## QUERY

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T V R Y T G E C T A V V V V E
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## TVRYTGECTAVVKVI

##  <br> KVE <br> s $\square \mathrm{K}$ ЏK

SMNTSSUDNDFWNISLQ
GELDVSTADKLKEHLHSJLADKK ENSRDGTLVI SAPKGRVDHHNCLTLKYETDLLLAKANY VTTERDGITVISLTGRMDATTVASFDEAWRTCLDNG



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MRISSEGTETVVLAVAGEVVLGGAPSLLEEAVTTAVSTAG LILLEKMNGYSVLFIQAERIDAHNSGELKEYVLDMI EQGE FTVDTAAESYAEVKGAGRLNMVSAAKLREVVSDVVAGGG MNLTQQQDGFNVLHTNEEI DAHNSSDLKAFITDMI EEGE (LQUQIEQENKSIIHLSGEDDVYTAPKLKEALLP LLTKEK
 FTVETKKELTVFKLHERLDASTAPELKSEFVVLTEAED QDKGTTLRIFLPQELDHHVSARLREEADLMVETHF RQERGHTVLEFCGE DLAAASEIAPHLDRETDRPA
VTTQDNNTLLVKLPPRETVIEAVSFREFFQGWI QDPS QGN KAAYLHGKIDTSNSKQLRQEVIDCVEADT LHVRQEHGHTVLELRGEMDTASAAETAPRLEREAGRPG VNUKELENNTVILKLDGDIDVYSSSDLKDAAFSQDEGG MELKTRKSDNYTI DVNGEMDLYNSYKLKELVVKMIEK K NRVDLVAVVGR DAATASKLKQQUDTFAEGR TRDEGDVVVVTFTGAIDVFAGPSVRDTLSGLISAGH $\square T V N P M N E R A V V V Q L R G R L D L L V A T E V K Q R L S Q I V S D G$ MSLEREANENMVAYLKGRIDVHMASEIEASLQKIIRENP MALEVSRDNTIIIVI PSRFDANNAPDSEKEIKTLLAKGK IVRPSGVLDSTQGDNFRKEI NHLINNN MNVTDESSTKIIQPSGLLNSDSGNQLRRYINDCVAAG MNVT TESSGSVVIYLIGEIDHHTAGEVREKI DDTLMFVK RHEGDIAVVVPVGEMDAVASPELADVIDGLLGERT $K E V R D D R T V S Q E R D D A N S G E L K D V V L K T L E G G$

S $\square$ T T E KSGTVLTVHLPAELDHPVSDETRRDSDRIGGHNY GOKMVVHVQGNLDVHNTHKIEKDLMTLVSAAG S $\square$ s $\square \mathrm{ERADRSAVLALNGDLDGTAPKLTAAVAETVTAG}$
 VTTATDGIRVLAPAGEVDHHTGDTLRDALLEAARDMA MEISRKSGETNIVSLSGSLDTYTSDDLKTFFENSTHKDN QRSGETSVIRLTGELDMLTTPALLRAKVTEELAAG FQQQKETAATVVAVIGRMDAVTAPEYEKKLAGMMDEGE QQVKVVKLSGlVNTTSTEELRQHITHLLESD MNVELHTEQGVIVPLVRBLDASVVSAFKQQVLEAID GE MHAVLAREPITVISPQSYLNAVTVGEFHSQLNAAFANPG EDDTLVLSPEGDLDVANAAVLRQVLQQMVDRRD DTRQRGVLQPKGH NASNAQELQAGLLRAVASED UTRQERGALVLTVSGDLDMDSVPPLGRALETAAAEGS FQLRTETEGRCLVYLSGELDANSDDFQEKLTNFVRNNP $E D H Y E V F V G E L D V Y T A P Q E E V L V P M R Q E G$
$G D D L V Y Y Y G E F D D S V A K T V R E N D M L I D S F V$ SEGVLVVENTGGRDDCAGAPAAARLDAVTGGA MTLTLEH QVILFQPQGRIDLEGGIADSEQMAQVTPQNH RKEKNTALISVGGMDALCSMDFEKDLDEQIAAGE $\square H \square D R I V A G T I V V T V K G R L D S S S P K L E E F L A G A P S E G$ QRIEDCLCIRMPEEVDHHRSEETCKNADHFALESQ $M K \square N S E T R Q D L V I K P E G A L D M A C Q P Q L K E G L A Q L L A D S K$ TTMREDGVHIVYLRGELDLSAAPDFRKLMEPLVGNDE MTTRRQADGALVVEVRGSLDAATVDGLRATLVDTVLRDR SMTTSVTQRDAAVLAVAGEVDLATAPALENAVDAALTA K KVDOVIEVAGDLDMASAPTLRDRLLEVVETG

 MDTSRHTGNRLTLRLVGRLDANWCNHVQDALAAAVRDGE $\square$ QDNCQIFRLTGLLDAFSEPTFAKVIGKYIEEG DQDNCQIFRLTGLLDAFSEPTFAKVGGKYLEEGM QHHGNVIVAVLSGELTMAAQHLRGELEEALSTQG LNDEDTHDDFYEVKVGGELDVYTVPELEEVLVPMMQEG ATETNQSDDVLIVDMEGRLDSRTAVDSNDEMERVLKAGS FELQSENDVQUVVPLVRRLDASVEQTFKQQVLEVVEKSN KRGNQ LIVYV MTLTQ

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M QIT QPH GDLLELKLSGRI



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## UniRef90-W5WII6

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 HDEDFSYRTTEDDDGYKPD K SA DEKMKDG
VDKQEKYCIVVLHEEKLDTTLAPKLKSELDTVHAKG DHTTTFDNGFTIIRPAARLTAANAKTFKDEVTDIINGG SMQ EDKSGAVTVAAFEGRLDTATAAAAEAKLLALLEEGG

ITETTGNATVVAVQGQVNSANAQALEVQVVALVDAG SFSFEM KNNILVARIHKRATVETAGDFKEQLLKKMDELG MNVAIIQNEETVAKVDGRLDTLSATEGGDSEAYTCTPQ REVDGVTVLDLSGRITLGGSVQLREAVRDLISKGS
DEKNGGDL
QRRTDSAVIVTV
TRRSDTFTVCVEGRFDFSTHQSFRDAYEH SEPT
TETDGITTVSLTGRLDTITAPELEAKLGEILDDG

TVAVERPADDVAVVRVDGEVDMVTAPALESQVVALLGEKK

TLEVVREDAVVVRVLGELDMATPLLAQRLYEAESTVP MTLKVDKDEHTVLRITGELDIVTSPVVRQHVHDAVAAGR MNITSTQRNGAAIVLEGDVDLSCSSALRKELLERTFERC AFNVTVEQGEWAVLRVTEREDAAMALQFKEDMRSETEE

FQYEVKBDNVVIVSVK


ETREGEVLI AVDGRIDSTCKLLEDVLPERVQA
TDGSSTLVTLGGEVDVLTAPGVSAALDALLGADR
ME TKKTTNNEVVMQLSGRLDTNAAPDLDKEDEATLVDG
VTSHHGELAI LTVAGSLDVLTAPALSEAVGEALSK

 AFVVSRPAGERPRLRVSGDLDATSSAGLHDAFVAVLRQHC MELS $\square T T K D V K V A G L V G D D D A N T A S S V T K E V L P L D E P G S$
$D G Q E L T I V I Q G R F D F G A H Q E F R D A Y E R V G B R S$

LTVGVRLEAGNLEPFNQTAYQLLETSP
MELTATREGCLVVEVAAEVDHTVSDDFKDMVLERFAGSS
RDSVVVI RCVGELDMMTVPELERQI ASAM KKS QECGGAVVLHVSGEIDQLTVEPLHRELDSALARVR EHGDHVRLALIGDVDFAAHPTLDAQLTTLV KGV

