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$S \square Q K$
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SCD
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\(S P K \square G \square L N N \square P F \square P\)


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\(S\) & \(R\) & \(R\) & \(A\) & \(Y\) & \(L\) & \(L\) \\
\(N\) & \(V\) & \(R\) & \(R\) & \(A\) & \(R\) & \(V\) \\
\hline & \(F\) & \(E\)
\end{tabular} \begin{tabular}{l|l|llll}
\(N\) \\
\(S\) & \(V\) & \(R\) & \(A\) & \(R\) & \(V\) \\
\(S\) & \(R\) & \(D\) & \(L\) & \(V\) & \(F\)
\end{tabular} D S K S L Y N
S
S

TVVTR K T L R I N R A K V F K \(V\) R R T \(\mathrm{H} \mid \mathrm{I}\) F \begin{tabular}{l|llll}
\(T\) & \(V\) & \(R\) & \(Q\) & \(T\) \\
\(K\) & \(L\) & \(F\) \\
K & \(R\) & \(N\) & \(H\) & \(I\) \\
\(F\)
\end{tabular}
\(+\) sir \({ }^{\circ}\) 을 งveroog \begin{tabular}{l|l|llll|ll}
\(S\) & \(V\) & \(R\) & \(R\) & \(D\) & \(Q\) & \(V\) & \(F\) \\
\(K\) & \(V\) & \(R\) & \(R\) & \(N\) & \(H\) & \(I\) & \(F\) \\
\(E\)
\end{tabular} \(T V V S R C N L E\) \begin{tabular}{l|l|llll|l|l}
\(K\) & \(V\) & \(R\) & \(R\) & \(E\) & \(H\) & \(I\) & \(F\) \\
\(T\) & \(I\) & \(S\) & \(R\) & \(S\) & \(R\) & \(I\) & \(F\) \\
& \(F\) & &
\end{tabular} \(S V \operatorname{S} R R_{1} T\) \begin{tabular}{llllll|l}
\(P\) & \(V\) & \(R\) & \(R\) & \(D\) & \(R\) & \(V\) \\
\(N\) & \(V\) & \(R\) & \(R\) & \(P\) & \(H\) & \(V\)
\end{tabular} \(\begin{array}{llll}N & V & R & R \\ H & H & V & F \\ H & S & R & D \\ H & F & E\end{array}\) \(\begin{array}{lll}H & C & S \\ R & D & T \\ S & F & E \\ R & R & Y \\ F & E\end{array}\) \(S V \operatorname{SRE} Q V \mathrm{~F}\) \begin{tabular}{l|lllllll}
\(H\) & \(R\) & \(R\) & \(D\) & \(R\) & \(L\) & \(L\) & \(E\) \\
\(H\) & \(I\) & \(R\) & \(R\) & \(E\) & \(H\) & \(L\) & \(L\) \\
\(E\)
\end{tabular} \begin{tabular}{l|llll|l|l}
\(H\) & \(I\) & \(R\) & \(E\) & \(H\) & \(L\) & \(E\) \\
\(K\) & \(I\) & \(R\) & \(R\) & \(D\) & \(H\) & \(I\) \\
\(F\) & \(F\) & \(E\)
\end{tabular} \begin{tabular}{l|llllllll}
\(K\) & \(V\) & \(R\) & \(R\) & \(N\) & \(H\) & \(F\) & \(F\) \\
\(A\) & \(V\) & \(S\) & \(R\) & \(A\) & \(K\) & \(V\) & \(F\)
\end{tabular} \begin{tabular}{llllll|l}
\(A\) & \(V\) & \(S\) & \(R\) & \(A\) & \(K\) & \(V\) \\
\(K\) & \(F\) & \(E\) \\
\(R\) & \(R\) & \(D\) & \(H\) & \(F\) & \(E\)
\end{tabular} \(\begin{array}{llllll}K & R & R & D & H & F \\ M & R & R & D & H & V \\ L & E\end{array}\) \(\begin{array}{lllllllll}S & V & R & R & D & Q & V & F & H \\ R & C & R & R & K & D & I & F & M\end{array}\) \begin{tabular}{l}
\(\bar{V}\) \\
\hline\(K\) \\
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T \\
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\section*{\(\frac{L}{N}\)}

S V V R R Q Y S R S R K V SRNNLL
 E V S R TEIIF
 \begin{tabular}{l|lllllllll}
\(P\) & \(V\) & \(R\) & \(R\) & \(S\) & \(H\) & \(L\) & \(E\) & \(D\) \\
\(K\) & \(V\) & \(D\) & \(R\) & \(R\) & \(T\) & \(L\) & \(N\) & \(D\)
\end{tabular}
 LED S Y RI L S GVCVD RLR S K L WVEFD GEEVL D Y G



 SVVRRD HI A E D GF DRLGGDA DLKAPIVIVF DDQAGI DGG RLRRGMVFEDSFRAVMRLKKEDLRKRLVVRFEGEDGLDYG D I R R D NVA E D G F N QLLN I P G D Q L K G K V F I R F F D Q A GV D G G LV H R E T L F F D D Y R H I M M E K S P P A E L AI S R N TI F E D S Y NAI I S L K P Y DL R K RL Y I MFKGED GL D Y G VI R R D H I A Q D GF D R L A D A EVVSREEI FEESYRAIMMKMRSKELKKRLMVKFRGEE GLDYG EVVTRSDVFEASYNQIMKMRPKDLKKRLTVKFKGEEGLDYG KVTRKNVGEESYRYVMNIKDEHLKTRLWIEFDGETGLDYG


 \(T V N R G S V A Q D G F D R L G E V D D H A P V A D T F V D Q F G N E E I D G G G\) EVVRRDQLFNDSFCQMK LWTKQE LMNRLSI RF DGEE GVVAS

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 \begin{tabular}{l|llll|ll}
\(E\) & \(V\) & \(S\) & \(R\) & \(D\) & \(N\) & \(V\) \\
\(K\) & \(F\) & \(E\) \\
\(V\) & \(R\) & \(G\) & \(M\) & \(A\) & \(A\) & \(E\)
\end{tabular}


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\section*{Q}




SYFKFVGR \({ }^{130}\) KA VY DNR 140
150
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\section*{D}

N
S
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 NWYR F I G R V L G K A L Y E GILVVDVAFA GF F LAAK WL GK Q S Y L D NWYRFI GRILGKALYDGILVDVAFAGFFLAKWLGKQSFLD ENFKFVGGFVAKAIFDGQTLEAYFSRPFLKHDLHVQPTWE
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D Y K RKYE FFRRKMKKQND DPN K FEM
 \(T G K S A L D N G P Q I D F K A K V Q Y F R F W C Q Q L\)
 QDP Y L R V

S S RF S E LE QVNALP F QQKHA WFVQHTAAMEVPWEYGH LLL DFEAKLRNFYRKLETKGYGQGPGKLKL


A LPFKAKVRWF DKE \(\quad\) GKVAVP A NP LRL


LE TAT K TM S MF Y D N R VNQ DRERRRS P DE QLPS P Y LIL \(\square L R E \square P\) F \(\square P\) F E R R V R L F QL L L E S S R D S ER Y P D V S PHHNQFVIL


LE E LT MLP F A Q K \(\square\) K WF S TE E DH RLWF P WE S G H V V D I
 \(\square S M G S K M K \square V E S D A K Q Q M E T K W R E A F H Q K A S N P Y L V L\) NLPEK D G
K K K D E F P P \(\begin{array}{llllll}H & P & T & F & T & L \\ S & P & I & F & I & I \\ N & P & C & L & I & L\end{array}\) N
F
\(\square L\) N NCPF LPFHFR \(\square H L L H R L V E S D K R K Y G\)
I D F EN K K L Y F H L K I I R K
VLT RIPQLP FAQRVQVFHKLLAADKRQAQDEGHRR FDLESKI KLMKCDSFVKLMSEVMAFPEKMSSPPYLIL

A LLQE T P F L P
A L F L L K NVP H DP HKERVLLFRDRVRDDKAS LGVQTRVI
 CP F L S F K R R L K L F E R IV T T N R VD DQK P G I M V

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 Q NELLRKSELDELPVPPL
\(L I D L S K E D F P T K F A H F W A Y T S S G I V P A E L E V L K L\)




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 TVVHSRIVEDGYRQLALLPPQALKGVIRVRFINEQGIDQD



 RI RRAHI YEDAFKALNHLGHGGLRGRVQVTFVEEAGIDGG KVRRSHLVEDTLRQLRQVEDFDLRKQLSVGFI NE DRPEAG SVVRDYMME ESMDHMYCIQPKNLRSFMRINFLDESGVDAG QIRRSHVVEDGYDKLNNLGHNLKRTVQISFVNQEGIDGG
TVHRNRLVEDGYQQDANLNSSQLRMKDRVQFVNEMGDDDD KVARDKILESSMKATKSLSTSDWCKNFEIDFLGEQGLDWG KVSRGRVLEDGLMHLNNLGRNMRQRIVVNYTKETGVDVG
 CVMRENLVSSA \(\square \mathrm{DQLGHLDKSELKKPLKVIFVGEEA} \mathrm{\square DAG}\)
TVSRHNLLEEATQATKHLSSSDWYKKFT\|DFQGEEGLDWG TVRRAHLVSDSLNEMAMKQ HDLKKKLKVTFAGEPGLDMG RVRRRHLVVEALRQLSQAEDTDLHKALMVEFADKEDRSIGY TI SREHVLEDAYESFNQI GERIKSKLSVTFVNEAGIDGG VI SREHILEDAMKSFNGI GDKFKSKLSVTFVNEEGIDGG KINRDSILEDAYNA YHRQGANFKNRLQVEFFNQAGIDGG NVRRDHVLGDA DTA \(\square R S H D T G D L L K P L R V Q F E G E E G F D E G\) RVNREKILESSMKATKGFSVSDWCGNFEVTFQGEQGDDWG QVKRSNLVEDTLRKLSLVEDSVLKKQLLVQFEGERGLDAG QVLEWMRKEMKLPI SITFVDQAGI DGG F LRREHVVEESMEYFCCLDDNDTRAVVRIDFAAETGVDAG TVARNRLVEDGYRQLSMLSTRALKSTIRVKFVNQQGI DQD KVRRDNUVNDALEGVAMSSPKDLKKQLVVEFVGEQGIDEG
\begin{tabular}{|c|c|}
\hline & \\
\hline UniRe & \\
\hline UniRef90－M7XSB0 & GVIKKEFFQLIVKEQI \\
\hline UniRef90－R7SEJ1 & GVFKEFFTSLCKEVFDTDRGLWLANKKNELYPNPDSYHSL \\
\hline UniRef90 G4VMLO & GVQREWFFLLSREMFNPYYGLFEYSAADNYTLQ \\
\hline UniRef90－UPIO003290FCB & GVAREWFFLISKEMFNPYYG \\
\hline UniRef90－TOR5L2 & GLEREWFAMVIEKLIEDET\GLFMCAHVESLAYVINP \\
\hline iRef90－Q6P289 & GVAREWFFLLSHEVLNPMYCLFEYAGKDNYCLQ \\
\hline  & GVAREWFHLVSEGLENPDFALFQYSSTNQMCMQUSNEQHL \\
\hline  &  \\
\hline UniRef90 K4A557 & GLSKEFLTDDLSKTAFSPEYGLFSQTSASDTSLITPSNDNGI \\
\hline UniRet90－C1MZR7 & WYLLAREMFNPGNALFEDSPSGD \\
\hline UniRef90－K3WLC0 & VREWFTLMTKEVFDDTTGLFYTSGNGDA品MTNPSVDHL \\
\hline UniRef90＿F6WD & FFLVSRELFNPYYGLFEYSANDTYTVQISPMNHH \\
\hline UniRef90－E9BYQ0 & GVVKEF何TEVQQGFAPDTGLFLATSDNSLYPNPSAVDAR \\
\hline UniRe90＿Jod781 & \\
\hline Ref90＿A0A023FIK5 & \\
\hline UniRef90 V9F & WVLLLCEQLFDESYGLF QR \\
\hline UniRef90－A0A0 & NRGFFKLTKDNMLYPNPTVHDFP \\
\hline UniRef90 H2KS & D \\
\hline E4YP6 & \\
\hline UniRet90－21630 & \\
\hline UniRef90＿UP1000206： & FFQL VEEITNPDYGMFTTQEDTQMT WF NTSFES \\
\hline UniRef90＿B8LKQ9 & F \\
\hline UniRet90＿S4R7 & FLINELLKTGFPHQGFFRTTNQGL \\
\hline &  \\
\hline UniRe990－A0A024 & GY \\
\hline UniRef90 UP100001D55BC4 & GVSSEFFHCMFEEMTKPEYGMFMYPEMSCMWFPAKPKLIK \\
\hline UniRef90－W4XX00 & MF \\
\hline UniRef90＿U5H571 & LFKELLTSLCKEAFDTDRGLWLETAQRELYPNPHAYSQL \\
\hline UniRet90＿UP10002C3F92D & GVSKEWFSLITKEIFNVDFGMFSYNKKTRYFWFSSCSED \\
\hline UniRef90 Q706 & E \\
\hline UniRef90－A9RLJ3 & GV FKerliol \\
\hline UniRef90－88733 & \\
\hline  & SPEYGMF MYPEDGAYMWFPKPKFEK \\
\hline UniRef90－B4LON9 & GVRKEFFMLLLKDLIDPKYGMFKEFEDSRMWFADVTFETE \\
\hline UniRef90－V9ETR2 & GLFKEFWLDLSTLAFDLQYGLFLTTHDQLLYPNPNSSDHL \\
\hline & D \\
\hline & GVFREFLSELIKTAFDPNRGFFMVTTDNKLYPNPDVPDFE \\
\hline UniRet90＿UP10003F109EB & GLTKEWFLLIRQIFHPDYGMFTYHKDSHCHWFSFKCDNY \\
\hline UniRef90－10z4k3 & A \\
\hline UniRer90－1008u9 & \\
\hline UniRet90＿GOMKQ5 & \\
\hline A0AO24 & \\
\hline & K P \\
\hline & D \\
\hline UniRet90＿R7TFZO & GIFREFMAELLKTAFDPNRGFFKCTTDKLLYPNPQVEAY \\
\hline UniRef90 W5UBVO & WF \\
\hline UniRe990－DORLT4 & MREWFTLLFAELFDP \\
\hline Ref90＿Q4R612 & \\
\hline UniRet90＿E4XPA8 & \\
\hline UniRet90 G7Y & \\
\hline UniRet90－H9K751 & GVKKEFFMLLLREILDPKYMFKQYEETRII WFSEDSLEDE \\
\hline UniRet90－K1QNF6 & G \\
\hline  & \\
\hline 俍9－G5BZ77 & \\
\hline  & \\
\hline UniRet90＿C1N6 & \\
\hline UniRet90－D6Wz & \\
\hline UniRet90＿S2JCV3 & GLRKEWFLLLVRSLFDPQYGMFTFDEDSNLCWFNPSFENE \\
\hline UniRef90＿M3WA47 & GVKSEFFHCDFEEMTKTEYGMF GYPEEGS \(^{\text {a }}\) \\
\hline UniRef90－HOXH41 & GVSSEFFHCMFEEVTKPQYGMFMYPEKDSYMWFPVN \\
\hline UniRet90 UPIOOO3 & GVRKEFFLL MRELVDPKYGMFRYYEESRLDWFDKT \\
\hline Ref90－B6K & 㑑 \\
\hline UniRet90＿ABRRI8 & LSKEWMQLLTKQIVDPNNKL \\
\hline UniRef90－W77 & GVFKEFMDALTKRAFDPQYALFRVTPDHLLYPNPLSPDHL \\
\hline UniRef90－V9240 & GVSSEWFMLVNELLASPTLRMFTCTNKADQSYYFNPQDEK \\
\hline UniRef90－L1J812 & VVNTSLQAFNPSYGLFCTTGQNDLFPNPQSFNVN \\
\hline & \\
\hline UniRet90 \({ }^{\text {G7YG62 }}\) & GVFKEFLEETLHRVFDPSLNLFRVTSDQRL \\
\hline UniRef90 \({ }^{-}\)5 & GLQREWFEVLCSALFDPENQLFHRFKNDKQ \\
\hline UniRet90－B8BR43 & YALFKVTEGSA \\
\hline UniRef90－Q7S6N5 & DSVTTEAFTHTELFVTNSKNAYYPNPTLIDRDR \\
\hline UniRet90－W4YNJ1 &  \\
\hline 90－H0 & \\
\hline UniRef90＿UP100021 & \\
\hline UniRef90＿－ 7 UCP3 & \\
\hline UniRef90－UPI0003AE62FC & YGMFMYPEEGSYMWFPKSKFKK \\
\hline UniRef90－A7 & FLTSVSEEGFKNEKYFLTNDKHELYPNLNLNPVQL \\
\hline UniRef90 H2AQX6 & GVTKEFLTSVSEEGFTDPKYFQTNTDYDDYPKPTRDLAKL \\
\hline  & \\
\hline UniRer90－UP100021A3E1A & GVQKEFFMLLURELLNPDFGMFYEEDESRYIWFRQQSYDR \\
\hline UniRef90 & \\
\hline niRef90 UPIO00388AB0A & \\
\hline UniRef90－M5BRH2 & \\
\hline & \\
\hline UniRet90＿U6NTR9 & \\
\hline C4 & G \\
\hline niRef90＿W5MA02 & GVFKEFUEEI ITKKVFNPADNLFRTTSGNERLYPYOUENHL \\
\hline
\end{tabular}

\begin{tabular}{|c|c|}
\hline & \\
\hline & \\
\hline & LASLDPELYNGLLKLKNYPGNVEEDLANFTVTEEDFGVS \\
\hline UniRe90＿AAS732 & L \\
\hline UniRef90－G4VMLO & MESVDSEYYRSLKYILKED \\
\hline UniRef90－UP10003290FCB & WL L EDPT ELDLRFII DEELLFGQT \\
\hline UniRef90－TOR5L2 & \\
\hline UniRet90－O6P289 & LeSVI \\
\hline UniRef90－DoNH72 & LQYVDPEVYTSMLWTRDNDGVDALELTFCVTELRADDEVV \\
\hline UniRef90－E9 & QPALAHGLQELLEYDGDVETFCRTFQLSYDVFGAT \\
\hline UniRef90－K4A & NLMQLKHYDGDVED \\
\hline UniRet90＿C1MZR7 & AFDPDYHRNL YMLEH \\
\hline UniRef90 K3WLC0 & VDHDLHKNLKWLRDNRGVESLALDFTVTVDQHSDKS \\
\hline UniRet90－F6WD73 & EEFHQSLQWMKDNDU HDLLDLTFTVNEEVFGQU \\
\hline iRe990＿－9BYQ0 & \\
\hline UniRef90－JOD781 & DRELYNGLIFLKHYQGNLEDLALNFTINEDDFGVT \\
\hline Un & QDWNPSLAKGLQQLLDYKGDDMEEQSFRITHKDVFGTV \\
\hline UniRef90－V9Fe & DAELHRHALWLRENEGVEALALDFTAQRQGTDGAL \\
\hline UniRef90－A0A026WIC3 & MYRNLLYLKSYKGDVADLGLDETVLTDELGER \\
\hline 21 & － \\
\hline UniRet90＿E4YYD6 & \(\checkmark\) D닌ㄴ \\
\hline UniRet90＿Q16J44 & 俍 \\
\hline UniRef90＿UP10002063 & WSPTLYRTLKELMDYTGDDMFMQTFRVAYKDVFGSIU \\
\hline UniRef90－ 88 LK & S \\
\hline & 㑑 \\
\hline － & \\
\hline UniReer90－A0AO2 & EMD EYYRS K Mrd \\
\hline UniRef90－Prooor & ESVSPRLGKSLQEVLNDDAD D GDVLC R S \\
\hline UniRef90 U5H571 & SLDPELYSGLTQLKNYPGDVEDMSLLFATVTDEDFGVS \\
\hline ef90－UP10002C3F92 & CYTSLVQLKEKTD \\
\hline UniRet90－Q706E5 & LP SLDKELYRSLTETKHYQGDVADLDLTFSVDEDVMGKI \\
\hline UniRe90－A9RLJ3 & － \\
\hline UniRef90－D8733 & \\
\hline UniRet90＿W9R8H4 & \\
\hline UniRet90＿G3SQ72 & KNLQEVLNDEADDLEELYIT F FITYWDK \\
\hline UniRef90＿B4LON9 & MSPTEANSMQALLDYTGDDFTFDLTFETSRDIYGEA \\
\hline & LIP EDYKNLMFLKSYEGDVEDLGLTHTVVQEVFGEQ \\
\hline UniRef90－F4PLS66 & D VNDA \\
\hline UniRef90－AOAO34V2X9 & DP E M K C K M G V \\
\hline UniRef90－UP10003F10： & M \\
\hline UniRef90－10Z443 & DP GKSLAQLEVEDAGGV \\
\hline UniRet90＿T0Q8U9 & DLEFLDEELYRNCRWLKKNDQAELLSLDFTVSVVTPDGKY \\
\hline & \\
\hline UniRef90 A0A024TQC8 & A \\
\hline UniRef90－W100046B2937 & 㑑 \\
\hline UniRet90－R7TFZO &  \\
\hline UniRef90 W5UBV0 & DLKELSPTEGRSLQQLLDYDEEDLEFCLNFAISREYYGVT \\
\hline UniRef90 DORLT4 & \\
\hline UniRef90＿Q4 & DLESVDPEFYNSIVWIKENNLEECGLELYFIQDMEILGKV \\
\hline UniRef90＿E4XPA8 & R S \\
\hline UniRef90 G7YUU4 & RQLRNLKNYSGDVRDLSLDFTVVTSTFGQS \\
\hline UniRet90＿H9K751 & DMSPVLAKSMQNILDYEEADFEEVFHFEIVREVFGEK \\
\hline UniRet90－K1QNF6 & \\
\hline UniRef90 K1R1A5 & － \\
\hline iRet90－G5BZ77 & DLKELSPVLGKSLQEILNDEADDLEEL DIMYFSIPWDR \\
\hline UniRef90＿T0QJM5 & DDELYRSLLWLKRDADAIAALCLDFTVTRKVPNGV \\
\hline UniRet90＿C1N6W5 & KLLKTAEEVDAFGLTETATRIVFGDE \\
\hline UniRef90 \({ }^{\text {dow }}\) & ＋ \\
\hline UniRe90－S2JCU & NVF \\
\hline UniRef90－M3WA47 & \\
\hline UniRef90＿HoXH41 & GKNLQEVLNDEGD DUEEVLD QFSUHWDQ \\
\hline UniRet90＿UPIO003EAD & GRNLQELLDYTEDDLDDCLLNTITMDNYGVT \\
\hline UniRef90－86K6U0 & \[
\left.\right|_{0} ^{K}
\] \\
\hline UniRef90－A0BR18 & \\
\hline UniRef90－W7TQY7 & DPELYRHLMSLKRLDLSLNFEVVVEDDEKLLPQEA \\
\hline UniRet90－224461 & LSLIPL \\
\hline 迷9－V9G019 & － \\
\hline UniRe99－ 1 J8L2 & A \\
\hline UniRet90＿A0A016SDH9 & DTEFYNSVM \\
\hline UniRef90－G7 & DKELYKSLSYIKHYDGDVADLEFTYSYAEDSLGQM \\
\hline & YFEQDDPDLYVS \\
\hline UniRet90－B8BR43 & DLSTLDTQLYNNLMFLKTYDGDATELCLTFTVANDDFGVS \\
\hline UniRet90＿Q7S6N5 &  \\
\hline UniRet90＿W4YNJ1 & Vrser \\
\hline UniRef90＿HoXRB5 & DMELVDPDLHNSLVWILENDITGVLDHTFCVEHNAYGE1 \\
\hline UniRef90－UP & ELYT TIQYIRDNDVT \\
\hline & dLarglaell \\
\hline & GKNLQEL L DEADDTEELY \\
\hline UniRet90＿A7TJJ5 & DDLS SLYNLVKLLTMSAAEIEDLDLTFELTDESDVS \\
\hline UniRet90＿H2AQX6 & S \\
\hline UniRet90＿C4Y107 & S \\
\hline niRet90＿UPI00021A3E1A & \\
\hline UniRef90 A0 & S \\
\hline & \\
\hline & \\
\hline Ref90 W2RG70 & DFESFDPVTYKSLKWMLEHEGADKLGLDFTATRKDAVGNL \\
\hline f90－U6NTR9 & ELSQLDPELYRNLTFVKKYDGDVSDLSLTFSTDEDFMGKI \\
\hline ef90 \({ }^{-}\)T1PAC4 & NDMEEVFMQTFKISYKNVFDEV \\
\hline iRef90 W5MAO2 & \\
\hline
\end{tabular}




\section*{UniRef90 C3YY09 UniRef90-M7XSB0 UniRef90-A7S732 UniRef90-G4VMLO} UniRef90-UPIOOO3290FCB UniRef90-TOR5L2 UniRef90-Q6P289 UniRef90-D7FM40 UniRef90-DONH72 UniRef90-K4A557 UniRef90-C1MZR7 UniRef90-K3WLC0 UniRef90-F6WD73 UniRef90-E9BYQ0
UniRef90 JoD781 UniRef90-A0A023FIK5 UniRef90 V9F611 UniRef90-A0A026WIC3 UniRef90-H2KST8 UniRef90-E4YYD6 UniRef90 \({ }^{\text {Q16JJ44 }}\) UniRef90-UPIO002063352 UniRef90-B8LKQ9 UniRef90-S4R7H0 UniRet90-V9KGY8 UniRef90-A0A024JJU7 UniRef90-UPIO001D55BC4 UniRet90_W4XX00 UniRef90-U5H57 UniRef90-UP10002C3F92D UniRef90-Q7Q6E5 UniRef90-A9RLJ3 UniRef90-D8T3T3 UniRef90-G3SQ72 UniRef90-B4LON9 UniRef90-VVETR2 UniRef90-AOAO34V2X9 UniRef90-UPI0003F109EB UniRef90-10Z4K3 UniRef90-TOQ8U9 UniRef90-GOMKQ5 UniRef90-A0A024TQC8 UniRef90-UPIO0046B2937 UniRef90-W7TN24 UniRef90-R7TFZO UniRef90-DORLT4 UniRef90-Q4R612 UniRef90-E4XPA8 UniRef90-H9K751 UniRef90-K1QNF6 UniRef90-K1RIA5 UniRef90-G5BZ77 UniRef90-T0QJM5
UniRef90-C1N6W5 UniRef90-D6WZG6 UniRet90_S2JCV3 UniRef90-M3WA47 UniRef90-HOXH41 UniRef90_UP10003EADA78 UniRef90-B6K6U0 UniRef90-W7TQY7 UniRef90-F2Z461 UniRef90-V9G019 UniRef90-L1J8L2 UniRef90-A0A016SDH9 UniRef90-G7YG62 UniReffo - V5HS59 UniReffo-b8BR43 UniRef90-W4YNJ1 UniRef90-HOXRB5 UniRef90-UPIO0021A44DB UniRef90-R7UCP3 UniRef90-UPIO003AE62FC UniRef90-A7TJJ5 UniRef90-H2AQX6 UniRef90-C4Y107
 RPPRLGFGQLNPKFADRNAGGDQT
 RVPMNGFSELWGSSGPQKFTVEC WGSVDQLPRASTCFNR SCSNGPQSFTVEQWGTPEKLPRAHTCFNR RVPVQGFKALTSYDRICHFTLNTVAYPEHTFPRAHTCFNR RLPVTNCRF
 \(R V P V Q G F K G L T S Y D R \square C P F S R R P D P N T R G F P K V H T C F N R\) RVPVGGLSHLN RAPLLGFKYLQPSFTDHKVPCDVTLWASDRLPSASTCYNT KVPLDGFKALQGDSGPQRFQHRAYGGGQRLCSAHTCFNQ RVPVQGFKALTMNDRDCPFAIQCVNKEECLYPRAHTCFNR SIPYEGFASLRGSNGPRRFCVEKWGK自T ALPR RPPLLGFSHLVPKFG SPSGDGDSPDRLPSAATCFNL RPPLLGFKELVPLECL RVPAEGFRALGR\|RRFGLQ\|VADGAPPAGLYPKAHTCFNR RPPLLGFKELDPPFC【QHAGS R \(\mathrm{P}_{\mathrm{V}} \mathrm{V}\) GGMAKMK S IPYEGFCGLRGPNGPKPFCVEQWGTVND LPRAHTCFNR RPPLLGFKDLDPPFCTQ NAGDTDRLPSASTCMNL RVPVGGLSRLK
 RAPVGGGGKIK \(R\) RPANGFSPMGYHSEQLRFTILRQPNPKSLP
\(R L H A R G Q Q K M E I V F R C P E T F S E R D H\) RLHARGIQKMEIVFRCPETFSERDHGSANAPTSITCHHI R
 RVPVGGLGNLRFFD K RPPL LGFKHLQPTFTDHKVACSVP LWATERLP
 RAPSLGFASLTPQFCVQKDPRRSD
RLPPSGFQGLVSTEGNTKFQUKSW RPPLLGFKDLDPPFFIQNAGDM

