## QUERY

## UniRef90_F7DK55

UniRef90-H3B057 UniRef90-T1E575
UniRef90_S9YWY4 UniRef90-F7H8L2 UniRef90-O13066 UniRef90-W5U8Z3
UniRef90 Q08BV5 UniRef90-M7BXE8 UniRef90-B5X198 UniRef90_S4R4J8
UniRef90 G3NLZ6 UniRef90-G3NLZ6
UniRef90 H3CHN7 UniRef90_UPIO003D77363 UniRef90-Q7SYN0 UniRef90_UPIO00265183B UniRef90-UPIO0033176A5 UniRef90-E6ZGM2 UniRef90_UPIO004575C65
UniRef90-T1IIM9
UniRef90-Q4T148
UniRef90-K1RBZ5
UniRef90_H2V355
UniRet90_M3ZEM3
UniRef90_UPI00035A1A53
UniRef90-R7UC73
UniRef90_DOVY20
UniRef90_V3ZN44 UniRef90_UPIO002B45964 UniRef90_H3C915 UniRef90-W5KJC3
UniRef90 C3YQ97 UniRef90_C3YQ97
UniRef90_A0A023GLB6 UniRef90_E2AV07 UniRef90-A0A026WGT5 UniRef90_UPI0003F0B692 UniRef90-UPI0000519ED0 UniRef90_UP100022C8D3A UniRef90_F4X0J8
UniRef90-L7M310 UniRef90-UPI000258DB65 UniRef90-K7J686
UniRef90 Q4R8N5 UniRef90 E9G1R0 UniRef90-E2B521
UniRef90 D6WGI9 UniRef90-B7P201 UniRef90-H2LBAO UniRef90-UPI00034FA312 UniRef90-11F9Y3 UniRef90_U4UAY2 UniRef90-S4PN05 UniRef90-T1FRD5 UniRef90-A7UUK5
UniRef90-T1GUW7 UniRef90-B4KIG9
UniRef90-T1L3F6
UniRef90-E0VW81
UniRef90-T1HW93
UniRef90-W5JC64
UniRef90-B4M818
UniRef90_Q170N9
UniRef90_U5EZK0
UniRef90-A0A034WAG6
UniRef90-B3MND6 UniRef90_UPI0003C38596 UniRef90-W8C8X3 UniRef90_B4PAY7
UniRef90_B4I5V3
UniRef90_G6DSD2


PSTVEALLAAPTLARFNGLGDQKSSLI LQHVDRLIAAKYA
 PKTATDFLNSPTEEIGI ALGDARNELILREAKKGDVNTFII
 PNT $\square E S F V N F P T E T M F \square S \square P D T A A G F R E Y \square A E A T A Q N N V A$ SPEQFCL SQTPCTLQQFNAVEEENKL QTPCTLQQFDSLEATNKL PNTVEAYTHYPSETMFHSLESNKAEAFKEY $\square$ K S L L P E E DYA

PVTVES FCKS
SPEEFVL

TPEKFCL SQTPCSQEDFDSGDEDNKL QKPCTIQAFESLQETDKL SQKPCSQKDFDALDEENKL | L |
| :---: |
| V |

[^0]

