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G I E P Y P $\square$ R E NEPYMNP A QKE HFHRI L LAA
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K S ALDPVD GVEPYVPAADEEYMNENQMAHFREILVK RKKASSGRVFRNFEPYKPKRGEEYMNEPQREHFKLILRK K $\square S T E D S$ P L A DA GVK P Y E VK P GE E YM S DA QKA HFRK L L A A K P S S K H MVAS GIA A Y E P E A G E E Y M S K A Q L A H F R E L L L A MS GMAVPLPPDYHPTDDEPFMNDRQRAYFRAKLLAA G $\square E P Y$ GPE K D E E Y M N P R Q E E H F R Q L L L A SK S M N $\square$ D P A L L D F FK K P Y K A K K G G E E Y M N E K QE A H F R S K E HNAFALSNEEPYKEKKGEEYMGEPMKAHFKAILNN


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K K S S S S G LK E | $P$ | $S$ | $L$ | $A$ |
| :--- | :--- | :--- | :--- |
| $L$ | $A$ | $P$ | $D$ |
| $l$ | $D$ |  |  |
| $A$ | $G$ | $L$ | $K$ |

FRNFTPYK
$\qquad$

K T K P A N QLT DQE I
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## QUERY

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Whiplouvc


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 T GP $\square$ A A P M G N M M R Q E D $\quad 1$| $D$ | $Y$ | $F$ | $R$ | $D$ | $L$ | $L$ | $K$ | $N$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $M$ | $S$ | $P$ | $A$ | $Q$ | $L$ | $A$ | $H$ | $F$ |
| $R$ | $K$ | $L$ | $L$ | $E$ | $D$ |  |  |  | K T P K T T P A A QP L LTEE QKMDEK DYMNPA QLAFFK VRLQQ

 LE VLGDH P Y K L K K T E K Y M S S KM Q D H F T K I L M A
 $\square A P Y K A K K N E K Y M S A A M K R H F T A V L L N N$ MNRT LPE GYRPCDEEEFMNSAQREYFK QKL L S MAT RLPK DYAPSDSEPFMNARQREYFR RKLVVT YTPAADEPYMSEQQLDYFSRILQE
 KNTDSTST ILPP DYD K K D K G D F M N P L M L L Y F R R KL I A
 MSET LP $\square G T G$ GVPEDGPFMNDRQKEYFRRKLLA
SATLLLAEADAEALLLASPPSEYMSPEGQLAFFRRQRLLAA LP K GYKPSETEEYMNPMQLEYFKQKLLA K MPEKDYMNEAQLAFFRD LLSR
A ATMSSKTLLTEA E ILLKMS DK D Y M N E A Q L A F F K D R L E K ASPPEDYMNDEQLAYFRQLLEK
 A MKEDDYMNEVQLAFFRQRLQE $K A V G L L G L A D V R P Y Q E K S D E E Y M N D A Q M N H F R L I L K A$ Y LPPRRAE EYMNQK D l
TSKK $\square$ LTEAE $\square L A M G E K$ D Y M N D A QL A FFK QRLE Q
EK D Y M N E A Q L A F F K D R L E Q K MS DK D Y MNAA QL DFFR QKLLT
MGT T K L L T VDE L L
 KK TASRKRSTP DSSYKGRKGEKYMSAAMKKHENAVLI E K MSED DYMNDVQLEFFRDRLRQ
 STFQPYKSKKNEKYMNANQKKHFEN DLQA