$D G K Q T T Q K G K F D F N M V Q M F R D A Y E V G E N R$
 MELKVEKRESVI LGIKGRLDAVTAGELEAKLTDDI QNE


 TVTRRTGSSVVVHVGGD DDASNETAWQDVLSRAAETVA LT T QDEFDAHTARQMEPQFET LSSQTE
 QDDVLVVMPFERMDTDSAPGVEKDVMA H D D G T


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| UniRef90_UPI0003787281 |  |
| UniRef90_E1K0M6 | LSKPVEKTLGLVQLLQFFQULADETALAAV |
| UniRef90_UPI00046E7A59 |  |
| UniRef90_D9VAF9 |  |
| UniRef90_R6XRX8 | TNKQVDKVFFTS GI Y E |
| UniRef90_UPI00028957B8 | L N N S I M K F F I T KL D D MFE |
| UniRef90_UPI0003647E49 | AQESVLRVLQQ VGGD T L I CLP T A E D A L G A |
| UniRef90_UPI00040539D9 | VSEEV S EI FEVVT GFS DIL T I E |
| UniRef90-B1WZ13 | TPPPVMMAVLSMT GLDEVIPI T T T L E |
| UniRef90_W0SCD7 |  |
| UniRef90-UPI00036273A5 | VQ GMV K ELL L R R R L D K V L HL E |
| UniRef90-W7CDK3 | V P K R L D RLF T IT GL D N I M S I N |
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| UniRef90_UPI000347B6FE | L T D HVVNKL D K I S QL D NVLTIIP T K E E A V D YV |
| UniRef90-UPI0003775130 | L N S DVQQMFRICRMDRVFVYKDVETATQSM |
| UniRef90_D5RQJ2 | L Q P AV R EVFEIS GFDKI IPYATRAEALDA |
| UniRef90_C0QZ50 | V P D I I K K I L K TVVELEDL FVVY E S Vid D A V A S F |
| UniRef90_UPI00040F876B | MRSHVHEVFD I SGFLAI LVVQPTREGALARLL |
| UniRef90_UPI000379A7D2 | EGPATARPMHLVGLDKI TVVYSSVDEAVARF |
| UniRef90-H1XQ53 | LQPPVSAMFELTRLYRRIFI FENEEEALNS P Q |
| UniRef90_R6YX22 | L NPEVKSVFDMT GFSQILTL |
| UniRef90-UPI0002FF1EDB | A H P L T L R MLR $\quad$ T G L A GVLPRP |
| UniRef90_UPI00047C | LT K K V K D V L Q L T K L Y TV F I Y D D E A G |
| UniRef90_D4IVX7 | PTEEVVQEI F EVVT GFS D I F T I |
| UniRef90-S7UQ88 | V T P L V A K I F Q I T QVGR |
| UniRef90_W5TCW1 | PSPAVRRPIEVTALDKLLEFPSVEAALDA |
| UniRef90_A1U254 | CNS DVRRILS $\$ S NFEQLIFS  \hline UniRef90-R6QTC6 & VNDVVKRIV V M A G L H K I  \hline UniRef90-W3AIV0 & L N D NVVE I M EVT G F S S I M T  \hline UniRef90-C4U3N7 & L N N NI H GMFKLTRMDRIFT\GT DQETLQQMR  \hline UniRef90_UPI000367E08B & $V$ P A HL GRIF QMVGLD QVFTHPTA Q A A |
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| UniRef90-M1PDY6 | $V$ N DKI M S L Q LTRMDRVFVFPDSQEA |
| UniRef90-14AFX2 | M N D K V L KVFRI LGLLDEI I P IT T T DEAKSRAK |
| UniRef90_W7SIN9 |  |
| UniRef90_A4FD77 | D HPEVLRALRVA GLA HLA GHPDVETALA |
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| UniRef90_UPI00045EB588 | V P P R V A EL L R L T GL |
| UniRef90_W5WBV0 | D H NAVLK P L HLT S L T T F VVP T M R Q A LD |
| UniRef90_G8SHF6 | P S P PVRQAI AVTGLA EVFGVEPV |
| UniRef90_V6K7S3 | P GSHVNRVLAALGVVRRLIVYSDVSDAVDE |
| UniRef90-H8FRW3 | P SVPV L R V L R L A R L D R V F T I E S V E |
| UniRef90-Q5LN03 | LT PVVDKVFRLTRMD TV F LFT T L D D A L A A |
| UniRef90_V6K819 | P D R HV NRVLGALGVRRLLFDVRPDLEA |
| UniRef90-G9RUP2 |  |
| UniRef90-A0ACF0 | VP D H TLR V L R MVGL D QVFGLLPDS D A |
| UniRef90-W9BQZ4 | PNEVMREILAM S R Y D K L F VT D S I E A A |
| UniRef90_UPI000472D3DF | P QPQVA V V F L T GFDQI FLHHTREEAASALLN |
| UniRef90_J5EJF4 |  |
| UniRef90_B0SG65 | VSNEI K T I F SVA NLLEMFEIE |
| UniRef90_UPIO0036829DE | CKDTVRQVLEIA CFTKL |
| UniRef90-K2KPE6 | CRPEV R R I L E I S RFDKMFVIE |
| UniRef90-UPI0004635C91 |  |
| UniRef90_R4X276 | L VP QV H EVFQV I GFDSLFRILPD R A A |
| UniRef90_UPI00036DAC75 | RDEFTLLRTLRATRLTRSFT |
| UniRef90-B6EQV4 | LQKPVEDLLKLLTRMDRLIPYPTLK D A M |
| UniRef90_R5JUZ8 |  |
| UniRef90_UPI0003788F5E | D GPS TARPMRLVGLDQAMTIYTLEAADD A M |
| UniRef90_J1L5L6 | PTPHVMEVFAIVAGFDRII I Y E SVDEALA A |
| UniRef90_D9TA45 | L N P Q I R HLLD RT GLA ELLAAPPQE |
| UniRef90_UPI00041131A4 |  |
| UniRef90_U5W573 | TP T M V Y RIL L I A GL |
| UniRef90_K9ZEY5 | LTEEI DD TM TVV GFLD FFTSATLEKGDEAL |
| UniRef90_UPI000468F8C9 | CNPDVRK【LA S N F E Q L F K $\square$ A |
| UniRef90_B8GBZ0 | V Q E P |
| UniRef90-G7Q8J3 | L H P H Va K V I R V V T L G T I F VFP P K A A A LT S L |
| UniRef90_14BG71 | D GPATSRPMRLI GLTEI MVVHPTLEAAVA |
| UniRef90_C6WJM1 | GHREVLRP L A I S GLDQLDVHPTLQA ALGA |
| UniRef90_C7QGD5 | LS R P V L RVI ELS GTTELF TII |
| UniRef90_UPI000349AF65 | LAPSVRIMFELT Q L |
| UniRef90-D5ZX89 | $V P A R T R R L L H M T G L D Q M F D I R D D A A S L ~$ |
| UniRef90-X1CCV7 | MQD Y KKEVFE\A GFDSFLIVATMDEAIGKSF |
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| UniRef90_UPI00047621BD | LS P WV E RLFTLTED L P LF TH A |
| UniRef90-14B6T9 | PNDEVK K I Y DLL L F S S HV I L Y A T L G D A L K |
| UniRef90-T2GA75 | LK D Y V K Eil F DMS GFS TII IVTTA S L E E |
| UniRef90-C0QFD8 |  |
| UniRef90-UPI0003696A97 | A Q G I TE TVLS MTGV |
| UniRef90_U7FY33 | MSPRVEKVVFEVVKMDDLS |
| UniRef90_E3CYK7 | M T GMVKE I FEL TRLLDRVF |
| UniRef90-F2IA84 | LQENVA K M $\square$ R I A QL D KVLS $\square$ E T IT E A |
| UniRef90-W5WII6 | GNRIVTRPMAI S GI D QAFVHS DLDEAL |
| UniRef90_UPI0003771D1A | VT D HV MKLVKISKL D HVLI LP T E E E AVVAI |
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| UniRef90_UPI00035CFC72 | $P Q R D V L R T L E V C G L S E V L T Y P T V E Q A V N$ |
| UniRef90_UPI0004720C52 | SQP V A RTIA A C GL HPLLTYATVQMALS |
| UniRef90-L8J5S7 | VNGQPR QLMK MLLRINKVIPDLITSAE |
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UniRef90-D2BFR2
UniRef90_UPI00036913DA
UniRef90 W7JC92
UniRef90-D8JT90
UniRef90 G4QNB8
UniRef90-Q884X3
UniRet90-V5SAT3
UniRef90-F4F8P4
UniRef90-GOFIJ9
UniRef90-IOLEU2
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UniRef90-Q1B8G3
UniRef90_UPIOO041948D0 UniRef90-A0A031M765 UniRef90_UPIOOO40564BF UniRet90-UPIOOO4185BC1 UniRef90_UPI00037B161F UniRef90-S6BLG8 UniRef90_UPIOO04673330 UniRet90_C6BS16 UniRef90-UPIO0037CD6C9 UniRef90-UPIO00346A8C4 UniRef90-W7SSN2 UniRet90-B8FBY2 UniRef90-E3G9NO UniRef90-AоА059MTP6 UniRef90_l4EVU3 UniRef90 SOGVYY UniRef90-FOSCA4
UniRef90 LODRS UniRef90-G2P206 UniRef90_W9H061 Uniref90_B3EQM2 $F K \square D K L D D F T L Q L K K E K L D T H V A P S L K S E V G L S G N G$ MRTKHGADHVFTWNEDITLNNTEQFRKAMAKLIEEGP S■SVDRSDPAVPVIGVGGDLAYATAAPLRAEVDRLLAAGR $\square K \square D^{\mathrm{D}}$ EARQGGWTLLHVSGELDLVSSPVVRQRVHDAVAAGR HDRIFVYKSTDDIDLYRCPELKSNI QEKMYEG

 NQAVVILPGEFDFASSAALRKALMAAVADGG EKSHLTII GLQGEVDASNSVELDEVIDEALDAN S四TVETGEGTTRLRAGVLDYDTSDTFGARASACVDADP TQREDVLIVRFDAQLYFANASYFREALEEEIQEGD SVETKSSTDGSVTISGRGQFDFGVVNQFRKAYETAGHPQ


DTNNDLTARLQG DLIGGSPDGQQLLEVVNNSID QFVCDGDTVVEGGE DIATAEEAFTRTTAAAADG TRRDGDRVVVTVGGELCLDDSALLERTLRAALDREP
 TSRPVVVKKR
 RDRRAV S पT TSHRTGDVALLDLSGKUTDGGSVQLREAVKSLLENGN GALRVAVGGDRDFTTAGELLTTVVAALDGGG
 DETTPASNGVQRVTLGGRLDTHTYAQLDEVLAPLLADNS

VQERSGGDVIVALDGEMDMTSAPVVEAAVDEGVAQNG LTVVEASPDGTLTFKPVGRFDGKDYQEFQDAYQR SAEP A YQul K K E DKTYYLHLQGDLIGDEGPKLVELVSDAVNEK DELRVVTAGGELDLTTAPAFARDLLDARHGSG $M E \square R V Q Q K G M A \| E V E$

VMVLEGVLNAET
$\qquad$
V 1 QRRP
 ETSQGAAACLAVEGEMTDYRAAEDHPVLDDAVRTHD
 DGSRVI IPAGDLDRDAADTLATAVNESLABHP RVTDEGVVMVAMGGEVELAAGILERFLLGAVARGP VRSEEGRQLTLFAR A AFDIQVIRPGAVMVRIRGALDADSAPQVRSALSTWAHR R TVHEGASVVRTRGDLGEDSAPGLLAAFAAAVTQGA GDAVIVDLKGRLTFADYSQFRE LTELFTENK F QVKR HGDVAVIVPSPQREDLPETLLQEMVLQPLKEDP VRSGDTLIAAALLGR DSGSAEDFQRLLEDGLGPDD MQYQUETNSQTTIDLSGKLYMQDIEQLRCDLVQYLEKGS

 FSVDKHEKYVLILRLEEGKLDFVSADPVREALDSFLASSA DDTLYVSIDGKVDSITTPDVEQAFNDLLGKYP
TEAGRAAVLGVAGELDLLSAPEFADVVDAVLARE


UniRef90 UPIO00369155E UniRef90_UPI00036594E7 UniRef90_W7YNW4 UniRef90_L8F2Y7 UniRef90_A0A023DEH6 UniRef90_W7VJH7 UniRef90_UPI00036CA148 UniRef90_B9E8C0 UniRef90_N1WAG3 UniRef90_F6CN26 UniRef90-K0F067 UniRef90_X1UQE3 UniRef90_M3F7A0
UniRef90-D9VW35 UniRef90_D9VM
UniRef90_I3I7I1 UniRef90-G0J515 UniRef90_-UPI0003737298 UniRef90_UPI0003B592C8 UniRef90_UPI0003804C59 UniRef90_Q2SHG4 UniRef90_W9AKN7 UniRef90-M5RBC4 UniRef90_UPI0002DFD7DD UniRef90_UPIO00428CCF4 UniRef90_W7IYIO
UniRef90_F8EYR3 UniRef90_D7AUZ5 UniRef90_UPIO00289FEA1 UniRef90_UPI00035C90B5 UniRef90_C6W8P5 UniRef90_F2R768 UniRef90_H7EHY5 UniRef90_Q1IHN9 UniRef90_L1KVA2
UniRef90_G2LIB5 UniRef90_F2PB31 UniRef90_UPI000477C150 UniRef90_L8EJ00 UniRef90_UPI00040852B8 UniRef90_UPI00046777F8 UniRef90_R4Z7F9 UniRef90_A0LDM1 UniRef90_D8PF31
UniRef90_U5BVQ0 UniRef90_UPI000374C733 UniRef90_K9P390
UniRef90_D9RY61 UniRef90_F0R1T5 UniRef90_Q025R6 UniRef90_B9TJ97 UniRef90_F3ZKJ6 UniRef90_UPI0004756360 UniRef90_D2BFR2 UniRef90_UPI00036913DA UniRef90_W7JC92
UniRef90_D8JT90 UniRef90_D8JT90 UniRef90_Q884X3 UniRef90_V5SAT3
UniRef90 F4F8P4
UniRef90_G0FIJ9
UniRef90_IOL6U2
UniRef90_B4V0B4
UniRef90_UPI000225B1C8 UniRef90_E3J8E1 UniRef90_UPIO003607DE8 UniRef90_UPI00016C521D UniRef90_V5JAG4 UniRef90_UPI00037D0FE2 UniRef90-D6YAC8 UniRef90_Q1B8G3 UniRef90_UPI00041948D0 UniRef90_A0A031M765 UniRef90_UPI00040564BF UniRef90_UPI0004185BC1 UniRef90_UPI00037B161F UniRef90_S6BLG8 UniRef90_UPI0004673330 UniRef90_C6BS16 UniRef90_UPI00037CD6C9 UniRef90_UPIO00346A8C4 UniRef90_W7SSN2 UniRef90_B8FBY2 UniRef90_E3G9N0
UniRef90_A0A059MTP6 UniRef90-14EVU3 UniRef90_S0GVY9 UniRef90-F0SCA4 UniRef90_LODRS2 UniRef90_G2P206 UniRef90-W9H061

50
VA R|VVV|D|LIS AVVTFADSAAV|NVLLQA
70
TA L G P A|L|R|L|AT VRAVVVDFSSVT F LGGVAGMELLLRAAGCAAVRRREFALVV EK N I L L A D H L I L N M E QV K Y I N S A G L Gll A D G V M T A R K Q Q K E L V V A G $P$ A T L V L D F A D L L F L D S T G L


P ARRVELDLGALEFWDC



 | V |
| :--- |
| $\square$ | -T L I DV

| $K$ | $N$ |  |  |
| ---: | :--- | :--- | :--- |
| $R$ | $L$ | $L$ | $N$ |



P

$\begin{array}{lllll}A & N & V & L & A \\ P & R & D & C & R\end{array}$

$P$ R A L V L D L S | G A | $G$ | 1 |  |
| :--- | :--- | :--- | :--- |
| $K$ | $P$ | $G$ | $L$ |
| $P$ | $K$ | $A$ | $F$ |

