

## QUERY

UniRef90_J3DID5 UniRef90-C9Y5F6 UniRef90_UPI00047C62CA UniRef90 UPI00035EF8AO UniRef90_C6DK88
UniRef90 C9A7G5 UniRef90-R6EME0 UniRef90-R8VU21 UniRef90-R5XXG3 UniRef90_S7SUH4 UniRef90-S4DLX9 UniRef90-D4DWE9 UniRef90_C6DCM5 UniRef90-UPI00041A8480 UniRef90-D4MPL4 UniRef90_E8XX21 UniRef90_U4WTI3 UniRef90_S3J1C5 UniRef90-S0K1U3 UniRef90_UPI000466BDCE UniRef90-E2ZMG8 UniRef90_U2AQA7 UniRef90-R9BZX1 UniRef90_L1LR38 UniRef90-V3TJW0 UniRef90-F7KL11 UniRef90-F8F9Y3 UniRef90-C9XQT4 UniRef90-10QRA1 UniRef90-R7QVM7
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UniRef90 UPIO00376ADE2 UniRef90-H6N8T3 UniRef90-J9YRT3 UniRef90-N4WPA9 UniRef90_L1Q2W0 UniRef90_U5SAL7



Y VS LT DH ${ }^{5}$ 5 SI ALCDHCHFA STM
 YVSLTDHIT FAAERNKKGLLI SNALLWEI KRIYSDEFAIG Y I SLLTDHI HFAIDDRHRQGLQIKNALLWEI KRMYRREFSIGG YHRFVTHLKFFAQREIGKFSDDESQLDDVVKERYQLSYRCA

$\begin{array}{lllllllllll}Y & V & T & H & V & K & F & L \\ Y & I & S & T & D & H & L & H & F & A\end{array}$ Y V T L L T D H H I I N F Y I S L
 Y QRLVT HLLKFFA LRRLLDNRETVSHSI YQGI TEMMPRA YACA

Y Y R F I T H L K F F AQ

 Y I GlL S D Hil S Y A L Y R S K Q K L P L K N NL L WE I K R F Y P R E Y Q A A
 Y IIS L T D H L L H F A V Q R IIE K G Y E I K N A L L
 Y I S L L D H I N F A A L E R F Q N Gll T I YLTLT D HI GFA I ERFKDGMDFSNALYREI KRFYPQEFGIIG


## $Y$ $Y$

 Y A R $V$ M Y A R L V M H M R A V I E R L M H E R R V I N P I V S E L R S N Y P E A F A LA



## wiz

## 


 F E R F V T H L K F F V H Q R V F T D V H L D G D F M F M L K D K Y P K E Y Q CA


 HQRMI THLRFATTRVEDGHDMDEDMLKLIQSKYEQAFS SS YHRLLKHLEYAISRFQEQKPFHSEMIKVIKKNYKKGFQAA HVALADHVEAALTRGQGGLEDENPFLEELRTLYPQMWNVA
 YERFVTHLKFLVQRLYRHELLKDEEI EMMENKYPEEYECS Y'TLTDHNFARQROSGQQLKNALWETKKFYHQEYLMG
 HIALTDH1 AFAl|KRYRQHIPI HNPFQYETRELYPREYELA
 YUSLSDHLAFAVKRFKSGDTVKNDLLNEVRRVHKKEFKDS
YSRFVHLQYFARRHDNKNSNDDFLFEQVKIKYPKAFECT