 LK N F QP YR S K K S EKY M N K N QQR H F LGML TA





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UniRef90_D9Y2S4 UniRef90_UPI000349C880 UniRef90_S7U460 UniRef90-E1YBT2 UniRef90_K1Z2A9
UniRef90 B5EG80 UniRef90_R7BUP1 UniRef90-13U8B2 UniRef90_G2JAA7 UniRef90_UPIO0036E2672 UniRef90- Q0FZI6 UniRef90_UPIO003606857 UniRef90-UPI0003F9B312 UniRef90_C6XC63 UniRef90_A0A011RGG1 UniRef90-A5CFM5 UniRef90-E6PM02 UniRef90_Q6AN61 UniRef90_C6BYR0 UniRef90_UPIO0036A170B UniRef90-F2G688 UniRef90-E0XVS6 UniRef90-TOXZA2
UniRef90 O1H1Y7 UniRef90-A1K7B4 UniRef90-UPIO0038137FF UniRef90-W6LXS2 UniRef90-V4LOK3 UniRef90_UPIO0035F0BE4 UniRef90-U1ABK2 UniRef90-W6RLX3 UniRef90_Q1JXQ4 UniRef90-C5WCL3 UniRef90-A0A011NM41 UniRef90_W0SHN7 UniRef90_UPIOOO368994C UniRef90-D6SNZ1 UniRef90_A1AL35 UniRef90_UPI0003B5F91D UniRef90-C7RQA1 UniRef90-UPIOOO3776F1C UniRef90_V9H5U8 UniRef90_R7IIF1 UniRef90-W6KB14 UniRef90-C7LTTO UniRef90-B8FKR3 UniRef90-B8DN26 UniRef90-A0LLI7
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UniRef90 F8A7Y1 UniRef90_J9YDA4 UniRef90_A0A031J9Y7 UniRef90_UPIO0037A3B15 UniRef90-J2IHZ1 UniRef90-KONAX4 UniRef90_UPIO003787ECB UniRef90-D4G815 UniRef90_UPI00046D6AF3 UniRef90-Q1V243 UniRef90-E8RF29
UniRef90 C8X3M3 UniRef90-A0A024IJI6 UniRef90-W8KFV7


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60
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80 LRDEMLSNAADTGEHLLK ENENFADPNDRATVEEEHMLEQ ERDELLDSAHRTTLHLQ EFESTPDPSDRASLEEDHTLEL
 LQDEELIHNANNTAGHLQEQATT PDPADRATLEEEYALEL
 WRST L LAA EADATLAEELRDDSHHEGDEADRANREAA QA L D L


 WRQSLMEEVDRTVSHMKDEAANFP

 EKR S LLEE EA GRTVVEMTS D LEDEI I NNAGVTTENLR ETOFV LQ NELLNNAGQTAE HLLRNS QV MKAQLLENANATSQHLQEQ EATP
 MQDDLI ERAAETTSSMQD E E E A L L S A V K E T A G H L L Q ETEDAA
 $\begin{array}{lllllllllll}K & R & Q & E & L & E & V & D & K & T & L \\ M & D & M & T & D \\ M & D & D & L & Q & G & Q & E & T \\ I & E & D & M & E\end{array}$ ERDTLI RAANETTAHLDH WRNQLREEVDRTVTHMKDEAANTP WR E M L Q F E Q D R T A D K
WR D Q L
W QLA H I RHN A A E T S K H L R LK Q SLI D DI QRAADELQDGPEALA
 MRDAI LS EAEKTLADMNDQS SNVP WRKELGDGLNQTIQTMQEEQT MQQELLVNANATANHLQEQ QRAELQAR IDEEFTEL QLE DLLREAGKTVSGMTDEHENFP E E Q S L L S A V K ETTAG H LLQ E A E E I S S MRE EVLQREVDVKERLLH EREMFA
 EESALLRSAANATTQHLLQ ER DTLLLSSAN DTMNHLLQU LQ NELLIAKASVTTNNMQD
 $M \square D D I Q R Q G E A T I E E M S E H V E Y Y$ S
 RL D E LVYVEA ERTVVA GMTMTEETTFP $W K Q L L Q L E Q S R T A D K D Q N N S N H F A$

