## QUERY

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UniRef90-B1B544 UniRef90_Q9PUB1 UniRef90_L7M721 UniRef90_E1CAY0 UniRef90_A0A023FYX2

$\square N P K K A Y E Y K Y E G E V N F G L G M P N L A E S G V R D S C K V K D F S$ F QPGKTYEYNYEGTVR $\square G H V E K N M V E S G L K U S C S V E I S G$

PKKTYEYKYEGEVKFGLGKANLAESGVRDTCKATDTG


HYEPGKTYKYKYVGDVNFGLGKPNDAESATRDSCNDK DAG KTYEYKYEGVVNVGRGDADLAEAGVKLQCTFRITG
 $\square N P N K \square Y E Y Q Y E G W V K F G L G K P N H A E S G A R \square K T \square V T \square M G$

LN S K K TYEYKYEGLVQVGRELPHLVESALKLRCTFK\| LNPKKDYEFQYEGAVNIGRGMPDLAESGVRLKCNAKITG QYSPGSTYTYSYEVETKTA LIGATEDQSTI KIIRATANI EVV EFAHDKTYVYKYEALLLGGLLPGEGLARAGIKVVSKVVRLSA $L N P N K N Y E Y E Y E G W V K L G L G K P N Q A E A G A R I R T N V T V$

WKTNTVYKY LLRGRSMTGLHQVSNQYS G LLKAQVADQL FEVGKEYVYKHKGTLDNVNPDHPQQLTGVAFRSKVLVQV

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 ETESTFLLMKFSDVQLHEYTGUWPRDPFVPETKLCMSTMTAE




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| UniRef90 $\times 2 \mathrm{OH}$ | UniRef90－13ЈЗАЗ UniRef90－U3LZUC UniRef90－ $\mathrm{H} 3 \mathrm{C6J5}$ UniRef90－H2SAZ4 UniRef90＿GOZF41 UniRef 90 GG3P4L3 UniRef90－UPLO003F05BFC UniRef90－X2QGRO UniRef90＿S6A416 UniRef90＿BOZSJ9 UniRef90＿Q8JIF8 UniRef90－Q6BCB8 UniRef90－F1QQQ3 UniRef90＿B9V418

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QETGVEGICQTTYVVQEGYRTNEMAVVK NIKKTHTVYELQEAGVQGVCKTLYAISEDEQAERILLTKT NIKKTQNVYELQQSGVQGVCKTHYVISEDAKAQRIMLTK S NFKKTQNIYELQEAGAQGVCKTQYVISEDPKADRITVTKS NGKKTQNVYELQEPGVQGIVKTHYV：SEDVMAERILLTKT NiKKTQNIYDLQEVGVQGTCOTTYEIQENKKANRIETTKT
 N：KKTQNVYEMQEAGAQGVCKTHYAITE E ETDRILLTKT NIKKTHKVYDLQEVGVQGVCKTLYSI SEDARDENILLTKT

 TLKKSQNAYDLQEAGDGGVCHTRYMI NKOLKKKNITVFKT NLKKTQNVYELQEAGVQGVCKTHYIVGEDVKAERIVVTKS

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## QUERY

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K DLNNCDHKVYKTMGTAYAERCPTCQKMNKNLRSTAVYNY RDLNDCQEKVVKD $\quad$ VGLAYTEKCPKCQQDSKNLRGAT AYNY
 K D L S H C Q E R I I T K D F F G L A Y T E E K C D E C T E R V K


 RDMNHCHERISREI GLLA YTE KCDECQKESKNNLRGSTS YR Y R D L N H C Q EKV I K DL GL A Y TEEKCVKCQQDSKNLRGTT GYKY
 RDMNNCQERI MK DMGGLAYTEKCDKCQRESKNLLRGTTTTFS Y

 K DL N N CHERIMKD I GMAYTETCAQSQQRGKNLLRGAAAYNY

 K DLL N N C Q E R I I K D L G L A Y L E T L Q

 K D L D N C Q E R A L L E Q I G G L V Y Y T M L C C P T C Q Q Q R S K N L $K$ D L D NCQERALE QUGLVVYTMLCPPTCQQRSKNLRSMATTTH K DLDNCEEKVQQKNMGMAYDHQCPTCTKKGRNLGRGTAASTY K DL N NCQEKASKTMGDPFTQFCESCQLKGKNLLRSFSTYYTY K D L N L C Q E K M M K D D G L E H V E K C C H D C C Q A R G K S L K K G T A S Y N Y
 K DL N NC QERRITK DFGLLA YTENCVQCQQQ GKNLLR GTAA YN Y
 K DLL N S CEE K V QVVTGSAYTQP CQTCQQQRKNSSATATYNY RDLSHCN V YKVVGLAYTHRCPECEATGKS LLNGASTYSY R N L N Q C Q E K V M K DIGGLA Y T K T S H H K Y Q Q D S K S $L$ R G T T G Y T Y



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 $R D L N Q C Q E G F I T K D M G L A Y T E R C D K C Q Q D T K S L L R G S T A C Y D Y$ R DLLN H C Q D R I Y K K D T G L K DLLNNCREK V VK E VGGLA Y MR KY H E S H GR S Q I L N GVT T T N Y K DL NS CNEK AQMTTGGSAYTYPCKTXKESNRTHSRATAATHS Y



 V DVTN CREKAEMYSGMANAVEDKLLSRERGKSVFSTVVRYV


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

 K D Y E K C I VR PA Y Y WNF T R S MQYVLERQA P PLRSAAT F R Y
 KDLNKCQKRIMKDIGLTTYTERCVQCEARGNNLKAAAASNY VDVV NCREKAMF QTGMATADVEDKVSRQRGESVVFSTVVKTY
 $V \operatorname{D}$ L N C Q E K V Q K S I G M A Y I Y P P C P V D V M K E R L T K G T T A F S Y

 K D L S C Q ER
 K NLLGCTERTHYQTALQGTPYVPSEDQSLPDMKSSHDCQQ $K D L T D C Q D S A V Q S T G M A Y \square R P C P T C P M K V R N M K G T V L F T Y$ R NF S E C D Q RVAFHFGTGPTNWEPAGNQMGPFMARSSVSRV K N LE K C E H R P Y $\square F Y G R Q R G K P C D H C E A E D T H P Y A S S Q V Y Y$
 K N Q K C D H H HY S
K NLEKCDNQPFHVTGT LKGRPCVGCKQRWVPLTMTSEVKY


$R \square L S V K N K A D S S Q D S V E S R G D \square M F$ KYSNERTGVVSANSVTRKADMNFE VLVD $\quad$ K S $\square P \square K A P D A Q L Q N K G S L R Y H F P$ TLESVQPAQGQPQSDPVRTDKDLVYEY TLEAEVRARSSSAPDVPMQSYGGLRYHFP DLVEEHDAPTTDTVEAGEKEHSLAQEFP TLLETHDSGAEDTLPDSDSYRRLAHKFP

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FETGKE Y VY HYNGR LQQKN P E QP LQ S S GFAFR SKVVAQP FKHLRKYTYDYEAESSSGVPGTADSRSTTKDTCKVELDV WKSGTQYVYNVRGRTMTGLHQVADQYVGIVMRAKLSVQP EWDPNRQYVYKVESRAFTALHQISNQYAGILMRAKLIIQP FKHLRKYVYNYEAESTSGVTGTADSRSATKDNCKVELEV FEVGKEYVYKYKGTLHTANPEQPDQSTGYAYRSKIVVQP Q YKDGETYRFTYEGETKTSGNGGNKEQSGLKFTATALVEV FKHFRKYVYNYRARSSSGVPGTADSRSATKUNCKVELEV FEVGKEYVYEYKGTMYVLNPEQRHQLTGRGFRSKLIVQP EVELGKTHRYNYTGDIRTSFPQTGNETVGQRLQCIVEIYP WKVGEEYQY LVRSRTLTGLQTLSDQYAGLLMKATLRIQC FEVGKEYVYRYKGTMQVFSPEQRDQSAGMAFRSKVIVQP FKHGKEYYYNYEGRUQTLSLDQPLHSNGFAFRSKISMQP FKHLRKYVYNYQAESSSGVPGTADSRSATKGIDKKVELEV FKHLRKYVYSYEAESSSGI PGKADSRSTTKTNCKVELEV WKNGNLYRYEVRGRTVVGLHQVADQFAGVLVKGKLTVQP WKDGKEYTYK $V$ RSRTLAAFNPQSKQYTGUVMEARLTVQP FKHLRKYVYSYEAESSTGVPTAADSRSATRINNCKVELEV WHVDNEYTY LVRSRTLTSLDELSDQHTG LMKALLTVQV YSPNKEYWYDYETQVVTGMPKGSKIYSGLKFKATAKLQF KFKPLRKYVYNYEAATTSGVSGTADSQSGSKFSCKDELEV WKVGDEYTY LVRSRTLTSLDVKSSQYAGDLIKGFLTVQA FKHFRKYLYNYEVESSSGVPGTADSRSTTRINCKVELEVV KYGPGTQQNYKYSVNVRSFFNGTSRNESDLHVEGTVTLNF WKVGNEYTYLVRSRTLTSGGDDSDLHTGILIKALLTVQV YQPGTTYLYNYASTTETSMQGTTSQKVAVHVACQVE:E

REYVYRYMAQTVTGDPGASKVYSGVKVMANVRLQF FEVGKDYVYHYNGKLQVYNPEQPLQSSGFAFQSKVVAQP FKTGKQYNFKFDGQUASGLPDGSSSDNSASRMESLVSLNF WKNGNLYKYEDNGRTLTALNQVADQYAGVLFRANFYVQP WKVNTQYEYAVRARTMAALAHQVAPQYVGLVLNAKLYLGQQ



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KSDHTYFK KTDFEVDSFNGDR ILDDHQFNHSTDDLREF PQPCSFILKTSHCTLKEGYGFNPRKTLLKKTKNSEEFGAA K S D S E V V K VNNAEYADVHANLGWNGYQPDSKLS YQQLP D
 KPDGT HFK LDNWEGDAFNSEHDDVAHHEFNYASNENVGD
 PQ
P C S F PKPCQGLLKLHSDEVRDRPDPVVEEQDFEHPKSDADAEDLD
 KAD HTHFKIADFESDTFNSDDINDERHEFNYASNEHVGA RGELTFFKISDFVFDQFHGETIDLRTHEFNHHDDALTDY
 ETASKVMIKMENVQMYKI NDQIPEDMFHQLTPETADMVAK


 KPDGT HFKLDNFEADSFNSEHDDVAHHEFNYVANENFAV ETAAKVLVKFDDVEMYK INDQDPEDLEQQLSPETADMVEK
 DEDAAWMQFESGKTKVSNGVEELDMKNEADELEGESTND
 VTPCDGLLT LSDDKLSE NPFEDGQETPPHANSQEFSDM




 ASNNVVTLQLHNAQYANVHANLSQGWSTPDPESHYQP\PMM

P QLCCSFVMRTS QCTLKEVYGFNPEKALMKKTKNSDEFTAM
 PQRCSFILKTSQCTLKEVNGFNPKKPLMKKTANSEEFTAM PQLCRFTLRTMHCSMRETAGGVDEGRADKKSKNSEEFNAM PQLCSFILRGSQCTLKEVSGFSAERALLKKTKNSEEFAAA KTDSHLVVTLNQPRYSEVHTTLQHGVETQDPEGQLQYKPD TDGNTARMQLQKDRFAVSQEELPFEKFEEVDNMDREHQQL
$P Q L C Q F R L R T M H C S Q R E T F G D S E R R A M L R K S K N S D D F N A M$
$D$



 PRHEDSPSNEMLHREKVEHFRDTL
 PQLCSF LLRVSQCTLEEAYGFEEGKALLMKTKNSDEFAAA
 QPGRQVRMDLMDVRLYESNSGEPNQVEWQRSPNSQDFSRA
$K$ R
K ■DERT TLLFQL NQVRFGSIQEEFEPRELLPFEKDDEEHKNM


VDER TF LLRFNK DRFGSTQDEFEPRHLLPFEKDDEEHMEM DSENQLTLQVQDAKYADI NQRLHEGWYIPESQANYKGFPA GQQEHVLQVMRLKLEGGVGFYPKNSLSEPPKEVKQFLAC VSPCNMELKLHHINVVQTNSKNAKA LNPAKLANFKAELD PSETVAHLRLEKI RVASLQKEDDEPELFEEDELNEEHLRT ITKPCEGLLQLSNVKLKD QDENYPVERAEKFVQAV LGKCHMFLKLQDVQLKKTLASREES KSEDTLNLQAREFKQAE INLSSNGWSTYULDQDLNYKQLPL
 V P C D G L TL SDVTL SE I A S RDNE ENPTSSTNSQLFSDMD PQPCSFILRVNQCTLREVTADDGKAVFKKTKNASDDFSTS

 KDHNYVVAY DDRPMYAAFNEY LPRGYRTE DSNDKWQPMPF PDHTHFKIVNFEADSFNSDE DDLAHHEFHYASNEHHGA

UniRef90 Q17083 UniRef90_Q90WQ0 UniRef90-Q90WM8
UniRef90 B7QGE2 UniRef90-F6Z5E1 UniRef90-T2B338 UniRef90-Q9U8M0 UniRef90-F6UCK8 UniRef90-F0J8W4 UniRef90-UPI0001CBBED9