 Y
 Y R H L L I D L A G V A I C C D S S G L S A L V V A H R $\quad$ G

 SRTVV
SRTVV D
SRECQMN
CWOVVD CWQLVVDFEAYQFADD
$\qquad$
T


##  <br> 

 $G K R V V L D L S G V T R I N S V G L S L L L S A A R S A R Q S Q V Q L Q A T A$





## In <br> -

| UniRef90_UPI000369155E |  |
| :---: | :---: |
| UniRef90-UPI00036594E7 | GNPAMWRTLEITGAEPLLCYGSLHEAVEA |
| UniRef90-W7YNW4 | LQPA VERLISVS QLDS VLT T E N M Q Q VEL M R |
| UniRef90_L8F2Y7 | PPDAL R R |
| UniRef90-A0A023DEH6 | VQGSLQEI FHIVKFSSFlLFKTEKEADHYF |
| UniRef90-W7VJH7 | $V \mathrm{P}$ P FLETILDLTGVTGLLDRAPVDD |
| UniRef90_UPI00036CA148 | PGSHVNRVLAALLGVRRLFDVYADAD |
| UniRef90-B9E8C0 | VNKRIERLFDIT GLKDLM |
| UniRef90_N1WAG3 | LS D SVKKVFSI T R L E S HIR R V E T E E A |
| UniRef90-F6CN26 | PQPDVAEVMRLVGLDRLLAQNT |
| UniRef90-K0F067 | GGPEVERSLEVSGVRPLFPYPSMRAALD |
| UniRef90_X1UQE3 | DENCMRILEITRLEKEFDHYAE |
| UniRef90-M3F7A0 | ESDHFRRVLRGAGLGGVFEV |
| UniRef90-D9VW35 | A GRPVRRLLEVTGTAGL |
| UniRef90-131711 | AKGATAQILAMANMQR |
| UniRef90-G0J515 |  |
| UniRef90-UPI0003737298 | PPPSMERMLRI T G TRHL |
| UniRef90-UPI0003B592C8 | $\square \mathrm{LTPTVAKVFRLT} \mathrm{RMDSVFDHPTLPDGLRK}$ |
| UniRef90-UPI0003804C59 |  |
| UniRef90-Q2SHG4 | CSNEIRKIFEDAKFEKSFIIESDADV |
| UniRef90-W9AKN7 | DGPVTRRPLELVGLAAVLTI P T LDD AFEQL |
| UniRef90-M5RBC4 | VSPNVMEVFKI TKLNKLFDLEGEEKAMASF |
| UniRef90_UPI0002DFD7DD | APPFLGRIMRI T GI D HL |
| UniRef90-UPI000428CCF4 | PSEHIRKLLII T KL NAI FTVAEDDQAANLLK |
| UniRef90-W7IYIO | NGGPVLRAI QVSSLDKVLTV |
| UniRef90-F8EYR3 | $\square$ Q GTPRKVLSMAN |
| UniRef90-D7AUZ5 | PPRQLT RIL DVLALLGAVLTHPDVS |
| UniRef90-UPI000289FEA1 | ASPVAERLLALTTGTCPLLVHVTEEEA |
| UniRef90-UPI00035C90B5 |  |
| UniRef90-C6W8P5 | AQRGVLRPLQLTGMSALLTHPTVDLAVDA |
| UniRef90-F2R768 | A SPRMTRLLRLT G |
| UniRef90-H7EHY5 | PSPAARVAI EDTGFYS |
| UniRef90-Q1IHN9 | LS P Q A AVVLEMTRTERLFDY Q S A D A VR S F |
| UniRef90-L1KVA2 | PSPQTERLL T DTGS |
| UniRef90_G2LIB5 |  |
| UniRef90_F2PB31 | V NGQPRELMQMLRIDKVIPLITSAE |
| UniRef90_UPI000477C150 | RPAALDRLLDVSGTYEHL |
| UniRef90-L8EJ00 | PRPVVRRLL R L A P L D ERFVV |
| UniRef90-UPI00040852B8 | VSPRI R DVLRTTGLTRLFI Y S SVDTAVLVLR |
| UniRef90_UPI00046777F8 |  |
| UniRef90_R4Z7F9 | PQHSTVRLLEVA GVLD |
| UniRef90-A0LDM1 | ARPEIRKILETANFQRLFK |
| UniRef90-D8PF31 | CSSEIKKILRIA NFHSLFTV |
| UniRef90_U5BVQ0 | P S EHVKKLLIIT K L N N I F TVGF D |
| UniRef90-UPI000374C733 | RPGADLVFRAA GLDRFPRYATVEDA |
| UniRef90-K9P390 | V HRQVALVALEMTGLE |
| UniRef90-D9RY61 | 1 P DLI R EDLEVIGGF QV |
| UniRef90-F0R1T5 | V SKEVREVMAI TGFEHFFKYDTVEE |
| UniRef90_Q025R6 | LNDRI WDLFRICK】EDVFTYATVAEA |
| UniRef90_B9TJ97 | ASPAVRDAFAMLGMTD |
| UniRef90-F3ZKJ6 | $\square \mathrm{D} P \mathrm{RLEKLLR}$ I T GTY THLT GA |
| UniRef90-UPIO004756360 |  |
| UniRef90_D2BFR2 | VS DHLRALISQICALDQVVR\\|V |
| UniRef90_UPI00036913DA | ATG\PLTALQVTGVYEYL |
| UniRef90-W7JC92 | VSAAVSRVLDVA GMNTELRVASSAD |
| UniRef90_D8JT90 | TS K QVRRTLLNAGLRRPLI HY TLIEDALIA A A R |
| UniRef90-G4QNB8 | AKDSAKD L L Q A NFDRLFNL |
| UniRef90-Q884X3 | CTPDVHKILAISNF |
| UniRef90-V5SAT3 | TSRDI R RVLI T H G L K R PLVRYTAEAALSAVQ |
| UniRef90-F4F8P4 | $\square \mathrm{NPNL}$ R QLL DRTGLAELLQVSPAD |
| UniRef90-G0FIJ9 | D NRVVRRALSAS |
| UniRef90-10L6U2 | A AGITTRRVLRTT QVE |
| UniRef90-B4V0B4 | PQVAI R RLFEVT GATAFHMTDSLESAL |
| UniRef90-UPI000225B1C8 | A HGQVKKMLDLGHFAS |
| UniRef90-E3J8E1 | PPPGVLRLLALTDLD L PVYPDVYA A I |
| UniRef90_UPI0003607DE8 | VNDVI NDVFEVTGFSDILT |
| UniRef90-UPI00016C521D | VNPNIRELLRIT NLEMYALYDNAAEAlS A L |
| UniRef90-V5JAG4 | LS QFNRDIVAVSGFDRIIVYDSRATAIIESF |
| UniRef90_UPI00037D0FE2 | A H GMVKEI FTRTRLDKLLKVS |
| UniRef90-D6YAC8 | V H GVLALVLDVTGLRDLFV |
| UniRef90-Q1B8G3 | EGPATSRPLKLLGI ADI I L Y A SVDEALAAD |
| UniRef90_UPI00041948D0 | VK S ELMY DFEDTGFILK |
| UniRef90-A0A031M765 | LPA GLLSMAAVCGLD |
| UniRef90-UPI00040564BF | I NEAVSRLITI S QLD NVMT\PKVEEADDLI |
| UniRef90-UPI0004185BC1 | VS IEEVFEIFEMTGFTNILE |
| UniRef90-UPI00037B161F | DS AVTS GPLKTTGLDT WI L HAT $\square$ D E A L H |
| UniRef90-S6BLG8 | GNEGIRE\\|LR\ANFDKLFKVA |
| UniRef90_UPIO004673330 | CSPDVRKILTI SNFEQLF DI |
| UniRef90-C6BS16 | P S EQI CK TLELVRLIS F F T I I E D E |
| UniRef90_UPI00037CD6C9 | RPPALDRLLTVTG |
| UniRef90-UPI000346A8C4 | VSPSVKMIFEI S QLD KVLG |
| UniRef90-W7SSN2 | SRRQALRPLQUTGLDTVLIVDTVDEALVAL |
| UniRef90-B8FBY2 | PQPLVEEILQTAGLTELMPITHDE |
| UniRef90-E3G9N0 | $\square$ - P GVLENVRRS GLAR |
| UniRef90_A0A059MTP6 | PAGRVRRTI A A A GVSRLNDHDNLDSAVGS |
| UniRef90-14EVU3 | NTRAVTRPLEVTGLDDLFT\\| |
| UniRef90-S0GVY9 | LGVRMLKLLVGTQSMGVFCYPTVGHALA |
| UniRef90-FOSCA4 | L S DAVSRLLSIS QLDTI ITVPKVEEA |
| UniRef90-LODRS2 | IAPDLAQVFKITRFDR\\|FEI Y DEESALDS F |
| UniRef90-G2P206 | DEPRFVRL LRMVRLDDAFEV |
| UniRef90-W9H061 | ARNDVMRVMQVAKFHKMF |
| UniRef90-B3EQM2 | LTC K Q |

UniRef90 F2K2G9 UniRef90 A8TZY7 UniRef90_UPIo0028A3F86 UniRef90-A9B526 UniRef90 Coogs UniRef90-×5JWI2 UniRef90_UPIO0028853CA UniRef90-UPI00047377D4 UniRef90_M7Z1T8 UniRef90-A4FPFO UniRef90-A4A8V8 UniRef90 D7A764 UniRef90-UPIOOO36C7179 UniRef90-Q10XU8 UniRef90-L8PRI2 UniRef90-KOVO80
UniRef90
M2ZPI6 UniRef90-UPIO003990A5F UniRef90 Q04P91 UniRef90_UPIO00374D559 UniRef90-UPIOO0464D56B UniRef90-K9VIK6 UniRef90-X6NXG5 UniRef90-G8AH92 UniRef90-D6SUE3 UniRef90-M5FE89 UniRef90-M1BP77 UniR Refo-M5H7L3 UniRef90-A4INE2 UniRef90_C1DIKO UniRef90-UPlooo3772409 UniRef90_U3ALZ3 UniRef90-M3АВТЗ UniRef90-X1MS76 UniRef90_Q1NUH8 UniRef90 L1KUL5 UniRef90-A0A015MIMO UniRef90-UPIOOO3B50140 UniRef90-UPIO00361FCA4 UniRef90-E8LT07 UniReffo-MoS5Z4 UniRef90-A6CGL3
UniRef90_UP10003772503 UniRef90_UPIOOO377BAFO UniRef90-S3VCF3 UniRef90-V6EZ17 UniRef90 G8S8K6 UniRef90-UPI0003AD40F5 UniRef90-E11D94 UniRef90_UPIO0032A76C5 UniRef90-N1MCF3 UniRef90-E31AUO UniRef90_UPIO0032A9C94 UniRef90 V8US17 UniRef90_UPIO002FE601B UniRef90-LODR04 UniRef90_UPIO00366301D UniRef90-UPI000323769D UniRef90-D5SMX9 UniRef90-UP10002DEA8C9 UniRef90 UPIOO0273FFCC UniRef90-TORNF2
UniRef90 ${ }^{\text {S2YCYM }}$ UniRef90-K2F9J2 UniRef90-A6C3R2 UniRef90 AGG4A UniRef90_A9W9Q0 UniRef90 A3VZIO UniRef90-A0A017SYS9 UniRef90-B2JFU7 UniRef90_UPIO001CE14B2 UniRef90_D9V176 UniRef90-14B0V6 UniRef90-Q5P1Z6 UniRef90-UPIO00371D226 UniRef90-A0A017TBB2 UniRef90-A6DWU5 UniRef90-M5XLB1 UniRet90_B8G3H2 UniRef90-F9T184 UniRef90_S4AXLO
UniRef90 AgGSOO UniRef90-A3YAB8 UniRef90-UPIO002378EC7 UniRef90_Q1PYK9 UniRef90-B8GBA2 UniRef90-UP10004756FDC UniRef90-10X978 UniRef90-F2U868 UniRef90-X5M1X8 Unire90_UPIOO036224E4