 EREVLLNAAQSTASELK E DEATP
 RLRE

 WRDELLKTSLLNRSMLDDMQA
 WKKNLI KESSSTLDNSLQNENTLR WKKELI EQNNRIMFNDMDDNSASADGDRA




 WK K K I D K K T N Q Q T V Q Q N RLDALLGEARATMNELDEGEEPFADPADRATAESDRAFQL WK K ELVKANNEALNGSMDDNSVSADVVDQASSYTDKTVEM




UniRef90 V4FIB2 UniRef90-T2GEL2 UniRef90-DORPK0 UniRef90-14JHI4 UniRef90-JOY117 UniRef90_UPIO002D2F1BA UniRef90 UPI00035CF624 UniRef90_Q1JWV8 UniRef90-T2GE99 UniRef90-G4QDIO UniRef90_VIZBF6
UniRef90_UPIO002883E8C UniRef90-S5R3T3 UniRef90 E6PJQ7 UniRef90-UPI0003733E57 UniRef90_U7NK72 UniRef90_UPI0002E3BC87 UniRef90 UPI00037C7597 UniRef90-U1KKJ8 UniRef90_C6XN58 UniRef90 UPI0003B3E2A0 UniRef90 B1J6V4 UniRef90_UPI0003B74135 UniRef90-UPI0003656985 UniRef90 C4XHJ9 UniRef90-V6UN37 UniRef90-F6ADE7 UniRef90_W9UZY9
UniRef90 A0A034TBG8 UniRef90-J9YVJ1 UniRef90_UPI0003F94A7F UniRef90 14C6P5 UniRef90-L8MSZ1 UniRef90-H0J4A0 UniRef90_15B024 UniRef90 Q2SLB9 UniRef90-UPI000225AF96 UniRef90-UPI000373F694 UniRef90_I1XJF3 UniRef90 UPI0003B41F5D UniRef90-B3EAN1 UniRef90-UPI0003678B1C UniRef90 M7PRA2 UniRef90-W8RXI6 UniRef90-L1LV05 UniRef90- UPIO002886033 UniRef90_Q2BGQ3 UniRef90_F8C206 UniRef90-UPIOOO30E31DB UniRef90-E1QE43 UniRef90_M4K6R8 UniRef90 A0A023HW17 UniRef90-U3HGQ4 UniRef90_H0JK53 UniRef90 B7RVH0 UniRef90-UPI000380B5AF UniRef90_Q0EXX5 UniRef90_U1KMY7 UniRef90 U2LIZ5 UniRef90-A8US32 UniRef90-UPIO003B2EBE4 UniRef90 UPI000255B62E UniRef90-UPI000365464F UniRef90_UPI00036520A9 UniRef90_UPI0003B66B24 UniRef90 UPI000365B505 UniRef90-S6HWX6 UniRef90_UPIO0036AEB85
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RPAAEEDFMDPKDVEFFRELLNG QPAAAYMNEPQRQFFRNLLLA
AQPAEAYMNDAQQAFFRDLLTTR
ASESAYMNDEQLNFFKALLEE
Y E P K D TE K YMCEK HL V F F RMRRLTE
KTDGTTGRP $\square \quad L P K D Y R P S A E E E Y M S P D Q T E Y F R Q R L D S$ M K K E DLE Y F Q GIL L Q K
$P E Q L L A Q P A D D Y M N D V Q Q A F F R D L L E T$ A QPESS YMNAA QLLA AFK QR L L D
Y $\square P \mathrm{~L} D \mathrm{~N} E \mathrm{P}$ Y M N K E QL S Y F K G K L M Q
A APESDYMSAEQLAFFKDRLMA
K S F S K EA A N L K GYRPE LD D S Y M S NEMMA YF Y S K L V G
DEQDLLAASETEYMNAEQLAFFDRRLQQ
K K K VA TVVAEPSVPP TAKTVEASVAS GGKWK E DQQQLLLA MSVD $\ P$ A T E E E LL LA MPDE DYMNEAQLGYFRRLL LK

APE ED YMNAEQLAFFDELLLR
A QP A DCYMNEA QQA F F R A LL L L
TATSSMDQPPTEAALRRMPKRDYMNRRQQMFFRQRLLAA A DPEVQRLLAMPEEAYMNDEQLAFFQHRLAA A A SEEDYMNES QL A F F QEYL E Q MNDGQI DHFRRILAA
QPEDAYMDAAQQRFFRELLLA MDEQQLQFFKELLEE
A Q S P D D Y M NEAQQGFFRALLIA DDENYMNHRQLDYFRQKL I Q


APESDY MNA A QLA F FKKRL

 $M T V M T L L S E Q Q L L A M P E S D Y M N T E Q R A F F R Q R L L D$
 Y TPNEKE


K S P P K D Y M S V R QLAFFENLLIDK
P E E D Y M N A D HLAA F F R E R L L K A PEEEYMNDEQLTFFDARLQA

P E DEYMNEDQLAFFRELLLK
VE H Y T P S DKEVVMM Q R Q L Q Y F R E R L L M H HLS E EQIA Q IK NLLLE
P P Q P S S GRDF SRIE RLLLD A APEDD YMNE E QLEFFRRDLL SQ

