QUERY
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 EDYAYVLDFLPYGHCEDTRPSYKKRGLVQAFGEKNFVLME EDYAYILDGIPPEQSLIKKGFPRNEVYVQAVGEQFFTLDE EDYVYVLDYLPEGR GGBPP
ENYAWILDYLPYGYGN EDYAYVLDFMPVGNPVDRHPWHKNRPVAQLIGENFFVLFD ETATVLDVLPHGRTEDDRPQYEKKPLAFVLDKTDFSLYE EEGAVVLDYLAHGRSDGGRDYSDGSLAYAVVVDRFTLYE EEYAYVLDYMPNGDPGGK Y YKAEPLVYALGESEFKLFE ETVVYVKDYMRSGNQMDKHAFHRTRPVAQVI GDTYFTGL
EEYAYVGDYVTRGKSTTVRG
EEYAYVLDFNPRGKSSTVRG
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 EKFAYVLDYDREGNPLDKHKDHKNRPFAQLLGTDYFLLME
 EDFVYILAYLPQKNDKEKKGFPKKEVYSQALGKDHFTLLEE

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 VIPKTD LMLYERVFVGKGQRDKVLMITRKLNYDDLTPT LIPKPNEDI TVGEKVYIGKNPRKKILSVRRRITYKDLTNS LTLDADADSUGDRVVGPTEARELVDEFRQSYADLSNT VAFDEDERLTUGTKVVVEPPAERDVVTECNEVEYDDLSSG LVDKDDKTVETGERVYIGKGKRDKVEYISRMLKYEELTPT
 LIPKPNVSIVI GERVYIGKDKREKI EHVKRRIAYDELTHA
 LTDTDDRVGUGRLVVTPDGAREAVARSRQUEDDLTAG
 LIPKPGVELDI HEEVYI GPGKRDKIARVNRRLTARELTAT LTFETDADVSi GDRVVGGPTEARKAVDGFRQVGYDALSTT LVPKESAQLDI HEKVYI GSGKREKI ARVNRRIKYDTLTAT LIPKKGADIRDYDTVYIGGDEERKQVERVKRRUGYGELTNT LTLEEDADVSIGDRVAI APTADRELVQRVEESSFGDLSNT IVPITGVTFTPHERVFI GKGGRDKVER\|KRRVGYEELTAA LTLGDDADVSVGEWLRLDGTA AALTDDAGINTGDRIETDPVGDNVKDLRTVTHGDLSNA LVPKRGVDLEL QDTVVYIGKGKRDKVYKVLGKLDYENLTAT LAPKEGAFLELHEEVYVGRGKRDKIHHVNRRLRYDELTAT LELKNNDDVELAEKLYI GKHNREKVSHVLKMLKYEELSRT LTLKPNATAEVGERVYUGSGTRDKVNKIVRRASYDELTNE LELADDTDAGTGDTVTTRPAEARTAVDRFREVSYDDLSNA

 LTLEEATLSI GDRLDI YDSPQVGRTTG I DHEDLPRG LNLSEDAD:SI DDRVKIVRPDEEGIKRGREEVDYGDLSDG LVAKPNVSINFEDRVYIGKDKRDVIDHVKRRVNSDDISST VVPEGENFEVGEKIYAGPDGKGPIKSVEGPISYEDLTV LKPKPDAVIAPGEKVYVGPGKRDK QY DKRLKYDELTDF

 VTLKHEATVE:GERVYVGNGVRDKVNKVVRRLKYDEETMPQ ATPLSNDDFQUEQKLELERDRE VVMREDERPKGGEFDYIGDGDR LTPLLSNDDFLPEDKIELD ALVL GGDYQDEQRVDLFNVQDLKIDLVRKRVGFEELTSTS LVPKPEVSLQUGDKVYI GKDLREMVQHVKRRISYSDLTSS LTLTDDADVSUGDRLVVAPEADRDVVSRYREIGYEDLSRG ASPLDSKEFQLEQRVELGSTP LKIDNLVIYEDLTTV VALKKDVKVEPGLKVYIGENKRDEVHHIDQRITPDKLSGN FALRPNVNVNVMDKIYVGKGARKEVSRFIRYLTYEELPPT
 VVSDYGVVLQKGELVYAGKYGRTKIKRISARLIYEELVDE LVAAEDANLSPGDRLAVE VDALNGVTRRLTYHTLTAA MVVKDGERPRGGTELYVGEGDRDKVDYVKQRVSFDDLTAS


