UniRef90_O29759 UniRef90-D8LRJ8
UniRef90 LOHBV8 UniRef90 G7WQG3 UniRef90-LOKZD: UniRef90-T1AAX9 UniRef90-F2U2N4 UniRef90_Q8TYB8 UniRef90-D7E8G6 UniRef90_TOMQ55 UniRef90_H1Z2B3 UniRef90_K3WGJ1
UniRef90_D7DUQ6 UniRef90 A2ST51 UniRef90 ${ }^{-}$V4ZVI1 UniRef90-D5EAW6 UniRef90_D3S2F0 UniRef90 A0A023FK98 UniRef90-A9V7B2 UniRef90-A3CW54 UniRef90_B6YSIO UniRef90_M9S9L1 UniRef90-D1Z1X9
UniRef90 A4RYM8 UniRef90-F2KT30 UniRef90_E0VLQ6 UniRef90-R9T553 UniRef90_A7RWI6 UniRef90_A4F2T7 UniRef90-B8GEZ2 UniRef90_A1RXQ8 UniRef90_I1G2T7 UniRef90_A2BKB8 UniRef90 WOJYW2 UniRef90_A9NNC3
UniRef90_J9JZR0 UniRef90-W4Y4N0 UniRef90-W4Y4N0 UniRef90-Q97BZ7 UniRef90_Q6L1E1 UniRef90- IOZ713 UniRef90-B9LUX1 UniRef90_N6V2X1 UniRef90_C1MUG7
UniRef90_B1L6N9 UniRef90-B3T6G5 UniRef90-A0B8W5 UniRef90-Q2FU62
UniRef90-E1Z354 UniRef90-E6N8Y5 UniRef90-F8ANR4
UniRef90 Q6ZD69 UniRef90-G0ECM7 UniRef90-V6ARS5 UniRef90_TOQV52 UniRef90-D2VKH8 UniRef90-T1B604 UniRef90-V4ARJ9
UniRef90 U5EWR6 UniRef90_R9SLX8 UniRet90_C6A458
UniRef90_D8UDF4 UniRef90-W7KM52 UniRef90_T1K7U5 UniRef90_C3YDE4 UniRef90-M7TB95 UniRef90_M7TE95 UniRef90-DOKTE1
UniRef90-T1C8A6 UniRef90-KOIJH0 UniRef90-A9TMR5 UniRef90-UPIOO035943F2 UniRef90-FOTCD4 UniRef90 D6WZR6 UniRef90-E9CEC0
UniRef90 A3DMU7 UniRef90-T2M2Q9 UniRef90_HOXUF1 UniRef90-H9JB40 UniRef90_UPIO0026595EB UniRef90_E2AUC7 UniRef90_Q5V2X9 UniRef90_A8MAL1 UniRef90_Q3HWV8 UniRef90_B1Y980

LT A E Q R R Q M ITEDKRLKTIINKTAREATNPQNGLPHPPKR\E
 LT A D Q R K Q M V E E K R R QV ITT FI A R N A V N P Q D G H P H P P A R I I E

 $V$ SKEE R DN ELLA DKF K E V A S I V S D K C I N P D T K R P Y VA A Q I E



 L T Q E Q R K H F L E E K T K Q QV V S LT A E Q R K E M L E Q K K K Q I I E Y I R R N S V D P R T G A P H T Y A R I E $V$ S E K E R H S QL E S S F R D I A T L V A D M C I N P E T K R P Y P V V

 $V$ S E R E R K A E S E S A F R D A V T T


 LT A NQRKE IQEEQKRKQIVSII SKNTINPQTDTPHPPKRI E | $V$ | $S$ | $E$ | $R$ | $E$ | $R$ | $Q$ | $A$ | $Q$ | $L$ | $G$ | $S$ | $T$ | $L$ | $K$ | $D$ | $I$ | $A$ | $T$ | $N$ | $A$ | $D$ | $K$ | $C$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $L$ | $T$ | $N$ | $P$ | $D$ | $T$ | $K$ | $R$ | $P$ | $Y$ | $P$ | $V$ | $T$ | $M$ | $I$ | $E$ |  |  |  |  |  |  |  |  |