## 9

 UniRef90-K1QKD6 UniRef90-HOXCJ2 UniRef90-L7LWWI UniRef90_Q17BE3 UniRef90-IOB4C6UniRef90-G8IIT0 UniRef90_A0A023GPB4 UniRef90-A0A023GP41 UniRef90_UPI00034FD7D8 UniRef90_UPI0003F18BF2 UniRef90-I7CE51 UniRef90-H0V4A3 UniRef90_E9HQQ7 UniRef90_A0A023F7A1 UniRef90-B2BD67 UniRef90-M3YQN7 UniRef90-UPIO0022CA20D UniRef90-A0A034WXN6 UniRef90-B0RZD4 UniRef90_Q7SYX5 UniRef90_UPI000258E3F1 UniRef90_UPIO00224705B UniRet90_UPIO0032 UniRef90-UPI00046C1394 UniRef90-UPI000252A983 UniRef90-A0A023GJX5 UniRef90_UPI0004418881 UniRef90_A9ZQ48 UniRef90-B7Q406 UniRef90-H3EHI3 UniRef90-UPIOOO3344E27 UniRef90_V9HZ08 UniRef90_W5JC53
UniRef90 QOZUC7 UniRef90-F7BS91 UniRef90-UPIO0042A9E54 UniRef90-F1KQS3 UniRef90-L5KRE2 UniRef90-H2ZVL8 UniRef90_U3JG73 UniRef90_UPI000443D786 UniRef90-EOVZ54 UniRef90_K7HLX3 UniRef90-F1NV02 UniRef90-A8XJI2 UniRef90_U1MGQ2 UniRef90-E9FXX3 UniRef90_UPI00034F318A UniRef90_UPI0003F05BF2 UniRef90-V9K7B7 UniRef90-UPI0003D0CF09 UniRef90_UPIO003314983 UniRef90-×2ATR8 UniRef90-W4VR36 UniRef90-C3XU16
UniRef90 E1CAX9 UniRef90-W6N9I2 UniRef90-Q5KQQ7 UniRef90-V5H340 UniRef90-D5LOB5 UniRef90_A0A016RY77 UniRef90-Q9U5D7 UniRef90_UPIO004418BCA UniRef90_T1.J9X6 UniRef90_H3FHY5
UniRef90-G6CQJ6 UniRef90_UPIO003C46C13 UniRef90-T1HDI9
UniRef90 UniRef90_U4UQE3 UniRef90_EOVZ52 UniRef90_H3B136
UniRef90-E3LCE2 UniRef90_UPIO0042C1887 UniRef90_R7U4T5 UniRef90-B7Q381 UniRef90_Q7PQM2 UniRef90-B5ABL8 UniRef90_GOM7M4 UniRef90_UPIO00359911F

## 而

## 





$\square E R P F A G T F S H$
$\stackrel{1}{M}$ S SSK K F ELRMENGAVDKMMVDKSLPTWELNMLKAIASQLQV LK DAFA ILLQNGHIVNVKVKDSTPNWAVNILKGULSTLQV MS Y E LK LS S G GK QV S L YPDRDEPTHDLNI KRGI V SALLL



## 



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## 

$\stackrel{L}{M}$



## 1

L E RP F A FTYAK

MNYDLRFAFH
SNKPFQLVYK
 $\begin{array}{lllllll}K & S & A & S & V & F & N\end{array}$
पKMPDRFVYRHGMVSETEFSEEDKPWSVNTKKAVLNMLQIV KNQPFQLLLSNGVVQKMVVDKDDPTWELNFLKGI ASQFQV QEYTAHFTYNGRIGSTLMSKNAPGHCKNDMRGMLTMLNM
 STHDLRFAFHDGLIS SEICPDEDEEDWVNYKRASLSLFQN

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## -




UniRef90-Q5KQQ7
UniRef90-V5H340
UniRef90_A0A016RY77 UniRef90_Q9U5D7 UniRef90_UPIO004418BCA UniRef90_T1J9X6 UniRef90-H3FHY5 UniRef90_G6CQJ6 UniRef90-T1HDI9 UniRef90_B3S1T7 UniRef90_U4UQE3 UniRef90_E0VZ52 UniRef90_E3LCEz UniRef90_UPIO0042C1887 UniRef90_R7U4T5 UniRef90_B7Q381
UniRef90 Q7PQM2 UniRef90_B5ABL8 UniRef90_G0M7M4 UniRef90_UPI000359911F

 VLKPAPTGALILEATATELI QFSPFSILNGAAQMEAKQIL
 TLESKRKH VSEADCKEQHLFDPFSYKNKGMMVQVTQTL
 TVVDNRRKHVVSEVVCTEKHLFLDFSHKNQGMMTQVRQTL ELKGTPEHYVI DHAWGESSQLFKPHNEGKE FHVLLNRTL KIS IVTGNLK TLDSRRKH V SEAVCKEQHLFLPFSYKNKYGMIHDTQTL KI HI KLNRTL NITGTRQRYIINDVRSDARYVFFSMGIKGGSVFVQVNQTL RLKGSRENYVISCACGTSDQVLAPYGNGK TFHVQINNTA TLDPKRKH Y L R GVDRSF TLDPKRKH $T$
IVSGNLKRYT QS SVT Y L R GMDRNF I
SMD S K R R H VISGNLKR
EI S L I D GAM K L T L D A R GK H

## 

V E CK QVF Q N G LV D S V E C K $R I K G L K G G N L I L Q A N V Q E D Q Q F D P F D E Q N G S G I M E A R Q K M$


AL V R $\mathrm{V} K$
TV
K M K Y A EA GA L
T LDP KRK D
T L D P K K K H

N I D A K K R H

## TL P K R K H

| N | T | G | P | S | N |
| :--- | :--- | :--- | :--- | :--- | :--- |
| S | L | L | I |  |  |
| I | $\mathrm{D} A \mathrm{~K} K \mathrm{~K}$ | H |  |  |  |

SIDAKKKH
TFKN
T A S H R
E CLQA F R D G T L
E I Q D D
S L D G S K K H
T L D P K R K H K I NGB $\qquad$

| $N$ | $L$ | $Q$ | $Q$ | $E$ | $Q$ | $N$ | $F$ | $V$ | $V$ | $E$ | $I$ | $Q$ | $T$ | $R$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $D$ | $R$ | $R$ | $G$ | $R$ | $H$ | $N$ | $F$ | $I$ | $E$ | $R$ | $A$ | $I$ | $A$ | $D$ |
| $K$ | $V$ | $A$ | $G$ | $D$ | $K$ | $N$ | $E$ | $F$ | $L$ | $I$ | $H$ | $E$ | $V$ | $E$ |$|$



VLKGTVANFIIEKMMADGEIMFTPYTPNGNIIRILLNRTM EVVGNRDEYLVREVELESQYKMIPGSKKHELITTFTNNKM VLSGKYNRYT QSSWTTEKVLVAPHLYNSQKGIVVSRLDLL $K V K R D S A G D Q I T Q V M S E Q L Y Q F P L I D G D E G A G Y M K A Q Q F M$

 SFKD

 $V L S G N L K T Y T V H S S V T T S K V I V S P E V Y N N Q K G E V I S R V N V$
 TFK N
SFKD
VLYTENER G ILAA E
 $Y$ LT G N WY N Y TII Q S V S T V N K V V V S P S L V N S Q K A M V Y A Q V N M


|  | $50$ |
| :---: | :---: |
| UniRef90＿Q1 | LDSVNAASGSPRPSEPESTGN |
| UniRef90－Q90WQ0 | FVDI EK $\square$ PVEPIK A A Y LPR G SVQYE F |
| UniRef90－Q90WM8 | FLEIEKTTFKPLQAEYLHRGYLQYQF |
| UniRef90－B7QGE2 | F LDEERAANADMQPDDVGVSDELTHSF |
| UniRef90－F6Z5E1 | KFEDTSK】NSRFFEEGVEEV SL |
| UniRef90－T2B338 | TLEAVNSASGSPSVSNPRTVKNLVYEY |
| UniRef90－Q9U8M0 |  |
| UniRef90－F6UCK8 | KLEDTPK $\square$ N N RVFDEASLPKKRL |
| UniRef90－F0J8W4 | DLEEEHDAASTDTAEGAEKEHHLAQEFP |
| UniRef90＿UPI0001CBBED9 | KLRESRD ${ }^{\text {L S E R }}$（EEPRDTKKNSLRYEFP |
| UniRef90－K1QKD6 | AFVS KSTGTTTRMAEVSRRDT |
| UniRef90－O17428 |  |
| UniRef90－H0XCJ2 | KLEDTPK】N |
| UniRef90－L7LWI3 | DL LEEHDATTDTSGDDHEKEHSLAQEF |
| UniRef90－Q17BE3 |  |
| UniRef90－10B4C6 | KLINVT T DPYFEKCPTQETRGGLTYKFP |
| UniRef90＿G8IIT0 |  |
| UniRef90－A0A023GPB4 | DLDEQHDAAFHTPPEDAVKEHSLQ |
| UniRef90－A0A023GP41 | TL DDEHENAAE $\square$ S $\square$ PEVESHERLSHVFP |
| UniRef90＿UPI00034FD7D8 | KLEDTPKINSRFFGGGTQKV |
| UniRef90－UPI0003F18BF2 | KLEDTPKI NSRFFNEGAEKV |
| UniRef90＿17CE51 | MLT NTKAISEPPM |
| UniRef90－H0V4A3 | KLEDTPKINS |
| UniRef90－E9HQQ7 | TYS SERRSDQVP S D Y K K K K SLLF D GP |
| UniRef90－A0A023F7A1 | TLLEAVTSSSGSPPVPNPRTVKNLVYEY |
| UniRef90－B2BD67 | TL HEVKDIS QVPP P P NPQSTGNLVYNY |
| UniRef90－M3YQN7 | KLEDTPKINSRFFEEGTEVV |
| UniRef90＿UPI00022CA20D | T LANVKK T C P L P K P S TPESTGNL |
| UniRef90－A0A034WXN6 | DL L E A HDA |
| UniRef90－B0RZD4 | MLT K T N E $\$ S $\dagger$ T P P Q N P R S H P Y S L R |
| UniRef90－Q7SYX5 | KLEEVTKTNSDFDPDPSVAR |
| UniRef90＿UPI000258E3F1 | TLGNVNK $\mathrm{T}^{\text {S N P L P P R NPESTGNLVYV }}$ |
| UniRef90－UPI000224705B | RLISEKDQKVTIPSANFQTKHT Q E E L P |
| UniRef90－UPI00032AFC8A |  |
| UniRef90－H9GAF3 | NLVE GQKHTPQQSQQQKGSIRYEF |
| UniRef90－UPIO0046C1394 | GENAVTLGEQS E |
| UniRef90－UPI000252A983 | TLAKMEKTNPLPTVNNPESTGNLVYDY |
| UniRef90－A0A023GJX5 | NLRSQRRAQGRRAAYNA |
| UniRef90－UPI0004418881 | E FLEAHN R L P Q IP P D L K K Y G S LS Y N F |
| UniRef90＿A9ZQ48 | LTEAMDLA D |
| UniRef90－B7Q406 | DLEEVHDANTDTQPEDLERVDHLSSTLPP |
| UniRef90－H3EHI3 | TLLSVESGVET I R G P K S |
| UniRef90－UPI0003344E27 | KLEETSK【N |
| UniRef90－V9HZ08 | TLA SFHQANGSPRSNNYRKVNNLVYD Y |
| UniRef90－W5JC53 | SFFQEESYTQEEPKDELQQR |
| UniRef90－Q0ZUC7 | TLVDVK S A S S S PQSPPSPQVKNLVYE Y |
| UniRef90－F7BS91 |  |
| UniRef90－UPI00042A9E54 |  |
| UniRef90－F1KQS3 |  |
| UniRef90－L5KRE2 | KLEETRN |
| UniRef90－H2ZVL8 | RLLKTENE DS SNRANLQQVSNLLYE |
| UniRef90－U3JG73 | K L E D P K $\square$ T NKNFD G D A Lie E K GL A L E |
| UniRef90＿UPI000443D786 | T L E D T |
| UniRef90＿E0VZ54 | TLTSVHS T G NVPT T Q P P S L K K L V Y D Y |
| UniRef90－K7HLX3 |  |
| UniRef90－F1NV02 | KLEDQRMNNRNPDGDELEEK |
| UniRef90－A8XJI2 | VFVEENK I NKEIKKVT GPKESLVY |
| UniRef90－U1MGQ2 | QLL NVIE DVRNVVEPRSERKDTLVY |
| UniRef90－E9FXX3 | EFIEI ENSESVANEDKPRKRSSLLFQ |
| UniRef90＿UPI00034F318A | KLI RIEADMSTNKDIPGKHYTSLLYE |
| UniRef90－UPI0003F05BF2 | EFVDVSS GS Y K Lie R QVREKK L LVFE |
| UniRef90＿V9K7B7 | K L E |
| UniRef90＿UPI0003D0CF09 | KLEDTKSNSRTFDEAALEKRG |
| UniRef90－UPI0003314983 | KLEDTPK\NS |
| UniRef90－X2ATR8 | TFTR QVAGVTRQRAAVRQ |
| UniRef90－W4VR36 | VLVDTETADETGKMTYI EHRAKLT |
| UniRef90－C3XU16 | RLRRVSEGDSDVRPADLQQRTSLVFQ |
| UniRef90－E1CAX9 | ELVETRDGVTDPINEDLVTYTKLAFLDF |
| UniRef90＿W6N912 | TLVY A GKPET Q I P S VRRDRKETLI Y N F |
| UniRef90＿Q5KQQ7 |  |
| UniRef90－V5H340 |  |
| UniRef90＿D5L0B5 | VFVET RAAAVVPVEAEYLHRGSI KYEF |
| UniRef90－A0A016RY77 |  |
| UniRef90－Q9U5D7 | TLEDVSPLKGDSPS GNPRTVNTLVYEY |
| UniRef90－UPI0004418BCA |  |
| UniRef90－T1J9X6 | NFIEKKSATRNKDMPQTV R S S M L F |
| UniRef90－H3FHY5 | RLI EVNKEQKR\｜AAPKSEKKE |
| UniRef90－G6CQJ6 | VLI DEYNRTGSETMAMDTKRSNL H H |
| UniRef90－UPI0003C46C13 | KLLQVEAGVLSTVNSSDLYVSNLLYE |
| UniRef90－T1HDI9 | TLEAVTS STGTPPVPNPRTVNNLIYEY |
| UniRef90－B3S1T7 | KRTSQKQQS $\square$ PLPGNLVSRGPI GFQF |
| UniRef90＿U4UQE3 | VLKEQGEKHSGEENEISTRTNLK |
| UniRef90－EOVZ52 | TLVVSTGGTSTGSGPANPQTDKKLVYDF |
| UniRef90－H3B136 | KIESTP I I N S RYF GEDQSVRKDLALE |
| UniRef90＿E3LCE2 | VFVEEKKWNKE\KKAT GPKEDIVY |
| UniRef90－UPI00042C1887 | KLLQVEA EMLIKTVDS S DLYVSNMLY |
| UniRef90－R7U4T5 | VFSELNQ\RTSLINTAKLTKEKSLIYVVP |
| UniRef90－B7Q381 | LRTQR |
| UniRef90－Q7PQM2 |  |
| UniRef90－B5ABL8 | DL Le Ehdat TetPredvekehst AQEFP |
| UniRef90＿G0M7M4 | VLVEEKK】NRE\EQSETTT F D NVVFRAP |
| UniRef90＿UPI000359911F | TFKTSQSGE\QSLP |