UniRef90 C7XXG9 UniRef90－UPIOOO374DBD4 UniRef90－R9CON9 UniRef90－UPIO00349ECBC UniRef90－W7CFQ5
UniRef90 B1YKV9 UniRef90－B1 YKV9
UniRef90＿UP1000472583F UniRef90－G7VUH2 UniRefofo－Q67SK7 UniRef90－B6GAF6
UniRet90－W8R1N6 UniRef90＿R6DDC2 UniRef90－AOFLO5 UniRef90－UPI00037DDF74 UniRef90－13DTX8 UniRef90－F5VDJ3
UniRef90 F9VAL9 UniRef90－UPI0003FBFB1A UniRef90－UP100041C63CB UniRef90－KonYV6 UniRef90＿UPI0003B53C31 UniRef90－D9RZF2 UniRef90－A9QSQ6 UniRef90－R2TDD1 UniRef90－A8FIT8 UniRef90－R7GNQ0 UniRef90－C3L2P0 UniRef90－U2YTA2
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UniRef90－E7G8Q1
UniRef90－H6CDAO UniRef90＿UPIO0028A0714 UniRef90－UPI000379B03E UniRet90－F4ECS7 UniRef90 F9USP1 UniRef90－UPIO0004059E22 UniRef90－Q5FJ25 UniRef90－UPI0004633984 UniRef90－W4D5Q88 UniRef90－B5QKQ5 UniRef90 V5XL90 UniRef90－UPIOOO2OD9921 UniRef90＿U5ZHN2 UniRef90＿UPI00037986B8 UniRef90＿R3WMNO UniRef90＿N9Y761 UniRef90－A0A023CYJ2 UniRef90 U5FA40 UniRef90－UPIO004116B14 UniRef90－U5MMJT UniRef90＿J3ADF5 UniRef90＿T1ZTZ5 UniRef90＿UPIO0040100FD UniRef90－M7EEF6 UniRet90＿UPIOO046EF4A5 UniRef90－M1MUX6 UniRef90＿R6LSF5 UniRef90 C9sox9 UniRef90－R7MN48
UniRet90－U5MXP8 UniRef90－C9CN46 UniRef90－D2C0F0 UniRef90－A0A023DB24 UniRef90＿UPI000375689A UniRef90－A0A024PPM0 UniRef90＿U2YM04 UniRef90－F3YAM3 UniRef90－N9Y4A0 UniRet90 LOEGU6 UniRef90－R9KI30
UniRef90 sokw95 UniRef90－L1Q9Y7 UniRef90－W8QMH1
UniRef90－UPIO0036FB14F UniRef90－D4LQF2 UniRef90－Q5WCP1 UniRef90＿UPIO0046FA12F UniRef90－R9CEQ9 UniRef90 ${ }^{-}$W3APU8 UniRef90－UPIO004799318 UniRef90＿UPI0004002623

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 $N \square S A H Y V S L D E V P E E V L E T R L I V Q K G Q Q Y L K M E V K P S F$
 SMQNKFTELLLDVPMEHTLVAETVINFGKDKLGKALNEDT QYKALVGHLDENF ALMNEVVSMGETRFGKRVDEH：

GES QEQYK
RKRFL
SDS
KSF

KEFL E！KK VDSALAKSTNPEFLEI ANMVLDEAEKVFGQLDRNI VDSFKELAREIMRSYFELTDSULSGAQKSLNVEFDGHL
 MEDDIYQVVMSILSERIVEEKGDKEVSDTT NTEDLTKVIDPKVIDLAENLVRYAEEQLQKSQNQQV
 RLLGLIDRNLVVEIEAALKEVVEESGLHLADSA
 NERRSYQTMLN
 KELSEEYLGIISAATTIVSNTTGMAFGDDL SKRLQEVVKEDSEEYLGUVDRVVKEAKKEKLEDRDSL
，
GS ■s K LNKYQKLLESTDERLYF



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\squareNRRY
SSTND
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                    Q F DALSHDE! QLINQL
    QSDLSSLYLQMESGEVEVVNAMI EEA NVEQLLATISS QLI EITQT N
 ATVQDLA A ELYL NIPIEILATTEKI
 M $\square \mathrm{HD}$ DPPEYF SRENFMTLLKDVP㤑 SQKKLQALLAQLDEKFFF SQKKLQALLAQIDEKFFFAVE

Q MLL
K K QLH


QKQYQNTLSQVDPAVVGAREC। SENKRELLLELPADII EMADKI

## N TY EK

LSRVYVDLDSEEI DLVVE
ATSER

A VIE EWSRVYVNLPDGEMQVFLNEL
Y四EGLSATPDEVSKVMKD｜
KLIEDVLK KYLAMVEKE QLGNFSSEETNLIYTHLV
DRERQLLTDVPYPVVEAVTRAN
NVSDSLKSQTKGTDSYMLEEIKTIL
SRLLNFIDPAWLLKIEQVI