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 $V$ S D K E R N Q QL E S M F R D I A T I V V A E K C V N N P E T K R P Y T V G M I


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VGEKEREVGQESVTRDCVNIGVEKTVNPETNRPYPHGMI



 LTEEERKKMDEAKRKQUANYIVKNTIDPKSGKPIPEQRI
SDKEREAMHESLYRDIATVVALKSVNTSNRPYTVNMI
 STEERRRKVDEMYRDQ
LTTEQRRKLLEEKKAQILNVIARNAVDPKTK
LTTEQRRKLVDNKKKQI ADVGSKQGINPKTKLPHPQQRIL

[^0]
$\checkmark$

MSAAERKEKTDKRRAEIVSYI HKYYVNPTNNRPHPVTRI E MSTQERKEKVDQKRKQMIYFIHQNYIDPKTNACHPLTRIC VSSKERENHADQTFRDI ANLVAEKCVNTETQRPIPVGII
 VGEKEREHDASSKRREVATLVAEKCVDPTTQRPYPSGR1 E
 ISEKERKQYYESSFKEIANNIAGMCVDGKSKRPYSQVMI E VTANQKRKMQEEKTKQVINQUAREAINPQTKLDHPPKRIA VTVKERKVENENLFRDVAKVVSERCFNPENSRAYTVTMI E KEREHDLTSLRKEIATLVAEKAVDPSTQRPYPVGMI E VSDKERVAQQGALFKDLATTLSNKCNPDTKRPYSISMI E VGEKERSHQDENTYKDUVRTIVDMCVNPTTKKAYTASMI E
 LTAEQRRKIIEQKKRQIINYGAKNALDPQTKLDPDPARI VSEKERQSVLDTQLNS:VNSVAALCVNPETRRPYSASIG

rat LTTDHRNKLREEKRKRLDELIHRNAIDS

v
V
VSSEERKQULESTFRDIVSILHEKLVNP
VSGKERTQQLESKFHEVATVICDKCVNE
LTAGQRKKKLEEKTKAVINRISQDSINP
VAGQRKKKLEEKTKAVTNRISQHSINPKTNTPHPPQRI

LTGGQRNEILKDKRDEVVDFIHQHCINPRENAPDPKDR1 E
LTTEQKAEMRDEKYRKLVDMISRRAQNPRTGNPHPPQRI E VGEKEREHELTNLRKDI AHRVSESVVDPSTQRPYSLGII V VSA KERAHELGNDWKDIATKVAEKVVDP KERAHESSQLWKE:ATQVAEKCVDP
 LTAQEKRETVEKLHNQVVNFI HENFIIEP V

VSEDERKS



UniRef90 L1JIC2 UniRef90-AOAO24JLC6 UniRefofo-XoV1U7 UniRef90-A2GC11 UniRef90-H2BON6
UniRen UniRef90-W1QA44 UniRef90-A5DGJ5 UniRef90-W5G166 UniReffo-K1VSX8 UniRef90-17J9L4 UniRef90-GOTUK1 UniRef90-Q74M40 UniRef90-M1VG20 UniRef90-B6AC29
UniRef90-S6BGM6 UniRef90-S6BGM6
UniRef90 D8LYB5 UniRef90-D8LYD2 UniRef90_COJ347
UniRef90_Q4N8W7 UniRef90-D2EG61 UniRef90-W4GRAO UniRef90-A0A058ZAT6 UniRef90-UP100035CA49E UniRef90-X0SMH1 UniRef90-C4ROK7 UniRef90-W6MXJ9 UniRef90-M2W0Y8 UniRef90-J9J9A0 UniRef90-U4LFK8 UniRef90-SSTXAO UniRef90 KOKTS8 UniRef90-C1LL17 UniRef90-B8BZ37 UniRef90 B7GBB66 UniRef90-K2GVQ3
UniRef90- GoalY5 UniRef90-R1E3M2 UniRef90-l3MXVO UniRef90-L7FPN3 UniRef90_Q3HWV5 UniRef90-D5G5F1 UniRef90-UPI0002A4BE9F UniRef90-12JUP6 UniRef90-17ML66 UniRef90 X1EJE2
UniRet90 O3HWW UniRef90-L1JCT5 UniRef90-E4WQY9 UniReffo-F1MOV8 UniRet90_R7YKA3 UniRet90_B5X8W4 UniRef90-AOCFW4
UniRef90 W5AXK7 UniRef90-E1F962 UniRef90-UPIOOO3829AF7 UniRef90-A8B6U5 UniRef90-V6LEL7 UniRef90_K1X5Y6 UniRef90-FOXZCO UniRef90-V4ZL59 UniRef90-A0A016PAV8 UniRet90_M2TB24 UniRef90-A0A017SJK9 UniRet90_Q4WLH3 UniRef90_E5A718 UniRef90-K2RDF7
UniRef90