\section*{} RVPVQGFKALTSSRRFTDQMVNRGPPPTGKLP SVPFEGFSALRGNDEDSKFCVEKWGDAT SLPPAAHCFNR RVPVEGFKGLGRVRRFGDQMVGRGDPPTGLYPKAHTCFNR RLHVRGTQEMG\|VFRCPETLSERDC KAPGGGLGRLYMAFCVHYLDQRAGPDSDHRPTAHTCFNT
 RVPAQGFKGLISSDGRVRRFNFAGANQSFLFPKAHTCFNR RLP GGGFAELIGSNGPQKFCTDKV GKETWLPRSHTCFNR


 RLHIRGIQS RG\|VFRCPETSSEKD RVPAQGFKALISSDGRVQPFNFCGPEDGNPFPRAHTCFNR RAPADGLGALPFVI
 RLHARGKQEMGQLFRCPKTFSERDN

 RLHVKGLQNEGIVFRCSETFSEEDN CVP KGLQNEGVFRCSETFSEEDNYKMTPRSLTCHRM
 RVP VGGFSELMGSTGPQLFCDERVGGKENWLPRSHTCFNR

 HVP QGWK SLQ RVPLQGFKALQGAAGPRLFTVHQUDACTNNLPKA RVPDGGMSEMQFKDTCPEFSARDNTNMLP
 QAP QGFGALEPKFGMRNAGFDNSGSDSDR R R R
 QLPPGGFQELNPQFQUAAPTFGN RIPVMGMDCIKIKFNQHMTMSE DHIPTAHTCFNQ RPPLLGFKELNPRFAD MTMSEDATSDDQHLPEAQTCYHN RVP GGFRYLTSHDGQ1CPFTLKGVH SPYIRSHSCFNR RPPVGGFSYLEPPFS■RCVEVSDDQDQGDRLPIA \(R\) P P L L G F A Y L K P P F S \(\square R \mathrm{CV} \mathrm{V} V \mathrm{~S} D \mathrm{D}\) Q D T G D R L P T S S T C F N L


UniRef90 A0A023EVW4
UniRef90- I3LVA1
UniRef90-U4TZQ5 UniRef90-W5MSA4 UniRef90-M1W0L8
UniRefo-AOAO2GFV9 UniRef90-Fow2D9 UniRef90_10YLY4 UniRef90 L5LKE7 UniRef90-G6DCN7 UniRef90-UPI000273FC73 UniRef90-UPIO003346B52 UniRef90-A0A024GOK3 UniRef90-N1JCF5 UniRef90-R9XHA5 UniRef90-UPI00046C1F94 UniRef90-U616 H3 UniRef90 B3SB64 UniRef90 W4WK21 UniRef90-H9JAS6 UniRef90-W4ZOY3 UniRef90-A7SQ93 UniRef90-T1GTQ9 UniRef90- W91123 UniRef90-K3X444 UniRet90-A0AO24SLAO UniRef90_W9XS76 UniRef90 G8ZZ08 UniRef90_UPI000180B44C UniRef90-AзGHK0 UniRef90_UPI0004571FD2 UniRef90 J3NH14 UniRef90-UPI0003D09D39 UniRef90-U9T013 UniRef90_A5DGV7 UniRef90 UPI000203960E UniRef90-V9GOV1 UniRef90-G2QSP2 UniRef90_V7BFA6 UniRef90-R4XC14 UniRefofo-H8X3P6 UniRef90-F1KTV1
UniRef90-A0A016WYS8 UniRef90-G3UKM0 UniRef90-UPIOOO3443092 UniRef90 A0A024TKX4 UniRef90-TOMG45 UniRef90-K3WL10 UniRef90_17M248 UniRef90 J5JIB1 UniRef90-C7YM87 UniRef90-UPlooo3339D38 UniRef90_K3YG96 UniRef90-V5FLQ7 UniRef90-11FMQ3 UniRef90-K1QDU8 UniRet90_K2G9K0 UniRef90_C5LR43 UniRef90_C1G9C1 UniRef90-UPI000161D37D UniRef90 V5F9F1 UniRef90-L2G7E9 UniRef90_U7PWF2 UniRef90-A9VDJ2 UniRef90 C4YBB8 UniRef90-A7T196 UniRef90_T5AFP5 UniRef90 UPIO003FOB5B3 UniRef90-UPI000161C275 UniRef90-K3X451 UniRef90 H3DYX1 UniRef90_U6ITM1 UniRef90-G8YA19 UniRef90-H2ZJ68 UniRef90_S3D659 UniRef90_GOSAP1 UniRef90-U5D7S8 UniRef90-G2WWF7 UniRef90 M4EKZ4 UniRef90-F1 Q519 UniRef90_M2MUG7 UniRef90-F9W790 UniRef90-A5E680 UniRef90-UP10002C34BCA UniRet90_B7G4C4 UniRef90_W4FEW4 UniRef90-F0X7Y3 UniRef90-H0XH44 UniRef90-D5G737 UniRef90_G7YX17 UniRef90_A9USQ1

LLKNMGSETFKDKQDFFYHEVQKKDEFPPSPIEFTL TFEA IVVKYQMTQGASE YPPKPIFQL PK LIEVLKHMPFVPFETRVRMFRQF \(\quad\) RRRFGTDPDFYKHHA

S LQ F R S K K R WF LIK Q \(\square\) T K R S V H F M D S I I F H

QRD
DYKRKYEFFRRKLKKQFRDTTT FDLLSK \(\square K L L D F Q \square R Q M \square F D E L I K Q D L L G S F D P P C \| L\)
 KFELLLRAPFLPFRERVAYFETLIHHDRLRPSSRRQRA

TK \(\square\) QQ \(\square H Y D N R \square N M L Q E R R G A \square F H A \square E M P Y F K\) ARRDLI ERVRENKVPNTSADF LNL
LVQKTPHMAHGERVRDFRRAVADEKVVLGLTSTLV LLQK \(\square P H \square P H R E R V I L F R K R V S D E K K S L Q P H S T Y\) ARKSLMEKVQRREMPDMGMDF LN I \(S V T D L R E D P F V S F A R R V N D Q G L D A S L H A F D Q G P A I H L\) PKLEILKHMPFVPFETRVQUFRHQLDRQQRGDNSQKHHA



RLEVLAKMPFIPFKSRVRVFQRLIELDRERNPRTTLKA
 PRLE LLRNMPF LDPDVRVQDFRQFVHRRGGNDDPDRWRLD
 \(\square S L G S K \square S V L E Y E A R R Q M E R K A E E A F \square N S \square D K R Y \square R I\) E \(\square E E K \square N H F Y A S L H R S G Y G K G P Q K \square K F\) \(S P \frac{L}{E S P N P F N L}\)

\section*{LE Y VR S LS F S LK F A WLVNQLT T LD}

RKEVVAQASQ DFPTKFANFVVTHA SLVVPAEVEFLKV LLNRDPHDTFEKRYQMMKKFIEDQSVQDRNPFQNI PKLAALKHMPFVPFDTRVMDFRQFI EDDINRRDNPFDSA PKLLILKKHMPFVPFETRVMIFRQQLDRGHREGNMPRHHA

\section*{LE F DARRHLAMAMLPELVRGTM RPPYEL}

L S ITWAK ITHILEHDARRQMEVKAREAFFDS VVSQYLVL \(L\) LQ T L P H
 \(\square S \square W A K \square R \square L E H D A R R Q M E E K A R E A L G R R G V S Q Y L V L\) QPHPFFEL PRLE ILLRNMPFTPFATRVQVFREF\|YRDQMRRRQGRHHA P K L E I L R H M P F I P F D T RVVQI FRQFV HKRRD GMDAE QWRM


LTLGGK DS LLEYEARRQMERKAEEAF DTS SDRRYFRV SRRLVLDNDGGSESFKKKREFFNEKLLS HQGMKGGEVRGL EARMAAF LHFMQGQHALPPHPTCNL


T LIFELDPFI PFWDRVKLFVTVVRNYRDNHQRPPVNL
SLGGKUS L L E Y E ARRQMERKAEEAF NNSDDKRYFRV
LS \(\square\) WAK \(\square Q \square M E H D A R R Q M E V K A R E A F F D S \square M N Q Y L V L\)

 \(L S\) UWAK S QULLEYDARRRQMT TKARRAAFF D S DM T Q H LTTML

 \(L M A S C P F B L S F E V K C K Y F R M T S D R R Q S S G G L P R Q K F\)

PFTAKY V VALLSLLKANワDHGHVKF
\(\square S \square\) WA K \(\square\) Q \(\square\) L E HEAHRQMRTKARDAFFDSUMTQHFS L QRRSEVPPFLQPTLDL
\(\square S M G A K \square S \square L E H D A K R Q M E V Q A R H A F F N S \square A S Q Y L V L\) GPAVPYKQKYDFFRSRLRSPRDPQA

UniRef90_A0A023EVW4 UniRef90_I3LVA1 UniRef90_U4TZQ5 UniRef90_W5MSA4 UniRef90_M1W0L8 UniRef90-A0A023GFV9 UniRef90_FOW2D9 UniRef90_IOYLY4 UniRef90_L5LKE7 UniRef90_G6DCN7 UniRef90_UPI000273FC73 UniRef90_UPI0003346B52 UniRef90_A0A024GOK3 UniRef90_N1JCF5 UniRef90-R9XHA5 UniRef90_UPI00046C1F94 UniRef90_U6I6H3 UniRef90_B3SB64 UniRef90_W4WK21 UniRef90-H9JAS6
UniRef90- W4Z0Y3 UniRef90_A7SQ93 UniRef90_T1GTQ9 UniRef90-W91123 UniRef90-K3X444 UniRef90-A0A024SLA0 UniRef90_W9XS76 UniRef90_G8ZZ08 UniRef90_UPI000180B44C UniRef90_A3GHKO UniRef90_UPIO004571FD2 UniRef90_J3NH14 UniRef90_UPI0003D09D39 UniRef90_U9T013 UniRef90_A5DGV7 UniRef90_UPIO00203960E UniRef90-V9G0V1
UniRef90-G2QSP2 UniRef90_V7BFA6 UniRef90_R4XCI4
UniRef90 H8X3P6 UniRef90_F1KTV1 UniRef90_A0A016WYS8 UniRef90_G3UKM0 UniRef90_UPIO003443092 UniRef90-A0A024TKX4 UniRef90_T0MG45 UniRef90_K3WL10 UniRef90_17M248 UniRef90_J5JIB1 UniRef90_C7YM87 UniRef90_UPI0003339D38 UniRef90_K3YG96 UniRef90_V5FLQ7 UniRef90-I1FMQ3
UniRef90 K1QDU8 UniRef90_K2G9K0 UniRef90_C5LR43 UniRef90_C1G9C1 UniRef90_UPI000161D37D UniRef90_V5F9F1 UniRef90_L2G7E9
UniRef90 U7PWF2 UniRef90_A9VDJ2 UniRef90_C4YBB8 UniRef90_A7T196 UniRef90_T5AFP5
UniRef90_UPI0003F0B5B3 UniRef90_UPI000161C275 UniRef90_K3X451 UniRef90_H3DYX1 UniRef90_U6ITM1 UniRef90_G8YAI9
UniRef90-H2ZJ68 UniRef90-H2ZJ68
UniRef90_S3D659 UniRef90_G0SAP1 UniRef90_U5D7S8 UniRef90_M4EKZ4 UniRef90_F1Q5I9 UniRef90_M2MUG7 UniRef90_F9W790 UniRef90_A5E680
UniRef90_UPI0002C34BCA UniRef90_B7G4C4 UniRef90_W4FEW4 UniRef90_F0X7Y3 UniRef90-H0XH44 UniRef90_D5G737 UniRef90_G7YX17


 \(K I K R G Q L\) F E D AF K Q F Y RLL GE GFKD T I Q I T F V V Q A GID G G \(\mathrm{Y} V \mathrm{GR} E \mathrm{~N}\) I V N D T L L N Q L A D Q S A A D L K K P L

 \(T V S R N H L V R D T M L Q I S N H D T S Q L K K P L R V E F V G E E A E D A G\) \(R W L Y W V T L S C I V G Q K L A F P K D Q D G A\) \(K\) VRRNHLVEDTLRQLNQFEDTDLCKQLVIEFVEEVVSPGE EVDRSNLLHDSCEQLLLWATPEQLHQPLVRVRTNEPGVDAG SVVR R D C L I E D S LLK A I S E EVVGGEEIVKK S L R I T F K G E E GII D A G


 HVSRNNIVNDTLDQLLKYDSNELKRPLRVKFRDEEAEDVG \(T V R R A R L V E D G Y R Q L A A L P S R A L R G C V R V R F D N E Q G I D Q D\)
 SVVRRSHL YEDS F D KL L R P EN QI SRNSSLFDDAYK QFYED GEGDK D P DQ DT FVVD Q A GI DGG SVIHRDYILE Q S LD HVGGCIKEKNIHSYMRINFIDESGVDAG QI R R E HLLED GYVQL GALPREKLKGTVRVEFVKEPLEDAA

 R V H R S R L V E D G F E K L G A M Q G N K L K G I I R V K F I N D A G I D Q D
 QVARNRVLQSTLECLLRFSNVSHFRSGFWVQFTDESCYGH \(K I K R G N V F D D A Y D Q F Y P D G D G L K E P \square Q I T F V D Q A G I D G G\) EVNRNNLVEDTGRKLCLVEDSTLKKELMVAFKGEDGLDAG
 DI RREFI L EDAFNNFNNI GQNFKNPLSVTFFNEYGQDGG \(R V Q R Q N L V E N T L H K L S H V E D \square S L K M Q L L V E F E G M S R F E A G\)

 V CRREHEFED GFGALWQIGGG IKGPL SV DYMQEA GIDGG





 FI QRGKELDDAFSKFHNKNMKALYKISFVDEHGF DEQDGG
 QI R R K R L F E D A Y K Q F Y E L G E GF K D P I Q I T F VV Q A G DD G G
 K V V R R D C L V E D S L R G V S E V I IP E E V K K G L R I E F L G E E GVVDA G TI H R S RLLED GYNHLGLVSTAHFKGVIVRVKFINEQGIDDEM KI DRS QLLYSSYRATKSFDSSDWFKSFQI CFTGEQGLDDWG
 K V R R D H L L E D S L R Q L A A F D A D E L K R V L K V Q F Q G E Q GV D E G
 SVVHRDNVVDDAMDALLSSKHMDLKKPLVKVYGIGEEADDAG



 DVRRECLVDDSLKKAVGEVISEDVKKALRITFRGEEGIDDGG \(R V K R S N L V K D T L R Q L S Q V E N G D L R K D L V I E F T D E \| V S Q G Q\) A V H R A T L Y E D A F R A L Q P HLLVP D M K S T I R V Q MVVE A GVV G G




 QV Q R G RA F A D A L D Q F W DL L I E R G Q L L T


 VVRRGSVFADAFDRFAGDTNSMFGVRFRDGNDMMEEGYGE NI R RE HVLEDAFAAFAS TGSQFKQRDRVHYDNQHGPDGG
 NVRRD HL L E D S VD A VM S L S R K D M R KL WR FE F DG E A GID A G RVYRHHLYDESMHMLQSLQPNVLCTRTRIELLGEAGIDAG \(R\) V R R D C L V D D S LT A V S E A V G S DL K K G L R I V F R G E E GI D A G TVVGRDDLVEDVL N WLS QRENEN L R K ELLWV S F S G E DG YEVG K V R R R E C L V


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UniRef90-R1DLQ1 UniRef90-A0A024SLA0 UniRef90-W9XS76 UniRef90-G8ZZ08 UniRef90_UPI000180B44C UniRef90_A3GHKO UniRef90_UPI0004571FD2 UniRef90-J3NH14 UniRef90_UPI0003D09D39 UniRef90_U9T013 UniRef90-A5DGV7 UniRef90-UPIOO0203960E UniRef90-V9GOV1 UniRef90-G2QSP2 UniRef90_V7BFA6 UniRef90_R4XCI4
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UniRef90_A5E680 UniRef90_UPI0002C34BCA UniRef90-B7G4C4 UniRef90-W4FEW4 UniRef90-FOX7Y3 UniRef90-HOXH44 UniRef90-D5G737 UniRef90_G7YX17
UniRef90_A9USQ1
 GVKSEFFHCI FEEMIKKEYGLFDYPEDGSCMWFPVNXTRG GLRREWFELICAQLFDAKHGLFASFHEGQQSLVHPNPDRP NKKDFF LHIFDQLIAPDSGMFWYNESNSLMWFPSNPTDAQ GVTKE FLIGVTSEAFGNDLLFPNPTAEDDVEWRGAMMRFD GLLREWFSLLCNELFRADLGLFVMTHAENMSYWDNPNDHD GVTKEFFLLLLKELDNPDYGMFTYYQDSNLLWFSDTCFEH GVKKEFFML LLKEIFDPVYGMFKQSEETNMIWFNNPFEDE A ATTDFSSKILTKM KYDNLVDNYT LQQNPNSGLCNEDHLD GLVRE WFTLMTLEEMFNSDAGLFQLNGNGDAWMDNASVDHL




 GVFREY NELLLKTAFDPNRGFFMLTTXNKLYPNPNVENYE GVTKEFLISSVTTEAFGAEGGRGMFTSNEKSTFRDMISDLL



 GVSQEFFSLFTRALYESKGDFTRNPNSGLLWFPNQEPEFD GVTKEFLTSITTEAFGSSQHNLFVANGSNAMYPNPSSLDQ
 G T KEFLTSSVVQEGFDPGGQFDLFKETATNNQLYPNDETK GLUREWFSLLNEMMVQPDYGMFMYPHPSSPMWFCTRKKVS
 GPTLEFYTLVCHEFQKPGDGMWRWS SMQDTSGG
 GVKKEFFMLLFQELLQPTYGMFTENEESHLIWFSGVETDQ GPSRELFYLLSRELFHPYYGLFEYSAPDQYTVQIVSPHSHCL
 GVTREWYTLLTMEEIFSADQGLFFVSNV GLHREWFML L NDLLMEPSTGLFVCTNPSEQVYTLNPNDHL GIDKEFDNSVVRQGFDPTCGLFIETAERTLMPAPNNKNKL
 GVTAEFFHCVFEEMTSPKYMFDYPEEGSCMWFPVSPKCEK GVLREWFCLVCQA LFNPRVVLFSACPHDRRRFFINPTSHL GLRKEWFLLLVREVFDPNHGLEGYDEESQFCYFNPYCFES GLRREWFELLCTELFDPANSDFFHRFTSDTQGLVHPMSKL GVQKEFF LLLVQEMYDENYAMFEYDKDTRTFWFSNKCESN GLRKEWF RLLVREDFDPLHGLFVYDEQSQYCYFNPFCFES GVTKEFLTSVTSEAFKPSNGLDLFVENDHHEWNEQVRDLL
 GLAREWFYLLGDEVFDPRLGMFSYCNEQDYLLQDNPQDHT GLKKEWFLLLTRALESPSAMLGNVDDSNFLWFNVDPVENA GL RKE WF LLLVREVFNPDHGMFGYDEDSRYCYFNPNSFET GVKSEFFHLVFQEMTRPEYNMFMYTTESSYIWFPKPKFKK GUR FEFDF ELLQTALDPSRGFFATTHEQLLYPNPYPNNFV
 GLCREMLVAVLSQGFDPSQGLFRYNDDHALYPNPDMEDFE GLKKE WFLLLTRSLFSPEAGMFVNVEDSNYLWFSDSPENN GLNREWDHL LCKIGFQSKFRSMNDDPQSLVLPNPSSTLKP
 GVVREWFRLVSHGIFDARNSLFLQCPNDRRRFFPNPASHLL GLRKEWFLLLVREVFNPEHGLFTYDEESQLCYFNPNSFET GVLREWFYLVCQE I FNPRNALELRSADDFRRFSPNPASHL VISAEFFSLI SKSFDEWDKKI LEVHESSGVWFNPHHTQDH GPRKEWFLMLVRDIFDPNHGMFVYDDESHTCYFNPNSFET GUTKELLTGVTTEGFDPENGLFQESSDHRIYPTTDLGNTS
\(G P T L E F Y T G V S H E F Q K S G L G M W R E C P C G L F P R P W S S T M D I\) GPTLEFYTLVSHEFQKSGMGMWRECPCGLFPRPWSSTMDD GLQRREWYTLFTQAVFEPSLFVATDSYGYTLNPSSTCRSDLD GLRKEWFLLLVREVFNPDHGMFSYNDDSRYCYFNPNSFET GVRREFFCCLFEKMTQPEYGMFTYPEESYMWFPVRPKYEE \(G V Q R E W F F L L S R E M F N P Y Y G L F E Y S A A D N Y T L Q D N N E D H E L\)
\(G L V K E F F Q L V M P K L Y A H A F V P M E S E G L R W F W F A G P T E D R I L\)

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UniRef90 R1DLQ1 UniRef90-A0A024SLAO UniRef90-W9XS76 UniRef90_G8ZZ08 UniRef90_UPIO00180B44C UniRef90-A3GHKO UniRef90_UPIO004571FD2 UniRef90-J3NH14 UniRef90_UPI0003D09D39 UniRef90_U9T013 UniRef90-A5DGV7 UniRef90_UPIO00203960E UniRef90-V9G0V1
UniRef90 G2QSP2 UniRef90_V7BFA6 UniRef90-R4XCI4 UniRef90-H8X3P6 UniRef90-F1KTV1
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UniRef90 C7YM87 UniRef90_C7YM87
UniRef90_UPIO003339D38 UniRef90_K3YG96 UniRef90_V5FLQ7 UniRef90-I1FMQ3 UniRef90-K1QDU8 UniRef90-K2G9K0 UniRef90_C5LR43 UniRef90-C1G9C1 UniRef90_UPI000161D37D UniRef90_V5F9F1 UniRef90_L2G7E9
UniRef90 U7PWF2 UniRef90-A9VDJ2 UniRef90-C4YBB8 UniRef90_A7T196 UniRef90_T5AFP5
UniRef90_UPIO003F0B5B3 UniRef90_UPI000161C275 UniRef90_K3X451 UniRef90-H3DYX1 UniRef90_U6ITM1 UniRef90-G8YA19 UniRef90_H2ZJ68 UniRef90_GOSAP1 UniRef90_U5D7S8 UniRef90-G2WWF7 UniRef90-M4EKZ4
UniRef90-F1Q519 UniRef90-M2MUG7 UniRef90_F9W790 UniRef90-A5E680 UniRef90_UPI0002C34BCA UniRef90-B7G4C4 UniRef90-W4FEW4 UniRef90-FOX7Y3 UniRef90-H0XH44 UniRef90-D5G737 UniRef90_G7YX17 S8


130
140

160
 K R Y F L F G L L C G L A M Y N N N V V H L P F P L A F F K K L V G V K P T L E QRYEFLGGRIVGKCLYE GULVNLAFAGFFDLDWPSYK GS I N

 NWF HLI G ITCCGLAI YNSTVVDDHFPDALYKKLLNVNPGLE
 K R Y Y \(L\)











 QDHHFV GKMLGKAIYE GLVLDIPFANFFLRSULSKQQPDD EMYY LL G AV L G L A A Y N S TI L D L H F P M A L Y Y I L L D K P V G L D \(D V F R L V G I L V G L A L Q K H F L A N F R F P L A L Y K K L L Q V Q P T L D\) E Q Y E FL GR V V G K CMYE G IL I D DA FA GF F L L K WV G YRA S I N

 \(K N K Y Y L G \square L E G L A M F N R V I A M V P F P D A A F K K L L D K K P T L D\)



\section*{K}

\section*{K
K
N}

\section*{D}

\section*{M}
 RRFEFLGRIVGKCMYEGLLVDLAFAGFFLLKWNNYKGSVN


 \(L Q Y E L F G I V I G L A A Y S G V I L D A N F P L I V Y R K L L S A D K E G R\)
 RRYEFLGRII IGKCLYE GI LVVDVNFAGFFLLKWSAYRANLN R Q F E F L G R V V G K CM Y E GI LI DI A F A G F F L L K WN S Y R G N V N
 LFFHFTGRLI GLAILHRHFLDVTFVSSFYKQ\|LGQSITLA

 EKYF L F GI L C GL L S F N L NVVNNLPFP LALFKKLLDDQKPTLE D HFYFIGRIDAKLI YE GLLADDRFANFFLLQQWMGNPDGTE
 A H Y IF L GAILAAKAI YEGMLVDLQFAPFFLAKIISANRNFN


 P Y F GF CGGRLVAMSLMHKVQLLDVVFARA F FL QLLA GR S V S WE SDQFFLGVVI GLAIIYNSTILDVALPPFAYRKLPVMTYNLE


 K
 E K F R A V G R L L A R S L L E E QV L P F H L TVVPM F K M L L G T P L S M T




UniRef90_A0A023EVW4 UniRef90-I3LVA1 UniRef90-U4TZQ5 UniRef90-W5MSA4 UniRef90_M1W0L8 UniRef90-A0A023GFV9 UniRef90-FOW2D9 UniRef90-IOYLY4 UniRef90_L5LKE7 UniRef90_G6DCN7 UniRef90_UPI000273FC73 UniRef90-UPI0003346B52 UniRef90-A0A024GOK3 UniRef90_N1JCF5 UniRef90-R9XHA5 UniRef90-UPI00046C1F94 UniRef90-U616H3 UniRef90-B3SB64 UniRef90-W4WK21 UniRef90_H9JAS6 UniRef90-W4ZOY3 UniRef90-A7SQ93 UniRef90-T1GTQ9 UniRef90-W91123 UniRef90-K3X444
UniRef90 R1DLQ1 UniRef90_A0A024SLA0 UniRef90-W9XS76 UniRef90_G8ZZ08 UniRef90_UPI000180B44C UniRef90-A3GHKO UniRef90_UPI0004571FD2 UniRef90_J3NH14 UniRef90_UPI0003D09D39 UniRef90-U9T013 UniRef90-A5DGV7 UniRef90_UPIO00203960E UniRef90-V9G0V1 UniRef90-G2QSP2 UniRef90_V7BFA6 UniRef90_R4XCI4
UniRef90_H8X3P6 UniRef90_F1KTV1 UniRef90-A0A016WYS8 UniRef90_G3UKM0 UniRef90-UPIOO03443092 UniRef90-A0A024TKX4 UniRef90-TOMG45 UniRef90-K3WL10 UniRef90-17M248 UniRef90_J5JIB1 UniRef90-C7YM87 UniRef90_UPIO003339D38 UniRef90_K3YG96 UniRef90_V5FLQ7 UniRef90-I1FMQ3
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UniRef90_A9USQ1
 DLKELSPLLGKSLQEVLNDEADDIKEELGLCFS DYW DK