SSTHPFSELIDNDPVAVFEVAAMMIRKAETIDGVQLSDHL
$\square P S \| L D D E N E Q \backslash Q E$
NRKNLLN【LGED【LNF！DK
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\begin{gathered}
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\mathrm{SH} \\
\mathrm{~N} \\
\hline 1
\end{gathered}
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## UniRef90 C7XXG9

 UniRef90_UPIOOO374DBD UniReforo-R9CON9 UniRef90-W4CH73 UniRef90 UPIOOO349ECBC UniRef90 W7CFQ5UniRef90
B1YKV9 UniRef90_UPIo00472583F UniRef90-G7VUH2 UniRefofo-Q67SK7 UniRef90-B6GAF6 6 Unires90_-R6RIN62
UniRef90_R UniRef90-A0FLO5 UniRef90-UPIO0037DDF74 UniRef90-I3DTX8 UniRef90-F5VDJ3 UniRef90-F9VAL9 UniRef90_UPIO003FBFB1A UniRef90-UPIIOOO41C63CB UniRef90-KONYV6 UniRef90_UPI0003B53C31 UniRef90_D9RZF2 UniRef90-A9QSQ66 UniRefofo-R2TDD1 UniRef90-R7GNQ0 UniRef90-C3L2P0 UniRef90-U2YTA2 UniRet90-R5YY59 UniRef90-U2URG9 UniRef90-UPIO003183A8D UniRef90_V711G4 UniRef90-H6CNN7 UniRef90-A8AXH7 UniRef90-D9S1N7 UniRef90_UPIO0036BF4CD UniRef90_I8SEC2
UniRef90 ETG8Q1 UniRef90-H6CDAO UniRef90_UPIO0028A0714 UniRef90-UPI000379B03E UniRef90-F4ECS7 UniRef90-F9USP1 UniRef90_UPIOOO4059E22 UniRef90-Q5FJ25 UniRef90-UPIO004633984 UniRef90 W4D5Q88 UniRef90-B5QKO5 UniRef90-U2T8D2 UniRef90-UPIOOO20D9921 UniRef90-U5ZHN2 UniRef90_UPIo0037986B8 UniRef90-R3WMNO UniRef90-N9Y761 UniRef90-A0A023CYJ2 UniRet90_U5FA40 UniRef90-UPIO004116B14 UniRef90-U5MMJ7
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UniRef90 $\mathrm{R9K130}$ UniRef90-R9KI30
UniRef90 sokw95 UniRef90-L109Y7 UniRef90_W8QMH1
UniRet90_UPIO0036FB14F UniRef90-D4LQF2 UniRef90- 05 WCP 1 UniRef90-UPIo0046FA12F UniRef90-R9CEQ9


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YVNLTDHLH
 LFSLCDH|HFAIENTKKGLILSNPMSHEDPHMYEKEYKMG Y S SLDDHi QFAMTRYRKSVGLKNSLLWQTKKFYKKEFGIG YDRLMDHLTYFIERLEQEDSNSNVSMKHIKKDYPEAYQVG YVNLTHIHSAVERYNTGIILKNPLRWDIKRFYPDEYAI G HIGLTDHLTFTFKRLEQGMEVTNPFLAETEALYPEEYALA HVALTDHIVFAINRLRKGLAVKNPFVSETKILYPREYE VA LI AFCLHLKPVINRYQYGMNLRNPMLDEGKANYPLAFEAG LIA TDHIVFAVERARNGEGFSNLMFSEVRGLYRREYEIG YFTLMDHLNFAVERHKKNDNTTNRVYWEIKNYYTEEFEVG LTPRADHI YFAVQRITKSGLVVSNPMLFDI RRLLFPKEFQVG HVALADHLHYTLQRTREHISLQNPLSWEIRKFYPKEYQLG YVNLTDHELHSTHERDDSGVTLTNPGKWDVARLYPNEYAVG II SLGLHLKPAI NRYKYGMNIRNPMLEDIKSNYPDAFEAG MLGLSLHVQTAIVRRGKNGSKIDNPQLNKIRKTYNKEFNDA , -

## Y

$M N N L$
$M N N L I V H V \begin{aligned} & \text { EFAL } \\ & A \quad I \quad A C\end{aligned}$ Y A R F L T H $\quad$ I I HSSFLVHLQFFAERVFSGRMLDSDDFESMSRRHPRATATA

