N Y K P A L A V I K N R G H D I F V F W R G D A G G V I I N G  |
| UniRef90_E4WUD9                                  | L G R L Q M N Y Q P S N A T I K N R G H D I K L E WV A G A G Y L Q I Y T P L L F R Y R S H Q L E L V N T G R G V R L L T P P G S A L V I L G F I H Y D V P Y M K A V R T E N N G H T A N I Q L P T T R S D A A Y I S G P L W D L N T N Y K P A L A V I K N R G H D I E V E W R G D A G G V I I N G E D F K V I G Y D A P Q T W S I T N K G T T V Q L D P Q D S S A M E L S G G F L S P V H V D K S T V A S E I I N I G Q M P R V R A R W P S V N V S G G P L  |
| UniRef90_U1MJ21<br>UniRef90_B9STU9               | L S P V H V D K S T V A S E I L N I G Q M P R V R I A R W P S V N V S G G P L L G R L N R S Y E P S N A T L K N R G H D M M L E W E N G A G T I E I N G   |
| UniRef90_C6WWH4                                  | LK <u>PLKLLQKFPAKEV</u> LQTN HSIQLNFRDGN <u>LVAIDNI</u> T   |
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| UniRef90_H2ZT50                                  | Y Q E L MF S T E S S N Q T T M K N T G K T V I M A L I V X S T S F Y T S A L G L N F E G E Q S V G A N L Q N N G H T I V V T P WA H F T L Q E V S V P P G D L H L A Y Q S A P A T V K S R G H D I M V S W T G D A G S I Q V N G L K P L N L D R Q N L L V H V T N I G W N I S F K A D N V N A L S L T G G G L E L N Y H K L C D P L S V I N V G L T V L M R L P K T E Q P S V C I S T E Q P Q I H Y R S K D A S V G Y E E A N K P Y T K E Y E G E Y S E I E V T D A S G F Q M L E L D G W T G D R T I I K N D G K T V A I N V D G D F Y L S G G G M E P L H R N Y T A A N A T L V D N I F N I A L R C G D A A G A V S L G T F T F T N Y S S K L L L N N P G H T V E V Q L A S G V T L S G G G N Y N P S T L R I F N N G H T I G V N Y D N G S M |
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| UniRef90_A0BL70<br>UniRef90 H2MY72               | Q P Q II H Y R S K D A S V G Y E E A N K P Y T K E Y E G E Y S E II E V T D A S G E O M II E II D G W T G D R T II I K N D G K T V A II N V D G D E V II S G G G  |
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| UniRef90_V5GFH5<br>UniRef90_Q8L817               | L R L I H L D K H K V S G M L H N T G Q S L V F R V D K D T K Q H V N I G G P L G R L N R D Y N P S N A T L K N R G H D I M L K F E D G A G T I K I N G   |
| UniRef90_R0FP82                                  | LRLI HLDKHKVSGM LHNTGQSLVFRVDKDTKQHVNIGGPLGRLNRDYN PSNATLKNRGHDI MLKFEDGAGTIKING<br>LGSLLLDY AAVPLAVRNTGHSI QLDLHDGGRMWTGG<br>LTLDWKGGGTI LNNGHTI QVKAAPGGTLRRGD  |
| UniRef90_UPI000365CF2F                           | ILTID WK G G G TIL N N G H T I QV K A A P G G T L R R G D   |
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| UniRef90_Q84UV8 TQYQLKQLHWH TPSEHTINGERFNLE<br>UniRef90_R0FD14 NTDYKLIQSHWHA PSEHFLNGFKFAMF   | A H L V H E<br>L H M V H K |
| MIT Y S H RL   E E   RL   H F G S E D S G G E H L L   N G G Q UNIR690 UP100032AD31   MIR690 UP100032AD322   UNIR690 UP100032AD31   MIR690 UP100032AD31   MIR690 UP100032DE8C4   UNIR690 UP72M3  | L H I V N S                |
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| UniRef90_E0VKF0 LAYRYQFEEFYIHYGIENHQGSEHQIHGYSFPGEUniRef90_M4DQ67 TVYQLQQLHWH SPSEHTINGKRFVLE   | I Q L Y G F<br>Q H M L H Q |
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| UniRef90_I1M4I7 NETEYVLKQ <mark>CHWH SPSEHTIDLE</mark><br>UniRef90_W0DWJ7 RGSAYDLSYVDFHV PAEHRIEGERYDAE   | L H M V H E<br>L Q L V H H |
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| UniRef90_J3LXM3   | LHMVHS<br>MHIVHT           |
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| UniRef90_B3P7Q7<br>UniRef90_UPI0004433D31        | P R   I V   Q Y N S N A T     T G   V   G Q   L L   G N   L V   T G E F F T Y N G S   L T T P D C A T R   T Y K N D A Y L L Q G L N   E E L Y P E T S S F   T Y D G S M T   P P C Y  |
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| UniRef90_S4RNX7                                  | KRIVICOPGILIHIVIH ATPECASDIL LIPESTDEERYSGTTTTPPCA   |
| UniRef90_F9SZV5<br>UniRef90_L8GPJ9               | KSGETVSLNHTINVADMIPDTEHYYRFNGSLTTPPCS<br>HDIETPDAHSPVGGLDVMSVLPRNASYYYYRGSLTLPDCD  |
| UniRef90_G7YCA4<br>UniRef90_Q0QBU9               | Q F   I   H N E G N   V   T M N G F D   L   S R   L   Q   V   D   P Q A Y Y R Y H G S   L   T T P P C T<br>A G   V   R R K G T K   V   E Y Y A H   L   P   L   M   L   P A D   V   N C   F Y R Y N G S   L   T   V   P N C   Q                 |
| UniRef90_I0FX45<br>UniRef90_Q84UV8               | SKATYDGTTVNLATPFPLAITSLMQPYFRYRGSLTTPT <mark>C</mark> N  |
| UniRef90_R0FD14                                  | N K     A D Q D G E   V   S   I   G K   I   D P R E F G W D   L   T K F Y E Y R G S   L   T T P P <mark>C</mark> T   |
| UniRef90_UPI0002A4CA15<br>UniRef90_H6WB77        | IVIS A T A S S S M S A M F OIVIN P Y S MILIP A D G T Y Y N Y ILIG S ILIT T P P C S   |
| UniRef90_F6EC75<br>UniRef90_UPI0002B4325D        | P RNPGEESPLITI DPKGLLPSSLSYWTYEGSLTTPPCS<br>LGMVDRKHEKKVGVMNPADI KFGGKKYYRYLGSLTVPPCT  |
| UniRef90_L8MUM8<br>UniRef90_S8D8D0               | Y O II A D S G G R I PI G A F H P P F II R K T P A K Y Y R Y V G S S S V P P C G   |
| UniRef90_UPI000462DAFC<br>UniRef90_F1QZG9        | PSIKHKDDLVEFEEFDPSCLLPSCTDYWTY<br>SYVAYKGQTKSLK <u>PFPLV</u> NLLPQNNQYYRYHGSLTTPPCS  |
| UniRef90_C5YM92                                  | ERVG VVDPRRARGTASVYYRYMGSLTAPP <mark>C</mark> T  |
| UniRef90_UPI0003512165<br>UniRef90_W9QKB8        | DTIRLK<br>LS <u>LRNG</u> TKQ <u>L</u> PLGI <u>V</u> NPR <u>D</u> IE <u>S</u> PWRSYYRYNGSLT <u>T</u> PP <mark>C</mark> A  |
| UniRef90_K4C9M1<br>UniRef90_G2T963               | LEALRLADQKALGINHPNLIKIDEKRYYRYMGSLTVPPCT<br>PAKEGGEATLGDPGPDLGKLLPESKSYTFYEGSLTTPPCS   |
| UniRef90_E1W3U0<br>UniRef90_K9ZQ32               | KKLTVGQKEKLAQPI DI KALMPKEMARFRLNGSLTTPPCS<br>PA_AGKNNLVQNSTI SA <u>ANLLP</u> KNKAYFSY <u>T</u> GSLTTPPCS  |
| UniRef90_H2S0J9                                  | Q N   T N A G T S V D <u>M A</u> S L D A L L E G V D R T K Y Y R Y L G S L T T P T <mark>C</mark> N  |
| UniRef90_E0UHC8<br>UniRef90_A3UG46               | S P E Q G E K N F A N V I I N A K D F I P V D Q S Y Y N Y L G S L T T P P C T I P H E G E H H E V D D V D P A A F L P A D H S A WR Y A G S L T T P P C S M D L P D E E E E K S L G L I D P S L L K M G G S M Y Y R Y M G S L T A P P C T       |
| UniRef90_UPI00032A7512<br>UniRef90_D4BK10        | PAMKD SSMPILIESPIVIDII IN QILLIPDNKTYWILIYSGSILITTPPCT   |
| UniRef90_G6EY53<br>UniRef90_UPI000475C0C6        | VISPOPNKEEIVIMTKPENII INNEII IPKDTSVEHVTGSII ITTPP <mark>C</mark> II I   |
| UniRef90_E0VKF0                                  | P LDSGEKEALTTPINTADILPSSHAYYRFNGSLTTPPCS<br>NKVLYRGAYTPIRHLSLRSLLPDTEHYMTYEGSTTHPGCW   |
| UniRef90_M4DQ67<br>UniRef90_UPI0003EE3933        | HESEDFVSLIDPRAVNFKTKFYYRYLGSLTTPPCS<br>DRITYKNDAYLLQGLNIEELYPETSSFITYDGSMTIPPCY  |
| UniRef90_K3YIY2<br>UniRef90_UPI0003C13106        | HRI ADRDREEPVGVVDPRGARGRASVYYRYMGSLTTPPCTEDIRYAGQSTVLRGLDIEDMLPDLRYYYSYLGSLTTPPCTLPLDRGREFVPDETIDLAAFMPSSPAHFLYLGSLPAPPCTKALSDTTEAERVVGVDPRQIKIFYKQYYRYLGSLTLPPCTPARPGERTRHRQIGVNPLFLLPLDRGYFRYHGSLTQPPCR                                      |
| UniRef90_N6YE17<br>UniRef90_I1M4I7               | LPLDRGREFVPDETIDLAAFMPSSPAHFLYLGSLPAPPCT   |
| UniRef90_W0DWJ7<br>UniRef90_UPI000329F3E0        | PARPGERTRHRQI GVN PLFL L PLD R GYFRYHGS L T QPPCR<br>ESUSEFNRSTEI DDFLLSVL DLDTSEFYTYA GSL T T PPCS  |
| UniRef90_A0A022PQT7                              | QAATREGTNII IGII   ILIEPPEIVIAFGGREYYRYNGSILITTPP <mark>C</mark> S   |
| UniRef90_E4WUD9<br>UniRef90_U1MJ21               | DKVRTKDDTTAEQLFGWSMLPKDLDGFWRYEGSLTTPTCD<br>SSIRFKRKRVELLDLKPWK <u>MLPH</u> KADYVTYEGS <u>M</u> T <u>S</u> PG <mark>C</mark> H   |
| UniRef90_B9STU9<br>UniRef90_C6WWH4               | R SIL IS G T F F F F R IV V IGII IN P K DIL IKII IG S R K Y Y R Y M G SIL IT IV IP P C T   |
| UniRef90_W9SAK2<br>UniRef90_E6QKU4               | PNESN NAVTLKSRLLASELMPSNQDYYRFSGSLTTPPCT EEISDTGEEIIVV I DPNKI KIGSQRYYNYIGSLTTPPCT LPKTPGKSATMNDPLSSAGLLPADRGYWTYMGSLTTPPCT   |
| UniRef90_C3XFH2                                  | II IDII ID K A H Q M D MII IYII IS QIL L IP K N H G Y Y A F S G S IL IT T P P C N  |
| UniRef90_F2E480<br>UniRef90_UPI000360FCF5        | SGTILINKIVINIVITGILIM IVINSADILLIPDKRQYEHYSGSILITTPPCS   |
| UniRef90_B7KGJ9<br>UniRef90_F2E858               | N N G A F P S T   V   P F T D   V L   D   L   E S   L   F P S D W K G W F Y N G S   L   T T P P A T<br>R M A D M K E K E E K   V   G   L V   D P G E A R G D G E A Y Y R Y M G S   L   T T P P C D   |
| UniRef90_H3DQ54<br>UniRef90_H2ZT50               | R R V V H H E K E T S L R S F I L R D L L P S V D G Y Y R Y T G S L T T P P C S P K V K Y N G T V C A F S C L Q G L E G V F W K I G G R I V V H N L R V T K L C  |
| UniRef90_B9T345                                  | KSVTKEEKK IGTINPKDIGFSSSNYYRYVGSFTSPPCT  |
| UniRef90_UPI0001924FBD<br>UniRef90_B3LV08        | DKVPYMNNSASFNVDPYLLLPKNLNHYFRYPGSLTMPPLT<br>SEVESTQNLGKSIALEDLFGGMDTGRYLTYQGSLTTPPCA   |
| UniRef90_A0BL70<br>UniRef90_H2MY72               | SEVEST QNLGKSIALEDLFGGMDTGRYLTYQGSLTTPPCASNTTGEVESFDLNDFFSKL SDATYLTYQGSLTTPPCSSVSRYAGKSAEMSPFSLQGLLPNTEKYFTYNGSLTTPPCLGCKAEKGTPLPAGFVSMLSLRQHVHMYYRYVGSLTTPPCAVNVSNAGTNITLNGSFSIDSILDRTSYYRYLGSLTTPTCDPYQESKEVRFPYITINAQDLIPQSERVYMYYGSLTTPPC |
| UniRef90_J3LXM3<br>UniRef90_UPI00034FE861        | G  |
| UniRef90_M1X0B4<br>UniRef90_I1LL36               | PYQESKEVRFPYITINAQDLIPQSERVYMYYGSLTTPPCS<br>KAISD <mark>C</mark> TGAEIELGVLDPWLVSI <mark>C</mark> RSYYRYSGSLTTPPCT   |
| UniRef90_V5GFH5                                  | NKVQYKGAYTPIKHLSLRSLLPDTDSFMTYEGSTTHPGCW   |
| UniRef90_Q8L817<br>UniRef90_R0FP82               | EGLAEEEAEKNVGMI DPTKI KIGSRKYYRYTGSLTTPP <mark>C</mark> T<br>PKDKNHTQ <u>LVA</u> NALIRASD <u>F</u> LPNQ <u>R</u> SFYRYEGSLTTPP <mark>C</mark> S  |
| UniRef90_UPI000365CF2F<br>UniRef90_UPI00032A5394 | PKDKNHTQLVANALIRASDFLPNQRSFYRYEGSLTTPPCS<br>QKAGDEASLHGVVDPSGLLPSALSYWAYEGSLTTPPCS<br>KLIDDKE LDVGTLNPADIKFANKKYYRYLGSLTTPPCT  |
| UniRef90_UPI0003AFA9E7<br>UniRef90_I3S826        | NSVSRYGKSARVSPFTLQGLLPNTEKYFTYNGSLTTPPCS<br>KSMSDHEAEKSLGVMDPSEI KLGGKKYYRYVGSLTLPPCT  |
| UniRef90_Q16RN9                                  | EAESEYSI PRQELFSVSDVLGDMEWPYFAYEGSLTTPPCS  |

|  | 210 220 230 240   |
|--|---|
| UniRef90_B9HC91<br>UniRef90_M0SW01               | ENVĪWNILGKVRTĪSKEQLEĀLRAPLGDDYKQ N<br>EGVVWTIVKKVRTVTREQVALLREAVHDDSEM N  |
| UniRef90_V7CZU1<br>UniRef90_V4NF13               | E GI I WTI DKKIRT VSRIQVELLKNTV  E NVT WL VYASPLSISAEQVDAYQRLT  E AVT WTV F P DV L DYPRRQLAKLWNLR  DSRKKPLIDN   |
| UniRef90_B3P7Q7                                  | EAVT WIVE POVLOYPRRQUAKLWNLR DSRKKPLIDN   |
| UniRef90_UPI0004433D31<br>UniRef90_UPI00032AD2E2 | ETAS WII MNKPVYITR MQMHSL RLLS QNQPSQIFLS MSDNQNITWTII REVKSVSKKQIELLRVAVHDESDS NEGVIWTILAHPNLVTDTQLRILRRHLR EDGSLLIDN  |
| UniRef90_A0A016S773                              | E GV I WT I LAHPNEVT DT QLRI LRRHLR EDGSELIDN   |
| UniRef90_UPI00032ABA01<br>UniRef90_UPI0003EDE8C4 | E G V    WN        G K V  R T   L    S K K Q   L    E    L L    K A   |
| UniRef90_W7ZMJ3<br>UniRef90_U5EY71               | EGVKWTVLDEPIEVSREQLDRFQSIYPS  N EAVLWTVETUSIDDOVEREKTI  |
| UniRef90_B3M085                                  | E G V I WN I I G K V R T L S K K Q L E L L K A PL G A E F Q Q N P A D V W M V L E D R V P I W R A Q V A Q F Q T V P Q A G P G S N P A P L T E N E G V K W T V L D E P I E V S R E Q L D R F Q S I Y P S E A V I W T V F T H S L P I S L D Q V E R F K T I K T E D G H E L L V N E A V T W N V F S D V L D F P H R Q I A K L L N L Q D S R K R P L I N N E S V T W T V F S D L D F P E R Q I A K L W T L K D S R S R P L I N N E S V T W T V F S D L D F P E R Q I A K L W T L K D S R S R P L I N N   |
| UniRef90_B4N9V2<br>UniRef90_UPI0004638DFB        | ESVTWTVFSDLLDFPERQIAKLWTL KDSRSRPLINN<br>EGVTWLVMKHPLTLSQAQLDKFKAVMHH DN  |
| UniRef90_G2E3S5                                  | E G V T WL V M K H PL T L S Q A Q L D K F K A V M H H E G V A WL V M K E P V T A S A D Q I H K F A R V M G H P N E G V K W T V L D H E V R V T P G Q V A A Y R E L F P R S E V V T W H I F A N P I P I S F R Q K I R P N S L E G V I W N V I D E V R T V S E D Q V R A L Q E A V H D G Y E K E I V E W L V F R R P V P I S Y H Q  |
| UniRef90_M3C8M9<br>UniRef90_W4W7P6               | EVVT WHI FAN PIPI SFRQKIRPN SL  |
| UniRef90_A9NP26<br>UniRef90_F1LP13               | E G V I W N V I D E V R T V S E D Q V R A L Q E A V H D G Y E K N E I V E WI V F R R P V P I S Y H Q  |
| UniRef90_T1FSN8                                  | ENVIWTIAIGTSTISEKQLNEFRNLMISQMKLDPPKLDHN<br>ESVLWTIMLTPVEVSHKQLRQFHRI<br>GVKEN<br>QGVEWTVFPRTVHISAHQLEALYGVLRAGYAMLLEYLQDN  |
| UniRef90_U6NLD5<br>UniRef90_S4RNX7               | Q G V E W T V F P R T V H I S A H Q L E A L Y G V L R A G Y A M L L E Y L Q D N   |
| UniRef90_F9SZV5<br>UniRef90_L8GPJ9               | EGVRWFVLKQAQTLSQEQTKLFKQV MGKN ERVTWLVLSHTMTALPEQIQEFTKIYPHI ENVMWTVFRQPVSLWNKQLTKTMWLDATSNG  |
| UniRef90_G7YCA4                                  | ENVMWTVFRQPVSIWNKQLTKTMWLDATSNG   |
| UniRef90_Q0QBU9<br>UniRef90_I0FX45               | ESVTWSVGCNPIHMSHNQLDMFRELYQGFFMEPNGHIEDN<br>EVVTWTVFKMPIRISQRQLNVFRMLRANAAGSPDIPLVDN  |
| UniRef90_Q84UV8<br>UniRef90_R0FD14               | E G V V WI I I D R K V K T V T R R Q I K L L Q E A V H D G F E T N E D V M W T I I N K V G T V S S Q Q I D M L T D A R R G G Y E M N E A V V W T V F K D P I M V S K D L I D L F G S T V R F S N S T S S F M T N V E T V T W L V M K E G I T V S P D Q L E A F R A G L M D P E F P L V D N Y G N N E I V D W M V A M E A V E V D P G D I K K F T A L Y S M N E G V I W T M N K K I R T V S R E Q V R L R E A V H D Y A E F N E G V K W N V F V E P M T V S E E Q I E A F E K L Y Q V D E N V P Y V I L G K V R S V S P E Q V A A I K A P L E F T C K D N  |
| UniRef90_UPI0002A4CA15<br>UniRef90_H6WB77        | EAV VWTV FKD PI MV SKDLI DLFGSTVRFS NSTSSFMTNV  |
| UniRef90_F6EC75                                  | E V D WM V A M E A V E V D P G D I K K F T A L Y S MN   |
| UniRef90_UPI0002B4325D<br>UniRef90_L8MUM8        | E G V   W   M N K K   K     K     V   S R E Q V   R   L   R E A  V   H D Y A E F N E G V   K W N   V   F   V   S E E Q   I   E A F E K   L   Y Q   V   D  |
| UniRef90_S8D8D0<br>UniRef90_UPI000462DAFC        | ENVPYVILGKVRSVSPEQVAAIKAPLEFTC KDN  |
| UniRef90_F1QZG9                                  | EVVLWTIYEVPVYIIS WA OFE OFVIS GIIY STEEEII QALLIH D N   |
| UniRef90_C5YM92<br>UniRef90_UPI0003512165        | E GV I WT I VK RVR S VS K Y QLE LLR E A VH D D MENN   |
| UniRef90_W9QKB8<br>UniRef90_K4C9M1               | ENVLWTVLKRVQTVSPKQVQALQEAVDDGFEE NENVLWTIDGKTKTVTRRQIQLLRDVVHDGFEY N  |
| UniRef90_G2T963                                  | E   V V   N VV   I   N   L   K   F   V   I   V   S E D Q   I   A K F A A   L   F F   WI N   |
| UniRef90_E1W3U0<br>UniRef90_K9ZQ32               | ENVAWTIFKAPIQASKAQIAALEEME GKN<br>ESVKWNVLAEPIQVSEEQIEAFQNLYQV  |
| UniRef90_H2S0J9<br>UniRef90_E0UHC8               | ESVKWNVLAEPI QVSEEQI EAFQNLYQV EAVVWTVFKDSI KVSKDLI DLFSTSVYFNTSKNSEFMTDV EGVNWFVFKTPLKVSPQQI QQFTQLY QLN EGVAWTVMQTPI SASAEQI AAFT AHYAHN  |
| UniRef90_A3UG46                                  | EGIVIA WITVIMO I PILIS A SA EQILIA A ET A H Y A H N   |
| UniRef90_UPI00032A7512<br>UniRef90_D4BK10        | E G V T W T I N K K T R T V S R G Q V K L K N S V L K Y Y A K R N E G V S W V V L K K P V V L S A E Q L D K F R Y I V G P A N   |
| UniRef90_G6EY53<br>UniRef90_UPI000475C0C6        | EDIVIT WIT V LIK Q PIVIQIVIS ED QIVID R F ET <u>LIMI</u> Q H D N  |
| UniRef90_E0VKF0                                  | ET <u>AL</u> YQIL  R <u>K L  M</u> QGSEETPKAP L GNN   |
| UniRef90_M4DQ67<br>UniRef90_UPI0003EE3933        | ETASWII MNK DVVI TDMOM <mark>I</mark> SI DI ISONODSOIEUSMSDN  |
| UniRef90_K3YIY2<br>UniRef90_UPI0003C13106        |   |
| UniRef90_N6YE17<br>UniRef90_I1M4I7               | E D V V W V M K T P V V M S A D Q L A L F A R L Y P  E N V S W T I I R K I Q S V S K E Q V R L L R V A V H D E S D T  N   |
| LiniPatan MADN/17                                | E SALWL V F G E PLEV G V G Q L Q R L R A V  |
| UniRef90_UPI000329F3E0<br>UniRef90_A0A022PQT7    | Q A V T WL V F A Q P I T I T S S Q M T R F H K L Q D D H G I A M E N N E N I T W T V F K T V R T V S L Q Q I T A L S D A V D D G N T G N  |
| UniRef90_E4WUD9                                  | EVVTWTVFETPIKMKAATFDMLKSTGLALLPPTDPKIPSN<br>ETVTWLLINHPLEUTREDUDSWSOUOOTTEEAEPRYLGPN  |
| UniRef90_B9STU9                                  | ENVINTI VKKURTVTREQVSLIRVAVHDESDT   |
| UniRef90_W9SAK2                                  | ENV VWI LIN I F WI A S R E Q V S L L R V A V H D D S D T N  |
| UniRef90_E6QKU4<br>UniRef90_C3XFH2               | E G V R WY V ME Q S V T L S R D Q L  Q A F G A  L  Y K R N E G V Q W   V L K E S V E A S Q A Q I  D A M H A II  |
| UniRef90_F2E480                                  | E GV I WTI VK RVRTVS RHQLELLREAVHDD MEKN  |
| UniRef90_B7KGJ9                                  | Q A V T W L V F A Q P I T I T S S Q M T R F H K L Q D D H G I A M E N N E N I T W T V F K T V R T V S L Q Q I T A L S D A V D D G N T G N E V V T W T V F E T P I K M K A A T F D M L K S T G L A L L P P T D P K I P S N E T V T W I I N H P I F I T R E D L D S W S Q L Q Q T T E E A E P R Y I G P N E N V I W T I V K K V R T V T R E Q V S L L R V A V H D E S D T N E G V R W I V I K T P M T A S K E Q I E A L S A L T Q N N E G V R W I V M E Q S V T L S R D Q L Q A F G A L Y K R N E G V Q W I V L K E S V E A S Q A Q I D A M H A I L K D N E G V I W T I V K R V R T V S R H Q L E L R E A V H D D M E K N E G V I W T I V K R V R T V S R H Q L E L L R E A V H D D M E K N E G V N W F V F E T P I E M S A A Q I D I F Q D F L A S N N L T N N E G V N W F V F E T P I E M S A A Q I D I F Q D F L A S N N L T N N E G V I W T V I K R V A T V S T D Q L K L L T D A V H D G F E M N K V V E W I F S R P V Y L S H S Q L E A F Y S L F T T G P N E S H S V R M C N N E G V P W T V F Q E V K T V S M E Q V Q A L K G A V D D G F Q M N E N V T W T V L P E L V R I S L N Q L E R M S K N N P R E E W E Q H N C I T N N T S M S C I T N N T S C I T N T N T S C I T N N T S C I T N T N T S C I T N T N T S C I T N T N T S C I T N T N |
| UniRef90_F2E858<br>UniRef90_H3DQ54               | E G V   |
| UniRef90_H2ZT50                                  | QG LFYSQYHHITSQLFFTGPNESHSVRMCNN<br>FGVPWTVFQFVKTVSMFQVQAUKGAVQDQG  |
| UniRef90_UPI0001924FBD                           | ENVI WIV LPELVRI SUN QLERMSKNNPREEWEQHNCIIINN   |
| UniRef90_B3LV08<br>UniRef90_A0BL70               | ENVTWTVLPELVRISLNQLERMSKNNPREEWEQHNCITNN<br>EAVLWEVFQTPLDIPHELWQNFWQLR NSQGQRVLNT<br>QTVNWVVFQQPLPISTAQLKQFQDYLAD STLFPIKHN<br>DTVEWLVFKNAVALSEQQLEVFMTMQQAGYVMLMDYLQNN   |
| UniPaton H2MV72                                  | DTVEWLVFKNAVALSEQQLEVFMTMQQAGYVMLMDYLQNN  |
| UniRef90_UPI00034FE861                           | ENVIWNIPARVREMTQQQAAALMA PLEEGYRRN  |
| UniRef90_M1X0B4<br>UniRef90_I1LL36               | ENI Y WI V F Q E PLE I S T D Q I Q Q F<br>ENVA W T V L T E V R Y V S R E Q I R L L R V A V H D D S<br>N   |
| UniRef90_V5GFH5<br>UniRef90_Q8L817               | ENI Y WILVIE QEPLEI STDQI QQF ENVAWTV LTEVRY VSREQIRILR VAVHDDS ETTVWI LNKP QNVTWSV VRKVRTVTRKQV KLLRVAVHDDANS ETVDWV V LTQPVQV SEAQINAFERIYSF NEI VDWMVAMNPIE VDPADIKKFTALYS MN EGVTWTI VKKVKTASIE QIIALKEAVHRGFEE   |
| UniRef90_R0FP82                                  | ETVDWWVVARAPVQVSEAQINAFERIYSF   |
| UniRef90_UPI000365CF2F<br>UniRef90_UPI00032A5394 | EUVDWMVAMNPIEVDPADIKKFTALYS MN<br>EGVTWTIVKKVKTASIEQLIALKEAVHRGFEE N  |
| UniRef90_UPI0003AFA9E7<br>UniRef90_I3S826        | EGVTWTIVKKVKTASIEQIIALKEAVHRGFEE NEIVEWLIFKNTVAISDDQAQLDDTINMHYQVCSSEPEGVIWTINKKIRSVSKAQINFLREAVHNHA QRNETVQWIVASERQLLTRSELKTMRMLKGRGGDWVQT   |
| UniRef90_Q16RN9                                  | Ē T V Q WI VA S E R Q L L T R S E L K T M R M L K G R G G D WVQ T   |