UniRef90_B7QIL0
UniRef90_H2WP64
UniRef90_Q7KTG2
UniRef90_UPI0004572B34
UniRef90_G0MWJ3 FK N FRRYVVYDYEAE TVVNGVNGATK DK S G HKI S C KVVEV EV FS PKSEYVYKFD GLLLS GLLPTTFSDAS QT LI S CRTRRLQA WT N GK Q Y T Y All N S RTIAATFN QQS K Y L S G I V I E A Y L T


Y QE GHTYVYNLEGTSVTSVTSAQGDATLKLAATVELSV
 K Y E ENVS Y WY R Y S VDVS T NL GNVS SNESTLDRLDADLVI R F


UniRef90_H2LNN9 UniRef90-UPI00022CA474 UniRef90_UPIO00457324E UniRef90_UPI00022CAB59 UniRef90_UPIO002A4A474 UniRef90_UPI0003340CBC UniRef90_UPI00042C457D UniRef90_Q49MF9 UniRef90-Q94637 UniRef90-R9WX72 UniRef90_M4AP66 UniRef90-J9K1J6 UniRef90-A0A023GB51 UniRef90-W2T2G3 UniRef90-X1ZYD0 UniRet90_Q9U5F1 UniRef90-G1KI31 UniRef90-Q9U943 UniRef90_M9TKT0
UniRef90_W8EAE4 UniRef90-UPIOOO4422E04 UniRef90-UPIOOO3F07785 UniRef90-E7FBD3 UniRef90-H2WDVO UniRef90_Q2VQM5 UniRef90_S9XXF1 UniRef90-T11H98 UniRef90-UPIOOO3871230 UniRef90-UPI0004542C97 UniRef90-Q5CAR4 UniReffo-A3RKP7 UniRef90-U6PMS8 UniRef90-E2AYB4 UniRef90-O2VQM6 UniRef90-A8XPS2 UniRef90_Q1JUBO UniRef90-B3MUX3 UniRef90-H3D442
UniRef90_F7DZN2 UniRef90-UPIO00259067A UniRef90-UPIO003FOC5DF UniRet90-B4KH15 UniRef90-U4UYR7 UniRef90-UPIO0044365D9 UniRef90-B4JCE5 UniRef90-D4N2J9 UniRef90-UPIO00258F1B2 UniRef90-UP10003DEAFBF UniRef90-A0A026WAJ5 UniRef90-UPIO00395AD75 UniRef90-W2THD1 UniRef90-Q9BPSO UniRef90-Q4W8F1 UniRef90-Q6QQB2
UniRef90_UPI000443FB9B


PSPDGTHFKITDFEVVSFNDEHTQLSEQEFHHSTDALKQF VDDRYVHLQLVNDRMAASHEQMPVLNSMEQRELSDEYKQM PRHCGLMMQVNQCKLQEVHS DNGKPDFKKSKESEDFQKAM ADDQHIHDQLEDDRMAASNEQMPAWNSFEQREDSDEYKQM KSDGYVVGRIDRAHYAQFNQYLADGHRSELSKLTWKPMP PQLCHENLRTSQCSLREVAGDNPEGELLKKSKSSDDFMAM VDDRYDHLQLVNIRMAASHEQMPSLNSMEQRELSEEYKQM KDPQYVVCYVKQAEYATFNEELPQGYRTNDWKLKWQPMPF ESDNKATAVLENAKYAQANLDRGWDSEDQENENQYNELDEL LGPCQMALWLQEFQVTSALG SEVAVLKDSENLSAA TSSDTLQAVISKPRYARVHRPLGWDSWПPVETVEPRELPM LSKCELALTLSNVVFKTS A EPDSTQLKELDDWDYKSVL PQTCSFVLHTTECSLKEVSDVDGKGNPVPAVGAKAFKEAM KGQDTLRAKVSKARYAQ
APQCSYVLKANVQVNG LWRNLAQ| QUQDLKVYHDSKHEKSQNVTGDPSGGKEDTAE KPDCIRQIRLKGVQUNGAPLSLPDVE $K S P D Y V V A Y V K Q P E Y A V F N E R L P S N Y Y Y Y Q N M L K F Q P M P M$
$K S P D Y V G G Y K Q P E Y A V F N E L P Q G I N T E L S H L K W R P M P M$ VAENTYLLKLVNPEDFEYSGVWPKDPFVPAAKLTSA $A$ AA PQTCSFDLRTTECSGSEGSGTDAEGRPVPAEGALAFTDAM
 KPDCVHQLRLKNVQT NGAPPSTPDVE
$\stackrel{\mathrm{L}}{\mathrm{N}}$

 KNENQAVFKISNAQYADVHQNDTEGWQQEDRSNELQYKQQ SAPCEYTLRVTDVTLGGSAHEQE PQLYNLVLKISLCTLEEVYGIQGKALLKQSRNSDEFAAAM
 PQTCSFVLRTTECVLSEVSVIDAQGQPVQAAGAEAFQAAM DDDRYVHLQLTDVLYGNTSEQWPK LGPCQMALQLQNFQMTSILG
 LGPCQMTLWLPDFKVTSVLG TGACQMTLWLPDFKVTSVLG
 PDDHNAILKLRDVRFDERKELFQPTDELKPRLMSKEHVEL EDD YVTVQLQSLKTNMWNGNVKEPSEDNVDIVONTVD KSPELLQAKFDNQHYAHDHQELSNDDFDDPKNVNYKRMPM VDESTAVVALLATKGKQFNEDVMEKYSEVDPGQEVRDQEH PKPCEGYLRINAAKLYDANDESGEKNNFEHPKSVNFHQDLL
PQACSFIVRTRSCQLUEVVGMDMDGNFGPAPTSDVFAADM VWRNPANKDDQLVRFEMKNLKVESVTERPQNKLGDNYMKS SSPCEGSTKFRNASTS HDPRKYNPEFPDRAGAEFKTHL LTNEDITLKGRSPRLYEYNTTHRHDHYKDSSGTNKFHEE PKGCEGYLRINTVSLYDSSDEHGSNDFEHMHPKSSELSVD RSDGKLQAWISESQYAQIMSQMPWNSEDPESQLNFKQLGL PKPCEGYMRINVVKLYSSSGEQVTPDFEDLHPKSLELLAND LSQNRLQLSVEQPRFARDNENWREVFGPEMAEVDEDLKR KPNCVHQLRLKNVK LNGAPASLPD
KS ENATMQFESLKMT IWNGKMQEQGEDQDDPK DVAD LGNCQVAKVODQYAQVHQQGNQDIPEHQVEFRELPM PDDHNALLKLREIRFAERKENFKNIEDLLQDHKITKKHMEL HTPSVLRGQLKDTYHMTVHRMLPWDQKFEERESNWERVGM TPCDVGISVKNTEVDGVTGPDMKKYDE
TERPFAGKFSKGKLVAAELGKNEPKWSKNLKKGVVISVFQLD

LLLDPVRAQLRNGLVSELQFEKEDVEWSKNMKRAVLNLVSF
SSKPFGDKYKKGAVKGLYVEKTVPNHEVNVLKSWVSQLQLL

AQYELKFSTQDEKKIDQLYSEKDEPMNILNDKRGIISALLV
SAKPFAMRYRKGAKKGLYVEQTVPNHEVNLLKAWASQLQL

 AKNPLKFTVDGQNRVKLYPEDDEPINILNVKRGVVSTLMV AKNPLKITVNGQNQVKLYPEDDEPVNILNVKRGIVSTLMV
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UniRef90 T1HDK

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




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PLLE E EKNSNMVE RMERFD $\square H$

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NTKVNNLHY
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QREGGN QF F TVVNE K
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QDDAENTVYHAME
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 K DI A S CK
 K DMNKCl K N P V S V S S T I K T K P C G S C E
 KNYTTNRAMPAYQYGFGEQEGKPTGNRMGDFLTRSAVLRV
 K D I A T C R R R Y A T Q S VLDQT T P Y T R D D K T $\square$ WP VL N S Q S Y C N L
 $F D P R T C D G H P H Y T W S N V P N M L D P N G D Q Q N P D L D K S S E R M Q Y$

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 NVTLTNSKY LQEALCDGULKVNPFG
$M V K D N$ MVKDN $\operatorname{SCQQSFQGVLQSVLAEESHVLSPALRSTTSIKISSRQQL}$
RCKQEDTNGTYSSDIDCHDKKVVRPSYGAYKYVEAKQESTLL LLEKEG ${ }^{2} L K K V E V R S M Y T I T V$ ENQPVMKTESRTRL KLKTDGHDHDILSVNTSGSMYVQPFQSMGEAHYHIVQQACT VISGDLKRFTIQSTEMKNEDAVQPETSDSPDGNVYTDTRL VLENN GCTSNEGHFVVQRVKSMDKLVVKPFSYETEATEGDTVQHL K

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SLREDG
GVLEEAKCSESDRVTLD
IVSRNKERFTIUSSVTFHEVVLKPELFNSQQGISVSRMNV VI GNLIKSALSKESHTISLTLKSSVGVNITSRQHLL EGVLKMAKCEESHKFRPFSSEEGGAVTTATTTM


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TLQDSVKIN
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 MS GAS ED TAK LTIQTSADVEV
 WQVGK A YRYNVKK HTLARLEEGPN S GTAFTANFII RV


 QK GVRYTYRYSAAI STTLLH GS G G GRS GLAA E CVV D DEA QLYYK FS Y DS EVVLLSTRRGPKENPAGYK I S S QV DAN L YRSFHKYEY LLYEAESLNGLNGALLN
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\(D T E T Q Q L T\) \\
\(L\) & \(T\) \\
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 \(\begin{array}{ll}V D A D K V I M K L D N M R I V K V H G A D G D Q N L E P S S P E G Q V L L K H \\ P Q T C S F & L\end{array}\)


 I D ENTIVVKLCADGRIKGYVTKPGHPEEDEGEEDQWVNPEH




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

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QMNPG
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\text { K } \triangle A R S G F T D
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RDLARCSLRRVRASLRSQALPATEEQGKSTQGSGASRL KNMPTCQKRYSTNS ILQQSVPYDRNDKTMWPLLDSSSSYCVM KDLDSCE
KALGTCE
K DI SSCRRRYATQSVI
K DINTCLNRHGYDTSMQYTPYTRDDKT WPILNSQSYCNL KAVDSCK TAETGFTSHSKVLGVSSKSSHQCEQ