20
30 T DPDVVVYRIS GAFFFGAAASVSSVLDRIDDDM RTH G D C T L V V L C G E DidQ T A P G I N H R L D T I N H A D N
 $M$
$M$
$N$
$N$
$N G$
GKK LT T A $\square$ K GRFDF GKHQEFRDSYERVPTR $M V F T F K G Q L D A F S E K Q F K T F V T Y N L K N D L$

 $M K T V D \square D \square K Y$ V I L V P H Q H TVVVEAMGEIDLATAVFLAQHLDAA TAGP $S L N D A Q E R D G A V I V Y V S G E V D T G T V Q R L A A A L Q A A T A D H P$ FSTERDS S A LVRVAVVAGELDMRNAPALCSYAGARML H T $V Q V L E G D V L L V Q P G S S L H F P A D E H L R D D I G R A L A A S P$ MEIT

QVQDSAMTV IMEGQ

I T TPGIVVFRFDGALYFGNVNYFKRAVVVVRBR


EAS

$\qquad$
E N NEHKIVVSLM N D FS GF T V
S F E L E M ITT
 LKVE EANRVVVATILPEEASLSNADAFKEEMDTIIGRGG

I R E Q E A T I Q I H G HF N F S Q H GAF R D A C K A V L A H Q A MQFRVKDDGTAVVSLEGQLNFAANEDF QALLGQLNNFK
 RGERTLVTTL
$\mathrm{S} \square \mathrm{H} V$
F TLLKG
1 VGRSRAR VLS G E

\section*{FEVEL} | $M$ | L | K |
| :--- | :--- | :--- |
| L | V | T |

V E T P
$N \mathrm{~L}$

$A L Q V E T V S R R G \square R V R V A G G E L D L A A T A G D L G D A L A E A L A T A G T$ I TV E L Q D G V A ill

E S D E Y LLE V


$V V R S T G G V T V A V L R G E L D L V L V R H L R P D L D A L V R E S D$


 $V Q Y E R A G V W V V V A K G D Y D P N S I A P D E E A L E T A A E K R E$ VAE QRGEILVV RMDDRDDAA GADQFK DRMREATILAAC

$E G I L V V P L V G V I D S F R A G Q U M E R L L D A B I A E R Q$
$\square T$ D SVVVMP LVGQMDAERVGRVMDAALEGDQAHR E T QVS E E PVLLV L R P E G R
 F GLLEHPDPAAVILRFDSPPLTADVAAAAFEHAVLAAAAATHG
 FK DAMRAATASGA
VMGVMIVRVDSA】YFSNSNY DKER】LRWLA DES

 L A A V I E E R R R K
R $\square A$ $M T$ GVLVVMMLDGPMFFGAVETFERALAGGTHTD M T $\square E Q Q R D D T L Y V K V D G K L D T N T S P D L E K F L N E N F D N A R$




| UniRe |  |
| :---: | :---: |
| UniRef90-A8T2 |  |
| UniRe990-UPILO0028A3F86 |  |
| UniRef90-A9B526 | $\square R P E \\| A Q T L V S \square G \square G D V V T h S N \square Q S G \square E R$ |
| UniRef90-C00GS3 | VSKDVFGLFSTMRL |
| UniRef90-×5 | VNEQl RILFELTGMDKMFT |
| UniRef90-UPI | SNSDVRKLLALSNFDKLFDILA |
| UniRef90-M7Z118 | PGSEIMKKLDSSKVLELIIFPTVGEAVAE |
| UniRef90-A4FPF0 | NTRTVDRALAAGGLDR |
| UniRef90-A4A8V8 | RQPQI EKVFQILQALPDMAVFSNDAELDE |
| UniRef90-D7A764 | TNASURRVLWNHGLRAPLVRYTVTEALRERR |
| UniRef90-UPIO00360 |  |
| UniRef90-Q10XU8 | NPTVKLAFE ${ }^{\text {a }}$ (LID RVFQFSNLDE\FSYFN |
| UniRef90-L8PR12 |  |
| UniRef90- M2ZPI6 | GRAVNRLLRVLG EPVYAHATLDSALHADR |
| UniRef90-UPIO003990A5F | \QEPVLQVLLTADLEGFQHFPSREEA |
| UniRef90-Q04P91 | EDLLQLFEDTMLDKVFlVPNDEDAFDEFK |
| UniRef90 UPIO00374D559 | ASSNIRGLIEMTRLNT |
| UniRef90-UP10000464D56B | DGPATSRPLKLVG\| A DIVVLYPSLDEALAA |
| UniRet90-k9VIK6 |  |
| UniRef90-G8AH92 | VPGPIRGVLEEAGLAALLEHGDLEAAVRA |
| UniRet90-D6SUE3 | $\checkmark$ VD |
| UniRet90_M5FE89 | ASPQTRRMLINHGVKRPLVTYSIRDARAQLR |
| UniRef90 M1E | PGAEVMKKLNKSKF |
| UniRef90 M M | VNAQPKKLMNLLRVDKTIPFVADEQELSL |
| UniRef90-C1DIK0 | PRVGGKLERAGI LEL |
| UniRef90-C6VVZ7 | PDVKNLLTLRMDKV |
| UniRef90_UP1000377 | AKPVVRQIFAIAKFDKFFEID |
| UniRef90-U3ALZ | VSGQPLEMSL |
| UniRef90 M3ABT3 ${ }^{\text {U }}$ | PRDNVFRMLETVAEAKTFEDDSRAEAVKSF |
| UniRef90 Q1NUH8 | E $T$ |
| UniRef90-L1KUL5 | PCAQITRLLDTTGSTSL |
| UniRef90-AOA015MIMO | VSTHYQKLFRMVGLTEYLMLYPDEYAV |
| UniRet90_UP100033550 | NVERV |
| UniRet90_UP1000361FCA4 | APPTVRF |
| UniRet90-E8L | GQPLE |
| UniRef90 MOS5Z4 |  |
| UniRef90 UPIO003772503 |  |
| UniRef90-UPIOOO377BAFO | RPPILDRILDI |
| UniRef90 S3VCF3 | LINDHFRKVMDIVGLTDFLIHNTLQEAL |
| 6EZ | PRGPVAQLLSLSALD |
|  |  |
| UniRef90-UP10003AD40F5 | P |
| UniRet90-E11D94 |  |
| 㑑 | ( ${ }^{\text {a }}$ |
| UniRef90- E3lAUO | VQQDVMNVFEILQLPEIL |
| UniRef90-UPIOOO32A9C94 | PGPDVTEKLEASML |
| UniRef90-V8U | ANPRVKAKLHRAGLVGLAVFDRFEDAVLSCR |
| UniRef90-UPIO002FE601B | PAGMLHSALDRLLGL |
| UniRef90-UPIO00366301D | $V$ NGKPDELL |
| UniRef90 UPI000323769D | DQPWILRLI RLTA |
| UniRef90-D5s | ANGGVADVLKLSRLQDYFLMADVPS G |
| iRef90_UP1000 |  |
| UniRef90_UPIO002 | RVLLSADLQGFQYFSTVEEAEKYLR |
| UniRef90-TORNF22 | PQDRRDETGADEVDDDTVEDAV |
| UniRef90-S2YCY9 | QVORVFR |
| UniRef90-A6C3R2 | QNEMVEEVLNISGLKKVWIVPTEAEADNHLN |
| UniRef90-A6G4A6 |  |
| UniRet90-A9W9Q0 |  |
| UniRef90 A3V | D V |
| UniRef90-A0A017: | VRPAAAQTLVGLLGDGLSTYGTLQAAMAS |
| UniRefoto-B2JFU7 | LNPDVFAVVEKAPLGKALGHENLEQALAA |
| UniRef90-UP10001CE14B2 |  |
| UniRef90-I4B0V6 | FVQELFDMTDLSRFS UVGSDDDARSQFK |
| UniRef90-O5P 126 | QV |
| UniRet90_UP1000371 D226 | MV |
| UniRef90-A0A017TBB2 | P HVAR L |
| UniRef90-A6DWUS | 俍 |
| UniRef90-B8G3H2 | RPEVAQTL VTLGLHHLRTYSTLQAALAR |
| UniRe990-F9T184 | A HGQP |
| UniRef90_S4AXL0 | TRPTTLQ |
| UniRef90 A9C | VPAMVGRILESGGLDG\\|PVFGTLKSALE |
| UniRef90-A3YAB8 UniRef90 UPIOOO2378EC7 | SNAFURNULDSRFDKR |
| UniRet90-Q1PYK9 |  |
| UniRef90-B8GBA2 | VSAQVALTLTHIGLSELDVAASPQEALCR |
| UniRef90_UP10004756FDC |  |
| IRe90 | PSEFPCM |
|  | P |
| niRef90 UPI00036224E4 | VRTQPGRLFAVISGTAHLL |


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UniRef90- S4Y454
UniRef90_UPI000366AA59 UniRef90-UPIO0046EEF34 UniRef90_F4CZD8 UniRef90-F3N9K8 UniRef90_UPI0003B72A4F UniRef90-UPI00047C57E0 UniRef90_LOE0U1 UniRef90_UPIO0036BC8B6 UniRef90_E1YAM8
UniRef90_A9FRN6 UniRef90-H2CG33
UniRef90-C6WL53
UniRef90-A5UPM0
UniRef90-G1KRF7
UniRef90-M0TI61
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UniRef90-R6E9S2
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UniRef90-E8RD86 UniRef90_A0A024HCD1 UniRef90_G4QMJ1 UniRef90_K6CAZ0 UniRef90-A1U6C2
UniRef90-W6M7X9 UniRef90-UPI00047DAD57 UniRef90_UPI00035F2D43 UniRef90-UPIO003452727 UniRef90-W0N794 UniRef90_UPIO00265712C UniRef90-UPI000255A28E UniRef90-A9GXP7 UniRef90-S2KC46 UniRef90-E9BVB5 UniRef90-WOSLS6 UniRef90_E7FF67 UniRef90_G8S3J0 UniRef90_A8M5N4 UniRef90_A7NLZ2 UniRef90-R4T7Q4 UniRef90_R5NTC6
UniRef90-U5WR63 UniRef90-UPIO002375E14 UniRef90-A0A017SUQ3 UniRef90-V6I9H3 UniRef90-A7NIN6 UniRef90-H0BTN9 UniRef90-M2Z0X1 UniRef90-W6EDH8
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UniRef90-R5IEY9
UniRef90_UPIO00412BFD0
UniRef90-A1UBC2
UniRef90-13Y5Y2
UniRef90-R8BRW8
UniRef90-W5JPJ6
UniRef90_UPI00037E21EC
$102030 \quad 40$
MNLKTDCKY|I $\mid$ R $|V| A Y|L T G P| L \mid F F A A T N T F N E A F A H \quad E E D$
 RRRNAVT TVNVVAGPLIFFGAAYRFENTMPGA GPEQ $D G T G R L A V S G E I D M S N A G D L A E A L D Q L S G$
 SSEVEDPRR VALYEDNGPLLFFANASYLEDQGDRLDNKKD
 $S L P \| L P V G R E V L V A P L I G A L D Q E R M Q Q L Q S Q V L K R V E R \square H$ QUKVLEHEALFIQPASGLYFPADEFLRDTVGKQLSEPR

 E GCLIVKGPEPLTFANTGELKTRLRRLRREEH
 KKVPEGVMIYRVFGALFFGAADKDETVLAK THSE
 $\square R E V S K Q T A M M R Q G F L F F G A A D Y V V E E T V K Q Q L D R S P$
 $T I P K G V E V Y E \| N G P Y F F G V A T Q F E A L V S E F R D R S K$ QVE TTPD VTIR $\square D E N L F F A N A R V L E D Y V L S L I A Q K D$