| UniRef90_E4WUD9       YRNVQPLNGRKV         UniRef90_B9STU9       ARPLQINGRS         UniRef90_C6WWH4       NRPVQPLNGRS         UniRef90_W9SAK2       ARPLQINGRS         UniRef90_E6QKU4       NRPVQPLNGRS         UniRef90_E3XFH2       ARPLQETNGRS         UniRef90_F2E480       ARPLQETNGRS         UniRef90_UP1000360FCF5       ARPLQETNGRS         UniRef90_B7KGJ9       ARPLQET         UniRef90_B7KGJ9       NRPLQET         UniRef90_H2ZT50       ARPLQET         UniRef90_H2ZT50       ARPLQKVNDR         UniRef90_B9T345       ARPLQRVYQPLNGRQ         UniRef90_B3LV08       ARPLQRVYQPLNGR         UniRef90_B0BT345       ARPLQRVYQPLNGR         UniRef90_B0BT345       ARPLQRVNGR         UniRef90_B0BT345       ARPLQRLNGR         UniRef90_B1LV36       ARPLQPLNGR         UniRef90_B1LX36       ARPLQPLNGR         UniRef90_UP100034FE861       ARPLQPLNGR         UniRef90_R0F82       ARPLQPLNR         UniRef90_UP100032A5394         UniRef90_UP100033A5394         UniRef90_UP10003AFA9E7         UniRef90_UP10003AFA9E7         UniRef90_UP10003AFA9E7         UniRef90_UP10003AFA9E7         UniRef90_UP10003AFA9E7  |                                      |  |
|--|--------------------------------------|--|
| Milkel90   | UniRef90 B9HC91                      | 250<br>S R PIVIO SILIK G R TILIF                                       |
| Milkel90   | UniRef90_M0SW01                      | ARPTQKINDRMI   |
| Milkel90   | UniRef90_V7CZU1                      | A R P L Q P L N E R K I Q<br>A R P L O T A O G R D L                   |
| Milkel90   | UniRef90_B3P7Q7                      | YRSIQDTNNRDVY  |
| Milkel90   | UniRef90_UPI0004433D31               | F R P V Q P L N N R C I R T N L  |
| Milkel90   | UniRef90_0P100032AD2E2               | WRTIVOPMNGRKILIYILIN   |
| Milkel90   | UniRef90_UPI00032ABA01               | ARTLQQLNGRKIEK   |
| Milkel90   | UniRef90_UPI0003EDE8C4               | F R P Q Q P L   Q G R R   V L   A S<br>Y R P V O D L G N R F V         |
| Milkel90   | UniRef90_U5EY71                      | FRSLQPLNAR   |
| Milkel90   | UniRef90_B3M085                      | Y R S I Q D T N D R E I Y  |
| Milkel90   | UniRef90_UPI0004638DFB               | N R P V Q P L H G R V V  |
| Milkel90   | UniRef90_G2E3S5                      | N R P I Q A A N H R V I  |
| Milkel90   | UniRef90_W4W7P6                      | NKFEQFKNGKE  |
| Milkel90   | UniRef90_A9NP26                      | A R P L Q P L N G R L V  |
| UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP000224CA15 UniRef90_UP1000224A2S25D UniRef90_UP1000228A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP1000452DAFC UniRef90_UP10003512165 UniRef90_UP10003312165 UniRef90_UP10003312165 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3934 UniRef90_UP100032B3935 UniRef90_UP100032B3935 UniRef90_UP100033B5266  A R P V Q P L N Q R E I E N Q R E I E N Q R E I L D S N R W V Q P L N Q R E I E N Q R E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E   | UniRef90_T1FSN8                      | WRWIQD <u>K</u> KNRKVRS  |
| UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP000224CA15 UniRef90_UP1000224A2S25D UniRef90_UP1000228A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP1000452DAFC UniRef90_UP10003512165 UniRef90_UP10003312165 UniRef90_UP10003312165 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3934 UniRef90_UP100032B3935 UniRef90_UP100032B3935 UniRef90_UP100033B5266  A R P V Q P L N Q R E I E N Q R E I E N Q R E I L D S N R W V Q P L N Q R E I E N Q R E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E   | UniRef90_U6NLD5                      | FRDLQPLNGRKLYSS  |
| UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP000224CA15 UniRef90_UP1000224A2S25D UniRef90_UP1000228A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP1000452DAFC UniRef90_UP10003512165 UniRef90_UP10003312165 UniRef90_UP10003312165 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3934 UniRef90_UP100032B3935 UniRef90_UP100032B3935 UniRef90_UP100033B5266  A R P V Q P L N Q R E I E N Q R E I E N Q R E I L D S N R W V Q P L N Q R E I E N Q R E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E   | UniRef90_54RNX7<br>UniRef90_F9SZV5   | NRPIQAKNARVVLEN  |
| UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP000224CA15 UniRef90_UP1000224A2S25D UniRef90_UP1000228A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP1000452DAFC UniRef90_UP10003512165 UniRef90_UP10003312165 UniRef90_UP10003312165 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3934 UniRef90_UP100032B3935 UniRef90_UP100032B3935 UniRef90_UP100033B5266  A R P V Q P L N Q R E I E N Q R E I E N Q R E I L D S N R W V Q P L N Q R E I E N Q R E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E   | UniRef90_L8GPJ9                      | NRPVQPLNSRVVY  |
| UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP1000224CA15 UniRef90_UP000224CA15 UniRef90_UP1000224A2S25D UniRef90_UP1000228A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP100028A2S25D UniRef90_UP1000452DAFC UniRef90_UP10003512165 UniRef90_UP10003312165 UniRef90_UP10003312165 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032A7512 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3933 UniRef90_UP100032B3934 UniRef90_UP100032B3935 UniRef90_UP100032B3935 UniRef90_UP100033B5266  A R P V Q P L N Q R E I E N Q R E I E N Q R E I L D S N R W V Q P L N Q R E I E N Q R E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E N Q R E I E N Q R E N Q R P V Q P L N Q R E I E   | UniRef90_G7YCA4<br>UniRef90_Q0QBU9   | FRPTQPLYDRQVLRN  |
| Nine      | UniRef90_I0FX45                      | YRPPQPLNGRUVFHS  |
| Nine      | UniRef90_Q84UV8<br>UniRef90_R0FD14   | ARPPQPLNGRLVYLN  |
| Nine      | UniRef90_UPI0002A4CA15               | YRSDQ NSQPVRT  |
| Nine      | UniRef90_H6WB/7<br>  UniRef90_F6EC75 | A R P A L A G N R R Y V I S S  |
| Nine      | UniRef90_UPI0002B4325D               | ARPLQPLNSREI   |
| Uniref90_UP1000462DAFC Uniref90_CFVM92 Uniref90_UP00003512165 Uniref90_W9QKB8 Uniref90_W9QKB8 Uniref90_W9QKB8 Uniref90_E7963 ARP   Q   | UniRef90_L8MUM8<br>UniRef90_S8D8D0   | ARPIQPSNGRVIQ  |
| UniRef90   | UniRef90_UPI000462DAFC               |  |
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| UniRef90_M4DQ67  | UniRef90_UPI0003512165               |  |
| UniRef90_M4DQ67  | UniRef90_W9QKB8                      | A R P T Q P L N G R K V  |
| UniRef90_M4DQ67  | UniRef90_G2T963                      | ARPPQALHRRLILES  |
| UniRef90_M4DQ67  | UniRef90_E1W3U0                      | N R P T Q P L N Q R D V E  |
| UniRef90_M4DQ67  | UniRef90_H2S0J9                      | Y R S V Q  |
| UniRef90_M4DQ67  | UniRef90_E0UHC8                      | A R P V Q P L N Q R E I  |
| UniRef90_M4DQ67  | UniRef90_UPI00032A7512               | ARPVQLLNQREIE  |
| UniRef90_M4DQ67  | UniRef90_D4BK10                      | N R P T Q P L N Q R K I T D S  |
| UniRef90_M4DQ67  | UniRef90_UPI000475C0C6               | N R P V Q P V N A R V I  |
| UniRef90_InM4I7 UniRef90_W0DWJ7 UniRef90_W0DWJ7 UniRef90_UPl000329F3E0 UniRef90_UPl000329F3E0 UniRef90_A0A022PQT7 UniRef90_E4WUD9 UniRef90_DIMJ21 UniRef90_B9STU9 UniRef90_B9STU9 UniRef90_C6WWH4 UniRef90_C6WWH4 UniRef90_C6WWH4 UniRef90_C3XFH2 UniRef90_C3XFH2 UniRef90_F2E480 UniRef90_F2E480 UniRef90_B7KGJ9 UniRef90_B7KGJ9 UniRef90_H2ZT50 UniRef90_H2ZT50 UniRef90_H2ZT50 UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl00034FE861 UniRef90_UPl00034F394 UniRef90_UPl00034F349E7 UniRef90_UPl0004F34F |                                      | A R P L Q N L H H R T V R T N L  |
| UniRef90_InM4I7 UniRef90_W0DWJ7 UniRef90_W0DWJ7 UniRef90_UPl000329F3E0 UniRef90_UPl000329F3E0 UniRef90_A0A022PQT7 UniRef90_E4WUD9 UniRef90_DIMJ21 UniRef90_B9STU9 UniRef90_B9STU9 UniRef90_C6WWH4 UniRef90_C6WWH4 UniRef90_C6WWH4 UniRef90_C3XFH2 UniRef90_C3XFH2 UniRef90_F2E480 UniRef90_F2E480 UniRef90_B7KGJ9 UniRef90_B7KGJ9 UniRef90_H2ZT50 UniRef90_H2ZT50 UniRef90_H2ZT50 UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl00034FE861 UniRef90_UPl00034F394 UniRef90_UPl00034F349E7 UniRef90_UPl0004F34F |                                      | FRPVQPLSNRCIRTNI   |
| UniRef90_InM4I7 UniRef90_W0DWJ7 UniRef90_W0DWJ7 UniRef90_UPl000329F3E0 UniRef90_UPl000329F3E0 UniRef90_A0A022PQT7 UniRef90_E4WUD9 UniRef90_DIMJ21 UniRef90_B9STU9 UniRef90_B9STU9 UniRef90_C6WWH4 UniRef90_C6WWH4 UniRef90_C6WWH4 UniRef90_C3XFH2 UniRef90_C3XFH2 UniRef90_F2E480 UniRef90_F2E480 UniRef90_B7KGJ9 UniRef90_B7KGJ9 UniRef90_H2ZT50 UniRef90_H2ZT50 UniRef90_H2ZT50 UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl0001924FBD UniRef90_UPl00034FE861 UniRef90_UPl00034F394 UniRef90_UPl00034F349E7 UniRef90_UPl0004F34F |                                      | ARPLQEVNDRDI   |
| UniRef90_UDWJ7 UniRef90_UPI000329F3E0 UniRef90_A0A022PQT7 UniRef90_E4WUD9 UniRef90_E4WUD9 UniRef90_C5WWH4 UniRef90_C6WWH4 UniRef90_W9SAK2 UniRef90_E6QKU4 UniRef90_E6QKU4 UniRef90_E6QKU4 UniRef90_UPI000360FCF5 UniRef90_UPI000360FCF5 UniRef90_UPI000360FCF5 UniRef90_UPI000360FCF5 UniRef90_UPI000360FCF5 UniRef90_UPI000360FCF5 UniRef90_B8T345 UniRef90_H3DQ54 UniRef90_H3DQ54 UniRef90_H2ZT50 UniRef90_B8T345 UniRef90_UPI0001924FBD UniRef90_B8T345 UniRef90_B8T345 UniRef90_UPI0001924FBD UniRef90_UPI000034FE861 UniRef90_UPI00034FE861 UniRef90_UPI0034FE861 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UNIREF90_UPI00034FE861  |                                      | IRPIIQPANGRILILIES   |
| UniRef90_UPI000329F3E0 UniRef90_A0A022PQT7 UniRef90_A0A022PQT7 UniRef90_DE4WUD9 UniRef90_UTMJ21 UniRef90_B9STU9 UniRef90_B9STU9 UniRef90_C66WWH4 UniRef90_W9SAK2 UniRef90_E6QKU4 UniRef90_C3XFH2 UniRef90_F2E480 UniRef90_F2E480 UniRef90_B7KGJ9 UniRef90_B7KGJ9 UniRef90_H2ZT50 UniRef90_H2ZT50 UniRef90_B9T345 UniRef90_UPI0001924FBD UniRef90_D1BUN00 UniRef90_UPI0001924FBD UniRef90_D1BUN00 UniRef90_UPI0001924FBD UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_UPI0003665CF2F UniRef90_UPI00036A5394 UniRef90_UPI0003AFA9E7  |                                      | A R P L Q L I N N R L V K  |
| UniRef90_ A0A022PQT7       A R P I Q E L H G R P V Y Y R N V Q P L N G R K V         UniRef90_ E4WUD9       Y R N V Q P L N G R K V         UniRef90_ B9STU9       A R P L Q Q I N G R S V         UniRef90_ C6WWH4       N R P V Q P L N G R L I         UniRef90_ E6QKU4       N R P V Q P L N G R T V K         UniRef90_ C3XFH2       A R P I Q E T N G R T V K         UniRef90_ F2E480       A R P R Q E V N S R D I         UniRef90_ B7KGJ9       A R P L Q D L N G R Q V         UniRef90_ H3DQ54       A R P L Q D L N G R Q V         UniRef90_ H2ZT50       A R P L Q D L N G R Q V         UniRef90_ B9T345       A R P L Q D L N G R Q V         UniRef90_ B1ZV08       A R P L Q D L N G R Q V         UniRef90_ B2LV08       A R P L Q D L N G R Q V         UniRef90_ B3LV08       A R P L Q D L N G R Q V         UniRef90_ B3LV08       A R P L Q P L N G R X I         UniRef90_ B1LV08       F R P P Q D L Y N R K I         UniRef90_ B1LV08       F R P P Q D L Y R S Y I         UniRef90_ B1LV08       F R P P Q D L Y R S Y I         UniRef90_ UPI00034FE861       F R P Q L P L N G R X I         UniRef90_ UPI00034FE861       A R P L Q P L N R F L L K S         UniRef90_ UPI00034CA5394       A R P L Q P L D R R F L L K S         UniRef90_ UPI0003AFA9E7       A R P A Q S L N R R   | UniRef90_UPI000329F3E0               | YRALQAKGNRKVY  |
| UniRef90_U1MJ21  | UniRef90_A0A022PQT7                  | A R PILIQ EILIH G R PIVIY  |
| UniRef90_B9STU9 UniRef90_C6WWH4 UniRef90_C6WWH4 UniRef90_E6QKU4 UniRef90_C3XFH2 UniRef90_C3XFH2 UniRef90_UP1000360FCF5 UniRef90_UP1000360FCF5 UniRef90_UP1000360FCF5 UniRef90_UP1000360FCF5 UniRef90_UP1000360FCF5 UniRef90_UP1000360FCF5 UniRef90_UP2E858 UniRef90_UP2E858 UniRef90_UP2E858 UniRef90_UP2E858 UniRef90_UP2E858 UniRef90_UP2E858 UniRef90_UP2E858 UniRef90_UP10001924FBD UniRef90_UP10001924FBD UniRef90_UP10001924FBD UniRef90_UP100034FE861 UniRef90_UP100034F394  A R P L Q Q I N G R S V V K B R D I Q R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R R P L Q R L N G R Q U R G R U R R P L Q R L N G R Q U R G R U R R P L Q R L N G R Q U R G R U R R P L Q R L N G R Q U R G R U R R P L Q R L N G R Q U R G R U R R P L Q R L N G R Q U R G R U R R P L Q R L N G R Q U R G R G U R R P L Q R L N G R Q U R G R U R R P L Q R L N G R Q U R G R G U R R P L Q R L N G R Q U R G R Q U R G R R U R R P L Q R L N G R Q U R G R G U R R R P L Q R L N G R Q U R G R G U R R R P L Q R L N G R Q U R G R G U R R R P L Q R L N G R Q U R G R G U R R R P L Q R L N G R Q U R G R Q U R G R G U R R R P L Q R L N G R Q U R G R G U R R R P L Q R L N G R Q U R G R Q U R G R R U R R P L Q R L N G R Q U R G R R U R R R P L Q R L N G R Q U R G R R U R R R P L Q R L N G R Q U R G R R U R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R P L Q R R R R R R R P L Q R R R R R R P L Q R R R R R R R R R P L Q R R R R R R R R R R P L Q |                                      | FRTLQDPHGR   |
| UniRef90_W9SAK2 UniRef90_E6QKU4 UniRef90_C3XFH2 UniRef90_F2E480 UniRef90_B7KGJ9 UniRef90_B7KGJ9 UniRef90_H2ZT50 UniRef90_H2ZT50 UniRef90_B9T345 UniRef90_UP10001924FBD UniRef90_B9T345 UniRef90_UP10001924FBD UniRef90_B3LV08 UniRef90_B3LV08 UniRef90_B3LV08 UniRef90_J3LXM3 UniRef90_J1L136 UniRef90_UP100034FE861  |                                      | ARPILQQIINGRSV   |
| UniRef90_E3XFH2 UniRef90_C3XFH2 UniRef90_C92480 UniRef90_UPl000360FCF5 UniRef90_B7KGJ9 UniRef90_F2E858 UniRef90_H2DQ54 UniRef90_H2ZT50 UniRef90_B3LV08 UniRef90_B3LV08 UniRef90_B3LV08 UniRef90_H2MY72 UniRef90_H2MY72 UniRef90_UPl00034FE861  |                                      | A R P I I Q E T N G R T I V K  |
| UniRef90_F2E480 UniRef90_UPI000360FCF5 UniRef90_B7KGJ9 UniRef90_H3DQ54 UniRef90_H2ZT50 UniRef90_UPI0001924FBD UniRef90_UPI0001924FBD UniRef90_A0BL70 UniRef90_A0BL70 UniRef90_J3LXM3 UniRef90_UPI00034FE861 UniRef90_UPI00034FA9E7 UniRef90_UPI00034FA9E7 UniRef90_UPI00034FA9E7 UniRef90_UPI00034FA9E7 UniRef90_UPI00034FA9E7   | UniRef90_E6QKU4                      | S R Q L Q E A H G R H I Q A N  |
| UniRef90_B7KGJ9       A R P L Q E I N G R Q         UniRef90_F2E858       A R P L Q K V N D R D I R         UniRef90_H3DQ54       F R P P Q D L Y N R K I F K S         UniRef90_H2ZT50       F R P P Q D L Y N R K I F K S         UniRef90_B9T345       A R P L Q P L N G R Q V         UniRef90_UP10001924FBD       A R P L Q P L N G R Q V         UniRef90_B3LV08       A R P L Q D D H D R T V Y L S         UniRef90_A0BL70       N R P L Q D D H D R T V Y L S         UniRef90_J3LXM3       N R P L Q D D H D R T V Q         UniRef90_UP100034FE861       Y R E Q Q E Q F V G Q V F S S Y         UniRef90_UP100034FE861       A R P L Q P L N S R F L Q S         UniRef90_V5GFH5       A R P L Q P L N R F L L K S         UniRef90_UP100034F580       A R P L Q P L N R R Y L S         UniRef90_UP100034F580       A R P L Q P L N R R F L L K S         UniRef90_UP100034F580       A R P L Q P L N R R F L L K S         UniRef90_UP100034F34       A R P L Q P L D R R F L L K S         UniRef90_UP100033AF394       A R P A Q S L N R R G I Q         UniRef90_UP100033AF3826       A R P A Q S L N R R G I Q   |                                      | A R P R Q E IV IN S R D II I   |
| UniRef90_F2E858 UniRef90_H3DQ54 UniRef90_H2ZT50 UniRef90_D9T345 UniRef90_D9T345 UniRef90_B3LV08 UniRef90_B3LV08 UniRef90_H2MY72 UniRef90_H2MY72 UniRef90_UPl00034FE861 UniRef90_UPl00034FE861 UniRef90_UPl00034FE861 UniRef90_UPl00034FE861 UniRef90_UPl00034FE861 UniRef90_V5GFH5 UniRef90_UPl000365CF2F UniRef90_UPl000365CF2F UniRef90_UPl00033AF394 UniRef90_UPl0003AF394   | Linipoton Lipinnoseneces             | A P PILIO EILI   |
| UniRef90_H3DQ54 UniRef90_B9T345 UniRef90_UPl0001924FBD UniRef90_B3LV08 UniRef90_A0BL70 UniRef90_H2MY72 UniRef90_UPl00034FE861 UniRef90_UPl00034FA9E7 UniRef90_UPl00034FA9E7 UniRef90_UPl00033FA9E7 UniRef90_UPl00033FA9E7 UniRef90_UPl00033FA9E7  | UniRef90_F2E858                      | A R P L Q K V N D R D I R  |
| UniRef90_B9T345 UniRef90_UPI0001924FBD UniRef90_B3LV08 UniRef90_A0BL70 UniRef90_H2MY72 UniRef90_J3LXM3 UniRef90_UPI00034FE861 UniRef90_UPI00034FA9E7 UniRef90_UPI00034FA9E7 UniRef90_UPI00034FA9E7 UniRef90_UPI00034FA9E7  | UniRef90_H3DQ54                      | F R P P Q D II   Y N R K II   F K S                                    |
| UniRef90_UPI0001924FBD UniRef90_B3LV08 UniRef90_B3LV08 UniRef90_B3LV08 UniRef90_B3LV08 UniRef90_H2MY72 UniRef90_J3LXM3 UniRef90_UPI00034FE861 UniRef90_UPI00034FE861 UniRef90_V5GFH5 UniRef90_Q8L817 UniRef90_Q8L817 UniRef90_UPI000365CF2F UniRef90_UPI00032A5394 UniRef90_UPI00033AFA9E7 UniRef90_UPI00033AFA9E7 UniRef90_UPI00033AFA9E7 UniRef90_UPI00033AFA9E7 UniRef90_UPI00033AFA9E7   | UniRef90_B9T345                      | A R <u>P L Q P L Y G R T</u>   |
| UniRef90_A0BL70 UniRef90_H2MY72 UniRef90_UPl00034FE861 UniRef90_UPl00034FE861 UniRef90_I1LL36 UniRef90_V5GFH5 UniRef90_Q8L817 UniRef90_Q8L817 UniRef90_UPl000365CF2F UniRef90_UPl00033AF394 UniRef90_UPl00033AF394 UniRef90_UPl00033AF394 UniRef90_UPl00033AF394 UniRef90_UPl00033AF394 UniRef90_UPl00033AF394 UniRef90_UPl0003AF394 UniRef90_UPl0003AF394 UniRef90_UPl0003AF394 UniRef90_UPl0003AF394 UniRef90_UPl0003AF394   | UniRef90_UPI0001924FBD               | FRILTOPIINDRIVIRS  |
| UniRef90_H2MY72 UniRef90_J3LXM3 UniRef90_UPI00034FE861 UniRef90_I1LL36 UniRef90_V5GFH5 UniRef90_Q8L817 UniRef90_UPI000365CF2F UniRef90_UPI000365CF2F UniRef90_UPI00033AFA9E7 UniRef90_UPI0003AFA9E7 UniRef90_UPI0003AFA9E7 UniRef90_US826  A R P A Q S L N R R G I Q   |                                      | N R P I I Q H L N G R K I I  |
| UniRef90_UPI00034FE861 UniRef90_M1X0B4 UniRef90_I1LL36 UniRef90_V5GFH5 UniRef90_Q8L817 UniRef90_UPI000365CF2F UniRef90_UPI00032A5394 UniRef90_UPI00033AFA9E7 UniRef90_UPI00033AFA9E7 UniRef90_UPI0003AFA9E7 UniRef90_US8826  A R P A Q S L N R R G I Q   | UniRef90_H2MY72                      | Y R E Q Q E Q F   V   G Q   V   F S S Y                                |
| UniRef90_M1X0B4  |                                      |  |
| UniRef90_V5GFH5 UniRef90_Q8L817 UniRef90_UP1000365CF2F UniRef90_UP100032A5394 UniRef90_UP10003AFA9E7 UniRef90_U3S826  A R P A Q S L N R R G L Q  | UniRef90_M1X0B4                      | ARPVQELNSRFLLQS  |
| UniRef90_Q8L817 UniRef90_ROFP82 UniRef90_UPI000365CF2F UniRef90_UPI00032A5394 UniRef90_UPI0003AFA9E7 UniRef90_I3S826  A R P A Q S L N R R G L Q  |                                      |  |
| UniRef90_UPI000365CF2F   | UniRef90_Q8L817                      | ARPVQPINKRLV   |
| UniRef90_UPI00032A5394   |                                      | A R P L   Q P L   D R R F L L   K S<br>A R P A I V T N R R Y I I I S S |
| UniRef90_I3S826 A R P A Q S L N R R G I Q  | UniRef90_UPI00032A5394               | ARPTQNLGAREVYAS  |
| UniRef90_Q16RN9 A R P T Q A L N F R R V F  |                                      | A R P A Q S I N R R G I O  |
|  | UniRef90_Q16RN9                      | ARPTQALNFRRVF  |