KDVDSCK \(\quad\) VRSGFTTPNQVFGVTLKA
 QDFEHCDQRMGFHFGTGQSDFKPQANKMGD\|AQKSVIGYM

 K DLARCSLRRGRSSLHS
K NFTHSEQSPSYHAGLDDGDYGYQPGN
K D L L S C T K S P S Y H A
HDPRNCSHFVQRVFDH \(D G \square Y G Y\) Q P G N K V G K K \(W\) L
\(P K M G Y A S P N K M F G D Q W\)
 K D Y S K C R N K P V Y T I I A P S GWQ CK S G V A A C G TA R S S S V N R Y KNYGHCHHR VAYHF GDPEAE WT GTA HNPEEDQFDRRATVS KNHRFCQD
K NYNKCEQQMAYHS G \(\square\) T D K M N WK
KA A N S CKERPSVTS
 \(R D L R Q C Q Q R L D R L W P H S V T L T E D T M V G M E L H\)
 R DLSRRCDNRPDKDHTSNDALITGMNYGLAQLDNSKQTCNY


 HNFDNCRERPVFSAWSGIKSNCDVTRSGCDDFNSIVSTRY RNYRDCDSMPMYQFS IVKNMMEDGDHERYLKRSTQVNM
 K D LQ S C \(\square\) R P K F GF S T
K A L Q S C C \(\quad\) K P K F GFS
VDVTNCWERAAMYS GMERSGFTTQNQVLGVSSKATSVTTY KHLETCK SQEA GFT THA R

Q E T GFT THSPVLGIS GKCAAETVVI
\(K N Y G H C H H R V A Y H F G \square P E A E W T G T A H R S E E K Q F \square A Q S T V S\)

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\hline UniRef90-I7DB97 & TLLE Q S E R R EI Q APKGQKEE L \\
\hline UniRef90-Q6KB24 & VLEDAKVVHVTVPE Q E LKNRGSI QYQF \\
\hline UniRef90_UPI00027F8E56 & SLLHEMADPAGTDPDDDMTPS GLLYEW \\
\hline UniRef90_Q3HWF7 &  \\
\hline UniRef90-K7FEY7 & ELLSSSPGPAETPGQSLQ \\
\hline UniRef90-K7INP3 & TYKGKKEDS P TAAVSLPKSIIFEAP \\
\hline UniRef90_U4UYX7 & TLLSEVNERTS YP DLER PKP \\
\hline UniRef90_E2B933 & ELLSVEDTTNKVVANLRTTV L Q W EL P \\
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\hline UniRef90_UPI0001CE0DAA & VLLS Q A P R D PAAPDPDDATPRSLLYEW \\
\hline UniRef90-B4MVA4 & EL K G E E S Y S \(\square\) S E F LE Q \(\square\) E R R A T L I \\
\hline UniRef90 \({ }^{-}\)W5L1B7 & VLQESSK】N \\
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\hline UniRef90_I3LJ81 & K L E E TP K I N S \\
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\hline UniRef90_E2C964 & S L ENV VP \\
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\hline UniRef90_D9IUX8 & IFQEYRQS G M P P I S A Q Y VH H G S LKY E \(\square\) P \\
\hline UniRef90-Q49MF8 & TL NDVRVY ENVPM GPAEDKK L L V Y S \\
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\hline UniRef90-M4ATC1 & ML R E T S K \(\square \mathrm{N}\) \\
\hline UniRef90-H9JUX8 & T LTG K GKAVAPS S K C T DVNS IIFFENP \\
\hline UniRef90-A7TZD9 & KL R T I Q P \\
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\hline UniRef90_E0V9D4 & KL R T S H SVT PK P T S GELKASR \\
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\hline UniRef90-T1PA90 & EFKGEQNYSPGENAKDIKKRSPLT F \\
\hline UniRef90_H2ZZL8 & ELISSVTA GPKETP GKQVLS \\
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\hline UniRef90_R9RZN5 & RLL T S S V P TP D V SRGHLVYETP \\
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\hline UniRef90-A0A034W413 & ILQQ E E N Y N Q A \\
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\hline UniRef90_U3KDI1 & QLVS PAMPGPAEVS \\
\hline UniRef90-H2UES4 & TLVGTEAGPLEAAGKD \\
\hline UniRef90-D6W7J2 & TLVSMDEQNQEFEQVSNPVNVGLVYHY \\
\hline UniRef90-I3KAW5 & KLVGTEAGPLEAAGKD \\
\hline UniRef90-I3KBH0 & T L V K V S \\
\hline UniRef90-H0WRU7 & ELRTTEAGPRLRPG \\
\hline UniRef90_UPI00042CDA15 & S L LEVP LD P AVT ED G G D LT P S S L LY E W \\
\hline UniRef90_G6DES6 &  \\
\hline UniRef90-W8B060 & ELLSEES D I N E K L N EVERRSNLL \\
\hline UniRef90_H0YZ32 & ELKSVQA G M GLI A A K Q V \\
\hline UniRef90-K7FKI4 & ELK S TEAGPRVIA GKQ \\
\hline UniRef90-B4M9H4 & RLEEGED T Y S IS ENIELLVERRSALIF \\
\hline UniRef90-K1QMJ1 & T FVVS K S G T T T RIA EV NRRDTLL F \\
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\hline UniRef90-I3JFT0 & T L R A T A K I N \\
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\hline UniRef90-E9GVW1 & QLVD V K N N SEKVPA DVKHYTSLTY Y Y \\
\hline UniRef90_T1DJQ0 &  \\
\hline UniRef90_B4YAJ3 & VLIKVK S G D F P L P K P N Q P K K L V Y E Y P \\
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\hline UniRef90_UPI00020E41CE & SLLHEMGTDPDDRDDEDMTPSSLLYEW \\
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\hline UniRef90-E2A9P3 & DLV S V VP T M E TP \\
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\hline UniRef90_E9H082 & TLQAVRHASSSSPPKDLDS \(\mathrm{T}^{\text {L G S L V Y S F P }}\) \\
\hline UniRef90-A5A3J2 & ELESSVEQDSEAEWEKPEGSRKNLLY \\
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\hline UniRef90-UPI0004419B78 & ELKSTEA GPRMKA GK Q \\
\hline UniRef90-V4A9P1 & TLID A T D \(\square \mathrm{K}\) S S T P \(\square\) P A V \\
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\hline UniRef90-H3D499 & TLVRTEA G P L EVP G K DVS \\
\hline UniRef90_W5KYG7 & S L V GVT E Y N \\
\hline UniRef90-A0A016TLX2 & \\
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\hline UniRef90_A7TZD8 & ELRT T L S TV S H Q \(\square\) P KP K T P K G NLFMEYP \\
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\hline UniRef90_UPI0002659AA5 & RLK S TK DVS EKEDA GDKQVYQ T L N M E L \\
\hline UniRef90-Q5XXZ5 &  \\
\hline UniRef90_UPI000441A08F & EFLT EMP GSKELSS K N L Q \\
\hline UniRef90-G5AP62 & ELKT T E A G P R L I P G K QV \\
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\hline & niRet90-T1J1M1 \\
\hline & UniRef90_H2MYR6 \\
\hline & UniRef90 H9GlT0 \\
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\hline & UniRef90_Q27309 \\
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\hline & UniRee90 \({ }^{\text {UPI00021A7CD5 }}\) \\
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\hline & UniRef90-H3EJ56 \\
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\hline & UniRef90 - V5IB14 \\
\hline & UniRef90- T1KSY0 \\
\hline & UniRef90 \({ }^{\text {UPI000383D53F }}\) \\
\hline & UniRef90- D2SM19 \\
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\(\square \mathrm{K}_{\mathrm{K}} \mathrm{RCDMADSIIKNPS} \mathrm{\square GGGAG}\)
70
促 KSDGYPVACVEHPMYAQFNEYLPKAYRVELSELSWKPMPLL VWRDLIQLAISNVRIDHVSPRSGKKNILQESKLGKNKLGAA VWRNLIKII QNVAVENVNERPPGKNVFKGKKIEKEQLDA VSPGRLQARLENPQRAQFHQQLPNNMARPSDLKYETVQN \(\square T P C D V A \Pi S F T N \square K M D G A P G P\) AEQNTLMLKLVEPELLEYNGDWPNDSADPSPKLTAALHLS LWRNLIQTMNSVNVDSVSPQRGDKSIFPARTVGRQNLEA NSKNTFYVTLSDMKHGLYNGPMKHYESVSHMLPDDAAKA VDDYTLAVQLTYSTVKRNGYFRGNAQDVEGEADEDPDLDV LWRNLIKVTVKDVNVEDVNQQRGEKSIFKGKTTPKENEEA RADRTVFKFSDVEADLFHGDPSELATHAFHYQRHESSQQ LGPCQMALQLQHFQLTSILG TWRNDELPEYTPVPSEYAHY PGRNCRLQAKLEKPQHAQQHEQLPNDMAMPKD LKKYETVQN ESKCHTVLSPQFNKTKEAFESEVTKSPSSPNENDRLREVLV bPECKTVVOLRNVQVT LWRNLIKVTVKDVNVENVNQREGEKNDFKGKKDSKDNLPA RSRSSATLKMDKLTFAK TNDPVPAEMFQPLTGRDAEQMTD VDENNDIVKDENGQDRRTGKYLVNPYHVGESGDKPENPEF IDDASVAFTLTKDDAKSFNEKIEGDVDPKMGKSEDEDKSR ENTNLWT RGGELETPEEYKGSFKHDLFESSRESWWEFRKQ SLSNAYYVKLNNIKYGLYNGMVIDHQPDEVIAELGEDAQQ KDSNELAAKSVHNMVLAG GQSMPDGKKYPCPQG
 YGPCEMVLSTPSCDVSDMEEEREYRTFPHGKSYTREFTED YGPCEMVLSTPSCDVSDMEEEREYRTFPHGKSYTREFTED
 VWDQLVRVQLKDAQLSHIGGEKAAVFQKVS AENCQYTLKVLSLTTFAPDG KSPQKLQMRLSNPQYAHLHTTLMDGPETPDHMLEYRKGND LSPCLISMKMADVELQGVS
 ПWRDEELLRVQUQELKEAKGQAGAGGPPAEDTLSPEAQAE
 LWTNLIR VA: SDVKFETVANRSDDENIFKDTSGGKNYLST VWDQLI QLQVEAVQLLNVSERQESQNIFRQTQVEPTNAAA VTDNTYYVNLTNVKYRLYNGFSKHYESGSVMESUPDVADA SSCLLSLKLIDVELHGVS LWTNLVELKFQDLKVNNNVTRNESQSFFKDSLVEHPHLTD PQPCKFIMKTRDCSLISEMSSTRPKPVFVKSSSSEDFFFAM LGPCQMALWLQEFQVTSILG SEVA RPGCDMMLKLRNDQUKQSSSKRDNS KSPQKLQVKVSNPQYAHVHTTLVDDTELPDQRLKNMRESLL TLRNAYYVVMSDVKHGLYNGHMKHFQHI NNMHPIADVAKH NEDGKLGGVDTDAQYVQDNRELGWETD PDSEVNYEPLDG GTDCKYLLKIDKLVVADDD PKFNWTNPDGKKSP TGPE PAGCLLSMSVSDCTFSSVERETPTNADWRPLIPHSDELARE PEPTLITGQVREAKYAQVNQDNGWKQNDPDSQLKWKDLPL EDTKRSLLKIKNVSLADKHGEKSSPTGNAF DELT ELNEQ PERCRNVLKVTSCSLDDSN PSNDETRQQVQRSNELGKQAM LSKCEMVLRLTDVTMEDSN PSNLLETRQQVQRSNEFKQALL EGNCGYTLQVGAVKVTNTKESVEKK QLP SDLKYQVVNN KGNCGYTLQLSSVKVSNTKESVEKKILNS
KGNCGYT GLSSKVKVSNTKESVEKKNNNSSVIKHVIDTGN
 PRECVLGVQLRNVE SPHQKFV LLQDFQVTPILGSKVED \(\qquad\) T
\(\qquad\) 03ACC861
\(G R \square R V R E Q L Q D V Q V T S V L G\)
A K VEVLKESERLSAA



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QHPLQFSFHD GK LIK I CP QQCE QA WV L N I K R GI L S V L Q T


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\section*{UniRef90_Q762M9 UniRef90-T1DDZ0
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 QLSSGTTANE
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PTRMDDDLEQDTABRSVFGTCPTE VSSSQEGAAVLI HKT HGDCAPKYEI TDSVDSVALGVRMV
 QSNEG

TVTEVDAS QMSSQTQTWRVMEQDLTGTCEHKYVVQRQSQSEEFQVQKS DLTSHRNVFRKMEDDVTGDCETLYTVSPASDDEPDEVTKS QAAAGER QETDVSGQCMALYDVSKSK
NLHKDSHNFTVLERTVEGDCEVAYTVLK KNDSVAEISKS A EGKS
DTQGENADFTAVEDSIGG
AQEK
AQEKS TETDVFGVCQTSF
DTKSPVKVFETVETDVLGKCT
QPHAG TAVEEDASGSCRVTYAVYS N H S
PPETEEDKQVLFTDTLYLAYNTR TCGSS T LK \(\square D Q K N Y N L R E N G V E K C N T T Y F D R N S E K N D E L L V T K S\)
LHESDW
QVK S G
QLIS G N G \(\quad\) S VREVVDVVG

