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 S R GCRLLRTLRVKVHDLGLGYNSDEIVLFKYCSGACRRSRT
 $R G C H L Q T Q L V K V R E L G L G H D S D E L V R F R Y C S G S C Q R A R$

$S R E$
C G L R S L L L R V R E L G L G Y D S
SR SP RVEKKEMKVRDLGLGF PCALHSILLLQVRDLGLGYDSDETVLFKYCSGTCPRLAS
 G Q G C R L R


 K P C S L K E L E V K S C S L R QL ELTVVTELGGFGYES DETVVVRYCS GKCTA HRK K P C C S L P C K P C S L L K E L L E V G P Q $L$ Q
$S \xrightarrow{R}$ RT QDCRL ERKEMKVRDL GL GYD S

A G P K G C V L L

CQL R S L P L QVKEL GL GYAS DE M M
$\qquad$ S K
S R
 AR P


VR

GR G C
K G CI
 $R G C V L T A L H L N V T C L G L G Y E T K E E L I F R Y C S G S C D A A E T$
 $G C G L K S L T V S V K S A L S P S T S N \square K N C H G S C S T P R$


## QUERY

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$\square$ YD L GLRRLRQRRRVRKEKAHGGPC

NYDVVVSNLRKWNHI ADTSLQEA
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HDLSLANLLHAGALKPPPGSRPVSQPCCRPTSYEAVSFM FSEWSGHAVL GAGALRPPPGSRPVSQPCCRPTRYESVSFM NYDLT LLGSLLRQERLPPGELS
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RQQLI APGPQERVLSHPCCRPTRYEAVSFM $Q L G L V L A R L R S Q G$
QHGLTLARLRGQGR
NYSQVMSMI KRSKN $\square$ NDT PQQWESMKFCCAPKKY DDVIVL SHYDILNLLHQKNSTRFPGVRRDELQSCCYPTRRNSFSUL NYTMALSALQSA

YK $\square T V H A V L D A R \square A R \square A Q W E R V$


L HYDVMDLLLRKNLSQFGNVQRDEVQSCCHPTQLTSMSVL MVNTINHAVLLNSHIENVNAD ERAPCCVPVAYEAVVDL

NHAITLLCLMN
NAN NHAVLLNFHTESENVD VRAA
NHADT LVGHLLNQLAVVPK
N H A I T T L V H L L L HP S K V P K
NGN NHAVLLNSHVESGNAN ERAP
NHADMLNS $N$ NGN

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DVNSTWRTVDRLSATACGCLG DVNSTWRTVDRLSATACGCLG

DVENTWQTVEK】SAAECSC $\square$ G

## D DRHRWQRLPQLSAAACGCGG

N N N NTFQKLHNMIVDSCSC【
YND $\$ RMHVLHNLIVLGCGC
DDNIVEKVIENIYVARCGC DTHSRYHTVHELSARECACV NETGTYSTVPDVVAKECEC
 DSRNRYHTVSEELSAKECGCV NEHGTYDS I PSVI AKECGC DNNKTMMTLSNMIVESCGC DS SNVLKKYRNMIVKSCGC DNSNVLKKYRNMAVRACGC NE H GTYLS $\quad \square P D V V A K E C G C$
$D N S N V K K Y K N M V R A C G C$
 D WNAEESFLDPDMVKECGC DWNAEESIKPDVIARECGC DADGTFS KPDAVARECGC DDSSILKKYRNMVVRACGC
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 NHAITLVHLMN
NHA H T L V H L M M N PVLVPK
ADTTHSSLLS LLYNT $\qquad$
P C ${ }^{70}$

PKTVPK $\square$ NPEASASP | P |
| :--- |
|  | NHAIVLLNSHI EGGH AGERA


SSANTHASLLQK LVAARERVPA
NHADTLVHLMYPNKYPK
NHAMILVHLLR
NHA I
N ML LS NVLSK
QQVVHLMKPDEVPK
NYGKMISFI RRTKP
KMKP
HNNDIMKWLSNKGNEHLSPLQVKSMR
NHAI I QNII HT $\mathrm{D}_{\mathrm{G}} \mathrm{GFQPKDP}$
HFASSHAALQSKGFISRULGHKTVPRP
 NHA TLVHLVSPGKVVK
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TPD VFAYYHAYII DRFRQVNPASIS P