 DLKQAMPELGRGLQQLLNFEGDVETFARNFEVEFEYFGEM DLKELSPTEGRYRAKRQDGVGNCSGCLWQCDICRESYGVI
 DLKELSPLLGKSLQEILNYEAD \(D M L F D D H V V Y R N L Q W L R D S P G A E A D D L T F A Q Q V E Q S L N Q Y\)






 DLEYLDPEAYRSMVWLMENNG VDDLGLDFSVMESRGGEL DLASLDPELFQSLQLVKSYDGDVEGDLCCFTVDEDVFGVR
 DLHSLDADLYSNLVKLLSMTAEQLEELDLSFEDNSPNGTG ELPALDPEFYKNLTWUKRYEGDQSELDLRFMHEEDDMGK@
 DVREMDEELYQGLLRRLKNMQSEVSECLDLDFTVNEMEEGVT DLKELSPDVGKSMQAVLDDEHDDDEEIVLDWFQ
 DLKELDPVLGRSLQAVLDYECD DI EENFQLCFSIGFWDD

 DLQAMDKDLYTGLDQLKNYTGDVENDGSLDDFTVNEQKGSG DLNELSPTEARSLQAAILDYDGDDLEEVFTFVITLSSLFGYS DL QEVDPEFYRSMMWI RENPVDPSLGGMTFVVSEEENGQV DLKELSPVLGKCLQTLL DDEGKDFGEVFYIRFDAHWDK DLKELSPLLGKNLQVLNEADDIGEELCIYFS OMWDK
DI RYLDPTVYSSLVYVRDCD DVDDLALTFSVTVDEAGS
 DLQYVDKELYKMLMNLKHTKDNVEDYGLTFSIDD IVNG DLRDMDEELYKGMLRLKNYPGDVSELGIDFTVTDQVSMKT


<mo LDREFDPEFAQGIRKFLDYDVDVNDGGLCFVTDEVVNGKI D LA EYQPALARGLRNLLEYDGDVQEFCLDFVIDVERYGKK DLSELSPAEGRSLRSLLDYEDDDIEEVFSFMI SVSLLGDS
 DLREMDEQLYEGMLKLKNYDGDVADLDLDFTIDEDNERLQT

Y DK KPRLARGLRQLLDYDGDEHTFSLDFVVDEKYGTT
 DLEHFDPGLFKSLLWMLDHDGVDSLGLDFS IDMEQQADKEV ELLA QFDPELYRSLSYVKKSEDEVNDMGLTGSTDENCMGKLD
 HFESDDPDLYMSKKYILENDVTDAELTFSEEQFTSHGALK DLRELRDEELYAGGMLQLLKNYPGDVADLGLDFTATVEKYGQT DVQDADPSMYSSCKR1 MDMDPEVLDSDATFVTEVEEMGLH LLAEWRPRLAAGLK QLLDYDGDVEEFGLDFVVPVEKYGTV DI K DTDRVMYN
DLEE L
DLAEFRPSLAA
NLK SFDSQLYRHLVSLLTLSEEEIESLANFTYTVDVLGTV
 DI RDSDEELYFNLKQLTENGEDLEMLCLDFTTTVEVMGAK DMLYMDKQMYTSLKFVQ Y STLDVGLCLDFSVTVEGG DLAEYRPGLAKGLQQLQDYEGDVESFSLDFTDPAEKYGVM D L K E L S P V F G K S L Q M L L D H E D D


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UniRef90 R9XHA5 UniRef90-R9XHA5 UniRef90_UPI00046C1F94 UniRef90_U6I6H3 UniRef90-W4WK21 UniRef90-H9JAS6 UniRef90-W4ZOY3 UniRef90-A7SQ93
UniRef90 T1GTQ9 UniRef90-W91123 UniRef90-K3X444 UniRef90-R1DLQ1 UniRef90-A0A024SLA0 UniRef90_W9XS76 UniRef90_G8ZZ08 UniRef90_UPIO00180B44C UniRef90-A3GHKO UniRef90_UPI0004571FD2 UniRef90-J3NH14 UniRef90_UPIO003D09D39 UniRef90_U9T013 UniRef90-A5DGV7 UniRef90_UPIO00203960E UniRef90-V9G0V1
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 NDVDLDPNGDSIPVDQTNKNDYISKCDDYDFNTSVKADYD QLLALKPHGADGAVTDENKDEYI ELRFKWIMATGVSQQLA
 V SI E L K E N G A D I
 N TH HL KP N GNK KNFELIPGGGK
 I T H E L L 1 VTHNLKPKGDTI PVVTNTNRQEYVQLYVDYLLNSSIMYKGE K V H E L K P G G Q N L V S S H N I N E Y I GLVAA F K L S K Q I H K Q C K VTRKLIANGDQI HVTNDNRLLVI SYVARHRLVVQPAPQTS \(V\) Q V E L I P N G S N I T C V T D A N K H T V QMP L C P G G E S K P V T N E N R R E Y V




 \begin{tabular}{l|l|lll}
\(R\) & \(V\) & \(T\) & \(D\) & \(D\) \\
\(Q\) & \(V\) & \(N\) & \(H\) & \(N\)
\end{tabular}


 RTVNLLPD GS QVPVTRANRLDYI HLI CHYKLNARLSKQSK
 K E V E L K E N G A QI A V T Q E N K A E F V R L VEKELLPNGAELEVADQNKEEFISLMVKWRVERGIQRQSR N E A E L I \(\begin{aligned} & P \\ & N\end{aligned}\) K DVDLI P N G DS KP V D Q S N K K D Y V S A CII D Y I F N I S V K A V Y E \(E V E L V V G G R D D A V T N A N K A E Y V D R M V Q Y L L F D R V A P Q L Q\)


 VT K K L I A A N G D Q V H V

 V T H E L I P G G S A IP P V T S E N K I S Y V H K L L A H Y K L S T Q I K D Q T E





 RTHELVPGGANKAVTEENKFEFAKLMVEWKLIKSSSRQMC H H R E L V P G GRE DAV NS ENREMY DD KY A R F F LT D GMKR QL Q
 NVVNLIPNGSAVCVDHTNKNDFVSKYVDYIVNDSVKEVYE







 K G Q E L V P N G G S QLI Q V N K V N N R Q K Y V
 VEVSLHENGRDDAVTRRNCMDYICR IADFRLNREAAK Q DQ
 Q A I E L V D G G A D II E V T T N D N F P E Y

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UniRef90-A9USQ1

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 NAYCDGYYKSHPTIQMFWKAFHELTSEEKRKFFFFLTGND HT TYVGQVDDTVI SWF WN IIREFTNEERSRLLQFTTGSA

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\(N T E Y G G F D E N D K T I N D F W T I L Q E F K P E ~\) \(\begin{array}{ll}V V Y Y G G F H S S H R V V & R W D W D U L E Q D Y P S \\ V & W\end{array}\) KATYNKYKPNDQTIKNFWTVFNQLPEE HTVYSGVYKDHPTDDLF WQAMHEFQDS NAEYHIYTPSHPTIKMFWEVFHDLLLEEKKGFLLFLTSTP TVYHGGYFDQHISI RHFWSILEDMNLKDKSAFLKFVTSCS NVEYGGYFDDDLTVYFWEVVKEMSPQERFKLVKFVTSVS NTKYSEELHHHRSLTWFWELVREMPNEYRRRLLQFSTGSS HTVYSGAYQEHPTVRLFWEVMHGLEDRERRDVLKYVTSTP NTVYGGFDEQDPAVRIFFWDVREFDNEERRKLVKFVTSTP DTKYGGWPVNSNUIKWFWEYLVTLSNSQRKKLLVFVTGSD NTEYRGYYDEHVVI EWFWDRVAQMSNADRLKLLQFVTGTS NACYEEYSSSHPTDEMFWKALHKLTEEKKKFLVDPLDGQD NSQYDQYHKSHPTILMFWKAFHKLTLEEKRKFLEFLRGND ST VVS SVEDVVGWFWDVIEFDMTASERAKLLQFTTGSS NTVYNGYLVNSDVKWFWEVEEAYSKKMKKKLLQFITGND HTQYKGYNPNDLTI DFFWQTLESFTDEEKGKFLHFVTSCS NTVYGGLYRNHPT DLFWKVVGGFTDEQRRDLLKYVSSTP NSQYQQYY HTDYRGYKEKDRQUKWFWKAVENMTVEQQGRLLFFWTSVK VANYDNWTNPRPVVRWFWELGMDADAKAQRRLLSFIVTGSD HAVIDGTSYFFKVLDWFWTVVDSFTEE
 NAEYKVYHARHEAILCFWEVFFEFNIVERKKFLQFLMGSD NTLYGGVYQEHPTI QLFWQVMESMNNEERAKVLKFVTSTP NTVYSGLYEEHPTVQLFWKVMAGESDKERRDVLKYVTSTP NTIYGDDHEEHPTVKLFWDVVQSGPDDD NTEYKGYESNDQUVEWLWEYVEAWDHD HH HVGGGQRFTKIMDWFWTVVSSLTQE NTYEDGFFKSHSTILMFWKAFHKLTLD FTTVHNDKSEHDQQYMFWLVINGFSSGDKKKLLKFITGCP HTKCSDNLVAHPVRDWFWESVRAMSHDHRRKLLQEATGSS
HVQYYGFHSGHRLKWLWQIVENFSAEERRLEKFVTS HTEYIIGEEKENCLNLFWDFVRSWNDDQKRKLIRFVTASS DTKYAGWKDQEQVIRWFWEYLEALSFKEQRKFLLFVTGSD VAVYEHWGVPVKTVVWF WDSFAGASPKDQRKLLSFTVGCS HTVYSGVYQEHPTVKLFWEVMTELSDDEKRDVLKYVTSSP HTEYHGYKETDDQI VWF WKVVEGMSVREQKMLLCFWTSTH NWGTKNPDGTEPVI GWFWDTFKSAKPSEQRKLLSFDTGSD HTEYNGFKETDRQI DWFWK VMKKMTEEERRSVLFFWTSTK SASYEGCSASDEDIKNFWTVFFELSEENKKKFLMFLYGTE HTQYHRPDDANSTVQVFWQVVRHMSLGQQRKLLEFSTSMN NAVTNGFEFDDTTLNIFWEVVAEMSSEERRKLLAFVTSSP DKFDHGYTASSPPIVNLLELIHEDDQE HTEYSGDYENYPTCQWFWEVVGEFDQE
FTVTRDFEYHSMKMYWFWDVLINMASP FTVTRDFEYHSMKMYWFWDILENMASPDRAKLGQATGTS NWGAHSSPESEPTMRWF WQAFEEASPQDQRKLLTFATGSD KAQYQDYSSSHPTILMFWEAFEKLKLEEKKKFLVFLTATD NTYKGEYHPNHPVIVNFWKRLLYVFCC

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UniRef90_G7YX17
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UniRef90_A9USQ1

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 QLPSGGFAELTPKFQDTAAPTFGN

 \(R\|P I L G M S E I K\| V L Q P M K V D R D G G T D\) HVPVEGFRALMSASGY \(\square H P F T \square Q L V P A S\) \(R A P V G G L G K L\) RIPI YGMASLQ \(\quad\) MVIQST AS G \(R V P\) Q GMRD K \(\quad\) R \(\square Q P\) VA D RVPMNGFAELYGSNGPQSFTVEQ WGSP \(R L H \square R G V K E M R \square T \square R C P E T L S E E D H\) RPPVQGFKALTMNDRDCLFSIQCVQLSDCEYPKSLTCYS I \(R \square P A M G A T N L L I D K L S A G D D E N R F P V A R T C F N Q\) \(R A P L L G F Q M L N P K F G \square R N A G P D Y\) R!PAEGMRHFQFTDADFQKENPD DFH

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 \(R \prod P A M G A A S L T D K L S C L G E D C G M\) R\|PAMGATNLII RIQLLRSKDEMDNKPDERFPDARTCFNM
 RVPATGGANLQPQFSDRCVEVPDDSSHNHRLPTASTCFNL


 \(R V P P M G M N S L R \square T \square H S H R S L S E\)

 \(R P P L L G F K E L N P K F S L L R K R A G Q D D\)
 SI PFEGFAMLRGSNGPKRFTDEK WGEESALPR RLQMGGLKNMKDTFCCPGNLNEKDP \(R\) LPVRGKQQMGI IFRCPETFRETD
 RIPISGSASLNLVIMMKNGCDTDRLPSSQTCFNQAP LLGG S S Q L L I P P P F S I I I I








\(R \| P\) A T GPA S L S I R I L C L G N D T G R



पK
RDAGADEER
RDGGTDEDR
 \(R L Q V N G L K R S G I V F R S P N T F T E K D S L\)

\(V D K D P \frac{R}{T}\) \(R\) VPI A GFRALTSSDGKLCPFTDNGVPVVAMYVRAATCMNL



 1 PAMGAALLP PKI SCLGEDEER





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\hline UniRef90_A0A023EVW4 & \\
\hline UniRef90-I3LVA1 & L DLPKYSTMERMEEALQVA \\
\hline UniRef90-U4TZQ &  \\
\hline UniRef90-W5MSA4 & LLLPKYSTKERJLTKKL \\
\hline UniRef90-M1 W0L8 & L P \(\square\) Y T SEAVLREKL L Yal T S \\
\hline UniRef90-A0A023GF & L DLPMYS SEAVMREKL \\
\hline UniRef90-FOW2D9 &  \\
\hline UniRef90-IOYLY4 & LPEYASEEKL R S RLL LTA \\
\hline UniRef90-L5LKE7 & DLPK Y S S K E L S \\
\hline UniRef90-G6DCN7 & L DLPRYQTKERLKYHLLMAI Q Q \\
\hline UniRef90-UPI000273F & L DLPPYESFEELWDKL QMA \\
\hline UniRef90_UPI00033461 & L DLPKYS TMKKMKN \\
\hline UniRef90-A0A024GC & DLP \(\square\) Y EKEKDFRQAM \\
\hline UniRef90-N1JCF5 & L SLPRYS SKQRLES M L WRavVE \\
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\hline UniRef90-W4Z0Y3 & LPNYQKKSTLKEKLRYAI T S \\
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\hline UniRef90-T1GTQ9 & L KLPPFKNDETMREKLLYAIES \\
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\hline UniRef90-R1DLQ1 & P NFKSRAVLRERLLYAll \({ }^{\text {S }}\) \\
\hline UniRef90-A0A024SL & L WRYT S K ERL ES ML WR AVV H \\
\hline UniRef90-W9XS76 & L SLYRYSSREKLEHKL WMA \\
\hline UniRef90-G8ZZ08 & P D Y Q -1. \\
\hline UniRef90_UPI000180 & L P NYP S K VVLK K K K K \\
\hline UniRef90-A3GHK0 & L GLYNYS S K EKL VD KL VTAVNE \\
\hline UniRef90_UPI0004571FD & DLPNYS \({ }^{\text {d }}\) - KOK \\
\hline UniRef90-J3NH14 & PR Y P T L E L \\
\hline UniRef90-UPI0003D09D39 & L FLPPYSDKEILK \\
\hline UniRef90-U9T013 & L K L P S S Q S V \\
\hline UniRef90-A5DGV7 & LPDYQDKELI R \\
\hline UniRef90_UPI000203960E & L LLPPFSTIGGKLKEKL Q \\
\hline UniRef90-V9G0V1 &  \\
\hline UniRef90-G2QSP2 & LKLPQYTSAAVLKRKLLYAVTS \\
\hline UniRef90_V7BFA6 & L K L P P Y S SKERMKEKLLYA I T E \\
\hline UniRef90-R4XCl4 & LKLPNYT THEQMRR \\
\hline UniRef90-H8X3P6 &  \\
\hline UniRef90-F1KTV1 & LDLPP】T DREEMRRRLL \\
\hline UniRef90_A0A016WY & \\
\hline UniRef90-G3UKM0 & MERVEEALHVATDD \\
\hline UniRef90_UPI0003443092 & L DFPKYSTMEKVEEALQVAINS \\
\hline UniRef90-A0A024TKX4 & \\
\hline UniRef90-TOMG45 & L PEYSSKDKL Q K K M T AL \\
\hline UniRef90-K3WL10 & V DLP \(\square\) GVSKRELQDML \\
\hline UniRef90-17M248 & KLPNYEDGNKLK \\
\hline UniRef90-J5JIB1 & KLPRYKTEATLREKLLYA \\
\hline UniRef90_C7YM87 & L KLPRYKTEAVLREKLLYAVT S \\
\hline UniRef90-UPIO00333 & LYLPQYSTMERMEEALHVVINS \\
\hline UniRef90-K3YG96 & L HLPAYTSSSMMQSRLRVIVQE \\
\hline UniRef90-V5FLQ7 & L GLYRYPTKQK\AAKLLWSAV \\
\hline UniRef90-11FMQ3 & LPDYNKKSVLKEKLLQSI T S \\
\hline UniRef90-K1QDU8 & LL CLPDYDSVESLHRSILI A I N E \\
\hline UniRef90-K2G9K0 & L ELPL L S TKEKLEKKL Sil A I N E \\
\hline UniRef90-C5LR43 & P EYS \\
\hline UniRef90-C1G9C1 & VALYRYT T REKLEEKL WRAV \\
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\hline UniRef90-U7PWF2 & LKLPRYSTEETLRDKLLYAI R S \\
\hline UniRef90-A9VDJ2 & DLPEFPVR \\
\hline UniRef90-C4YBB8 & LSIYQYS SREKMVDKLTKAVN \\
\hline UniRef90-A7T196 & L CLPDFPSFNEMQRKLLLAVNE \\
\hline UniRef90-T5 & L SLWRYGTKDRLEAML WRAVRE \\
\hline UniRef90-UPI0003F0B5B3 & L DMPKYSKMKRMREALQEAI D S \\
\hline UniRef90-UPI000161C275 & LKLPLYDNAETDRRKLIYAI N \\
\hline UniRef90-K3X451 & LL D PL HDTRHEFRAA \\
\hline UniRef90-H3DYX1 & L K L P NYNKKSVLLEKLRYAI H S \\
\hline UniRef90-U6ITM1 & L KLPAYQTAEEMREKFLLAI ES \\
\hline UniRef90-G8YA19 & ALYD Y S S K S K I Q K L N \\
\hline UniRef90-H2ZJ68 & L CLPNYDSYDELHKMLKI \\
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\hline UniRef90-G0SAP1 & KLPQYK TKE GLK K K L LYav K S \\
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\hline UniRef90-F9W790 & KLPPYKEFEVARQKLIAAI E E \\
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\hline UniRef90-B7G4C4 & DLPMY \\
\hline UniRef90-W4FEW4 & DLPMYPSRELMEHALKQUV \\
\hline UniRef90-F0X7Y3 & TLYRYRSKEALQKRLWEAVNE \\
\hline UniRef90-H0XH44 & LYLPKYSTMERMEEALQGAI N \\
\hline UniRef90-D5G737 & \(\square \mathrm{L}\) LWRYKRREKLEALLWRAVTE \\
\hline UniRef90_G7YX17 & \\
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UniRef90 R7Z0F?
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UniRef90-E4YAB8

LMESCPFLSFEARCKYF KLKAFGQPQVPPHLKKF LS IGAK IRDMEHDARRQMENKAREAFFDS MMSQHFHL DFPTKFSHFVTTSAGLVVHVSKQY \begin{tabular}{l} 
VKL \\
\hline
\end{tabular} KA \(\square\) S RKENKNRSNPDEYYEMNC LMTSCPFLSFEVKCKYFRDAADRRDSSGGMPRKKF

K L ELLFKFPFMKFFERVDYFNDLIEADKDRPGENRLRS

 \(\square L Q Y \square P H V P H K N R V L L F R N M V T K E K E S A S P H V T H I\) ELMSACPFLSFEARWKYFQNMMDTSGSGPSFSRKKF ILEHKEVTNFKTRQRFALQMLQ EGRHMREELWEM DFEAKLRNFYRKLETKGYGQGPGKLKL RRKLRERLHTATSRFLVI \(\square S \square G G K \square S V L E Y E A R R Q M G R K A E E A F I N S L D K R Y F K V\) S GRLDTVLIKYPCDDMEAKLLIHSLECNRLFFSIPPGQWTF LLVDCPHLPFEYRVRIFRELVKEDRRQRVRPVAED
 \(P R \square E \| L R N L P F I P F E T R V Q \square F R E F V Y K D Q L R R R A G H V H A\)

CPF \(\square\) PFE \(\square R R\) QYFYRA \(\square H R \square Q Q Q Q R \square Q R Q K \frac{V}{F}\)
TS F NLLS RYPK LT FEAKA QVFRKQDKKEQRKHSRRGFY KYA WMLEQIDASYAERSG LMALYPFLFFEARCKYFRLAADRRHNAGS LDPKKF \(\square S \square W A K \emptyset R \square L E H A R R Q M E A K A R E A F F D S \square T S Q Y L V L\) CPFLPFETRRQYFYRALYRLQQQQRDQRQKV

DSPPAPVFQL
NGKSSVTKGGPQ \(\square\) AYE RSFRWK \(\square\) AHFRYNA \(\square P S H V K i\)
LIE WSARDFPTKYAKFVSHTSTLLRHASGTVLRI LTH LAK K PF S L KYGWFLDQASALVTPYDTLHVHF LSS GAKI QLLEHDARRQMESRARDALSHRVVRQFLTL I MK N


\(P R \square C P F L P F E T R R Q Y F Y R A L Y R D Q Q Q Q R \square R R Q K V\)
 \(E \square G K T C P F F P F D T R Q M L F Y R A M Q R L R V A P R L D R K K R\) YGDFQPE \(\frac{R}{R}\) S QERVTPRLDERKR
QGPS 1 GFDT \(\square R G \square L I S Q G K V K R S R S K G G L A G\) E \(\square\) GQAAPFLPFDTRQMLFRAVLRNERVGPRLDRKRR

SFSLKYAWLLT QTSHSYKNYS
KM
DLVQKDKVLRHELS LQQPQAGHCRI SLIGQTPAVPYKKKYEYFRSKI RKLADTQPGQRFDill \(\square S \square G A K \square Q \square L E H D A R R Q M E V K A R E A F F S S V V S Q Y F V L\) DFEAK LDRNFYRKLETKGYGQGPGKLNV \(E L S K Q C P F \square P F E C R Q T L F R \Delta Q E Q Q P R \square T P K \Delta E K K K R\) GGSETFQDKVNFFQREDRQVHMKRPMSKVKV CPF \(\square P F E T R R Q Y F Y R A \square Y R \square Q Q Q Q R \square Q R Q K V\)

A LVQELPFVSFQDRTK ILH Y LDR LDEQFM M PK LDE \(\downarrow\) RHMPF \(I\) PFDARVH IFRQF IQKRRQGMDAEQWRM

DFEAK \(\square R\) NFYRK LIEAKGYGQGPGK \(\square K\)
LK GDGRSYPRANQPF \(\square L Q Y \square P H \Pi\) PHKNRVLLFRNMVTKEKESASPHVTHFI ALSFRMKKQWF LVQLSRDATPVTEAVAKL CPFLPFETRRQYFYRALYRLHQQQRLQRQKV

A LDLPQNFPFLPFATRYNY LQQQVRGQDNSRRLPRQKV \(C P F L P F Q T R R Q Y F Y R A L N R L Q Q Q Q R\)
\(L L E N R I V T D F E S R K H L V M M L F P D L K D K Q\)
\(C P F L P F E T R R Q Y F H R A L N R L Q Q Q Q R\)
\(D L V Q K L S A L R Q E L Q T V Q\)


पS DLIE NS S LP F D LRRY LFYMS S S RRLNSERSSREKK

\begin{tabular}{|c|c|}
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\hline UniRef90_V7BJ05 & \\
\hline K3X480 & NVVRENLLADSMESLA MIPREHI RSVMR \\
\hline \(17 \mathrm{MAC8}\) & VI DREEI WYS \({ }^{\text {SYKLLSGLPPSSLTEQFEIVFKDENGVDAG }}\) \\
\hline & VFR \\
\hline & RREHLLEDGYVQLGALPREKLKGTURVEFVKEPLEDAA \\
\hline UniRef90 & TI RREHALEDAYNA YGAVGEMFKEKLGI QFVNEAGIDGG \\
\hline UniReef90-K9 & DIRRESVFEDAFSQYYGL GDGLKEPLQISFIDQAGIDGG \\
\hline UniRef90_A7AQ28 & T RRSHVVEGM \\
\hline UniRef90-AOAO24U & SVMR \\
\hline & T R \({ }^{\text {P }}\) \\
\hline UniRef90-J3N & KVDRDNLLASAAKVMQSHKPA \\
\hline UniRef90 & DRSRLLDESEEYGGQAKPSELHSGLL \\
\hline UniRef90-AOAO16U &  \\
\hline & VIRRDHLLEDAFNQ1 MCYSRKDLRSKLYV \\
\hline  &  \\
\hline UniRe990-Q4S & TVSRQTLFEDSFQQI MALKPYDLR \\
\hline UniRef90 UPIO003505BA5 & PVRREYLLHDIIRDHLRNATNSQFR \\
\hline UniRef90-C & G \\
\hline UniRef90 E9E912 & RRECLVEDSLAAVSEVIDSEVKKGLRITFRGEEGDDA \\
\hline UniRef90-A2DQ3 & \\
\hline 90 & E \\
\hline UniRef90-Q9BL11
UniRef90 \({ }^{\text {DOMMO3 }}\) & RRE \\
\hline O-M0 & LDSAVKVMEMY SSQKAVLEVE \\
\hline UniRef90-TOPF & TV \\
\hline
\end{tabular}
 VVARDQLLE QS L A FLMQLPVDELCRRTRVTMAGEDALDAG
 RVVSRNNRVL DSAAKVVMEMYVSSQQKAGLREVEYVGEEGVDAG RVRRTHLVEDALEELGRQVK SDLLKPLRVVFDGEEGDDAG

 YI HRRSLLRQSMEHLSELPAAHMDSLLRRIDFDGESGUDAG KVNRPRLVVEALENLSASKSMHLAHGLLSPAAGL
 TVRRDQUYMDAFEKYKPKAVKDLKANIVRVKMINEQGVDGG


\(R\) VSRNR LDD SAAKVMEMY SSQKAVLEVEYFG EVGTGL

 TLRRTHLVEDTFRQLAAAADHCAFKRELLVLFADDRKLMNV N NRDEI WMST DAELSKQDSASDHQQLIINFEGEAGIDQG T I S RTDI LIK QAELVI QDLASS KALLVVQYVNEVGTGG \(P D G T K S V F G Q M C A K M S S F S P D S D H R V W K V K F V G E S V D D C G\) EVVRKDILKKAEKVMEDMSGSASARTMLEVHYENEVGTGG
QVYRDK冋FDES EVSREEIFEESYRQLMKMRPKDLKKRDMVKFRGEEGLDYG KDRSHLLDESFNYIAQAKHNELRGGLFMEFKNEEAT GP RVRRECLVEDSLQRVSEVSPEEMKKGLRTGFVGEEGVDAG KVRRENIVEDAMQQLVHLSSSTLKKPLKVKFVGEEGIDEG NIRRDHLLEDAFNQIMGYSRKDLRNKLYVTFVGEEGLDYS CVSRENLLLQAEKIMEELGSS RISRSRLLESAMKVMELYGSS P P RISRKHILESAVKVFELYGSS RVSRNRILDSAAKVMEMY SSQK RISRKHILESAAKKVEMYGSSS RVSRSRILDSAMKVMELYGSSA
VVKRGRMYEDAFNALTKKKAPN