PRKTLEANSVVSE
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\(Q T\) & T & \(H\) \\
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\end{tabular}
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\(R V T D G P D S Q S H G Y\)
\(\begin{array}{lllllllll}T & T & P & S & F & K & P & Y & R \\ V & K & E \\ K & M & D & R & K & R & Y & R & V \\ M & E \\ D & L & G & N & N & Y & Y & S & D\end{array}\) D L E A D D V D Q T L , \(\begin{array}{llll}S & R & G R V R E T & R \\ D & L & T & \text { Q Q GMF K K M E }\end{array}\) GTE S GH
GDEAEH
\(\qquad\) T
\(P V D K V P T K F T E S E\)
\(N Y D P Y Q T Q Y S \square S E\)
PSTALES SVDSDE
HPGARTPETLNEVDVLG SPKHENSVFTVMENT SPKHENSVFTVMENTLVGYCPVTYTTRERADANVTKVTKT
TMDTFKTEQNLVETDVVGKCRTKYNL KQEEWRSVSIVK S SPAAAGNGOTVE QTQTGQRKQTTDE DDDEVHQSFDVYEPTDKGECEVSYYQVIPGSEQFYWEVVQKM

\section*{UniRef90 Q762M9 UniRef90-T1DDZ0 UniRef90-T1J1M1
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UniRef90 O27309 UniRef90-Q27309
UniRef90-Q810L2 UniRef90-Q6RZX4 \\ UniRef90_UPI000443BF38 UniRef90_UPIO0021A7CD5 UniRef90_E9GIR4 UniRef90-E9G1T6}

UniRef90_H3EJ56 UniRef90_UPI0003C916BB UniRef90_V5IBI4 UniRef90-T1KSYO UniRef90_UPI000383D53F UniRef90_D2SMI9 UniRef90-A7XS62 UniRef90_UPI000441F62F UniRef90_UPI0003597B72 UniRef90-EOVFC1 UniRef90-F7BAZ3 UniRef90_UPI00039439E8 UniRef90_Q49P77 UniRef90-E9HPD7 UniRef90-F8SLS8 UniRef90-E2ANT2 UniRef90-C3YVH5 UniRef90-A0A026W329 UniRef90-G5D3H3 UniRef90_Q25490 UniRef90_A0A023G1D7 UniRef90_L9L2M6 UniRef90-S4PIN1 UniRef90_C3YTM4 UniRef90-C3YTM4
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UniRef90_Q29CT0

KNHRFCQDHII \({ }^{170}\) V QTETPKA \({ }^{180}\)
190
200
WPKAPLPMEESVS KNFSNCDRRMGYHFGTGASDIKPNTNQMANILSKSAVSRI KDVNHCSSRPDWEYSPNSLIWNMSFMQYGLNAMS K ILDTCK

TSETGFTTHSKVLGVGRKSSSVTVF KNYGHCKHRVAYHFGVERMGFTSQNQIFDISKKSSSATIY KNYGHCHHRVAYHF GVPEGEWTGTAHSNEEKQFDSHSATS TNYGHCHHRVAYHFGVPVAEWTGTAHKQEQQLIGRATYSR KEHRHCTE

KADDSCTERPGFTTRN YDSMNCSHFKYHEFNHVE CHKCQULGVTSKAMSVTTY RTQSECTNVRDGHNSFGATNCAKGQUERNDMSTSRRVI

 K DLERCGQLAHAFYGRVKGYSCVNCKAQ
KN L RNCNQRQANVFSLVFTKYSTNDNSQQNDP DLNNEHSC \(K A L G Q C S D R R V R A S V R S Q A L P A A E E Q \quad\) U KDVSSCEKRSSFSYYKPGYFRCPT GNCDGMWSRSS ITRY KNYGHCHHRVAYHFGVPEAEWTGTAHSNEEKQFDSHSAVS
 \(K D V L S C T K R H Y K T M D Q M S L Y N V P S E D Q S L P Q U K T T H E C E Q\)
\(R D L E K C Q F R E K L R Q S F F A V S H G H E S L Q S S P L M D S Q\)
 \(R D L S Q C D Q F Y S R E L T N S P G A D L Q R L H P M S K L I T S T Q S C S Y\)
\(R N Y Q H C L D R P K Y F A S M F H L R Q C A E C R E Q S E P L R S A S Q D R Y\)
 \(K N F D K C K K V A N F N D M S P V G M K C K P S T S G D T T A Q R T S T T R I I\)
\(K D Y K N C K Q R H N Y ~ I V N N E R L S W P Y T K T P S D T S V S Q D S T T R M ~\) KDFKNCVERPEHAHSLHSAFDPNHQEDPKK LQQSTVAMRV HE \(\square\) RNCSHFTQRVFDHVECEKCHV
\(K N F D N C D Q R \square N Y H F G M\)
\(R D \square S R C A H R E Q G R N D F V N S \square A N P D A G \square K D \square Q V L Q S M\)
KNHEKCEHGHYALFG RDLSRCA HREQTRNELDTAVYNPTAEIVNTQL MLQSIL KDMSKCQH


PDNVFQDEVMDETGGSASQQCDY
SPSSVNNVF
RNVDRC \(\square\) QRSALINK QS GQYMCSEGNCLGVNVQSECSTVYY KNYGHCHHRVDYHF GVPEAEWSGTAHKTGKEQF DNRATVS RD C LLTTGFTNNNKVVGVDVKSASSVVY VNFDKCTGRPEAKYNFRYVTECPGCKGND FLEPSTVYSY RDLAGCGYREFLSNSMVSSII NSKAGDKSTPLLTS NY RNYEKCDQRQVYRRGLEEPLLQDRVQQDKMLLEDSSTRM KNLASCFGRFGSSLPVIYTPYESKAFQTDPMTNGTFSCQQ \(\begin{array}{ll}R D L G N C A Y R E S D S N S F V T R D V N S K A G D K S T P L L Q S S \\ R D S A C D K V Y G K P V G L Y A G L V P H D A E E K D L I D G S V T V E S \\ K & V\end{array}\)
 K DLTDCDDMVLKVVGAAYA DPCKSCQQRNMNFQAAATYNY KNVDACHRRNDVSGLRAVSYRLHSKVQTPPALQATQKCDR KLLNSCK VAKKGFVNHNKVLGVSINATSGGDF KALDSCKERPGFKT KQLQSCERQAFGF AASNKVLRVHWQPTCATHY QESKNCTRFSYHETNHFDSEKCHVDE WDDMTTASRRDF

 KD DARCS \(\quad\) LR RVRTS
 GNYEKCLQRQDYHRGLENPYKQEKFYKQDKF DSELSTTQM KNYTYSPRQPSYHADFEG \({ }^{2} H G Y Q P Q N K D A D F M S R T S V S Q A\)
 K NLA QCVQ QNISHCNSHLFHDKFSGFEHFTDRMNNGGFISNNVVTRM KDYRNCEEKSEHQSGFMPQEQGEEPKELLESSVQTRAYVM TDUNNCMLRENMTRWQSFKDIVLNMTVMDKFINSSKTCASY \(K D L I G C D D R S G P Q S A F Q G A P F V P S D V Q T D P V M K S T H E C E\)
\(R H L Q Q C K E R V N E F W\) KNYGHYHHRVAYHFGVPQGEWSGTAHKNHEEQFIDRRATVS RNLNSCAHREQDNSGLISGVVNEKAGDSSSLLFQA D DY RNLNSCSHREQUNSGLVSGKVNEKAGITSSLL Q DQANY
 PDYTTFSHMPYDVYSNVETAYVYHNWTSWDSVRP VGVEF
 KDLAQCS \(\quad\) LCRVCSSLHQALPGVAPGLAS HLL