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EDYMNPVQQDYFRT ASDDEYMNAEQLAFF DLRRLQQ AQPAEAYMNAE

TASQYMNASQREFFRKRLLA
A P E S D Y M S D Q Q LA F F K E LL L N

## UniRef90 V4FIB2 UniRef90_T2GEL2 UniRef90-D0RPK0 UniRef90_I4JHI4 UniRef90_J0Y117

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UniRef90_UPI00036AEB85 UniRef90_C0N820 UniRef90_F2BA58 UniRef90-C0QFB9
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UniRef90_A6FE57


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80
K $\square$ NELLSEAGKTVSEMTNGKENYPDPNDRAS LIESDRNFEJL $M A N E L L Q R G D D T V A S M Q G G D M D M P D P A D R A S A E S E R E F L L$
$W K N D L I E Q N N R I I F G N D D D N A A S A D V V D Q A T S F T S K S V E M$ WK N D L I

## Q Q Q

## L

- 


WK

## 

## 

WREELVKANNQAKNGSMDDNSDSADVVDQANSYEDKNVEM
 EREELTSHLREVKAATASHEERSDEADQASFEEELRLAL LHESTCDRIQEARDQUTGPMDFSDENDRASREEQSA ALL WKNSLIKSEQSSVDSLADVTTRENDPLDNCSNKEINYPQV

$\stackrel{M}{M}$

## ,


EQAEVEAHLVEVRNALQS
QKQETIDDHI QNAKA QL N D N E

Q

WKAALKKESEETREVLQ



MRERLDESAQEQURDPSN
RK任LTDKDESTLNKMKSLKSVGGDET





EKVRELEQ
KGNRCDTGEQ $\square$ QELKE LLLQ AMSASDYMNGEQQQFFRDRLVA E H L S Q E Q M M E L K R DLL N DDSNYMNHKQLEYFRQKLIK SEADYMNSTQRDFFRRRLET MKDET ${ }^{\text {ME YFREFLTS }}$ MTVMALPDAQQLLAMPDSDYMNSVQRAFFRQLLQD

MS QPNYQE $\square$ PNYQPKKNEKFMNNSQLEHFRKKLNT MEKD E Q
EPENDSHYMSHKQLEYFRDKLIK KMPEDDYMNDEQLAFFKALLLQ

SKDSYMNQKQYEFFEKILCQ AMPESEYMSPVQLDYFKQMLQD LS P EQLAA F K QQLL N
QPETEYMSPAQLEFFRALLTT
MNDQQLEFFKRRLQQ
AQPQSEYMSNAQQAFFRNLLVR
$\square$ A GPRNVQPY $\square$ PKRGEQYMNESHMLIE EFKASSLLQ
NVE QLLA QSADQYMCEDQLEFFRQKLAE
PESAYMNEEQRAFFMDYLQR


EHLTKDQI E E L K N N MLLQ
 MNQ

EKQD
PACDYMNDEQLA
 DF MT MNTRGTEEDRHRLTI
MTLSTEEKMDQAAESEYMNQEQLAFFKDKLID
TRENEYLSEQQVTTMKDKLLGG
MEKKELEYYKEKLLK
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AQPVEAYMSEAQQAFFKQRLET
 MNTTDLKHFE GLFGT MDKAKLEKYKDKLLH
A QPTDNYMRSVQQQFFKQLLES MTEYNEEYYREKLLQ DPH $\square$ T NEDLERFKAMLNT MESSKTLLEHFKK LIFI E
AMSPDDYMNEAQQAFFRRLLEE $M T M L T K E Q L L A M P E S E Y M S A D Q L R Y F E D V L R N$
$K Q P A D A Y M N Q A Q Q A F F N A L D L K$ $K Q P A D A Y M N Q A Q Q A F F N A L D L K$
$A M P A S D Y M S A P Q L A F F K A L L L$ MQASELNYFKDLLLS
QPEDAYMDAAQLQYFRLLLQT $M D E Q K L A R F R V R L D E$
 ETPAPVKPARAMSRAECEPFRRLLLE MDNEKLMHFKNLLL K
QPEDQYMNPDQVAFFKSLLVG
 $P G G D Y M N P A Q K E Y F D G V L R A$
$M N V R E T E R F R R U L A A$
$Y M S V D Q L A F F K D R L E V$