 YA A A A DHEK P A I H R Y K H H M N I R N P M L E A DK V N Y P VA F E A G




 L $\mathcal{H} P$ L
 Y L A L A D H L H F V F Q R CRE G I F I E N P L S WEVVRKMYPKE Y Q I G



## Y

## Y


r

$A \perp S$ V L H H Y N R L M N H V $\operatorname{M}$ R Y M M V









UniRef90 UPI0003047C86 UniRef90-C0Z8L8 UniRef90-E3H2RO UniRef90 HoUPE8 UniRef90 W7C9K4 UniRef90-C1FM27 UniRef90 - T4N853 UniRef90_UPIO00288693D UniRef90-B6GAR4 UniRef90-A4ED34 UniRef90-C5EW03 UniRef90_U6Q1U1 UniRef90-G5FOW1 UniRef90- U2EIG4 UniRef90-W7CE59 UniRef90-EONHM2 UniRef90-E9RZ88 UniRef90-E6WN21 UniRef90-UPI00030D9C67 UniRet90_R2QQ56 UniRef90 ${ }^{-}$K8E6R6 UniRef90_UPI0002E58575 UniRef90-H7F4N5 UniRef90-R2QJD3 UniRef90-C8WQV6 UniRef90-H6CRX2 UniRef90-K2GB62 UniRef90-R1X7R5 UniRef90-B7CDV3 UniRef90-R2RA04 UniRef90-F5RL97 UniRef90-G5IVM8 UniReffo-E2SLG9 UniRef90_W9ADH3
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UniRef90-E5YL17
UniRef90-Q4L665 UniRet90_W1UFW7 UniRef90-Q45419 UniRef90- R9TUG6 UniRet90_UPIO003F98405 UniRef90_UPIO0046642EE UniRef90 J8TC80 UniRef90_UPI00040F157A UniRef90-DgTRG9 UniRef90-F7Z776 UniRef90_S5A532 UniRef90-UPIOO02626C6E UniRef90-D9RZ81 UniRef90-R2XQL8 UniRef90-J7CSC5 UniRef90-UPIo0031E920B UniRef90-E3YNM3 UniRef90-H1BCPO UniRef90-U5CRZ6 UniRef90-UPIO00472CF9D UniRef90-N1ZJ96
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UniRef90-UPIO003B67D37
UniRef90-COD786 UniRef90-T2NTC2
UniRet90_F6BJS4
UniRef90-R2SMN9
UniRef90 A1AOB5
UniRef90-F3B9F2 UniRef90-R9CG72 UniRef90-R5QS24 UniRef90-UPI00046EE4BC UniRef90-UPI00047647BA UniRet90_R5Z5K0 UniRef90-R6UYX5 UniRef90-UPIo0047E61E8 UniRef90 G1VXC7 UniRef90-F5SJO5 UniRef90-UPIOOO36074D8 UniRef90_R9CG07 UniRef90_R5ZCO3 UniRef90_U2N8HO

 RLLEGПKEIPQDVLLFAARAAEHVRAELSYALS ANM QDVMRDLPS DIVMFAAKVMDIVANEVLPYDLSTNA

 EELSKLVDKKII DLVE EFLSYAGVKDGKVFPNKT

 K E H Y K T L V E MA D D H V L Q A V I E A V NL I T N T T L D V N D E NL


| $Y$ | $V$ | $D$ |
| :--- | :--- | :--- |
| $Q$ | $I$ | $P$ |
| $F$ | $V$ | $D$ | $\begin{array}{llll}\text { D } & D & K & 1 \\ P & K & K & 1\end{array}$

QMMRKQFEPHE I A T EHIDS VHE THHELKTFQKRHELSFTDEA K R I L E T L K S
$\square$ N H R F E E L VTS $\square$ P S MEVM次
LVTS D A HVKKEL
E L E K VT D K N CLLD L


$R L L G L V D$ | $K$ | $H V V$ | $E$ |
| :---: | :---: | :---: |
|  | S A V |  |

 AKHRFGT LEELGVGLEDLAA EVVVEVVKKLDINFDNQL



 G S L


$\square$ NF G | $M$ | $N$ | $E$ |
| :---: | :---: | :---: |
| $A$ | $E$ | $A$ |
| $A$ | $L$ |  |