## QUERY

UniRef90_F7DK55
UniRef90 H3B057 UniRef90-T1E575 UniRef90-S9YWY4 UniRef90-F7H8L2 UniRef90-W5U8Z3 UniRef90-Q08BV5 UniRef90-M7BXE8 UniRef90_B5X198 UniRef90-S4R4J88 UniRef90 ${ }^{-}$H3CHN7 UniRef90-UPI0003D77363 UniRef90_Q7SYN0 UniRef90-UPIOOO265183B UniRef90 UPIO0033176A5 UniRef90-E6ZGM2 UniRef90-UPI0004575C65 UniRef90- T1IIM9 UniRef90-Q4T148 UniRef90-K1RBZ5 UniRef90_H2V355 UniRef90-M3ZEM3 UniRef90-V8P5X7 UniRef90_UPI00035A1A53 UniRef90-R7UC73 UniRef90-DOVY20 UniRef90_V3ZN44 UniRef90_UPI0002B45964 UniRef90_H3C915 UniRef90-W5KJC3 UniRef90-C3YQ97 UniRef90-A0A023GLB6 UniRef90 E2AV07 UniRef90-A0A026WGT5 UniRef90_UPI0003F0B692 UniRef90 UPIO000519ED0 UniRef90_UPI00022C8D3A UniRef90-F4X0J8 UniRef90-L7M310 UniRef90_UPI000258DB65 UniRef90_K7J686 UniRef90-Q4R8N5 UniRef90-E9G1R0 UniRef90-E2B521 UniRef90-D6WG19 UniRef90_B7P201
UniRef90_H2LBAO
UniRef90_UPI00034FA312
UniRef90-I1F9Y3
UniRef90-U4UAY2
UniRef90-S4PN05
UniRef90-T1FRD5
UniRef90-A7UUK5
UniRef90_T1GUW7
UniRef90-B4KIG9
UniRef90-T1L3F6
UniRef90-E0VW81
UniRef90-T1HW93
UniRef90-W5JC64
UniRef90_B4N162
UniRef90_B4M818
UniRef90_Q170N9
UniRef90_U5EZK0
UniRef90- Q29K52
UniRef90-AOAO34WAG6
UniRef90-B3MND6
UniRef90_UPI0003C38596
UniRef90_W8C8X3
UniRef90-B4PAY7
UniRef90-B4I5V3
UniRef90_G6DSD2

50
60
70
SAFLKVSSVFKDEATVRMAVQDAVDALMQKAFNSSSFNSN STFLKVSSVLKDEVSVKTAVQETIDAGMKKAFNSSSFNSN QS F L K

 QAA 1 QV S S V Y R E D G E I K K A A





 | $A$ | $S$ | $Y$ |
| :--- | :--- | :--- | :--- |
| $A$ | $S$ | $F$ |
| $S$ | $S$ | $Y$ |
| $S$ |  |  |
| $S$ | $M$ |  | E

D
E
E T E
$\mathrm{A} S$
P E

N |  | $K$ |
| :--- | :--- |
| $V$ | $K$ |
| $V$ | $K$ |
| $V$ | $K$ |
| $V$ | $K$ | $A A$

$T$
$T$
$\mathrm{Q} A$
$\mathrm{~N} A$ $V L D$

$\qquad$ VMES |  | $L$ | $D$ |
| :--- | :--- | :--- |
| $V$ | $F$ | $E$ |
|  | $Y$ | $Q$ | T D A I L K K L F

PA D A L MRKAF SSSFNAN
D V L L K I A S L Y S E EP E T K T AVVL ETVD AVLK K L L S A S A L Q S H



 ELFLKI GSLHS QDAQANAAVFEVIDGGLKKVLAFASALQSH TV F L K I S S V FK DETV
 RTVI KI S MI L T E GNEAANAAFE CTDELLLKEALLPGDDTVTA






$\begin{array}{lll}R & I & 1 \\ E & \text { K K V } \\ \text { K }\end{array}$
 K V VM K V S A L C A

VIMKVSSTLRSEISSVENVQQSV HMKVSSTLRSEISSVENVQQSVDVILKAAFEKANDKTS

 EVLLKIGSLYSEEPETKSLVLQTFGEVLKKLLSGSVLQSF



 FLTMKFAALSKESKEALELAAKSFFDECFK YATEKS QTN
 SAFVVKI TTGGNE STSSSPENVVLKDSDLLLDKRLIGEKGPS Y P L L V KI S S F S C D N E NVK N L S V K I S Q N L Y K N L F A S R K K C L P
 QAFKNDINQFTEDNKTSKPALDLAMVSLYKSTFEYATKQEN QALQNIINQRSDDNQTSQAALELAVSLYQATFDYATDQES