K A
KK K
 Y

TIKRGQEFDDAFEQFYELGES LKEPVQUQFLEEAGIDGG

\section*{I\RRDNLLEGTFNQVIAYSRKE पRNKY}

VARRGCVFADAFERFADMPDSMFAVRFRDANDMDEEGYGE
TIRRSRMLEDGYEQLRQLSQHAMKGVIRVKFVNDAGIDQD RMTRERDIQQSLGQLAEAPPDALLAYLKVTFDGEPGIDAGG RTRRDSTRDSEOTSO RISRKHILESAVKVFELYGSSS SIL VEYFD EVGDEG RISRKHLLESAVKVFELYGSSS SGKLEVEYFD EVVGTGL LIDRSQVLAESFEYIDSRAMPK RVSRNRILDSAAKVMEMF SSQRAVLEVEYFGNEVGTGL

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 GV QR E WY T V L S Q A I L S S T L F V A T H D NV Y M M P H P N A T S S D D

 GLTREFFFKKLTE I A F S P DYGMF RYVNSKYYWFVPES KSEN NKRDFF LHVFDELMAP ESKMFDYNESQTVAWFPPKP KVEE

 G \(\operatorname{l}\) V R GVVLRR E WF L L L V C C Q A L



GPSREFFF LLS QE LF NPYYG LFEYSANDTYTVQDSPMSAF
GVYREF LVS LCRE GFA A E HGGLFCLLT DNGCVYPNPSS YE H L
 \(G L L R E W F G D V C K Q U F S E K M G L F V P T K G E D M S Y W D D P D S D E\) GPTLEFYTLLSHELQRA GLGMWRWPANADSSNGSQFSSKVI \(G L T Q E L F S V A A R T L C Q P G T G A F C R L A S G L A W F P T Q V P S C E\)

 GP T L E F Y T L L S H D L Q K A S L G M WR S S S G D K V S M QI Q A H K VI GPTLLE F Y TL L G H E L Q N A R L G L W WR S S S P Y D Y S EMEDD F K V V
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QLFEFVGKMLGKAVYEGIVVDVPFASFFLSQLLGHHS KQFHLLGQVVAKAIKDSRILDIPFSKAFYKLILGQELNLY KYFVFSGRVIGLALMHKVQVGIVLDRTLFLYLAGRSITLE EYFVFSGRI IALALDRVQVSUTFDRVFFRQLAGEDISFE KMVGULCGLAVYNCVLVAFPFPLALYKMLLDQQPVLE WKFELDGTIMSLAVYNGMTLPDTFPKAFYRKLQGESTTEH EMYYLFGAVLGLAI YNSTDLDLQFPLADYKLLMGKSLDHN SYFCFIGRFIAMALFHSKFIDTGFSLPFYKRMLNKKLILK DTFLLVGTFFGMALYNHCQTPFPFPRALEKKMRDVEPTLE EIVELGGTMTGKALYEGGLAEANLAHFFSKAMLGAPRTVD SDQFFAGVVMGLAVYSTLLDVALPPFAFRKLPSMQYTLE GYFKFVGTVVGLAAVNSYNLNVQFPSLLFKKLVGKKLILD EQFHQLGRLVGLSSI YNHSIVPFPFPLALYKYLLDTPPDLE QMDEFLGKLMGASI RSKQYLA LNA ALVWKKLAGERLVLD EYFRLVGQTMAKALQDGRLLDLPLSTAFYKLVLGQELDLY MEFLGRII GKALYDGVLLDSAFATFFLAKWLGKRSYLD DTYKFIGRVVAKTVYDGEFLDVNFTKSMYKALLQQEVTLN DKLEAVGRLLGKAI DDGQVLPMRLCVPDFKALLGTPVSIH KQFVLLGQVVAKALQDGRVLDLPFSKAFYKLILGQELSVY SEQFFLGLVFGLALYNSTLLDVAGPPFAFRKLQPFRCTLD DSYFLLGLVLGLAVYNRVLLAFPAPLLLYQKLRGAREPGR SLERELGLVIGGGAVNKVPLPVRFPLLMYKKLLNKTVTMN
 MYFHSVGRFVGRALLEGATLGFHLATPLLKILLGLPLSFT EQFFLVGVVLGLALYNSTLLDVALPPFAFRKLQTMNYTLE

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 SYFHFVGRIMGLAVFHGHYINGGFTVPFYKQLLGKPI QLS SYFKFIGRVAGMAVFHGKLLDAFFIRPFYKMMLKLP: TME EQFFLVGVVLGLAIYNSIILDIALPPFAFKKLLAQPLTTQ MEFELIGTLLALALYNAVGLDVSFPHTVYKKLMGCTLGLE NRFRFLGRFMAKAIMDFRMLDGPGSEAFYKWMLGQEDSFQ SLFKTLGKFVARSMLDSR\|IDSFNPAFFRMLLKRFANAK FYKSKVC
H TLRVIGQFVAKAMDDSRTIDLSFSKFDKTVLGEPTTTA KHFRLVGRVMAKALQDGRLLDLPLSTAFYKLVLGQDLDLH HDFRVIGQFVAKAMLDSRIIDLSFNKDFVKLVLGEHVPVE HLFKSLGKFVARSMLDSRIIDDNFNPTFFRQLVKRAKVK DHYYFLGR LLGKADFEKHLVELPGAGFFGSKILSDNSEVHM MELAGRVLGLALLHRCLIDTFFTRTFYKMLLEQPITLL
 FYKQLLGKPDQLS RRFRF GSMVGRALRDGVLQDVPFADHFRNS LGRNNSIS QLFEFVGKMLGKAVYEGIVVDVPFASFFLSQLLGHHHSVD KNETHLGGLIGKALFEGLVLDAHLADPLLKHVLGDPDSFS

 HELRVVGQFVAKAMLDSRI DMSWNKVFYKQVLGEDVPI D EYFRLLGRVMAKALQDGRLLDVPLSTAFYKLILGQELDLH EYFRLVGRVVAKVLQDGRLLDLPLSTAFYKLILGQELDLE SYFHFVGRVI GLLAVFHGHYIDGGFTLPFYKMLLGKPIHLD QLFKMLGKFVARSMIDSRDVDNFNPIFFRDGDESTAVRP NKFKFFGQLLGRALKDSRLLDLPLSPLLCRYLLSETFKFR
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 DLEELMPAVGRNLKNVLKEESEHKL ESSLHMTFVQMEEGG
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 DLAAVDSMLVNSMSRMRTDDTEEMFEDIVMETFTTLGADN D L L FDAEFGKTLQEMQVLVHCKQFMDATDDCDDFTLPGY DVWYMDETTYKSLQRVEATDMVEALADDFSVLVPAVDGGH DMESVDQQFYKNLKWLLDNSVE GGLEMKFCYEREEFGKT DVRYVDETTYKSLRYIVESDDVDALALDFSVTSDDH DI QSFDPELGRGEKSTFDVDMCFRNTKDEDLYLDFTDPGY DLAEYRPTLARGLRQLLEFDGDETTFCQDFVINVERYGET
 DLAEDDPHFVTSVSQMREMKENDEVIGGLYFTTSYEAYGEM DMKEFDPVLAESWRDMLEDYTPDVVQTLDTTFTVSWAGET D \(\operatorname{LESDDTEFYNSGIWLRDNNDEECGLEMYFSVDMEDLGKV}\)



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R A \(S L K L V D P S\) S A K S LS Q P L Q R K I





 ALD S T S LDW L L N LT F H N R E E E G K K N F D L D S V D P E L P K S L V W I L E N D
 E L P S LID S E F Y K N L T S I \(\operatorname{L}\) K R Y D G D I A D L






 DLYELDA QLARS LQQLHTFSSNGEADSIDELYLDBVLPGY


UniRef90_V7BJ05 UniRef90-R7Z0F2 UniRef90-K3X480 UniRef90-M5W7B6 UniRef90-R1CTV4 UniRef90-Q6CN77 UniRef90_K9GDI5 UniRef90_A7AQ28 UniRef90-A0A024UHY6 UniRef90_S9YJ65 UniRef90-J3M7Y2 UniRef90-M7ZJ73 UniRef90-K4CQ05 UniRef90-A0A016WQD0 UniRef90_Q4S336 UniRef90-A7F7C8 UniRef90_G3ASI5 UniRef90-Q4SKN0 UniRef90_UPIO003505BA5 UniRef90-C1MYC3 UniRef90-HOYBH3 UniRef90-E9E912
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UniRef90_E4YAB8

210
220 P D 1.

240 TGVPLCNGAKRPVTNENQEFVDLYVRYLLDTSVSRQFE PDFVLSSRPDNKMVNVTNLEDYVSFVADATVKAGI TRQVE TAVDLREGSTMPVRENRDEYVMLMAYRLNRQAEASR KRIPLIKDGLLSTKVTQKNVFEYYTRISHYKLNLQLYTVTS VTAELKPNGSQTAVTNKNRLVYISYVARYRLQLQPALOTN
 AEOHLHEPVCTGSEGSSGLISYIHLMAHFRMHTGIKNOTA PEYVLSPESSLKNVNADNLEOYVSEVVDATMRTG|ARQLE
 ETLDLKGGADIVTOSNKAYYORYVHRRNGEVGROA

 SVVELKKNGALVYTKHNREFVDLYVNYTGNESVRKPFE AAFELRPNGANVPVTSDRM
Vavplchagerkavtnsnareymoly iryviotavtrafe
 KTIKLYPDGANKVVDNVWRHIYIDRMVRYRLODQPERVTS HTTELLSGGTEKPVTNANRDEYVRGYVHHRYNGEDAQQAL \(R V V E L K D G G A H L P V T F S S R C E Y A D L V E Q A R L H E S D D D A Q\)
\(P D Y V L K G E E S T V V N D N N L E E Y D S V V D A T T N T G D R Q M D\) dVLDLIPSGRLTDVTSGNKATYVDAMVRHLLCGRWSQQDG KIVELIPNGANISVTKENRIRYIYLVANYRLNTKIAKQCQ KIVDLIPNGANDVTDKNKOLYVKLLVDYKLNKSVKKQDD
 MEVALCPGGEKRPVTNSNRAEVDLYVKYMLDGAVSRQFE PEYALKAGNDNVDLN ETVPLKPGGEVIAVTETNRAEYVALLASWYLGGAVASOFE VELDPNEPGKLVTGSN RKEYYAAFVNYVFNKSVERVFD T S H D L K L G G S N I L V T E E N K D E Y I G L M T E WR F S R G V Q E Q T K

 R TVVN L K P N G S N Q R V T N V D N V V H E Y I \(\operatorname{R}\) R L Y V





 E DVV E L D P T E P G K L V T GT N K R E F V


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\(D\) \\
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 \(\bar{V} S V P\) L C P G GE K KP V T N A N R R E F V D L F V H Y H L D T A V A R Q F E



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 EVVDLKPGGQNLAVTPENLEYIHKLADYKLNKEV



 HE V







 NKFELMKSGQNKAVNGDNLSQYI DLVTHWTM|IEGVRRQFQ


UniRef90 V7BJJ05 UniRef90-R7ZOF2 UniRef90-K3X480 UniRef90-17MAC8 UniRef90_M5W7B6 UniRef90-R1CTV4
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UniRef90-E4WVU3
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UniRef90_E4YAB8欠 UniRef90_E4YAB8

260
270
280 AFKSGFNQVVS DEHDQTFNEEELERMLCGEYDSWNELGDN PFKRGFFTVCGGNALSLFRPEEVELLVRGSDEPENWRDAS
 AFKSGFNQVFPDEHLQU FTEEELEHLLCGERDSWNELLLD

 AFLSGFCQLIPDDWI QMFTPHELVHVI SGADNDINDMRKN
 AFKSGFNEVFPDSTLQQVSEDELERLLCGEQDTWDKLVDH NFAKGFGDI LANPFFGCLDLEDFDRMLGGNNTVNDKDWRS

 SFHEGFDHVI GGNALSLFSPEEI ELLLCGSDDIDVDLLK S AF LDGFNEVVPDQWLQYFDEKELEVMLCGMQEVDLQDWQR DFMRGFLRGCPVESWKDFDPDELQVVLMGPTNYDWHLLKK
 PFKRGFYTVCGGNAFSLFRPEEDELLIRGSDELDUASLRA YFERGFKEVVASETLKCLSYDELQELVCGSQKFDWSEFKR \(A F L Q G L G Q I V S P S W L A M F N Q K E L\)


 AFRSGFNQVFPDKHLQIFTEEELEKLLCGERDSWACLLDH PFKRGFFTVCGGNALHLFRPEEVELLVRGSDEDDDPSLRA
 S LAEGFRAVDTPELINIFSPQDLDQIVSGSPQYDWPALKK EFKRGFFKVCNMDVVDFFQPEELQAVMVGQENYDWEVFKK AF LDGFNEVVPLDWLQYFDEKEL








\section*{} AFQKGFNELIPQHLLKPFDQKELEHTSQKNIDPAFQLFDP HFTQGFTDIRKDFFECLDDEDLDRLLGGSNDTDNLQDWK S PFRRGFFSVCGGNALSLFRPEEDELLVGRGSDEQDVKSLRA AFHHGFHQVCNHEVLSMFRWEELQQLLIMCGSSDDDFEALEE
 AFKEGFNSVVFPLSTLQHFYSHEMDTFLCGANNQKWELMEY

 AFRAGFSQVFPYSALRAFTPNELVMLFGRDEEDWSMEMDS
AFLRGLRADVAPTWLSMFNQTELQRLVGGDSEISDDDLRD
 ALVRGFYEVVDSRLVSVFDARELELVIAGTAEIDLIDWRN ALQKGFNELI PQHLLKPFDQKELELI I GGLDKIDLNDWKS AFQTGLEHIVDRSLLRDFDSKEVMKLFGGDSDIDVEDWKR EFLMGDYDVVPKAGLSVFDYQELELILCGDPT:DTADWKA
 AFYNGFHSDCGGRALELFSPQELVQVICGSSEFDDDSLDN
 AFRSGFNQVEDUTSLQDFTPSELDYLLCGRREDWEVETEH AFRSGFSQV FDDSS LQQIFSPQEDDYLICGRQEIWEAEVDN RDD VYTLQLNPDSSVNPLQVHELKPNGRELPVTDDNKKEY AF QAGFS QV FPYS A L S A F T P D E L C T L F G R V E E D WS LLEM D S


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UniRef90-K3X480 UniRef90_-17MAC8 UniRef90_M5W7B6 UniRef90_R1CTV4
UniRef90-Q6CN77 UniRef90_K9GDI5 UniRef90_A7AQ28 UniRef90_A0A024UHY6 UniRef90_S9YJ65 UniRef90-J3M7Y2 UniRef90-M7ZJ73 UniRef90-K4CQ05 UniRef90-A0A016WQD0 UniRef90_Q4S336 UniRef90-A7F7C8 UniRef90_G3ASI5 UniRef90_Q4SKN0 UniRef90_UPIO003505BA5 UniRef90-C1MYC3 UniRef90-HOYBH3 UniRef90_E9E912
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290
300
310
320
【KFDHGYTASSPPIVNLLE VVREFDHEQRRAFLQFIVTGAP NHKDPHPEETEPVI RWFWEFFGAADAKDQRKILSFITGSD HSKHTMTRQTYNTVKWFWELVHEMPNEYRRRLLRFATGSS NLNYQTYTKDSDQI KWLFEILEEYNQEQRAGFLFFVTGSF ITKFDHGYTVSSPPIVNLLEIIHKFDQEQRRAFLQFVTGAP HTRYGGYNELTPTVVRDLWRVVADFSHEQRALLLKKFVTSSCS
 TTYSGGYTSYSNVIVWFWELMNDFDEEERRTFLWFVTSCR HTTVKHGSQQQDVVDWFWLTVHSYS QVQKAKLLLQFVTGGS
\(H T V Y Y G F H G S H R V I D W L W D I A S D F T P D E R A M F L K F V T S C S\)
 HTQYNGYKEKDRHVNWFWKAVESMTVEQQRQLLEFWTSVK HTNYNGYKKDDPQI SWF WEVVGSMSAEQRNVLLGFWTSUK NTEY
 VTKYSGWKQNSNIIKWFWEYMNDMSNKERRKLLGFVTGSD NTVYRHYTRNSKQI DWFWQVR
NVKYVYYEASHQTIVNFWTVFYK DPEEKKKKFDAF DTGSD HARYSGYDKSSKSVAMFWSAVRSMDAAQRRALLKFTTGST NTEYTSGYEREDPV VAEYDNWESRQPVVGWFWETFQEATPGNQRKLLSFITGSD NVKYSQYTPTSKTI QMFWK DFEEFDEKQKRNLLTF T T S L T NTQYGGLYVIHPTVELEWKAMQEMDDADRRRVLKFVTSTP

 \(N T V Y S V Y D D K H P T G V M F W E V L Q D F D E D Q R R K L V K Y V T S C S\) NTEY
HT VVSRS DQCSTTLAWFWDVVEFMSAADRAK LLHFTTGSS IKFDHGYTASSPPI DNLLEVVQEFDHEQRRAFLQFVTGAP VAVYE HWPEREPVVNWFWDFFARVSPRDQRKDLSFIVGGSD
 ATRYVGYQMNSRAI KNFWSVFENFNDDNRRAFLKFVTGAD
NTVYEEYHDEHPNIQVFWEVFESLTAEEKKKFLLFLTGSD
STKYSDSLANHSVKTWFWELVREMPNEYRRRLLQFATGSD STVSSSNLKAHAVLVWFWEIVESLSTSDQSKLLQYATGSS



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\section*{V}NTEYRGYHDNH VVI RWFWAAVERFNNEQRLRLLQLALCKC
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UniRefigo V7BJo5
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UniRef90-G2QX22
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\(R V I P K G D H F V L S D E D P L C E N P \quad D N S Y P F A R T C S C T\) RPPVQGFKHLHPPFTIHKVVGEHGAFAAFRDPSASTCFNT RVPHGGFANIMGGSGLQNFTIAADPYTPNLLPTSSTCDNM

 R IPVVSGWEELHAA DQPSA PESLPVAHTCFNL RLPASADEFPQRFKLQSFNMERAGRSVDAYMPVAHTCFFS


\(R V P \square Q G F K G L T S Y D K \square C D F T L Q A T A Y S H G C D P K V H T C F N R\) RLPPGGLASLNPK LTVVRKHCSK WADADLPSVMTCANY RIPAMGATNLVIRLLCLGQDSER
 Y SP IGGGLGGI KLVI EKEKN \(R\) VPFLGMESIKMRVAVLPDASER

RVPLSGFNSLTSSDRTSPFTLNGVPFKNGGNDWSHSCFNR
 \(R\|P A T G A A S L V V K D S C L G D D\| G R\)
\(R A P V D G L K S L Y P K M G I L V D S T S\)\(\quad E E E Y P T A R T C F N A\)

 \(R\|P A T G\| S\)
\(R A P V G G L G K / K\)
\(R L P P G G L A V L N P K D T V V R H S S\)
\(R A P L L G F S H L N P R F S\)
\(R\)
 RLPVGGFRSLNPPLTVVRKTFESTENPDDFLPSVMTCVNY
 RLPVGGFKS LTPPLTVVRKTFDPSMKTDDFLPSVMTCVNY RLPRTIADFRGRDFVI QVVDKYNPPDHF QPESYTCFFL
 \(R V P L Q G F K G L T S Y D G K L C P F S L K A V P Y T G V F P K A H S C F N R\) \(R L P E P P H D V L Q P R V R L P V I Q V Y F \square Q A A Y D Q L P R D F T \square H N T\)

RI PAMGATSLN \(\square Q L I C L G D D S P R\)
KTSDSPDRDPSSQTCFYR RVP \(\quad\) R G G L S N L
YVGNLTEVSLDMQYHRWLCNFDAK \(\square\) S \(\square C D Y\)
RLPVGGFKALNPQLTIVRKAVGSSQSPDNFDPSVMTCVNY KLPIGGFKSLTPTFTVVCRPSEPPYTPDDYLPSVMTCVNY






RVP LQGFKPLQGSTGPRLFPIHLTAANTDNLPKAHTCFNQ RPPLLGFQFLNPPFKVHVLWDA LEDRLPSASTCFST RPPLLGFAYLKPPFSI RCVEVSDDQ
RVPVEGFRGLMSSSGIIHQFTIQLVTRGKK
 RI PCYALDCFRFSIADPQ VENPDEMYPFVNTCSHI \(R I P M K G L G D I N F I I G G R F G P D S N M L P T A H T C F N Y\) KLPDGGFRGLNPPFTVVRKPHEAPGTADDYLPSVMTCVNY
 RLPTGGLAALSPKLTVVRKHPSSGVSTDDDLLPSVMTCANY DEKEGERGSTGAAGPRLFTDHLIDANTDNLPKAHTCFNR \(K\) K P G GFKK LTPMFTVVCKPSEAPYTSDDYLPSVMTCVNY HLPVGGLKSLNPPLTVVKKTVDEGENPEDYLPSVMTCQNY

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\hline UniRef90-K3X480 & LDIPLYY T R DKLETVL \\
\hline UniRef90-17MAC8 & MELPFYESKEDMKEKFEDAFTE \\
\hline UniRef90-M5W7B6 & LKLPPYSSKERMKDKLLYADTE \\
\hline UniRef90-R1CTV4 & LKLPNFKSRAVLRERLLYAI R S \\
\hline UniRef90-Q6CN77 & L K L P D Y Q N Y H TL R EKLL TAIINS \\
\hline UniRef90_K9GDI5 & L K L P R Y S D A T L R S KL L Y AVS S \\
\hline UniRef90-A7AQ28 & LKLPEYDTKSLLRSKLMDAMT \\
\hline UniRef90-A0A024UHY6 &  \\
\hline UniRef90_S9YJ65 & LKLPNYSKKSVLREKLRYAl \\
\hline UniRef90-J3M7Y2 & LKLPPYSSKDKMREKLLYAI \\
\hline UniRef90-M7ZJ73 & L CLPPYPSLKVMQSQL QKl T Q \\
\hline UniRef90-K4CQ05 & L S FPPYPSMEVMQNRLNIITQ \\
\hline UniRef90-A0A016WQDC & LDLPN \(\square\) A D S K ELL R RLRVS \(\square\) Q \\
\hline UniRef90_Q4S336
UniRef90_A7F7C8 & \\
\hline UniRef90_G3ASI5 & LAdY E Y S S K A KLVGK LS K A \\
\hline UniRef90-Q4SKN0 & \\
\hline UniRef90-UPI0003505BA5 & Lf LPR Y S SKElLEEKL \\
\hline UniRef90-C1MYC3 & L K L P N R R S TMREKL RYALA \\
\hline UniRef90-H0YBH3 & LKLPEYPSKE!LKDRLLVAL \\
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\hline UniRef90-M0TQ05 & L KLPPY S T K GI M Y K KLL L Y A I S E \\
\hline UniRef90-TOPRQ1 & I DLPLYPSRGLMKD \\
\hline UniRef90-F4P0D2 & YESKDILRRQKLIY \\
\hline UniRef90-B0EMR5 & \\
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\hline UniRef90-C4JVL2 & L SLYRYQTREKFESKLWRAVVE \\
\hline UniRef90_UPI0003D25 & LKLPPYSTKE@MYKKLLYAI NE \\
\hline UniRef90-D8TWA2 & LLLPEYGSPTKLAALLRLAI N \\
\hline UniRef90-A2FIB4 & L GLPDYPTREKMKQSLEI I I Q \\
\hline UniRef90-13JBS2 & LLLPRYPVERTMRTRLLKAlN \\
\hline UniRef90_G319G4 & \\
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\hline UniRef90-A0A024TLS4 & 1 DLPL L YPTKALLQEALTM \\
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\hline UniRef90-UPI00002215F5 & LRIPKYSNRTKLEEKLRYAI N S \\
\hline UniRef90-J9K5J4 & LKLPNYQKKSILRDKLRYAl S S \\
\hline UniRef90_G7JKJ3 & L CFPAYSSMPVMQARLKVITQE \\
\hline UniRef90-J8PLP7 & I CLWGYSSKKKLEQKLLWAI NE \\
\hline UniRef90-F7EZD3 & LLLPEYS SKEKLKERLLKA \\
\hline UniRef90-D2X656 & LLKLP S Y S TKElM Y K Q \\
\hline UniRef90-FOUUU5 & L K L P R Y T R L \\
\hline UniRef90-Q6NTJ4 & LKLPDYSSI DVMREKLLMAARE \\
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\hline UniRef90-G3P012 & LLLPRYPVERTM \\
\hline UniRef90-UPI00006CA737 & LELPAYQSKNQLKEKLTQA\| Lie \\
\hline UniRef90-V9IL08 &  \\
\hline UniRef90-UPI000388B75C & LKLPRYSCKQV \\
\hline UniRef90-UPI000359B418 & |LKLPDYSKVEVMRERLGTAARE \\
\hline UniRef90-UPI0004541A1D & L DLPKYSTMERMEEAL QVAll N \\
\hline UniRef90-W4H5L9 & \(\square \mathrm{DLP}\) ¢YPTRELLKEALMA \\
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\hline UniRef90-E4Z657 & \\
\hline UniRef90-K3ZQL1 & LCLLP P Y T S S K M V E N Q L Q \\
\hline UniRef90_C8VT87 & LGLYRYKTREKFERLLSEAV \\
\hline UniRef90-H3H7R1 & \\
\hline UniRef90-M7AJ37 & \\
\hline UniRef90-UPI00021A3D82 & K L P D Y S S ED 1 M R \\
\hline UniRef90_B0Y7S6 & L K L P D Y S SLEEVLRERLSVAI R E \\
\hline UniRef90_UPI0003ACBDF8 & L CLP T Y D Y E EV H R M L Q L A I S E \\
\hline UniRef90-D6RNX7 & L K L PEYS SKEVMREKLCIAI QE \\
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\hline UniRef90-W2SX92 & L DLP S Y P R HILKAKLHTAI TE \\
\hline UniRef90_L7MS96 & LKLPEYPSKELLK D R L L VAL H \\
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 EI GRSNVARDAFDQLWRREKRELLRPLKVHNSGEEGFDSG KVRRTHLVSDSDDE! KRHRESVFGQAFQKMDCLLPDSVHRDWKVKFDGESVDDCG T I RRDQVYMDAFDEFAPKKVRELKS SVRI KMI NETGVDGG KVRRKHEFDDAFEQFFKL GEALKEPI QI TFVDQAGIDGG EVVREF IVMDTMNKLDPTLSDQDLKKPLKVKIMGEEADDAG EI RREHFVDDTLSQMSRKW SDLKKPLKVKFVDGGEMDQG KVNREKILTTTIDELNK IKNDTLQKRLKVQFEGEPGVDEG RISRHRILESAMKVMDMYGAS PSVLEVEYFE EVGTGLD SVVHRDFL E QSVQHDNCDREDDDRVRLQVSFADQGDKEVG AI SRDHVLRDAFDQLWRRQERELLRPLKI HAGGEEGFDSG