|   | 1 10 20 30 40  |
|---|--|
| UniRef90_UPI00046DA01F<br>UniRef90_H2TB97                           | 1 F D Y G S K K G P A Y W G E   A A C K H G G M Q S P   D L P G K S F Q L P S  |
| UniRef90_M5W7K1   | G S K K G P E H W G E L K K C K D G K S Q S P L D L M D G L A T K V N S  |
| UniRef90_B3KUB4<br>UniRef90_UPI00036AEAD4                           | H WAYSGPRGPQYWGDKDPCKVGSQQSPIDFNRTTPAFASA  |
| UniRef90_Q4VUS8<br>UniRef90_K2K7G1                                  | H WAYSGPRGPQYWGDKDPCKVGSQQSPIDFNRTTPAFASA<br>GRYPSPIDIVPVITCFGEH<br>WDYKGQTGPAFWSSLSPCGNGLRQSPIDV TAVTLAD  |
| UniRef90_UPI0003769350<br>UniRef90_Q9M501                           | WGYHDDKAPRHWAELSECGSGQAQSPIDIKRQGAVGTTG<br>FSYGSPNGPENWGNLRPCGYGMEQSPINLCDDRVIRTPT<br>WCYDRECNASTWPINYPHCNGTRQSPINIVSASARPNDN  |
| UniRef90_I3JAU3<br>UniRef90_U5CTF7                                  | F G Y D G A T K P A II IWA SII IH P C S H G S N O S P II INII V K G D II ITII IN K D   |
| UniRef90_K7MY87<br>UniRef90_K3X3I0                                  | FTYGSSTGPENWQKWKT <mark>C</mark> GDGKLQSPIDLLDQRVQELPQ<br>WGYKEQDDPENWGQGYPT <mark>C</mark> DGKRQSPIDIDAVKN <mark>C</mark> KVKE  |
| UniRef90_H2TG38   | S P   I   N   L   Q   V   S   R   N   R   S   L   D   S  |
| UniRef90_D8LB10<br>UniRef90_J3MT25                                  | WTYEEPYGPDDWYLGYPDCAGTKQTPINIADVMGTATMQ<br>YGYGTPTGPENWGRLKPCSTGRMQSPINLLLDLVTLAPR   |
| UniRef90_Q29CG6<br>UniRef90_E9J2H8                                  | F N Y D K Q G K D W Q V E P G K Q Q S P I P L V Q S E A L R H E A F G Y A Y Q N G P H T W K D L Y P E S T G S N Q S P I N I I T R L A V V V Q P W S Y G G A T G P T A W G T L D P C T A G E R Q S P V D L S G A T P S                |
| UniRef90_K9H2S2<br>UniRef90_L5LBZ1                                  |  |
| UniRef90_B3MIJ7<br>UniRef90_U5EM87                                  | Y G Y D M D H G P H T WLG K P V G P G C R Q S P V N T D E S Q L Q R L A L H W D Y D H E G P D H W G K Q Y A T C N G H A Q S P I D L P D A G E A H P T D  |
| UniRef90_G4ZY17<br>UniRef90_A6QR76                                  | WGYKPSDAPNQWAEHYPTCGGQRQSPIDIETTELDNVSEWNYVDQ ESWCHLNSQSNGLNQSPIDIPTKDTKESPEHWTYDEQ AEWGELYPCGLGQKQSPVDISAPSVNLDIN   |
| UniRef90_UPI00037614DF  | H WT Y DE Q A E WG E L Y P C G L G Q K Q S P V D L S A P S V N L D L N   |
| UniRef90_UPI0004627793<br>UniRef90_K4D3H5                           | F D Y G E E K G P K M W G K L K A C N N G E M Q S P I D M S H E R V R I I Q K<br>Q S P I N I D D R Q L S P M A I   |
| UniRef90_Q28XJ3<br>UniRef90_UPI000258EF23                           | S P I D I N I T M N I I F I N  |
| UniRef90_F7D650<br>UniRef90_UPI0003B7B83B                           | WTYGGPDGEKAWSRSYPFCGGQLQSPIDFHSDLKYDSS<br>HWEYEGDHGPDHWAQLYASCAGAEQSPIDLN GYAINAA  |
| UniRef90_UPI0002B4CE2A<br>UniRef90_W5KQS8                           | E G E K G P T H W G D L K P C K T G H M Q S P I D L L H E R V R I A S L Y C Y K E T D N P Y L W V K S Y P S C K D K L H S P I D L N D E A V R N D T V H W D Y D A E G P D H W A D L D T C Q N G H E Q S P L D L P S H T R L E P      |
| UniRef90_K0EWN3<br>UniRef90_UPI00038702E5                           |  |
| UniRef90_A7IHH9<br>UniRef90_I1FAY4                                  | HWTYEGHGGPQEWGSLEACAVGSQQSPINLEGAVQAAGDG<br>WIIKCPDCGGQLQSPINIETHHIISNMT   |
| UniRef90_UPI0002C2FDB8<br>UniRef90_L9KS04                           | F D Y D S E K G P K H WG E L R A C K T G R L Q S P V D L H S E T V E V H P N W K V H G A L S Q K N W G K K Y P T C N S P K Q S P I N I D E D L T Q V N V N H W G Y T G A A G P S H W G Q L E P C A H G H S Q S P I D L T H A M D A P |
| UniRef90_UPI00047CA52B<br>UniRef90_B4K4I9                           | H WGYT GAAGPSHWGQLEPCAHGHSQSPLDLTHAM DAP   |
| UniRef90_H2VUP4   | A A A Q R Q S P I D I I G Q H V F <mark>C</mark> D D E<br>A E G T L E T P I D L D L S Y <u>M</u> K V I D   |
| UniRef90_H9KT35<br>UniRef90_S8DIB9                                  | A E G T L E T P I D L D L S Y M K V I D E K G P Q N W G N L K P C R T G R L Q S P L E L N R N T L T L R S T  |
| UniRef90_E2REV6<br>UniRef90_UPI0002B41D4E                           | GSKKGPSKWGDLKK <mark>C</mark> NNGNMQSPLDLSNKRVKVVK <mark>H</mark>  |
| UniRef90_B4LVZ5<br>UniRef90_UPI0002D7A275                           | CQDGLQQSPIELIYSKANVTSI<br>HWSYSGDQGPAHWGDLGSCASGAEQSPIDIEKSKLEPKKV<br>HWGYTGDVSPEYWGGLSTCAVGQKQSPVNLQVQKAT DKD   |
| UniRef90_Q65RJ8<br>UniRef90_UPI0002653FF3                           |  |
| UniRef90_B4JY83<br>UniRef90_UPI00038ED93F                           | WGYPDQDEPPKWGGI CDNGRRQSPINLHVKGSLKGEF   |
| UniRef90_D7SL11<br>UniRef90_H9GDF9                                  | FDYESDKGPDKWGEIHE <mark>C</mark> KHGNMQSPIDLLHERVQVVSH<br>HWTYEGPHGQEHWPETYPD <mark>C</mark> GFQSQSPIDIQTGSVQYDPN  |
| UniRef90_UPI00046B97C8<br>UniRef90_T1FY70                           | HWRYGGD PP WPQIVIAPTCAGRFQSPIVIDII IRPEHTAILISPA   |
| UniRef90_A0A022RDX7<br>UniRef90_UPI00042B2F3D                       | D G P K N W Y Q L F S L C A G L K Q S P I D L K T L E S Q Y N R N F D Y S G E K G P R K W G E I K A C N N G S F Q S P I D M S N E R V V I F S R F N Y D E A S G P S R W G L L K P C S D G R M Q S P I D I G T V Q P R P Q            |
| UniRef90_B9G1C9<br>UniRef90 H3E9S4                                  | F G Y G T E N G P G N W S R L D P C N T G N M Q S P I D L S H E R L M R N G G G Q K Q S P I D I V P L I T S F G E H  |
| UniRef90_O02637   | G R T Q S P [ D [ V P V I ] T A F G E <u>H</u>   |
| UniRef90_B4LVZ6<br>UniRef90_W7D3S0                                  | WSYSGKTGPENWGSIKSAYTGKAQSPINIKTSDTTQNAK<br>WNYEE PHKWGELYQA <mark>C</mark> KGQQQSPIDLE <u>S</u> F VASS   |
| UniRef90_B7JY43<br>UniRef90_G4Z520                                  | WGYEEEILIGPADWKESYPA <mark>C</mark> GGTHQSPII INII IPIVIR DILISHNDW  |
| UniRef90_UPI0002739A1D<br>UniRef90_UPI0002B40E47                    | EHWSKLYPLANGX QSLIDIKAKEVKYDTS<br>PNYWRKFNVQCDGNFQSPLNLIKNRKSVKGK  |
| UniRef90_UPI0004548739<br>UniRef90_A0BI44                           |  |
| UniRef90_B4GYZ4<br>UniRef90_UPI0002B46FEB                           | E  |
| UniRef90_M1AEL9<br>UniRef90_H7CE94                                  | FSYNEGNGPKEWGKLKACEEGKYQSPINIVEEDVQVLPK<br>FSYGTTEGPESWGTLKSCETGLFQSPVNFRNKTVKITTA   |
| UniRef90_B4N9V3   | CAACIDO S BIJAI WT A T A T B CALL  |
| UniRef90_F8CH20<br>UniRef90_T1G0X2                                  | CAAGLDQSPIALVTATATPQNH<br>HSGPDTWWVHYPSASGSMQSPVDIITEET  |
| UniRef90_B9IHX3<br>UniRef90_D3UGG4                                  | QFTYEEEEGPKNWGKINPCGKGKMQSPIDVLDRRVEVFPNWDYDEVGPTKWADAHPCGHGKEQSPIDIKTKEAVSANFWGYRANDDPSKWSEHWPACGSVRQSPIDIVTTGQIGKGK  |
| UniRef90_H3GIU0<br>UniRef90_B9G0Z0                                  | WGYRANDDPSKWSEHWPACGSVRQSPIDIVTTGQIGKGKQFGYGTPRGPENWGSLKPCSSGEMQSPINLGLLDLTLAPG  |
| UniRef90_A0A015JWN9<br>UniRef90_UPI0003ACA2A2                       | QFGYGTPRGPENWGSLKPCSSGEMQSPINLGLLDLTLAPGFGYVGSLGPDFWHKLSACETGTKQSPIDITPDDLKTLAEHWRYGGDPPWPQVSPACAGRFQSPVDIRPELAVFCPA   |
| UniRef90_Q9V9Y7<br>UniRef90_G4Z5L0                                  | WNYLKNG KDWEDL CSSGKHQSPILLDSRTVSISLD<br>WGYRANDATSKWA <u>DH</u> WKA <mark>C</mark> GGVRQSPIDIKTVAKAGKG <u>K</u>   |
| UniRef90_I1GXD3<br>UniRef90_UPI00046C18CC                           | Y T Y G A D N G P E R WGLLWA A CY G R Q Q S P V D V P G G S S A P G P L  |
| UniRef90_DF100046CT8CC<br>UniRef90_D8SY70<br>UniRef90_UPI00036473C4 | Y S Y V G A R G P R H W G D L K S C S D G K A Q S P I A I R S K H A E L N S S<br>H W S Y D G A E G P A E W G H L S A C S T G N A Q S P L D L P A H A D Q K A A E   |
| UniRef90_E4YVE6   | N  |
| UniRef90_B3MIQ8<br>UniRef90_A3INB7                                  | FDYGMERGPHTW DTPC NNQSPINIETNCTTYFDC WSYEGENNPDRWGEISTCSTGLFQSPIHLTSSNLIRENG   |
| UniRef90_H9JYV5   | RQSP   D L   CRTFTWTKK   |