 RNYQNCTTTPRLTQHNWERKGCDECKQEDEPLDQQDTSTY
UniRef90_Q29CTO


NVESKVNNGVPEKVSADEEYपYKPFSVGENGAAKVHTK


TCVQLYDDTVLKKVNCTETVSLVP DPGLLEVTETKTVSSL LLSGHLKRFTIQSVVTKNHISVRPKKTDPFLGNVHSILKL EVEDQGNAILIRKLVSHGVINYMPFHANADAHYVLTNQTF VVTGSLKAFVIQSSVTTEEVVLRPTLADQQKGSVNTKLTL FSTEKNTNLVLEKASSRSTVSHAPYTEYGNVVKLTTKQNLL TLKSSGSGMMDHVTCRETFPARPQDGDDARSSVVVFGK
 DLKGTTGEF RGUECEEVHSFWPMNNSDSGVRTY四QQRL Q Q \(\square \mathrm{N}\) S A G LIT QSVCC E TH
RILSGKQGPI YKT-E SKESKVERGVVENVQLVETYKFAGVTKGNSDVSAKVLTQ
\begin{tabular}{|c|c|}
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\hline UniRef90－T1DDZ0 & S LT Ql K ELLQREP \\
\hline UniRef90－T1J1M1 & ELT G S E K Q S GLVA K G N R \(\square\) T G \(\square\) Q Y E W \\
\hline UniRef90－H2MYR6 & VKT GKEAGPPEVA GKDV \\
\hline UniRef90－H9GIT0 & ELLKSTEGGPRMMAGKQV \\
\hline UniRef90－W0M288 & \(N L M S V E Q D S G A E W Q K P E G S R H T L L Y\) \\
\hline UniRef90＿Q27309 & \(E L T S V D S G A E W P R A G A M R P A Q S I L Y\) \\
\hline UniRef90－Q8IOL2 & \(R \mathrm{Fl}\) S E S S D S A \(\square \mathrm{SG} \square\) ¢ T R G EL \\
\hline UniRef90＿Q6RZX4 & \\
\hline UniRef90＿UPI000443BF38 & ELQ T TEAGPRLVPGKQ \\
\hline UniRef90－UPI00021A7CD5 & F L E K \\
\hline UniRef90－E9GIR4 & VLK S S G P \(\quad\) A K P \(\square\) S A S G L K H Y G S L R \\
\hline UniRef90＿E9G1T6 &  \\
\hline UniRef90－H3EJ56 & NLDE \({ }^{\text {L }}\) A A ENTRLLE GPKSERKESLMY \\
\hline UniRef90－UPI0003C916BB & \(E L T K T E A G P R L M P G K Q V\) \\
\hline UniRef90－V5IBI4 & \\
\hline UniRef90＿T1KSY0 & T LTMLE A S VP S K P V C P P H L S N R Q A LTTF K \\
\hline UniRef90＿UPI000383D53F & S L L Q T E RLT S DS D S G DL TP S SLLY E W \\
\hline UniRef90＿D2SMI9 & KLVKVEDHSE＠K R P N N P K T L K S L L Y T Y \\
\hline UniRef90＿A7XS62 & TLL SVEENAPEWHSPQSTRQINTLLY \\
\hline UniRef90＿UPI000441F62F &  \\
\hline UniRef90＿UPI0003597B72 & TYRTSQSGGRSRP A T DRSRDTLV \\
\hline UniRef90＿E0VFC1 & VFES K T P A APPAVSNNEPRQVFFENP \\
\hline UniRef90－F7BAZ3 & ELK T T A A G P G L M P \\
\hline UniRef90＿UPI00039439E8 & R F Q S N R T S N R F S VER D Q VR P L H F E P \\
\hline UniRef90＿Q49P77 & \\
\hline UniRef90－E9HPD7 & R L E R K E A \(\square\) S S A L S V S S P K S H Q S L A Y VF \\
\hline UniRef90－F8SLS8 & \(T L T S V Q E T T G R H S R S F G G F R G S L V Y S Y\) \\
\hline UniRef90－E2ANT2 & TLVEVNDKPVGQKAEAMVPTGNLMY \\
\hline UniRef90－C3YVH5 &  \\
\hline UniRef90－A0A026W329 & S LHSVVVPVA E T P A S V V F F Q \\
\hline UniRef90－G5D3H3 & \\
\hline UniRef90＿Q25490 & T L \\
\hline UniRef90－A0A023G1D7 & \\
\hline UniRef90＿L9L2M6 & S L L Q E T P T D P G D G D G D A PRSLL Y E W \\
\hline UniRef90＿S4PIN1 & S L SGT T K G N \\
\hline UniRef90＿C3YTM4 & K L V F V K K D P \\
\hline UniRef90＿C3YTM4 & K L V F V K K D P \\
\hline UniRef90＿C3YTM4 & K L V F V K K D P \\
\hline UniRef90＿UPI00026527B6 & VL Q G S S D G A P L Q GATVE \\
\hline UniRef90＿V9P1K5 & RIR NTQGEKTSLPE】N NPK \\
\hline UniRef90＿G6DGS4 & NLMSYEDDPA WV Y P E GAREVT NLL Y \\
\hline UniRef90－C3Z5A2 & K L E K Q T G G A V Q GA S V E \\
\hline UniRef90－U6NLD9 & ILEDVKE】GREFER\D GKKQTLIF \\
\hline UniRef90＿B0WKS6 & TYTGVKGGAPVALK A A T P P R S I F E N P \\
\hline UniRef90－F4WXZ6 &  \\
\hline UniRef90－G9M4L6 &  \\
\hline UniRef90－Q7PUR8 & TLT GNKAGAAPALGAASEPR T I IFENP \\
\hline UniRef90＿T1FHS9 & \\
\hline UniRef90－U318Z4 & ELVSSSSPAPEEEA \\
\hline UniRef90－13N8H0 & KLEDTPKTNSRFFNAGTEKVG LTAFE \\
\hline UniRef90＿UPI0004626E3F & S F EQ】E D \\
\hline UniRef90－F1KPM2 & V H A T T T S S N A P L M P F S K H E T \(\square \mathrm{MF}\) \\
\hline UniRef90＿V9KD53 & VFQA T K A G P K Q 1 T GKEVS \\
\hline UniRef90－UPI0003319258 & ELLKT T EA G P R MVP GK QV \\
\hline UniRef90－UPI0004571E77 & H Y LT S EPRSEEFSKRSLQ \\
\hline UniRef90－H9KD98 & H L K V V SVSES \\
\hline UniRef90＿V5ICY8 &  \\
\hline UniRef90＿W5MCA6 & \(L L L S T N P G E S E F T Q P G L Q\) \\
\hline UniRef90－UPI0002989208 & T F Q S K R \({ }^{\text {S }}\) N R VF DVK H T Q K K Q L H F \\
\hline UniRef90－K7INV7 & EFERVVDDSE \\
\hline UniRef90＿UPI000344698D & \\
\hline UniRef90＿UPI0003838BDE &  \\
\hline UniRef90＿W4VW12 & T L L K K D K I S S S E S S NLES T G NLI Y T Y \\
\hline UniRef90＿UPI000258E917 & VLESVV \(V\) P ESNVQLRSVNFYNVP \\
\hline UniRef90－Q64EZ1 & TL S S V \\
\hline UniRef90＿W4VRP6 & TLKD SKQGQEFKDAKGESK T I Life \\
\hline UniRef90＿V9PA92 & KLLETK H T T E K EVQG D T QVY Q T L N M D F \\
\hline UniRef90－C3XPX0 & RLL HVK SLP P SVTI N L D G T R S DL A Y E \\
\hline UniRef90＿Q9GR96 & VL SRKSNQLS L H P V S D P R NVG DLVY \\
\hline UniRef90＿C3Z052 & KL QESADTEELSEPEPAERKGGLMFVF \\
\hline UniRef90－E9HJQ1 &  \\
\hline UniRef90－W4ZKG3 & 】S N T 】E N \\
\hline UniRef90－R7TIB2 & \\
\hline UniRef90＿UPI000440D194 &  \\
\hline UniRef90＿G3LSH9 & QLVSYES QPEWQKPEHYRQVKNLLY \\
\hline UniRef90＿B4NHW7 & KLKNA GGTAGSAPATGSDKASII F Q K P \\
\hline UniRef90－B4PW44 & KLKNPSGTKANSPATGSTVR SVIFQRP \\
\hline UniRef90－F6SIF8 & ELK S S I P GP A E \(\square\) P E D S VQ V \\
\hline UniRef90＿W5J7X7 & VYMEVVVPSKMMEF A N F P M Y H H V H Y E T P \\
\hline UniRef90－B3RVW0 & \\
\hline UniRef90＿UPI0002658E27 & ELVREEDGA Q NVRSATYR R S C L VFEF \\
\hline UniRef90－UPI000274276A & T L L Y E M P P P I S D P D D G DVT P S IL LYE W \\
\hline UniRef90－A7S177 & VLL S T K N K VAKP \\
\hline UniRef90－K1RD58 & AFVS K S T GTT TKMAEVSRRDTLLF \\
\hline UniRef90－M7BNP8 & K LLQVEA EMLK T V D S S DLY V S N ML Y E \\
\hline UniRef90－UPI0003ACC861 & \(T L L Q Q A A L D P V S D P E D G E L T P S S L L Y E W\) \\
\hline UniRef90－H2YTN5 & GLMD Y S Q K S A \\
\hline UniRef90－T1L541 & R FVRIS G A P LDLIN E N N A IR S NLA F N Y P \\
\hline UniRef90＿T1L4N5 &  \\
\hline UniRef90＿C3ZJ91 & ELVEAKSGPKDPEPSQAENKGNLIFVF \\
\hline UniRef90－Q29CT0 & \\
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\({ }^{1}\) WETGNEYHYFTKSRTDTGLINGDAEQYSGIIFMRGKLTI \({ }^{20}{ }^{40}\) NRQYEYEYVGTVAVGAKAPQEDESGWIVRGKLTLQR LQPGVAHKYQYVVEVAVEHASASTGTGSGFKAEATVKTFR A GRWYLY DYNIVAEASAVGSTDDTGDMKDACRVKVSH KFTPGNFYEYAFES LTT \(G\) GNVSEADDSSLKVTGSAKIYA Y HVH GRTFSSLFQVANQYTGMLYKARLSLDR QRGQSTVYGVRGAVTVGVQKLTGEKTALEYNGTLALEQ

NKQMLYEYVGNVLVGAKHPSPPTTGWIVRGKLTLQR HYQTNGTYVYSYAGKSKI EMKGVEGGDTETEWNKQVYLTW KYEPGNFYEYAFDS ILTVGLSSGVVNEADLKVTGSAKIFA YTTGFVYKYNYAAEI ETGLLDGVDENTAVIRLNAADDLHA KYKPGNFYEYSFESILTVGLSSSNAAEADLKVTGTAKVYA YVYDGMTTTTTRLNKFEDDGVGFRIRSLVHLDY NKQMLYEYVGNVLVGLPAPPTTGWLVRGKDTLQRQS WR G G NKQMGY EYVAGVAGPEAGRHVAGVSLDGR HLA \(K F Q P G H D Y E Y N F D S V L T V A L G T G S T D D T S L K W I G T A K V F A\)


YRYSYEAEVTLNEADTEDKTTGLKVGAVFQLSS WQVGKEYLYDVNTYTVASFDGSNSNGNAFKAQFAVRV F LHGKTYHY LFTA DSDSGFVGASESKAGFKYTCRFSVDV PQQTVLYTYVGENRDI E ENQDAQHHDHVRANVEVGV
 QYEVGVSYEYQYKSVVSFTESRPDQSQVAFQVSSMIVEKS KFQPGNVYEYNFDSVITVDDDTGGTDDTSWRDTGTAKI YA \(Q Q G Q S S V Y G V R G A V T V G V E K L T G E K T A L E Y N G T L A B L E Q\)

\(F K D G Q K Y V Y N Y R L N T L Q S L S S R S G A S T W A R L N L E V T P D T\) QEYVYEYELDVTTGVVEP EYGSMYRVKAFMHVRP

RLYK KTY S TEVFLNRGKEKLQDSGYRワS SNVEVVL FSPKSEYVYKFDGLI LSGVPTTSSDTSQTRISCRTRIVV GSTDYSGLKLKCTVRFQT WKVGNEYSYVVQSRTFTNLAEFPKDYAGULMKGYLTVQA FENGQEYQYSYQTYTLTGVREPDWFGSSFGDRGNLFIQQ YAPQMTYVYSHSGKSRTLMKDVEGGNADMEWSSQVELTW PHDKEVVYTWKALVKAGTDLPTSHASQFVLEGKI HLQS


DFVE GNDY TYSCENMLLKGLP EWGLGRAGDKLNCKDEISG

 K Y R D G H V Y E Y V F D S A MAADGGV K T S D N S Q T S M R I T GVVA K I F T H F D A G V L Y E Y E Y S T M T L A P P I S V D D L G D V T T T S
QYELGTTYNYHYTAAVLLNEAQPLFSQVGYQVAATVEDTP F A P GD QVAYR WT SEVL NE \(\square K T S R G K Y V G F G L S G T V L V S S\) K A Q S T Y V Y S Lid A K TVV L FHDQSEYVYNYRSLVATGMPHQSSRYAGVEKYGTLTVQM WE T GNEYHYLIKS RTLTGLNGLAEQYSGワFMRGK\T\QM



 HRYKFK \(\square\) KHRVSSAAHEASQR GFTIRGKAVI S G \(R L Y K L T Y S T E V L D G G K G K L Q D V V G Y R I S S N V D V V L\)


 WQVGNGHKYK LT NTLIDRETESSTGDVGFRDTGELDVTA LQP G L E Y Q Y RYS A R VA T G \(\square P S \square N R Q F A A A G \square Q A D V T V Q M\) WDVGNGVKYKLTTTLLFSTPTKSSGDVGFRLTGELDVTA

 \(F E G Q R E Y V Y N Y R S L V A T G L P R Q S Q R Y S G L E K Y G V L T V Q V\)

\section*{UniRef90 W4VW11} UniRef90－A0A034V3R1 UniRefefo－H3AZO6 UniRef90－F4WML9 UniRef90－B4JZN6 UniRef90＿O76823 UniRef90－ 55 G 8 C 9 UniRef90－G3T3D1 UniRef90－GOKUS2 UniRef90－ \(84 N B A 8\)
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VWKNE DLGKLEDLECKTSAVPRNDADNVFSGAPCNQVT STEEQLSLRFK円SSIANQLGP REESTKEMDSGRED PSGNGTFVYFDQPKVFLYTGHDPDPVEPTDANYTQYAKQA

LLSTKGKQFNEDVMEKYSEVDPGQEVRDQEH
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PDGDDDQLIDQT
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 TSSKVLGLHLGHVQTGSFDKEVEDDENRRVEGVSRTDDEM MMQ1 RNPQDKRLS PQKEHSVQHLKSLRESLER KSSDTLQAVVSEMQHASVNEDLPDISDETTNVEFRKLSL PEEILIHGTLSSMQYAKINRDLGWSEY円PSLSVNWDNLPM QKKNRINMVVFDAPKNVGADEDWKKTFVLMRG LWGESEEKLLKQLHURSRKAPSPDGF DEHSSKGEKKHEF
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 ■WQDLLKFELLSPQUNWDTQQQVPENLFRPLTKDADQMJK AADYSTVVQFSNTEVGDLNKVLDCEEVSETEKSMTELRRH VWDDSFLLKDELLSPQLWIKSRRAPEPEGFVEHSSRIQKV
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UniRef90_Q4SZ85

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100



 QF TLAS GQLEPICADAGESSYS\NI KRAI I SLLQQ
 LQVP
 \(\square\) QK PVMFILVNGKVEQLCTDPNDNQYALNDKRAIIDLLQS R N WL R F GF E D G L V R E L C P P S R E P V WA L N A K R GL L S L L Q N ERSPLRGAFD DGEVKAVCPHDGDPTWAVNDKRAILSAFQT
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\section*{\(\boxed{\mathrm{V}}\)}

\begin{tabular}{l|l|}
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L & S \\
F & V \\
\hline
\end{tabular} FVQPF GNYNKGKV EIKVASNDGRSAVGLKKSISSLFNV

 LS K PVKF T Y \(\square\) R GSFSNVQTESDDPENSVNDKRGLLSLGVI

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


 \(L S R P \square N F L Y\) VRGNVREDK QEAD DPEWSVNVKKGLLSILEV
 L E K P F RVVMNES GI P DHMGGP DEPDVWDSNMRKAFVNDRRV




\section*{UniRef90 W4VW11} UniRef90-A0A034V3R1 UniRef90-H3AZO6 UniRef90 F4WML9 UniRef90-B4JZN6 UniRef90_O76823 UniRef90-S5G8C9 UniRef90-G3T3D1 UniRef90-GOKUS2
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UniRet90 \(\mathrm{O2P7} 04\) UniRef90 \({ }^{-}\)W5KYZ7 UniRef90-M7ANL9 UniRef90-G1NOZ2
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\(T \square N\) SETGTDVTNEVDVFGQCPTH HYMUHESASEDDF
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\(\qquad\) SMERFDVDRRVE KLGAR
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QAHTG
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SVM H HIVVTKS
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KDMLYCSYPERADWHLSPWAVMWNL KVFDVDWQPTSTSHY HDLRNCSHFVQRAFDYFECEKCH MKSVDDMTTFARRVF RNLNNCAHREQDSSGLLSGD VNEKAGVTSSSLFQSDY HQFTNCRHNSAYKLHFNAFEYFHLKQHKPETFLSNSAVSR
 VNFNKCSRRPQAKYNFRYLSECRDCNDADNNFEPNTVYNY PELKTCTEAVHVTRSNVPPNTCEFDYQKSVII GNEAIYG \(K N H R L C D H R ~ G F P T P S R T H L P W L K T P L P M E E S R S R C T Q\)
\(R D L N S C A H R E Q L T S G L L S G I V N E K A G V K T A D F Q S ~\) RDLNSCAHREQLTSGLLSGDVNEKAGVKSTATFQSQKCY KNLEKCDQREQNGGTSNHIDGRRPRSLPLVRGTQKCRQ RDPKECTKNTAV DNCTIPGKNCRETPSEYESTSQTTLHPS PELKTCSEAVHVTRSNVHPNTCEFDHQKSVII GNEADYG KDLK C SNHQNAPSATNKVLGLEWSPKSVASY PELSTCKESTHDTRSNVPTNTCKFDFQQNV DSGNEADFG RDLNNCIYRENTRSSFIHGVVNQAAGVKSAHLFKA KDLASCRQHLSLVRSQSYRSPRASGRRGGALLASSLECDUQ KNLATCDGRFGSSLPIDYTPYESKNFQTDPMTNGTMDCQM KDVSSCVNKEERYTSMPEGSTWNGKALGVTSAATSRADY KNYGSCKKRSALYSGVPEGSDWNGENDEQQLIKQTSEARI KNLASCYGRFGSSLP IIYTPYESKPFQTUPMTNGSFVCQQ
KVKKSCWNNNQDTKNFDY
DKTFDTNKSHQKVTY KNYNRCHQC\|IYNFGVPRGAWTGIDAGNTEKQFDSHTTVS RDLNQCRFRENTRSSLTHGVINQAAGVKSAHGFKAS PEVKTCSEAVHTTRSNVPPNTCEFDHQKSVII GNEATYG VDYKDCLIARPVYDYELKKPTPGCPANQQRQDSLL VTVNS INFSACDSKLGQQWSNTPAFTCPSSYQDGSM SHSVRNY KDYTSCDKP \(R D \square N D C S H R S S G T S V Q S V V L P H V S S E Q Q L L S S Q L E C V Q\) RNYENCTQNDEFSGKKFSSPEFHKCTKNPEYSTP WVSRSS
 KALDSCK