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GEK G L D Y G
 A I S R Q H L L P A A QK VMELV A RHKAVL EVGY F NEVVGVGA

 T \(\square R R\) R HLGY DAFEHFYK GGA

R\S R E Y VLE S A IK VFELLYGGS S R I S R N T I F LT G L K I L S K Y G S S \(R\) I S R K L I L Q S A L K V L N L Y G T S \(\qquad\) S l Le DE Y F E EVGT G ECFFA QAFRQLCDVNPEVFRRKFNVVFRGEEGVDWG

 Q NRGRVFD DALAA L GPRPPGSL
 \begin{tabular}{llll|l|llllllllll}
\(P\) & \(S\) & \(L\) & \(E\) & \(V\) & \(E\) & \(Y\) & \(F\) & \(D\) & \(E\) & \(V\) & \(G\) & \(T\) & \(G\) & \(L\) \\
\(P\) & \(D\) & \(V\) & \(L\) & \(E\) & \(L\) & \(E\) & \(Y\) & \(Q\) & \(E\) & \(E\) & \(A\) & \(G\) & \(T\) & \(G\) \\
\(L\)
\end{tabular} RDPKRSLIFASTMKQLSAIPPSLLRAKFIVIFAGENVVGBG K \(\square R R N A V L E D S Y R R I L S V T R A D L K A R L W L E F E G E K G L D Y G\)

 \(E L N R K S V F G Q M V Q K L P L L T Q E A L H R V W K V K F V G E S V D D C G\)

 R I S R L K I L E S A L K V MELLY GAS Q S




 \(T\) I R R N Y I Y E D A Y D K L S P E N E P D L K K R I R V \(L \mathcal{F} V Q \| S H Q V V R L K A A D L R L P W K V K L I G E G A D D A G\) \(E \square\) N R K T V F A Q MVVA K M S L L T P E C L H R V W K K K F V V G E S V D D C G




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 NWF H L L G IT C G L A A Y N S TVVV D L H F P L A A L Y K K K L N V K P G L E

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 Y \(\square\) T S Y L G T F \(V\) V A R S LL L D N R L L D D TQFRAFGRLLGKALLDEGHLVPAPLTDVMFKHILSAPD SFS QMFEFVG L LMGCCLRTGVRLNDRLAP VWKMLVKQNLVLA





SDQFF LGVVMGLA MLA YNSTILDVALLPPFAFRKLIAAMRYTLE K Y F \(\quad\) H S G R I I G L A L M H R V Q V G I
 \(R Y Y Q L A G V I L G L A D Y N S D N L D V D L P P V M Y R R L L G Y S Y R L E\)

 FKF GK K M A K A V M D S R M L D L P F S I P F Y RWL L N E EHHER

 E WF K F L G I L M G V A I R T G S P L S l N LA P M M WK Q A GMM A RE




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 Q K F VLLG Y VA K A L Q D G RVL D D L P FS K

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 DLRDLDEDLYQGLLTLKNYPGNFTVTDVDRTDTSTGQQUT DLEEGWPALGQLLQWDDGEVEDVFCRDYETSMDVFGQGVT DLEETDPQLVSTLMNTLSYEGDVENDMCLDFTYEN TKDELDSSLTMEKAQADDNDTIHDARVEDLMLDFTDPGY DLEFLDAEMYRNLTWQLDNDG AESLELDFTVTQRHGNHA HI ADGWPDLASGLTALQEWDEKDGLVEDVFARTYEFSPMT DVDPQLAl ALENPEGLIGLD
DLAASLGQVQSFASINQNEK TRRKLGMTENVSTEDFTDPG DIPSFDPKLGKTVMEFQALDLSYKNVRLEDLCLDFTLPGN DLGWLDETLLKSLSQLR DIDVGGLELTFSVDESAFGAV DLAF FDPEAYKS LIEYLVTHSDVESLGLDFSVTEHVNGQA DLENYDCNLYNYATQLREGSNLPSTKDTFCLTFTALGPNG DIEFYDKGLYLISWKYLMDNQFDENQLQQYFIICKDD DLIDVSDSLGHHGATTIQLIPGSSTSCSVEELSLDFTLPGD KKIDENRNLTAAQKVPADEADTVDGAHVEDLGLDFTLPGY DMESVDSEYYRSLKYI LKEDP DPFVGKSMMEVQKIVDSKLSTSEITE EHLMKYAELYKNVPEHERDSGLVDNC D
\(\stackrel{D}{\mathrm{D}} \mathrm{E}\)
,
 D L Q A \(\quad\) D D A K L R F TVV D E E L F GQ TH Q H E L K S G GT D I I V









 DL QEVVDA LYVVQNLKSICNDHESGVTEETFLETFHTGSAT DLNEVDRDYVPGLMYIRDLDADAFSRLES IPFVTHSCVG












 D \(\operatorname{G}\) D M D R GFFFAK Y S Y L L \(\quad\) T V VK GA D L DI H F VDP E LCK S DS R A A M Y D L S F R G TK DE DL C L E FA LP G Y

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UniRef90_V9KCX1
UniRef90_W6L4C3
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UniRef90_R1EUB0
UniRe90_G0NU96

E E|V|P|L|K G G 210
220
230
240

 VELPL GTHAVSDEVTVANREEYVQLVVDHVLNVSDAEQYR


 REI ELI G G GA D IP V TT TSNCLLHYMHLVVADFKLNREGFQQTR

 \(R T V N L K P N G S K Y R V T V D N V Q E Y V R L Y V V Y Q L E Q R D A A M V G\) RTKDLVSDGSNMPVTNENRLVYI SYVARHRLQVQPAPQTA
 V E L VP K G S QI PVVTNANRQSYVDLIVDVVLNKSIDE QFR P GI I L I







 VEVDLI K D GRNI RVTNNNKTQYI ELD KVVEL CPGGKGIVVNSKNREKYVNLLIQHHFVTSISDPVS
 F S V E L FP G G K E I S V V G R H NV E M F L D M A L H F K L R R M G A M Q I E





 GDVELAPGGS DVRVTAFNRTRYVHLMAHHLLHRQVRSQSD









 VEEP IVFNGQNKLVTKTNRGEFVRKVVQYYLEDSVMRRFE P N D L E D N G S Q K R V T \(\quad\) DD N V D D T Y L



NQVAALS S
S EVILS SKFMNVTIEN
H E V V P L S T K


K SHDLKPNGGNI LV TEENKEEY I



 VICP G GEKVPVTYENRLLTVMHVEQARLTES AQQLA
 Y DVVEL K S G G A S M DV T L L E N L A E Y V K L L V L D WS L R R G V Q K QMQ




 \(L V V R G F Y D V L S P D V M F R F D Y K E L E L I L C G T S E I N I V E W Q F\) AFKE
A LREGGMSWVVPVPLLSLLTARQLEQMVCGMPE\|CCDVLKK S FIDDGFSTVFP YSSLLLL LTPEELVVHMCGRTMEDWSSETLY \(A \vee R E G M S T 1 \quad D P V P L L S L L T P Q Q L E Q L V C G L P E V S V E M L K K\)
\(A L R N G L A T V L P M E A A A L F T S R E L E T V I C G R R E V D V E L L R Q\)

 A F L R G F D R V V P R E H L A I F F N A S E E V A E E L I G G H N N L P W D D L R A A UniRef90- V4L977 UniRef90_Q16TE9 UniRef90_E3RME0
UniRef90_D0A6G4

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UniRef90_C4WWW6 UniRef90-Q4S4X1 UniRef90-R7UC06 UniRef90_UPI0002658278 UniRef90-J91ALO UniRef90-Q5TMPO UniRef90-A2FG81 UniRef90_W2KUN6 UniRef90-J6EY51 UniRef90-F7H2U0 UniRef90_Q54L33 UniRef90-W4FRBO UniRef90-U6DPN1 UniRef90-Q4T8J2 UniRef90- \({ }^{-16 E 455}\) UniRef90-UPIO00298DB1B UniRef90_C3XXN1

NTECTSYERDDPVI QLDFWEVVVEDTQEERIV \(\overline{L L} L Q F V T G\) HANYEAGFHSSHRVIKWLFVEKDLSREEQEQFLRFVTSCS HTRLAMEY RREVAWFWDVIEHMSTVYRKQLLHFATGYP NTYDKPEDVNAPQVRLDFWDVVESLTRAQQRQLLKFVTSMT SATSYQYTAESQTVQDFWAVADALDSVQKKKLLMFVTGSD HARYVGWDASHRTVRDFWSVVRKFDDSMRRKLLEFVTASD VATYKGIDDSSAPLIQWFWEVMEEFTNQERSLFLRFVWGRT CRYVDGYTAESPQCNWLWEIVHEMTVDEQKRFLAFCTGSD VTTYKIYNRSHPTVEMFWEVFHKLPLEEKKLFLRFLVGTD NTCYTGYTETSQQUWLWDVLENFSTEEQGEFLLFVTSSR STQYDGYAKTDLTI RYFWDVVLGFPLDLDQKLLLHFTTGSD STQCKGDSPNDELIRWFWETLESFSDEQRSLFLRFVWGRT HTQYGGLYVIHPSVQLIFWRVMESLSDDERRAVLKFVTSTP MVYKGDYTSSHPAVKTFWKAFFALEEDERKKFLQFLSGST AEYDDGYNVDHPTIRQFWSVVHHLNEQKKKLLDFVTASD NTTYENYTTDSPAVKLFWKIVRDLNDDEKKKLLYFVTSSP VKADHGYNMDSKSVKNLLQTMSELNPAQRRDFLQFVTGSP YARYVGWDSSHHTVKDFWSIVKRYDDRMKRKLLEFVTASD NVEVGTYKKDSPVITNFFEVIEEMNDEDQKLLIRFITGSV LKADHGFNVESRAIRNLLEVMAEFDTQTRRSYLQFUTGSP HAQYRGDFADHDVVRWFWDAVRAMDGATRSQLLQWTTGHG HSKYNETDHAHPSKRWFWKFVRGMNDEYKKRLLHFTTGNT NTKYDPLSPTHPLIVWFWDTVLNMTQDQRKALLKFVCGSA HDYKQPYFENNQQI IWFWKVLAEFDQDQLKKFLHYCTGSY NCQDHGYTMTCSHVRQLIEEIIASFNEEEQRQFFLFLTGSV DKADHGYNDDSKSVRNLGQVMSELTASQRRDFLQFVTGSP 1 HTEYSSYKETDPQI SWFWETVGRMSADQRKVLLEFWTSVK TKTDHGYHENSRAVKYLLEVLTELSPEERRKFLDWVTGSP SARYED四DPNDVVQYLRQVLRQFSRHERADFMRFVSGRE RTVYGDCQAKDPHI AYFWQLLSEFTDEQKSSFLRFVWGRS NTQYGGTYQEHPTIQLFWKVFSTDDDADRRKVLKFVTSTP TAVYRDYSGTHPTVKLFWETFHEFPLEKKKKFLLFLTGSD IKADHGFNNDSPALRRLVEVMSEFDNVSRRDFLQFLTGSP SSINHGYSKDSDAVRTLIDULVHFNDIERRSFLQFLTGAP HTRYEGFTESDDTVQLLFWEALEQFSDEQRSDFVRFAWGRS TKCDHGYTHSSRVLKTFFKGLLQMTPSEKRDFLRFVTGAP SFFFFFFFSFDFVWFWFDWLVGTFTSPPKNLVLQFVTSCS MKADHGYTMDSSTIRNLVLVLSEGNETDRREFLQFMTGSP HATKKQTHATTKLTQWFWK LRSGTLDEQGHILQFATGSS HTRYSMSPEQFPHLETFWKVLSSFSEENKRRFI NFAWGQD QERLLRLQPHCHPVVLESESVVDPRTFPFRIVRLLLQFVTGTS DKADHGYNMDSKSVRNLLQUMSELTLAERRDFLQFTTGSP ETVVTANDTASPALA WFWDVVERMHQHDRAKLLQFTTGSA VATYKGFDPGSALVSWFWEVMEEFTNQERSLFLRFVWGRT PDGSEPVIDWFWETFQAATSQDQRKLLLFITGSD MLGGSNKT TNLEDWKLHTQAVESLSTEQQRQLLEFWTSVK TKADHGFNMDSRSVKNLLQVMSEFALSERREFLQFITGSP T TKYKNWLAPPQVVEWFWQLIECLSATQRQQLLMFVTGSD IKADHGYNMDSKTVKNLLHTMSQFNASERRDFLQFTTGSP VVRYREDDENHHLVNWLWQTLEEFTNEERDLFMRFVSGRS
 FTNYSGYTATHPVIQTFWEVVEGFTKEEKRKLLKFVTSCS VATYKGVESDSSLVQWFWEVMEELSQEERGLFLRFVWGRT

 QT \(\square D H G Y N A D S R S I R N L I E I L S A F D S S E R R E F L Q F M T G S P\)
HTRYCGLTHSEPRVTWFWRTLESFSSEEQTLFLRFVWGRS ETVATPDLTASPALGWFWDVVERMQPHDRAKLLQFTTGSS
VVRYREVDEQHPLVQWFWQTLDEFSNEERVLFMRFVSGRS AVADHGYSMDSSTI HDLIYVMSTFNDREKRLFLQFLTGSP LVRYRDVTESHQLI VWFWQSLQEFTNEERVLFLRFVSGRS

\section*{CTEYDTGEESMPHVKHFWEVLTEMTNEERTSFLRFVWARS} NVTYRQYTKLDQTIRNFWTVFHKLPEEKKKMLLAFLSGSD HATYGGDSSQSPRVDYDKDTLLQFTREERAKFMRFVSGRE RTDYGDCQATDPHIAYFWDVLGEFSDEQKSSFLRFVWGRS LKTNYGYTMDSPQVAQLLEELASFGQEERRAFVQFLTGSP LKTNYGYMDSPQVAQLLEEVASFGQEERRAFVQF HTRDKQCTPETPQU


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UniRef90-F6ZZZ6
UniRef90-GOPFL1 UniRef90-R1EUB0 UniRef90-GONU96 UniRef90-S2JIL8 UniRef90-A2EEN6 UniRef90-W9YKC7 UniRef90-DOMTZ7 UniRef90-E9EOF9 UniRef90_A2ECJ9 UniRef90_J4I2R6
UniRef90 A2ZRQ5 UniRef90 FOYCR9 UniRef90-K3X449 UniRefofo-E1EVJ 6 UniRef90-K4E2A8 UniRef90-R1E7L0 UniRef90-МОТ250 UniRef90-UPI0001A627BF UniRef90-U5G5J4 UniRef90-L8GG155 UniRef90-V5BHJ2 UniRef90-FoW4D8 UniRet90 N1 QFLO UniRef90-G316M3 UniRef90-14YJ12
UniRef90 GOWHZ UniRef90-GOWHZ1
UniRef90 G3B076 UniRef90 \({ }^{-}\)A0A024G152 UniRef90-D2V243 UniRef90-MOR8Z5 UniRef90-C1E887 UniRef90-R4X8Q7 UniRef90-J8PLA4 UniRef90-G4ZDD3 UniRef90-Q4SIF8 UniRef90-K3WUL9 UniRef90 F7VMT2 UniRef90 A0AO24UOX8 UniRef90-B4H2G8 UniRef90-L9L406 UniRef90-F9G3V4 UniRef90_11 QPY4 UniRef90-J5JS76 UniRef90-A0A024JAD2 UniRef90 I1RY13 UniRef90-W6MKH9 UniRef90-UPIO003F085F2 UniRef90-UPI000329FD18 UniRef90-C4QWW6 UniRef90-Q4S4X1 UniRef90-R7UC06 UniRef90_UPIO002658278 UniRef90-J91ALO
UniRef90 \({ }^{\text {O5TMPO }}\) UniRef90-A2FG81 UniRef90_W2KUN6 UniRef90-J6EY51 UniRef90-F7H2U0 UniRet90_Q54L33 UniRef90-W4FRBBO UniRef90-U6DPN1 UniRef90-Q4T8J2 UniRef90_S6E455 UniRef90-UP1000298DB1B UniRef90-C3XXN1
\(K P P V L G F A A L Q P R F T V R V R N F F T S G T D T T R L P T S S S T C T E N T\)

 RVPVGGLKSLKFV QRNGEERNGSDTDRLPTAHTCFNF


 \(R V P V G G M K N L Q F V I Q K N G E E D G T G\) RVPVGGMADNN FKDSKNETSTAWWPTYTCYGT
 \(R A P V D G L K S L V P R M G V L V L Q T S\)

 R D A G H D \begin{tabular}{llll}
\(V\) & \(T\) & \(R\) & \(L\) \\
\hline & \(E\) & \(S\) & \(L\) \\
\hline
\end{tabular} \(K D P G G G F K S L T P M F M V V C K P S E R D G D P N H I\)
 RLPVGGMRNVQFTVQKNGEEEGSG


\(R \bigvee P\) G GFAA L N Y N GRLLAP F T I VG
RAP V G G L S R L R F K
\(R\|P V N G F S K L E S N R G M Y S K F Q\| V P Y K N T N S F P D A H T C F N R\)


R
\[
\mathrm{F}
\]

 K L P IGGGFKSLTPMFTVVCKPSEPPYSSDDYLPSVMTCVNY
 RGP LLGFSHLNPRFS
\(R 1 P\) Y \(\quad\) Y M A S L Q \(\quad\) VI
K L P I G GFRGLHPQLTVVRKS P

RLPRGKWAQ

N TP P L L G F G Q L L
\begin{tabular}{l|l|l|lllllllll|llllllllllllll|l}
\(K\) & \(L\) & \(P\) & \(G\) & \(G\) & \(F\) & \(K\) & \(S\) & \(L\) & \(T\) & \(P\) & \(Q\) & \(F\) & \(T\) & \(V\) & \(V\) & \(C\) & \(K\) & \(P\) & \(H\) & \(E\) & \(A\) & \(P\) & \(M\) & \(S\) & \(A\) & \(D\) \\
\hline
\end{tabular}

RV PMNGFAEDYGSNGPQLFTDEQWGTR DKLPRAHTCBNR

 \(R\) PP L L GFKELYPAFCI HHGGSD
 K VGERFP \(\quad\) AARTCFNM \(K\) K P




 \(R P\) P L LGFK
\(R \square P A N B A D D A Q R F Q V M K V E R A D D G L P T A Q T C F F Q\) RLPRT I AD FRGRDFVL QVLDKYSPPDSFLPESYTCFFL



\(R\) RPSPSEFTSNDQFQDYPFDKNESRDYDDY \(\square P E A Q T C F F T\) \(R V P L Q G F R A L T G N D G Q L C P F N L K G V P Y T G A L P K V H T C F N R\)
\(R L P A N T A D \square S Q R F Q \square M K D D R P Y D S L P T S Q T C F F Q\)


RMPNSAKDFPMNFK \(\square\) Q T AHGQSSQEDPDKY LPHAQTCFFS \(R\) L S G Y R L E C FR R F C DE D P QVE N P D E S L P Y A S \(\square C\) Y LT
 RLPTHAADFTQ DFKDSGLPKAAGRADMYLPDAHTCFFS
 \(R\) L P P G G L A S L N P K L T \(\quad\) V R K H G S D S S E T D
\(R V P L Q G F R A L Q G S T G A V G P R L F T D H L T A D N L P B K A H T C B N R\)


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UniRef90_W9IUF7 UniRef90_UPIO0038C596D UniRef90_F6ZZZ66 UniRef90-R1EUB0 UniRef90_GONU96 UniRef90_S2JIL8 UniRef90_A2EEN6 UniRef90-W9YKC7
UniRef90 D0MTZ7 UniRef90_E9E0F9 UniRef90-A2ECJO UniRef90-J412R6
UniRef90 A2ZRQ5 UniRef90 FOYCR9 UniRef90-K3X449 UniRef90-E1EVJ66 UniRef90-K4E2A8 UniRef90-R1E7L0 UniRef90-MOT250 UniRef90_UPI0001A627BF UniRef90-U5G5J4 UniRef90_L8GGI5 UniRef90_A7EA92 UniRef90_V5BHJ2
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UniRef90 M0R85 UniRef90 C1E887 UniRef90-R4X8Q7 UniRef90-J8PLA4 UniRef90_K3WL04 UniRef90_G4ZDD3 UniRef90-K3WUL9 UniRef90_F7VMT2 UniRef90-A0A024U0X8 UniRef90-B4H2G8 UniRef90_L9L406 UniRef90 F9G3V4 UniRef90-I1QPY4 UniRef90-J5JS76 UniRef90_A0A024JAD2 UniRef90-I1RY13 UniRef90-W6MKH9 UniRef90-UPI0003F085F2 UniRef90 C4QWW6 UniRef90-Q4S4X1 UniRef90_R7UC06 UniRef90 UPIO002658278 UniRef90_J9IAL0 UniRef90-Q5TMP0 UniRef90_A2FG81 UniRef90-W2KUN6 UniRef90-J6EY51 UniRef90-F7H2U0 UniRef90_Q54L33 UniRef90_U6DPN1 UniRef90-Q4T8J2 UniRef90 S6E455 UniRef90_UPI000298DB1B UniRet90_C3XXN1 UniRef90 A0A024GC57 UniRef90-UPIO002B4426B UniRef90_S9VDB5 UniRef90_G4YPH5 UniRef90-A9UTU0 UniRef90-T2MHM8 UniRef90_V4L977 UniRef90_Q16TE9 UniRef90-E3RME0
UniRef90 DOA6G4


LR LP P Y S S REKMMERMRYADH



 1 VLPLYPSRYLMHEALVVLVN

L RLP P Y S S QAVVMERLRYAIN



UniRef90 G8XZ08 UniRef90 DON4S9 UniRef90-M2U4W8 UniRef90_G0UAN1 UniRef90_N4VCK9 UniRef90-B0XOZ1 UniRef90_D7FWC7 UniRef90_A0A059AQ33 UniRef90-FOWPI9 UniRef90_A0A024UCF2 UniRef90_H3CGU7 UniRef90_ROKVB3 UniRef90-G1QCB0 UniRef90-A0A024TW54 UniRef90_B3S812 UniRef90-R1BSI9 UniRef90-11HMI7 UniRef90-W9S8P4 UniRef90 W5MS82 UniRef90-W4ZIX3 UniRef90-H9JM75 UniRef90-R0H1W1 UniRef90 S9WSE9 UniRef90-K8F3W2 UniRef90-UPIOO04573370 UniRef90 W4FX08 UniRef90-DOA3T5 UniRef90-V4A1C3 UniRef90 F0Y341 UniRef90-U3IT07 UniRef90_L8G075 UniRef90-M0SEB3 UniRef90 B4K4G6 UniRef90-A8NHJ2 UniRef90-A0A024TP45 UniRef90_G5EDT9 UniRef90-D8MA35 UniRef90-Q4N9N6 UniRef90_UPIOOO3F0B89C UniRef90-K3WHY9 UniRef90-H3D6Z1 UniRef90_E1FGX9 UniRef90-I1CLX5 UniRef90 A2DAV4 UniRef90-W5NTL6 UniRef90-E5SHY1 UniRef90-A7RSK9 UniRef90 E3LMC7 UniRef90_M3ZIB5 UniRef90-I1F7P9 UniRef90 N6U8H1 UniRef90-L1JC50 UniRef90_Q7PY72 UniRef90-UPI0003BBFCBA UniRef90 V6LNF0 UniRef90-I1FZ94 UniRef90-A0A024UNX0 UniRef90 T2MHV2 UniRef90-UPI00038C4FB0 UniRef90_V3Z5H7 UniRef90-G3PVX7 UniRef90 E9GFI3 UniRef90_Q4Y175
UniRef90-Q23K61 UniRef90 \({ }^{-}\)FOYIA3 UniRef90-L7M6Y6 UniRef90-W4XB36 UniRef90-UPI000457253D UniRef90 D8U6D4 UniRef90-T0RJ31 UniRef90-W9QUP9 UniRef90_F4WM84 UniRef90-M5E5M6 UniRef90-L7MSJ4 UniRef90-N1QJP0 UniRef90 M4C2R3 UniRef90-V9EA87
UniRef90-R7Q772 UniRef90-UPI0003EBF6B9 UniRef90-UPI0004408B00 UniRef90-R1BMA0 UniRef90 B3L7C6 UniRef90_UPI0003F0BFF4 UniRef90-C1HBJ2 UniRef90-UPI00046C1895 UniRef90 A0A024TEV6 UniRef90-A7ASG6 UniRef90-V4BHH8 UniRef90 UPI00045E1C71 UniRef90-E1C1L5

\(D V S R E D P L K D T \square D Q L W G Q D K R M L L K P L K V K M E G E D G V D H G\) \(R G S L F G Q \square Y Q L L H D K N V S L F K K L W S V S F V G E G A D D \square G\) \(D \square S R K N V I R D A F D Q L W Q R E E R E L L R P L K L H E G G E E G M D S G\)

\author{
\(K V S R L P D A D L R K R L K V V F R G E D G V D E G\)
} RVSRNRILDSAAKVMEMY SSQKAVLEVEYFG EVGGG|L RITRDDIMEMANKTLRGH SKRRAIVEVAFVG EKGYGA T \(T\) NRDELLKQALRAKRPLGASDPF IAFSVVDFMGENVVGEG DVSRED \(\operatorname{CLKDTLDQLWGQDKRVLLKPLKVKMEGEIGVDHG}\)
 \(R K S V F G Q L Y R E M R T W S D S G F K R A F K V\) VACRDN LEGLCAQLGNLLDGAGPQRLSVRYAG EAADGD KVMRGNILEDAASMMSTHASSN ETLEVVFEGEVGTGR
A VRRCNLIEDAFNDLSNDAVEDLRKLLTVEFVGEDDRPGV
 TVERGKVLRQGFKQLMRKCVEALQGNVRVKFDNEHGVDGG

\(T V V S Q S \square F G Q A F D E L H F \square D N K V L R M V F K V K F E G E G A D D Y G\) A L S S QCTFAQLFRETRDTPVEVLRAPLDVKLKGEQGLDWD


T TRRNHDFEDGFNAFHKLESALKDKVA DSFVEEAGDDGG IVRKDKUFEDGLK LLKHCGPGTLNWDCK CKF Y G G EAGIGGS
\(T V K R K A \prod F V Q \prod A T Q V T K L K S A D L C D P W K V K L V G E G A D D A G\) SVRRDF VADTMDKLSSLSDADLRKAFKVKIIGEEADDAG RSSENTYFCQAARQLSCVVSSQLCVKDNIRFTGEEVHGTS KVCRST GQAMEATKNFSKNDWGKNFFVKFDEEEGIDCN VVRRMS \(\square\) F \(\square Q \square A K Q V V N N R P Q E F R L P W K V K \square V G E G A D D A G\)

KRSRSSVFGQMCAKMSSFSPDSLHRVWKVKFVGESVDDCG NVSRERI LIDAVAGSLEHAGTAARQDFRVKFEGEKGADGG
 RASENSYFCQAARQLSSVPSSQLCVK \(\square\) N \(\square R F T G E E \nabla H G T S\) KT LDYRWPARYDQWWECKF \(\square\) AEG \(\| \quad\) DQG

S S SVFGQLFDELHFLEAPLLRMGFKVKFDGEGVDDYG EVNREDVFGSSVREMLCLPRYMLQKPLKVHFMDEMGDDEG RNSENTYLCQATRQLALVPSSQLCVKLNIRFTGEEVHGTS \(R V S R K R I L E S A A K V M E L Y A R S R A V L E L E Y F G E V G T G L\) \(\square\) DRSHLLEESFEYTGRADPESLHGGLFMECLGENEEATGP VVE EA F DLI HTHT QDLTS EMLDDDDVFSLERCAAS T I R R DHIAEDGMAQLYALGPR LKEPLEIVFIDEAGIDGG KVRRDHI IDDADEMI AMENPADLKKQLYVEFEGEQGVDEG \(Y V S R S N L L K D T F D Q L W Q R R K S E L R R P L R V R M E L D \square G H D G G\)