50 60 70 80

L VE L K R T Y K P S N A T L K N R G H D K L E WA G N A G S E I N G I

M Q S L F H R A WR T L V Q I D L P P T M M I T E G L P

S L E H F K V S Y K P A E A M L E N E G P V I A I V WE G D A G S I S I N G

M H I Q G UniRef90\_UPI00046DA01F LVELKRTY UniRef90\_H2TB97 UniRef90\_M5W7K1 SLEHFKVSYKPAEAMLENEGPVIALVWEGDAGGLGMWHIQG
PQ IDWKPLTNGDVVNNGHTLQLNVEKAGGMWLLREGNDSELAVSFL
LPPLTLKYPGGALSVMNTGRVLKL
LPPLTLKYPGGALSVMNTGRVLKL
LPPLTLKYPGGALSVMNTGRVLKL
LPPLTLKYPGGALSVMNTGRVLKL
LPPLTLKYPGGALSVMNTGRVLKL
GGP
LGKLRTSY QAARATVKNNGHDIMVYFKSDAGTQFIN
LTEIHFYNDTSKIDFIENNDNTVRVKLKEGVNIT GGN
LPPLTRNYKQAN ASLINDGNRVMLRWAEDAGELLSDG
LGKLKKAYKSAP AVLKNSGHDIVLEWKGDAG HLNI
DAPLSFSGDCSSYG LQALEDTFKWTAANTTTCKVHKGD
LHLEGFEDIQAGHWTLQNDGHSVILQ VGSGMSVSGGG
EQAIAFFPSECNSTELVFKSDFAVWQVDFSGCTDAPYLQY
LGYLNYTYQNAN ASVVNRGHDIMVRFDGDAGSLLINGS
RQLVFFNYTKPYKPYLTHNGHTVRMNISETVEKQNPAGSN
SEPLQWSNYNPLSMTIANDGHTDILTFWTSTTWPQLQGGP
MMATPDIDWPAMPLVIANTGNTIAVEATAYA TMGLGL UniRef90\_B3KUB4 UniRef90\_UPI00036AEAD4 UniRef90\_Q4VUS8 UniRef90\_K2K7G1 UniRef90\_UPI0003769350 UniRef90\_Q9M501 UniRef90\_I3JAU3 UniRef90\_U5CTF7 UniRef90\_K7MY87 UniRef90\_K3X3I0 UniRef90\_H2TG38 UniRef90\_D8LB10 UniRef90\_J3MT25 UniRef90\_Q29CG6 UniRef90\_E9J2H8 UniRef90\_K9H2S2 UniRef90 L5LBZ1 L N WN H Y D P A S Q L E N T G Q T L V L R A Q F H G N A P T I S G A D D I D L V Y R R I R T A T L T N N G H A I Q V G V P A D S G N R I V V D G S L T F S G S C A D F D V S Q S D E S F T A S V N G G S C A V S A P L I L G Y E Q K L K G T W T R T S H S L R F D P S G P A P S I V T Y G G N L V Y S A V P L S I S N N G H T I K V N M P I V A N P N A S F V G G G G UniRef90\_B3MIJ7 UniRef90\_U5EM87 UniRef90\_G4ZY17 UniRef90\_A6QR76 UniRef90\_UPI00037614DF K R S I S P R I N RELLEWIS GOOD

RELLEW UniRef90\_UPI00037614DF UniRef90\_UPI0004627793 UniRef90\_K4D3H5 UniRef90\_Q28XJ3 UniRef90\_UPI000258EF23 UniRef90\_F7D650 UniRef90\_UPI0003B7B83B UniRef90\_UPI0002B4CE2A UniRef90\_W5KQS8 UniRef90\_K0EWN3 UniRef90\_UPI00038702E5 UniRef90\_A7IHH9 UniRef90\_A7IHH9 UniRef90\_I1FAY4 UniRef90\_UPI0002C2FDB8 UniRef90\_L9KS04 UniRef90\_UPI00047CA52B UniRef90\_DH00047CAS2B UniRef90\_B4K4I9 UniRef90\_H2VUP4 UniRef90\_H9KT35 UniRef90\_S8DIB9 UniRef90\_E2REV6 UniRef90\_UPI0002B41D4E UniRef90\_B4LVZ5 UniRef90\_UPl0002D7A275 UniRef90\_Q65RJ8 UniRef90\_UPl0002653FF3 UniRef90\_B4JY83 UniRef90\_UPI00038ED93F UniRef90\_UPI0U038ED93F UniRef90\_D7SL11 UniRef90\_H9GDF9 UniRef90\_UPI00046B97C8 UniRef90\_T1FY70 UniRef90\_A0A022RDX7 UniRef90\_UPI00042B2F3D UniRef90\_UPI00042B2F3D UniRef90\_B9G1C9 UniRef90\_H3E9S4 UniRef90\_O02637 UniRef90\_B4LVZ6 UniRef90\_W7D3S0 UniRef90\_B7JY43 UniRef90\_G4Z520 UniRef90\_UPI0002739A1D UniRef90\_UPI0002B40E47 UniRef90\_UPI0004548739 UniRef90\_UPI0004548739 UniRef90\_A0BI44 UniRef90\_A0BI44 UniRef90\_B4GYZ4 UniRef90\_UPI0002B46FEB UniRef90\_M1AEL9 UniRef90\_H7CE94 QNGNKPYIMGGL
QDAPSFHYGTSR VRMTNNGHTVQFTYDVGSTLQVGG
WQASRENSNFEPLEIDYSSMGGGSNVTGGPY
LGKLRRDYQAAPAA VKNRGHDITVIWKGDAGK ITI
PFAMQYHKGDA KVINKGYTIQAKYKNAGG VDF
KSPLNFTGKCSQY NLTEPAEPLEVDVIGGNCVANV
LGDLNYTYRNAN ATVVNRGHDIMVRFDGGDDAAAAGGLV
PPSPKF DDACDVESIHNGNTVEISSGKEEVPLPAEITI
LQLLGFELPPFPELRLRNNGHTGEGSGGGARLSGGE
VTSNGRKPFITGGR
RSPLSFSGQCSQY NLTEPHEPLEVDVIGGSCVATV
RYGRLSQHYRPAPATMVNRGHDIMVRFDGDAGGLLIDGL UniRef90\_B4N9V3 UniRef90\_B8CH20 UniRef90\_T1G0X2 UniRef90\_B9IHX3 UniRef90\_D3UGG4 UniRef90\_B3GIU0 UniRef90\_B9G0Z0 UniRef90\_A0A015JWN9 UniRef90\_UPI0003ACA2A2 UniRef90\_Q9V9Y7 UniRef90\_G4Z5L0 UniRef90\_I1GXD3 UniRef90\_UPI00046C18CC UniRef90\_D8SY70 LPGLRAHYQSSVCSI ASSQYIFKVFIAGAHCTLPLQPTITSS PTVGESVDTGHTVQLVPESGASAVEWDGLQFTLTNYEKPHKWTVKNTGHG VKLEPAVEDMKFTGGDVMEWGHYNDMPMGIRIENSGHTLILRAAFRHVTPYIGGADNIETHYQATPLVINNNNGHTIEVNYKPGSYVLINGLPPLYMTNYWSDIGTMTNTGRTVVIEIDDRSLPYLRGGPL UniRef90\_UPI00036473C4 UniRef90\_E4YVE6 UniRef90\_B3MIQ8 UniRef90\_A3INB7

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| UniRef90_L5LBZ1 UniRef90_B3MIJ7 UniRef90_U5EM87 UniRef90_G4ZY17 UniRef90_A6QR76 UniRef90_UPI00037614DF UniRef90_UPI0004627793 UniRef90_UPI0004627793 UniRef90_G28XJ3 UniRef90_UPI000258EF23 UniRef90_UPI0003B7B83B UniRef90_UPI0003B7B83B UniRef90_UPI0002B4CE2A UniRef90_UPI0003B702E5 UniRef90_UPI00038702E5 UniRef90_A7IHH9 UniRef90_I1FAY4 UniRef90_UPI0002C2FDB8 UniRef90_L9KS04 UniRef90_UPI00047CA52B UniRef90_UPI00047CA52B | A Y L R Q F H F H W G D Q P G C G S E H L V D G S S Y D A E L H F V H S R E K Y Q L L Q F H F H A P S E H T I S G V S Y P L E V H F V H S F P F P L Q A A Q L H L H W G S Q P G G G S E H T V D G H R F A G E L H V V H Y T N Y P L Q A H W H S P S E H T I V N G R R Y D M E M H M V H L A S Y T F V E V R F H W G W C N S E G S E H T F N H R K F P M E M Q V M H R L A G K Y M F A Q V H F H W G E N E M E G S E H S V D D A R M P M E L H A V H F L A G K Y M F A Q V H F H W G E N E M E G S E H T L D G R R Y P L E V H L V H A Y Y N F L Q F H F H S G S E H T L D G R R Y P L E V H L V H A R T R Y F L Q G H W H S P S E H T L N N R R F P M E M Q L V G V A E F E L A Q F H F H L S G S E H T L N N R R F P M E M Q L V G V A E F E L A Q F H F H L S P S E H T L N N G R R A A E L H L V H K L Y R L Y Q L R F H W G S S D D H G S E H V V N G V R Y A G E L H L L H W K T Y T L R Q F H F H A P S E H T V D G R S Y N G E L H L L H W K T Y T L R Q F H F H W G E K Y S R G S E H T V D G R S Y N G E L H F V F S T D Y W L D Q C H W H S P S E H T L N G N R F D L E L H M V H R S E M V F K A S K I T F H W G K C N M S G S E H S L E G Q K F P L E M Q I V C F T D F T I K G L T F H W G K C N M S G S E H S L E G Q K F P L E M Q I V C F T D F T I K G L T F H W G K C N M S G S E H S L E G Q K F P L E M Q I V C F T D F T I K G L T F H W G K C N M S G S E H S L E G Q K F P L E M Q I V C F T D F T I K G L T F H W G K C N M S G S E H S L E G Q K F P L E M Q I V C F T D F T I K G L T F H W G K C N M S G S E H S L E G Q K F P L E M Q I V C F T D F T I K G L T F H W G K C N M S G S E H S L E G Q K F P L E M Q I V C F T D F T I K G L T F H W G K C N M S G S E H S L E G Q K F P L E M Q I V C F T D F T I K G L T F T L T K G L T F T T T T T T T T T T T T T T T T T |
| UniRef90_H2VUP4 UniRef90_H9KT35 UniRef90_E2REV6 UniRef90_UPl0002B41D4E UniRef90_UPl0002D7A275 UniRef90_UPl0002D7A275 UniRef90_UPl0002653FF3 UniRef90_UPl0002653FF3 UniRef90_UPl00038ED93F UniRef90_UPl00038ED93F  | LKGRYVAEGVHFHWGSPVTRGSEHVIDRRRFDVEMHLVHR PNAKFELAQFHAHWGCNSKEGSEHLLNGKQLSGEVHFVFW LEGNYVFAQVHFHWGENEMRGSEHFVDGASMPMELHVVHY TKFALRQCHWH LPGRFKAEKVEFHWGHSNGSGSEHSINGRRFPVEMQIFFY TDYLLQQAHWH SPSEHKINGRRYDLEVHLVHQ LPGSFEAQSVHFHWGSPNSKGSEHTLNYERYDVEMHLVHK TFYRLLQFHFH SPSEHQFNHRPYPMEMHLVNQ KVYTLKQFHFH SPSEHQFNHRPYPMEMHLVHR LGSDYVVEQIHMHWW SPSEHTINDDRYPLEVHIVHR PSPAYRALQLHFHWGSPGSEHVLDRRKYPAEMHIVHR PSPAYRALQLHFHWGSPGSEHTVNGKRFDLELHMLHE PSIYSGVQMHLHWGSRRPGSEHTVNGKRFDLELHMLHE PSIYSGVQMHLHWGSRRPGSEHTVNGKRFDLELHWHHE LPGTYLLAGVHGWWSDDSRGSEHTFKSRQYPLELHLIHY NTEYPLRQAHWH SPSEHTFNRTRFALELHLVHQ KAYKLKQLHWH TPSEHTFNRTRFALELHLVHQ KAYKLKQLHWH TPSEHTFNRTRFALELHLVHQ KAYKLKQLHWH TPSEHTFNRTRFALELHLVHQ KAYKLKQLHWH TPSEHTVNGRRYDMELHLVHD KAYKLKQLHWH TPSEHTFNRTRFALELHLVHQ EEQYHLDAINWHWGTEPMNGSEHSIGGVGYAAEEWHLIHR  |
| UniRef90_B4LVZ6<br>UniRef90_B7JY43<br>UniRef90_B7JY43<br>UniRef90_G4Z520<br>UniRef90_UPI0002739A1D<br>UniRef90_UPI0002840E47<br>UniRef90_UPI0004548739<br>UniRef90_B4GYZ4<br>UniRef90_B4GYZ4<br>UniRef90_UPI0002B46FEB<br>UniRef90_UPI0002B46FEB<br>UniRef90_H7CE94<br>UniRef90_B4N9V3<br>UniRef90_B4N9V3<br>UniRef90_F8CH20<br>UniRef90_T1G0X2<br>UniRef90_B9IHX3<br>UniRef90_B9IHX3<br>UniRef90_B3GIU0<br>UniRef90_BG0Z0          | EEQYHLDAVNFHWAIEPMNGSEHII GGWGYAGEMHLIHR KGKYVADGVHFHWGSPESRGAEHLIERTRHDVEMHIVHR GGKDYLLKELNIH TPSEHELDGKKFDAELQLKHV EKFDLLQFHFH HPSEHSLKRETYPMELHLVHQ DEREYSLAQFHMHAT SEHALDNYHYDAELHFVHK TSKEYNLQQHFHFHGGONRKTGSEHRIDGKAFDLEVHFVHR TSKEYNLQQHFHFHGGONRKTGSEHTIDGKKAFDLEVHFVHQ GTYTAVQLHFHWGGQSSETSGSEHTMDGMRHIAELHLVHY LVVRYYAKQFHIH WW SEHTIDGKKHFDLEIHFVHQ AHEYELEQIHLHWW SEHTIDGKKFDLEIHFVHQ TKYKLSQCHWHA TPSEHTIDGKKTYAAELHLVHW TKYKLSQCHWHA TPSEHKVDGKCFAMEAHMVHQ QFHFHWGACDTHGSEHTIDGKKTYAAELHLVHW LKGRYQAEGFHFHWGSPKSRGSEHSISERRFDVEMHIVHR NTYHLAQFHFH WGESDKNGSEHTIDGKKTYAAELHLVHW NDTDYQLQQCHWH SPSEHTKDGVEYPLEVHLVHT RHYNFLLEQIHMHWGESDKNGSEHTIDGKKTYAAELHLVHW NDTDYQLQQCHWH SPSEHTKDGVEYPLEVHLVHT RHYNFLLEQIHMHWGESDKNGSEHTIDGKKTYAAELHHLVHW NDTDYQLQQCHWH SPSEHTKDGVEYPLEVHLVHT RHYNFLLEQIHMHWGESDKNGSEHTIDGKKTYAAELHHLVHW NDTDYQLQQCHWH SPSEHTKDGVEYPLEUHLVHT RHYNFLLEQIHMHWGESDKNGSEHTIDGKKTYAAELHHLVHW NDTDYQLQQCHWH SPSEHTKDGVEYPLEUHLVHT RHYNFLLEQIHMHWGESDKNGSEHTIDGKKTYAAELHHLVHW NDTDYQLQQCHWH SPSEHTKDGVEYPLEUHLVHT RHYNFLLEQIHMHWGESDKNGSEHTIDGKKTYAAELHHLVHW NDTDYQLQQCHWH SPSEHTLDGKALDGEIHFVHK NDTDYQLQQCHWH SPSEHTKDGRRYDDMELHMVHL DGKKYELQQHHWHA PSEHAVDGKRYDDMELHMVHKL  |
| UniRef90_A0A015JWN9 UniRef90_UPI0003ACA2A2 UniRef90_Q9V9Y7 UniRef90_G4Z5L0 UniRef90_I1GXD3 UniRef90_UPI00046C18CC UniRef90_D8SY70 UniRef90_UPI00036473C4 UniRef90_E4YVE6 UniRef90_B3MIQ8 UniRef90_A3INB7 UniRef90_H9JYV5  | TPSEHRI GGRHFEVEQHLVFK SGRSAGARQWGWPHGRARPPGLEMALPGREYRALQLHLHW LKGRYYADGLHFHWGSYKSRGSEHLI NKRRFDAEIHLVHR NSASYKMAQFHLHA PSEHTVDGKAHDGEIHFVHK NYRLRQMHWH SPSEHTVDGKRYDLELHMLHW NRATYTLTDFHFHI PSEHTVDGTRFPLELHLVHK TEFTLAQTHFHWGDRTHQGSEHTFNGTRFPLELHLVHT ESEEYTLAQLHFHWGDRTHQGSEHTFDNRHFPLEMQCLHV QKYELKQFHFH TPSEHSLNGKKSEMELHLVHQ SKDEFQFMNVQFRWGAENSCGAEHSINGLWYSMEAQVMHW   |

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UniRef90\_ITFAY4 UniRef90\_I1FAY4 UniRef90\_UPI0002C2FDB8 UniRef90\_L9KS04 UniRef90\_UPI00047CA52B UniRef90\_B4K4I9 UniRef90\_H2VUP4 UniRef90\_H9KT35 UniRef90\_S8DIB9 UniRef90\_E2REV6 UniRef90\_UPI0002B41D4E UniRef90\_B4LVZ5 UniRef90\_UPI0002D7A275 UniRef90\_Q65RJ8 UniRef90\_UPI0002653FF3 UniRef90\_B4JY83 UniRef90\_UPI00038ED93F UniRef90\_D7SL11 UniRef90\_H9GDF9 UniRef90\_UPI00046B97C8 UniRef90\_T1FY70 UniRef90\_A0A022RDX7 UniRef90\_UPI00042B2F3D UniRef90\_UPl00042B2F3D UniRef90\_B9G1C9 UniRef90\_H3E9S4 UniRef90\_O02637 UniRef90\_B4LVZ6 UniRef90\_W7D3S0 UniRef90\_B7JY43 UniRef90\_G4Z520 UniRef90\_UPl0002739A1D UniRef90\_UPl0002B40E47 UniRef90\_UPl0004548739 UniRef90\_A0BI44 UniRef90\_B4GYZ4 UniRef90\_B4GYZ4 UniRef90\_UPI0002B46FEB UniRef90\_M1AEL9 UniRef90\_H7CE94 UniRef90\_B4N9V3 UniRef90\_F8CH20 UniRef90\_T1G0X2 UniRef90\_B9IHX3 UniRef90\_D3UGG4 UniRef90\_H3GIU0 UniRef90\_B9G0Z0 UniRef90\_A0A015JWN9 UniRef90\_UPI0003ACA2A2 UniRef90\_Q9V9Y7 UniRef90\_G4Z5L0 UniRef90\_I1GXD3 UniRef90\_UPI00046C18CC UniRef90\_D8SY70 UniRef90\_UPI00036473C4 UniRef90\_E4YVE6 UniRef90\_B3MIQ8 UniRef90\_A3INB7

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| UniRef90_B9G1C9 RRIADKDKSEPIGVVDPQLAKSPDAVYYRYMGSLTTPPC  | Ţ        |
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| UniRef90_F8CH20 PRHAGEHSQPAGALINASSLLPFNKAFYKYAGSLTTPPC UniRef90_T1G0X2 KHKNTKTHTDKHTQTHTNSQPEDTSKFWTYQGSLTTPPC  | Υ        |
| UniRef90_B9IHX3 NHVDHREREMGI VNPGDIKFGSRKYYRYVGSLTVPPC UniRef90_D3UGG4 PS KKGGYKILKDVDIHDLLPEKKHYYYFMGSLTTPPC  | Т        |
| UniRef90_H3GIU0  | D        |
| UniRef90_B9G0Z0  | Т        |
| IUniRef90 UPI0003ACA2A2  | À        |
| UniRef90 G4Z5L0 AHAKHEAUTVQUKSYSSLIRKSKTDGUYNYPGSLTTPGC  | D        |
| UniRef90_11GXD3  | ľ<br>S   |
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| UniRef90_UPI00036473C4  AATPGTTDLPLDVAAMLPEDPTYEAYEGSLTTPPC UniRef90_E4YVE6  AATPGTTDLPLDVAAMLPEDPTYEAYEGSLTTPPC   |          |
| UniRef90_B3MIQ8 UniRef90_A3INB7  VAVQTAGQAVEVPPFPLSLMMPFFSRFYSYHGSLTEPPC UniRef90_A3INB7  SEKQGIQEVKNKTINGANFIVNNPTYFHYQGSLTTPPC   | T<br>D   |
| UniRef90_H9JYV5  SKIKTLGSQTNLSPYCLLWMLEGCHSYYTYKGSLTTPPU   | T<br>D   |