RNYMKC \(\square\) NRASFTNN \(\square\) YHGHTCAEC
KSYDRYPEMSENVFGM TRQMKKEPKTNKNDMSSSTSR』 RNQNDCTNVPRVGFNTFGTTTCTGKQEDE LQSTTQVYY KNHRYCQD YY \(\square\) NQAETPKSWPKAPLP DEESVS HDMHDSRHDYQHDFSNNEAGHC DAHYENPIMHDSRKDY KELQQTCNHNPYSFSGGMKNFNERVNQSQSSTLESNSHCFY




QNDTYCKHHSD \(\square\) YH \(L K Y S G F E K F S Q Q H G G F D S N S V V S R L C\) NDYSECSERPA QTRNYLETEDCSP ERGSRIPPMSKTI TSC \(K\)
\(R T D E G C\)
\(R\) RNYLNCLERPFYSRSDYNADRCAQCEERTEPFKSASQVRY KYLDDCTRPVHTVDGAVRTGYYGVCSKHLPNDDSVVTAHE KALNSCK
 K
 KNYHKCDGRTAVGFAHYADYEYQGCPQTCQAHKPATVGFES
\(R Q L A N V P H D E D T L W S V R R T T D F D M C E N L V S L Q D H S S K Y T E\) RNYDNCLDRPMYFSSMFHGKRCAEC ACTH GTLPPSKQHPNPMFAVRLKSYRNSKY KDYQNCRQKVEKDHSLLSAKKSKDERKDRKKLESSSVSRLG HFMEED DQRDAYSSSTLWS IRRTTDFGMCENLLSSSVASY \(K T F\) CEH NNLPTRKRHPNPLFDVKVASLRNATY T NYKDCLSRPVYDHEMKPTPGCPVNQQRSDTL
 DCKNRVHVLIDDWRGHRCPESRENPNGLYSASNT \(\quad\) Y
RNYMKCQNQPELSDWMKPTEGCPVSFHPKTDLFTTYNYNM
\(R N L S Q C D S F Y S R E L \square S S A L A L V Q R D S T S Q R M R N T Q T C N Y\)

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UniRef90 A8CMX8 UniRef90 \({ }^{-}\)K1PQE5 UniRef90-A0A023G6U3 UniRef90-A0A023G2N9 UniRef90-T11P65 UniRef90-Q25265 UniRef90-W8BIF3 UniRef90-Q9VF24 UniRef90-UPIO002659406 UniRef90- JgKIR8 UniRef90-UPI0001CBB3A6 UniRef90-UPI000359E3F8
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EIKRQDNNILIERLVAHSTVNYFPYNSRSESHY LINTT SKESKDERGVVANVHLVESYKFAGMAKGNSDVTAKVVTTL VIA TLDPKRKH VSEATCKEQHLFLPFSYKNKYGMMHVTQSL VLDNNG LLPHNETGYFLSMAHAKGTTLIHTFESTGEAQYGNSELLL NKESKDERGVVQNVQLVELYKFAGTTKGVTDKTAKAVTTLL IRELRVERGLVENVQLNEVYRFAGSAKGSSEVTAKVTTT SINTKTNLDEIKEVYLDEAYVFNHADDHSIDLFMVVRQSLC
 VKESKIVDGIVESVHLVEDYNFGVAEKDVNSTRGKVITNL SLD RODNVYQRVECREEHRLRPL VVERQDTSYNLQQVTCTEDYRVSPFSEGNLGTDH VEQTL TLSGDLSH LIFAVAMESHSVRVNVKQDVSLYIVSRQKL VAS KO TVKCNHRRHQLKMVNCLQQQIFEP TV DANRWUTKAECK

 K
ECEQEDTKGTYTTTTCTDTTDRPAY GSYKYDEAHQES LIVIQDGHHIVKHVQAVGALVYHPFKAQSDHQFILVNQSL KMDLKNQAQLI DI QCEENFLVKAFSSDKAGAFVKSRSSM KIDEDTWSGVTAVMAEEVYAFGALNY乌RTLTGKVVSKDK DTAD GUIVKATGSSRHSIVINARPQLSAAVAADQRL
ETQUKDS TLVAVTNKETF DYQPFGP DDVETRTMVSMSL SVQ GSLIQSVLSEESHEVSPTGKSSIGTKLMSRQQL
\(M V V S D K D G V K V E E V H D S D K T V Q P V S E G Q V Q Y V A T K Q Y\) AKESKDENGII SSIEVTEEYTFGNKVGGKTIPNVYAKVK \(\square M D D N H \quad \square K S V T S Q E F R S V V L E E Q S T V G U H V S S R Q L L\) TVLLN NWF LV ASPRRMHTFLPSSYKNQYGMMQVTQTLL SFKSDSD VVDTLTSSEVHSIRVNLRSQAGASVASRQYL TLDKDDSKNVISSSVSKEQHQLHMRAKSDLLGGLVGAEQTLL RIVKQDGHHVVKDIHSAGVVFYYPFKGQSDHQFDFVNQSM KFDKEQEHGMTSADCTEKHVLVPFSHKGEYGVTNTKQVL
DT QVYGAAKGSLIA QCITNETHAIAPDQGGNLNAIHVSKRKL QVYLDAKGSLIAQCITNETHALAPDQGGNLNAIVVSKRKL ALREQUHERLIE
VMKGDNRRFMVYSA \({ }^{\prime}\) GECQHVFTPYSPDGGNVATY \(\square\) NQTF VSYYNVSENLLESALFDSLTVLPVLNA GEVVVRTRLQF VLEDT FI KSVRAEENHIFNLKSLQLIDAKVISKQKL SLKYNKP IVASVISCREWFVVNPVDYQWKKLNIEVITRLD QLTHDASA VVQSAKASESVRMSVNAWPEASIEVTAQHSL KLCGDKRKLDILNVEVREDWIGQPWGAKHGSGRMSITGRV 1 YNQKS LVEVSFDENHEFSTSFMNEVGASVSSKQH V
DIIIQRDTHRRDEQVVVEGTITVLTNKEQHEHVDTFTNQTL
VLTQS \(\quad\) LPPERVNDYEGHKMTLVSKPD \(\square\) GTSVVSERTL L V VSDKDKFLDQQSEVRSQHVFQPYSKQGG
LI RG DTHRRIEQAVVEGTDSVLTNKERNEHVDTFTNQTL ELTQQFRPNMVRE QERHKMTLTARPEMGTVVTSERTL VTKYNVSWGYLDGAHSEHTDDYHLF G GDRFQVFTALHL DIYQEKDKKIVKYПTCETAQYMTSFYEKGPHVLYTTNQTF


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NFLNETS
QLLSLEQGPAENSE \(\square\) S \(\square Q\)
TLDSE
DLHSVVPTEVP
K L K N
TVVERKGRELTVIDYELRNVGDLSY \(R \square R N T Q\) GPKIEEPQNVQTYTTLQHRLP KFGNTSKINS
SLEDVRKI RQQFESSRGKTEG L IY
NFLKETSIIPDD\ETSMASEVSNLILEETP
TLRYQSQSSQQPPA 1 S
\(K L Q N P A G T A A S A P A T G S S P A S I V F Q\)
HFLQRKPDPSENNTFSCMEMKSLIME
K
K L LP EMK T R F VT L P D N Y \(\square\) THG
LLNFQKETR】DNP
EMLSAEGGAK
NFLNETTI
K \(\square\) KN \(\square\) A G \(\square\) TSAAPQTG NHGS \(\square\) FFQKP
\(R A V G \square S T A A P Q E L F N E R S S W V F\)
VLI LQQQTP 1 KPVPATVNMMSSLVK
GLLDYSQQTAKV
Y L A SVQSGAEWKKPEGGRS \(\Pi\) DS LIF ELKEVVD \(\quad\) KRSVNRR \(\square R G K K Y V D G L F E F\)

VLVK Q
RLKS IDENPGTNWQKPEATRHSLLH KI RNPAGTPSAPPQTGTHGVSLIFQKP LLNFLNETPIDNP
RLRNTQ GPK
ELDD \(\quad\) FP 1 GEP \(\square A L V K S D D S I G Y D F\)
SYLNSE
K LLHVETET
NLE
VK Y VQAVAPTKQYEFSSFPMYHY
TVV VEKVEFQPMYPDVFNK
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T \(\square E D\) M HE \(\square K\) T P MPS P
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E LVKTESRTSTKSLESFRR
\(H Y V S D A A G A A A \square S A N N \square K E A \square D L I Y K\)
QLVKMAGVQTPSLSRLSKSRS \(\square\) MFEKP ELVSSSPGPAETPVQSLQ

VFK S T TGMRVKSLTGSPSTAPYGSRSSIIGQEP RLLSTKSGANEEAQGELQ
KLVETPK \(\square\) N S
KLVSSTSGPSVAAEQSLEN
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1 YKESQ
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\(T\) L L N
\(V L L S T R \square R E G Y \square P S L E N M E K S S L L F K F\) NHVKNEKTGP

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E QTVET \(\square\) S ATA \(\square\) QAN
E LKKAVREVGEP DT \(\quad\) TTYEVHNHYNWHY
E L
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VYVG \(\square E \operatorname{VPKEPYTFADFP\square YNYLTY}\)
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VY K VRATVTLKSPELT TEGAGLQYAGDLALYP DYDSSKTYSYSYETDLHSKRATRAQQDVGVKGSVSFQLST FESGQEYTYEYRTAVSLSVPHKASHATGEEVYGYLKLTV
 FEPNQEY LYKY RTAVVSLSLPLKATHATGEETYGLLSVVV
KWEDGS GLVYDLTTTVLLG\RNDSTGDVGFQLTNKLTVLP WKI GSGHKYRLTNTLI FREVGSTGADVGFQLTGELDITA WVIGGGHKYKLTNTLI FREAEPPKSGVGFRLTGDLDVTA
 RLYKLTYSTEVLLDRGKGKLQDSGYRISSNVDVAL
FRVGTEETFDFSNVVHVGNGKNATVPFGYQTHATVIVGS PPKSQHFYELTNVVMHDLQRSNAEEASYDFRAQLKVNS FPVQKELTYFWQVEVSSGTVIPTVLDVSWNLEALVTVQQ
 WEHGPEYTFQVQVN CTA \(\square\) PEEG \(\square Y G S R L N L V S K L I C Q P\)

QFEDGTTYKYS \(\square Q S D V F L A A P R P A G K T S G L R A A A A V T C D W\) WE Y GPEYTFQVRVNS TA DPEEGSYVS \(\square \mathbf{L D V T S K L V C Q P}\) YRFSVNSTVSDSSLHEPDRSTRFDMSAMLKCRF

TSYNFDVDVTVLLNDVNRTDKE \(\square G Y K \square K A T \square G V T P\)
 YPANSDYQY YWSTLVDTVSTMQEQSS GVVRQGYLQVER

TYDVLVNTSLANWVQENDNFCAMDATELKCRP
TYDVLVNTSLANIVQENDNFCAMI ATELKCRP YRVGS QYDYTWSMDVTTS GTS QNQTGSRIVGSVMIIP


KQYNYVVKTNDSTGVAHRNSYWT LEGRLVVLVDD WEHGPEYVFQVQVNS TALPEEDMYDSRLNLESRLICQP

PAGSQQLFALRSKDS LELAGSKPEDVSYSFETQLKDNS \(\square R P N E E Y \square Y\) QYEAKTQLDNVGV FKTNAK \(\square\) G \(\square \mathrm{S}\) L EFVPGRSYEYDYQTQVKDSRHORTKYSGYKATELKCRP KYTKFKVAS FKPGF FKPGFEYEYKLESTSTVKNLG DQRAS

