



UniRef90 UPI000258E997 UniRef90－UP1000258E997 UniRef90－UPIO00258E997 UniRef90－UPI00032AFACD UniRef90－UPIo0032AFACD UniRef90－I3J6NO
UniRef90－H9KHN2 UniRef90－H9KHN2 UniRef90－H9KHN2 UniRef90－H9KHN2 UniRef90－AOAO26XOV3 UniRef90＿A0A026X0V3 UniRef90＿A0A026XOV3 UniRet90＿F6WSS3 UniRef90－F6WSS3 UniRef90－UPIOO035AOC30 UniRef90－UPIOOO35AOC30 UniRef90－UPIOOO35AOC30 UniRef90－UPIOOO35AOC30 UniRef90－UPIOOO35AOC30 UniRef90＿UPIOOO35AOC30 UniRef90－UPIO0035A0C30 UniRef90－UPIO0035AOC30 UniRef90＿UPIIOOO35AOC30 UniRef90＿UPIOOO35AOC30 UniRef90－UPIOOO35AOC30 UniRef90－UPIOOO35AOC30 UniRef90－UP100035AOC30 UniRef90－UPIOOO35A0C30 UniRet90＿UP100035AOC30 UniRef90－UPIOOO35AOC30 UniRef90＿UPIOOO35AOC30
UniRef90 UPIOOO35AOC30 UniRef90＿UPIOOO35AOC 30 UniRet90－UPIOOOS5AOC30 UniRef90－UPIOOO35AOC30 UniRef90 UPIOOO35A0C30 UniRef90－M7AM40 UniRef90－M7AM40 UniRef90－T2MHU1 UniRef90－T2MHU1
UniRef90 ${ }^{\text {T2MHU1 }}$ UniRef90－T2MHU1 UniRef90－T2MHU1
UniRef90－T2MHU1 UniRet90－F6SSN6 UniRet90＿F6SSN6 UniRef90－H3AXR0 UniRef90－A7SXX5 UniRet90＿A7SXX5 UniRef90－A7SXX5
UniRef90 F2D64 UniRef90－F2D647 UniRef90－F2D647 UniRef90－H2LPI2
UniRef90－H2LPI2 UniRef90－G5C218 UniRef90－G5C218 UniRef90－G5C218 UniRef90＿G3P0LO UniRe90＿W5MQ57 UniRef90－G1TT99 UniRef90＿G1TTT9 Uni Ref90－R7VK12
UniRef90
R7VK12 UniRef90＿R7VK12 UniRef90＿A0A023F7D0 UniRef90 AOAO23F7DO UniRef90－A0A023F7D0 UniRef90－UPIOOO22B1095 UniRef90 UPIOOOO65EE72 UniRef90＿UPIOOO2B4311B UniRef90＿UPIOOO2B4311B UniRef90－UP10002B4311B UniRef90 UPIO00284311B UniRef90＿UPIOOO2B4311B UniRef90－UPIo002B4311B UniRef90＿B8JK19 UniRef90－W5KKZ5
UniRef90 JgMMW9 UniRef90＿－JgMMW9 UniRef90＿－」9MMW9 UniRef90＿нян9м1
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40 AVCKSIISVIDELMDDKYDNNIEQAVSKACKYVPAN CAVCKSIISVIDELMDDKYDNNI EQAVSKACKYVPAN RLCKDVI SAAGEMLKDNTE

 C F LCKMMV
 HATEAN： KKRSREH｜： NATEDR1 KNATE KNFLSRVCNFLPD S


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CTTCKELVKTIYTMASDPTQNQU保 CLVCTVVMMYYLHGVFKDKTQDE：EQVLDSVCRVLPNV CLVCTVVMKYLHGVFKDKTQDEVEQVLDSVCRVLPNV CGECSQl l RTSTNMIGSDTKVTVYEALHAVCRRLPER CGECSQII RTSTNMI GSDTKVTVYEALHAVCRRLPER


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CWACKWAMKKLKKHLGTKDKDA
CK V C T ICKVCT VMKYLF PFPCEACKKVVSVVEGEGKMNSGETE