KKNSSMAAKENDAVDEP $\square$ T KT
MLTEEQLNEDKSMLI E
Y L S D E E L E E H R Q L L L K


UniRef90_O67865 UniRef90-TOW1N6
UniRef90-C6HWS3 UniRef90-E8T661 UniRef90-U7FVR0 UniRef90-D3SNH0 UniRef90-Q2GI38 UniRef90_T1HJV3 UniRef90_S7TZ38 UniRef90-L7ZKQ9 UniRef90-B3E1N7 UniRef90_B2V8G8 UniRef90_J9Z945 UniRef90-UPIO003611C98 UniRef90 A8ZZF5 UniRef90-UPIOO04651252 UniRef90-K0NF46 UniRef90-T0XQQ6 UniRef90-Q5FF14 UniRef90-UPIO0047783B1 UniRef90-A9GWL3 UniRef90_UPI0003B3A8F1 UniRef90_G8DB33 UniRef90-X7B888 UniRef90_A6G1B1 UniRef90_UPI00036EAA16 UniRef90_UPI000255B911 UniRef90-V4RD47 UniRef90-UPIO003670E0E UniRef90-TOZSM4 UniRef90-A5GBX8 UniRef90_S6KZ68
UniRef90-E1X3T4 UniRef90-UPI00047609A3 UniRef90-TOCE26 UniRef90-UPI000466F38F UniRef90_C0QTV0 UniRef90-E1X558 UniRef90-TORKB5
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UniRef90 TOCCD7 UniRef90_UPI00032A0FFF UniRef90-UPIO002FD1145 UniRef90-UPIO002556AEF UniRef90-EOUSE0
UniRef90_UPI0002FC9CB4 UniRef90-M8DDR9 UniRef90_K4LHT0 UniRef90-B4S317 UniRef90-HOC2C4 UniRef90-XOY195 UniRef90_Q8R9N4 UniRef90-R9V2J4
UniRef90 H1 XQV3 UniRef90-S4Y9F4 UniRef90-A0A023WYS6 UniRef90-B4UCC9 UniRef90-F3CFB7 UniRef90 S6L6K1 UniRef90_UPIO00237836B UniRef90-M1RCT8 UniRef90-B3EEK1 UniRef90_Q67Q17
UniRef90_DOLUD2

MRRKIILESAESQLKDPSNVKFEGGDEIIDRADLETERF|TFF

 LA GECEKDIASAMAHLRTAPVQEPDPVDAAAEEESCRHRL LREACI KNAQQQDKDPSNDTFEGGDEIDRANDEVERYLNG WREVLQKESEEELATEELLR PQADADLTDMATKEHNVVLIL RLQELLNRADHTVTGMTHQKENFPDPTDRAS LEESDRNFML ERQKLLLH DDELKKED DGGEATGDEADKAAREEDQRLLGF
WRNQLIEDTKRTGEALSFEG ADEMERAEAETSR\|LTL QRTQI LREAGRVVEGUNSSAEDFPDPTDMATREEDEAFS L RLNELLEQADGTVSDMTSDEETF WRKQLV
RLDDELINHAGHTMSEDVSQS QQE DGYDDRACVDTDQTLKK QRKEIISGAEKVLQSTVEKGVQFPDPSDLASIEESLGFSY WHEALQKESQETIEVLQPQADT DLTDMAIKEYNTELILL
HKDELT DA DEDAKKSLAESERNTDLNDVATSQEMQQLYL $K R D E L V K K A K Q T L E D M M L D A N D L P D E M D L A S S E Y G Q S F T F$
$R L D E L L Y S A T H E M I E E R S R N G G E D E Y L D R A S N E A D Q T M R L$

 | $R L C E A R A R I A D L Q S Q L R S$ VDVEPDI TVDATVEEERSRTL |
| :--- |
| $K R D H L L Q Q A R E T L D N M V L S P D D R F D E V D Q A S S E Y M Q A F S F$ | QRE

LI
 WKRDLMVEVDRTVSHMKDEAANF
MKEETINEI SKSLKSGSDDPTNEPD DYDQASSERDREDGL KAAMLRERIE KNQALCKIERQPDEADSASAEEDRSTAS EKERIYNKSQNSENYCLDKNE DS DPVDEASVNVQTSQEVI
 WKEQLLQESHDSIGEPL SYEGGDEDDRADTEAGRLVMML