DFLLKAKVVEER QPDTEYVYKYVDR TEMKHDGVFTTQVKVASTMEKCRP FKPGYEYVYSFNGHSTVNDVGK GVVAKVLDQ FKKGVDYKYRDDTESKLSNVENPFH LGAQVSFQHLLDT YRYAWSSTVQTAATRPRQDVNRLGMTGVVEIS G
 \(P T G S Q Q F Y Q\)
K S S EVVS
S FKKGVDYKYRIIDTEST

LE A E QVS YT FA T EQLK K C R A \(L A K V D T P\) F N|V G A Q V V S F Q H QWKNGPEYTFNASLGMVTSMEVDKGQPMGSNMFVTLKCRP EPNRQYDYFDKANVSSTTLAPKRSGSYWTLEGKLYVRA PPNSQQIFKLQNTVSLGLSGT EETRYTFETELKINS





\section*{UniRef90 V8NQB4}

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KGPYALSCHFEDSQASSFTADDPSEPAVPTGQVSRQAYED KSPRDPLNR F VWPSSFLLKIELLQPQLWIKSRSASELEGFVEHSSRUNAL

KTSNTATVQपRDKEVMDLTSTVPNVYTPRPEVEVYF
AGQDTYEARFDNFKHEH YGGLDNDTADPDNVADDYSQH LFKN LTETDYVAKF LNFTLVKFDKVLGDVHHFEPHGQEVDYFQY PTAKTAKLLVKLLNVTSVYDKEVHDLTAPVPGLYHHYLQH YDAKNLAAQELD
 MHGKKPVEKSFVP\VKEAEV WWRDT LLSTKADSLQDWDK LWP NSFLAKFEQLWUKSRRAPEPEGFVEHSSKVEVEQV \(\checkmark\) DDET LML
ASNLAVKI Y LLYMQTTRT GDWKMDVDSAHPPENNVATDT LWRNLI QITMKDVNVENVNQQRGEKSDFPSKПMGKENDEA


VWRNDIQDTVTDVKVENVNQQRGEKS DFPPKDIGKANDEA
VWKSDDSEFLLKFD \(\square R H \square R G K H P T A E F \square P R P S P \square D S Y E A\) KRFHADTCHFRESKADSYVTEDPDAPA TPVSRVSQEAYE YAYDSYSAYGRAQVINMYNKTEAGWQQVTDPEVDGRTDAE A WA A ADQLLLQFELLSPKLYGRGKHVNADFVQUESVWDAY
KGDDSLSCHFQNSLIK RPDPKDNRCSNAKDFVPTRYKFV KGDDSLSCHFQNSLIK RPDPKDNRCSNAKDFVPTRYKFV LGPKDDGSMVLEALASDTRAFTTNTESIEATEVPSTTVH LWTEAGVQSVLKFELLSPHLIF VWSGDGSCRFTNGQLLEVPDP NYYATVQFKLEDGKTSVYSYNTDDRCSNSKNFVPVADRFI KVDSYSLSCRFKDSVANSDHLEPTGPAVPAGPVSQEAAREE VWskd EEQLLEDeपsks

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UniRef90
T1GCSO UniRef90-T1GCSO
UniRef90 \({ }^{-} 4 \mathrm{WH}\) O UniRef90-G7YQT5 UniRef90-A0A023G639 UniRef90-Q177S4 UniRef90-UPI000258DD64 UniRef90-K7JYK6 UniRef90_UPI0002034E08 UniRet90-13M7X3 UniRef90-B3MU72 UniRef90-G3UU60 UniRef90_UPIO0034F77D4 UniRef90_S4NLY5 UniRef90-H9KLW3
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 FESPVVLKWVDHSVESLEVPVGVPEEVVNLYRGLASVLTL FKLPFYVTYDKGFVQEVFTVPEDVQWSVNLKKGLASVLQL AEKPFFVLWRRGDIVAIY \(\operatorname{WDSDDNASSANLKGLASLFQY~}\) AENPFFVLWRHGDVQGVYMDPTESTSSANFKRGLASLFQY LMEPFRVVINDSTVLSLLFKEHETVWSSNTKRALASLLQA MKRGLDSLGN ESPFYAWWNDGQDKEVYFEASDADPVRNFKKGLCALEQY MQLSFCGTFDNGDFTTITVSKKDELWSTNMKRALLTLLQL FYAYWQQGTMKEMFLNTKENLSVKNLKKSLISSLFQYE E D
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 WF SF VIS RGE I THVYHPAGEDEEV VSKK GFAAGFA S VEVPF YFEQHTTGEEVVGMYFDRTDSEEVRNMKRAAVSQLAM PDRPFYDALVKGQPQQLIAHTSRDQSLLNLERALASLLQL L R PFVVVYDDGLLKHITVVHTEADLSSVNLKLLLSNLLQV


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 QVETPQEVPTSYEDGVSGHCRVTYEVESGTK KLLYTEATKT

 Q LDDGQYVYKVEEDPSGKCDVQYTSHS PVDKVPVQFHVVEESVYGKVNVTYDVETVKES UVVTKS KTYDGA RTLDD EVRQRDASGICDVVYV STGENIIEKRKT
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Y DMGSCNGA IY LTTRSN \(\square\) R LDN \(\square\) CTANK QNQA LLKK VEPYR Y R HLHMCMHRVPYFFGS
R NVNKC S LR A DYFF GS REGFRTDPSDMEAR VVQSESSMMV
 K ALLDS C K I ERRSAFT T QN QVGSNN Y IL Y R LI LNN NRK DR Y
 R
KNYGHCHHRVDYHFGVPEG

K R R C

 K DRTQQNYQVFADSS \(\square A A H G S S A P S S A L G V P A T S R A E N K S\)


NYHPEEALGVTQQAQETVFY
 N S Y QKA S M T S Q T S WS S VP WS G DY G R GVP E N \(\square\) A T S QR VY D
 \(F D M D S C C Y P Y\)
\(K\)
\(K\)

R Q LKK CPQK T \(\square\) YFFGNHE DYSRGDGEFYMDMTTSAS LIM C \(\ddagger\) N R S Y L Q R S T S Y
T N L N NCSYYAS F Y F G S Y GANTVVEADLDSHLESSTTRQFV \(R\)
K \(K \quad R D C D L R V S Y H \quad P E D A \square G \square A Q E S K E Q \square S Y\) RQPKRCPRRIDYFF GNDEDYSRGDKQLYMDMTTSTSHIT MQMSEEPEF I HRVH
R H
R
RDQDSYTAFADRTI
 K DMKDCS DLLKSNNSSGUSSLLNNCRNDTQKHLKWDRKIDM \(R R P K R C P N R N D Y F F G N H R D F S F G S E D D F M D M M T S V S R M\)
\(R D C A L W D L R V N Y H\) R
RWPKRCPNRKDYFFGNHQDFS LGGKNDFMDMDTSVSRMY THLSDCLIHSVYFFGTRHTFGUVPVGSMEKLQSSTGRUIID
K MDCDLRVNYH
\(P E E A \square G V S Q L S\) QEQVS \(Y\)
T N LN NCTSYASFYFGS YGNSVVVESD DQS H DESSVSRDY RKPKSCPNRK \(\square Y\) FFGNH EDFSGGHKNTGMDMTTSLSYM F D QK D F K F A

T R R VEKK K \(\square\) C C S G WD LK M A Y R S E R A LDD DS R L S S E


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TVDTKKKH
210 S E All C T E K \({ }^{220}\) LF L 230
 I S S S S C E ETVVI QFDRRERH
\(\qquad\)
VSYYNVS
EFKENL
ELTODE E

KLS ENTN A MLT QSL

TCERQDAQGNLQQVSCNEDYRVTDPYGEGNLGTLHVEOT
DGHIII TSISGTSNVITTSKISEAVVTTLYENVRLL

\(R L I G N T N A F L I K D V D L K S Q Y \square L A P L G L K G A A D R S T V A C Q L\)
EDES GlISSVMCEDKKVVRPTYYKYVEAMQESTLRL
 QLK D \(\begin{array}{lllllll}V S Y Y N L S D N V L E S A Y T E S L D V L N V F & T G K V V V K T L L K V\end{array}\)

 VVVNDKDGVKVHEVYTENVKTVQPS \(V\) SE GQMQYVATKQSF
\(L L T Q S L \quad L P E R V L D Y E G H R \square T L A S K D D D G T V L S E R D L\)


TI DHNVYEQVVCKETRLLQPDSNRHAGAKTDSRVSL

\(S \square T A D G D V S K \square D N \quad H E H V E F L M N S Y S K \square G G F \square D S L T T L\)
 QLKPTQE \(\quad\) LQTSCNETLNDTSSSLMQNSQSVVVRTIT

MLLEMD GTMRTNVRTFESY YPQFLYTKDQLKYEAHSVI
SDTNFASNTFK NE \(\square\) Q \(\square\) ARQRGEDLI DYEHYS \(\quad \square\) GVDSERKAMLKKSKTSE

KYNLETFIFLS \(\quad\) HSF \(\square Y\) YYFS \(\quad\) LCRQK L

\(D \square R A G \square K N T T T Q R \square R S G F S T E N S L N N Y E G S G Y G \square Q S\)
ILRTMHCSDRETFGVDSERFDCWFHSNGANGSSTSQNF 1 SKDKFVSYTISEGTANKSRIMRPYQK

(

 ELSAD GALLRAESTETHRLTLTAKPD VGSVVRGRL TCHQSFQAGULREASCTELDTVGPLSEKASAVHMRTLSSLL
\(\square\) SKEKFVSYT \(\square\) SEGTANKSR \(\square\) MRPH
QNDS L
S D Y QF VS S \(\square\) TRMGT LGTEKKK LS
A MTQYVS L
DLS A D G LLLRAESKESHRDR DK \(\square K P D \quad\) VGS WVKSTL ISKDKFVSYTISEGTANKSRDMRPYQK


I S R R E M N S F
SSSNF
ELSAD GALLRAESVETHRLTLAAKPDAGSTVQS S[L
VSDYQFRMGTVGSDKMNNLMA TSQY \(\square\) S \(\square G \square R D \square R A A K R E L\) R \(\square\) S ERGMHSY

TESTGIMRTLNKPRTMQLHQK \(\square\) S \(V\)
KVDFD DSEGALLQAHSVEVHK KY DTAQPE GGTLIESVTTL

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RFQSNRRTSNRDFSVERDQVRPLHFEDP
E LIA S LSVPPTNPVAFNGELRTSLEHQLP
E
N \(L K\) NTVESAVT \(\square\) SAGSMEEA \(\square\) SLL
ELL
ELLETGSKKVSTDEGKSV
\(\stackrel{\nabla}{\mathrm{V}} \mathrm{L} N \mathrm{G}\)
EWNQVVSATQTVQADSLKH
\(R A V G \square A N A A P Q E \square \quad F K K R \square S \square I F\)
RLES I R PAESEPP
RLEGTSPSAKS
ELL
QLLNVIEDVRNVVEPRSERKDTLVY
TSSDVSAPDTDSRIAQDE
\(E L A S L E V P P T T V Q Y Q G E P H T S \square E \square H \square P\)
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\(W \mathrm{~L} A \mathrm{HV} \mathrm{DGPQ} \mathrm{Q} E \mathrm{EFTPVQTYQTLELVLP}\)
HLEYLYKTPATSFSEQVKTYTNLTYAYP
E T E E
 VFAKE

R LVQETTDTS
STQEGSD TDG \(\quad V K K \square S \square E K E T L L T E E Y\) TLVESSD

K S DGVLTNVQTFTGDT \(\square E N\)
K F \(\mathrm{L}_{\mathrm{K}}\)
RLESTQAAKSEPP
E IR LVRKTQSEERK LHKTE LLRFQ
E EQEQ
\(T \square A S \square D P A E T A Q P\)
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QL L N FKNSS \(\square\)

H L E C L LT T N NDRPSSPYE
\(T \square Q S \square S\)

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S \(\square\) K D \(\square\) RA A K RE L VE \(\square\) P NS S \(\square\) T T \(\square V\)
\(\square L E H L G T G S S E E \square T\) Q \(L S\) Y S T \(\square\)

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S LK S \(\square\) NPARTPDPED
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T
EMYDASKTTIVAN
\(T \square K D \square N P A H Y D F P E \square\)
KHVEESSE
\(S \backslash R D \square R A A K R E \square A D \square P E P S \square T ~ T \square M\)
\(10 \quad 20 \quad 30 \quad 40\)

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lupas_28
jnet
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sol5
sol0
jhmm
jpssm

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DLT QDSRS \(\square^{210}\) KLLES \(\| E R{ }^{220} S V G L R A K E E \stackrel{230}{V} G S \square V E S \quad S L^{240}\)
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lupas_14
lupas_28
jnet
jnet
sol25
sol5
sol0
jhmm

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lupas_14
lupas 28
lupas_2
jnet
sol25
sol5
sol0
solo
jhmm
jpssm```