| Indexest   Depth   D   |   | 240 220 220 240   |
|--|---|---|
| ######################################   | UniRef90_UPI00046DA01F                    | EGIVĪWI MSKQFGTIVISREQI IDĪLLĪRVISIVIYDYAET N   |
| Marketon    | UniRef90_H2TB97                           | ESILWTVFDTPITLSHNQIRKLESTLMDLDNKT LWND  |
| Marketon    |   | PTIV LIWTIVIF RN PIVIQII IS QEQIL LIAL ET ALLIY CT HMD DPS PMI NN   |
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| June 890   June 900    | UniRef90_K7MY87                           | E GV VWT I VK KVRTVS S E QLISALK G AVH H GY E E   |
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| American    |   | E GIVEN LIMS EPNYMST WQLDNYRRAIVALHEGSKIVISEIVIGAT  |
| June 899   1990   199   | UniRef90_J3MT25                           | E G V I WT I VR K V H T V S L S Q L A L L K A A V L A G Y E N N   |
| June      |   | FILVI WI VOOFPILALS   |
| June      | UniRef90_K9H2S2                           | EAVRWL VETHPIEAAPEQLEAFARLFP MN   |
|  |   | OGTEWELLER QPILSISSQQ   |
|  | UniRef90_U5EM87                           | Ē GVĀ WĪ V LRĒPSPVĀVĀ DVDRYRRLĒPHS  |
| Junkers   Decompose   Decomp   |   | EII VID WWV VIK K PVIDIVIS TA DILIE RILIQ S QILIR EILIHILIT D D GK N  |
| Junkers   Decompose   Decomp   | UniRef90_UPI00037614DF                    | E GV D WY V L R R PI T V S K A QI A Q F E A L Y S G N   |
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| Jimerego   Moreword   Jimerego   Jimerego   Moreword   Jimerego    | UniRef90_UPI0002B4CE2A                    | QNV LWTI VR KVRTVT T E QVKL LRVASHDDSNT   |
| Junkergo   | UniRef90_W5KQS8<br>UniRef90_K0EWN3        | E G V S WT V L  E H P  V A V G S A G V D R Y R M L  F A H S   |
| Junkergo   | UniRef90_UPI00038702E5                    | ECITWILLREPLIVSSDQ  |
| Junkergo   UPI0002C2FD88   E GV   T MI   I H K K   L T V S R K Q ME L   R E A V M D Y A E   L N N JUNKERSO   L N N JUNKERSO   L N V   M  |   | ENVQWIVLKHPIINVPEAFILDTIIRSIL KTFDSOSIIKKN  |
| Jinkey   1900    | UniRef90_UPI0002C2FDB8                    | F GIVIT WILLI <mark>H</mark> K KILIT TIVIS R K Q M F ILLI R F A IVI <mark>H</mark> D Y A F ILLI N   |
| Jinkey   1900    |   | VID WI VIF K D T VISILIS E S QILIA VIF C T M Q Q S G Y VIMILIM D Y LIQ N N  |
| Jinkey   1900    | UniRef90_B4K4I9                           | EAVIWIVE ADPLPISLADISKLWLL QDSNGNLIRNN  |
| Junkers   Junk   | UniRef90_H2VUP4                           | ECVIWILFTEPVEVSYGQLNVLRNIIPA  |
| Jinker90   | UniRef90_S8DIB9                           | EGIVTIWTILLIKKIVIRTIVISK DQT QFILIREAIVIDPGFE NN  |
| Janker   Dark    | UniRef90_E2REV6                           | FILVIEWI VIERKPIVIPII ISYHOII IEAFYSII IETTEOODHIVIEYII IRNN  |
| Jinker90   | UniRef90 B4LVZ5                           | ESVTWTVFQDVVELPRRQIMKLWNL QDSRRYPLINT   |
| Juriker90PI0002653F53   Juriker90PI0002653F53   Juriker90PI00036B093F   Juriker90PI00036B093F   Juriker90PI00036B093F   Juriker90PI00036B093F   Juriker90PI00036B097C8    Juriker90PI00036B097C8    Jurike  | UniRef90_UPI0002D7A275                    | E G V Q W V L F E K P L E L S K Q Q L Q Q F Q A L F P D N   |
| Jinkef90 D4JY83 Jinkef90 D7SL11 JINKef90 D7SL1 |   | FVVT WTV LKOPITIS REOMS AIR GVF ETT RT ET PILLIONN  |
| Junker90   | UniRef90_B4JY83                           | EAVTWEVLTDTHPVTDDQVNQFKEIEYN KDKQLHNN   |
| Jinkef90   |   | PIVLWII FESAVPI GRAQVI QFQILPRASLIG LLI DN<br>EDVLWTI VNKVRTVT REOVNI I RVAVHDDSGS  |
| Jinkef90   | UniRef90 H9GDF9                           | Q S <u>V L  </u> WT <u>V  </u> F H Q P A S <u>I   S  L  S Q  V  </u> A H <u>L  </u>   |
| JniRef90_A0BI44  | UniRef90_UPI00046B97C8                    | SLISDSIL WGPEDSRLIQLIN  |
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| JniRef90_A0BI44  |   | E G V L WT V F P Q L K T V S R S Q V E A L R N V L P P E N R N N E G V L WT V E K P A O T V A O V O L D L L R E A V A D G V E                       |
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| JniRef90_A0BI44  | UniRef90_O02637                           | ETVNWLVIRAALPIISSHQLDKLREVRYDEEFSDKVPMKP  |
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| JniRef90_B9G0Z0  E G V I WT I V R K V H T V S L S Q L A L L K A A V V N E Q  E G V T W Y V N K E P Q S V S F Q Q F N K L R D A I G F N S R F T Q L R E G E N  JniRef90_Q9V9Y7  JniRef90_G4Z5L0  JniRef90_G4Z5L0  JniRef90_IP100046C18CC  JniRef90_UP100046C18CC  JniRef90_UP100036473C4  JniRef90_UP100036473C4  JniRef90_UP100036473C4  JniRef90_B3MIQ8  JniRef90_B3MIQ8  JniRef90_B3MIQ8  R G A E W M I F P L P L A I G E R Q L N E F R Q L  K D L R D A V H D H A R K  N  G H R L I N  G H N  G H N  G H N  G H N  G H N  G H N  G H N  G H  | UniRef90_B4GYZ4                           | EAVIWIVETETLPVTLEQVEQEKELEYSN GKQLHNN   |
| JniRef90_B9G0Z0  E G V I WT I V R K V H T V S L S Q L A L L K A A V V N E Q  E G V T W Y V N K E P Q S V S F Q Q F N K L R D A I G F N S R F T Q L R E G E N  JniRef90_Q9V9Y7  JniRef90_G4Z5L0  JniRef90_G4Z5L0  JniRef90_IP100046C18CC  JniRef90_UP100046C18CC  JniRef90_UP100036473C4  JniRef90_UP100036473C4  JniRef90_UP100036473C4  JniRef90_B3MIQ8  JniRef90_B3MIQ8  JniRef90_B3MIQ8  R G A E W M I F P L P L A I G E R Q L N E F R Q L  K D L R D A V H D H A R K  N  G H R L I N  G H N  G H N  G H N  G H N  G H N  G H N  G H N  G H  | UniRef90_UPI0002B46FEB<br>UniRef90_M1AEL9 | E GI VWSVLYE A RTVS ME QMMAL RNAVHDGFEA N   |
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|  | UniRef90_H9JYV5                           | ECVI WI I SPI VNKI SVRQI DAFRSLY DGKMKNI LKN  |

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250
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|--|---|--|---|
| UniRef90_W7C7B0<br>UniRef90_I1JPR6               | NGDIYTLVAFHAHI FFLQQAHWHW QSDEYRFGELQFRWGP LPQTYGPVQLHSHGSR   | PSEHLL<br>PSEHTI   | D G K T H P I E WH F V H E<br>N G R R Y D L E L H M V H V                                 |
| UniRef90_UPI0002246B49<br>UniRef90_UPI00042BCA51 | QSDEYRFGELQFRWGP<br>LPQTYGPVQLHSHGSR  | S  | D G V W F S M E A Q A V H W<br>N G E T F P A E L H L V H Y                                |
| UniRef90_H3GIU3<br>UniRef90_D8S528               | F D L L Q F H V H A   | PSEHTL<br>PSFHTV   | NGEPFDGEVHFVHG<br>NGKHUAVFGHUVHR  |
| UniRef90_UPI0003BD5008<br>UniRef90_K3WD24        | LSEQYDSLQFHLHWGN  | S S V P G S E H T V  | D G K R Y P M E L H L V N S   |
| UniRef90_N8TKE8                                  | L E Q F H V H   | SPSENNI  | NGQSYPMELNLVHA  |
| UniRef90_G4VP63<br>UniRef90_D0P4Q7               | NGASYSMAQLHLHA  | PSEHTL   | DAKPLDGEVHEVHS  |
| UniRef90_UPI0003288D71<br>UniRef90_M7BDQ4        | LENHYTLKQFHFHWGA<br>HAHLRIFCAG  | A  | D S R T F P A E L H L V H W<br>L P V Q R L L L H L I H W N                                |
| UniRef90_W8BVI4<br>UniRef90_G4ZXZ2               | LPQTYGPVQLHSHGSR FDLLQFHVHA LSEQYDSLQFHLHWGN NGKTYSLAQFHVH LEQFHVH LTSEYKLTQFHLHWGS NGASYSMAQLHLHA LENHYTLKQFHFHWGA HAHLRIFCAG LLACYTFVELCFRWSL NNASYNMVQFHLH LPGTFEAQSVHFHWGS DGKRYNLIAFHGHI | MSNDGSEHML<br>SPSDHTL  | N Y R K F P L E L Q A M H R<br>S G E H L D A E V H F V H N                                |
| UniRef90_B4JI18<br>UniRef90_W7D750               | LPGTFEAQSVHFHWGS DGKRYNLIAFHGHL LEDNYRLKQFHFHWGA NDVPYKMAQLHLHA LKHTYNLYSLIFHWG LRSRFKVGRLTFHWGR  | A N S R G S E H L I  | N G Q R Y D V E M H T V H K<br>N E H Y E A M E W H I V H M                                |
| UniRef90_J9P892<br>UniRef90_D0NW72               | LEDNYRLKQFHFHWGA  | D A WG S E H T V   | D S K C Y P A E L H L V H W   |
| UniRef90_T1J5K0                                  | LKHTYNLYSLIFHWG   | SEHVV  | N K V R A P L E L Q L L H Y   |
| UniRef90_UPI000441012D<br>UniRef90_V4JUP0        | LKHTYNLYSLIFHWG<br>LRSRFKVGRLTFHWGR<br>RDTEFKLVQCHWH  | S P S E H T L  | NGIKYDWELHWIVHI   |
| UniRef90_E5RJI8<br>UniRef90_Q0AFL1               | L L PL VQL H F H<br>L S Y R Y R L V E I R L H F G G   | EPSEHVV  | MMTKM <u>LHV</u> A <mark>H</mark> WN<br>EGKKFPAELH <u>F</u> VHL                           |
| UniRef90_W4XL56<br>UniRef90_Q4SJA6               | LSYRYRLVEIRLHFGG<br>LPDVYHTAQLHFHWGG  | ENTHGSEHTV<br>PASNGSEHTV                                       | G G R A F P G E L Q L I F F<br>D R R R Y P M E M H V V N V                                |
| UniRef90_W7CKT5<br>UniRef90_UPI000368A190        | L P DVY H T A QL H F H WG G N G L K Y H L T N W H M H M G N N E Y D L L Q F H F H A K P Y Q L K Y I S V H V N H Y R F K F L K F Q F H W G K L P F Q Y T A T Q L H L H W G N                   | PSEHQV<br>PSFHII   | N G G V Y P L E G H L V H T<br>N G M T Y P L E I H F V N G                                |
| UniRef90_UPI000379A9AD<br>UniRef90_I1FAY2        | KPYQLKYI SVHV   | P S E H Q I  | K Q K S Y A A E L H M V H E   |
| UniRef90_UPI00042C294E                           | LPFQYTATQLHLHWGN  | N K P E G S E H T V  | S G R H F A A E L H I V H Y   |
| UniRef90_UPI00021A7D4B<br>UniRef90_I0EXY3        | RGHDYVLDNVHFHWGE  | P M E F L  | N N K T R P L S A H F V H K   |
| UniRef90_UPI000258EF25<br>UniRef90_B4ME63        | LAGDYELVEAHFHWGE<br>LLS <mark>C</mark> FSFHEISFRWSW   | D N  | N G I W Y S M E G H V L H W<br>D N E <u>H</u> F P <u>L E M Q C L H</u> T                  |
| UniRef90_A0A026WQ71<br>UniRef90_H3F1Y9           | L D D V Y E L M D V H F H W G R G H D Y V L D N V H F H A L A G D Y E L V E A H F H W G E L L S C F S F H E L S F R W S W  M P Y K Y R L S Q L H F G A A D                                    | R F T V<br>G G E K G S E <mark>H</mark> T V                    | S S F L F S Q L Q I F G F N<br>D R V R F P A E I Q L I A Y                                |
| UniRef90_B4FGK2<br>UniRef90_J9NZ52               | MPYKYRLSQIHFGAAD<br>KKYKLKQVHWHV<br>ISFHWGKCN<br>MEFRLVQFHFH<br>TAYRLRQMHWH   | PSEHT V<br>MSSEGSEHSI  | NGTRFDAEM <mark>HMVH</mark> E<br>FGQKFPUFMQUY <mark>C</mark> F                            |
| UniRef90_D8RZ19<br>UniRef90_C0JAC3               | MEFRLVQFHFH   | HPSEHFI  | D G K K F E L E A H L V Y R   |
| UniRef90_G6CMD3                                  | LLEKHIFS QVHFHWGA   | D M M E G S E H T I  | D K R Q Y P A E M Q V T F F   |
| UniRef90_T1DDD4<br>UniRef90_W7CW22               | NGRKFELNQFHFHAE   | S E H T V  | D G K H Y P L E A H F V N E   |
| UniRef90_J9EPL8<br>UniRef90_R0FAJ5               | MEFRIL VQFHFH TAYRLRQMHWH LLEKHIFSQVHFHWGA LNNKYVFEQLHFHWGV NGRKFELNQFHFHAE FDQTYRLVQYHFHWGL QTDYKLVQSHWH RSLTYHFTGLHFHAMPI   | HDNEGSEHIL<br>SPSEHTL  | A GILIH Y P A E L HIL V H<br>N G T R Y D L E L H M V H T                                  |
| UniRef90_A4I3A0<br>UniRef90_M1DF34               | R S L T Y H F T G L H F H A M P L<br>N T N Y S L I Q L H W H  | VHQLRTLRPD<br>SPSEHTI  | A E M H M S F T T N H V E Q<br>N G R R Y A L E L H M V H Q<br>D G Y L Y P I E W H F V H E |
| UniRef90_D3UL74<br>UniRef90_W9QKC3               | NTNYSLIQIHWH<br>EYYPLVSFHAHI<br>TDYALLQCHWH   | P A E H L L<br>S P S E H T F                                   | D G Y L Y P I E W H F V H E<br>N G T R F E L E L H V I H K                                |
| UniRef90_UPI0002B42A6A<br>UniRef90_UPI0003EB06DB | K Q Y N Y <u>Y</u> G L   <del>H F H</del> W G E   | N D T F G S E H L L  | S N K H F P L E V H I V H Y F G H R F P A F I H V V H I                                   |
| UniRef90_I0K7K0<br>UniRef90_UPI0003EAA4B8        | Y <u>L L K Q F H V H</u>  | RGSEHTL  | N G K A A P M E L H L V N Q   |
| UniRef90_UPI0003ACA40F                           | PGREYRALQLHLHWGA  | AGRPGSEHTV   | GGHRFPAEIHVVHL  |
| UniRef90_E1BL46<br>UniRef90_I7M2W0               | VKATYRAI QFHFH  | SUSEHTI  | D G E H F D L E L H I V T Q   |
| UniRef90_U5S903<br>UniRef90_K1RPZ2               | SGKSFKF <u>E</u> S <u>F</u> H <u>F</u> HAGS   |  | N N V F Q P M E V H L V F Y   |
| UniRef90_B4PNC3<br>UniRef90_UPI00046C0A65        | LISGRYHAVIGILHIHWGS<br>RGHEFE <u>LH</u> DVQ <u>F</u> HWGR   | K  | K   |
| UniRef90_F6XXU0<br>UniRef90_UPI000344E71E        | PGREYRALQLHLHWGALLYSHRLSELRLLFGAVKATYRAIQFHFH NHKKYFLEDLHFHL SGKSFKFESFHFHAGS LSGRYHAVGLHIHWGS RGHEFELHDVQFHWGR QEYRALQLHLHWGT DEKDYKFLQLHFHA RDHEYSLVNLHFHI                                  | S D H P G S E H T V<br>P S E H A V                             | NGHRFPAELHVVHL<br>EGEHFPMEMHLVHQ  |
| UniRef90_K4RNW8<br>UniRef90_K1QX66               | RDHEYSLVNLHFHI<br>GSDEYLFFFLHFHLGK  | PMEFAI<br>REEKGSE <mark>H</mark> SI                            | H G E Q Q P L S M H L V H R<br>D G D F Y P M F A H M V F Y                                |
| UniRef90_R2QTJ1<br>UniRef90_UPI0003508A13        | GSDEYFEELHFHLGK<br>NQRIFSLTQFHFHAE<br>TVYHLKQLHWH<br>NHKRYVLEDLHFHL   | SEHTI  | D G K H Y P L E A H F V N   |
| UniRef90_K8EGZ2<br>UniRef90_K7FMS1               | NHKRYVLEDLHFHL  | PSEHLI   | DEKSFPLEFHMVHR<br>CPAPVPLQLHVVHY  |
| UniRef90_N2BBW7                                  | NRYQL <u>K</u> EIJYF  | K T P G F N A I  | D S L R G L L E A O L L H E   |
| UniRef90_J1EQH2<br>UniRef90_U9SXA8               | RGAPWRLVRLQFR<br>DSVRYIFNQVHFH  | T P S E H R F  | H Q N Y P M A T E L V Y Q<br>D G I H T D L E A H F V F E<br>N G L H Y P L E L H L V M Q   |
| UniRef90_M9V0L7<br>UniRef90_M0VQL3               | TTKSF <u>VPI</u> QFHFHHF <u>L</u><br>SYRLRQ <u>M</u> HWH  | S P S E H A L  | N G   |
| UniRef90_M7ZZ37<br>UniRef90_UPI0003AE8DDE        | Y F L R Q L H W H   | SPTEHSV  | H V V H Y   |
| UniDofOO C2DHE7                                  | Y F D L T O F H F H A   | P S F H K 🗆  | $\cap$ $\square$ $\square$ $\square$ $\square$  |
| UniRef90_UPI00022CEF6B                           | MTYSHRILEEIREHFGS   | EDSQGŠEHLL<br>TDSELLA  | N G Q A F S D C L A A W F F   |
| UniRef90_W5I4I4                                  | YFDLTQFHFHA MTYSHRLEEIRLHFGS RQFNLIQVHFH SYRLRQMHWH   | SPSEHAL  | N G S R Y D L E L H M L H Q   |
| Ullikei90_VV/ X I / U                            | Y R L L Q F H F H   | HPAEEKV  | NHKGFAMVAHLVHQ  |
| UniRef90_V9LKF0<br>UniRef90_K1QM00               | Y R L Q F H F H W G G P G Q K F L F N E F H W H L G R   | K D S R G S E H T   V<br>S F S H G S E H L I                   | D G N K F P M E A H L V F Y   |
| UniRef90_B4GWS9<br>UniRef90_E2J7F9               | LRFATTSNWLGHTVEQ<br>LNNEYNFAQLHLHWGR<br>KDFTLRQFHFH   | N R M G M N S Y A <u>G</u><br>T D N E G S E <mark>H</mark> R I | R D N Q R R <u>L I Q L                               </u>                                 |
| UniRef90_N4VZW7<br>UniRef90_A8JX26               | KDFTLRQFHFH<br>LGSEFKAASFHFRWDK   | T P S E H R I<br>S S A A G S E H T II                          | NGEHFPLEVHFVWE<br>GGKAYASEVHIVHH  |
| UniRef90_E7FYS7<br>UniRef90_S3DM93               | LGSEFKAASFHFRWDK<br>RDHEYYLINLHFHL<br>KVFNLAQFHFH   | P M E F A I  | R G K H Q P L S M H L V H Q<br>N G F Y M P I F M H M V H F                                |
| UniRef90_UPI0003F14347                           | KUI KEA WI III II   | I OLITAL   | N H Q W M Q L F F Y N   |