$A H G H \quad R R M L Q N$
 T L
$H M D S G P H G Y L R Q Q V D A \square P P E$
TFESFMVNLMQGHGRPSSRDER
VYKPTNHAMLQTLMRMKRP NVAPLP C
SHSEMMQDYRNLKYDRLSEVQRGAMLS
NHAIV QTLVQVHLMFPDHVP
NHAI TLVHLMDPGEAPSPG
GSALSFHSAVISHYRLRGYAPFQNSKSC
PA SMHSLI KARMHNLAPG TTPEPCCVPSSYEPMVLLM
NP TNHAVLLNSH $\square R A A S R S A D E R P P C C V P V A Y E A V D F N$


NHA TLVHLMNPTKFPK $\quad$ K

MHSKTNHAVVQTLVHLVVDPKRADEAK
PKYKTVNAYTEIKSKMHRDSNGIIPG
AMAPCDCMAYEPLIM
AHMNATKHALVQSLVHLIQPHKFPKPCCAPTEDRPVYYL
NHAHVQSMLHSKNKKLVPP


| NHA | $T L L V H H M S P S H V P$ |
| :--- | :--- | :--- |
| NHA | LLINSQVQS GLA |

AHSLI QAMRWRAGTVNETFMEELERS
SAKAHTQMQARLHRLRPDSVP

VSGSQYNS IVMKLLTKDGGQQKNK DM
NHAM LQTLMRSKRKNSAPP
$\mathrm{D} Y \mathrm{GT} \mathrm{V}$
$\mathrm{N} H A \mathrm{I}$

QDADTV AHMVDQQAVPK
$L N N D N N H A V L L T Y H H D E R G N V N Q P E R G P C C$
$T P D T K N Y Y T H V I D E Y R K M D R L A G M Q P C$



NHAI SLVHLMKPETVPKA
NHAVLLNSYIDNKRAANEAVD QRAPCCAPTKLSATSVL
HHNS LQKVMGKNNQR GSRPELTPCCAATQFQHLI YM
SDTTHRKLLS LYNT $\square$ NPSASAS
NHADT LVHLMNPENVPK
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R
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SCMNTKHAILQS LVHLMKPDAVPK

| UniRef90 $\mathrm{O} 16 \mathrm{HT8}$ |  |
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| UniRef90 A7ROJO | DNNVVLKKYN |
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| UniRef90-M4AJV7 | Y Y VG |
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| UniRef90-E9FWU5 | D E N |
| UniRet90-D6WJ | DTNVILKKYK |
| UniRef90-Q1LWW7 | DDNNLKKQRNMVVKN |
| UniRef90-M4AQ41 | DDNNNV ILKKHVVKT |
| UniRef90-Q4VRV7 | KSGLTIRTLNNL |
| UniRef90-112168 | YMPI RSNTLPN |
| UniRet90 | YNTITQKTLPN |
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| UniRef90-UPIOOO26584C4 | YQDSHFGRMPKM |
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| UniRef90-Q7PNK1 |  |
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|  | GPR SNVM |
| UniRef90-H3CNQS | DS SNVLKKYRNM |
| UniRef90-U1M3 | ENDLRKRLIHGMK |
| UniRet90-E5Q7M8 |  |
| UniRef90-EOVAB4 | DNNUTQKTLPNMVVDACGCM |
| UniRef90_T1WD | YFDHSMNTLPRMKVERCGC |
| UniRef90 W4Z1T55 | DGD QMMRLPDFIVRECAC |
| UniRet90-U6IIU | YNELKMD |
| UniRef90-P07713 | Y LNDQ |
| UniRef90_K7G2389 |  |
| UniRef90_J ${ }^{\text {da3x1 }}$ | DDKSVLQKFPKMIVKACGC |
| UniRef90_M4AJ90 | M |
| 4P903 | K |
| UniRef90 D2XUR9 | EDLT QVRPFENVVVKECGC |
| UniRef90-V9L3J1 | d |
| UniRef90-H3AU44 | DNNNVLKKKRNMI |
| UniRef90-N6UC73 | DDYNVLKKYKQMV |
| UniRet90-UPIOOO21 | YVDSTQKTLPNM |
|  |  |
| UniRef90 W2TR45 | GV |
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| UniR | YDDSRNVVLKKMVVRACG |
| UniF |  |
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| - | YNTLTQKTLPNMVVEACGCM |
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| H7 |  |
|  | DSSNNVDRNMVVRACGC |
| f90 |  |