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UniRef90_B2ITG1

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A Q S E L E Y V V Q D L V E E N E D R F V D F Y N E P
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A RVVEL P Y V V E E I I
ARQELEYAVAEVVEREERRFVVDFNDP
A QNELP FVLEGIVNKREPDFI KFFNES


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| $G$ | $V$ | $E$ |  |  |  |

A R V E L P Y A I Q K
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| $G$ | $R$ | $V$ | $E$ | $L$ | $P$ | $F$ | $A$ | $I$ | $E$ | $A$ | $I$ | $V$ | $K$ | $E$ | $N$ | $E$ | $A$ | $R$ | $Y$ | $V$ | $E$ | $F$ |
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| $A$ | $F$ | $N$ | $K$ | $P$ | $I$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $A$ | $Q$ | $S$ | $E$ | $L$ | $D$ | $Y$ | $A$ | $V$ | $E$ | $D$ | $L$ | $V$ | $E$ | $A$ | $E$ | $A$ | $G$ | $R$ | $F$ | $V$ | $D$ | $F$ |
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ASSEVVYVVE

ARSELVEYVE
A ESEEL E Y A I E A K TEELLHVI K E AVVKA Q E E R F V E F L L N N P i

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A A S E L



| $A$ | $K$ | $E$ | $N$ | $L$ | $V$ | $S$ | $V$ | $L$ | $S$ | $Q$ | $I$ | $K$ | $E$ | $N$ | $E$ | $K$ | $Y$ | $F$ | $L$ | $K$ |
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| $A$ | $F$ | $N$ | $N$ | $S$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $A$ | $K$ | $D$ | $E$ | $L$ | $P$ | $K$ | $V$ | $L$ | $E$ | $K$ | $I$ | $L$ | $D$ | $N$ | $E$ | $K$ | $L$ | $F$ | $V$ | $E$ |
| $A$ | $F$ | $F$ | $N$ | $Q$ | $P$ | $L$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $A$ | $K$ | $E$ | $Q$ | $L$ | $E$ | $K$ | $A$ | $I$ | $E$ | $Q$ | $V$ | $K$ | $E$ | $R$ | $E$ | $K$ | $E$ | $F$ | $V$ | $E$ |


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| $A$ | $L$ | $E$ | $K$ | $A$ | $E$ | $E$ | $Q$ | $V$ | $V$ | $K$ | $E$ | $R$ | $E$ | $K$ | $E$ | $F$ | $V$ | $E$ | $F$ | $F$ |

AK TEELDYNI MNAV Q Q Q E E R F I R R F F N E P P I T T R R L


A K Q E L E A VV E K I V KV R E K F F I D W

A K D E L P K VI R K I I T E E D K S I F F V E F F N K P L T L K L L H A L E L L L P N



A E Q E L L D Y V V





A Q S E L E Y V L K A L V D E E E E R F V E F F N N P V T P R R H A F E F L P G
A E S N L K D A V K I I V R S R E K E F V E F F N K P I N DR LHADIEL R G




 ASLGI PTYI A QKI E QDRQTCSQF LI NLNTATLAELETMPG
 S RALI QP IL EKEI LN YEEEFLNFFNNS
A K L G V P L S V Q Q K I S A E E K Q C P Q I I V N I N T A T L E E L V T L P G