|  | 130 140 150 160  |
|--|--|
| UniRef90_W7C7B0<br>UniRef90_I1JPR6               | N S R G E K L V L G A F M D V G T G V S T D M T E L R R V F P E V F Q D F S V E S P Q P D G T N K T A V V G L L Y K Y G S P D P L L S K L G K Y I  |
| UniRef90_UPI0002246B49                           | N T S Y G S P D K <mark>C</mark> Y E R D D G I  A V V A F  L  F Q V I  G <mark>C</mark> Q G M V D N L I  S H I   |
| UniRef90_UPI00042BCA51<br>UniRef90 H3GIU3        | N S E S Y A N V S E V G N V A N P A Y D N I L D R L K N I Q P A Y D N I L D R L N S D G S A L I L A V G I F M E I D P A G D T D P W L E S V I  |
| UniRef90_D8S528                                  | S E D N R   L   A   V V   A   V   M Y T   I   G S E D D P F   I   D Q   V   E H F   L   P E   L  |
| UniRef90_UPI0003BD5008<br>UniRef90_K3WD24        | SSYNGNTNLAVKDSTG<br>EDNGSGLLVTGLLLNPEKHVPENAWIEDVW   |
| UniRef90_N8TKE8                                  | S D K G E L A V V A L M E O Y G L E N E K L K H L W N S  |
| UniRef90_G4VP63<br>UniRef90_D0P4Q7               | NTKYATMETALTYSDGLSVVGIFFQLGKSSNNNNALKRLC<br>NADGSALMVVGVFLQVDTTDPWMVSVLDGM   |
| UniRef90_UPI0003288D71                           | N S K Y P N Y Q E A   V   M G E N G   L   A   V I   G   V   F   L   K   L   G A H N E A   L   Q K   L V   E   V L  |
| UniRef90_M7BDQ4<br>UniRef90_W8BVI4               | STRYSSIDEAVGKKHGIALIALFVQIGKEHLGLKVVTELL TGPSGD CTSSYDILMIGYFFEISSNNPYLDPVVQNL NTNGS ALLVVGVFFKAVDGGETNPWVASVLDALDTV   |
| UniRef90_G4ZXZ2<br>UniRef90_B4JI18               | NTNGS ALLVVGVFFKAVDGGETNPWVASVLDALDTV<br>NVRYATVAEASLRPDGLAVLGVMLQ   |
| UniRef90_W7D750                                  | NE L G   |
| UniRef90_J9P892<br>UniRef90_D0NW72               | NAKFENFEDAALEE <mark>H</mark> GLAVIGVFLKVRM<br>KAADGKALLVLGIFLQVAPKSDPWVGPVLDAL  |
| UniRef90_T1J5K0                                  | NSKESDIVI <mark>H</mark> SAIVIGEPDAILIAILIAIVIEVWILIGRDAPEIVIHTILITSEILI   |
| UniRef90_UPI000441012D<br>UniRef90_V4JUP0        | EDHHSSVDAALRDGGRITALSVFIETSVEDNENYAIIDAV<br>SAQGKT AVI GVLYRLGEPNEFLTKLLNGI<br>SAKYSSLAEAASKADGLAVI GVLMKVGEANPKLQKVLDAL<br>N KDGRI AVLAVTI NI GKENAMFQTVLDNM  |
| UniRef90_E5RJI8                                  | SAKYSSLAEAASKADGLAVIGVLMKVGEANPKLQKVLDAL   |
| UniRef90_Q0AFL1<br>UniRef90_W4XL56               | NDDYDSYGQAEKSPNG L A I MG L F I KIN  |
| UniRef90_Q4SJA6<br>UniRef90_W7CKT5               | KAVHPNETAALGDPTGLAVLGVFLDVAYADNVHEHISQKL   |
| UniRef90_UPI000368A190                           | T A D G R M A   V L   G   V L V   K A G A H N P A F Q E   I L   E Q S  |
| UniRef90_UPI000379A9AD<br>UniRef90_I1FAY2        | D KTGHRVIIAVMLEEGNANPAFEKLLGSV<br>KGEDAYGVMKHTALAVLLKSDHTSQAMFEKWQKL   |
| UniRef90_UPI00042C294E                           | N S D Y P D V T A A I  D K S D G L  A V L  A V L I  E R G P F N P S Y E K I  F G H F   |
| UniRef90_UPI00021A7D4B<br>UniRef90_I0EXY3        | N R K Y A T V E E CF R H K D G F C I L A Y L F L V Q P D C C N C I R I T D H L D A K G R L L V L A I G F E E G K E N P N L D P I L E G I   |
| UniRef90_UPI000258EF25                           | N K K Y F S F E E <mark>C</mark> Q R H K D G L <mark>C</mark>  I L A Y L F L V Q <mark>C</mark>  I  N P Q L E R I  T E N L   |
| UniRef90_B4ME63<br>UniRef90_A0A026WQ71           | DAANTENA SSRSLLMVSYMFAVSAENPFMDVIVQHL<br>SQLYNNFSDALHRAQGIVAVSLLLQVGDSNPELRTFTQQL<br>NSDYENYTVAESQPRGLLAIAVIVDISTTHPELLRMTKAS  |
| UniRef90_H3F1Y9<br>UniRef90_B4FGK2               | NSDYENYTVAESQPRGLLALAVIVDISTT <mark>H</mark> PELLRMTKAS<br>DSTDA KSKAVVAVLF <u>S</u> AK <u>AGKS</u> SKLLRDLK <u>P</u> YFE <u>R</u> LAG <u>K</u>  |
| UniRef90_J9NZ52                                  | DDRFSSFEEAVKAKGKLRALSVLFEVGMEENLDYKIIDGV<br>AMDNSSRMAVVAQMYKKGEENSLLAQVLDMK  |
| UniRef90_D8RZ19<br>UniRef90_C0JAC3               | SDTNGRYAIVVIS QILIFEII ISRRRDDATILIDMILIE PYII IRRII I   |
| UniRef90_G6CMD3                                  | R S E Y M T Q E E A F K H N D G   V V   M     <mark>C</mark> Y   I     K G   V   N P D P R   L   Q W   V L   E G F   |
| UniRef90_T1DDD4<br>UniRef90_W7CW22               | E A D G L A V T G F F V H A F T D C P E F D K I V N G I N Q D S R L A V I G V F F K E G K A N P A F Q S I L  |
| UniRef90_J9EPL8<br>UniRef90_R0FAJ5               | E GLANPNKLAVI GVFLVLGDDDNALSQECSVL<br>SAQGKN AVIGLLYKLGEPNEFLAKLLDGI   |
| UniRef90_A4I3A0                                  | K M R N V L I V A V M L K A S A M V N S T S A R A L Q H I L V D G S L  |
| UniRef90_M1DF34<br>UniRef90_D3UL74               | EQVDKKVVVNAVLYKFGKPDPFIFILKGHILSM<br>KADGTTLVMSAWMELDNTTNVELKDLPKHFPEVFVDFETE  |
| UniRef90_W9QKC3<br>UniRef90_UPI0002B42A6A        | SSS GETAVIAIVY EYGHPDPFLTRLFEHI<br>LNDYGNFSNSLNYADGVLVWGLLYQIDVNNNSLKDVFNNL  |
| UniRef90_UPI0003EB06DB                           | S T A F A RIVID E AIL IG R P G GIL IAIV L IA A FIL IE H  |
| UniRef90_I0K7K0<br>UniRef90_UPI0003EAA4B8        | DERTGAI VLGVFLTNGPQNAVLQQVLANL<br>KKG KSLPVALADPGGIAVLGFFLE  |
| UniRef90_UPI0003ACA40F<br>UniRef90_E1BL46        | S T A F A K V D F A M G R P G G I   A V I   A F I   Q F G P F F N S A Y F Q I I   S H I  |
| UniRef90_I7M2W0                                  | N Q E Y G N L S A A T R G P N G L A I L S L F V N V A G S S N P F L S R L L N R N V V K T P K K L A V F G L F M Q E T E N E A E E T Q L F K K Y E F A G E N V N  |
| UniRef90_U5S903<br>UniRef90_K1RPZ2               | SVHNELLVVGVT VLPSERPINTTLAALD<br>NTQYGDFKTALGQSDGL <u>VVISVL</u> VQENQGNTPF <u>S</u> G <mark>C</mark> VNTQ   |
| UniRef90_B4PNC3                                  | SEKYKDI MEAVQHKGGI AVAAI FLAADKTGRTHIHGLSRT<br>NSTYSSI DEAVGKKHGI AI I ALFVQIGKEHLGLKAVTEVL<br>STAFSELHEALGRPGGLAVLAAFLQ<br>EVGSDDLV   |
| UniRef90_UPI00046C0A65<br>UniRef90_F6XXU0        | STAFSELHEALGRPGGLAVLAAFLQ  |
| UniRef90_UPI000344E71E<br>UniRef90_K4RNW8        | 1) K E (3 N II   1 V V   (3 II   1 3 E S II   1 3 K K N P E E I P II   F N A Y   |
| UniRef90_K1QX66                                  | NDKYKDLGAAKSKRDGLVVIGVMAELN  |
| UniRef90_R2QTJ1<br>UniRef90_UPI0003508A13        | N D K Y K D I G A A K S K R D G L V V I G V M A E I N Q A Q D G R M A V I A V F F E E G S E N K G F Q E V L D D V T P E K K T A V V G I L Y R V S N L A D P F L K S L Q P  |
| UniRef90_K8EGZ2<br>UniRef90_K7FMS1               | SPKNELLVIGIMAEPTMVPL NEKMANLDRK  |
| UniRef90_N2BBW7                                  | DSK GHKVI LAVFFVEGHANPLIESLVKNL  |
| UniRef90_J1EQH2<br>UniRef90_U9SXA8               | DSK GHKVI LAVEFVEGHANPI IESL VKNL GPS GQMAVVSVPMQLGSPNAFI TRI WTHM DSVTKKYS EQDPADVATAQLAVIG MYKYSENGDAFLNSLQTQIEGKI   |
| UniRef90_M9V0L7                                  | E Q D P A D V A T A Q L A V I G L M Y K Y S E N G D A F L N S L Q T Q I E G K L  |
| UniRef90_M0VQL3<br>UniRef90_M7ZZ37               | SAQGKAAME KYA <u>VV</u> AQLIFQIIGEHRDETLIHLLERY<br>SAQGKAAME PYLLE   |
| UniRef90_UPI0003AE8DDE<br>UniRef90_G3RHF7        | N S K Y K S Y D E A Q T A P D G L A V L A A L F E I K D Y N T Y Y S D F I S H L N H F Y T N V T F A A K S P N G I V V V S I F I K V S D S S N P F I N R M I N R  |
| UniRef90_R8GPB9                                  | KAQNGRLAVI SVFFREGSENQGFQKVI   |
| UniRef90_UPI00022CEF6B<br>UniRef90_UPI0001DD0FFA | NHEYTNVTEAAKSPNGLVVVSIFIKVSDSSNPFLNRMLNR KAQNGRLAVISVFFREGSENQGFQKVI  IPIPNSPKKRVDFNYGGVILCSAMNNAQSMSSGCFHPSKE ATDDGTLGVLGVMFEEGEANPGLQALIDAL SDKASNKYAVVAQLFQ IGEHRDEILHMLEPFIERI NPDDFDSFQTAISENRIAMAIFFQVSPRDNSALDPIIHGL  |
| UniRef90_W5I4I4<br>UniRef90_G9KJD5               | S D K A S N K Y A V V A Q L F Q       G E H R D E   L H M L E P F   E R     N P D D E D S E O T A L S E N R L A M A L E E O V S P P D N S A L D P L L L C L  |
| UniRef90_W7X170                                  | N D Q G R L A V V A V L I D P G A A N D L V H K V W T H M  |
| UniRef90_V9LKF0<br>UniRef90_K1QM00               | NAKYKSFUEAASAPUGILIAIVLIGIVIFILIETGEK <mark>H</mark> S <u>VLJ</u> HRILTDALL<br>NARYGDAVTAKRSPRGILIAIVI IGIVIMII IQIVIAGDDDDESGDDYF   |
| UniRef90_B4GWS9                                  | S QLY A N F S D A LN R A Q G I V G V S I L L Q G D L S N P E L R M L T D Q L   |
| UniRef90_E2J7F9<br>UniRef90_N4VZW7               | S Q A G N G T S L A V V G F PI E V A E T S N P L L A A V F K N I   |
| UniRef90_A8JX26<br>UniRef90_E7FYS7               | NPDDFDSFQTAILSENRIAMAIFFQVSPRDNSALDPILHGL NDQ GRLAVVAVLIDPGAANDLVHKVWTHM NAKYKSFDEAASAPDGLAVLGVFIETGEKHSVLHRLTDAL NARYGDAVTAKRSPRGLAVIGVMIQVAGDDDDDESGDDYE SQLYANFSDALNRAQGIVGVSILLQGDLSNPELRMLTDQL RSYRKRNTYSKNTVTISVVLGVLFDKSENAIKYDLLEKAD SQAGNGTSLAV VGFPIEVAETSNPLLAAVFKNI NSKFSSVADAANVDGGLAVLAIFVQPGAANAELQKLVDVL DSE GRLLVIGIGFKIGQENPFFTPLFNAY AEDGALAVIA VPFQLCEAGGSNPLLNALLPSM PDDFDSFQTAISENRIIGAMAIFFQVSPRDNSADPIIHGL |
| UniRef90_S3DM93                                  | A E D G A LAVIA VP F QLC E A G G S N P L LN A L LP S M   |
| UniRef90_UPI0003F14347                           | PUUFUSFQIA    SENK        GAMA      FFQV   SPRDNSADP   I    HG   |

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REVS

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KNI QHAGQKI SIPPFDI HELLPGQGHYFRYNGS
DGI TAATMMKLTSYSALVQKSTRGGGLYNYPGS
RQNVSI AAGFSL DDLL VGVDRTKYYRYLGS
RTMNDGVEDKEVNYVDLLNSI VYTSHLFNYAGS
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LPKNVGESNQLYSKNKADSYLPNNLEYYRFNGS
TLL KSTKKGESKDI QPMLDLNTLLPTYLYFS
EAVTPAAATTMNLGLYANVVNTNAVRTYNYPGS
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                                                                                                                                            PYESGKENSTSGVKFKPSGMNAANLKYLTLAGS

SSVAYKGQTTKLKPFPLLNLLPNMSQYYRYYGS

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NNVRT

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KGVEKKEKNLGMVDPREIKFHSKLYRYM

GSL

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REITT

KSISHEERE

LGIVNPGDIKFGSRKYYRYLGS

QNVINAGNKTNLVPVPLSSFVPQNSSYYHYAGS

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

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SDGKKT

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| UniRef90_W7C7B0<br>UniRef90_I1JPR6               | F GIL I WT VID K                         | DRQTIGI<br>KVRTVS               | HVA H K A F E KV  | ∐G                                       | GT         |
| UniRef90_UPI0002246B49<br>UniRef90_UPI00042BCA51 | ECVTWIVIP<br>QHVLLTVL                    | RSVKISA<br>HPRSDWI              | ARQANAFR<br>LGGRQKISIPPF<br>AKDLTRIRD   | DIYNSQGERIL<br>DIHELLPGQLG               | R N<br>H Y |
| UniRef90_H3GIU3<br>UniRef90_D8S528               | E U D W W V V E                          | KPVKVS                          | A K D L T R I R D   | NQGEVHATDAS                              | D N        |
| UniRef90_UPI0003BD5008                           | EAVVWTVEK                                | EPIKVS                          | KTQYRLLVNALN<br>KDLIDLFSTTLH  | FNDSSSPIMI                               | NÖ         |
| UniRef90_K3WD24<br>UniRef90_N8TKE8               | E G V R W V V F K                        | E L Q Q A S I                   | LSELK <mark>H</mark> LREKYA<br>NEQLESFMELMG   | ERPSTDKG                                 | P N        |
| UniRef90_G4VP63<br>UniRef90_D0P4Q7               | ELVDWWVV                                 | QPMSIS                          | SAD FTRLQT  | QLKELSVTDNG                              | ΝN         |
| UniRef90_UPI0003288D71<br>UniRef90_M7BDQ4        | ENVT WILF R                              | Y PLITVS                        | QLQIEEFRRLRT  | HVK G A E D GI L G                       | DN         |
| UniRef90_W8BVI4<br>UniRef90_G4ZXZ2               | QGAEWFLFF<br>EIVDWWVVK                   | ' E P  L  A  I  S I             | E   | S K D G K T R L L Q L K E I P L T D D G  | RN         |
| UniRef90_B4JI18<br>UniRef90_W7D750               |  |                                 | E E D F VA F Q D [  |  |            |
| UniRef90_J9P892<br>UniRef90_D0NW72               |  |                                 |   |  |            |
| UniRef90_T1J5K0<br>UniRef90_UPI000441012D        | EVVVWTVFK                                | DPNFISI                         | SIDFGRL <mark>H</mark> Q<br>LIQLKKFYAVKT<br>LEMF <mark>C</mark> EVMTMQQ                                 | VTKRPAYGPLL                              | HN         |
| UniRef90_V4JUP0                                  | E GVIWIV VE                              | RVNTISI                         | K E Q I A A L R N A V D   | DGYET                                    | N          |
| UniRef90_E5RJI8<br>UniRef90_Q0AFL1               | E G V Q WY I L                           | KSLTLS                          | K E Q I A A L R N A V D<br>S E Q L A Q F R S L L S<br>A A Q L E Q M K T F Y S                           | NVEGDNAVPMQ                              | N N        |
| UniRef90_W4XL56<br>UniRef90_Q4SJA6               | QAVVWTLYE                                | VPVHIS                          | WS QVGLSRHV   |  |            |
| UniRef90_W7CKT5<br>UniRef90_UPI000368A190        | E G V Q W F V L C                        | )                               | KKQAVNLYDLLY<br>EQQIRDFSS   | K F Y H                                  |            |
| UniRef90_UPI000379A9AD<br>UniRef90_I1FAY2        | E G V Q W V I M K<br>E N V Q W I V L K   | [                               | K F Q L G S L Q Q A I S<br>E A F L D K M R S  | E<br>HKKDDGGFLK                          | P N<br>T N |
| UniRef90_UPI00042C294E<br>UniRef90_UPI00021A7D4B | ECATWIVEP                                | VVIPIR                          | A S E T K E <u>F</u> R R L R D  | R D G N D [ K T                          | N          |
| UniRef90_I0EXY3<br>UniRef90_UPI000258EF25        | F GIVIA W F IV I I F                     | FPILIFIVIS A                    | A K O I   A F I   K K R M K   | N S P                                    | N<br>Q N   |
| UniRef90_B4ME63<br>UniRef90_A0A026WQ71           | RGAEWFI Y P                              | QPIAISI                         | P S D I N E F R K L R<br>E R Q L H E F R K L R<br>K Q Q A H A L R Q L M Q                               | SRSGARIG                                 | R N<br>N N |
| UniRef90_H3F1Y9<br>UniRef90_B4FGK2               | ETVT WV I MN                             | INPILYLTI                       | K Q D R H F M P T L Q L<br>K F F L H S L F S V K F  | JA Q W N E L Q Q P M Q                   | PU         |
| UniRef90_J9NZ52<br>UniRef90_D8RZ19               | DTVDWIIFK                                | DTVSISI                         | ESQLA <mark>VFC</mark> TMQQ<br>KQQIKDLKQ <mark>C</mark> LG  | S G Y V M L M D Y L Q                    | N N<br>R N |
| UniRef90_C0JAC3<br>UniRef90_G6CMD3               | F GII IT WTIVIA R                        | ! NIVIR RIVIS I                 | R Q Q   V   K   I   I   R G A   V   H   | D G A R WD P WD E P V                    | RN         |
| UniRef90_T1DDD4                                  | ESVTWLVYK                                | TPVYVS                          | R A Q I A A F R E L   Q   | SCPKDSNKKLV                              | ΝN         |
| UniRef90_W7CW22<br>UniRef90_J9EPL8               | ENVEWYVM A                               | EPIVVI                          | K E Q I A E F<br>K F Q L A L F R S L H<br>M E Q L T A L K E T V D                                       | DKTGQ IME                                | ΚN         |
| UniRef90_R0FAJ5<br>UniRef90_A4I3A0               | ENIVIR WIV VIM T                         | SPILLIS                         | PIVIAILIGRILIRDAMD  | AIL LIPNDFHRFG                           | N<br>N     |
| UniRef90_M1DF34<br>UniRef90_D3UL74               | EGIVIT WILVLIK                           | ( N A                           | R F Q V N L L R K A V <mark>H</mark><br>K S L K Q   | E D F T E L D K A L G                    | ΝΤ         |
| UniRef90_W9QKC3<br>UniRef90_UPI0002B42A6A        | EGVIWTIVK<br>ESVMWIVNO                   | (                               | R E Q V <mark>H</mark> A L R Q A V <mark>H</mark><br>S I Q L Q A F R <mark>H L H</mark> N               | D<br>VSDSVEPEVLT                         | ΕN         |
| UniRef90_UPI0003EB06DB<br>UniRef90_I0K7K0        | QQQDWFLFK                                | NPVAIS                          | А   | GQEGAFAQKYP                              | ΚN         |
| UniRef90_UPI0003EAA4B8<br>UniRef90_UPI0003ACA40F | QGVIWTVFN                                | IQTVRLS                         |   |  |            |
| UniRef90_E1BL46<br>UniRef90_I7M2W0               | VIT WILL I                               | RALNII TS                       | S L Q M <mark>H</mark> S L R L L S Q<br>K K T L D K F K E L W F   | N P P S Q I F Q S L S<br>N Q S G E I K S | G N<br>G N |
| UniRef90_U5S903<br>UniRef90_K1RPZ2               | GPIVIE WII VIFR                          | QQSFMR(                         | Q G L   | N II IG                                  |            |
| UniRef90_B4PNC3<br>UniRef90_UPI00046C0A65        | ESVIWNVFS                                | KAVLVSI                         | FDGFARLWKLRD  | HSGN RLI                                 | ΝN         |
| UniRef90_F6XXU0<br>UniRef90_UPI000344E71E        | VGVNWLIFE                                | FAUPASA                         | A E OLLA O E K A LLY S  |  | ΝΤ         |
| UniRef90_K4RNW8<br>UniRef90_K1QX66               | EGVTWFLLE                                | ĒTLNĖŠ                          | A E QIIA Q F K A L Y S<br>K E Q F E E M R K I M H   | YKS                                      | Ň          |
| UniRef90_R2QTJ1<br>UniRef90_UPI0003508A13        | ENVEWYIFK                                | E P V Q A S I                   | K D Q I K K F Q R F Y<br>S D Q L D L L R E A V D  | D G F F M                                | H N<br>N   |
| UniRef90_K8EGZ2<br>UniRef90_K7FMS1               | GPVNWVVFK<br>QNVLWTVF                    | SPIVIYMRO                       | QGLLEAFK  | E Q [ G                                  |            |
| UniRef90_N2BBW7                                  | QGV <u>R</u> WIV <u>L</u> K              | . Q T <u>M</u> T  I  T <u>0</u> | Q S Q V D S M R D I T G   | S  | N<br>P N   |
| UniRef90_J1EQH2<br>UniRef90_U9SXA8               | E G V L R L V M K<br>E D V T W W V V P V | IKPLLIS                         | L   | HII IG                                   | FΝ         |
| UniRef90_M9V0L7<br>UniRef90_M0VQL3               | F GIL IA WAIVIA T                        | RIVIR HIVIA I                   | RHOIVIFILLIRDAIVIH  | VT MGAHAGADV<br>DHARM                    | V N<br>N   |
| UniRef90_M7ZZ37<br>UniRef90_UPI0003AE8DDE        | ENVHWEVLA                                | DTVKLSI                         | R H Q L E L L R E A V <mark>H</mark><br>R T Q V W K L Q N S L L   | D<br>N D Q N K T                         | N D        |
| UniRef90_G3RHF7<br>UniRef90_R8GPB9               | ENVEWYVMR                                | K P V Y   T   T     T           | R M Q M H S L R L L S Q K W Q L E T F Q S R M Q M H S L R L L S Q P A Q I A V M R H Q V E L L R D A V H | N Q P S QIL F L S M S<br>Y Y N           | N N        |
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| UniRef90_K1QM00<br>UniRef90_B4GWS9               | FTVT WVVIN                               | IK PUYUT I                      | K Q Q L <mark>H</mark> <u>A</u> L R R L M Q   | G S P D H P K A P I G                    | NN         |
| UniRef90_E2J7F9<br>UniRef90_N4VZW7               | T N V I WI V L R<br>E N I A W N V V G    | : D P  L  S  V  S <u>:</u>      | <u>S_</u> D Q   | D EGLIT<br>KTKNI MK                      | ΕN         |
| UniRef90_A8JX26                                  |  |                                 |   | <del>_</del>                             |            |
| UniRef90_E7FYS7<br>UniRef90_S3DM93               | EGLTFFVAT                                | QTLPLD                          | PKQFETIKKIMY<br>VKTYNLMKSI<br>Y <mark>H</mark> QLEAFYSIFT   | T F O O D !! W = V   G                   | N<br>F N   |
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| UniRef90_E2AGD3<br>UniRef90_T1HFH7<br>UniRef90_N6ZB78            | P   | E WR T <mark>C</mark> S E G T R (  | S P V D L S L L Y E Q I<br>Q S P I D L R D G I A V                        | L V H R<br>D                                 |
| UniRef90_Q9MZT3<br>UniRef90_C4B8E0<br>UniRef90_K2RK00            | F S Y D R K N G P F C W R<br>Y G Y D G A N G P L N W H                              | D T Q K <mark>C</mark> F H G V N C<br>N L A P C A T G K N C                  | QSPIYVDTDKVRI<br>QSPINLGSSIKK   | R F <mark>C</mark> G<br>A                    |
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| UniRef90_G0YYQ2<br>UniRef90_D0A823<br>UniRef90_K1R175            | FSYDRQNGPFYWR<br>WSYSNL AAWP<br>HFGYTEAHGPTHWH                                      | D T R K <mark>C</mark> F F G <u>V</u> N (<br>P L                             | Q   | N <mark>V C</mark> Y<br>C T K P<br>Y R P D   |
| UniRef90_B0W4B1<br>UniRef90_R2QYS5<br>UniRef90_E4XS94            | WGYEGENGPKHWH   | TICDWAKYPYO  | OSPINISKNI IN (   | GESS   |
| UniRef90_B6QDD8<br>UniRef90_A0A010RZ00                           | F N Y T GL G G P L N WY<br>F G Y N D L T G P L N W H                                | GLNACAKGMRO<br>GHSKCATGAWO   | QSPINIDTHTIE<br>QSPINLNDTSAT[   | Y A A<br>L V A G                             |
| UniRef90_S4P9N1<br>UniRef90_UPI000468DD74<br>UniRef90_G9NLT4     | F G Y N D L I G P L N W Y   | A K M E A C<br>S L N K <mark>C</mark> A T G Q H C                            | QSPIDITAADTKI<br>QSPIVLDSSIAT   | F EK<br>AHGD                                 |
| UniRef90_S6DFU0<br>UniRef90_R0GQ04<br>UniRef90_M4FK38            | FSYEGKKGPAKWG   | T [ K F <mark>C</mark> G K G K M (   | OSPIDIRDKNVV  | V T H R                                      |
| UniRef90_C7Z076<br>UniRef90_M7Y3S1                               | Y G F Q G M K G P L N WY<br>F G Y N G L K G P V N WY                                | SLDPCATGKSO  | QSPINMAKGSFNI<br>QSPINIQSA S  | L I P A<br>T G E E                           |
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| UniRef90_K9Q5K8<br>UniRef90_J3C6B8<br>UniRef90_S8A6B0            | P D S W D F S Y L G L T G P V D W N   | DIL IS E C K T G E M C   | )   | S DIVIS                                      |
| UniRef90_W4WJL6<br>UniRef90_UPI0002A479D5                        | Y C Y S Q P H D P Y S WG  | (  | Q A P     D   L   N D K   L V   R  <br>H S P   L N F D P H M P R <u>;</u> | RTRF<br><u>S</u> DS                          |
| UniRef90_Q8PFA4<br>UniRef90_R2RYG5<br>UniRef90_I3WBF5            | WSYSGENGPNYWH   | T <mark>L C</mark> D WA R Y P Y (<br>C V G D R (                             | QSPIALEHEPLV<br>QSPINIPSPDTQI   | E I PP                                       |
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| UniRef90_R2QGY6<br>UniRef90_L8GXK3                               | Y D E E N G P E VWG   | A G T L C<br>D L <mark>C</mark> K <mark>C</mark> S Q G A L C                 | QSPIINII DTTQTK<br>QAPVDI R <u>YV</u> TI                                  | T [V]T A<br>M D Y N                          |
| UniRef90_E1Z3D7<br>UniRef90_M0TAT2<br>UniRef90_T0RXF6            | H WN H A G R E WP S H D A   | Q  | Q S P T D T V P T T A K I   |  |
| UniRef90_F4FS65<br>UniRef90_A0A024TUP8                           | WGYSGERGPE <mark>H</mark> WA  | WPNGFGSQ0<br>R0  | QSPIEIKTAQTLI<br>QSPINLPR   | KSKE<br>VVPN                                 |
| UniRef90_R2SNN4<br>UniRef90_H3CKP7<br>UniRef90_U4KZX1            | F G Y T GL L G PL N WA  | GLSP <mark>C</mark> STSLT(   | Q S P [ N [ D P S [ ] S [   | L <u>L</u> P S                               |
| UniRef90_B2WAZ4<br>UniRef90_W9WIK5<br>UniRef90_L8G1U1            | F G Y G P L D G A M N W A<br>F G Y D A L K G P L N W Y<br>F G Y T G A I G P L N W A | A  | Q S P   | RPA<br>VQGS<br>TLTA                          |
| UniRef90_F9WEC6<br>UniRef90_W6T636<br>UniRef90_S4E478            | WSYANLTA WP WGYTGETGPEHWA   | PL CHTGTQC<br>GGNVC  | QSPIDIQTTTT   | CTTQ<br>ASQL<br>ADSP                         |
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| UniRef90_W4G104<br>UniRef90_UPI0003EBE76C                        | WCYHLPSCNDKWP   | T S Q Q (<br>T   S P Y C N G S R (   | QSPIDINPKATKI<br>QSPINIVSASATI  | E V V M<br>P N N N                           |
| UniRef90_W5DNN3<br>UniRef90_C4B8E1<br>UniRef90_UPl0004415EC9     | WCYHLPSCNDKWPFSYDAENGPAHWGFSYNSSIGPDDWNWSYSSETGPLLWA                                | RVCPCFGGSNC<br>GLSACRLGTH  | QSPVRIYPHLVK<br>QSPVVIYTASPDV   | Y F C D<br>WT P I                            |
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| UniRef90_Q04H50<br>UniRef90_L1JH97                               | II WO I GODE OF NO WO   | WLFKTGQMC  | S P V A L E S N K A E I   | KÜĖK   |
| UniRef90_G0QZG4<br>UniRef90_A2YW47<br>UniRef90_W7AUG9            | G   | WP <mark>C</mark> QEGSA(<br>M(   | <del>_</del> _  | L M R N                                      |
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HVODFTVA UniRef90\_M4FK38 UniRef90\_C7Z076 UniRef90\_M7Y3S1 UniRef90\_J8FD78 UniRef90\_UPI000372B2AF UniRef90\_W8B0L7 UniRef90\_W8bUL7 UniRef90\_K9Q5K8 UniRef90\_J3C6B8 UniRef90\_S8A6B0 UniRef90\_W4WJL6 UniRef90\_UP10002A479D5 UniRef90\_Q8PFA4 UniRef90\_R2RYG5 UniRef90\_I3WBF5 Unikef90\_I3WBF5
Unikef90\_UPI0003444A70
Unikef90\_R2R3A0
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Unikef90\_R2QGY6
Unikef90\_L8GXK3
Unikef90\_E1Z3D7
Unikef90\_MTAT2
Unikef90\_T0RXF6
Unikef90\_T0RXF6
Unikef90\_A0A024TUP8
Unikef90\_R2SNN4
Unikef90\_R2SNN4
Unikef90\_U4KZX1
Unikef90\_W6T636
Unikef90\_W6T636
Unikef90\_V6T636
Unikef90\_V10004541384 UniRef90\_UPI0004541384 UniRef90\_F2PNC5 UniRef90\_K2SFN4 UniRef90\_G0SAA8 UniRef90\_W7DJM3 UniRef90\_W4G104 K G S V K I D I P T A R M A D F E N L G S T V E V
P V I D F P N V E A A E F E N L G S T L E A I V N G T T T V G G V
S D V E L T V N D M P D G A E F E N L G T T V E V V
P A S G K L T V
T Q G G T L T A DKRVGHIHLALGSASGHMEYLDTNFRVNWCGDAKSVLTLR
LTKFTFYDDTSAMTSIENTGDTVKVTFKSGVKI SGG
LGYLNHSYVAANAI I VNRGHDIMVKFEGDAGSVSIDGTP
PHRLGYPPRQLVTGLLENDGYYPKIAEGTISDIVLQGVPG
PTVAHIDDVSAGCAVLENLNTTLEVPVHPRGSIAVRLPDE
QGLLQIFWKPSTCKEIFNIGHSFHVNFDHKYNQSVLLANH
NYQINLKYKDLNNVKMENVLWSVRLKGADNGYIELTDLNG
TTPLKIAFNQ HVDNIVDNGHTIQVNVDEGS SVTF
QATLKLNYS TNASYVHDNGQGIEIGLSGKAIIDNR UniRef90\_UPI0003EBE76C UniRef90\_W5DNN3 UniRef90\_C4B8E1 UniRef90\_UPI0004415EC9 UniRef90\_J9HPD7 UniRef90\_J9HPD7
UniRef90\_UPI000360F09D
UniRef90\_Q04H50
UniRef90\_L1JH97
UniRef90\_G0QZG4
UniRef90\_A2YW47
UniRef90\_W7AUG9 M MVN MVLK A E DILT SVN K SLQGLK SVGQFTILH A K DID GLGYLDYSY LPAEAS MVN R GHDIEVK F M G N A G R V V I N G