UniRef90 UPIO0038C219E UniRef90-K1PPZ9 UniRef90-ATYFD2 UniRef90 W5LZ94 UniRef90-T1J1K9 UniRef90-H3BX74 UniRef90-E1FQX1 UniRef90-L5MOSO
UniRef90- 7 IFDP7 UniRef90-UPIO0046B3966 UniRef90 HoVKRO UniRef90-V8P9V6 UniRefo-APLO13 UniRef90- P30886 UniRef90-UPI0003B2E964 UniRet90-M7AMX8 UniRef90-B3Y027 UniRef90-E5S.J99 UniRef90-ASHE94 UniRef90- F6RS38 UniRef90-UP10003FOEEDB UniRef90-058G888
UniRef90-M7AMY7
UniRef90-L7T8M7
UniRef90-EOVGU5
UniRef90-G1EH59
UniRef90_UPIO003B6F7A3 UniRef90-UPI00038E9D96 UniReffo-J7GXK1 UniRef90-S4RBK6 UniRef90-HOYTH2 UniRef90-V9PPD5 UniRef90-W4XGZ5 UniRef90-G6DR01 UniRef90-EOVNW2 UniRef90- ${ }^{-H 2 U H 55}$ UniRef90_Q28DF2 UniRef90-G1EH61 UniRef90-S5SWM8
UniRef90 B4KGU4 UniRef90-C4B8H5 UniRef90-H3DQU4 UniRef90 K7G9V9 UniRef90-UPIO002B4843B UniRef90-F8V236 UniRef90-K7GDQ7 UniRef90_-6TV66 UniRet90_G3NDFO UniReffo-l3KGQ3 UniRef90 ${ }^{-}$AOAO44ULR8 UniRef90-Q1PHQ8 UniRef90-UPI000359A5B8 UniRef90-UPI0004572BB3 UniRef90-M3ZHF2 UniRef90-S4RGAO UniRef90_UPIo004441B6A UniRef90_Q4SS30 UniRef90-H9G6V2 UniRef90-G1EH57 UniRef90-E4XX73 UniRef90-B3DIZ5 UniRef90-J9KCT9 UniRef90-C9WEZ2
UniRef90 EOYCT1 UniRef90-EOYCT1 UniRef90-F7BG91 UniRef90_UPIo00442092D UniRef90-E3ML80 UniRef90_V4B113 UniRef90-U1NAV2 UniRef90-G3NVT2 UniRet90_UPIO003F06AC3 UniRef90_UPIO003338164 UniRef90-UPIOOO441997E UniRef90-W2TCQ5 UniRef90-12FKQ4 UniRef90_UPIOO035A1079 UniRet90_UPI000441EC8B UniRef90 G3Q2D4 UniRef90_UPIOOO3290668 UniRef90_Q32PR5 UniRef90-D1LWV6 UniRef90_Q94580
UniRef90_S4RM04

110
CRRHELLYVISFRDLLGQGYSA KNCHLSNMHVSFSRLGWG

| QY <br>  YYCAGECRNE |
| :---: |
|  |  |
|  |  |
|  |  |

QACKRHEDYVSFSD\GWGYSA
YCAGECRNE CQLRDWYVNFEHL GWNSWVMAPTGFCSGECPSHAS KPCRLRSFTVSLERHVIGPSTADIVNNCQGACSFPTI CCLKSTYFDFHEHGM DNIVRMNFCEGECIMQDE CRKHELYVSFQDLGWGYAA SEGCCVRSLYIDFRDLGWKWDHEPSGYYNYCTGSCSTSEN SSQCQRTSLRVNFKDIGWDNWIIAPKEYCKGSCFFPLS GSHCQKTSLRVRFKD GGWDSWIAPKEYCQGGCFFPLS CCRKDYYVNFRDDGW NDA NDWFKYCMGECPMAAS
 QA

CKKHELFVSFRDLGWGYA CSKKALHVNFKELGLGYEA YHCEGVCDFPRS PCQRRSLYVKFRDLGDGYHA CQRRTLYVSFRDLGDGYAA KTGYCYGECHMNAT Ctrhelyvopadi GLGY SA


QFCHGDCVHAT KQNFOKHA NYCRG
CK LUSFNDAFNELGLGH DAPRVYNP
CRRHRपFVKFQELNW CCLQRFYVEFRKIPAGFQS RNCARRYLKVDFAD GWSUISPKSFDAYYCQGECRGAQV CQKRTFELNLADUGGWDSPERVDGGVCRGRCDADD