 KAFKNI I E Q FTDDNESSPAALDDLAKALYKETVDYAT K QER
 ES S P A ALELAKALYKETVVYATKQER


0

## QUERY

UniRef90_F7DK55 UniRef90 H3B057 UniRef90-T1E575 UniRef90-S9YWY4 UniRef90_F7H8L2 UniRef90 O13066 UniRef90_W5U8Z3 UniRef90-Q08BV5 UniRef90-B5X198 UniRef90_S4R4J8 UniRef90_G3NLZ6 UniRef90-H3CHN7 UniRef90-UPI0003D77363 UniRef90_Q7SYN0 UniRef90-UPIO00265183B UniRef90-UPI00033176A5 UniRef90-E6ZGM2 UniRef90-UPIO004575C65 UniRef90-T1IIM9 UniRef90-Q4T148 UniRef90_K1RBZ5 UniRef90_H2V355 UniRet90_M3ZEM3 UniRef90_UPI00035A1A53 UniRef90-R7UC73 UniRef90-DOVY20 UniRef90_V3ZN44 UniRef90_UPI0002B45964 UniRef90- H3C915 UniRef90-W5KJC3
UniRef90 C3YQ97 UniRef90-C3YQ97 UniRef90-A0A023GLB6 UniRef90_E2AV07 UniRef90-A0A026WGT5 UniRef90-UPI0003F0B692 UniRef90 UPIO000519ED0 UniRef90_UPI00022C8D3A UniRef90-F4X0J8 UniRef90-L7M310 UniRef90-UPIO00258DB65 UniRef90-K7J686 UniRef90-Q4R8N5 UniRef90-E9G1R0 UniRef90-E2B521 UniRef90-D6WG19 UniRef90_B7P201 UniRef90_H2LBAO UniRef90-UPIO0034FA312 UniRef90-I1F9Y3 UniRef90-U4UAY2 UniRef90-S4PN05 UniRef90-T1FRD5 UniRef90-T1GUW7 UniRef90-B4KIG9 UniRef90-T1L3F6 UniRef90-E0VW81 UniRef90-T1HW93
UniRef90-W5JC64 UniRef90-B4N162 UniRef90_B4M818 UniRef90_Q170N9 UniRef90_U5EZK0 UniRef90-A0A034WAG6 UniRef90-B3MND6 UniRef90_UPI0003C38596 UniRef90_W8C8X3 UniRef90-B4PAY7 UniRef90-B4I5V3 UniRef90_G6DSD2

90
100
110
 A F I T $\quad$ S L L D F I S S S L L V $\operatorname{H}$ H M G L L L K S E E K


 S F I S A L L V K L L GLL I K S E D K L K K P V A VV $\operatorname{P}$ G H L Q C C L E H V V K Q K Y A F $\operatorname{F}$ V S S

 C F L S S S L L V K M G L L K G E G R V K K K A S

 V
C $\operatorname{IF} \left\lvert\, \begin{array}{ll}\text { T A L }\end{array}\right.$
 $N F V S S L L V L L G G L I K S E E K V K P D H V V P G H L Q A L E H V V R Q D Y$


$D V A N A F L V A L G L K$ AFCNE CV $V$ G AFCELVQLGLLKAEDKLTLVLNSSGPLIVMLHLVVKQS


 L I A N G L L V H M G L L K S S E E K V V P P I S D L Q G P L I L L Q H I F Q Q V Y P WLN E L MV H L GLL L K A E K E H KV S WT RE GAMVI LA DLVP K E Y S L N N N A
 $I W N N A L L V N L G L I$ KAEDKNKDDWNLEGCFKALEIVSQKDY
 N F N N A L L V $N$ N L


 VLDNTLLVYMGILKSEDKFRPTWPLSGFFLILERIVDPSN
 LVVNNTI LI HLLGLI KAEDKFKPTWNLDDACAKALRSVMDKNY DLNNRL LV RLLGLLKAE RGEES L WWTKE GAMS LLLA DLVVPKEY $C F L S A L L V M M G L L K G E G K V R K A C V V P G H L L C L E H A V Q Q D F$ A L A N S L L P G L G L I K WE NKYK DR WDL P GCYYSILAANVLDEA Y
 LVNNSLLVNLGLI KGEDKTKPTWNLAGCLASSLKTLSTQS F L L A N T L L R A L K L I K S E N K Y K 1 RR WRI P A C Y S A L A A E I D A A S Y A WVN S I L L S L GL I K G E R K ITTLDVK DI K G P C I L L A H I I V V K Y S L R N F LL I QL GLLLKSEDRFRPNYNVQNCQRALRDAL KQNL RVKNFFLI QMGLLKSEDKFVPHFNVESSRFAIEESLKTET $R$ V L D Y Y L I Q L G L L R S E E R F K S E Y N L K S C R Y A L R E A LI K K E S E S A Q A LLL S H L G L I K S E E G Y K K T R D L R G P F DA L T N C C M
 K L L R D $\quad$ F $R V L N Y I L L Q L G L L R S E E S F K S E Y D L K$
 S L R D F LL L $\operatorname{L}$ Q L G L L K S E D R F K P G Y N T Q G C R Y A L K N A I N K N I