LEPLRWNNYEPASVKLTNTGETVILSARWDSEQ<mark>C</mark>PSEGGP

UniRef90\_C5ML18

| UniRef90_T1H954  | [RGFYSLD   | 90<br>H [ ] H F H W  | 100<br>P S E H   | T VD G R F P L E V H F V H Y N   |
|--|--|--|--|--|
| UniRef90_UPI0003C17BBB<br>UniRef90_A0A010Q209<br>UniRef90_L2FB78<br>UniRef90_B0JU65<br>UniRef90_B0JU65<br>UniRef90_D8T703  | KTYNLR<br>KNYTLR<br>LPGLYSLK<br>ENWDLL   | QFHFH<br>QFHFH<br>SFHFHWGTYHY<br>]QFHFH  | TPSEH<br>TPSEH<br>'KGSEH<br>HPSEH  | RINGEHFPLEVHFVWE<br>RLNGEHYPLEVHFVWE<br>AIDGRKHDMEKS<br>QIKGQSFPLEIHLVHR   |
| UniRef90_B7QE12 UniRef90_B6QSA0 UniRef90_B9T349 UniRef90_C2PBQ8 UniRef90_C5XTF4 UniRef90_E6LFX9 UniRef90_M5WID4 UniRef90_K9F3V7 UniRef90_K9F3V7 UniRef90_T1HFH7 UniRef90_N6ZB78 UniRef90_Q9MZT3 UniRef90_C4B8E0 UniRef90_C4B8E0 UniRef90_C4WTW3 UniRef90_W7CKB6 UniRef90_W7CKB6 UniRef90_W7CKB6 UniRef90_W7CKB6 UniRef90_UPI0002B4B041 UniRef90_Q9SUB4 UniRef90_G0YYQ2 UniRef90_D0A823 UniRef90_D0A823 UniRef90_D0A823 | T T PI Y K L A D S P E Y H F V D K D Y E L V K Y K L K Q N V R Y F L T D E Q L Y T L E L L D D Y V F S R Y A L E Y S H R E L N D G R A F E L A R G V K Y H L T Q K T F R C A Q T D Y K L V Y E N N F E L N G A Q K F T F N G A Q K F T F N | QFHFH QCHWH SMHFH QFHFH QLHWH DLHFH EVHF MHLHWS QLHFHWGIWLL RFTLH ELRLLFGARDG SLHFHIGKEKF QFHLH MHFHWEKNDM MHFHWGEKC QFHFH QCHWH SIHVHAGKEQF | HHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH   | RVNEEYFPMEAHFVFA TFNGSRFELELHLVFA RIODESYSPMEUHFVFA RIODESYSPMEUHFVFA RIODESYSPMEUHHWVH LIODGQVHELEHHWVH LIODGQQHELELHLVHY SINGGRHAMEUVQLVHR TINGGRHAMEUVQLVHR SINGGRHAMEUVQLVHR RVGGGMAHAMEVQLVHR RVGGGMAHDWHVVQLIHF RVGGGMAHDWHVVQLIHF VIGGRKSYDAEMHWVHQ RIONGGFHYPLEMHWVHQ KVNNGGFSAEWHWVHV |
| UniRef90_E4XS94<br>UniRef90_B6QDD8<br>UniRef90_A0A010R700  | E D A H Y K F D<br>N N I T Y Y L D   | HFTFRWGDLEK<br>NFHFH   | GGSDH  | TVNHAHAFGE QAWHR<br>RVDEEYFPME CHFGFV  |
| UniRef90_S4P9N1 UniRef90_UPI000468DD74 UniRef90_G9NLT4 UniRef90_G80DFU0 UniRef90_R0GQ04 UniRef90_MFK38 UniRef90_C7Z076 UniRef90_M7Y3S1 UniRef90_J3FD78 UniRef90_UPI000372B2AF UniRef90_WBB0L7 UniRef90_K9Q5K8 UniRef90_J3C6B8 UniRef90_J3C6B8 UniRef90_J3C6B8 UniRef90_J3C6B8 UniRef90_UPI0002A479D5 UniRef90_W4WJL6 UniRef90_UPI0002A479D5 UniRef90_Q8PFA4  | T V D T Y Q L A  K D Y K L A  T R Y F L R  T R Y K L Q  D S K D Y K L A  E K S Y E L K  R K F Q L S  WV T R Y R F H  E I Y N L L  K G M K Y E L Q  F I N N Y E F H  L L D E Y H T I  K G T K Y A   | QFHFH QFHFH QLHWH QLHWH QFHFH QFHFH QFHFH QFHFH EFHFHFH EFHFHFH EIHIHYGLHDG QFHFH QFHFH QFHFH QFHFH QFHFH QFHFH                              | T P P S S T T E T R T R T R C S S C S C S C S C S C S C S C S C S                      | RY DS G G G G G G F P P M M L V H F V V H F V V H F V V V V V V V H H F V V F P P M M M L V V F V H H M V F V V V V V V V V V H H G V F P P M M M M M M M M M M M M M M M M M  |
| UniRef90_C4B8E1 UniRef90_UPI0004415EC9 UniRef90_G1NGR6 UniRef90_J9HPD7 UniRef90_UPI000360F09D UniRef90_Q04H50 UniRef90_L1JH97 UniRef90_G0QZG4 UniRef90_A2YW47 UniRef90_W7AUG9 UniRef90_C5ML18  | PETAYTLL CFSEPSLW GPYIYRAH GDKVFSLK FFSLQ NLVGYDGY KAYKLK NFDLQ  | SLHIHVGKISH QFHFH QFHFH QFHFH QFHFH QFHIHA QFHIH EIQ QLHWH   | T P S E E H<br>T P S E E H | RI DEE HYPLE MHLVFT TRDGKKYASELHLINW KINGKAFDLE MHLVHE TIDGEHLPLE MHFVHQ LLNNYRFDGEIHFVHQ TIDGEHYDMEIHFVH QIEGTQYDLEVQFYHN TVNGRRYDMELHLVHD TVDGNHYPIEVHFVN TIDGYRLPLELHVIHF   |

|   | 130 140 150 160   |
|---|---|
| UniRef90_UPI0003C17BBB                                | NSTYPSINAALPDPAGVAVIAVIFTEGSKSSPIGHLIEEN<br>QELYNNVSEASRSPNGLAVISLFVKVGDSCNPFLSKIETM  |
| UniRef90_A0A010Q209<br>UniRef90_L2FB78                | A E I G N G S S L A V V G F P I E V A E T S D P L L A A V F K N V S E A G N G T S S L A V V G F L I E V E T T D P L L A S I F K N V   |
| UniRef90_UPI0004627871<br>UniRef90_B0JU65             | N ETPSVNTWKTLADLL<br>N GKGNLAVVGLLAEIGANNPYLQTI WAYL  |
| UniRef90_D8T703<br>UniRef90_B7QE12                    | VAPNSSQITVVSKIFKLGRŠDPLIDQVSSVGIKESI AANA<br>SDLYANMSEAMRSEGLVGISI LLQLGDLSHSELRVLTGQL  |
| UniRef90_B6QSA0<br>UniRef90_B9T349                    | NEASQIAVAA FLFQLSESGASNPLFDSVFAHL<br>SPERKIAVVAIVYEYGRPDSFL SRLFHHI   |
| UniRef90_K2PBQ8<br>UniRef90_D4DIY5                    | HTQQSRQPHII MIVVVVIQII VIASDKII NSTSIVIAAII IKHII I I IDGSII I  |
| UniRef90_C5XTF4<br>UniRef90_E6LFX9                    | TSDKSIAVVA FLVELSPYGRSTPLLTQVFAHL VTEDGNVTVVALLYRYGKPDPFLFQIKEQL SEQQKNLVVGV  |
| UniRef90_M5WID4                                       | SI NPNV TNKI AVVIGVI YRI IGHANSFI ISKI ITRDIV   |
| UniRef90_K9F3V7<br>UniRef90_E2AGD3                    | Y GEHVVI V GIFVEV GEDN PVMQSI WEHM DKQYANSSI AAQHEDGI AVVSCL FELSKHDNQQLEPI VKA KRSCESHEAAKSVADGI VI LVYL CADVTEEPN PYPI TRNI ADD GRMAI LSL LLSAGGESN PALQTLWN N  |
| UniRef90_T1HFH7<br>UniRef90_N6ZB78                    | ADD GRMAILSLLSAGGESNPALQTLWNN   |
| UniRef90_Q9MZT3<br>UniRef90_C4B8E0                    | REEHNSEVDAMLNKVHLIQNYTGDPLCEGEPESVCAHHTS  |
| UniRef90_K2RK00<br>UniRef90_C4WTW3                    | N Q E Y G N L T A A S R G P N G L A L L S L F V N V A G N S N S F L S R L L N R R E E H N S E V D A M L N K V H L I Q N Y T G D P L C E G E P E S V C A H H T S A A D G D G F T V L G L M F E L S E D G S T T E L L T S M N K K E Y G S F K N A Q S Y S D G V C V V G F F G E L S S K D N R D M D N F L A D N E L A G C G S V L V P A C S P C S |
| UniRef90_W7CKB6<br>UniRef90_UPI0002B4B041             | NDOVKTELLEADKS PNGWAWIGHTUNKONE SEELVINME   |
| UniRef90_A0A024GBC4<br>UniRef90_Q9SUB4                | Q A E D G A L A V F G I L F E V G D E S P F L A Q F W D H L S A S G K T  T V V G V L Y K L G E P D E F L T K I L N G I E G Q H N S E V D A M L N K V Q A I Q Q Y E G D P L C I G E P E S E C P H H A S A E D E H S V E P A V V V A V Q L A A S D A A N T S A T R A L N H I M L D G P L N A R Y G D A V T A K R S P R G L A V A E D G D E T D D V Y I E H K D K D C G A N K K Y K N V A E A L G Y S D G L T V L G F F Y Q V V E Q E S E I G Y L L R S F  |
| UniRef90_G0YYQ2<br>UniRef90_D0A823                    | E G Q H N S E V D A M L N K V Q A L Q Q Y E G D P L C I G E P E S E C P H H A S<br>A E D E H S V E P A V V V A V Q L A A S D A A N T S A T R A L N H L M L D G P L  |
| UniRef90_K1R175<br>UniRef90_B0W4B1                    | N A R Y G D A V T A K R S P R G L A V A E D G D E T D D V Y L E H K D K D C G A<br>N K K Y K N V A E A L G Y S D G L T V L G F F Y Q V V E Q E S E L G Y L L R S F  |
| UniRef90_R2QYS5<br>UniRef90_E4XS94                    | MHNMTHDEAVKHESGFRVISAFVELCFMKDLSRRLRTKA   |
| UniRef90_B6QDD8<br>UniRef90_A0A010RZ00                | SDDYK<br>ADEQQLKNSTGPSNSVVGFLIEVDNS APSPFLDNVFAHL   |
| UniRef90_S4P9N1<br>UniRef90_UPI000468DD74             | DAKNN II L V VIGK WII IEI VIGA SNAAILIE PII IF SDILI  |
| UniRef90_G9NLT4<br>UniRef90_S6DFU0                    | TPDKST AVVSFLVDFGVPNLLLSSVFQNV<br>S QTGKIAVIGILYNIGQPDYFLSTMRQHL  |
| UniRef90_R0GQ04<br>UniRef90_M4FK38                    | SEDE RYAVVAFLYNIGASDPFLLSLDKQL<br>AEDKSUSVI VGEPLELHGKNSDEVAKVEDKV  |
| UniRef90_C7Z076<br>UniRef90_M7Y3S1                    | T A E E E   |
| UniRef90_J8FD78<br>UniRef90_UPI000372B2AF             | S QVGRIAVLSVFFKIG <mark>C</mark> ANSAIQTIL<br>GPNGEK <u>LVV</u> ALFITTGGAGGTLQDK <u>VL</u> ATVPEE <mark>C</mark>  |
| UniRef90_W8B0L7<br>UniRef90_K9Q5K8                    | N S Q Y E N F S D A L N R A Q G<br>N D D G D L A V L S S M L F A G A F N Y D V S K L W R N L  |
| UniRef90_J3C6B8<br>UniRef90_S8A6B0                    | S ETGAYAVLGVVIKTGSVNSALQTLIDAS<br>GVSDPTKLAVVGLF IDTNEKDVSDPMMARLATYL   |
| UniRef90_W4WJL6<br>UniRef90_UPI0002A479D5             | NQKYLTFEE <mark>C</mark> LKHRDGL <mark>CVLTYLFLVY</mark><br>KS <mark>VH</mark> PNMSAALEDPTGLAVLG <u>F</u> FLD <u>VV</u> YADN <mark>VH</mark> FHISQML  |
| UniRef90_Q8PFA4<br>UniRef90_R2RYG5                    | GPDGT LGVLAIFFETGKANTAFQRVLDAM<br>DHAGNNLVVGVL <mark>C</mark> DISEEVLPEGPLRQATLWDMER  |
| UniRef90_I3WBF5<br>UniRef90_UPI0003444A70             | S Q A E N S N Q L A V I A I F Y E Y G S E A D D F L T R L H T E A I S A Q Q G N<br>S T A F A K V D E A L G R P G G L A V L A F L Q E G P E E N S A Y E Q L L S H L  |
| UniRef90_R2R3A0<br>UniRef90_B1K7U3                    | SPS GQLGVIGVFYQVGEFNPDFEHVLNQY<br>AQDGRLAVVAVLYRAGAKNAQFASIVRAARRDVASPLASF  |
| UniRef90_R2QGY6<br>UniRef90_L8GXK3                    | K A S N G Q M A IV V IA IV L IY T IL IG R H N P A F E Q IV L IH Q F   |
| UniRef90_E1Z3D7<br>UniRef90_M0TAT2                    | RPDLSVYLYHHTSKKQVAVAVISFNTSHASSGFLDSLIPY<br>ECPEGSDALCLAVFGVLYDIKHGDNVTRGDPTIQQIIDNL<br>SADNKTAVVGFLYKTGPPDPFIHKRSIEK   |
| UniRef90_T0RXF6<br>UniRef90_F4FS65                    | EDGKII IAIV VIA EEEEEGDESKEII IA OIVIWE HII I   |
| UniRef90_A0A024TUP8<br>UniRef90_R2SNN4                | N D I G Q L V V V A L L V S A G E L D D E K L Q Q I M T D K N K N L A V V G I L F E L D P N D E P N P F L D Q Y L S G F N A Q K E N L V V A V M Y Q L T T D E G W L Y D R   |
| UniRef90_H3CKP7<br>UniRef90_U4KZX1                    | NHEYTNYTEAAKSPKGVKARKLF <mark>C</mark> QQFQT <mark>C</mark> MLQLEATTHA<br>SATGELAVVA  |
| UniRef90_B2WAZ4<br>UniRef90_W9WIK5                    | GVNDPSQLAVI  ALMFEVSDKKSSSIIKSLSDSL  ESEGTATPQFAVVAFLVELCESPGCTDPVLAAVFDD  TPEKDIAVIGVEVDLDNGVAASAPRADSHLSALVQLESQV   |
| UniRef90_L8G1U1<br>UniRef90_F9WEC6                    | TPEKDÍTÁVÍ GVEV DÚDŇGVÁ Á SÁPRADSHÚSAĽ VQÚFS QV<br>AENEG <u>S</u> SV <u>PV</u> V <u>V</u> VAVQUVSDAAN <u>TS</u> ATQALHHILLDGPL  |
| UniRef90_W6T636<br>UniRef90_S4E478                    | SATGQLAVVAVFGRIGKPNQAFQGLLDQFTP<br>SKKGENLVVGVMAHFEQGGW <mark>C</mark> FDRKNNENWNLAS  |
| UniRef90_UPI0004541384<br>UniRef90_F2PNC5             | NSKYRTYFFAKSQANGII ISIVI IAII II IFIVID FFNTYYT PII ITSQII  |
| UniRef90_K2SFN4<br>UniRef90_G0SAA8                    | SAE GGFVVLGLLFQLTEDGSTTDLLTATT  |
| UniRef90_W7DJM3<br>UniRef90_W4G104                    | SADNKNF GDLAVVGVFFEEGEESSFLKQFWHYL  |
| UniRef90_UPI0003EBE76C<br>UniRef90_W5DNN3             | SSYNGNTS L A V KDSTG L AA L GFF  E V <br>SAOGKAA V L G V EYEL GAHDAE L HK V PNES <mark>C</mark>   |
| UniRef90_C4B8E1<br>UniRef90_UPI0004415EC9             | R D G G N A S G S V A G Q A V V A V F L S T R M E S R M M S R M A A R N A <mark>C</mark> P H  |
| UniRef90_G1NGR6<br>UniRef90_J9HPD7                    | NKY SSIAGAFYKSGDLAILTVFLKLDLCNVNLKVVLKAL<br>LIDGPDHET YKEQLAVVGIVFQLAEESHPFIKKLNAE  |
| UniRef90_UPI000360F09D<br>UniRef90_Q04H50             | SDDESLAVISVMFKEGEA AKDGRTAVIAVFLKAGKTSKTF   |
| UniRef90_L1JH97                                       | K T D D P K A K S K V R P K G A S A T R L T G R Q I M V M L L P I D F A D   |
| UniRef90_G0QZG4<br>UniRef90_A2YW47<br>UniRef90_W7AUG9 | I K A E F K I A N D A Q Q K T K A V V C I F F N Q D S T K S S K F F D V W D G N S N T A V I G N L Y Q I G N P D P F L L M L E P F L Q A Q D G R L A V V A V F F K E G K E N A A F Q D V L   |
| UniRef90_C5ML18                                       | A E R F G D Q D T A Q A S P G G V L C L V Y F F N L K S N P N F V E P V V E A L   |