DD GWKVYDL EGPLFFGSVTHFREDFDP L
 THEGLVVYALEGPFFFGAAENFERTLSNIDHAY QEGVA CMDQGS LFFNADYVRTRLLTVGEQG RKDLLILRFDAQLEFGNKDYFREKLDGLI AKQK RGVLTMPVLGVLDEERAQQMMEVLDEAVARTR
 EGGGVIR $\square$ A VRGE $\square$ DHDVSDA $\square A A \square V A N A A A Q P G$

RRK D E GVIVLP LVGGS DPSRRSAQ DMEALLSGDQHYA KKGVLVAVGPFFGDANKFDECMK TLSTERRSDGTPVLIAVGEDDMSNVDAFASALVEAVGAGD
 NGVLFAP IVGHLDSRRSARFTAYLNSHVAHK NR $\square D \square V K D D K I V V S F Q Q D I$ NFETSRVMEETI ES Q

TRPVATWRLHGALFFGAAAK DD I QAVETGPP
 $\square T$ KDNVAVYTI NGPFFFGAMAVFENKVDEHIHMSK












 GVLVVGLQAPLFFLNASSFRADLLQMLQKKK

IV R L

E E D D D R $\square$ A L I $\mathrm{N} \mid \mathrm{D}$ G P L F F A S A D R
Unirefonolisf

|  | 90100110 |
| :---: | :---: |
| UniRef90_IOI3F5 | V H P K V V M R M L E R A G L D |
| UniRef90_S4Y454 | $V R P E V A Q T L V T L G V D$ |
| UniRef90-UPI000366AA59 |  |
| UniRef90_UPI00046EEF34 |  |
| UniRef90 F4CZD8 | SRED LVRQLT ITT GLE |
| UniRef90 F3N9K8 | VPP LL EPVLTV S GLA DLVTV |
| UniRef90-UPI0003B72A4F | TSEP Y Y NLMSTMRLNRHFTV |
| UniRef90_UPI00047C57E0 | IQ P AVA I T L I E G G |
| UniRef90_L0E0U1 | $V P$ E D L R PLL V L Y R L E E L L |
| UniRef90_UPI00036BC8B6 | ASAATQRALMMGGLSSVASYAPSVEAAARL |
| UniRef90-E1YAM8 | V NETVMKVFKNTHLLEKIIYP T M E K A V |
| UniRef90_A9FRN6 | PLPR PRE】F DKARLQRVYVA E D L A A A |
| UniRef90-H2CG33 | PRSPLREKS QLS GL L V V Y D Y L D A L A A |
| UniRef90_C6WL53 | VT R Q I R RVLS SVGL H HVLQ |
| UniRef90-A5UPM0 | V R P EVA Q TIVALLGLRDIVEVFSDLGSALQR |
| UniRef90_G1KRF7 | L Q A QVLKVLVA A DLEGFYHFPSMKFA |
| UniRef90_M0TI61 |  |
| UniRef90_U4WKK5 |  |
| UniRef90_C4ZM20 | HS A A V L RLL D LAARL G GALGDPLLE D A |
| UniRef90-UPI0003725748 | ITSPQI A Q AI VQLGGLD DVT T T A TLLK D GLE E |
| UniRef90-M4Z6P5 | $V \mathrm{SPL}$ L A R I F R M G GL D |
| UniRef90-S3BXG7 |  |
| UniRef90-S4YCH7 | VR P DI A R S LA DVDL GAL AT F S SLS A A L R EL |
| UniRef90-UPI000361424A | IS K E I E E T L K L L G V N EILLD Y EMREE |
| UniRef90-UPI000377672B | PHTQPYFLMHQAGFFD |
| UniRef90-I0RQ50 | VNP L L M PVLRVSGLT AV |
| UniRef90_R1HDJ0 | LQF QPLLKTLA RAKVGKLEFYSTLEEAL |
| UniRef90-D8Q7B2 | V ES PVGRALEESVDLLSVEVFSSFNDAL E |
| UniRef90-W2S499 | LPKRRSKVFE\\|CGGERHFV A S V D E A L K |
| UniRef90-A0L9F2 | PCRQVA GALR NSNFYALLEEDRDD |
| UniRef90-R6E9S2 |  |
| UniRef90_X1BC86 |  |
| UniRef90 F6CXF9 |  |
| UniRef90-E8RD86 | AK GP I LA V L D R THL F D K IF Y P D T K A A VA D I |
| UniRef90_A0A024HCD1 | HS A CVAEVI QLL |
| UniRef90_G4QMJ1 | $\square$ S P E CRVLL K K A G |
| UniRef90_K6CAZ0 | AVLPLLD TL K K S GLY D |
| UniRef90_A1U6C2 | LQ F Q PLR TLA RAGVKSYF YPTLEAALAEL |
| UniRef90_W6M7X9 |  |
| UniRef90_UPI00047DAD57 | LNA QPERVLQK T G L D HFFEHEA |
| UniRef90_UPI00035F2D43 | ANERVSEKLERAGIVELVVHPAFDEALAS |
| UniRef90-UPI0003452727 | A K A PVRAVLERTGLLD |
| UniRef90-W0N794 | LNEESRELLDRAGVIT A $\quad$ I I S D K D E A M A A L K |
| UniRef90-UPI000265712C | A HEGVTESVMLS G |
| UniRef90_UPI000255A28E |  |
| UniRef90_A9GXP7 |  |
| UniRef90- S2KC46 | V A R R |
| UniRef90-E9BVB5 | PNPEVLVTLS K A G L V |
| UniRef90-W0SLS6 | LKK QVLDVMQA T GL HD TIFFATAERALER |
| UniRef90_E7FF67 | CNESVLKI LT S S GL M N Y M |
| UniRef90_G8S3J0 | A R GlVV H GVLA T T GLLGLF |
| UniRef90-A8M5N4 | P N PRIRS L Q T A RVD TVLP |
| UniRef90_A7NLZ2 | $\square$ S A EV A Q A MV H L G V D |
| UniRef90-R4T7Q4 | K T ALVVSRILLDVS GV |
| UniRef90_R5NTC6 | VNEEVHKVLMKS ELS GK\ICSNDQEAVEK A N |
| UniRef90-U5WR63 |  |
| UniRef90_UPI0002375E14 | $\square K L P A E Q V L R Q A G L D G L A L H R T D T D A L A A L R ~$ |
| UniRef90-A0A017SUQ3 | AS ENVTARLSESGLLK HVVYPTVA E A L A S L |
| UniRef90_V6I9H3 | VS P R L K Q IL R LV S L D R V |
| UniRef90-A7NIN6 | I S S EV A LTLLQNV S L R DI A T A R S P Q A A L |
| UniRef90-M8D6Z7 | V S A P I K HILS I C Q L Q V V I |
| UniRef90-H0BTN9 | L H E Q PRSLI ERSGFAD |
| UniRef90-M2Z0X1 | M R P AVAl T L S E L G L |
| UniRef90-W6EDH8 | V N E HI KLLKI R R L G F E K K I I T D N ID M A L S R |
| UniRef90-Q12U22 | $V$ QPEVMRVLK LMQEKDVIVFKSTQEALGGYLQ |
| UniRef90_UPI00035CD36E |  |
| UniRef90_I4F138 | PIGQ TR DVL R R T GVVT L D S H P DVV A A V A A LR |
| UniRef90-A0A024HA25 | LSERCKQLLKRAGVEH |
| UniRef90-F8F357 | V R E Q P M K ALERS GF |
| UniRef90_W9GHM6 | SSERTTRLLRGCRLERIL |
| UniRef90_LOFDK6 | MPD D MREI A EVYDL D EV L |
| UniRef90-H2K2L6 | M R P A VA \TLLVELGGLTGLVTALDVDRAMELL |
| UniRef90-UPI00037A2638 | ASAAMTE\\|L QLS GLRDLLP |
| UniRef90_UPI000376C6F2 | $A R G Q A Q R T L E A T G V V E M L A D S E D L G A L$ |
| UniRef90-D5BVB3 | $\square \mathrm{P}$ D Q M L A I A R I S S L D Q |
| UniRef90-D9SCB7 | MPA S LLLSLA ${ }^{\text {L }}$ L Y GVA D MLP H |
| UniRef90_D5HBI3 | L I G P V REVVRRS GL H A L L |
| UniRef90-F3YYC1 |  |
| UniRef90-N1Q9L2 |  |
| UniRef90_UPI00037AF3BF | $L K G T V I D E L R A N G L Q R \\| L F Y D S P E A A L S$ |
| UniRef90-Z5XTT9 | TPEQLQK LM Q L G Q V T NLFE |
| UniRef90-W4LKV9 | 1 IS P D MA Q T L VKL N I D |
| UniRef90-F7YL47 | $V P E Q L R T L F Q L S N I D R L M$ |
| UniRef90-UPI000346AC64 | MRP GVAIT L V E L G L T GLETARNVTEAASRF |
| UniRef90-G3C7W6 | LQAPVLHTLLAADLKGFQNFPTLEKAEQYVR |
| UniRef90 R5IEY9 | V NEQPMKVMKKA GF |
| UniRef90_UPI000412BFD0 | LS LRAQA AFERFGLYGVLVFHSVDEAVRAL |
| UniRef90-A1UBC2 | N P T VR R V L G $\mathrm{l}^{\text {C }}$ |
| UniRef90-I3Y5Y2 | $\square \mathrm{l}$ P E GA Q T L T KL G |
| UniRef90_R8BRW8 | $V$ GEP I GRELLAVVGLTRLMMFCPTLNS A L E S |
| UniRef90 W5JPJ6 | CNRSVR CTLCRLDKQLFYP |
| UniRef90-UPI00037E21EC |  |


| UniRef90_G5GM96 |  |
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| UniRef90-UPI0003773FFE |  |
| UniRef9 | 3QS99 |
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| UniRef90-A0Z4Y3 |  |
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| UniRef90-14BNH3 |  |
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| UniRef90_D5UFT3 |  |
| UniRef90-17DK02 |  |
| UniRef90- W9AUI2 |  |
| UniRef90_S3UG78 |  |
| UniRef90-K5BAA1 |  |
| UniRef90- G3HE32 |  |
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| UniRef90_A8HZU5 |  |
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| UniRef90_T0JF01 |  |
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| UniRef90-X8AGI7 |  |
| UniRef90-B0SBW6 |  |
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| UniRef90-A1UL84 |  |
| UniRef90-W5IZX0 |  |
| UniRef90-A3I8U7 |  |
| UniRef90_UPI000478604C |  |
| UniRef90_UPI00037DCACF |  |
| UniRef90-B8GA31 |  |
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| UniRef90_G9EJD3 |  |
| UniRef90_U1EQ15 |  |
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| UniRef90-M7TU37 |  |
| UniRef90-B0VG01 |  |
| UniRef90_UPI00035E7F85 |  |
| UniRef90_I2K912 |  |
| UniRef90-D0LYR1 |  |
| UniRef90-UPI000466016A |  |
| UniRef90_UPI00047BD29A |  |
| UniRef90_UPI0001745A8C |  |
| UniRef90 G8UXM4 |  |
| UniRef90-M2QR47 |  |
| UniRef90_UPI000258F909 |  |
| UniRef90_UPI00038066F9 |  |
| UniRef90_G8SD87 |  |
| UniRef90-W7Z164 |  |
| UniRef90_UPI000225AA1B |  |
| UniRef90_K5BA18 |  |
| UniRef90_Q9FY46 |  |
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| UniRef90_L0D538 |  |
| UniRef90-D5DEP0 |  |
| UniRef90-C5FH12 |  |
| UniRef90-UPI00047E9016 |  |
| UniRef90_UPI0002745D50 |  |
| UniRef90_UPI000477C39B |  |
| UniRef90-J3P9W8 |  |
| UniRef90_Q9SAY1 |  |
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| UniRef90-UPI000395A2B9 |  |
| UniRef90_UPI000379DB20 |  |
| UniRef90-Z5X982 |  |
| UniRef90 G1XAM6 |  |
| UniRef90-K9NDW6 |  |
| UniRef90_V4TCQ4 |  |
| UniRef90-I4WNH9 |  |
| UniRef90-W3AH51 |  |
| niRef90-A0A023C1I5 |  |
|  |  |
| UniRef90-A5UWK6 |  |
| UniRef90_A9GD92 |  |
| UniRef90-F8X290 |  |
| UniRef90-F2R8N8 |  |
| UniRef90 UPI00036C05A7 |  |
| $\begin{aligned} & \text { JniRef90_R5CYC7 } \\ & \text { JniRef90_N6Y2UU0 } \\ & \text { IniRef90_E1IIB4 } \end{aligned}$ |  |
|  |  |