CRRHELYVKFEDVGWGYDA F YCSGDCPFPLS SEPCKRRPLFVDFKDI GLGYEAYE CKKRRLYVEFKDVGWGYMA
 SKPCHKVDLHVDFNQUGWG SWIVFPKKYCEGECPSPVG CCKRQFYVNFRDGAGYHA IIF
$P$
CDKHSLYRKD GWGYEA
CRRHSLYVDFADVGWGYDA
CRRHELYVSFQDLGQGYSA
CSLRPLL VTSKSLGWTAPNKFNP
RVCCKRQFYVNFKD GWGYHA
CRKMNYKEGECPASFS QGCCLRSLYDDFRDLRKGYA
 KGCCLKKRYFHSQNSGLNYKTPERFADDFCEGKCNQAAT
PCSKQKLYVDFEEDGWGYNA YCSGECRMA
FCRGSPRAG
CCRYPपTVDFEEFGWDWПAPKRYRANYCSGECE YCSGQCEHM
RSCTRRYLKVDFADWGLSPKSFDA RVCCKRQFYVNFKD GWGYHA
GCKKHELYVSFRDLGWGYAA
GRPCRRHELYVSFRDLGQGYSA F
RLCQRRKKYVDFGDLGAGYTA
RKCQRKSLHDDFSEUGWNSPKSFDAFYCAGQCGHEML
CCRYPDRVNFTSFGWNFVAPTSFDAYFCSGDCR CCKQRFYIKFQDIGGWDSWIIAPANYCRGDCGGVHR
GCCLYDLTVDFQEGGWKFDAGAPAKYCRGDCTVNHT
CCRQEFFVDFRDGGWGYA KTMEANFCTGQCPLAAS


| $v$ |  |
| :---: | :---: |
|  |  | GGCCLRSFYFNFSD RGCSRRNLKVDFADDGWSQDAPKAFDAYYCAGTCGAMPS GPCALRELKVVDVAEHSVPETYQANNCQGTCGWPQS

 GCCLYDLTVDFQQMGWKFD $\backslash A P H K Y C R G D C T L S H A$
NCCVRKLYIDFRDLGWGYHA NYCMGSCTNAEN
 DCDLYDFRVSFKELKLDHWIIDEPKKYRYCKGSCPRNVG SKKCQLYDF GQACHREELYVSFQDVPSGYMA NFCNGHCPFPAT YRCSGECDMNAT
NYCAGECPYPGE

UniRef90＿UPIO0038C219E UniRef90－K1PPZ9 UniRefofo－ATYFD2 UniRef90－W5LZ94 UniRef90－T1J1K9 UniRet90－H3BX74 UniRef90－E1FQX1 UniRef90－L5MOSO
UniRef90 ETFDP7 UniRef90－UPIOOO46B3966 UniRef90－HOVKRO UniRef90－V8P9V6 UniRef90－A7L013 UniRef90－U3RA98 UniRef90－P30886 UniRef90＿UPI0003B2E964 UniRef90－M7AMX8 UniRef90－B3YO27 UniRef90－E5S．J99 UniRef90－ASHE94 UniRef90－F6RS38 UniRef90－UPIO003FOEEDB UniRef90－O58G888 UniRef90－M7AMY7 UniRef90－L7T8M7 UniRef90－EOVGU5 UniRef90－G1EH59 UniRet90－UPIO003B6F7A3 UniRef90 UPIOOO38E9D96 UniR Refo－J7GXK1 UniRet90－S4RBK6 UniRef90－HOYTH2
UniRef90＿V9PPD5 UniRef90－W4XGZ5 UniRef90－W4WT78 UniRef90－G6DR01
UniRef90 EOVNW2 UniRef90－EOVNW2

UniRef90 H2UH55 UniRef90－Q28DF2 UniRef90－G1EH61 UniRef90－S5SWM8 UniRef90 C4B8H5 UniRef90－H3DQU4 UniRef90－K7G9V9 UniRef90－UPI0002B4843B | UniRef90－F8V236 |
| :--- |
| UniRef90 | UniRef90－F6TV66 UniRef90－G3NDFO UniReffo－l3KGQ3 UniRef90－M3ZLLV9 UniRef90－A0AO44ULR8 UniRef90 Q1PHQ8 UniRef90－UPI000359A5B8 UniRef90－UPI0004572BB3 UniRef90－M3ZHF2 UniRef90－S4RGA0 UniRef90－W5L015 UniRef90－UP10004441B6A UniRef90＿Q4SS30 UniRef90－H9G6V2 UniRef90－G1EH57 UniRef90－E4XX73 UniReffo－B3DIZ5 UniRef90－B4NHV6 UniRef90－C9KCIT2