UniRef90 UPIO0027398FD UniRef90-UPIO002035B29 UniRef90-UPIO002035B29 UniRef90-H3C308 UniRef90-FoZF78 UniRef90-FOZF78
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UniRef90-B4LKL3
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 I PCEACKKVVTUIUENLKKNTEAEIESYLEKECEMLPAD GAFCNVCQIFITYLDNLLKNETLTELGAVLEKGCELLPGP GAFCNVCQUF TYYDNLLKNETLTELGAVLEKGCELLPGP CKACTWAIGRVKKLGKNTTVE NKKLST CSICKIVTGDVIVMVKQKTESEI ISDLDNVCKEFKVF G G
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 PKCALCRATMKALQHIIRKGDSGSIEKALQKVCHTMGK PKCALCRATMKALQHII RKGDSGSIEKALQKVCHTMGK PKCALCRATMKALQHIIRKGDSGSI EKALQKVCHTMGK
 GLECDLCGYIVNYVETYVNNATESQILQFLDKDCNILRNS IFCKACHFVMEKLSTLVNNATEGLIGQAVGKACTLCPAP
$\underset{G}{G F}$ GF
 VECTUCEFAASYVGYAANATE

## CEECKKLFEYRYNVGGDRAQVET

 CELCKKLFEYLYNVGGDRAQVEEKALDVCDKFSGA CPLCELVVTYAEYLSTNATEQEITKALDKVVCDKFSGA PD$\qquad$

TCTLCEYLLLVFVYFGDNVNEEKVKGEGEKKVCRLIP P S DKCEVCSYVVNYIENVIESRGELKV GTECAVCTLSVALVEQYAEEKKNASA
 GDFCDVCKMVVAYI EKLEKNATGAEIEAALEKVCHFLPKS GGCCNCCEFVVYUEDYVKNQTEAE GGTCVGCTLIVGGIEQLGEVRNE OO

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TCWVCQFVMNKFSELVNNA CWURTFGKAESVIDSDQETL KAAIGKTMSQLCHVLPAA


33886 CILCDFAVGKIEKYLDDKNTTVI
 GTKCQUCKMLVGFIE

ALVE QLS SE TVVADSLARFCSYLPPE
LS CIVCSVLVGKDDSIGNQKTEDKIV

UniRef90 UPI00027398FD UniRef90-UPIOOO2035329
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UniRef90 - 12 HS 00 UniRef90- UPIO00441F94A UniRef90 UPI000441F94A UniRef90-L8Y544
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UniRef90-O55E11 UniRef90-UPI0003836846 UniRef90-D3B7C7 UniRef90-D3B7C7 UniRef90_D3B7C7 UniRef90 D3B7C7 UniRef90-UPIOOO443C226 UniRef90-D3BDG2 UniRef90-P10960 UniRef90 P10960 UniRef90_L8GWD6 UniRef90-I1G2TO UniRef90-Q75K05 UniRef90-B3SAR7
UniRef90_F2UPD1

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WVISKCKE\|IMESYLLPIVII INAlL
 ASTKCTEMVETFGPSLLDTLFROVSP ASTKCTEMVETFGPSLLDLLFRQVSP

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QSATCEKYVKTYTPVITKIIIQTTNPDEAC
QSATCEKYVKTYTPVITKII QTTNPDEAC
QSATCEKYVKTYTPVITKIIIQTTNPDEAC
LAA ACVNLVATYLPWITTQLLDGENGAKLCEQT


LSNTCKQMIDSYLPVVL


VSDQCVQFVDQYEPMLLTHLTEMDPDFVCRKL
LQEPCKILISNNIGKII

LETCDETMADYGATV

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LK SMCKGLMKKHLWVLIEELSTSDDVRTICVNDK

