QUERY
UniRef90_R4MNY4 UniRef90-WOGPSS UniRef90-Q9J7A5 UniRef90-A4UDH1 UniRef90-13Y3Y8 UniRet90 C8C5T8 UniRef90-U3H0X8 UniRef90-E9PTK UniRef90-P89903 UniRet90-D5G2R6 UniRef90_Q301S4
UniRef90-C9DU90 UniRef90_W80918 UniRef90 Q 701 H 3 UniRef90-Q8AD26 UniRef90_W8EEZ4 UniRef90-Q5IKD7 UniRef90-Q9QKY7 UniRet90 UPI000359D35 UniRef90_D6NT15 UniRef90 O8AD34 UniRef90- ${ }^{-1} 3 \mathrm{CKG7}$ UniRef90- P19560 UniRef90-V5SIA3 UniRet90_O699A4 UniRet90-E2GBG9 UniRef90_Q5W411 UniRef90-C9DXZ5 UniRef90_K4IWL4 UniRef90 E6Y2W UniRef90-Q6TIQ4 UniRef90_D1MN99 UniRef90 UPIO0046C294D UniRef90-UPI0002B4D88E UniRef90-A0A024NMW7 UniRef90-Q3S816 UniRef90-U3H0L7 UniRef90-M9NZ12 UniRef90_Q3S806 UniRef90 Q6TIZ2 UniRef90-Q3S831 UniRef90-Q3S7U9 UniRet90_Q2PAMO UniRef90-S4X3F4 UniRef90-Q99FI2 UniRef90_Q699E8 UniRef90 WoGPK5 UniRef90-Q3S7X0
UniRef90 - $4 \times 155$ UniRef90 UЗНOK7 UniRef90 C8C5B8 UniRef90-Q5U6W8 UniRet90_H6W1F1 UniRef90_Q7LZ15 UniRef90 ${ }^{-}$A3R313 UniRef90-W5Q301 UniRe90-G33B3 UniRef90-I6QQE1 UniRef90-G3W7N7 UniRef90 C8C5F2 UniRef90_UPI000333FE3D UniRef90-A8BDN3 UniRet90_Q9QGN7 UniRef90 G3VE30 UniRef90-G3VAX1 UniRef90-G3VBH2 UniRef90 UPIOOO3FOB682 UniRef90 O699C UniRef90 UPI000273A5A8 UniRef90 Q3S7U5 UniRef90-P89686 UniRef90-UPIO0032925A7 UniRefgo-C4IJT UniRef90-C9DWW UniRef90_O09241 UniRef90 UPI00034FA879 UniRef90-UPIO00359277B UniRef90-G3VBK0 UniRet90_UPIO003441C9E UniRef90 UPI00042CF4F6 UniRef90-P31622 UniRef90-P21411 UniRef90_UP1000359D078 UniRef90-M3X5Z2

1
10
20
30
40
PWTEIAQGPTEPFQEFADRLIKAVEGSDLPRAVHGPV $\begin{array}{ll}\text { D } & \text { RQGPKEPFRDYVDRFFKALRAEQASQXVKGWMT } \\ E & K Q G P K E P F R D Y V D R Y K T I R A E Q A S Q P V K A W M T\end{array}$ I RQGPKEPFRDYVXRFFKTLRAEQATQEVKNWMT
 $D I X Q G P K E P F R D Y V D R F Y K T L R A E Q A S Q D V K N W M T$ $D I R Q G P K E P F R D Y V D R F F K A L R A E Q A T Q D V K N W M T$ P F T Q V DQ G P K E T F P D F L Q R LT S A V E R S V S D TAAARKA TV

F P D
D

| $S$ | $L$ | $R$ | $D$ | $Y$ | $V$ | $D$ | $R$ | $F$ | $F$ | $K$ | $V$ | $L$ | $R$ | $A$ | $E$ | $Q$ | $A$ | $T$ | $Q$ | $D$ | $V$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $P$ | $K$ | $N$ | $W$ | $M$ | $T$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $P$ | $F$ | $D$ | $Y$ | $V$ | $N$ | $R$ | $F$ | $F$ | $K$ | $T$ | $L$ | $K$ | $A$ | $E$ | $Q$ | $A$ | $T$ | $Q$ | $E$ | $V$ | $K$ |

            ロロ
    
D I RQGPKEPFRDYVDRFYKTLRAEQATQEVKNWMT
KQGPKEPFKDYADRFFKALRAEGGSHEVKEWMK
T E
D K Q GP K E P F R D Y V D R F F K V L R A E Q A T Q E V K G WM T
$\stackrel{\text { D }}{n}$
DNHQGPKEPYTDFINRLVAALEGMAAPETTKEYLL
$D R Q G P K E P F R D Y V D R F F K A L R A E Q A T Q E V K G W M T$
D I K Q GPKEPFRRDYVDRFFKTILRAEQA TQEVVKGWMT
$N$ I K Q E P K E E P F R N N Y V N R F Y K T L R R A K Q A S Q K V K K N W IT
$P M T R \left\lvert\, \begin{array}{ll}\text { K Q G N T }\end{array}\right.$