LVFRND I LGGSAAK DMELH ACHKDPDEVEY NEEVGTGL LI HRDSI FRSSCEMVSKSTNEKLKQGIAVRFHGEEGM GQ NV RRGRVFEDSFHAFQHKTGDQUQYKLSVRFYAEEGVDAG
\(R \square S R S R \square L D S A M K V M E L Y G S S \quad P S V L E V E Y F E E V G T G L\) \(R\) VRREFVVLDALQQLVQASSDQLKKPLKVKFLGEEGVDEG LVFQDTVLLKSGGNDHPMLSSKLLNKPDGEEKGNQEG AVRRSHLVEDVFNQLDYRWNYRHDQWWECKFTLEGIDDQG UniRef90_D0P035

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UniRef90_H9JM75 UniRef90-R0H1W1 UniRef90 \({ }^{-}\)S9WSE9 UniRef90-K8F3W2 UniRef90-UPIOO04573370 UniRef90 W4FX08 UniRef90-DOA3T5 UniRef90-V4A1C3 UniRef90_F0Y341 UniRef90 U3IT07 UniRef90_L8G075 UniRef90-MOSEB3 UniRef90-B4K4G6 UniRef90-A8NHJ2 UniRef90-A0A024TP45 UniRef90_G5EDT9 UniRef90-D8MA35 UniRef90-Q4N9N6 UniRef90_UPIO003F0B89C UniRef90-K3WHY9 UniRef90-H3D6Z1 UniRef90_E1FGX9 UniRef90-I1CLX5 UniRef90 A2DAV4 UniRef90-W5NTL6 UniRef90-E5SHY1 UniRef90-A7RSK9 UniRef90 E3LMC7 UniRef90_M3ZIB5 UniRef90-I1F7P9 UniRef90 N6U8H1 UniRef90-L1JC50 UniRef90_Q7PY72 UniRef90-UPI0003BBFCBA UniRef90 V6LNF0 UniRef90-I1FZ94 UniRef90-A0A024UNXO UniRef90 T2MHV2 UniRef90-UPI00038C4FB0 UniRef90-V3Z5H7 UniRef90 G3PVX7 UniRef90 E9GFI3 UniRef90_Q4Y175 UniRef90_Q23K61 UniRef90 FOYIA3 UniRef90-L7M6Y6 UniRef90-W4XB36 UniRef90-UPI000457253D UniRef90 D8U6D4 UniRef90-T0RJ31 UniRef90-W9QUP9 UniRef90_F4WM84 UniRef90 M5E5M6 UniRef90-L7MSJ4 UniRef90-N1QJP0 UniRef90 M4C2R3 UniRef90-V9EA87 UniRef90-R7Q772 UniRef90-W9S7X8 UniRef90 UPI0003EBF6B9 UniRef90_UPIO004408B00 UniRef90-R1BMA0 UniRef90 B3L7C6 UniRef90_UPI0003F0BFF4 UniRef90-C1HBJ2 UniRef90-UPI00046C1895 UniRef90 A0A024TEV6 UniRef90-A7ASG6 UniRef90-V4BHH8 UniRef90 UPI00045E1C71 UniRef90-E1C1L5 UniRef90_DOP035

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GVTKEFFQLLTVQLFDQSFGMFVPAGEGGRVLWFNKDCVW GPTLEFYTLLSHDLQKVGLEMWRSTSSEKRAVGVDLNEQS
 GPTQEFYALVSQELQRADLGLWRAVPFGRTTKPAHDAKDK GVTYEFFRVI LGEAFKPQHGMFTDDSQTRMTWFQPSLEPLD GVKSEFFYFI FEEMTKTEYGMFMYPEEGSYMWFPDPRFEK GVFDDTVSEMCKELESNDVSLLIPTPNSVDQLGYNSDEELL


LRKDFFLYFFDKVIEPESNMFWYNELSTLLWFPSKTSVEK GPT \(\square E F Y A L V A A E L Q R A D \square A L W L H D P A P D P Q E S P \square C D K V C\) GVLREWFYLVCEKLFEPGRKLFVHSTDDDRRFTPDTASYH

G LIFKDF LSATVEEAFDPKEGNFLFCETPDRTLYPNPRYAN
G LY REILAQMSTELQTPKVLPLLVPCPNENDHLRNDPKLV GPFREHISEMCRELMSTELPLFVPTANNVHNTGSYSDTEL GSFRHFLGQDAKEUQSSSLSFLVPCPSSSLKPGQMTYSEE \(G D T K D W Y L A L S H G F A D V N F G F F S K T P A G D L P S D E Q G G R P V\)
\(G G F R D S L A D M S E E L C P T S N Q G N S T G E A R D M Y V P N P S C K D E F\) GGFRDSLADMSEELCPTSNQGNSTGEARDMYVPNPSCKDF
GVQQEFFRLA \(\square A E A L N P D Y G A F T \square D E R T K M \square W F Q S S P E P L\) S FER1品 GPYREFFAQFVSEVQCCMLPF LDPSPNWRHNPVDNTALGLL G \(\square \mathrm{Y}\) R D T \(\square \mathrm{ERCDDDDFSDR} \mathrm{\square DLFLACQNARNPKYRESSDAL}\) GPTLEFFT LISEEFAKFQKPKLLECDDGYYFPTPHSTDSL GSFRQF \(\square W Q V \square K E L Q S T S \square N L L L P C P S S \square L K P G A M T Y A E E\)

GVFKEFLTGLSHDAFNVNYGLFVATPEQLLYPNPNSFATE GPSREFIFSLTNEFLQRDQTFRKYE MGYMP DHGA GGFRDSLADMSEELCPSSADTPVPLPFRDMYVPNPSCRDF
GVFDDTDTEMCQELEEGVVNLLIHTPNSTAEVGFNSEDDL GVRKEFFLIVMRKILQPEYGMFSEDEESHLVWFSAEFCER GSFRHFLWQVCKELQSSAGSLLQPCPKYDLTPCPASYAEE GVSREF I NCLCDAI FSGRRPDGLFRAHPTTDKERNGLYDLL GVFDDTMTEMCQEITSTVSLLVPTPNADNLNPDFSSAQHLL

YPSSERM
GGYSESTAEDCEELQNGLTPLLIVTPNGRDESGANRD GLKNEFIY I GIDQEIGKRDFCMFKTYDNQAVWIDNFSEDLK
 GLQR
GSFRHF LWQVCKELQS S S \(\square S L L L L C P S S \square L T P S P\)
GGFRDS LAD DMSEELCPSSAECPMP LPFRDYYVPN

STER \(\frac{\square}{F}\)
GPYREVFAQ DPSELQAFKCSPDLDVPKF \(\square\) LLRPQYTAPMYL
A \(\square S M D F F R L V E E L D P E R Y V N E D D K T H S P V W F R K D C E D S\) GSFRHFLWQVCKELQSSTLSLLVPCPSSILKPGHDTYAEE GPTLEFYTLLCHELQRKDLCEYVNAPWGLFPRPLPPAKAV GPYRAVFQTAGWELFEPCPNAVQASGANQDKYVVSPGASP GVLREWFFLVCQA FNPQNALFVACPHDCRRFYPNPASHG GVFKEFLTSIVHEVFNTDRGLWCTNDRHELYPSPYSYEQL GVSKEFFQLVVEEVFNPDDGGMTYDESTKLFWFNPSSVET

\section*{Y PHRKPSSKLV}

GPTLEFYTLVSHEFQKAGLGLWREDHGSFTSNANLCPEST GVVREWFDI LSNE I INPDYALFTQSADGTTFQPNSNPDHL GVTREWFQULDRMFNSNYALFRTFD ALRREWFEQATAEMVDPRRGLFLASQDGLRPNPHSGEDHL Y DEKTMSAMEL NTSERLL GPTLEFYSTVSKEFSKKK \(\square\) K \(\square\) WREHDSNQ DDEYVFSRKHLL

GVKKEFFQ I I RELLDPNFGMFLADNTHTLWFNCDSLEST CDTS DWCSSGCCTGSHAMGGTCVCNLMSRTCHREFPIVEP GGFRDSLSDIAEELCPSNPDCPVPLPYTDVYVPNPLCLDK GIDRSEF FHCI FKEMTRPEYGMFMYPEESYMWFPVRPKFKK GGFRDCLTDISEELCPTSNQGNSSSDTRDMYVPNPSCKDF

UniRef90 G8XZ08 UniRef90-DON4S9 UniRef90-M2U4W8 UniRef90-N4VCK9 UniRef90-B0XOZ1 UniRef90-D7FWC7 UniRef90-A0A059AQ33 UniRef90_F0WPI9 UniRef90_A0A024UCF2 UniRef90-H3CGU7 UniRef90-ROKVB3 UniRef90-G1QCB0 UniRef90_AOAO24TW54 UniRef90_B3S812 UniRef90-R1BSI9 UniRef90-11HMI7 UniRef90-W9S8P4 UniRef90-W5MS82 UniRef90_W4ZIX3 UniRef90-H9JM75 UniRef90-R0H1W1 UniRef90_S9WSE9 UniRef90-K8F3W2 UniRef90-UPI0004573370 UniRef90-W4FX08 UniRef90-DOA3T5 UniRef90_V4A1C3 UniRef90-FOY341 UniRef90-U3IT07 UniRef90_L8G075 UniRef90-MOSEB3 UniRef90-A8NHJ2 UniRef90_A0A024TP45 UniRef90-G5EDT9 UniRef90-D8MA35 UniRef90-Q4N9N6 UniRef90_UPIO003F0B89C UniRef90-K3WHY9 UniRef90-H3D6Z1 UniRef90-E1FGX9 UniRef90-I1CLX5 UniRef90_A2DAV4 UniRef90-W5NTL6 UniRef90-E5SHY1 UniRef90-A7RSK9 UniRef90_E3LMC7 UniRef90_M3ZIB5
UniRef90-11F7P9 UniRef90-N6U8H1 UniRef90-L1JC50 UniRef90_Q7PY72 UniRef90_UPI0003BBFCBA UniRef90_V6LNF0 UniRef90-11 FZ94 UniRef90-A0A024UNXO UniRef90_T2MHV2 UniRef90_UPI00038C4FB0 UniRef90-V3Z5H7 UniRef90-G3PVX7 UniRef90-E9GFI3 UniRef90_Q4Y175 UniRef90-Q23K61 UniRef90-FOYIA3 UniRef90-L7M6Y6 UniRef90-W4XB36 UniRef90_UPIO00457253D UniRef90_D8U6D4 UniRef90-T0RJ31 UniRef90-W9QUP9 UniRef90-F4WM84 UniRef90-M5E5M6 UniRef90-L7MSJ4 UniRef90-N1QJPO
UniRef90 M4C2R3 UniRef90-V9EA87 UniRef90-R7Q772 UniRef90-W9S7X8 UniRef90_UPI0003EBF6B9 UniRef90_UPI0004408B00 UniRef90-R1BMA0 UniRef90-B3L7C6 UniRef90_UPI0003F0BFF4 UniRef90_C1HBJ2 UniRef90_UPI00046C1895 UniRef90_A0A024TEV6 UniRef90-A7ASG6 UniRef90_V4BHH8 UniRef90_UPIO0045E1C71 UniRef90-E1C1L5
UniRef90_DOP035

WKFEM \(\square G \square L F S \square A V Y N G \square T L P V T F P D A L Y E Y \square Q T S G S S R H\) GMYHFFGRL GGGCLRSAEPLPVY LPSLLWKALLGAPVDAG WKFEILGLLISLAIYNGLTLPITFPKALYRKLLGEPVTEH


\section*{}

KYFWF \(L G V F L A K V L Q D G R L V D L P L S E P F L R D M C G E E L T K E\) DYFQFAGRFIA \(\operatorname{LALLKNDVQVGVLLDHVFYLQLAGKRVSDE~}\) MYEFAGRLVGKCLYYKQLVRARFTRSFLAQL YSYFYLGAILGKACGEGULLDAPLAGFFLSKLRGKPPTLS
HMAEF LGK \(\square\) MG \(\square A \square R S K T P L D L N \square P P V V W K Y L V D Q P V V R S\) SAYVFVGQLMGGALRNNEPLGLFFPPLVWKFLCFYPITES K LLQ FGGQULGVTMRADDPLELDVVTSFWKCLTSMDDPDS


 NAFRNVGRMI GI CLMQMEI FPLHLCRHVLKFILGRPINWF

 \(K L L Q F F G Q L L G \square S I R A N \square P \square G L D L L S T F W K C L V D Y P L D E T\)

NCFRN \(\square G R \square L G L C L L Q N E \square C P \square T \square N R H V I K V L L G R K V N W H\)
QYFRFLGLI IGKAVYEG LLLDVPFASFFDKKCDGKVNYDD KNMKEFG【LIAKTI DMQATINDAFCDAFFKLLCGERFDWT
 \(\overline{V L Y K F L G U L F G V A V R T K K P L D L H L A P L V W K Q L V G D P L T P D}\) EQFRQLGKLVGLAVYNSVIVPFPFPLALYKVLVGSDVCDD
 SWFKFDGGLFAVAURTRKPLADPGAPLIWKLLVGEPVCVE MFFFIGQLMGVAMRTQNLLSLDFPSLVWKSLI GDELDEE NAFRNVGRLIGLCLLQNELFPLFLQRHVLKFILGRQURFH
 Y HVN IGGSLLATAVMYDDTLDCNLSVPVIDKQLLGQSVSSD AKFRAVGRLLARSILDEQVLPFHFTVPLFKMALGTPLSMT NCFRNVGRILGGCLLQNELCP LVFNRHVIKYYLGRKUSWH

 NAFRNVGRLMGLCLLQNELCPIAANRHVLKAILGRPDRFH


Q QLLHFFGQLLGDAI RADLPLPLDLLSTFWKTLVNEEDPDT ERFRLLGRTLAKALQDNRLLDLPLSHVFYAAALGSPLDMW





ERFRMMGRLAGKALMDERLLPLPLSPQFVKLVVGESFGLE
\(K F\) VT C LG Q IVAK A L Q D GRVLDLHFSKEFYK LILGQKLGLF NYFRFAGQILGGALYHRQLVNDYFTRSFYKHILGDPVNYQ
 A M Y E S L G R I M G M C I C I A A S A L

 MEFELI G ILLGLLAI YNGVI LELHFPRLVYKKLMDQPVTLE





\section*{UniRef90 G8XZ08} UniRef90 DoN4S9 UniRef90-M2U4W8 UniRef90-GOUAN1 UniRef90_N4VCK9 UniRef90-B0XOZ1
UniRef90-D7FWC7 UniRef90 A0A059AQ33 UniRef90 FowP19 UniRef90-A0A024UCF2 UniRef90-H3CGU7 UniRef90 RoKVB3 UniRef90-G1QCBO UniRef90-A0A024TW54 UniRef90_B3S812 UniRef90-R1BSI9 UniRef90-|1 HM17 UniRef90-W9S8P4 4 UniRef90- W4ZIX3 UniRef90-H42 UniRet90_ROH1W1 UniRet90_S9WSE9 UniRef90-K8F3W2 UniRef90-UPIO004573370 UniRef90-W4FX08 UniRef90-DOA3T5 UniRef90-V4A1C3 UniRef90-FOY341 UniRe90- U3IT07 UniRef90-L8G075 UniRef90-MOSEB3 UniRef90-A8NHJ2 UniRef90-A0A024TP45 UniRet90_G5EDT9 UniRet90_D8MA35 UniRef90_O4N9N6
UniRef90_UPIO003FOB89C UniRef90-K3WHY9 UniRef90-H3D6Z1 UniRef90-E1FGX9 UniRef90_-11CLX5 UniRef90 A2DAV4 UniRef90 W5NTL6
UniRet90 E5SH1
UniRef90-E5SHY1
UniRef90 A7RSK9 UniRef90- E3LMC7 UniRef90-M3Z1B5 UniRef90-11F7P9 UniRef90 N6U8H1 UniRef90-L1JC50 UniRef90_Q7PY72 UniRef90 UPI0003BBFCBA UniRef90_V6LNFO UniRef90-I1FZ94 UniRef90-A0A024UNX0 UniRef90 T2MHV2 UniRef90-UPI00038C4FB0 UniRef90-V3Z5H7 UniRef90 G3PVX7 UniRef90_E9GFI3 UniRef90_Q4Y175
UniRef90-O23K61 UniRef90-FOYIA3 UniRef90-L7M6Y6 UniRef90_W4XB36 UniRef90_UPI000457253D
UniRef90 D8U6D4 UniRef90-TORJ31 UniRef90-W9QUP9 UniRef90-F4WM84 UniRef90 M5E5M6 UniRef90-L7MSJ44 UniRef90-N1QJPO
UniRef90 M4C2R3 UniRef90-V9EA87 UniRef90-R7Q772 UniRef90_W9S7X8 UniRef90_UPI0003EBF6B9 UniRef90_UP10004408B00 UniRet90_R1BMA0 UniRef90 B3L7C6 UniRef90_UPIo003F0BFF4 UniRef90_C1HBJ2 UniRet90_UPI00046C1895 UniRef90-A0A024TEV6 UniRef90-A7ASG6 UniRef90-V4BHH8 UniRef90-UPIO0045E1C71 UniRef90-E1C1L5
UniRef90_DOPO35
 MFLKSYDGDVEDLGLTHTVVQEIFGEQ
 DLARDDKSTLQSYRC|RSNDDEAAPATDEDIAELCPGGFT DFVRGH DLGDDDPGLLKGFHQLRDYDGDEDVFGDDFRVTWDDLGME DQVDSVFGLHDFVHGKKQTLNGMQGEKWLDMACDSFVDPL ELKQVDQALHDSLDSTQTDA TLLEADTFTTALSDG DLVNIDPSVAKSUQQKKRLEQDRSQVRSPLTNLDQKFFSN TI RDGWPTLAESFEQLWNNGDVEDIFMREYVFSYEVFGRR DLKELSPLLGKNLQEVLNYEAD DDGEALCUYFSLRWDQ HLEDIDVVAFNTLTTLETLPPSKDDEYCKQFTFTTHLSDG DLELVDPDLHSSQKQLVSMSAEGLLEALCLLTFEVDGDETVV DLKELEPRVGKSKCWAVKRQHSKMSVAEMRMLRWMSGQT NLQEПDP\|RHRFLEKMLEAAEGYDKTMRDESUDEDNFGHV DIRRTDEAEYNSCLQTLQLSREEFDKLTFSVEIDENLKKK YFETDDPEFYKSKVCFILNNDMSEMELVFAEEKYNKSGQD DLTTFDPEVYRNLIMLKGFNESDFDDLELYFVALDNPDSP DTESTHQGCFQVVDTTNNTTKHGTTPNMFDDSFTVLSSDK DIDDIDRTCLQCIREFRSLNDSDMYDEVFDSETFTTRLSD DIQEAD LTYNYIKKDEMVETEQALCSDVYPRFVYSSLEGG DFPAVDSVLVKLLEVMEVMDKDTFEFKFNELTYTTVLSDQ HHDEDGWPLTSLLEWDEKDGLVSDVFCRTYEFSANVFGAP DVRDADPVLYMSCKQLEMDAALLDSDATFAREDDMMGSK DLAFYDPVLFESMRTLVFNEGPTRPEQTFEVAVPEQEGG DLAEDDTAAFTLLQQLKQLDPTTAADTGLDLTFTTHCSDG DVDSVDHAFVSTLRQVNEFDDSEDFQELFVLTFSVLDSAG TLAKIDPELANSLQQLKDHPDPSQLHLVHLYQTYNTVEF DFAFDPDMEPLCLDFTVTRIVNGKP DFAFFDPVMYESLRQLIRHDAVFAAMDLAFAVDLCKEEGA DLS S DDPELYRGLLTLKNYDGNVEDGSDDFTUTHDELGKN EI DKSYANMFNNPEKLTGCDLATF DFPAVDSVLVKLLEVMEGMDKETFEFKFGKEDTFTTVLSD DMAFYDCYMYEKLHKLVTGEYAAEDLDLNFTVTLDAIEGG DLSELSPSEGKGLQALDDYEGDDVEDVFNFCDTFDVFGEK YFETDDPHNGKVRYDKECSDSDLGMDDTFTEEEYDGSSKN DLKDTDAMYVQTLRSIRDIDKSGITSERFHETFEGYSCTG DLKATDYSCWSSLQFRDEDIGGNKFEELFQYTFMTVLTDG DKVDELLTNLLNLQTRRNQGTDTSDLCHNFSVTSDVFDWQ DLESVDADLYHQLTNLKNESVEDFPCTFCTSLVCPWNGNL DLAFFDPTLYESLRQLIEDSKRFSDLDLTYCDQSLAPEASGG

 DLEEVDRPVFDMIKFDDSCEKTVF QESFFETYTTTLSDL DLAFFDPLLYESLRQSRDSSTVFSALDLTFCLDLCSEEGG DLQEVDILTYNYVRKFETVNDEPDSPSKPCCKFTYVTMTS DLARIDPGLGATLAKLHSALVAYRGVSVEDLCDTFVLPGT DWCDADPCLYSSCKKYLQMDAEFVDSDATFAREDEELGAR SLESLDKDLYRGLIALKNYNGDENDFSLLNFTVSKDEFGEQ DLGDSHPVLYQSLKDLLEYEGNVEDDMMFQUSQTDGFGNP ELGDTFYSMYKASKK RAGEQSVQTDQMDVQDWLEAVGFT LENVDGQALSLTKLIEMVRDNQPETVESLCNFVLPGY DI LS FDPELGRTLLEFKKVDSCFRDTRI EDLFLDFTLPGY DVSSTDPEYAKNLQWULDNDDSDGGLELTFSVETDVFGAM DVEWVRDTHPGQIAQYISKDKPENHPDFYEPHDFLVKMST
\(D L A S V D P A L H Q S Q R T L L A M P A E D L G A M C L C V I Y E S S K R R\) DLCDYDFVAVEMLKTLKMVNCERSNGWNIDITFGTEDSGG胃 DVELCQPALGKGLRQMLEFDGDVEVYQRAFEVSYEVFGEV DI SDF DISDFDKM SVDFLHRLSVSPDP DDFSTVDSLGVVLTDQLETFDSATFNSVSRSWSYDSSNGT DFAEVDVVLGKCLQMLLDDEGD DVGEVFYDHFNICWDK DVAVQYEEKKESGEADASSEVAAWTAKVDSLCSFTLVGA
\begin{tabular}{|c|c|}
\hline & \\
\hline UniRef90＿G8XZ08 & PKYELIQAGENTQVDSKNIEVYINEILDATLFSGVASQVIH \\
\hline UniRef90＿DoN & HLVANYYLNT Q R EQCA \\
\hline UniRef90 GoUAN1 & RERE成 \\
\hline UniRef90＇ 4 UVCK9 & VSREMENPEDAPMVTNENRNAF \\
\hline UniRef90－\({ }^{\text {d }}\)－\({ }^{\text {a }} 1\) & PNDELRRGGRDTAVT\｜HNL \\
\hline UniRet90－D7FWC7 & RSHDLVEGGANTPVTSENKE \\
\hline & SbetVDINN LE \\
\hline & DGTNVQLTDD \({ }^{\text {de }}\) \\
\hline UniRet90－A0A024UCF2 & HVVELVPGGHTKPVTKENVAEYVRLVTKTRLEEC－RPQVD \\
\hline UniRef90－H3CGU7 & QS \\
\hline UniRef90－R0KVB3 & ПD HNLKHPFATPMVTNANRDHYVRDYVR \\
\hline UniRef90－G1QCB0 & HNVDLDPNGDS LVDQTNKTDYVSQCVD \\
\hline UniRef90－AOAO & \(\checkmark A L R P D G E T H V D Y A S R\) \\
\hline UniRef90－B3s8 & RM \\
\hline UniRet90＿R1B & ELKPGGADEAVIPDN REYLQ \\
\hline UniRef90 \({ }^{-}\)W9S8 & RIKNEVIDSKVGVAPLEDKV \\
\hline UniRef90－W5MS82 &  \\
\hline W4 & QTTDLTPNGGDKEVTAKNRQEYIDAYVDYTLNKSVEPQFS \\
\hline H9JM & \\
\hline UniRef90 ROH1 & LVEPLCECGTDLAVTYDNRESY NMRAENRYVTLIKDQVS \\
\hline &  \\
\hline UniRe90－UPIO004573 & TAVDLKPNGDDEMVTIDNAEEYVDLMF \\
\hline UniRef90－W4FX08 & QEVELVPGGKQVRVTWDDKEEYA \\
\hline UniRef90－DOA3T5 & GTLKEL \(\square\) AGGS \\
\hline 4A1 & EDVELIPDGHNTPVSWNNRQSYMEAICKLRRELFNMNRME \\
\hline UniRef90－FOY341 & R \\
\hline & （ \({ }^{\text {a }}\) \\
\hline UniRef90－MOSEB3 & DIVVHSRNEEYVS \\
\hline UniRef90－B4K4G6 & DIPVTSSN \\
\hline & \\
\hline & \\
\hline UniRef90－G5EDT9 & \[
\begin{aligned}
& \text { DEV V V } \\
& \text { SQU }
\end{aligned}
\] \\
\hline & N \\
\hline UniRef9－QPiooo3FO & N NVCLENRQEYIDAI CKRMD \\
\hline UniRef90－K3WHY9 & \\
\hline ， & \\
\hline \[
\begin{aligned}
& \text { UniR } \\
& \text { UniR }
\end{aligned}
\] & K \\
\hline & \\
\hline UniRef90－W5NTL6 & QQVVELIPGGSGIVVGYEDRSRFIQLVQKARLEESKEQVA \\
\hline UniRet90－E5SHY1 & NTVELLSNGTNVAVTSENVVKYVFLYAQHRLYKLVQSALT \\
\hline & \\
\hline 3LMC7 & \\
\hline M3 & EEVELCQGGRSLTVSWENKDVYARAVRSLRRELIENVECMT \\
\hline & K \\
\hline & KLVPVTHGGKNLPLTFENRAQYYEQVIRFR LQEFDLQVA \\
\hline UniRef90－L1JC50 & KCVPLFEGGEETRVTFERRHEYAELVKQAR L R R SkEQLS \\
\hline 72 & \\
\hline UP10003 & QLSSRHSHLSLDT RAEYVRLAVSYRLHEFDEQVA \\
\hline UniRet90＿V6LNFO & TDNGAKTSV \\
\hline UniRef90－AOAO24L & D \\
\hline UniRef90－T2MHV2 & HV \\
\hline UniRef90－UP100038C4FB0 & EEVELCSRGRHI PVAWENKDTYAAADRSLRRELQNMECVT \\
\hline 硅 & GGSVARYED \\
\hline G3PVX & GGSNVARYEDRSEF RLV QKARLEESKQQIA \\
\hline UniRef90 E9GFl3 UniRef90 & GGKD \\
\hline UniRef90－Q23K61 & NGSKINV \\
\hline & －\({ }^{\text {a }}\) a \\
\hline －7M6Y6 & E \\
\hline 44 & RSVEVTTENVDLYVDNMVREYLVP \\
\hline  & \\
\hline 84 & E \\
\hline 0R & S \\
\hline UniRef90 W9C &  \\
\hline &  \\
\hline M & P \\
\hline UniRef90－N1QJP0 & PDITEMEHAWPGWKLTMHVEDYTNAYSQWLCFDSVLPQLE \\
\hline M4 & \\
\hline UniRef90＿V9EA87 & \\
\hline & DEVEVIENGAQVDVTLGN \\
\hline UniRef90－W9S & DFLLASGPDYEMVTMRNLEDYISLIVDATVSAGISRQVE \\
\hline UniRet90－UPI0003 & \\
\hline  & \\
\hline UniRef90－ \(\mathrm{B}^{\text {L }}\) L7C6 & NSTEIKNGAN \\
\hline 03 & \\
\hline & PNIQLIPHGSSTAVTMDNVG \\
\hline Un & GTVELMPGGKDIEVTSSNVYDYVRKYAKYRMIKVQEKA】E \\
\hline Ret90 A0A & \\
\hline A7AS & GTI DLLEGGSRAMVNQENLDTFVRLATHWLLTHG DVACT \\
\hline －UPIO0045E1C71 & N \\
\hline & R \\
\hline & \\
\hline
\end{tabular}