$\square T K G \square G V L P L I G D \square D T K R A Q L I M E N T D K E C N E K R$ $R \square Y$ TESDGTRDYELEGPLFFGSATTFADNFDGDDND GVLIVRIRENLDFANTAQLKER\RRLPRREE RDGVVVLAVAGEVDLVT IPALEDAISSVIADN DKVFSI QLKGGLDGTSAEDFYRYFESQLNKG
AMTVELPGGDEARVRVDGPVDSTSAVALRQEMLRRSRGGN DEH【ALLRLDGAMFFGAAERUSTEABEAFAAAG T IEGPLLFFGAAQRFEQTUASTLQQQQ
VTSPHVLTLRVDESLYFANSRALEDKTLGLVAERP EGVILMPIDGNVDSRRAQLIMEHLLTGI AERM
 VTPIWDGLLLLPLVGI IDSMRTADVMNKSLTKIAETR $D P \vee V 1 R R I E G R A S F D N S T S S L H D F F T E A F R M G K$ E G
MN $\square \mathrm{EL}$ LS G
HRDDVTFVKLAGVIDEDN
RGSAL $V$ G
 EGVMVYVIEGPFFFGAVETFQSALAN THTD TLTTDSREDGSVLLI ASGEDDLSNVDAFDSALAGATKNG
 $T V D V N T S T D G T L I L H P H G A L D A A D A V G L S R T V V Q A A D R T E$
 $S \boxtimes P \square I P \square T P N V S I L P L I G G T I D T S R A N V I E E K V L L E V G R D R$
 $L Q Q$ VR R Q
 KQTFVIKLAGFLFFGT IVVSVEKRIRGLVDERP EVETDQVLTLRVDESLYFVNARFLEDLI QDRVVDGD

LQ GF LFFGTANLMLRRVSERLA AGS $\square Q Q V G R Q \prod S I V K L S G Y L F F G T \ V G V E E T I R D L I T D E P$ GILII RVDSAIYFSNSNYVRERASRWVREEQ $D G V L A V P L D G T L D S T R S Q S A T E S L L D Q V V V Q Q$ DLLALRMDSELDFASAAADEERAANVWAQGH QVE $\square R K D L L I V R F D A Q L Y F A N D N V F R E R D D E W M A T K G$
$T$
 SF QLDTGTPGTLGGVCGELSFATAAAAWQAMARVAVDRSTB



| UniRef90 G5GM96 | $\text { PNT L VS Y A F } 9_{\square}^{90} \text { A A L G G V V F } \quad 100$ |
| :---: | :---: |
| UniRef90＿UPI0003773FFE | P $\ Q E V N N R F S F \square S F N T L F S F N N R Q E A \square E S F$ |
| UniRef90－E3QS99 | PRHHI WRLLR Q A G I D L L V V S D Q A |
| UniRef90－W1JRV4 | A HAQLRDLLRAEGL |
| UniRef90＿A0Z4Y3 | $\square S P E \\| S Q A L V N L G L G D \square Q T Q A T L K ~ D ~ G V S ~$ |
| UniRef90－A0A059MS04 | PPGSTA HVLSLVGL H |
| UniRef90＿S4Y276 | V R A EVAQALVALDI D |
| UniRef90－A1T6F2 | V N P I L L P V T TVSGLT K VT T |
| UniRef90＿A0A024LT80 | S GPATGRPLALDGUSNI I VYA T R A E A L L A L |
| UniRef90＿14BN | SKAVSRVLELCDPEGLIPPLAT |
| UniRef90－S8EBE6 | FSGRSLRNV DLLEMDGVELFATFNDALLE |
| UniRef90－C9R9B9 | 1 R P A V ALT L A Q M GLE ELNIA R D LE H A L |
| UniRef90＿E8TQ37 | L $\square$ S QPLD\｜AR R T GLY Y |
| UniRef90＿L8MKW1 |  |
| UniRef90－W7ZCJ3 | $V R P E I A Q T M V S L G G K D L K \ Y S S L R Q A F$ |
| UniRef90＿B4SD51 | $V H A Q P L F A L Q Q Y G L Y D D I I F G N I D D A L D H A R$ |
| UniRef90＿D5UFT3 | PNRVLR DLL DMVGL GAV |
| UniRef90－17DK02 | $\square S P$ T A Q T MVQL GV D R S TIIR S G L A D A L N R V |
| UniRef90＿W9AUI2 | S P QVLD L L R L L D A P P I T A SVPEALH H F |
| UniRef90－S3UG78 | L N K S L H SVFRLSGLDRIVNLYY I I E E F L E K |
| UniRef90＿K5BAA1 | $V R P E H M D L L T N V G V F E S L R H E S L E E A D E H A R$ |
| UniRef90＿G3HE32 | CSPQV V NDLTR NRFFENPALKE |
| UniRef90－B6JZB2 | VD P K V L N Q F E Q Q I |
| UniRef90＿UPI000477872F | I K GP I M D I LEQ TPVIM DL VF LS TQQAVNKL |
| UniRef90－M3EFN7 | I R P EI A Q TIV VTL GLNDFT T T S T L Q R GVEQ |
| UniRef90－UPI00036834E8 |  |
| UniRef90＿V4YHZ9 | VKGPVMDRLRTTELGQRLVFLSVVHEAFE |
| UniRef90－A8HZU5 | AGGQPLQLLTHLRMADLI |
| UniRef90＿R9C674 | LR P EVA Q T A I Q L G V D H P P I N NLA S ALGGK F |
| UniRef90＿UPI0003F086D3 | CKKEVRDFLSRCNFYEDVGYETVHDAV |
| UniRef90－T0JF01 | LS A D CKA IL K K A G |
| UniRef90－S7Q7A5 | LKR GP HEAFERA G $\square$ L K L LF Q D NVGA A $\square$ A R 】 |
| UniRef90－X8AGI7 | A R R P |
| UniRef90－B0SBW6 | F K S EVE DVLKLVGLFDK L P $\square \mathrm{F}$ |
| UniRef90＿G8SBI7 | AP D S P SRILL DLVGL |
| UniRef90－A1UL84 | VR P E H L N MI T SVVGVLD S LR H E S LD D A I A H A R |
| UniRef90＿W5IZX0 | $V P R E T L A M L E R S G L K P P L V F S S V R A G V N A Y R$ |
| UniRef90－A3I8U7 | V Q D D L K A L Q Q N G Y D |
| UniRef90＿UPI000478604C | V S P H HQK】FK MVE MSRFMP V VEERE |
| UniRef90＿UPI00037DCACF | $V K G P$ VMD RLQR SDFLR |
| UniRef90＿B8GA31 | $\square R P S V A Q A M I N \square G \square D Q \\| I T R S T L R E G \square E ~ A ~$ |
| UniRef90－U5W1V4 | A R P PV H RLL |
| UniRef90＿G9EJD3 | A NSRVEGKLRRAG\｜VNLIFYREFSEADA A V |
| UniRef90＿U1EQ15 | VS P A I A R T MVELLGVSDI RTTA T L R D A F E |
| UniRef90－W0J5C6 |  |
| UniRef90－H2Z9G1 | LQECNENMLKRMDVVKYKFYDDVNEAKD TI |
| UniRef90－M7TU37 |  |
| UniRef90＿B0VG01 | S S N SVY ELL F S M L K L N Q L F TVV |
| UniRef90＿UPI00035E7F85 | PEGAAHRVMRCGGLDALGPVATLADAL |
| UniRef90＿I2K912 | LS KDCKSLLK T A G P F C T Y E D D |
| UniRef90＿D0LYR1 | CSPAI |
| UniRef90＿UPI000466016A | D Q H I T A RVVD A A G D D A ELSFA TVD D AL |
| UniRef90＿UPI00047BD29A | $M Q P Q P L E M I R R T G L L D K I L F A S T G D A L N ~$ |
| UniRef90＿UPI0001745A8C | ANARNRQLLSSLGLDHILDVD N D |
| UniRef90＿G8UXM4 | A NP L V A A K R K M G I VQL I |
| UniRef90－M2QR47 | T NPLLMPVLTVSGLTELVDVE |
| UniRef90－UPI000258F909 | CS GPVY EMMRKCNLTEYSMFPTVADAVVHAR |
| UniRef90＿UPI00038066F9 | VKGPVMNRLRHTPL GHALID LS THEAFEHAR |
| UniRef90＿G8SD87 | S S ARI A E ELTEAGV |
| UniRef90－W7Z164 | M R P Q I A Q T SVHLGFFQDVHHYQDVERAMDHLN |
| UniRef90＿UPI000225AA1B | LR P EIV |
| UniRef90－K5BA18 |  |
| UniRef90＿Q9FY46 | P NK DV H LTI A R S GMVELV |
| UniRef90＿G2X250 | VDAETERNL R A VGLLGEVTMLP DLNS ALLES |
| UniRef90＿A0A022FXE4 | $V P \mathrm{DGV}$ V A ELERYRAGRQElVATVID A A V A L R |
| UniRef90＿L0D538 | ANHGTKDF EMMRMDAYWLFDSLEEA |
| UniRef90＿D5DEP0 | IR P E I A Q T MVSLG I E E I R S F S S L H Q A VQ Y |
| UniRef90－C5FH12 |  |
| UniRef90－UPI00047E9016 | V K GPV M D R K T T HFLD |
| UniRef90－UPI0002745D50 | CNALVQ GTLTRAGLDQLFV SVQDA |
| UniRef90＿UPI000477C39B | LPPRAHDMLA R A GV D N I HVFG DLD S GLE WV |
| UniRef90－J3P9W8 | $V$ S A LCHNLRALLGVDEATLLPDLINSALEA |
| UniRef90＿Q9SAY1 | PGPVV IE K L Y A SKFVEEIIVFLTVGD A V A |
| UniRef90－UPI000237B75F | $\square \mathrm{DPQIA}$ A T MVQLGGIDDLVTK A SLA D A L S Y |
| UniRef90＿UPI000395A2B9 | $M K L P V E A R L K R A G L L Q L R M Y R T D A E F L Q A M$ |
| UniRef90＿UPI000379DB20 | VK GPVRDALEK】GADNFFM SVQEAVD A |
| UniRef90＿Z5X982 | P G P AVARVL R V C |
| UniRef90－G1XAM6 | P NGDVNA ALE GVG |
| UniRef90－K9NDW6 | MPEDMRE I A Q V S L T ELLAHP |
| UniRef90－V4TCQ4 | L N HEVLLTLLSKS GVVDLI |
| UniRef90－14WNH9 | $V P$ A G M S L A Q VCEVDRLF |
| UniRef90＿W3AH51 | ISPVIA Q TAVELGGFT DI EVVYNSLA Q A L K E |
| UniRef90－A0A023 | T I GPVRDF LKRSGFT D RLYY LTI S S A A D |
| UniRef90＿UPI000380C22C |  |
| UniRef90＿A5UWK6 | 1 SPT TA Q TMT T L G M D N T T A R S PQD L L A Q |
| UniRef90＿A9GD92 |  |
| UniRef90－F8X290 |  |
| UniRef90－F2R8N8 | PP GP I A R L L D $\quad$ T GTRQAFDVALD D A A |
| UniRef90＿UPI00036C05A7 |  |
| UniRef90＿R5CYC7 | V N S NVRAVL ERS GFNELI |
| UniRef90－N6Y2U0 | LKKQV ${ }^{\text {L }}$ A MERDGL |
| UniRef90－E1IIB4 |  |