S8AWT2 UniRef90_GORF41 UniRef90-L8FS95 UniRef90-B6OAN4 UniRef90-T5A9E1 UniRef90-S3CRA4 UniRef90-G1XIW9 UniRef90-ROKAX3 UniRef90-FOXPL4 | UniRef90-M1W119 |
| :--- |
| UniRef90 | UniRef90-G7X7A1 UniRef90-W9YDN8 UniRef90-B8NXS8 UniRef90 W9XSC0 UniRef90-V5G485

UniRef90- Q3HWW2 UniRef90-M2NOQ6



 ERTQHLSSLSREIATIVSEMTVDPNTSRKHTVGMVE LSEKERQLMLNKINNEMLTIISAKCI NPVSKKRYPPTMI H
 VSGKERGAQLSVQFRD:ATVVMEKTVDPETRCPYTMNMIEE DSHEERLQSLQKKFKDVVSLLHECI NPQTGYPDTRTMI E
 TPTEYKRKDKEELKRKI DELIARKNYVDPRTGLPYTYQRI E VSEAERSYMMEKQYLDVCNLLSEMTVNPSNNLDPLTVKMLE
 VAQQERAAELDQMFDDIAVYISQKCVNEVTQRPFPSQVI E
 VAERERQQHSENLSREVAQMVSDMCINPETNRPYPVTMI Q LTADYRDEEKEKKIURVVDFLARDAVDPQTGNPHTPQRR1 K LINERERNAKQEQDVNEILQQISSKCVNPKNKKRYTTTMI A VSELERDEHLDSTKKE ANF HKYY DPAKKLPHPMSRI E VGEKERSAKLDQMHAEVISIVASKCVDPGSKRVYTSTMIE LSEKERQAKGNQIQAETLQLISTKCINPKSKKRYPPTMI Q VSETERSYMLDKQFTDTCHMLNRMTVNPKNNLLPLSVKII E LTEKERLVGQQALFRDVAKDVSERCVNPENNRAYTVTMVE VSDDERNQQIQNTLSQIATWVANNCVHPDTCRPYTVSQIK SSDERKQQVEDKKKRUVEYIHNYYVDPATNKPHPVVRUN
 TTEERKQQTEEKKKRLIEYVHMYYVDPTTDKPHPVVRI N $\square S N K E R A G L K E K D Y K D M I E L H E M S V N P Q T G Y P D S T N M I E$ VGEKERNAKLEQTHTEVISUVASKCVDPTSKRVYTPTMI E VSDKERQTQLETMFRDIAT TVADKCVNPETKRPYPVSMH E VGEKEREVQLSSLQNDIINVCEKCVHPDSQRKFSDDQMQ
 TAEERKRQMEEKMEEVAAFICCNFVETPSHRAYSM VS DKERGVANEALLSEI A EKV S EMSVNPQTERKYPSTVIDQ