UniRef90＿C9WEZ2 UniRef 90 －EOYCT1 UniRef90－E2R4N6 UniRef90－F7BG91
UniRef90－UPIO00442092D UniRef90－E3ML80 UniRef90＿V4B113 UniRef90－U1NAV2 UniRef90－G3NVT2 UniRef90－UPI0003F06AC3 UniRef90＿UPIO003338164 UniRef90－UPIOOO441997E UniRef90－W2TCQ5 UniRef90－12FKQ4 UniRef90＿UPIOO035A1079 UniRef90－UP1000441EC8B UniRef90－G3Q2D4 UniRef90＿UPIooo3290668 UniRef90－Q32PR5 UniRef90－D1LWV6 UniRef90－Q94580
UniRef90＿S4RM04

NHAQALTHT ${ }^{50}$ MKPEVVVIPKIV
NHA VMQSLMRESAKGNVPD HLQKYPHTHLVNKP NHAMI ${ }^{1}$

GMS NHAMLRGLYRAN QPEMEAQNVNPACCVPTSLRADSFI VQVPERMIGGP P
c c 70
$\qquad$ TKLSSALSUV

80
 NHAVLLSSYVEARRAAGQAVE TNDR NALILQERKNHPEGPLWRRLS NHADTLVHLMNPEYVPK KYSQVLALLYRH

$\qquad$ HNPGASAQP

 FPT ASAQP | $\mathrm{P} C \mathrm{C}$ |
| :--- |
| $\mathrm{P} C$ |
| C | KHASYLSMLKRSKTSLLSARQLETMKN NHAlVQTLV HFINPETVPK

HLEPTNHALDQTLMNSMDPNSTPP P MASMHTQKARMHTLSKETPAP NHA【TLAHLMNPGRVPK NNLLLGGVLNKTGNDNTPHRS

NHATTLVNSMDPSSVPKV
NS TNHALLQTMVHSLDPE GTPQP FS SNHARALNFARGRGLGSNKDLRA QMNATNHAVMQMKVHDLNP AVPR NHAlIQTLIKELGVGDIPP HYGSPLHTLVQN VISEKDDAAVPAP QYNPTNHALI QN LLHHRYSKSVPAA
 NHALVQTLVHHMS
TPDTFLNYYTHVIEEYRKMDRLAGMQP
YSF GQKYPHLVHLAAPQGSGGPCCAPRKMSSMSML
DHNSTNHAIVQTLVNSVFP NTAPKA

PRPMITSSLGNKYEAPSPG
HLNSTNHAVVQTLVNNINPGK VPKAC
位
ASSLSFHSAVINHYRLRGYSPFQSVKSCCVPTRMRAMSML
ESLRATNHATVQSVVHTLKLSKEVSTP NHAQTLVHMMFPEIIPK
HLNTTNHAVIQTLVNNTHPGK VPKP NHA ILQSLIGSRWARSPCLDRWSMHA NHAll $V$ QNLVNERVNRTVPRP GSSLSFHSTVINHYRMRGYSPFQNMKS
D

NRNLLVQAMRNSLQNSNPFQDKWV
QTSKPTNHATVQSIVNALKLGDEVAMP
MQGTSLNSWVNQQV
PGVGDA
HYGSPVHTLVQN

NHATTQS\｜VKTVG\｜！PG\｜PE
FHSTVISHYRMRGYTPFQN
A LSRPLKNASFQKQ⿴HFDNPETVPKP
NHATSLVHLMK
NHAITLAHSLNSSYVPK
SSKKSNHAFLQSTMNRYEPE VPGP HSH VVKA NPRGSAGP
TPDTYLNFYTQATEDYRKAKHSSIIFQP HUSRSAHTKVSKHGGVITRQDATGNQMCCHPAEYDAVRMLI FHTAVLNLLKANTAAGTAG GGS PA SLHAQLKARLHSVSPA ELNGTNHAILQT IVHSLDPEA
LSASSHSTVMREFSKKTYEKDLRHLQR YQDEYAHTYLRQR
YA YTYLRQR