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| UniRef90-K9VEl1 |  | EFDRLY |
| UniRef90_UPI000371 |  | REFDRLYA |
| UniRef90-K9QM97 |  | EFARLYT |
| UniRef90_F7USV5 |  |  |
| UniRef90-X0X7A7 |  |  |
| UniRef90-B0CC58 | VR】NKNSDLQ |  |
| UniRef90-B8HTE6 | EFERLYAN |  |
| UniRef90-K8GTK0 |  |  |
| UniRef90-H9UEP0 | VPG $\square G Q K T Y E K \square K E R \square K V E N \square G V Q V Q N E R V Q G G$ |  |
| niRef90_R6WT79 | LTENAD SERVNLVRKVRDPVKKAERTSRTQRKSAQ |  |
| UniRef90_UPI0002F |  |  |
| UniRef90_Q83MW2 |  |  |
| UniRef90-R5ZAH8 |  |  |
| UniRef90-R6V7M5 |  |  |
| UniRef90-E1SZE8 |  |  |
| UniRef90_UPIO00234E8 | KTPTNKVSPKLTERLT REISNSLKLLSTRPLSVT |  |
| UniRef90-M1Z4E5 |  |  |
| UniRef90_E6KZZ8 | QEKVAEGKKADKDKLRNDKPAQVEKLS |  |
| UniRef90-UPI00037D3 | AVLKPGVKCELGDR I Y A GGASKDANLDIDNLV DEDKDG |  |
| UniRef90-U4KNT0 | $\checkmark V V K E G L V L A D L I D R A L G L T P E A E D D S I N Y Q M R L V D S T T$ |  |
| UniRef90-R5L8B6 | VI EKAGGMTKAAKKDYIETVADSQNINIITKKQYKKLISN VKKPGVMLTEGQRVA DAVNAVGGVI ETADDDRLEDG |  |
| UniRef90-F5RLT4 |  |  |
| UniRef90_R7MC49 | GQK $I Y \square P S K K E K E A N E G K V Y D T T E$ <br> I RVLTQEELQS |  |
| UniRef90-R5C2R9 |  |  |
| UniRef90-B9K9Q8 | A LTNQASTVTDGERTY ${ }^{\text {l }}$ GPVKAQR\VE YRRITVEELTNV/ |  |
| UniRef90_FOYXQ4 |  |  |
| UniRef90-K01XL8 |  |  |
| UniRef90-W5HD22 | VEQPA | DPKTPA HDKFEQAADY |
| UniRef90_UPI0003B4604A |  |  |
| UniRef90-M9W2Q0 | {{VQPK A A I \( |  |
| ) S YGEGNSYGHPHSEVIDRLLNS GVENDYST}} |  |  |
| UniRef90_UPI00034A776C |  |  |
| UniRef90_W8RJN |  |  |
| UniRef90-W1IZJ4 |  |  |
| UniRef90-R5AJR4 |  | G A |
| niRef90-K2BW26 |  | G |
| UniRef90_A3J4V1 |  |  |

[^0]

UniRef90_D8FTJ2 UniRef90_K9TPN UniRef90-UPI00037FD482 UniRef90_K9QM97 UniRef90_F7USV5 UniRef90-X0X7A7 UniRef90-B0CC58 UniRef90-B8HTE6 UniRef90-K8GTK0 UniRef90-H9UEP0 UniRef90-R6WT79 UniRef90_UPI0002F24AC7 UniRef90-Q83MW2 UniRef90-R5ZAH8 UniRef90-R6V7M5 UniRef90-E1SZE8 UniRef90_UPI000234E8A3 UniRef90-M1Z4E5 UniRef90-E6KZZ8 UniRef90 UPI00037D3199 UniRef90_U4KNTO UniRef90-R5L8B6 UniRef90-F5RLT4 UniRef90-R7MC49 UniRef90-R5C2R9 UniRef90_B9K9Q8 UniRef90_FOYXQ4 UniRef90-K0IXL8 UniRef90-W5HD22 UniRef90 UPI0003B4604A UniRef90_M9W2Q0 UniRef90-UPI00034A776C UniRef90_W8RJN8 UniRef90 W1IZJ4 UniRef90-R5AJR4 UniRef90-K2BW26 UniRef90_A3J4V1
90 100
100
110
 ALLGLPTHIEAKI QQQDQQCPSARINVNRATQEELEELPG ATLGI PARI KQRIDAKKKECDKKLVNLNAASQEELETLPG

 TEYGLPPTVQARIDRQEQECPNRLVNLNRGSQEELESLPG SKALI QP IL $S R L G L P T F L H N K A Q D H Q R Q C G D L L V N L N T A S Q Q E L E A L P G$ SRLGPPEFLKQKDADQLQKCGGTIVNVNTATEAELDALPG A ILGDPPALQKKIQECQERIVPRRVNLNTATQAELEQLPG TTLEKENKDESGEQKNNELLSNEKININTASLEELEKLPG