WAA ILQGPEEPFCTFVERLNDALDNGLPEGTPKEPDL
P Y A KV T Q T L S E P Y S T F L D RLREAI DRSNLTVEAKAAV G
F S T I L Q G P D E S F
V I Q
S E
K D
K

P F Q S Y V D
$D \square K Q G P K E P F R D Y V D R \square$ L
$G Q R N P L E T M S D R F F K T L R A E Q A T Q E V V N W M T$




GPKNHSEDMYDRFFKALRAEQATQEVKHCMT



PCT


D I RQGPKEPFRDYV DRFYKTLRAE QAT QGGKK

SK EQ GPNEPF A D FVGMLQTA I GEN A AKEIMMI
$P \square A$
G S
S F V K

FMKVVQGPNEPFADFVGHLQTAVIRTGIHSGEVAKF



M T I K K Q D P D E S F S D F V
MTII K Q D P D E S F S S D F V $A$ A S L L Q V $A$ V V E R S
Q GRTSYT GVVNNWMT
QMK Q GPKE DYAS F I D R LYY A QID Q E Q N S P E VK I Y L K
$S K L L Q G P N E P F S D Y Y S R V K E A V V R K V S H S A A A D A A L C$
ANSYTEVVQKQNESFADFLDRLSLAAVRAQDPHEGAAAVLLD
WA A I L Q GLEE E Y CALLERLNVALDNGLPEG

G N

F QKVVQGPREPYT DFDARLQEAVRRQINNDEAVDTIM
G S



P C T TQGPNESFQSFTDRLLAAAEG


G

PMTRITTQGNTE



 | $D$ | $R$ | $R$ | $C$ | $H$ | $L$ | $R$ | $D$ | $Y$ | $V$ | $D$ | $R$ | $F$ | $F$ | $K$ | $T$ | $L$ | $R$ | $A$ | $E$ | $Q$ | $A$ | $T$ | $Q$ | $D$ | $V$ | $K$ | $N$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

 D $\square$ K Q GPKEPFFRD Y V V R I


 GPKNHSEDMYDRFFKALRAEQATQEVKHCMT


$\qquad$ VGK D DVK B WM X
ENESEFT AS P

## MT

 PFS $R$$D$
$D$
$D$
$T$
$T$
$T$

$T$ | $A$ | $A$ |
| :--- | :--- | :--- |
| $A$ | $E$ | | $R \mathrm{~L}$ |
| :--- |
| K |
| S | G K

$R$
R
 E L M


\section*{$\begin{array}{lllllll}P & Y & T & D & F & S & R \\ T & Y & \square & G & F \\ N & S\end{array}$}| T |
| :--- |
| Q |
| G |

$\qquad$ L GE


 V L $\begin{array}{lllll}V & K & N & W & M \\ A & S & S & L & L\end{array}$ SKVGWT A AA DALL
$E V K G W M T$
 WA A I LQ GLE E P Y CALLE RLNVA T NI RQGPDEPFVDFVHRLLTAVGQIFGSAETETBFV G N
 GSYTKIVVQGPNENYADFLARLETAISHTVIGEETKKQLE

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UniRef90 Q3S816
UniRef90-U3H0L7 UniRef90-M9NZI2 UniRef90_Q3S806
UniRef90 Q6TIZ2 UniRef90-Q3S831 UniRef90_Q3S7U9 UniRef90_Q2PAM0 UniRef90 S4X3F4 UniRef90_Q99Fl2 UniRef90_Q699E8 UniRef90 W0GPK5 UniRef90_Q3S7X0 UniRef90-S4X1S5 UniRef90 C8C5B8 UniRef90-Q5U6W8 UniRef90-H6W1F1 UniRef90 Q7LZ1 UniRef90 A3R313 UniRef90-W5Q301 UniRef90-G3VB37 UniRef90_Q3S7X1 UniRef90-I6QQE1
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UniRef90 Q3S7U5
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UniRef90_O09241
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UniRef90_UPI0004446BAF

50
60 ${ }^{70} \mathrm{~K} Y$ VLDRQ

DTCLIQQAN PDCKTVLKAALGAGXTXXEMM
ETLLI QNANPDCKHILKALGGTGASLEEML $E T L L V Q N A N P D C R S I L K A L L G S G A T L E G M M$
$Q S L L V Q N A N P E C K L V L K A M P G G A T L E E M L D$

ETLLVQNANPDCKXILRAMGPXVGSLEEMM ESLAFENVNTECREGIRPLRARSASVDEWTRQTAD ETLLIQNANPDCKLVLKGLGDHP TLEEML


 ETLLVQNANPDCKSIIFRALG
ETLLVPKDQPDCRSI LKA L G TGATLEEMM



DTLLVQNANPDCKTILKALRPGAT
ETLLVQNANPDCKTILKALLPA ATLKEDM
DKLL QNANPDCKQILKGLQS PTLEEML
QHLSI DHANEDCQSILRPLG PNTPME
ETLUVQNANPDCKS LARALGPGATLEEMM