NHATIQS\｜VRAVG\｜IPGVPE
RYNNTNNNI LRSRYRQRQSPRSDPPRA DHSLLLKMQARGAADARP
P ASMHAQ KARLHSपSGETPAP EHNGTNHAIVQTLVNSMRKNGNGVPKA HVARAGHTKVAKTGIITRQEATGNOG
 GGPPVLNHAVDRALMHAAAPTPGAGPP FYGSPMHTMVQN IIYEKLDSSVPRP FH TAMVNQYRMRGLNPGPVN FYGSPMHTMVQN LIYEKLDSSVPRP NHATVQAILNTKDFSLKGQR NHADTLVHLLKSKLFP

|  | 90 100 |
| :---: | :---: |
| UniRef90_UPI00038C219E | Y N NVI L R K E H M |
| UniRef90-K1PPZ9 | Y TENDQFLVKH |
| UniRef90-A7YFD2 | YFNHQEHIIPAMVVDRCGC |
| UniRef90-K1Q066 | Y F D H T S R TLPRMKVV |
| UniRef90-W5LZ94 | D DNNNV ILKKHVV |
| UniRef90-T1J1K9 | Y VDETMRKLNNII AEECGC |
| UniRef90-H3BX74 | NNGTELLRTVTDVVVRECGC |
| UniRef90-E1FQX1 | ENRNGIR\\|LENVKVMEC |
| UniRef90_L5M0S0 | DNSNVYRNMVHHQQ |
| UniRef90-E7FDP7 | Y Y VG RQHKVEQLS VK T C K C |
| UniRef90-UPI00046B3966 | Y D D S GVPTLKFHSVAECGC |
| UniRef90-H0VKR0 | YKDDRYH YEGMSVAECGC |
| UniRef90_V8P9V6 | Y N SNLIK TIP D MVVDACGC |
| UniRef90-A7L013 | D GNIIYAKLPDMKVDRCGC |
| UniRef90-U3RA98 | YRDYTQDIVNDMIVESCGC |
| UniRef90-P30886 | D DNVILKKYKNMVVQACGC |
| UniRef90-UPI0003B2E964 | GNNVVYKQYEEMVVEQCGC |
| UniRef90-M7AMX8 | DGRLVSTLIFEDMIVTKCHC |
| UniRef90_B3Y027 | D GNVVLKKFPKMIVTSCGC |
| UniRef90-E5SJ99 | D D S SVLKKYNNMVVKTC |
| UniRef90-A5HE94 | K NGMTVRTLDNLL AKRCSC |
| UniRef90_E2A0F7 | DKESVLKNYEDMVAESCGC |
| UniRef90-F6RS38 | D DNVVLKAYPDMQVKTCGC |
| UniRef90-UPI0003F0EEDB | DNNNVLRKQRNMVVDSCGC |
| UniRef90-Q58G88 | DENVVLRQYEDMVVEACGC |
| UniRef90-M7AMY7 | YYDNHDNVVEDMVVDEC |
| UniRef90-L7T8M7 | Y L N E V S TFNDLI AATCGCM |
| UniRef90-EOVGU5 | D NNIIKKRDLP K MVVEQCGC |
| UniRef90-G1EH59 | YDE MGTVKNMIVEACGC |
| UniRef90-UPI0003B6F7A3 | VVYKKYRELEDMVAESCTC |
| UniRef90-UPI00038E9D96 | DAS $\square$ A YKEYDNMIATRCTC |
| UniRef90-J7GXK1 | DGSIVLKEYGEMVAASC |
| UniRef90-S4RBK6 | Y N NIVQKKDVPDMV |
| UniRef90-H0YTH2 | DENRRVLKVYPMTVESCAC |
| UniRef90-V9PPD5 | D G QLVMSDLPQFVVSDC |
| UniRef90-W4XGZ5 | Y D D SRNVVLKKMVVRACGCL |
| UniRef90-W4WT78 | DSNIIKRDLPKMVVDECGC |
| UniRef90-G6DR01 | DLNI I Y GTI P GMVVESCGC |
| UniRef90-EOVNW2 | YVDEENKVIDDMSI L G C G C |
| UniRef90-H2UH55 | YHENTFHKYEGMVVAECGC |
| UniRef90_Q28DF2 | NDNVVLRHYENMAVDECGC |
| UniRef90-G1EH61 | Y NSIVRIETIN G IVARECCTC |
| UniRef90-S5SWM8 | DDN FNVIPKMIVKACGC |