UniRef90_F9RKM5 UniRef90-UPIOOO47D7E92 UniRef90-UPIOOO3343B86 UniRef90-R5HC44 UniRef90 UPI000368AD16 UniRef90-A8LDV6 UniRet90-H8ISV7 UniRef90_D5WGM5 UniRef90-LOSZJ4 UniRef90-R7N8J5 UniRef90-A0A017TA57 UniRef90-Q2BR57 UniRef90-FOUPI3 UniReftol-K5W397 UniRef90-UPI00037A033A UniRef90-A8Q5R2
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UniRef90 K0R363
UniRef90-s31JD8 UniRet90-G2SYEO UniRef90-Q55FK8 UniRef90_UPIO002C47484 UniRef90 162 T71 UniRef90-AOAO24UKW8 UniRef90-F7WMHO UniRef90 A3UE17 UniRef90 UPIOOO3B3B9E1 UniRef90-O89W82 UniRef90-E3IRU7 UniRef90-B8GLV1 UniRef90-UP100040F11DC UniRef90_E7AZ89
 KEILIYSUNGPMFFGAAQKALKTLLNVNDEKN
 RGPVRI\RLTGTIDMAGAATLRETLLAQVARE ATAALDGDLDMATEAPARAALDAVLTAVA
 HTMQLSELDGDMTIRRAGELKPLLLPALDDSEA
 VTDTSTLALRVDESLYFANTRFVEEFILKHCADNP K VEF $\square^{\circ}$
 DAQVLALQGPLTHASVGEWRERGRELARKG GDSHVLALVGEI DLHTAPDYRDALLAAAVPRGA
 ENWTVVYMSGPLEFMSAEKLKNKLAQLNHKDG ME $\square R R$ RGGDUKLKLRGHLDSVSAEDFYSYLKSKWEEGE


LHVAGRPGFDNARALADAGTAWLARHS TपDTtCRGDGTLVLRAVGEDDLSNDAFSQALTDAKAAAS RVDGP DTVTADEFDRAVRTA GSAG $\square D \square K R \nabla P K H T V V Y E L E G S L E F G A T T E F R Q Q G N F T H E E G$ $\square D L V R E D A L Y$ RPNMS YYANAEYVYEYULQKAQERP EGDEDVLRVGGSIFFGASHYLQTR Q DEKFGKQVYYQHLEGPMFFGRFETLKVKICEYAQEHH TTEPGLIAVRVDESLYFANSDALLDRVEELVAAKP HDGVFVIKMLGDVRDTDCDSFDNFI DDMFARSD EHVRCYAlRGPLFFGAAEKALDVLRKF DPG EGVVAVPLIGTLDSERTQVVMESLLQRVVETG
 QVETDAELALLRVDESMYFANSRYLEDTVMALAARPG LNLQSYLFFGSANRLYRHVKARLQRSE
TKDNTCVLPLIGSLTNDRFQSMSEYVSEYMDNGK TiTK SIGLLP 1
 TPEVSTVHVEGNMFFGASDVLQNQiRR\|AAEPD


GSTLLVSTQTELHDRLASELQEE\|LASTEKNK DVALPEHATYVVHLHGNLSFANAMQVHTVVDTEWQTRP QVE TTPSLLVVRIRGELDAANVEQLSEHVRRFSLGTN

DDVIVCSI SKS
SFENLQUYRDVFSNGVSDG
FFGSANRLYQHVKKLLERPE
RES G
GGSGILILSGEL



|  | 90100110 |
| :---: | :---: |
| UniRef90＿F9RKM5 | V P K Q L S T L L A L S N｜V｜EK Y |
| UniRef90－UPI00047D7E92 | L N N RVFKKI ERAKI DYVTS F S S IEA A $\square$ V Y A K |
| UniRef90＿UPI0003343B86 | CN A SVLIA T L T R A GLL S S V T F V S V Q D A |
| UniRef90－R5HC44 | V N E Q P WRVMEKN G F |
| UniRef90－UPI000368AD16 | A G S APARILTL L S GF G D A |
| UniRef90－A8LDV6 | A GP L L R R MV ELL T S P GVPLYPDVA EA WNAL |
| UniRef90－H8ISV7 | SNRATREAI TRS G I A HFMPVYS SQKA |
| UniRef90＿D5WGM5 | A HADVRDLL R A EGLE |
| UniRef90－L0SZJ4 | CSAPVT DALDLLGLRD |
| UniRef90＿R7N8J5 | VNEQPFKVMQKSGFYEKVGEENTD DATIKR |
| UniRef90－A0A017TA57 | $V$ S GAVARTLVALDVDEVPAFASLEDGLRE |
| UniRef90＿Q2BR57 | $V \mathrm{~K}$ GPVMDQLNS TRFVE QMIVFT TD Q A MREL |
| UniRef90－F0UPI3 | PGTE F R L M E K G IV DAVFVRSVDEA L Q |
| UniRef90＿K5W397 | LK R GPRKKFEQA GFVELL GEEDVSSAMAR】 |
| UniRef90－H0PX96 | MPGGLCS LAA LYGVDELI |
| UniRef90＿UPI00037A033A | P G S L A WRVLEI C |
| UniRef90－A8Q5R2 | LS GDVA S AL Q SVDDLK QVDVFA S L E A L E |
| UniRef90＿S0S5T2 | LQPEVEKQL Q L WKKEGTEQHQTVA H ALLSAL |
| UniRef90－C6CMG1 | AS ERLRTM I QLYNLNE I |
| UniRef90－M3HQ46 | FNEECKTLLS F L GF GRI AFFEDLQRAEEYL |
| UniRef90－D6XXH5 |  |
| UniRef90－B0TUW7 |  |
| UniRef90＿UPI00046E99B8 | LPERLQELV HVSGLAPV |
| UniRef90－W7J333 | PP Q A M R I L EVLG |
| UniRef90－LOJ1F4 | V H PVLI R SLTI S GLA ELLVT $\square$ E S |
| UniRef90＿G8SK55 | PTGSPADVLSLVSLLT HETVD |
| UniRef90＿F9VA11 | VNEQP Y HVMEKAGF |
| UniRef90＿UPI00031AF733 | L P E D M R ELARVS GLLDVLS LT S E E E A V |
| UniRef90－W0DDH6 | IGGCDVFPI L D R L G F D K |
| UniRef90－D1BTU0 | PPPVVAEVLHLVGCDSVIREERTPAA |
| UniRef90－S6S252 | A R P QV |
| UniRef90＿14X763 |  |
| UniRef90－A6Q1R5 | LQE QPK DLLTTKVK L DPSLITYENFGEAVKAV |
| UniRef90＿UPI0002626D42 | PTRQTARPLA IT GL DRLLPVYTTRDEAL |
| UniRef90－KOIAC9 | VK GPVLD R L Q G E L G Q RLI F L S T A A F Y A R |
| UniRef90＿UPI00037B3AEF | TNPSI NRILLETMGFADIIFTIVDE |
| UniRef90＿I4JZM6 | TAPRVRLKL R R A G $\$ L H R L A Y V Q T L E Q A  \hline UniRef90－K9ZX51 & IR P Q I A Q T V V L G I D GVIT K S S L A D A $\square$ Q |
| UniRef90－G0NPP7 | L P E DV L S V L R |
| UniRef90＿Q11VS4 | I R P E I A Q TV V H L G $\square$ D T $\square$ I T K A T L A S A L K |
| UniRef90－M1V7L7 | L S R D S A RLL R |
| UniRef90－X1PI99 |  |
| UniRef90－UPI0002895042 |  |
| UniRef90＿S4XZE5 | I H P Al A Q T V V L G V S I E T R S T L R Q G L E |
| UniRef90＿A5E840 | LTP A I ERTLLRAGEFK DVV DTP ELLDHALLER |
| UniRef90－K2G2U3 |  |
| UniRef90－E3ZND1 | I SPK FAMTNLASLTTYYSTIKEALQY |
| UniRef90－M7NEU6 | $\square R P E \square A Q T A V H L L G S N I P T Y S T L E N A L S ~$ |
| UniRef90－G7SS34 | MQF QPLRMMVKSNIQKINFASDLSSAFNK】R |
| UniRef90＿D9SHI3 | HS K A VTEVLDLY N M A G Y F |
| UniRef90－R7L3P2 | V R P DVMRVLK S S GVY D |
| UniRef90－UPI0003A96F93 | V N A MVA ALL R M M GV D Q Vav V |
| UniRef90＿UPI000333CEC9 | CTASSLDKAMQY CGL E K P $\square$ F F E S VA S AVS T $\square$ |
| UniRef90－A8FDP4 | $\square R$ P EI A Q T A VQ $\square$ GL NEFRTA A S L A H A L E R M |
| UniRef90＿V5HXL2 | PKSDVF QNFERSGIVDYHFVPSVIEAL |
| UniRef90－A3D8S0 | A S P Q L K L I D LY DL HAFFTEE |
| UniRef90－A0A024LXM9 | PSRAVSRVL RIC D PARALPVVS E |
| UniRef90＿B5F9P2 | VP D Q L $\quad$ TLI Q L S NVESLI |
| UniRef90＿A3XBP6 | $V K \mathrm{GPV}$ M D R L K R H F L Q |
| UniRef90－Q3SFN7 | A NPRVAHKLREFGL |
| UniRef90－UPI00047324C1 |  |
| UniRef90＿F2G974 | IS DECRSLLRKA DKFVEINVVED |
| UniRef90＿G0NGY4 |  |
| UniRef90－C7RRH6 | R Q $\square$ E F E R WL E $\square$ T G |
| UniRef90－S9QGT2 | AS A ETTLLLD |
| UniRef90＿UPI00040DF9CA | L K G P VR DL L L R A G |
| UniRef90－L1M2Q0 | MP H G M R EI AEVY G LD D $\square$ |
| UniRef90－A6Q3R5 | LS P E CKQLLTEAG |
| UniRef90－UPI00038020ED | A S P |
| UniRef90＿Q2NWJ1 | VT D R L R T LIA LYY K Q A I P C T T T A D A |
| UniRef90＿U7GLA6 | V K G P V M D R L K R T D F L K HL |
| UniRef90－UPI000314F8C2 | I S Q S R HQLQL |
| UniRef90＿A0L9P6 | LSPDLLKRMI K I A A F D S F F E |
| UniRef90＿D0IWX6 | L K LPAE QRL ERAGL |
| UniRef90＿UPI0003B31815 | IS PA I A E ILK M N |
| UniRef90＿A4AB86 | MSPRLRRRQL T A A R L M L L L E T D |
| UniRef90－B9XQZ5 | LK P E Y Q K A Q |
| UniRef90－K0R363 | P NPRVMQKLVQS GL |
| UniRef90－S3IJD8 | ASENLRTLAQLYNLDKLLPH |
| UniRef90＿G2SYE0 | VNE QPMSVMVKD GFTEYVFHANDVEALD |
| UniRef90－Q55FK8 |  |
| UniRef90＿UPI0002C47484 |  |
| UniRef90＿I6ZT71 | I S P AVA \( |
| ) TLVVELGME GVK TALDLESALE |  |
| UniRef90＿A0A024UKW8 | V P S S V E A Q F A TL S L |
| UniRef90－F7WMH0 | SPAVVE QL |
| UniRef90－A3UEI7 | VK G PVMDKLK H T H F |
| UniRef90－UPI0003B3B9E1 |  |
| UniRef90＿Q89W82 | LPA A A E KVLRSSS F D GVTVIP ELD H A L E |
| UniRef90＿E3IRU7 | V VP A V S E T A H R A GLD |
| UniRef90＿B8GLV1 | L QPRMIT K LRRRAGI R K L M Y S S NLESAV |
| UniRef90－UPI00040F11DC | I R P EVA Q T I VNLGLE NVMIK A NLQQAFTE】Q |
| UniRef90＿E7AZ89 |  |

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UniRef90-STZSX2
UniRef90-A0A011PT84
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UniRef90_UPIO0037E5EE7

