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 S D Q E
 T Q E S L S L L L MV V K P R R V H R D G $\quad$ R TSA QLA L CLL LTRKADVV HNGG I VELDNA GNYSKHLTNRYQS

 E E D L W L M M L R S R P Q K V G R R G VQ $\quad$ T $\square$ A GK R I I AT QL R L CL LAAAEAMKPHRDGSFTV

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$P$ T L A A F V G E Q V E A V Y D P R D L T

| $R$ | $L$ | $Y$ | $V$ | $Y$ | $N$ | $L$ | $D$ | $G$ | $Q$ | $K$ | $I$ | $C$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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| $K$ | $E$ | $V$ | $I$ | $I$ | $R$ | $K$ | $L$ | $D$ | $G$ | $T$ | $Y$ | $V$ |
| $C$ | $T$ | $A$ |  |  |  |  |  |  |  |  |  |  |
| $S$ | $V$ | $I$ | $W$ | $V$ | $E$ | $L$ | $D$ | $G$ | $G$ | $R$ | $C$ | $I$ |

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 D E L T D Y I G D K V D Di K WD A E D V T
T E

S KVIV R K L D GVVFVCYA E NSVIV R R A D GSYICD


 S S $V$ V R V Y | K T | $V$ | $R$ | $L$ | $Y$ | $N$ | $T$ | $Q$ | $D$ | $Q$ | $Y$ | $L$ | $T$ | $W$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $S$ | $S$ | $L$ | $L$ | $V$ | $Y$ | $S$ | $E$ | $D$ | $G$ | $K$ | $F$ | $C$ | $E$ | EH|IWVF DLEDRLICKAE

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UniRef90_U7H8E2
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UniRef90_C7R625
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1


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30
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DERTLDFLTKEGRKVQQDG RRTVRG
S DRMRFWLLPEEERTLRPDG SERELDVCLMKEARRRIAR
 ERELDI ALMKEAKRTLGKSGT

PRELDFLMMTA
PGKEGTRQVGRQG
 EDERALDMLLCEDGGVRRDG KKGVRFENHTYFN


$$
\begin{aligned}
& \text { EAFR\SFLPFEWRQLGRTG }
\end{aligned}
$$ V

| $\square R H L L L A G E D K K V G P Y G$ |
| :---: |
| $Q D F L P F E E R S V R D G$ |

 TAEDLH



R GNYYFS

DER LDDVMDQP TEVELDYLARPEVKRKVDMNA

ERQLD DCLMKKTHRSIYK A GGY
 ENERALDVLLSPT AGGGWRVVTKKG I RDDGASFDH
 PAEADDLDRPYE DRTTRRGEVQLKNLNYSS $D Q F L L D F D P F E M R K V R R D G$

EKLRDDFLPFETRVVRPAG


FRPHVVVKVTRE
F LPA EQRVLQRDGTVTPWG


$R N L V Y R S$
$L G K Y Y Y A$


T LEECREAFLWEETRRVDKTGC LKLCGKIYEAG
E LDND DFLWE E E RVVVDRAGCDRLS


 PDALAMILRRSTHTKVNKNGVKFRE LQNVCYNS






 FLMQTRPTT RTGKAKIVYGRGIITVNGLQYWH SQDELRDALLKSDYRNVSKEG RS GNAMVRQGRGI K $\square R G L L Y W H$

$T A R Q L Y D A G L I Y S P V S V D R F G Q V R K N R R G L V E W N T N Q$ $L D A L L M T V$ VGKDGLRTVTAQG ANVTEDKRQAVVLTVNRAAIKHGKRAYTH LDMFTLEDDRAHRK $N$ TKGIVTKGVARGRGRHYVA LRDTFMPFEMRTVQQYGVVI