| UniRef90-B4KGU4 | Y NDQRTVVLKNYQVVGCGC |
| UniRef90-C4B8H5 | Y Y ENRHH EDMIVEECGC |
| UniRef90-H3DQU4 | YYNEEQK\IHNMIVEECGC |
| UniRef90_K7G9V9 | YFDDNENVVKDMVA |
| UniRef90-UPI0002B4843B | FEDERHNVVPNMIVQHCGC |
| UniRef90-F8V236 | Y $\square$ N DEKSVVQDMTV VGC G C |
| UniRef90-K7GDQ7 | Y Y D SNNVVIRNMVVKSCGC |
| UniRef90-F6TV66 | EDNGTYKEFRDMVAQSCTC |
| UniRef90-G3NDF0 | Y Y NEEQK\\| I K K M V VDECSC |
| UniRef90-13KGQ3 | YYENRHHEDMIVDQCGC |
| UniRef90-M3ZLV9 | Y F F GRTPRVEQLSVIKS CKC |
| UniRef90-A0A044ULR8 | Y DNGTQRSIK ${ }^{\text {d A K V TEC }}$ |
| UniRef90_Q1PHQ8 | D DNVVVKKYDDMVAASCGC |
| UniRef90-UPI000359A5B8 | DMNI LYQ L Q W K VDK C A C |
| UniRef90-UPI0004572BB3 | DGSVTYKEYEDMI |
| UniRef90-M3ZHF2 |  |
| UniRef90-S4RGA0 | YFNDQQQIIPDMVVERCGC |
| UniRef90-W5L015 | DEN VVLKVYPNMSVETCSC |
| UniRef90-UPI0004441B6A | Y Y NEEQKI IGKMIVEECGC |
| UniRef90-Q4SS30 | DS SNVLKKYRNMVVRACGC |
| UniRef90-H9G6V2 | Y Y DSNNNVIRNMVVKSCG |
| UniRef90-G1EH57 | DDNS NIVKNMVVRACGCL |
| UniRef90-E4XX73 | Y NEESSQHVPNMSVLSCCSC |
| UniRef90-B3DIZ5 | YFNDREQII P SMVVDLC G C |
| UniRef90-B4NHV6 | D D NHVLSVIPNMSVEECSC |
| UniRef90-J9KCT9 | DGNIIJK DLPKMVIDECGC |
| UniRef90-C9WEZ2 | D NQVTMARVPGMI ARKCTC |
| UniRef90-E0YCT1 | Y Y DHKFDTI Q D MVVDRCGC |
| UniRef90-E2R4N6 | Y DSNVVKTIPDMVVEACGC |
| UniRef90-F7BG91 |  |
| UniRef90-UPI000442092D | Y DNVVLR HYEDMVVDECGC |
| UniRef90-E3ML80 | D GKTVVKRIE GMVARRCAC |
| UniRef90-V4B113 | DQN ILFTELQNMKVMKCGC |
| UniRef90-U1NAV2 | Y T T GRERVLRD I V K E CGC |
| UniRef90-G3NVT2 | Y Q N PVLKVYPNMSVRS C S C |
| UniRef90_UPI0003F06AC3 | GNSI GLETMEDMQASMCGC |
| UniRef90-UPI0003338164 | EERISARHVPNMVATECGC |
| UniRef90-UPI000441997E | DGNVATQLFDDMIVTRCHC |
| UniRef90-UPI0002657CB0 | YVDAYERVVQDMVVLGCGC |
| UniRef90-W2TCQ5 | D NQVTMARVPGMI ARKCSC |
| UniRef90-I2FKQ4 | Y YVGRQHKVEQLSVESCKC |
| UniRef90-UPI00035A1079 | D D NVVLR H Y E M M A DECGC |
| UniRef90-UPI000441EC8B | DKGIVTQNYEGMSVSECGC |
| UniRef90-G3Q2D4 | DGSYVYKEFEDMVATRCTC |
| UniRef90-UPI0003290668 | YFDDEYNIVPNMIVDECGC |
| UniRef90-Q32PR5 | DKS Y A YKEYEEMI ATKCAC |
| UniRef90-D1LWV6 | D D Y NVLKEFDDMEAKSCGC |
| UniRef90_Q94580 | Y D D H RYRKYRNMVVLS CAC |
|  | Y Y D N S D NVVLR H Y V D E C G C |