$\qquad$
NSVNLAELLQK VVKDSESSPVNI $\qquad$

 EQ QTIPRRKGKKSSTKGRDDKVSGLVNINQADLAELMTLAG A QKVKDEQMDKVPKKGEEAMVSFKININTATREELQTLPG AKKGMPPVMRLKFEQAEEECLTFLN SNAKEQLKSLKG
 AKE K
SK I I I P KSAVENKAQMTQGKKVD SK SKA IVAK V Y P N KVN I
EKN
K N
V
RKEPSQE N N A S V E E E L Q N L K G QVRVP R DGGDVERPKNKNAEGR N NSADVAELTGRS G SGNNVII KDKVEGGKKQKVN $\square$ NNEAKQEDFEQLPG
 A EELE KGIVDGQTAEVTGTDNNINTAAKEELKTLPG NQIINLAEKVELIVQTQSN DGKDRINQATQTELEQLPG PTSSFKTRSTGIVKSUVQECLSFMN LPFGVSDGVNAGATENETDSLPPLI AKESVQTPQAKVPENATENDGRRVS AKESVQTP QAKVPENATENDGIRVSINSASAEELKALNG
 AA ANAPP $\quad$ GNEQ SQGVNVNQADAAELQTING ANELADKTVKQPVTQQESNAVKEUININTASTEELVKLNG



[^1]|  | UniRef90_D8FTJ2 |
| :---: | :---: |
|  | UniRef90-K9TPN1 |
|  | UniRef90-K9VEl1 |
|  | UniRef90-UPI00037FD482 |
|  | UniRef90-K9QM97 |
|  | UniRef90-F7USV5 |
|  | UniRef90-X0X7A7 |
|  | UniRef90-B0CC58 |
|  | UniRef90-B8HTE6 |
|  | UniRef90-K8GTK0 |
|  | UniRef90-H9UEP0 |
|  | UniRef90-R6WT79 |
|  | UniRef90_UPI0002F24AC7 |
|  | UniRef90-Q83MW2 |
|  | UniRef90-R5ZAH8 |
|  | UniRef90-R6V7M5 |
|  | UniRef90-E1SZE8 |
|  | UniRef90-UPIO00234E8A3 |
|  | UniRef90-M1Z4E5 |
|  | UniRef90-E6KZZ8 |
|  | UniRef90_UPI00037D3199 |
|  | UniRef90_U4KNT0 |
|  | UniRef90-R5L8B6 |
|  | UniRef90-F5RLT4 |
|  | UniRef90-R7MC49 |
|  | UniRef90-R5C2R9 |
|  | UniRef90-B9K9Q8 |
|  | UniRef90-FOYXQ4 |
|  | UniRef90-K01XL8 |
|  | UniRef90-W5HD22 |
|  | UniRef90-UPI0003B4604A |
|  | UniRef90-M9W2Q0 |
|  | UniRef90-UPI00034A776C |
|  | UniRef90-W8RJN8 |
|  | UniRef90-W1IZJ4 |
|  | UniRef90-R5AJR4 |
|  | UniRef90-K2BW26 |
|  | UniR |





UniRef90_D8FTJ2 UniRef90-K9TPN UniRef90 K9VEI1 UniRef90-UPI00037FD482 UniRef90_K9QM97 UniRef90- F7USV5 UniRef90- X0X7A7 UniRef90-B0CC58 UniRef90-B8HTE6 UniRef90 K8GTK0 UniRef90-H9UEP0
UniRef90-R6WT79
UniRef90 UPI0002F24AC7 UniRef90-Q83MW2 UniRef90-R5ZAH8 UniRef90-R6V7M5 UniRef90 E1SZE8 UniRef90_UPI000234E8A3 UniRef90-M1Z4E5
UniRef90- E6KZZ8
UniRef90 UPI00037D319s
UniRef90_U4KNT0
UniRef90-R5L8B6
UniRef90-F5RLT4
UniRef90-R7MC49
UniRef90_R5C2R9
UniRef90 ${ }^{-}$B9K9Q8
UniRef90 FOYXQ4
UniRef90-K01XL8
UniRef90-W5HD22
UniRef90 UPI0003B4604A
UniRef90 ${ }^{-}$M9W2Q0
UniRef90-UPI00034A776C UniRef90-W8RJN8 UniRef90 W1IZJ4 UniRef90-R5AJR4 UniRef90-K2BW26 UniRef90-A3J4V1

R V
$R$ V
RIE
$K$ L $\quad$ QLRNK
K V
HVE


E 1
K V
$R$ ПKDET
KTLERIRGK
R I I
FII
$\square_{1}^{\prime \prime}$
R NL
TQ D E TT
AVFEKiKEQLVIY

```
lupas 21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
```




[^0]:    lupas 21
    lupas_14
    lupas_28
    jnet
    conf sol25

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