DF \(\square\) QGFGTVMAPSALKLFSSEELKQ IDCGNNKYNYT DEDL AMQAGLLKVVPQAVLDLLTWQELEKKVCGDPEVTVDALRK N 1 R D GVVRDVI P V SML AVREGMGWILPVPLLSLLTPDNLEQLVCGSAEVSVDMLKR MFRKGFTDALHSRVLRFFQPRELMELIVGNENYDWNEFRD
 A \(\square\) REGMSGIIPVPLLSLMTAEHLEELICGMPHIS Q DTRS KMRDGLCSiVPSSMLCLMTHEELER RVCGMPEI DI ATLKR

 ELLEGFWKI I PRRYDSAFTPNEFS LLLSGTPHDDVKDWRK

 SUKTGVFDVLPSNALEGLTSEDLRLLLNGVGNVNVQTLIS

 AMRTGLSCVIPPCVLQLLSWAELEKKVCGTPGIDDELLKQ
 A V R A GLGS I DP LQLLLT L LT PLEME LRRTS GLP Y DNLE F L K A



AF \(\square\) HGFRS LIDS QTLS LLGPSRLQAYVEGMDMLNDHDLKA AFKQGFEQI CGGKGDRQLFRFLQAFDVSVWDRDGVDLREH

 VP H G GFA Y L M G G S

\section*{AFRAGLVF LDDGRPFASLRTCCTVQLLLCGEAADDVDDWER Y LLKG G S S V DP LDRDRLLYEYTTVEHMVCGEREI NLDVLKA \(S L R S G V F D V L P R N A V D G L T A E D F R L L L N G V G Q V N L Q Q L D S ~\) \(S \square R T G V L D V L P E G S L D S L T A E D L R L L L N G V G D \square N V A V L I S\)}
\(Y L L R G F N A V L P G R F R M L L D H R L L E F M V C G D P R D D L E V L R G\) Y \(\backslash R N G L L Q V I P K A V L D L L T W Q E L E S K V C G D P V I S I E A L K K\)



RESTDCSQGVTPNTQWLFE\|LAEFDQETFQNFLKFVTGSQ LTRFEDFEPSDTRVQYFWEALNNFTNEDRSRFLRFVTGPS LTVIT DESKFDQFKKWFWSVVSSMTADEKQDLI YFWTGSP VVRYREDDPSDSLVSWLWRVLESFTNEERILFMRFVSGRS LVDYKEYTAAHPAMQAFWKAFFALDEEERKKFLQFLSGST NAVVRGVSG QTLEWFWTSVNQLSQEELARLVQFVTGSS FCRYRELDENSQLVKWLWNILESFTDNERVLFMRFVSGRS HTRYRSFSADSPHIQMFWEVLEGFSQEDRRLFIRFAWGRE YTAFNDESNEPKFKRWLWNVVEKMSNGERQDLVYFWTGSP
VATYKGVESAPLVQWFWEVMEAFSNTERSLFLGFVWGRT
 24UNX0
38 C 4 FB 0 YTFFSDETKLSKKKEWFWESVTAMSTQDRAKLLQFATGST HTMYQVGLMTDQHDELFWGALETFTQEELCKFIKFACNQE YTSFNDESRVHRFKRWFWSVVEKMNNRERQDMVYFWTSSP LUKPARYEDREQSRVQYLWEALLSFTNEDRSRFLRFVTGRS DKPDHGYTNDSDTFDTLDELLSEFDCNERKMFLKFCTGTS HTDYSPDNENTPH KYLWEVLHEDSHTESLRFVKFCWGQE NTEYDDDQPNDNHITLEWDALRSFTGHERSIFLRFVWART YTSFNDESKDFRFKRWFWSMMEKMPNQEKQDLVYFWTGSP
STQYQPYTDSHPTVKMFWKVLHALDNDMKRKFLVFVAGSD HTMYQVGLMTDQHIEFFWTALETFTQEELCKFIKFACNQE TKFDHGYTANSQPVRFLLETLSGLDASEQRAFLRFVTGCP ITVYDGVDPNDAHIQFFWQCLTDMNHEQRSSFVNFVLARS HTEYNGYKENDSQIVWFWKVEK
YTSFNDESRLVKFKRWLWSLVEKMSHVERQDLVYFWTGSP

AVRYDGYVPTQKYILAFWRVIASWPPEKQKLLLKFVTATE MVCDHGYTADSRAIANLVSILCELSLDEQRLFVRFVTGAN TKLAHGYTKDSQPVQFFFEALEEMSAAERRAFLLYATGCP TRCDHGFSHESAAVRYGLQULSEMDSQEQKQFVLFTTGSP
 YTSFNDESGENKFKRWLWS IVEKMTHLERQDLVYFWTGSP HT \(\square\) S S S \(\square Q L K R D L F N V L A R F D N R M L Q L F L R F V S G R S\) STHYDEVEENDDRIKFLWEALKNFSNEDRSKY!KFVTGRR

\section*{UniRef90 G8XZ08} UniRef90 DoN4S9 UniRef90－M2U4W8 8 UniRef90－GOUAN1
UniRef90 N4VCK9 UniRef90－B0X0Z1 UniRef90－D7FWC7 UniRef90－A0A059AQ33 UniRef90 FoWPI9 UniRef90－A0A024UCF2 UniRef90－H3CGU7 UniRef90－ROKVB3 UniRef90－G1QCBO UniRef90－A0A024TW54 UniRef90－B3S812 UniRef90－R1BSI9 UniRef90－11HM17 UniRef90－W9S8P4 4 UniRef90－W5MS82 UniRef90－H9JM75 UniRef90－ROH1W1 UniRef90－S9WSE9 UniRef90－K8F3W2 UniRef90＿UPIO004573370 UniRef90 W4FX08 UniRet90－DOA3T5 UniRef90－V4A1C3 UniRef90－FOY341 UniRef90＿U31T07
UniRef90 L8G075 UniRef90－MOSEB3 UniRef90 B4K4G6
UniRef90 A8NHJ2 UniRee90－A8NH2
UniRef90－A0A024TP45 UniRef90－G5EDT9 UniRef90 D8MA35 UniRef90－Q4N9N6 UniRef90－UPI0003FOB89C UniRef90－K3WHY9 UniRef90－H3D6Z1 UniRefe90－E1FGX9 UniRef90－A2DAV4 UniRef90－W5NTL6 UniRef 90 －E5SHY1 UniRef90－A7RSK9 UniRef90－E3LMC7 UniRef90－M3ZIB5 UniRef90－11F7P9 UniRef90 \(\mathrm{N6U8H} 1\) UniRef90－L1JC50 UniRef90－Q7PY72 UniRef90－UPI0003BBFCBA UniRet90＿V6LNFO UniRef90－I1FZ94 UniRef90－A0A024UNX0 UniRef90 T2MHV2 UniRef90－UPI00038C4FB0 UniRef90－V3Z5H77 UniRef90－E9GFI3 UniRef90－Q4Y175 UniRef90－Q23K61 UniRef90－FOYIA3 UniRef90－L7M6Y6 UniRef90＿W4XB36 UniRef90－UPIO00457253D UniRef90 D8U6D4 UniRef90－TORJ31 UniRef90－W9QUP9 UniRef90－F4WM84 UniRef90 M5E5M6 UniRef90－LTMSJ4 UniRef90－N1QJPO
UniRet90－M4C2R3 UniRef90－V9EA87 UniRef90－R7Q772 UniRef90＿W9S7X8 UniRef90 UPIIO003EBF6B9 UniRef90＿UPIo004408B00 UniRef90－R1BMA0 UniRef90＿B3LC6
UniRef90 UPIOOO3F0BFF4 UniRef90－C1HBJ2 UniRef90＿UPI00046C1895 UniRef90＿A0A024TEV6 UniRef90－A7ASG6 UniRef90－V4BHH8 UniRee90－UPI00045E1C71 UniRef90－E1C1L5
UniRef90＿DOP035


RMPNSAKDFPMNFK TQAPHDQGARSHPDQYDPHAQTCFFS RLDPNKMDLGQKFQV1 KVDRPDDSLPMSQTCFFQ



KFPQND【KK LNPK DS DKGDQN DEAFPTAKTCMRR RPPA
RLPANVGDTTQRFQLV
RLPLAGMKELKAVIQPSS
RIPFTCPCKDGGPDTAHVPPYPMAGQPD
QVP SLPVAOTCFFQ QVPDGGFAEपQPNFTLLCSGESG NRLPYAHTCFNH RLPAN RLPLESDYSEHSSMKLFPSDRGDG DSVLPEAETCFFI
 RVPDNGF CRETIECSGDS RLPPGGFASLKGLSGSNGFTLTCGSGVNKYPHAQTCFNV RVPVQG
AMPASAEGF QPTPSVTVKPANDHQLPTANTCTSR
 ALPAS EEGFQPMPS PTVRPADN RGSETDHLPTANTCTSR
ALPAS EEGFQPMPTVTIRPAD D
TLPNNGFSALK PMMKVVKKED L M N
RLPANDEEFERNQIRFMIKPTYQTYQPD
 R｜PFTCPCKDGGPDTAHVPPYPMKIAPPDRYVRVETCMFM


A \(\square\) PAS EDGFQPMPTVT \(\square\) RPAD DAH \(\square\) TANTC \(\square\) R
RTP\｜SGASSLTF\｜IKRAYPETLQA
LPTSSTCFGT RLPLGGLRNLEPRKLVQTTDGSSAKENDAVLPSASTCTNY \(N L P P G G F Q A L K P P F E V V R R V V D N L D V D R A L P F A R T C T N T\) ALPRGGLKKLHPRLTIVRRTPENEYSPDECLPTVMTCTNY


RPPATGFAS LMGYREQRFTVACTGGGATGRDPTASACFNR RLPTTKNDWYMIIDVDNPNNSMSQTDQRLPTAVTCGFR

A LDPAS

\({ }_{R}^{R} ⿴ 囗 十\) P SQ DE WNMYVEYDQ \(\square Q V S\) GKIDDAV QRLPTAAATCSFR

RDP RLPGGGLRNDEPKLTVVRKGTESSDENDAVLPSASTCTNY
\begin{tabular}{|c|c|}
\hline & \[
370 \ldots 380
\] \\
\hline UniRef90_G8XZ08 &  \\
\hline UniRef90_D0N4S9 & L K L P T Y S S Y KVL L A A L L T S I S S \\
\hline UniRef90_M2U4W8 & L Y L P E Y R D R GV ME A K M MLA I R S \\
\hline UniRef90_G0UAN1 & LSLPHYS S A EVLRER L L F A I Q \\
\hline UniRef90_N4VCK9 & LLLPEYK D R D TLL RERLSMALLQ \\
\hline UniRef90_B0X0Z1 & L KLP E Y S S REAMRQKLKVA A S E \\
\hline UniRef90_D7FWC7 & LVLPE Y S GEEKLLT RLLKR A I A E \\
\hline UniRef90_A0A059AQ33 & L KLP P Y S S \(\quad\) KV L Y I V V \\
\hline UniRef90_F0WPI9 & FHLPAYTSKAVLAERLTYAI E \\
\hline UniRef90_A0A024UCF2 & ILELPAYS S VQVMK D KL H L A I N \\
\hline UniRef90-H3CGU7 & L K L P D Y S S I E TMREKL LIA ARE \\
\hline UniRef90_R0KVB3 & \(L Y L P\) E Y R E R E VME K K V L L A \(\square R \mathrm{~S}\) \\
\hline UniRef90_G1QCB0 & \\
\hline UniRef90-A0A024TW54 & LS LP A Y S T K E I LK A K L LY A TQ \\
\hline UniRef90_B3S812 & L R L P S Y S S Q EV M A E KLL R Y A I S \\
\hline UniRef90_R1BSI9 & L Y L P E Y G S E \\
\hline UniRef90_11HMI7 & I K L P P Y S S K E \(\square\) M R N K L K Y A L A E \\
\hline UniRef90_W9S8P4 & L K L P P Y R R P P TLLK \\
\hline UniRef90-W5MS82 & \\
\hline UniRef90_W4ZIX3 & LD LP M Y D S \(\quad \mathrm{D}\) I I K E K L LT A \(\square \mathrm{E}\) \\
\hline UniRef90_H9JM75 & L KLPEYS CKEVLRERLLAATNE \\
\hline UniRef90_R0H1W1 & L Q L R V Y S GF DV MK N Q L I Y V T E \\
\hline UniRef90_S9WSE9 & L CLP T Y D S Y E EVVHRMLLQLA I S E \\
\hline UniRef90-K8F3W2 & L KLP P Y D T DEEMEKKL V Y A I S \\
\hline UniRef90_UPI0004573370 & L KLP E Y S S E E IMRERRLLAA TME \\
\hline UniRef90_W4FX08 & 1 D MP A Y S S K A V M R D KLV V A IT \\
\hline UniRef90_D0A3T5 & L E LP D Y S S LE V M K A K L Y Y S \\
\hline UniRef90_V4A1C3 & I K L P Q Y S S Q El M A ERLLRYAI N \\
\hline UniRef90_F0Y341 & 1 V L S NF T S Y A TMKK Q C A F A I R \\
\hline UniRef90_U3IT07 & L FLL P N Y A T A K V C E E K L R Y A \\
\hline UniRef90_L8G075 & \(L\) LL P E Y K D R E TLLR R KL S M A L E \\
\hline UniRef90_M0SEB3 & L CLP A Y G T K S M M H D RLQLI SQE \\
\hline UniRef90_B4K4G6 & L Y I P L Y S S K S I LR S K M L M A I K S \\
\hline UniRef90_A8NHJ2 & L Y V P L Y P S K K V L K S K L L T A I K \\
\hline UniRef90_A0A024TP45 & L L L P K Y S S D DV CRK QFL Y A I H \\
\hline UniRef90_G5EDT9 & \(L \mathrm{Y} V \mathrm{P}\) VY S S K R V L R T K L L L A I K \\
\hline UniRef90_D8MA35 & L ELP Q Y S S DA I M R ERLL L V \\
\hline UniRef90_Q4N9N6 &  \\
\hline UniRef90_UPI0003F0B89C & I K L P Q Y S T Q Q IM T E RL L Y A I N \\
\hline UniRef90_K3WHY9 & L D L P T Y S K EVLA E Y L KL IV Q \\
\hline UniRef90_H3D6Z1 & L Y V P L Y S S K Q I L K Q K L L L Ald K \\
\hline UniRef90_E1FGX9 & LKLP D Y S S T E I M R ERFLTTATNE \\
\hline UniRef90-I1CLX5 & \\
\hline UniRef90_A2DAV4 & \(\square \mathrm{K}\) \P D Y P T K E 1 L R E K L L Y A \(\square \mathrm{S}\) \\
\hline UniRef90-W5NTL6 & L F L P HY A S A K V CEEKL RY A \\
\hline UniRef90_E5SHY1 & L Y I P L Y S S K N I LR Q KLL LFA \\
\hline UniRef90_A7RSK9 & L R L P P Y S S QEAMANRL R Y A I N \\
\hline UniRef90_E3LMC7 & L D L P N \(\square\) S D D V E M L R R L R \(\square \mathrm{S}\) I I E \\
\hline UniRef90_M3ZIB5 & \(V \mathrm{~K}\) L P Q Y T S L DVML E K L R Y A I H \\
\hline UniRef90_I1F7P9 & L CLPECESYEQFNNVL M T A I R \\
\hline UniRef90_N6U8H1 & L R L P P Y S G Q K I M A E KL R Y S I N \\
\hline UniRef90_L1JC50 & V K L P K Y R T K ELMKENL L A A I T \\
\hline UniRef90_Q7PY72 & |L Y I P L Y S S K A V L R H K L L L A I K \\
\hline UniRef90_UPI0003BBFCBA & L K L P R Y S CR Q V L E E K L K Y A I H \\
\hline UniRef90_V6LNF0 & L C L P A Y K D E NVL R E K L T F A L E \\
\hline UniRef90_I1FZ94 &  \\
\hline UniRef90_A0A024UNX0 & \\
\hline UniRef90_T2MHV2 & L Y VP LTY S S K A I LR N K F L L A \\
\hline UniRef90_UPI00038C4FB0 & I K L P Q Y S S LEI MLE K L R CAI H \\
\hline UniRef90_V3Z5H7 & L Y I P L Y S S K T I L R T K L L L A I K \\
\hline UniRef90_G3PVX7 & L Y L P NYP S A K V CEEKL RYA \\
\hline UniRef90_E9GFI3 & \(L Y V P\) L Y S S R T IL R N KL L L A 1 R \\
\hline UniRef90_Q4Y175 & L K I P D Y K N K E KL R NRL MYA I N E \\
\hline UniRef90_Q23K61 & L ELP A Y T T K Q ALK T QL L I A I N \\
\hline UniRef90-F0YIA3 & L NLPKYS S HEVMVSKL R Y A M \\
\hline UniRef90_L7M6Y6 & L Y L P L Y S SKAVLLRAKI Q M A 1 R \\
\hline UniRef90_W4XB36 & L R L P M Y T S VEELMED R L T VA L S \\
\hline UniRef90_UPI000457253D & I K L P Q Y S S L D I MLE K L R Y A \\
\hline UniRef90_D8U6D4 & I K L P P Y S S K A V M S A RL M Y A I R E \\
\hline UniRef90-T0RJ31 &  \\
\hline
\end{tabular}
\[
\square Y \nabla P \square Y S S R H V L R H K \square L L A \square K S
\]



LF LP K Y S S VK T C E E LLR Y A V


DER \(\square\) DA VRSY \(\square\) HA \(\square\) RATHSQKT \(\square \square\)
FS \(\square \mathrm{N} \square \mathrm{Q}\) G MNFEKRKRQFQEA \(\square\) QKFKKNSSGQS \(V\)



SRRSTPN \(\square Y R T F M L\)

DK \(\square\) NPQSNP \(\square\) FFE \(\square\)


DER \(\square\) DAVRSY \(\square\) YA VRRSHQ QK VLV
STALVMSQLRS LIFYDTKVNFFNR】LAKRKPDQAAPE \(\square\) T \(L\)
A \(\square \mathrm{CDFS} \mathrm{Y} \square \mathrm{P}\) YMPFAQRAGVFHRLIAADRAXFADXRTRG KEAAFRKVVQATMVRDRQHGPVI

QS P P Y R M
\(S L L A R \square K T S \square S T Y L V L\)

\section*{}


SSLVYVPHUGFPDRLAVFYQLLAYERGDSSSSAYYSL LARMKTSMTTYLVL

DER \(\square\) DA VRSY \(\square\) Y A VRRSHQ QK VLV

 RDNPSLDSSCKNAVFNQVFEGLKPSDKFE KMRL
CPF LPFE \(\square R R Q Y F Y R A L H R \square Q Q Q Q R \square Q R Q K D\)


VVRRDNVLPDALNQLWRRERRELMRPLKVQMEGEEGDDHG E L N R K S VF GQACSK LS QF GADS LHRVWK VKF \(\square\) GESVDDCG \(\square V\) R TS F Y NDFRR \(\square\) FAVEGRE LIRRE \(\square\) LVS FAGEEA \(\square \mathrm{D} \square \mathrm{G}\) VVRRDNVLTDALNQLWRRERRELMRP LKVQMEGEEGDDHG \(S\) VF G Q \(\square F V Q \square Q K S P \square S T F Y P M F T V K \square A G F G S T D A G\) \(K S C Q A S \square L C Q S Y R Q L A S \square S S R K \square C V R \square N V R M T G E E \nabla H G T S\) \(T \square S R D N V L F D A F D Q F Y S M S G T A F K S P \square A V Q F V N E A G \square D G G\)
\(\square F V Q \square A R Q V V K D N A S D D R D P W K V K L V G E G A D D A G\) \(S\) VS RNQMVESLTNQIVERFDEEDMMAP DMVVFQGESGDDEG
\(R \square\) NRDKFAE ELLTNFENFD \(\square\) KNG \(L Y \square\) NFKDEKG \(\square \mathrm{DAG}\)

T I R R NY T Y E DAY DK LTS PENEPDLKKRVRVHGLDEAGDDGG \(N V N R K S I F G Q L F T Q L K N T R Y S T F R Q L W S V Q F A G E G S I D V G\)
\[
K \square Y E H F C G K \square P Q R N K \nabla E V F H G E E G T G T
\]
\(R Y S \square L A Q \square Y R Q \prod G F L T E E Q W K V N L H \square S G S G H \square P V D M G\) TITRRSRMLEDGYEQLRQLSQNAMKGVIRVKFVNDAGIDQD HISRED L E QLLEYI NQMTSRNLQLPLKVEFDGEVALDLDG CINRSSVFGQTFALLSSRDFQTHQRFWSTVFDGEGAEDAG

LKYPLFVQFKGEIAVVDTG \(R \square P R \square D M T A K A M G L L S K \square P N W E L F M P L K V E F D G G E D V D V G\) SVF GQ VY LQLUQQATDDDFYPDFTVK DAGFGSTDAG
 R LQRASLFEGTFRELEAAPHNACKKPLVVYFDEDPNTKDV \(K \prod R R L N F L K D L L E \quad \square T D K K M N F N F S \prod T F Q D E P G \prod D A G\) Qi RRTHIVEDGLSALLNGDVTRGFQVEFITPEGEAGIDGG VVRRDNVLTDALNQLWRRERRELMRPLKVQMEGEEGLDHG
\(\square A S Q \square E A V P P W L L R R S T R V W F V A Y E G E G G \square D A G\)
\(\overline{V V} H R R H V L N S A D R A D D R A S F K L E E P F K V E F P G E \square G A D Y G\) SVVSRNHMVESMRD\FQHLDNDDLLSP

FKGERGAGA \(F\) VSRFSAFGDSGKS \(\square M Q Q F A S Q Y T Q P W R D T G Y G E N A D D A G\) \(K V R R S Q L C R D V I E Y F S P T N A R Q L F Q R T E V T H \square D E E G E D L G\)
\(K T\) LDYRWPARYDQWWECKF \(\square A E G \square I D Q G\) \(D \square R R D Q A F \square D \square Y Q K L Y N T S G S D M K Q T D L Q \square F F R G D T T G E S\) \(R\) VSRNR ILDSAAKVMEMY SSQKAVLEVEYFGEVGTGL

G \(\mathbb{V} Q Q E F F R \nabla A \square G E A \square D P S Y G F T M D \square R T R \square S W F Q P S M E P \square\) GGYSES \(\square\) AEMCDE \(\square\) QNGSVPLLVLTPGRDEAGANRDCHQ G \(\square K R E \square F T M V G D \| F H D G \square A P N M \square S E S S N E \square T M S T V L P\) GVQQEFFRVA \(\square G E A \square D P S Y G M F T M D M R T R M W F Q P C S M E P \square\)
 GSFRHY \(\square W Q\) VRE \(\square Q S P \square M S \square F A C P S S \square L K P G K M T Y S E E\) Y C


GLRREFYELVGKMMKDSTYQFFELSNNQNTEKYYFHKNCV
GपFREFLNELLKSGFNPNQGFFKTTNESLLYPMLVGDSFT GPYRESLTNAUSDLQSDSTPLFVLSPNGRNSVGLNREKWL GPTQEFYTEVSRYFSTHKEMWYKTDDNVVLGFPTNSGKYE

GPYRQLWT GVFKEFLEEVTKKVFDPADNLFKTTSGDERLYPYIHENYG GPFREHLSEMCRELMSGRLPFFVPTANHVHNTGSHSAYDG GGFRDSIADMSEELCPSSSETPVPLPFRDMYVPNPSCKEF GVQVEFFDQVGREFMTPDLSLMEYDEESNGQYLLTDRCCP GPYRDVLSQLATEMMCQLNPLFVNCGRGDVTAMMPNVQDP GPYRECLTQMSAELMSTSLLALFLPSANMASNPLCAPPLEL YKRDLFHHLFLKMVSEESGMFMLNDSKTLAWFPSNATEES
GLKREFYDMIGNTLKDDTYKFFQPVQGNLGKYFDHSNFNR GLLKELIVELSRRAFDPAYGLFQTCPDNSLSPNPSHKNFA GVQQEFFRVLMAEADDPGYGMFTMDQRTRUSFQPSLEPA G \(\square Y R D \square F S H \square A A E \square Q T T S N G L L L P S P N S R G F G E D Q D M W L L\)
GPKREFLSCLMKELANAVLEGEPY NKTF四HVPLDDK ALTTEMLNLFYEQMILVKKALVCAATEDADTAPSQSVGSP

A VRREWMSLVAAAAGDRSNLLFASNDHPNAMSGEVTPEHL GPGRELFSQVCEE LLQMKLFCLTPNAKSFHEEEYLPCDPN \(G L T V E L Y S C F F R E V L L A G S G L F E G A G D D A S T S \square P S P T A D P\)

GGFRDS \(\square\) A DMSEELCPSSAECAMP \(\square\) PFRDYYVPNPSCKEF QSPSEWLAAVFTQMFDPNLALLAPTPADGRVMHPSNPQHL GPTGEFYTLLSHDLQKAGLRMWRSNSPDVNTSLD DDPK \(\quad\) TT

    \(\begin{array}{llll}B & B & B & B \\ B & B & B & B\end{array}\)
                                    B

UniRef90_T2MCH1 UniRef90-F6YU10 UniRef90-W4Z2G8 UniRef90_C0S2F5 UniRef90 L9JI98 UniRef90 W4XCV3 UniRef90_L1JA82 UniRef90 V6TIU0 UniRef90-S4ACP6 UniRef90_C5G8C1 UniRef90_V9ICH1 UniRef90_Q4DWV9 UniRef90_U6M9M4 UniRef90_UPI00035A10C0 UniRef90-W2YV24 UniRef90 \({ }^{-}\)K 3 WMM 9 UniRef90-_2JVZ5 UniRef90_X6LVT3 UniRef90 UPI00021A46F6 UniRef90_L9LC32 UniRef90-W6KKE1 UniRef90-TOSBF5 UniRef90-UPI00006D0DDF UniRef90-A9UPT7 UniRef90_K7LBK3 UniRef90 G3NIL2 UniRef90-X6MLK9 UniRef90_I7J9R7 UniRef90 S9UUR0 UniRef90-B3PAJ2 UniRef90-A4HL30 UniRef90_UPI0003505FA6 UniRef90 Q6C8U2 UniRef90-E9BV16 UniRef90_V8PBX6 UniRef90_V6LEY4 UniRef90-A0A024J6K0 UniRef90_A4HNKO UniRef90_E9APH1 UniRef90 A2E5Q8 UniRef90_UPI0003BD5120 UniRef90-A0A024U1P8 UniRef90_A0BZ50 UniRef90 U6LT06 UniRef90_Q0CJR7 UniRef90-ROJVU8 UniRef90_U6MD24 UniRef90-S9VLW2 UniRef90_K1R8L8 UniRef90_A4HN70 UniRef90 UPI0003F0877F UniRef90-C9ZZB0 UniRef90_E9ATM1 UniRef90 C1EDR7 UniRef90_A2F3N1 UniRef90-R1CBP2 UniRef90_Q4DLE5 UniRef90 Q4SV69 UniRef90-F9XIM9 UniRef90-A2ED26 UniRef90-D2X657