 $R \vee L N Y L L Q Q L G L L R$ $R \vee L N Y I L M Q L G L L R$ R V L $N$ Y V L M Q L R L L

lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm


## QUERY

UniRef90_F7DK55 UniRef90_H3B057 UniRef90-T1E575 UniRef90-S9YWY4 UniRef90_F7H8L2 UniRef90-W5U8Z3 UniRef90-Q08BV5 UniRef90-M7BXE8 UniRef90-B5X198 UniRef90-S4R4J8 UniRef90_G3NLZ6 UniRef90-H3CHN7 UniRef90-UPI0003D77363 UniRef90-Q7SYN0 UniRef90-UPI000265183B UniRef90 UPIO0033176A5 UniRef90-E6ZGM2 UniRef90-UPI0004575C65 UniRef90 T1IIM9 UniRef90-Q4T148 UniRef90-K1RBZ5 UniRef90_H2V355 UniRef90-M3ZEM3 UniRef90-V8P5X7 UniRef90_UPI00035A1A53 UniRef90-R7UC73 UniRef90_DOVY20 UniRef90-V3ZN44 UniRef90_UPI0002B45964 UniRef90 H3C915 UniRef90-W5KJC3 UniRef90_C3YQ97 UniRef90 A0A023GLB6 UniRef90-E2AV07 UniRef90-A0A026WGT5 UniRef90-UPI0003F0B692 UniRef90 UPI0000519EDO UniRef90-UPI00022C8D3A UniRef90-F4X0J8
UniRef90-UPI00034FA312
UniRef90-I1F9Y3
UniRef90 U4UAY2
UniRef90- S4PN05
UniRef90-T1FRD5
UniRef90_A7UUK5
UniRef90 T1GUW7
UniRef90-B4KIG9
UniRef90-T1L3F6
UniRef90 E0VW81
UniRef90-T1HW93
UniRef90-W5JC64
UniRef90 B4N162
UniRef90 B4M818
UniRef90_Q170N9
UniRef90_U5EZK0
UniRef90 A0A034WAG6
UniRef90_AOAM34W
UniRef90_B3MND6
UniRef90-UPI0003C38596
UniRef90 W8C8X3
UniRef90-B4PAY7
UniRef90_B415V3
UniRef90_G6DSD2

$\square A H \square S R E \square L Q \square F \square A K T H P V L D K A Q S A R H Q L L Q T L Y$ FPRKYTSHFLAFLMKSNRLLDKCQDERHALMQTLYQ F
FPVDQADVLLIFLSRNGKVLESCSKARDYLKTTDEK FPRSLDQLFIAFLTRS
FLTCTREALQAFLSKPQCTSGSAAKARHRLMQVLYQ FLAQTRNILKVFLERPVKVVDPFQDSKTDLKTVLNND FLGPTRS LKLF EKPMKVVDPFQDSKAALKAVLD FPIVCATTLIAFLSSSMQS
FLQETRNTLKFFLEKPKKVMDSLQDSKDSLKTVLDR】

 FPEEDRTTLK

 FLEQTRSTLKLFLDKPARVVDPFQDSKAALKTVLDRD VTEDTKNTFTVFLQK
FDSSTRDALQAFLSR
FSQPHASLLFCFTSR
 FSSKCHEMLLALITKS
FPAALRDTLKFFVASKMASDPA
FPPDAKNVLSFFFERNTNLDDFAY LKEVITQ
IPEEETSMFKTFDD

LKKVQVDA LQFSLGRDPTATDTTGKLKHK LMQALF VPNETQDVLKALRDKKS
FP K E T C QLLE FLFSSSKC V QQ Q $\square$ Y FA
VP E EEQMQFRTFLDR $\square G$
FANDlKNTLKVFLEQ
FANDIKNTFKIFLDQ
VPEEEQGFFKVFLE

GSEHI RNAFNVFL
F A NDIKNTFKI FLENN
ASEYMKNTFKVFLEQ
SSEHMRNAFNVFLQQ
FANDDKNSFKTFLES
FANDVKNSFKTFLE
lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol0
jhmm
jpssm


[^0]:    lupas_21
    lupas_14
    lupas_28
    jnet
    conf
    sol5
    sol0
    jhmm
    jpssm