| UniRef90 T1H954  | 170 180 190 KYSQINAGPLSSDLTADQFLPADSSRFYRYHGSLTTP   | 200                     |
|--|---|-------------------------|
| UniRef90_UPI0003C17BBB<br>UniRef90_A0A010Q209                    | T Q I S F K G D A F P L P D M K L D T L F P E T F G F L T Y Q G S M S T P D K V T E F G S H T G P L D F T S L A E H I S K N T I Y Q Y T G S L T T P   | PCY                     |
| UniRef90_L2FB78<br>UniRef90_UPI0004627871                        | D K V T A V G A H T D P L D F T S L S S H L A K S T L Y Q Y S G S L T T P E K L P E K G N S V N L D G Q F S L L K V A D V R S Y Y R Y F G S L T T P   | P C T<br>N C S          |
| UniRef90_B0JU65<br>UniRef90_D8T703                               |   |                         |
| UniRef90_B7QE12<br>UniRef90_B6QSA0<br>UniRef90_B9T349            | HRITYRGQEAVLKHLSIKELLPATEHFMTYEGSLTMPDDITTPGTFTKTGPFTTVNQHFSNHGIFQYSGSLTTPKSVGKEERNIGI INPGDIKFGSRKYYRYIGSLTVP  | P C S                   |
| UniRef90_K2PBQ8<br>UniRef90_D4DIY5                               | P P K R A V T T C T L T E D M T   A G F L   P Q S G S Y F A Y N G S L T T P H R   T T P G T V T K T K D F T K L L K H L H A H D   Y T Y T G S L T T P   | P C T                   |
| UniRef90_C5XTF4<br>UniRef90_E6LFX9                               | A E L Y A E G C K A E K G D P L P L G V V R E M T K E Q A D L Q S K W D F L N H L Q T F S P A L F L P Q N Q S Y F H Y T G S L T T P   | P T A                   |
| UniRef90_M5WID4<br>UniRef90_K9F3V7                               | K S M T D Q K A K R N M G M I D P R K I K I G G K N Y Y R Y M G S L T V P P A T P G K K T F D N V A I D A A Q L L P D N L G A Y Y R Y S G S W T E P   | PYS                     |
| UniRef90_E2AGD3<br>UniRef90_T1HFH7<br>UniRef90_N6ZB78            | T R E V G K S T A I Q K E L I P L S F L P K N Y K S Y Y Q Y Q G S L T T P R K F F E A F T I M P V E L V P L C T I V P M F T D D Y L L Y A S Y M K Y L P L D R G R E Y T P D A V L D L P A L L P A E P G H Y L Y T G S L P M P D R I S Y K N D A Y F L Q D L S L E L L F P E S F G F L T Y Q G S L S T P   | A C Q<br>K C N<br>P C T |
| UniRef90_Q9MZT3<br>UniRef90_C4B8E0                               | DRISYKNDAYFLQDLSLELLFPESFGFTYQGSLSTPGNGNCGGPHTIRPEHLLSSQVTNRGFYYYYGSLTTP  | P <u>C</u> S            |
| UniRef90_K2RK00<br>UniRef90_C4WTW3                               | GNGNCGGIPHTI RPEHLLSSQVTNRGFYYYYGSLTTPEVLADVTTPGSITQTGALDFKPIVKHLTSYSGSLTTPLKYLVKQKSTIVRNFKEEFSWLKKQHYYTYHGSLTTK  | P F <u>T</u>            |
| UniRef90_W7CKB6<br>UniRef90_UPI0002B4B041<br>UniRef90_A0A024GBC4 | NKVPYMNYKTKLE <u>VSPYFLFPIC</u> TEKFYT <u>Y</u> LGSLTTP   | PTL<br>PLT<br>PYS       |
| UniRef90_Q9SUB4<br>UniRef90_G0YYQ2                               | K GIVIG K K F II IDII IGII VID P R DII IR F F T N N F Y R YII IG SII ITII IP  | PCT                     |
| UniRef90_D0A823<br>UniRef90_K1R175                               | GNGNCGGLSHTLRPEILLSSHVTRRGYYYYYGSLTTPPRQASTTCTLERNLTVAEMLPQRQSYVTYSGSLTTPKRHRPYSRCVCNDKNPYSAYFCKSSGKCKC   |                         |
| UniRef90_B0W4B1<br>UniRef90_R2QYS5                               | PLIEEYDQKASLNFLNSLLGQLDRTRFYTYKGSLTTP<br>KW KSETHQQWFDPSIFLPEEKSHFHYLGSLTTP   | PLK                     |
| UniRef90_E4XS94<br>UniRef90_B6QDD8<br>UniRef90_A0A010RZ00        | K N E K E D G K L E Q A F S F N S I F K G V D P H S Y Y F Y H G S H T H P D D I T K P G T F T K T G P L D F S G L I S H F N K Y Y T Y S G S L T T P D E V K E P G S H T E E L D F G E L R R L L E G S D V Y Q Y D G S L T T P   | P <mark>C</mark> T      |
| UniRef90_S4P9N1<br>UniRef90_UPI000468DD74                        | ENVTEPHSSVVMPFSFLNLLPLDLTRYFTYRGSLTTP<br>PKTTTQTHVFNHFDLNALLPTNMESFRYDGSLTTP  | P C S<br>P F S          |
| UniRef90_G9NLT4<br>UniRef90_S6DFU0                               | N E     A T P G E T T   L   T G P F A A   L   E N H   L   K S N A   L   F T Y S G S   L   T T P V E   I   S G T Q R D K   L   N M   V N P S   L   K M R S S   L   Y Y R Y   L   G S   L   T   V P   | P C T<br>P C S          |
| UniRef90_R0GQ04<br>UniRef90_M4FK38<br>UniRef90_C7Z076            | KKITDTHEAE  DKVTQPGSKTGKLDFTKLRSHLHRSKVYQYKGSLTTP  DKLATPGATTHTEPLAMSELVKTSGSFQSYAGSLTTP  | P C S<br>P C S          |
| UniRef90_M7Y3S1<br>UniRef90_J8FD78                               | E H E T A E L K P G T V K I A D L V G T I P T T G N Y Y H Y K G S L T T P<br>D N I N K K R G V T N T I D I D I K Q L L P H E T I Y Y H Y L G S L T T N  | P Y T<br>G F I          |
| UniRef90_UPI000372B2AF<br>UniRef90_W8B0L7                        | D E DIVIHILIPHA NILIA SAILIPR DILISTYRYE G SILITTA  | PYS                     |
| UniRef90_K9Q5K8<br>UniRef90_J3C6B8<br>UniRef90_S8A6B0            |   | PCD<br>PNQ<br>PCT       |
| UniRef90_W4WJL6<br>UniRef90_UPI0002A479D5                        | Y S L S WM R V A T D C P S Y Y L Y Q G S H S G D S S V A Y K G O T A K V K P F P L M G L L P R H N  | FNL                     |
| UniRef90_Q8PFA4<br>UniRef90_R2RYG5                               | P K D K D Q T R Q V A N A T V S A E A F L P N Q R S F Y R Y E G S L T T P H L Q I F D P S L F L P K A R S H F H Y V G S L T T P   | PCS<br>PTK              |
| UniRef90_I3WBF5<br>UniRef90_UPI0003444A70<br>UniRef90_R2R3A0     | A N WG D N N V P I N L P L T F A T D L M P S S Q G Y F A Y D G S L T T P E E I T E E G Q F V D Q G K G E G N F S V E G L I P K D K S Y Y H Y I G S L T T P  |                         |
| UniRef90_R2R3A0<br>UniRef90_B1K7U3<br>UniRef90_R2QGY6            | N A A D G D C A D C A D | P L T                   |
| UniRef90_L8GXK3<br>UniRef90_E1Z3D7                               | L P L N T T S S Y V P L F D L A S L V A E S F A E G Y Y S L L G S L T S P P T C P E A G K E C V K D V P G W L S S F F P D T T Y H A Y T G S L T T P   | P C T                   |
| UniRef90_M0TAT2<br>UniRef90_T0RXF6                               | VK D K Q D K E E E L G A V D P S H A S R R M G Q R Y Y R Y M G S L T T P S E I E P H G P R V L V D E I S F D S L D V N A E S Y F R Y T G S L T T P T Y E N G K T E P V D L N I S D W A P W Y P V G F H Y L G S L T T P  | PCS<br>PYT<br>PLT       |
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| UniRef90_B2WAZ4<br>UniRef90_W9WIK5                               | PKITKPGTKTPLDFSDVEDKLKKSELLTYSGSLTTPLAVPGEAAMTGPLAFGQULDKFENSQVYRYGGSLTTP   | P C T                   |
| UniRef90_L8G1U1<br>UniRef90_F9WEC6<br>UniRef90_W6T636            | PPHQATTT <mark>C</mark> TLEKD <u>MSI</u> DG <u>M</u> LP <u>Y</u> RHSY <u>V</u> TYSGSLTTP  | PCS<br>PCT<br>PLT       |
| UniRef90_S4E478<br>UniRef90_UPI0004541384                        | HEHWEDPI I FLPEVKSHFHYVGSLTTP   | PTS<br>PCT              |
| UniRef90_F2PNC5<br>UniRef90_K2SFN4                               | H K       S T P G S   V   T K       R D F S S   V   A D S   L   H K N D   I     F T Y T G S   L   T T P S H   L   S E T   V   T E T A A L   D F A P   L V   K H   L   T T T P   L L   N Y T G S   L   T T P   | P C S<br>P C S          |
| UniRef90_G0SAA8<br>UniRef90_W7DJM3<br>UniRef90_W4G104            | DQIATPGTRVKTPPLVMSEVVDKANAFQIYSGSLTTPSKLENGKTAMMKSAISTLGLIPENGDMYRYEGSFTTPPELDPHGEHLTVNNIDFDSLDITNESFFRYQGSLTTP   | ATT<br>PFT              |
| UniRef90_UPI0003EBE76C<br>UniRef90_W5DNN3                        |   |                         |
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| UniRef90_G1NGR6<br>UniRef90_J9HPD7                               | D S E K T E K R F T S W E H S T L K N K P F D L W I F N G S L T H P D L G H I E T I N F S D I F H T L D G E D N H N K G F Y H Y K G S L T T P   | P L H<br>P C T          |
| UniRef90_UPI000360F09D<br>UniRef90_Q04H50<br>UniRef90_L1JH97     | SQIFNHLNQDQNFVCDLTDLIPENKSYYHYLGSLTTP   | P L T<br>P C S          |
| UniRef90_G0QZG4<br>UniRef90_A2YW47                               | ISQTVMIGSLTHRGADAFSFVPNFKNYLTYSGSFTTPKPQKVENSFNLNLNATLGEVFSTSDDYYSYQGSITQPRRIADKDKSEPIGVVDPQLAKSPDAVYYRYMGSLTTPNNIKKGKKADVSNPIEVTQMIPTNKTYYHYIGSLTTP  | P C D<br>P C T          |
| UniRef90_W7AUG9<br>UniRef90_C5ML18                               | NNI KKGKKAD <u>VS</u> NPLEVTQMIPTNKTYYHYIGSLTTP<br>ERILLPESYTKLEPFPLIDLFHAFTDYFLYWG <mark>C</mark> TRNG   | P L S<br>P Q V          |

| UniRef90_T1H954<br>UniRef90_UPI0003C17BBB   | 210 220 230 240  E S V M W S V L K S K P S L S S E Q L G W F E K A P L K N G P L T S N  E T V T W L I D R P L T V T S V Q M H S L R L L S Q N L P S H I F H S M S D N  E S I A W N V V G S P I P L D I A T Y L K T K K S I M K Y N  E S I A W N V V G T P L  Q A V I W T V Y P Q P I E V T H K T L K K F T D S L Y Y T T K A E G R K M Q K N  |
|---|---|
| UniRef90_B0JU65   | ESI AWNVVGSPI P  NI DI TTYKKAKGI MKYN NI DI TTYKKAKGI MKFN QAVIWTVYPQPI EVTHKTLKKFTDSLYYTTKAEGRKMQKN EDVLWLVWQNAI EI SPQQLQQLAEI FPS EGI LWTI LKKVCSQNHSFSSFFFLRNHH   |
| UniRef90_D8T703<br>UniRef90_B7QE12<br>UniRef90_B6QSA0<br>UniRef90_B9T349                    | EGLSWYI STEPMPLNVQTYNKVKKVVKFNARYTQNTLGQN<br>EGLSWYI STEPMPLNVQTYNKVKKVVKFNARYTQNTLGQN  |
| UniRef90_K2PBQ8<br>UniRef90_D4DIY5<br>UniRef90_C5XTF4<br>UniRef90_E6LFX9                    | E GV L F V V L T S P Q I I S K T E L E R L V E A F Q R A R P G N H N G N E K V S WY L S A A P L T I S V S S F N A L K K I V K V N N A D L M A P L E G S Y R H N G P V Q W F V F E T I Q H F N P E F L K E F E V I W T I D R K V I N C S S L R V S T F G P Y Y A E M N E S V T W I L M R D P I T I S L T Q L E Q F L T V   |
| UniRef90_M5WID4<br>UniRef90_K9F3V7<br>UniRef90_E2AGD3<br>UniRef90_T1HFH7<br>UniRef90_N6ZB78 | EVVIWTI DRKVIN <mark>C</mark> S SLRVSTFGPYYAEM NESVTWI MRDPITLSITQLEQFITV LGET<br>ESVKWFVLEERSPVSTAQVNVFKRLKGDHGRQTS N<br>HRILWLISRES <u>F</u> PISLYQL <mark>C</mark> KFQSVR NKHSQPITNP   |
| UniRef90_Q9MZT3<br>UniRef90_C4B8E0<br>UniRef90_K2RK00                                       | EVVIWTI DRKVINCS SLRVSTFGPYYAEM N ESVTWIIMRDPITLSITQLEQFITV ESVKWFVLEERSPVSTAQVNVFKRLKGDHGRQTS N HRILWLISRESFPISLYQLCKFQSVR NKHSQPITNP EDVLWVVMKQPVAISADQLDVFARLYP RN ETVTWILIDRALNITSLQMHSLRLLSQNPPSQIFQSLSGN ESVLWQLIKKPIRISRAQLKAIQNTYTHFPGVLMKKFG N EGINFLISQTPMAIDVKTFNALKGVMFNSRVSQNVPGQDN  |
| UniRef90_C4WTW3<br>UniRef90_W7CKB6<br>UniRef90_UPI0002B4B041<br>UniRef90_A0A024GBC4         | ECVTWMVRKRPMIISHEQYTAFVNLLNGS<br>ENVTWILLAEPIKISIDQLKRM TTCTSDCGYITNN<br>EGVEWTISKDIWOVSQKQLDQFRKCLKCS  |
| UniRef90_Q9SUB4<br>UniRef90_G0YYQ2<br>UniRef90_D0A823<br>UniRef90_K1R175                    | E G V I WT V Q K R V L Y F F C F C E S V L W Q L I K Q P I R I S R A Q L T A I Q N M H T H F P G V L I K E H G N E G V R F V I M T T P Q L I S K A A F N K L S Q V L R Q T W P E N R L G N  |
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| UniRef90_A0A010RZ00<br>UniRef90_S4P9N1<br>UniRef90_UPI000468DD74<br>UniRef90_G9NLT4         | EVVI WLDFEQPII RLA HDQII EAFRELR SANGKLITHN   |
| UniRef90_S6DFU0<br>UniRef90_R0GQ04<br>UniRef90_M4FK38<br>UniRef90_C7Z076                    | E G V R W D L A Q P L Q M S A A E L N A T S S L F P N G B V K D V I K F N Q N V L W T L V R K V R T V T P E Q V N L L R V A V H D D S E T N E H I R T V T K K Q V K L L R V A V H D A S D S N E G V R W N V V R N P V A I N V K T Y K A I K R I M K F N E G V R W L V S N K K V S L K T S T Y L K A R S V L G N N K K V S L K T S T Y L K A R S V L G N N E S V R W Y I A K H V Y E A S S A Q L E A I N K V E G N N E N V E W Y V F E D P L E M S Q E Q Y N L F K T R Y S G N E P V S W L V L N H H R Q L L P A S L S H F Q T R F P D G D S |
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| UniRef90_U4KZX1<br>UniRef90_B2WAZ4<br>UniRef90_W9WIK5<br>UniRef90_L8G1U1                    | GPIKWFVMDHIQHLNKDFLIPFK GQYAQPN ENFCDIFINQITHLTSSQMHSLRLLSQNLPSQIFLSMSDN EGLTFIIPQAPLPVNVETFNKIKSTVKF NEGVTFLIVKEPLDISVADFNAIKKIVKF NVDWLISTESLYIDVPTWLSVKKV EGVMWLVSTQKLKIQTATFKKVRSV IGFN EGVRFVIMTTPQLISKAA FRELSRTLLKSWQTGGLGN ESVFWYVCGDSVMIGGAQUQAYQALF   |
| UniRef90_F9WEC6<br>UniRef90_W6T636<br>UniRef90_S4E478<br>UniRef90_UPl0004541384             | GPIQWFVMDRIGKVDARFLEPFK GQYAQPN   |
| UniRef90_F2PNC5<br>UniRef90_K2SFN4<br>UniRef90_G0SAA8<br>UniRef90_W7DJM3                    | NKISWYISAAPLS LDVVTFNAVKKVVKYNEGINFLISQEPLPINVATFNSIKSVMKFNSRFSQNSLGEGVNWHVSTARLFVSPQTFTKARDVIFNSRFPQNTPGQPNEGVSWLIYQTPVTMSKQQIQDLQK NLNNNEGVEWVIVKDARTVSKAQILAFI DAIPGESN  |
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| UniRef90_UPI0004415EC9<br>UniRef90_G1NGR6<br>UniRef90_J9HPD7<br>UniRef90_UPI000360F09D      | R PLGVELY NAVKHVMK F N R SV I Y I I F K E L L S V S S E Y I Q Y Y K D I V N W N L Y S E V L P I S A K H L Q A L H Q Q W H D N L G G H C N   |
| UniRef90_Q04H50<br>UniRef90_L1JH97<br>UniRef90_G0QZG4<br>UniRef90_A2YW47                    | ENVEWYILANPVEISRQQLAEFHKLYPY EGVQWVLLRNPIYVYSKDLQVIRSLEGA N EVVNWYIFNTVFSMSTIQYSDL SLYLQRNIEFAKGNGSN EGVIWTVFKRV  |
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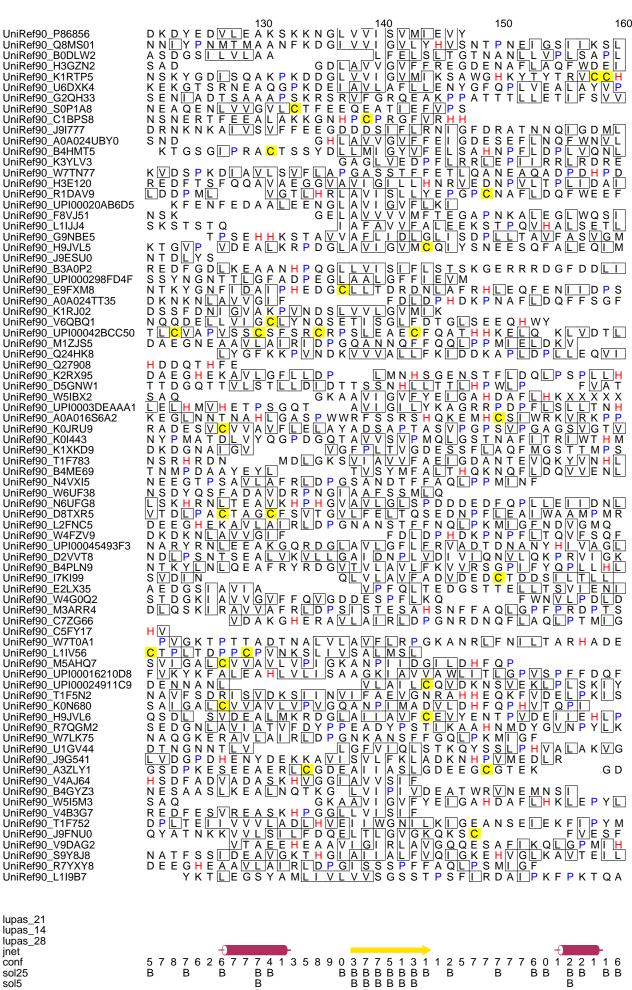
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