HK
EERLRMDFLPVYERSVQRYG

| Ref90 J3G |  |
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|  |  |
| UniRef90－UPIO0004654CDA |  |
| UniRef90－E7NRJ7 | EELRGLTGQQVMARDNLTN KNE |
| UniRef90－I3TNA4 | HALVPYTGQSVRVGYSIHD GDRVWV |
| UniRef90－C6IXM3 | RDKYVTIYYDPDDDSQ LII Y He |
| UniRef90－UPI000377D02D | SALSADVGRRLLVKYDP |
| UniRef90－K9TN | ENLAGYGGEWVVLRYHPRDUT K L L |
| UniRef90 J2YIB4 |  |
| UniRef90 B7JWC5 |  |
| UniRef90－UPIO0046 | PELALLQVGQRVVVKYNPVSVQ Ki W |
| UniRef90－K9L | AELAGWI GKTVYVCFDPQQPRTIYVYGSDTKFVCQA |
| UniRef90＿UPIO003E | KTLSAYLGQSLTILYDPRDT SSIEAYDQ |
| UniRef90－Q0EWA9 | DE GQY GKNALLKYDEQDIGGRLYAY VEDRF｜GVLLC |
| UniRet90－L8JAII6 | PELGPFIGEEVFCSWDPTD GRLYVFTKDMGFICEAE |
| UniRet90－K1ZKH7 | RGLEGYHGHDVIVEDDVHDAR EVKVRDMTHRLICTAQ |
| UniRef90－Q8KVW3 | VGRKVQVKYDPRDLSQ V |
| UniRef90－R4LHF2 | QI RYMPHDDRQ I EVYAG GEHLCTA |
| UniRef90－H4F | RRLRIRYDPRD S L VVVEGPDGT |
| UniRefao－9RK32 | DVLSTWIGERMIVRYDPRDL SRIYVIGPDGTYECTAQ |
| UniRef90－UPI000262F05B | DWMHGRVGEQVHLRY隹HHNH RVVEYDHTGRHLGAA |
| UniRet90－－R5B5P5 |  |
| UniRet90＿D1NEQ8 |  |
| B8G | KKVFVEFNLRS ${ }^{\text {a }}$ |
| UniRef90 UPIOOO301D359 | GAVVGDEVLCKWDPKNVGRVYVFRMNNEF |
| UniRef90－H8DWA | YLAMYAGESVLRFDPRD GSUIVRTQEGAF |
| 990 O1QF43 |  |
| UniRef90－D6U3P7 | S RLRGREFDLYYDRRDİVLY |
| Un | DEADYGFVY |
| UniRef90＿UPI0003B5B46C | AELFRYLIGHKVRFRYDKENLTGF WV |
| UniRef90－UPI0003806DE8 | PELESTRGTRVTCRYDPNDGGTIHVDDSSDEYTEVPC |
| UniRef90－D5AQ | HALAPYHEPKVMVGYD Y HQADRV |
| UniRef90－UP10004725DDC | NVLS WVGGEQMLI KYDPRNL SCV |
| UniR | AADIGRRLIVKYDPRDL SRMV |
| UniRet90－F3BK | GAVGDEVLCKWDPKNV GR1 |
| UniRef90－T1A4E1 | DVLQRWVGRKFVVRYDPRDI SSS |
| UniRei90 UP | EWMMGFKGTKVYLRRDIKMYQEAWVFAETNEFLGKAQ |
| UniRef90＿UPIo00374525B | PDLSHWNGKQVIVAYDLADYRQVVWVKDMKGAPICVAE |
| UniRet90－14EAC7 | DELR |
| UniRet90＿K9SAT1 |  |
| UniRef90－K2G273 | DELRWLMGRKFTLKYDPRD |
| UniRef90－UP100037DE6FE UniRef90－E2CGC8 | PAVLERGGQKVQI RYMPHDDRF LVMVY |
| UniRef90 UPIO00383022B | PWMTGQAGTQVRIRFMPHHDH RIEVYHATGRYLGPAD |
| 1CG55 | DEMLGLAGTDAVIRYSRSD |
|  | GDLIGKTVDVRYDPFDLAE ELV |
| UniRef90－J8QA81 | GLVGEKI Tilla |
| UniRef90－UPIO002F4 | 硡 |
| UniRef90－Q0K J96 | IVVSWDERTIQ C HVY |
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| UniRef90－G4CRI5 UniRef90 K9UJ59 | Rell |
| UniRef90 G2HQV8 | RKYIGKTVICRRDPRDI SKIYIYDED |
| UniRef90－R6D913 | ETLQELAGKKVYARYDTADV SKUHVYEAEGQFLC |
| UniRef90－UPI0001E2 |  |
| Uni | D |
| UniRef90－M4S | QTSAAWPGEDVLVRMDPADL GRALVFALDGEYLGEATC |
| UniRef90－H1SDK7 | PELGLYVGRDVSVRQTAD MGELVVYH EGEFVCVAVC |
| UniRef90＿G2HDA8 | A ALATLVDTQVQVR |
| UniRef90 Q602V4 | PEL WRHHGDAFRVMVDETDL GRVYAYDDNG |
| UniRef90－B308N3 | TV |
|  | $V$ |
| UniRet90－M2C4N5 | EELIGLTGQQVIVRVNLTNRNEALIC N |
| UniRef90－16AAE8 | P ELALYVGKDVAVRITPD DGEV |
| ef90－D9UPB7 | TGQAGRKVRLRYMPHHEH |
| UniRef90 A1VWS4 |  |
| UniRef90－D6T |  |
| Ref90－UPIO0047A0175 | PDLHAYNHMPVVLEYDDMD |
| UniRef90 ${ }^{\text {B2V783 }}$ | DULVRYAGKKYEKY |
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| UniRee90－AOAO23CC54 UniRef90－UPIOOO45EC32A | QEFPRVAGRNLPVRYDPWDA S S SVYV |
| UniRef90＿－B8FD28 | PELAAYVGWRVEVRRDMQDV GLI YVFSATMEF |
| e9 | AALERYHGEEVM |
|  | QA |
| UniRef90－A0A024KJX9 | MGLLP GEQVMVRQDPTDM GRL |
| UniRef90 A3RUQ1 | PELHAFNGHRVVMEYDLMD DRVAVRTQE |
| ef90－Q5YMJ9 | MVGMVGA |
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| UniRet90＿U7H8E2 | MGLMEGKQVELRYDEQDI GRLAVY ADGRFLCWAVC |
| UniRef90－E1P414 | 兂 |
| Ref90＿UPI000382CB84 | R P P Dil |

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1 ETLLRRIIF 10 WQDTRRVDK ${ }^{10}$ GV LDMLLLPVASRTIQRDGARTVSKKG A DERADDVLDAPA R PQDGGVRKVGKKGVTVNRRHYVN $E R L T R Q F L P S T D \square T V H S Y G G V Q I N R R Y W H$



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70
80
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``` PELGRC \(\square G Q R V Q V R \square S R T D K R Y A Y I Y D E A G L F V C R A\)
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lupas_1
lupas_2
net
conf
sol25
sol5
sol0
jhmm
jpssm
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## 