 D QEMIRNKHEQKDQYCMDKSELADPVVDASUNTQTSEADI
 A
KRRLVLE R DKERILNNMNSVKETYQLDKNELSDPVVDEASUNVQTALHEM WRDQLVVESRQTMDNLREEVRDVGDEAERATRETENSLELL
D



LRSEILNGULRKNEDLTVSTDDLADEADLANNVINQQVSF QLGALLGQGERAVHEMADGAHEVPDPNDRATVEEGRNWALD ERERIDEQIVGFKEAVS VTE KVADSSDAGTVEENRGLLM
 AKAEDLNGILTSTEDLKMSTDDLPDEGDVANAVINQQVTF
 RQRQELQARDEEQMQVLSEQQADSDPMDUGSAEEQRQWQL RKAKLQELLSSDRAETLRGESDNRPDDADTASDVEEQRSMEL RKEQIEKNI NGVSTELLSEDASDNDEGDHASANNNSMVES EMASVKSRVQAVREEVGGGLEKATDDVDVAASEQHRQSLL QKKEALEEI GGLKDTLQELSMYDNHPADIGTETFERSKDI
 EKN KV L S TI H R QREYY Q E L S L L D N H P A D MAS EVVY V V K N Y E S A T A M G R I D Q L R V D D
 RLGGEVANSARAAKEALLA GLGGIAAADALDQGLIDEEERNTLYY
 K A AEL RDRLLSC




MDREQLHHMNTVLSQ
MTKTELSKFKK LET
MDTTKYAQLIDEQLKK
$M T P Q Q A T P Y R Q Q L L E$
RERLLQ
MNKKEDKQFKDQLEQ
M I S DQQi ETDRDQLVE


MHPHQTQPAREQLLA
D F


MLTEKQIAKLKKQLIE

YLSDEELEHFRQLLMK
MISNRQQEKFKEVLLA
MLLTN N Q Q LAA A F R S TLL L E
FLDNEKLCRFKEQLLT

MDK Q TLA HVK QRLL D
MNKEFLKKMKEYLLE
NHLTSEQLDHLHGLLVQ
D HL S E QQL A GLLRTKLET

N K N QU D E ClK A I L L E
PEELLAQPESAYMNEAQRDFFRQLLLGG
MTRTELKHFRSVLHA
NKNQUDEELKTILDQ
P HLTKAQLAELTAKLQ
KKDLEKFRK LLM
MNEADKRMDRARLTE
MKKSF DEEMKEYLMN
MEYYKNKLLK
MKKKFIEEMKEYLLK
$M L T N E Q L A A F R K Q L L Q$
MNETKLASFRAKLEE
MDAKKLQEFKELLLK
MNKNDLNYFKSRLI R
DQNKMA ILKEKLL
MNKKDLASLKKILIQ
MLSTQQLAELRLQLLK
MALMSVEQLLDQAEDEYMSVDQLAFFKDRLEV
SADDYMSGSQLQFFRELLNT
K NAEYMGERMI SYFRDKLLR


MTPEQKNS IRRTLEA
MDSNQMEKFKDILTN
MENQKYAK LIEQLN
KRKNTHMTDKQ LDEQYKKVLLA
MQESELKYFKEILES
MRKSDLEQFKALLLE

MDQAFVATMKKRLET
MDKKNIDSFKTRLLE
MDKATKEHFREKLLA
SKAELEEFKQII I E
MDANKLQYFKKKLLD
MEKKKLEYFRGKLLK
QEMLMKFKQRLLD
LDENKILQLKK LLLE
MDADFLSQQREKLLQ
DLEKlKKQLLE
LT E EMLHSLRRRLLD
lupas 21
lupas_14
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898877777777777777777776552789999999999