UniRef90_T1DMW8
UniRef90_UPIO0032AFEBC UniRef90_UPIO003F15ABC
UniRef90-G1KCN0
UniRef90-D1LX92
UniRef90_V9KXTO
UniRef90_UPI0003592D50
UniRef90- U3IAB8
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UniRef90_UPIO003347EC3
UniRef90_UPI000395BCC3
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UniRef90-UPIO004571D87
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UniRef90_UPI00033452C9
UniRef90_Q99988
UniRef90_UPI00035046E8
UniRef90_UPI0003D0D5FB UniRef90_C3YLE2 UniRef90-D1LWV4 UniRef90-I3JME5 UniRef90-D0Z7E1 UniRef90_E3VVL4 UniRef90_G3WED1 UniRef90-Q7ZZM3 UniRef90-H2VCI5 UniRef90 Q6VZI6 UniRef90-F1NHC3 UniRef90-W5K052 UniRef90_L5KWW1 UniRef90 I3MA89 UniRef90-H2LXY1 UniRef90-L5JUX2

CSRKLLHVVNKD MGWDDWUI APLEYCEGLCEFPRS GRCCRLHRVRASLHELGWSVLSPRELQVGVCVGQCPRSAN GPCALRELVVDLRABERSPETYQANNCQGVCQSDRN YCSGECE
PCRREG $\square T V D F D K \square G W G \quad S W \square I H P K K F C V G S C P G P V D$
YCSGQCE
NCCKRP LVARFREDNDNTMYPRNLTVGYCFGSCNADNQ GRCCRLLSLRASLEDLGWAVVAPRELDVRMCVGACPRSAS GPCCKKQFFVSFKDIGTGYHA CCLKSLKVSFQD $\mathrm{C}_{\mathrm{G}} \mathrm{G}$ SDWVIAMRFCEGSCPHNYK
C CRKQFYVNFRD $\square G \square G Y Y G$

YCSGECP
ASECRLRPLKDNFHEEGWNY $\quad$ HEPVEFNYCSGACSVPSM

CCREK LY $\square$ S FAE $\square G W G Y H A$
FCTGSCQGT L
YFCRGSCSSAAS
YCAGEC
GPCALRELSVDLRAAERSPEYQANNCQGACQSDRS $R$ VCSRRYLRVDFADDGLAPKSFDA QAYYAGTCGAHPS DCGLYDFRVSFSQLKLDHIAPHKYNPRYCKGDCPRAMG GRCCHLQTVHATLEDLGWSVLSPRQLQLSMCVGECPRSAS

YCEGSCPAASS
YCSGECEYM
CCRKDFYVDFRD $\quad$ GWGYQ $\quad \square$ D $\quad$ NYCVGQCPMASS
NCCLHPLTVDFEEFGWDWI A P
CKLHTYHVNFTSLGLEPRSYKA

C CMRALKVSFQEAGGAPRSYDM
CMRRSLQVSFHDLGTNYDA
N C C L R S LY ID F R DLGGWGYEA YCSGECPYMB L
FCAGSCVHPDS

CCRYPLKVNFTSFGVAPDSFDA YFCAGAC
CGRRQLRVNFKELGWDDWIIAPDDYCEGACDFPRS GPCRLQELSVDLRA EQSVLIDETYMANNCQGPC HDRS
 SDCSLRSFPVSFAQLGWDHIAPHRYNPRYCKGVCPRHAP SRMCCRQEFFVDFREIGQGWDAPEGYAMNFCTGQCPDAAS RGCSRRNLRVDFADGGDAPKAFEA YYCAGTCQVTRS

CSKKP LHVNFRD $\quad \square G W D D W \square I A P \square D Y C E G V C D F P R S$

[^1]


UniRef90-UPIO0032AFEBC UniRef90_UP10003F15ABC UniRef90_G1KCN0 UniRef90_D1LX92 UniRef90-V9KXTO
UniRef90_UPIO003592D50 UniRef90-UPI0002C638BF UniRef90 U3IAB8 UniRef90_UPI0003347EC3 UniRef90_UPIO00395BCC3 UniRef90 H3B5H6 UniRef90_UPIO004571D87 UniRef90-B4PW45 UniRef90-F7E542 UniRef90-H9J882 UniRef90-R7V0A1 UniRef90_UPI0003872094 UniRef90 B7P4B4 UniRef90_СЗҮ9T6 UniRef90-B4NO15 UniRef90-UPI000328A5E1 UniRef90-M4A510 UniRef90_F1DH66
UniRef90 UPIO0038C0E3B
UniRef90-H3B7B1
UniRef90-E7DX60
UniRef90_UPIO00394687F
UniRef90 ${ }^{-}$T1K4Y6
UniRef90-I1G5C6
UniRef90_H2LU35
UniRef90_M3WC01
UniRef90-M4A6B6
UniRef90_UPI00033452C9
UniRef90-Q99988
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UniRef90-D0Z7E1
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[^0]:    
    
    

[^1]:    lupas_21
    lupas_14
    lupas_28
    jnet
    cont
    sol25
    sol5
    sol0
    jhmm
    jpssm