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UniRef90 F2UPD1 UniRef90-UPUOOO44212FE
UniRef9O-FOZGQ2 UniRef90-FOZEG2
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FOZEG2 UniRef90-B3SAT1 UniRef90-UPIOOO2658800 UniRef90-UPIO002658800 UniRef90_UPIO002658800 UniRef90_UPIO002658800 UniRef90-UPIO002658800 UniRef90-UPIO002658800 UniRef90-UPIOOO2658800
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UniRef90-E9BX27 UniRef90-UPI0003F14051 UniRet90-UPIOOO3F14051 UniRef90 UPIOOOO394626F UniRef90-UPIO003347A42 UniRef90_OPIOOO3347A42
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UniRef90 UniRef90-R7VL66 UniRet90-A9UTM7 UniRef90-Q54LG3 UniRef90-F4PSW1
UniRef90-M3WNK3 UniRet90-M4BAK7 UniRef90-Q54WE4 UniRef90-W4YKG1 1
UniRef90 W4YKG1 UniRef90-S4AN89 UniRef90-W4XXY9
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UniRef90 O54PT7 UniRef90_UPIo00359BF41 UniRef90-A8XC18 UniRef90_B3SAS8 UniRef90-R4UJ82 UniRef90_UPIo002C47238 UniRef90-AOW5A8 UniRef90-D2VZR0 UniRef90-D2VZR0 UniRef90-D2VIY6 UniRef90_D2VIY61

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|  | $K$ | $F$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $K$ | $N$ | $T$ | $E$ | $N$ | $K$ | $I$ | $I$ | $S$ | $Y$ | $A$ | $D$ | $S$ | $L$ | $C$ | $K$ | $Y$ | $L$ | $P$ |
|  | $G$ | $D$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $Q$ | $K$ | $T$ | $E$ | $A$ | $E$ | $L$ | $K$ | $D$ | $K$ | $L$ | $D$ | $G$ | $I$ | $C$ | $R$ | $V$ | $I$ | $P$ |
|  | $V$ | $D$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | RYCRYVI C R Y C R Y V I $\begin{array}{lllllllllllll}C & R & C & R & Y & V & D & D & E & L & R & N & D \\ R & N & D & F \\ C & R & Y & C & R & Y & V & & D & E & L & R & N\end{array}$





K

$\qquad$ CMCVKGVVKOD | $V$ | $K$ |
| :--- | :--- |
| $V$ | $K$ | $\begin{array}{lllllll}C & C & M C & Y & L & V & K \\ C & S & L & C & K & Y & V \\ M & M & K\end{array}$

TCTICEF AVVQYV D G F

TCA A C C S $\quad$ G:
 LKCSACKHVVKAAEKTINKGTDEGKSFAHSEAKHLGKP $G Y Y C F G C T M A V G V L Q Q I A E V H N$ A S I S E S L E S V C K Y L P E L GT G C A V C T L G V G G V E QL T E I H N E S A L E A V E R L C Q ML P S N

 VK CEMCEYVI HS AT DLI K
 LKCDVCHYVVKATEDLVRNYTQRQIVNHLESACHRLPHK





VECDLC QLTVNDVTEHLIKNYTKEQVETELLKKICNNVPA N

 CNLCNFLVSQI E GY IK NQTEEEI I

## LK

 C T F C E F V L L K I E E L A E N K S E D K IIK R VV L N V V C L S L P Q A GTNCAVCTVLVGDVEQLAQVYDEGAV DALERLCSFLPEQQ

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 K C WA C K WI L N K M K K A GP NA T A E S
S C A A CTII L

G T D
 CQMCKMSVKIVDD MI GEDTE SIVKKAVDAECKKEFP F LRCVVCS F I A G TII D SVLGGNKDEYSVVMHEI DHFCTYMP F D
 C DVVCTAAVVHEV Q GLL G S D S T K E D V $N \mathrm{C}$ C S V C E Y A V Q TVV E A L A




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|  | UniRef90-D3BRD5 |
|  | UniRef90-E9BX31 |
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|  | UniRef90-S4R2L6 |
|  | UniRef90_UPI0003344AF7 |
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[^0]:    lupas_21
    lupas_14
    lupas_28
    jnet
    conf
    sol25
    sol5
    sol0
    jhmm
    jpssm

[^1]:    lupas_21
    lupas_14
    lupas_28
    jnet
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    sol25
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    jpssm