YKFELLGLLMSLAVYNGLTLPVNFPVALYKKLLGRVKNLD MYFLI GILCGLVI YNFII I DLPFPLALYKKLLHEPVGLI
 \(N L L D V G Q L L G D T D R A D D P L G L D L L S T V W K L L V G L T D P G Q\)
 RVYRFIGMVVGKCLYDNVLIDVSFADFFLNLMMCCESCYD

YRNTGRVIGLALLHSEMMPLPFCRHIVKYLLNKKDSWH



RHYYFLGRILGKALYENMLVDKRSRRFLPAKLYWTRCSLD PMYEFVGVLMGDALRTKQTLGFDDPS VVWKQLLPDEKVDD RVYEALGRI CGMCASMGQPFGVFFNPMVWKKLVFDTMRGE
 \(R \prod F T F F G K D M G H S A R A K T P L D M A D A P F F W K F L V D D E D T M K\) QLFEFVGKMLGKAVYEGDVVDVPFASFFLSQLLGHHHSVD EKWVCI GVVVGLALFNGCPLSFDMPLSFYRNLQEFWGSPC EAFAFIGKLMGGALRSEDPLDLFLPPLVVWRYLCAYPITEA LKYEWI GQIMGAALRGKEFLVLALPGFVWKQLTGEEVWNK HAWKYVGVIFGLDAIHNGCTLPVDLPPVFYKLIVIDNFRPH

 KRNF F L G L L CGGLALYNQCI 1


 NPYRVL GRLMGVVLRGRLSLGLDLPLLVWKRDVALQPEVR
 VATNTLGKVLLKSILENRQDPDQLSSAVLKFLSDAEPSFV NCFKNIGRILGLCLLQNELCPITLNRHVIKVLLGRKVNWH
 GLSTCAGAFIAACATSMDPFQFKI CTPFWRSMTGKPDTIH QSMNNDGRIMCRCVLDDQPLGRGLGRFVFEFLADTHEWR

HKFEW \(\square G Q \square M G A A L R G K D F L I T F L T X X X X X X X X X X X X X X\) PVFRFAGKMVGLAIRAKVTLPVRLSRAVLRRMDAFEDLME

E H F R L L G R V I A K A L Q D G R L L D L P L S P AF Y K L M L G QE LD L H

\footnotetext{
lupas 21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm
}

\begin{tabular}{|c|c|}
\hline UniRef90_T2MCH1 &  \\
\hline UniRef90-F6YU10 & DYFS凹DATEVRFHESUAKMTEEEHKSFENTLTYSMVLAN \\
\hline UniRef90-W4Z2G8 & ( HFEYPNMMG \\
\hline UniRef90-C0S2F5 & D TRVGWSELAK G G LeELLS WDDCDVGFMRTYEFSFEAFGNF \\
\hline UniRef90-L9JI98 & DVASIDPEYAKNLQWILDNDDS DLGLELTTFSVETDVFGAM \\
\hline UniRef90-W4XCV3 & DVTEVDKDYVAGLMCI RDMESDAEAFNQMDMPYSTPSATG \\
\hline UniRef90-L1JA82 &  \\
\hline UniRef90-V6TIU0 & D \(\|\) D FEPGLGNLIAEAEKDDHSLA \\
\hline UniRef90_S4ACP6 & \\
\hline UniRef90-C5G8C1 & D \(\square\) R VG WPELAK G \\
\hline UniRef90-V9ICH1 & DMKDMSPVLAKSMQNLLDYEEADFEEVFHFEXVREVFGEK \\
\hline UniRef90_Q4DWV9 &  \\
\hline UniRef90-U6M9M4 & DVADSDCRLAAVPPQF WDATMEASLSDMTFSAEDTL \\
\hline UniRef90-UPI00035A10C0 & DL LQADALTYRYLK R I EMAETEAEDESVCGEV \\
\hline UniRef90-W2YV24 & TLKEDDFVAYSLWKTLNGULDEFKQLEAMDLVFT TVLSD \\
\hline UniRef90-K3WMM9 & EYCGSNEVFKRSLQFVLDHDFDSSPLEMYFECTTDVTIAD \\
\hline UniRef90-12JVZ5 & DLQLFDPELY DNLEKLLRDAPSFCVTEKFEYRGTEYTLSV \\
\hline UniRef90-X6LVT3 & DLEHFDEKMFHTFQGWMDNTSKRGFQMHQTYGLHFVIYDD \\
\hline UniRef90-UPI00021A46F6 & DLAFFDPALYHHVSEMGNYTPLATIIYLS WQVTLSENEGG \\
\hline UniRef90-L9LC32 & DLEEVDLLYVQTLNS ILCHID S GITEESFHEMFVGQSADG \\
\hline UniRef90-W6KKE1 & DLEEYDRVLAESLKRLRLLSAEDLEMAELKFSTF \\
\hline UniRef90 & D WL E A VDLS F VD \\
\hline UniRef90-UPI00006D & D LK HVDS QTYNNYKLLKELDAESLEDMCLFFTFTN K G \\
\hline UniRef90-A9UPT7 & DLEAFRPTVVASVKCLGQMN ELDDMGLTFSVDDDT G G \\
\hline UniRef90-K7LBK3 & DLS SLDPELYRHLIFLKR DISELELYFVIVNNEYGEQ \\
\hline UniRef90-G3NIL2 & VLHLDTLKCVNYLSLIELNSPGTDQSTLLNRGTL \\
\hline UniRef90- X6MLK9 & SDLEAIDKLCVQALNELEK\DEKSFNYVVYERFTTQLS DG \\
\hline UniRef90-17J9R7 & D \(\triangle\) ALIF DEATLSHDSMLSQGDLRDLDRFEVGESSSPNGLAD \\
\hline UniRef90-S9UUR0 & T NEEMSPALALFTKLQPDAAKSMGM\LSSTDSELEEMG \\
\hline UniRef90_B3PAJ2 & EYEMLQAS L L HFTLEDSQFEEDWREDWSTLFDDLMKEEGC \\
\hline UniRef90_A4HL30 & D FYTHVDSVVEATVKDDNFLLS GVADELIPGFA \\
\hline UniRef90-UPI0003505FA6 & ELPSLDDSEFYKNLTSITKRYD GD\S DLGGLTLSYDEDVMGQV \\
\hline UniRef90-Q6C8U2 & RVTEEDYEQQDPVA Y S S L V L R NLP K A L A Gl G L A N G S \\
\hline UniRef90-E9BV16 & EVEQVDVICVQCVREFRGTETELFEDVFGEEFFVTQLSDH \\
\hline UniRef90-V8PBX6 & DFPAIDSVLVKLLEMMEGMDKETFEFKFNELTY T TVLSDQ \\
\hline UniRef90_V6LEY4 & DI QDYDFQFAKFI QDSENYDDVYKEY \\
\hline UniRef90-A0A024J6K0 &  \\
\hline UniRef90-A4HNK0 &  \\
\hline UniRef90-E9APH1 & DMARIDMATLNAL GYVEQLAGDEELAELCPRGFSLLNDAG \\
\hline UniRef90_A2E5Q8 &  \\
\hline UniRef90-UPI0003BD5120 & DMMEFSPTVGRTLQTILNYEDDVLDNLY \\
\hline UniRef90-A0A024U1P8 & K I EMLDKSLYNS WMQLSVLDNFQSFLEVEELPPTMTPTEY \\
\hline UniRef90-A0BZ50 & DLYMI WDKQTYSNYANLSSMNS ETIESLYLDFTYQLGN \\
\hline UniRef90-U6LT06 & DLQSLEPSVHRSLMLLKS Y P G DAADLSLT F SLVRSEFDAN \\
\hline UniRef90-Q0CJR7 & DHIR DGWPELTKGLETWHDGDVGDVFMRTYEFSFEA \\
\hline UniRef90-R0JVU8 & DLKELMPAVGRNLQNILNEESEDKLESQDMTFVILGEGGS \\
\hline UniRef90-U6MD24 & DLEATDALAVHDLRKLLDLECEGVDAASFSELFPLCWASG \\
\hline UniRef90-S9VLW2 & DLVISLDSTLKDTLDPVTLLQTTETDLEDRFPGVKNLWSDV \\
\hline UniRef90-K1R8L8 &  \\
\hline UniRef90-A4HN70 & DLEEYDANDANTLKRRLLSATDLEEAGLDFSHFTPEFLKA \\
\hline UniRef90-UPI0003F0877F & DFAFFDPVMYESLRQSSDADAVFSAMDLAFADDLCKEEGG \\
\hline UniRef90-C9ZZB0 & \\
\hline UniRef90-E9ATM1 & \\
\hline UniRef90-C1EDR7 &  \\
\hline UniRef90_A2F3N1 &  \\
\hline UniRef90-R1CBP2 & \(L \vee Q P\) \\
\hline UniRef90-Q4DLE5 & \\
\hline UniRef90_Q4SV69 & XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX \\
\hline UniRef90_F9XIM9 &  \\
\hline UniRef90-A2ED26 & YECVKSN【DQNVFQRQYNLKFVINNDAG \\
\hline UniRef90_D2X657 & D \(\square\) S \(L\) F D A E F G K T \(\square\) Q \\
\hline
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\hline & UniRef90-L9JI98 \\
\hline & UniRef90-W4XCV3 \\
\hline & UniRef90-L1JA82 \\
\hline & UniRef90-V6TIU0 \\
\hline & UniRef90-S4ACP6 \\
\hline & UniRef90-C5G8C1 \\
\hline & UniRef90-V9ICH1 \\
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\hline & UniRef90 W2YV24 \\
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\hline & UniRef90-L9LC32 \\
\hline & UniRef90-W6KKE1 \\
\hline & UniRef90-T0SBF5 \\
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\hline & UniRef90-A9UPT7 \\
\hline & UniRef90-K7LBK3 \\
\hline & UniRef90-G3NIL2 \\
\hline & UniRef90-X6MLK9 \\
\hline & UniRef90-17J9R7 \\
\hline & UniRef90_S9UUR0 \\
\hline & UniRef90-B3PAJ2 \\
\hline & UniRef90-A4HL30 \\
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\hline & UniRef90-E9BV16 \\
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\hline & UniRef90_U6LT06 \\
\hline & UniRef90-Q0CJR7 \\
\hline & UniRef90-R0JVU8 \\
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\hline & UniRef90_C1EDR7 \\
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\hline & UniRef90 R1CBP2 \\
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\hline & UniRef90-F9XIM9 \\
\hline & UniRef90-A2ED26 \\
\hline & UniRef90-D2X657 \\
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 ALI GGFRSI I RPDWVRMFSGPELQRLI SGDNEI DLEDLKR A \(\backslash R C G L A S G V P H R L L S \square M T P A D M E L R M C G R P H V D L A M L K A\)

AFLQGFHMFTPPSLIQLFDEYELFRGSCQKSEGRYP YCA WVREGMARVI PVPLLSLFTGSELETMVCGSPDIPDDLLKS AMREGFNSCI PSNVYEA TVVEDLSTVISSGTCEVDVDDWRK SLRNGFLDLLPLTQDPVLARTELDLLLSGEPTIDVNEWKA TSHPGSFD
AFYKGFHKVCGGRVLELFHSYELMAVVVGNEDYDWEELEK YTQRGFDEVVPLYTLNAFRWQQVELII CGAPKLSYDALRE

 KLKRGLLDTIY RTALKKLFRPKELGQRLVRGEREI DVATMKK


 AMKKGFYSVVSLEPHKLLSPSDLVLLLCGVQHVSAQACVD
 \(Q L V R G F H D A C P A H L A C \| F S P G E L Q Q L V R G K P D I D V Q D M I E\)
\(N F L R G L Q Q L I Q K D W U D M C N E H E L Q L L T S G S L D S L D V D L R Q\) FRQG
\(S \square A K G L N Q V V P V R M L S L F N W Y D L E V L V C G N P N D D D E A L R R\) WFSKGFAAVLPLGYI RLMESGVVEYMVCGDPEIDLDVLKG YFS SGLSQSLELPALQLFTVDNLCRMFGGAGSDDTELRQV


MVAF GFQMVYPAELARKMPTKDLKRLVEGDSHDDVELLEQ KMREGLLSVVPEVAVLLLTPEELELRVCGQADYTPEELRK
 HFCTS LNFF

 EFKRGFFLVCEQDLVR A LHKCMMS PQDFQR LVYGDPPAES \(\square\) S \(\square R S T F V V S M D K E\) SF I EGFTSVVDLDNGKWLRPSEDS LFTQGLLE VKPEVILQQ

DFMQGFLKGCPARSWKMFDPVELQVLLLGHTTCDWRLLQK AVRQGLGEVVPLQIVDLLEPHQLQRLVCGSPSDDLQLLRS
 AMRKGFYCEPSLEHHLKLLSPSDLLLLCGQLHVSAQVIVD AMRKGLLDVLPKNSLEDLTAEDFRLLVNGCGEVNVQMLIS

 AFKEGFYQVLPQNLCATDTTDSLVQACCGDDFIPDSTFLN A LRDGFTEVVDLREQLGASASELLLMLRGNTELSCEELLA FLDRGFRDUVPSEAGASLGEQEMMSLLCGSRANDKKPLWT X XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX AFAQGVHD IVS
MMRDGFLENLNFTPPAYVNGYT \(\square Q Y A A C G E R D \square P T D \quad K F\)

\footnotetext{
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\hline UniRef90_T2MCH1 &  \\
\hline UniRef90_F6YU10 & HTVYYGFHGSHRLI VWLWDISSDFTPEERAMFLKFVTSCS \\
\hline UniRef90-W4Z2G8 & HTMYQVGLVETDTLEFFWQALESFSQEELSRFLKFACNQE \\
\hline UniRef90_C0S2F5 & \\
\hline UniRef90-L9JI98 &  \\
\hline UniRef90-W4XCV3 & VATYKGIDATAPLVTWFWEDMEDFTNNERSLFLRFVWGRT \\
\hline UniRef90-L1JA82 & HTELVGWKASDNVVKWFFEMLEQASNEFRCCVLKFSCALS \\
\hline UniRef90-V6TIU0 & HSVVDGCWS P P V V E WF WELLRENPEDA VGGL R P S C Gl S \\
\hline UniRef90-S4ACP6 & CTYSTTMTPSSPLVQWFWEVVETMSQAERAQLLLFWTGFS \\
\hline UniRef90-C5G8C1 & \\
\hline UniRef90-V9ICH1 & NTYKEGYTKDNPT\VLFWQVFRELDPLEEKKKF \\
\hline UniRef90-Q4DWV9 & VCQVSLPANDAR MF LDVIA SMTDEDRMLLLRFTTGQT \\
\hline UniRef90-U6M9M4 & HTECESFTNEQPVYQVANCVI CSLHAT WNSFACRFVCGRS \\
\hline UniRef90-UPI00035A10C0 & HTMYQVGLVEDPHIEYFWAALESFSQEELARFIKFACNQE \\
\hline UniRef90-W2YV24 & NTEYDEDSPNDEFI QRFWRVLESLLEPEDKRAFLRFVWARS \\
\hline UniRef90-K3WMM9 & SMLYSKGSPDHGVI QRFWEVVDEFDQTQREKLLTFWSGSP \\
\hline UniRef90-12JVZ5 &  \\
\hline UniRef90-X6LVT3 & HVDYDDCSANDNVIQWFWTYVKSLDKEGLKHLLLFWSGTC \\
\hline UniRef90-UPI00021A46F6 & ITTFTDESQ \\
\hline UniRef90-L9LC32 & VVRYREVDEQHQLVQWFWRTLDEFSNEERVLFMRFVSGRS \\
\hline UniRef90-W6KKE1 & SLEFHGFDSTSKTPTYLKEFLLETSQNNLRRFLQFCTSSA \\
\hline UniRef90-TOSBF5 &  \\
\hline UniRef90-UPI00006D0DDF &  \\
\hline UniRef90_A9UPT7 & N MRVVASPRPDAATLDYFVTVLGELTPEQCSKFLIFTT GNA \\
\hline UniRef90-K7LBK3 & RTNYGGYHSEHYVIEMFWEVLKGFSLENNKKFLKFVTGCS \\
\hline UniRef90_G3NIL2 & \\
\hline UniRef90_X6MLK9 & HTVYQGGSSSSDVVKFFWKTLYAFSQEERQLFLRFVWGRN \\
\hline UniRef90-17J9R7 & HTC S SNSGLLNEFFGIISEFTNDQLKLLLRFVSGRS \\
\hline UniRef90-S9UUR0 & VTEAHGYAAGSKEVATFVSIVGEFGRDEQKYFLEFVTGCD \\
\hline UniRef90_B3PAJ2 & YTTFNDESSEGPFKKWFWSIVEKMNIMERQDLVYFWS \\
\hline UniRef90_A4HL30 & Y \(\square\) RVQL T GSREAHFWQIVEQLS MEQRASLICFASGQR \\
\hline UniRef90_UPI0003505FA6 & \\
\hline UniRef90-Q6C8U2 & FAYEGGYSESSPQVKWLKEY L R G L S V HQ \\
\hline UniRef90-E9BV16 & GASYEGLT S E DRRVQLLWKALEEATPLQRRLFLRFVSGRD \\
\hline UniRef90-V8PBX6 & LT RFEDFEPSDTRI QYFWEALNNFTNEDRSRFLRFVTGRS \\
\hline UniRef90-V6LEY4 & HT\ I KCSHE I ANDFFNMLENNETMRSKDLKFSTGMS \\
\hline UniRef90-A0A024J6K0 & E \(\\) K R L V M FVT G T D \\
\hline UniRef90-A4HNK0 & KCD\QLPTTDAS MFDSVLESMTDEDRTLLLRFTTGQS \\
\hline UniRef90-E9APH1 & AARYEGLSPTDVRVRFLRSVLRGFTRHQRGLFMRFVSGRE \\
\hline UniRef90_A2E5Q8 & E I S EQQS \(\quad\) FFKVIQKFTPEQRACLIKFATGRS \\
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\hline UniRef90_A0BZ50 & K \(\square\) T Y S G G A N H S Y F T Y VNQADSLTLKNMLKFITGS \\
\hline UniRef90_U6LT06 & \\
\hline UniRef90_Q0CJR7 & \\
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\hline UniRef90-U6MD24 & HTKYTGYAESDKQIKWFWRALESFSQTERQSFLRFVWGRS \\
\hline UniRef90-S9VLW2 & ECD\QLGTAEA DMFDEVLQSMTDEDRALLLRFITGQS \\
\hline UniRef90-K1R8L8 & NDKRKEEDTMYAFEDFLQDCSEDTSEDNLNMLLAFWTGAE \\
\hline UniRef90-A4HN70 & A LEFQGFDSTSNTPKYLKEVLLDMSQNNLRRFLQLCTAAA \\
\hline UniRef90-UPI0003F0877F & FTSFNDESGENQFKRWFWSI VEKMSMTERQDLVYFWTS SP \\
\hline UniRef90-C9ZZB0 & PDHGYNSESPQ\TMLQNI AKRFGPREQRAFLLFCTGCP \\
\hline UniRef90-E9ATM1 & QFARHGYHIKSDVVQYLLDIVPTWSAQMQHAFLKFVTGSS \\
\hline UniRef90-C1EDR7 & HAA YQDARLAFAFTECFWRAMEEFTREERDKVLQFATGLT \\
\hline UniRef90-A2F3N1 & FNMDLNSTILRQ S LIQQLTQEERFGLLKFASGSR \\
\hline UniRef90-R1CBP2 & CFAWPDTSDSAAAKAGFAAAGSDAPRYGRMRLLEWSTALL \\
\hline UniRef90-Q4DLE5 & \(\square A E \square H G Y Q T D S P Q M T M L Q N \square A N R L T P A E Q R S F L D F C T G C P\) \\
\hline UniRef90_Q4SV69 & X X X H E DEPSN \(\square\) R VQYLWEALTN FTNEDRSRFLRF \(\square\) T GR S \\
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\(\square S M \square K F S G Q N H T N \square N W L \square N V V Q R F S E E R T A D Y K F \square T G R T\)

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RLLPT PLIISGSKMNAALNSLIPESATCSHT RSPLLGFAYLKPPFS IRCVEVSDDQDTGDRLPTSSTCFNL \(R \square P S T C P C H V P P Y P M K \square A P P D G P G G S P D Q R F \square R V E T C M F M\)

YTS GYEREDPVIQWFWEVVED \(\square\) T QEERVLLLQFVTGS \(\square \mathrm{NM}\) R L P
RPPAGGFRRMPNKFRDC KTEDPDPRLPTAHTCFAE VPPQEGFCNLGQPDFLGQHPFTDRPCSKDRLPMGHTCTNT \(R L P T G G M G S L T Q A S E P F A D M M N S R R L P P D R L P S S S T C T L Y\)
\(R \prod P \square Q G M K A \square K V S R F V C F \square S Y\)
RLPLKEA DKVQRNGTH DSLPTSSTCFFT RLPVAASDWRMTVDYET \(\square \mathrm{DRGATVNDNRLPTAATCSFR}\) RIP QT CPCMEGPPYPMKDAPPDGSGLPDGRYDRVETCMFM RLP LGSAQFHQKFKDQSSSSSTSGGWMDSQMPKSHTCFFA QPPLFGFASNHRSMNSDWYDDVDARMKANQLPMANTCDRR
 SLPAN GFSKSKYETYQPAPSITDRPADDQHLPTSSNTCDYSR RLPANTAD \(\square\) SQRFQ \(A_{M} M K V D R A L C H G V P V T W Y S W A D A S T P Q\)





R\PPAQAAWDQEM
 S L P
RLPHGG AVPY GGLT QRI KVVRRDVDFTGGGVNHDNSLPTVSTCFGY S PPAGGFRNLVGYLGDAVPFTAPGRDEDGALPMAHACFNV


\(R \square P \nabla G\)
EDPPS LT \(\square\) DNAHT LDMMPTASTCFDQ

5777777777776531146777666777741256415613 B B B B B B B B B B B B B B B B \(\begin{array}{llll}B & B & B & B\end{array}\)
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\hline UniRef90_T2MCH1 &  \\
\hline UniRef90-F6YU10 & L K L P NYRKKSVLP NKRRYA \\
\hline UniRef90-W4Z2G8 & \(\square K L P Q Y S T L A V M K E K L L Y A \| N\) \\
\hline \begin{tabular}{l}
UniRef90_C0S2F5 \\
UniRef90 L9JI98
\end{tabular} & LK LIPEYPSKE\|LKDRLLVALH \\
\hline UniRef90-W4XCV3 & \\
\hline UniRef90-L1JA82 & IVLPEYQTRDDLIQAFQRVVVE \\
\hline UniRef90-V6TIU0 & L Q P L A ESKDDLLRALKVA \\
\hline UniRef90-S4ACP6 & LSLPPYESKEALRSKLMAA \(\mathrm{L}^{\text {L }}\) QQ \\
\hline UniRef90_C5G8C1 & \\
\hline UniRef90-V9ICH1 & \\
\hline UniRef90-Q4DWV9 & LRLP S Y S SYESMREKWLYAWRQ \\
\hline UniRef90-U6M9M4 & L VMP LYY S VA MMRERLLYAI N \\
\hline UniRef90-UPI00035A10C0 &  \\
\hline UniRef90-W2YV24 & LQLPRYS S D I C R ERLL Y AVR \\
\hline UniRef90-K3WMM9 & LILPDYPSKDVVKQKLLTALE \\
\hline UniRef90-12JVZ5 & KLPDYNDKDLLKQKLLFSI \\
\hline UniRef90-X6LVT3 & LHIPNYS S P D L K S K F DVILQ \\
\hline UniRef90-UPI00021A46F6 & L Y L P L Y S T \\
\hline UniRef90-L9LC32 & ARGPRDSSQLVMAERLRYADN \\
\hline UniRef90-W6KKE1 &  \\
\hline UniRef90-T0SBF5 & L HLPAYSCREVLSAQLEYAV \\
\hline UniRef90_UPI00006D0DDF & P Y Y K S Y EMMKA \\
\hline UniRef90-A9UPT7 & VELPRYTS LDEVCREKVLFSDS \\
\hline UniRef90-K7LBK3 & K E QLE T KLLY AIIN \\
\hline UniRef90-G3NIL2 & \\
\hline UniRef90-X6MLK9 & L \\
\hline UniRef90-17J9R7 & L LVPRYSSAETFRDRLLYA \\
\hline UniRef90-S9UUR0 & V KLPPYSSRKI MKERLLFA \\
\hline UniRef90-B3PAJ2 &  \\
\hline UniRef90_A4HL30 & ITIPQY T S LD MFKEKLLVALQ \\
\hline UniRef90-UPI0003505FA6 & \\
\hline UniRef90-Q6C8U2 & LF LPKYETKEVLVRYMDKAME \\
\hline UniRef90-E9BV16 & IE VP D Y S L E V M K K L Y Y S \(\square \mathrm{E}\) \\
\hline UniRef90_V8PBX6 & \\
\hline UniRef90-V6LEY4 & LK\P\VS SEE\|LR QRFLIALE \\
\hline UniRef90-A0A024J6K0 & \(L L L P E Y Q S \square A Q M E T K L R L A L\) \\
\hline UniRef90-A4HNK0 & LRLPSYSSAEKMKEYLLYAVRQ \\
\hline UniRef90_E9APH1 & LHMPRYTS F D N A K M \(\square\) S \(\square\) A \(\mathrm{V}^{\text {E }}\) \\
\hline UniRef90-UPI0003BD5120 & \\
\hline UniRef90-A0A024U1P8 & Le\tPNYPPYEELRQKLLYA\E \\
\hline UniRef90_A0BZ50 & \(\square E V P L Y\) A N Y G Q L K Q K L D \(~\) A \\
\hline UniRef90_U6LT06 & \\
\hline UniRef90-Q0CJR7 & \\
\hline UniRef90-R0JVU8 & \\
\hline UniRef90-U6MD24 & \\
\hline UniRef90-S9VLW2 & FRVPS Y T S S Q \(\square\) M M D R L L Y A A R Q \\
\hline UniRef90-K1R8L8 & LEISRGETPEEFHRKMELA \\
\hline UniRef90-A4HN70 & LDLLPD Y N D K QVIKEKLEIAL \\
\hline UniRef90_UPI0003F0877F & \\
\hline UniRef90-C9ZZB0 & LK MPP Y T E ELMY K L Q \\
\hline UniRef90-E9ATM1 & L K LPRYSSKAVLQDRLRFAVCE \\
\hline UniRef90-C1EDR7 & R L P R \\
\hline UniRef90-A2F3N1 & MTVPMYKSVQVCTKSLRAAIQ \\
\hline UniRef90-R1CBP2 & VHLPPYATRQQLQAKLLQAVE \\
\hline UniRef90-Q4DLE5 & LKLPPYPTEDLMYKKLRLS \\
\hline UniRef90-Q4SV69 & LY Y P N Y P S A V V C E KLR Y A \\
\hline UniRef90-F9XIM9 & \\
\hline UniRef90-A2ED26 & LH LP A Y S S P D K M Y T L VR A A V \\
\hline
\end{tabular}
lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm
```