ETLLVQNANPNCKTILKALG


RSLAYSNANKECQKLLQARGQTNGPLGDMLR
LDLADQNTNPVCRRILATDPKTASLMEVI
RKMAVTNASAETKKILRALPQ
ES LAFENANTECKEAI RPR RARSVP $\square D E W \square R N T \square D$
DTLLVQNANPDCKTILRALG
ETLXVQNXNPDCKTILXALGPAAT
ATLLLQNNTPGSKIILTALGAAGATDEEMM
ETLLVQNANPDCKSILRALGPGASLEEMM

ETLLVQNANPDCKTLLRALGPGATLEEMM
D T L L V Q
ETLLVHNANPDCTT\|LKASVAAVTDEEM
NNLLI QHANPDCKRILKGL
KHCWVQNANP
QTLLC PKCKSRIL
ETLLVQNANPDCKSLLKALRTGATLEEMM
ATLLVQNAKADCKT LLKALGBAATVEEMM
RHLVGPKCEP
ETLLV
RHILVQNANPDCKVHFKS!RSR
$\triangle A L I V Q N A S P A C K S T G R A L G T G A E L E E M M Q Y D L D K$
DS LT $\square$ S NANPECKRAMNHLR


EXLLXQNANXDCKTILKA
KHLAFENANPACQDVIRPHRRTGT DSD FDKY

DTLTDQNANEECRHAMRHLRAEDS LEEKM

RNLAKENANEVCRRGILGLCK DAFL E E II R
ELMAYENANPECQSALKPLPAGSDVI SEYVK

ETLLVQNANPDCKSILR
QSLSLANANPECKKAMSHD KPESTDEEKDR
K DLLWEGTNTECQQT\MMP $\mathbb{C}$ CNKSPDNWV
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RDLAYRNSNADSRKALAPIKATGT
ETLLVQNANPDCKSILRALGPGAASEEMM
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QLLAYEDANSDCKKLLAPFKGKGT
KLLAYENANQECQKAI TPDHETGT 1 VD
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KHLAYENANPACQSALRPFRQ
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K QLAYKNANSTCQAAIRP

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F T KII E Q GPNKFFADFMGHLQ Q A VKRTIIGENAATRTIT

 TSIKQGPDEPFADFVHWLITAVGRDFGNAEADTEFV

 FSNIKQKPEETCEDFLSWLAEAVNRVI SNSEEVNIVT



TKIVQGSTEPYADFVNRLMEAAGNIFETVEEAMPLV
YSKI FQG $\quad$ D K P FVVFI KRLCKT DE QQVLSEGVRAELL
 R 1 Q GPQEPFSDFVVRMTEAAGRQFGDPEQAMPLV VK SEKYEEFVARLKTAVERTIKSTEPAEIVL VK QK N S E S Y E DFIARLLEALDAEPVTBPDKTYLK PCSDIK QGPKDPLETMSTGSLRPSELDNKLHKMCK GWT

FASSVRGASESFMDFTNRLQEADRQVDNPAAAQEDLL
A QMTQGKDEDFATFVARVI EACQRKVRGEEAQVALA KQKPQEAYEEFIAARLLEEADDAEPVAAPDKEYLK


TAVKQGPDEPFSDFVHRLMTTAGRDFGNAETGVDYV


[^0]

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RQLAFEYVNSTCRAILCPIKKSGQ\|VDYIRQCAD
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ETLLDPKC
K QLA AENANAACQAT $\square R P$
QSLS $\square$ ANANPDC
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RHLVGSKMNPDLSRLLRS $\square$ RASGPTD
EQLVYEQATQECRAA APRKS
EQLVFEQCTKECRAAITTPWKSKG $\square Q \nabla W \square K Q$
RELILQGANPDCKQA
KQLAFENANEEC
RQLAFENANAACQAADRPYKKK TD $\square$ TEY $\square R \square C \square D$
RQLAFENANKACQAVLRP
LTLSYTNASADCQKQMDRTSGT
KQLAWENANSLCQDLIRPMRKTGTMQDY $\square R A C L D$ KELVRQGANPACQQALL
ANLVKCNCNEACNKVIVAMPG
KQLAFENANSTCQA LVAPDKKTAATLKDY DRQCAD LT LSYTNASSDCQKQMRVLGQRVQSVEEKMQ
EQV DWEQCNAECRVLIK LVGD
VTLSYTNANSECQKHMRVLGQRVQ
KPGLCENPNTACQAALRPLGKKGT

RRLAYEQANKTCREALRP
KEMAPPTPTAACKAVI $\square S \square P$
KRLAFENANGPCRSVLNGQWQ DKTLNEMDK DCRD DQ
MQLAYENANA DCRAAI QPHKGT
EQLVYEQCTKECRRAI
EQLVYEQATQECRAAMTPRKS
TEVAKQNANTACKAA, LS LP
RQLA YENANSTCQALLRPVRSKDS
VTLSYTNASTDCQKQMRVLGTRVTTVKEKMQ
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[^0]:    lupas 21
    lupas_14
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    jpssm