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| UniRef90_F6BGU8 | ERNK\\| L H T L N E E R E Y Y Q E L S L A D N H P A D I A S EV |
| UniRef90-W4LEM2 | RREGILAKGSDAHPMPSSEDAA H G S L D I A S S SRDREDTF |
| UniRef90_X0XVZ3 | KRRVL A G DVNGLEKA ALHNSRQDADMADIGSDNYEQEFTL |
| UniRef90_B3QWB1 | KREEVLR DLE ILLKSSFSDENEEDSHMADHGTETMDREQRF |
| UniRef90-M1YXK7 | \R S El L G DLEKNDKS S Q EEEFTKS DVS DDAARSSSR QMLL |
| UniRef90_T0SGD9 |  |
| UniRef90_UPI0004727F49 | R R VEIVNSIKNSASE@SELMQS GADEF DMAS |
|  |  |
| UniRef90_C8X580 | K K Q L EEAl GQMQNDLATMPHNLADPADQAT L S T D R Q L A |
| UniRef90_UPI000374F875 | K Q E L L RIVRRKRDAIT IEKS A D A LDEVQHASERELA |
|  | DKQEAMET A Q EVIESIA ELLSLIDDNHPADIATEVYERSRDV |
| UniRef90_A1VL41 | $M R T S L L A Q M S E Q R G G T L G R A Q A A A E H F E R A Q V A T E R E L E F$ |
| UniRef90_UPI00031D5877 | ERTQLLQRIA EQRGGLVVSRADMASDHFDRAQURTERQTEF |
| UniRef90_UPI0003B50344 |  |
| UniRef90_R9 | QLNETEERLEQD S QLFK DKEDS GDDVDRANQEES QQLQL |
| UniRef90_A0A017R | EKEKVTSTI DKMKEHGLNSNEDDNHHADMATEVTNKEENF |
| UniRef90_UPI000477ACAF |  |
| UniRef90_UPI000371E98D | MREDLLD DAA RAYAESQTGKDGVPD DGDMSSNSYT QEVLM |
| iRef90_UPI0003768810 | QRTSLIE QLA Q Q R G L V D R A QRAP QPEDHAQSATERELAF |
| UniRef90_UPI0002E397FD |  |
|  | K K Q L V |
| UniRef90_U7DE19 | ER D RVEQNLKQTVEESASGEGTHFSHDGDAAAASYDREFSM |
| UniRef90_D0LJW3 | EEARLAEEISRRHISEAATEAERHPDEGDQASQNANQAYLL |
| UniRef90_UPI000475003A |  |
| UniRef90_M9UHY5 |  |
| UniRef90_Q3AT78 | R R D EVMRDLD L L R S SLS D A NVEESHMADHGT DTMDREQRF |
| UniRef90_UPI0003F5724E | RQNELDNHVQDAKESVGELSNY N H P P A DLGTELLYERQKDL |
| UniRef90_S5Z2E7 | MKRDI EERLT QTR SHAHDGASYDNHPADEATELYEREKDL |
| Ref90_S0G3Z6 | K Q VELVR K R S E $\square$ K T K $\square$ R S LK M K H A D L L D Q S L M G C $\square$ D NE |
| UniRef90_A0A017SZY0 | $R R S A I V G S I G E R Q N E E R D V S T S R G D E M D E A T L E G T T S M T G$ |
| UniRef90_A4IS17 | MKRDI ED RLK Q N D A VGELAASYDNHPADEATELYEREKDL |
| UniRef90_U4WRX9 |  |
| UniRef90_UPI0003B |  |
| UniRef90_X4ZPA3 | QRDDI RHRLDENEDHGLEDSEDDNHPGDVAT DLYHRSMD |
| UniRef90_A6FXL2 | E Q A L S ERIAASSTSVVADNLDPRGDVEDQAAEEAGRFQAK |
| UniRef90_H2ABQ9 | ARDDI LS RFKENDQQLTTDESSYDNHPGDQATELLYEREKD |
| UniRef90_A7ZC59 |  |
| UniRef90_G2HZQ0 |  |
| UniRef90_UPI0002D | QRGELQRLI DEQVEDL R GMDAHGDPADVGNA |
| UniRef90_Q01TC0 | K R R ELVD AlG R A EQEVVRTASEEVGD P LD RSVDD T A A D E GL |
| UniRef90_Q021M5 |  |
| UniRef90_UPI000467 | RK D S L S Q NIH S S I D S Q LK D Q D I N D DLD Y A F VS D S F E G |