1301020
 $S \square P V T A L G P Q T \| F L P L V G Y G D A E R S A Q L E Q T V D N A D Q Q R R$ MEDKTSRQKILARIVVEGALYFANCEYGVRVVEREVRKRH $V S F D G E L L T R Q T V A S A W Q R R Q W L P Q R G$ $\square K H S H E K T V L A Y V S G P M F F V N Q G K C K K K L I E E E C A D$ DQSPRVLSVRVDESLYFPNARFLEDRVAELIGRPQ MDKANGRVLVFHLSGPMDFGVARAISQE QNAMADHD TRKKNAAKRIAI GEDMTDYNAAVQKQALIDALAAGQ $M R R V Q \square P E N V Q I F E L N G A F F F G A A G K F E D I F M T S L D D K$

DERIALFRIDGSLFFGAAERD LDRINDHEG
 VA GTIDATTCEAFGAHLDD\VTARR
EHVATYAI RGPLFFGAAEKALGALRRFNPE
SREANTLRLEGELDRDTLLSLWEQREALVNAVE
TNPD DA L R V DESLYFANARYLEDRVAALVHQSE
DLKLVPKNTLVYEVFGALFFGAAKDLITVMNIPHEEG $\square H E V G R Q \prod R V V K L Q G F L V F G T D S N V E E A V R K L L D A S P$ LK QGPLLDATVQSAMTASDTERLWKELASKMKKNR

SEGVLALPLIGAFTGERSQAMVTLLDNQDEQRR
GSALILLYKKDLTHEDCQPDKEHFETLIAVQD VQEDSLLLTVSGGLS $\square$ F QAAERKPELLHALTMVQ


S VP $\|$ DP DNGDTH\|IPLIGA TI YEVESLHKSLLEWCEKSD R
D L L R EHIVAYRIGDGP

LVLE GP F F F A A AHRF DA LLAELADVVE
$R G V V V M P L V G T$ V
 $\square N \square N H T D T G R T L V G F S G R M D A D G \mid A K G W E K A C D G I G T H A$


$T K D \square G \square$ | V | P |
| :--- | :--- |
| P | $\mathrm{R} G \mathrm{R}$ |

NRYRAQIMFEKVLQQCHNNS
$S D R \square A F L R D R G S L D D K T V F S F K K S V F N D C P$ $\square R E A S K Q T T I L R L Q G F L F F G T I A H V E E S I R T L V S A S P$ LLRMEGAIYFGAAAHVADQLHALRAADA
EGVLAVPMDGTLDSARTQLVMEALLQRIVDTG $\square Q K V G S Q T Y V M K L Q G F L E F G T D S T V E E E V R K L L D H N P$
 KEDPEGVEVYEINGPFFFGVADMLLINTGEHLAAAGT FDLPR RLAPDVLAVRIDAALNFLTGAALERVVTRCSTDHD

TTEPSVVLNLRVDESLEFAANASVLENLIVQKVYAND MI L R L D G S FPMAVEEEGURLLRFDASLNFSNSDFFESRVLHSLLSPS
 LEKEGQQTA LELQQS FFGTKDQLYLALEQEVGGT

TREGDTLALAGELDDQDVLNPLWDARVDAMKDVTT
 $L D E V G T Q T Q 1 / 1$ K QQGFLFFGTDNSVEDLI RRALDQNP


【TVPH L L S DR DDEALTYLNARWLEEVLEEVADRPA GTWTVTLFGELDLLQAGELSATDTEAAGHDD EHIVAYRIDGPLFFAAGHRF DLELDEVAD


 DGVI AVPLVGTLDSARTQVVMEKLLQALIDHN
D $\square$ HQRDA VVFRVDGPVFFGVANELDDT\R WVGPT EDHTLLYRFSGNLIFANVSTFLQDUENADNDDT EDHQTHIRVRGNVTALSGPVLNRAFDEACSTNG VLFRWDAPLFFANAEQFQAC LQQVDESP


| UniRef90_UPI00040D8CB1 | $L \mid P \text { A R L L R E\|I I } \left\lvert\, \begin{aligned} & 90 \\ & D R E G\|L\| G S\|V\| F ~ T \end{aligned}\right.$ |
| :---: | :---: |
| UniRef90_F7VF28 | ADERAARLLKALGHDTLL |
| UniRef90-B8G3H5 | V R P |
| UniRef90-D0P0R2 |  |
| UniRef90_S3V0A0 | WNEECKLVLGLLF G L T S LPI F P TERAALSS L K |
| UniRef90_K2KF45 | A NQQLREIVAL S GVNDLL |
| UniRef90-R7G606 | V S R AVLERMERYELFDAF |
| UniRef90-14CV03 |  |
| UniRef90_UPI0003002760 | ARGKTLSRLEKLGALLQ V V P Y D T R T E AL Q S |
| UniRef90_N6XZB7 | HSEAVREVID |
| UniRef90_D1R7P4 | VMPNCKKEM QVS G L L N K L L P S LP E A I Q A T K |
| UniRef90_UPI0003B6691F | $\square \mathrm{I} P \mathrm{E}$ HLHVLE RLLGV I G S L R H P NLEPA I A H A R |
| UniRef90_S9TY02 | FS P EAA Q TL |
| UniRef90_S6AFC7 | VK D P VK E K L Q R L V VLD H I G H P TVGG A VD A |
| UniRef90_UPI000310973D | E Y SLHRFLTLLNMDTYVPFDNADSALTHI |
| UniRef90-W9T769 | S N A RVRLKL R R A G I H R |
| UniRef90-D4GI73 | IGGDKLQSLI T L Y NLQQI I V S A D |
| UniRef90-W9V1A9 | I K GPVMM RLN NVN F F D Hil |
| UniRef90-I0R8V6 | V NEQPMKVMEKAGF |
| UniRef90_UPI0004789F17 | P Q P P VELLTMRMLLEVDEL |
| UniRef90-M7XFC7 | CP |
| UniRef90_D6ST61 | LR P E L R |
| UniRef90-B2HK91 | L Q P V A F S MVQLLG LT F D D M K T A L D |
| UniRef90-H2FVR4 |  |
| UniRef90-UPI000364703A | $L$ Q F Q PLR TLA R A GV GRLR F Y P S LK E |
| UniRef90-W1RS96 | Y R R A S A LID RFAL H D |
| UniRef90_A5UQD7 |  |
| UniRef90_K0YM76 | ANEQPMKTMRRAGFVDLVFRANDDDAIAFAR |
| UniRef90-UPI0003727439 | P PRHFLELLQKKQLLRFFLFRNEDDMLS SL |
| UniRef90_R0EJV7 | Y S P AVVAAL DLLQL HER F |
| UniRef90-H8HUN1 | GHRAGRAAVTRTGVARFMVYPTEKA A S K A I |
| UniRef90_UPI00037998BF |  |
| UniRef90-E4U2Q0 | LS A EVQNSMR】A G C D T L F |
| UniRef90-UPI0002884F91 | I R A E I VK |
| UniRef90_UPI000424C080 | PS A PVRRALD A T G L G R L V VF P DVA S A |
| UniRef90_G0JMK6 | LS G D CRDLLE |
| UniRef90-K8XDC7 |  |
| UniRef90_UPI00035D5D38 | 1 P D A L R P L E L Y L E N I V T |
| UniRef90_A0A017T5Z0 | I K P QFA QVLVQLGI D |
| UniRef90_18J6I1 | $1 \mathrm{RPEEIA} Q \mathrm{~T}$ V V SLGI D |
| UniRef90_W7X6Y9 | $L K L P V E A L L R K A G L L R L T Y R T E A E A L R S ~$ |
| UniRef90_A0A022MDG0 | APHGI R RVLEVTGVRRVPVYD D P E Q A L |
| UniRef90-M3C9E8 |  |
| UniRef90-S0G4G8 | L D P A A T L V E |
| UniRef90-19A8K9 | $V \mathrm{P}$ S ALGRMFA A D R L G R L L R F E E S E |
| UniRef90_A3PJT3 | L S E SHRHLLETV |
| UniRef90-W3AB45 | 1 S PVI A Q T |
| UniRef90-UPI000479906C | $V \mathrm{P}$ D HL R P V L A Q A GLS QLL |
| UniRef90-H2CIF3 | A GEELQLLL R |
| UniRef90_UPI0004449E9D | M GP SVK T ALE NVGLD GVELFEKANDALE |
| UniRef90-B1XXU8 | PRPQVLAMWRSSGFLQRLVYP DKRSALAD |
| UniRef90_UPI00047D9D2E | $\square \mathrm{I}$ P Q I A Q I V H L G D D |
| UniRef90_UPI0003F4A531 | A A P NVGT AL R NVGLTRVEVFGGLND A L E |
| UniRef90-Q1GL51 | VK GPVMDRLQRSDFIDEMIF L S Q M E W N L |
| UniRef90-Q0TQC3 | L Q E QPK K VMRLM GFID T L HFATNDEALEK A N |
| UniRef90-N6XJN1 | $L P A G L A S L S S L C Y D \triangle D A L L P V E$ |
| UniRef90_V2QDT7 | $V$ P A P Y A T L K |
| UniRef90-A6SU31 |  |
| UniRef90_W2UHF6 | $V K G P V M D A L R Y S G L A E Q L I ~ Y ~ L T ~ Q F D A F Q H L R ~$ |
| UniRef90_UPI00036AD9A7 | AGTEVTAMI RSA HLA E E M I Q P DLT T A LQ R |
| UniRef90_C4XQQ8 | LK GEVMELLTLDARI GAENVFRDKESAI A |
| UniRef90_UPI00037BE1F0 | P R A DVVA ERIT R A GVT R HVVY A DLE A A L A S L |
| UniRef90_U6GGU6 | WK GPMRDFLQKAAFYDVL |
| UniRef90-S7ZSX2 | L N GEVGKSLQNVGLFEVPIFEDLNA ALE |
| UniRef90_S8AIW0 |  |
| UniRef90_A0A011PT84 |  |
| UniRef90_G7LQW3 | AGDRLK T L DA L Y NLNE I I PVS |
| UniRef90-A8AQ82 | V N E K V Y T L A K L Y NL |
| UniRef90-Q2SIH8 | TNEDI TRLLVLS MGFDQLF 1 |
| UniRef90-Q16NA2 | WQR S V Q |
| UniRef90-E6ZME2 | L N P AL R SVLWA D R S ENLEVFANLNEALE |
| UniRef90-H0R3Z0 |  |
| UniRef90_A9GTU1 | $1 \mathrm{R} P \mathrm{DV}$ A Q T L |
| UniRef90-B2J7C1 | I R P Q I A Q TIVY L G LT D $\quad$ T TK A T L A D A F |
| UniRef90-D0NTP7 |  |
| UniRef90_K9TP01 | S P GQPRRRLGK L N L D R F HL DE NRQEALQR |
| UniRef90_UPI0003F0FF97 | CTAS LIK A M Y Y C GLD K P $\square$ F F E S V S A A I G N $\square$ |
| UniRef90_A3WDH9 | VK G PVMDRLKRSHF |
| UniRef90_G8S6D8 |  |
| UniRef90-M3ELP1 | $\square R P G Q R Q V L D S V G T L E V L E Y A T T P E A \square Q G A R$ |
| UniRef90_W9CFT5 | 1 D P E |
| UniRef90-K2G9Y1 | V T P A TA M A L R NLG TK T V |
| UniRef90-UPI0002F4C231 | I K P ELA I K TEQLNLDSLQT F L NVK D A I K Q L K |
| UniRef90_V5PL76 | LP T G L A SLALLVYGVD HLL |
| UniRef90-S3YYU2 | V K S PV M ERLCKSQL |
| UniRef90_D6M4V7 |  |
| UniRef90_G6CI83 | ANGPVLEMI ETS S R L L L D T F P TVVH D AV |
| UniRef90-15BH09 | VQA QPMAMLK RVSLGRVIFSDDFPDALRLDAR |
| UniRef90_R7NDN2 | HVD HVNDQL R QL G |
| UniRef90_UPI00035CF96E | LS E NFRAVFEMMG $\square$ F R L |
| UniRef90_A0A024HFB1 | MKGPVKELFERMGESAF HPTVGAAVD A |

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