 LS T QERRRRVEEKKQE


V G E VGGERE R K D Q L E E R V VGEK K R R A A Q L L D R V $V$ G E K E R A A A L E R V H N E V V S I V A S K L V N P S T K R V Y T T G Mi V G E K E E R G Q Q L VG E



 \begin{tabular}{l|llllllllllllllllll|llllll|lllll|l}
$V$ \& $N$ \& $A$ \& $N$ \& $E$ \& $R$ \& $K$ \& $E$ \& $L$ \& $L$ \& $E$ \& $R$ \& $M$ \& $E$ \& $R$ \& $E$ \& $I$ \& $V$ \& $E$ \& $E$ \& $V$ \& $A$ \& $Q$ \& $R$ \& $V$ \& $V$ \& $D$ \& $P$ \& $Q$ \& $T$ \& $K$ \\
$V$ \& $R$ \& $V$ \& $Y$ \& $T$ \& $P$ \& $G$ \& $M$ \& $K$ \\
$V$ \& $G$ \& $E$ \& $R$ \& $E$ \& $R$ \& $K$ \& $E$ \& $I$ \& $I$ \& $E$ \& $R$ \& $V$ \& $E$ \& $K$ \& $E$ \& $V$ \& $L$ \& $D$ \& $I$ \& $V$ \& $S$ \& $G$ \& $R$ \& $L$ \& $V$ \& $D$ \& $P$ \& $T$ \& $T$ \& $K$ \\
$R$ \& $V$ \& $Y$ \& $T$ \& $P$ \& $G$ \& $M$ \& $I$ \& $S$

 

$V$ \& $N$ \& $A$ \& $N$ \& $E$ \& $R$ \& $K$ \& $E$ \& $L$ \& $L$ \& $E$ \& $R$ \& $M$ \& $E$ \& $R$ \& $E$ \& $I$ \& $V$ \& $E$ \& $E$ \& $V$ \& $A$ \& $Q$ \& $R$ \& $V$ \& $V$ \& $D$ \& $P$ \& $Q$ \& $T$ \& $K$ \& $R$ \& $V$ \\
$V$ \& $T$ \& $P$ \& $G$ \& $M$ \& $I$ \& $K$ \\
$V$ \& $G$ \& $E$ \& $R$ \& $E$ \& $R$ \& $K$ \& $D$ \& $I$ \& $L$ \& $E$ \& $R$ \& $V$ \& $E$ \& $K$ \& $E$ \& $V$ \& $L$ \& $D$ \& $I$ \& $V$ \& $A$ \& $G$ \& $R$ \& $L$ \& $V$ \& $D$ \& $P$ \& $A$ \& $T$ \& $K$ \& $R$ \& $V$ \\
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 $\left.\begin{array}{l|llllllllllllllllllllllllllllllll|lll}V & G & E & K & E & R & G & A & E & L & E & R & L & Q & R & E & V & V & E & V & V & A & G & R & V & V & D & P & G & S & K & R & V & Y & T & T\end{array}\right)$


UniRef90_V6LFR7 UniRef90 Q5B1Y7 UniRef90_11C019 UniRef90-Q4Y4B7 UniRef90-U6MIP8 UniRef90 C4JNM1 UniRef90-K2GYL2 UniRef90-C5LTW9 UniRef90_J9DS68


 V S ELERRQQLESLFNDVVTCVVDLTYSAVTGLPISRSAVS VGEKERKELLERVEREVLETVSARLVDPVSKRVYTTGMIS


lupas_21
lupas_14
lupas_28
jnet conf sol25 sol5 sol0 jhmm
jpssm

NA|I HETGFQ ${ }^{50}$ NS F PASEQAAS LVNA\| Q ${ }^{60}{ }^{70}$
KALDQLTAAVNPNKSAKS LAALEAMKALIAWQPD
KAMQDLHLSVNPKRSTKSQALDVIKQLQEKLPIQ S
AALKSLGFGVRLQQPAK
KALDQL
$K L I K D L K Y N W V T S K T A K Q Q$
SALQDINYQV



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