| UniRef90_C6J3C7 | TK SALTE L L S D N D H GMNESMRDNHPGDLGSEVYERGKDL |
| UniRef90_UPI0003B59E42 | EI RRKIAGDLKHLEGDSLNTSHMADMATDNFDREFTL |
| UniRef90_UPI00037E14F8 | ALENLL T SLLHSEDAPENFADDADYASQLTA HTMTL |
| niRef90_S5ZPV8 |  |
| UniRef90_UPI00047D32 |  |
| UniRef90_M2BED7 | EREEI LA S L R K N DEEYA ETLLANSDDFA DLA S Y ST DR DMLE |
| UniRef90_A0A023CN99 | AKQEI QERLQDHF GK\RSHAHDDNHPADEATELYEREKDI |
| UniRef90_UPI00037EAD9A |  |
| UniRef90-H1XQZ8 | KRKETLLEERERYGELLLQDTNSEEDK YTEFGTDTMNREQS Y |
| UniRef90_UPI000287 | EK Q K I H EVIE E T NA EMAS E $\square$ S VY D D Q T DSAGALLFDMTRDM |
| UniRef90_V6M362 | EKREIEE RVE Q M S A I Q E A M Y D NHPAD $\square$ G T E EREK DLA L |
| UniRef90_B1H0G2 |  |
| UniRef90_UPI000471 | EKSEVKEHDEQNDESMGEDLS Y D D M P P D D G TELFEREK DI |
| UniRef90_L0FC10 | DKEEAMEMAAE LIE S L G ELSVIDDNHPAD】ATEVYERSRDV |
| UniRef90_S6KCQ1 | K A A L L R D RLL S C QASCEIIERHPDEADFASDEENRA |
| UniRef90-S2FWQ1 | $R \square S E L R L T \ G D W R E E L E R L E N D P D P G D A A T \square E E Q R Q K V T$ |
| UniRef90_X5H345 | LKSDLLSEGRVVQDFLRK CANSYEAD DII L |
| UniRef90_A6Q9W6 | R RVQUI EKNLNGTALELEMRNLDLNDEGDYAAASAETAVDS |
| UniRef90_Q1IJ15 |  |
| niRef90_Q9K2C0 | MKAKLSHTLEGNAQEVKKPNEATGHQADQGTDTFDRT I S L |
| UniRef90_UPI00036AB |  |
| UniRef90_S7U2J0 | KLDELLAA ISPAETSAET CADENEYASRLSEQSLSVV |
| UniRef90_UPI000477E130 | QIDDRILE Q A R V S RLELLNDENNRETEY IDDQAAVHSDQSMRL |
| UniRef90_W0EDV8 |  |
| UniRef90_K1XQW0 | T Q T KIL T NIGHMEDNL NSHKDAAGDLADVGTENYDRE L A L L |
| UniRef90-Q30RD2 |  |
| UniRef90-M3IK78 | RKA QITTKNI LD S S NEMA GLR Q SVS DEFDDA SVNA D Q L I E Q |
| UniRef90-K6EAD8 |  |
| UniRef90_D3P9F9 |  |
| UniRef90_UPI000399D9 | MKSEIL H QL DEEFRAMAGSSDTK D L V DVA SNDID K K L L S |
| UniRef90_A0A037ZF79 |  |
| UniRef90_V2RHP6 |  |
| UniRef90_17A299 | KRNEI I EQL Q A LKE QMMDPTENSPHMAEQGTDAMEREKL Y |
| UniRef90_R1CXE |  |
| UniRef90_A8MH72 | EKKQVMKTI ES MKEYTE ELLS SY D N H P A DL G SEMFMMEMQN |
| UniRef90-A5D3H2 | ERENLTRRI DAMEDS |
| UniRef90-14C4G8 |  |
| UniRef90_T0RZN3 | QKEDI Q N SYSALIKDLLA S S DETS DVVDSATSSSSLHS DGF |
| UniRef90_G2LEU5 |  |
| UniRef90_B2V759 | K REQI LK S MEEALLKNDLLNEKTGVGD D A D NVTEELS R E T F Y |
|  | EKAELER R V R Q NRDSTGELS GIDNHPADAGTETPERAKDV |

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[^0]:    lupas_21
    lupas_14
    lupas_28
    jnet
    sol25

[^1]:    lupas_21 lupas_14
    lupas 28
    jnet
    conf
    sol25