 $G \square K$
$S \mathrm{~F}$

$\mathrm{D} \square \mathrm{C}$ | $V$ | $G$ | $I$ | $K$ |
| :--- | :--- | :--- | :--- |
| $A$ | $Q$ |  |  |
| $D$ | $I$ | $Q$ | $L$ |
| $A$ | $A$ |  |  | V G F V K A I

PKTVQVVAS AERS QKRHQQRGQTS
 TK N K K EK L L S V V D E N N Lid


V E D S S LDVA Y QAK A I I E FVVS S HLLGKDL N $\square$




RLLPLDDLEVLEIVGELI RRVE

 QENMTRVARCVVAEVIDTEN FTVVNSVA
 N $\square F S$ SEI IN TAAK KLVVKLIN ETVVVKIND DNN
 VK G I E P K Y L E A A G RVI D EA QV VF K K I N P D I

 TLLADSHP LLPEELI RQLVQRMSE LNMDEFSRDD


DQEVLLLVN
L LDA S GLELAEKTL



UniRef90_UPIOOO3047C86 UniRef90_COZ8L8
UniRef90_E3H2RO UniRef90- $\mathrm{R5F2E8}$ UniRef90-HOUPE8 UniRef90-W7C9K4 UniRef90-C1FM27 UniRef90 - T4N853 UniRef90-UPIO00288693D UniRef90-B6GAR4 UniRef90-A4ED34 UniRef90-C5EWO3 UniRef90-G5FOW1 UniRef90-R5QSE0 UniRef90-U2EIG4 UniRef90-W7CE59 UniRef90-EONHM2 UniRef90-E9RZ88 UniRef90- 6 WN21
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UniRef90-E5YL17 UniRef90-Q4L665 UniRef90 W1UFW7 UniRef90-Q45419 UniRef90-R9TUG6 UniRef90-UPIOOO3F98405 UniRef90-UPIO0046642EE UniRef90-J8TC80 UniRef90-UPIO0040F157A UniRef90-D9TRG9 UniRef90-F7Z776 UniRef90-S5A532 UniRef90-UPIO002626C6E UniRef90-D9RZ81 UniRef90-R2XQL8
UniRef90-C6PVA3 UniRef90-J7CSC5 UniRef90-UPIOOO31E920B UniRef90-E3YNM3 UniRet90-H1BCPO UniRef90-U5CRZ6 UniRef90-UPIO00472CF9D UniRef90_N1ZJ96 Unirefoto- S4EF10 UniRef90-UP10003B67D37 UniRef90-COD786 UniRef90-T2NTC2 UniRet90-F6BJS4 UniRef90-R2SMN9
UniRef90 A1A0B5 UniRef90-A1A0B5
UniRef90_F3B9F2 UniRef90-R9CG72 UniRef90-R5QS24 UniRef90-UP100046EE4BC UniRef90-UP100047647BA UniRet90_R5Z5K0 UniRef90-R6UYX5 UniRet90 UPIOO047E61E8 UniRef90-G1VXC7 UniRef90-UPIOOO36074D8 UniRef90-R9CG07 UniRef90_R5ZCO3
UniRef9o_U2N8



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FHDLVTHLKKPTDYRTQKDMYTNNPLIMEETKRDYQDTYEIT IFGLALHLQTSKERLAQGKQIVNPQINHVRRKYKKEFAVA YLGLVIHVADAVNRDQKQEII EENPDMTDKLHGDSDYMGA VTGLALHVKMLRRRAILGHWVRNPMDEDLRRRYPLTFEVA


##  <br> <br> 

 <br> <br> } VYPLAVHLNSTYERDRNGKEI DNPKLSDK TRYEKEYNVA


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* V T L A D H I N F A I E R H N K Q M P V K L S I Y H DV R HL HK L E VK $\square G$


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| :---: | :---: |
| UniRef90－A6TVY0 | L EGLI Y IA EEEMGYKLADSA |
| iRef90－Q65NA0 | LTRKKLIDFDSQKTGMNLNHSL |
| iRef90－R7RPZ8 | DFLDNLIRRAETQLGRRFSDDA |
| UniRet90－UPI0002E8BE5B | LEHMINELIKQVSVEMGDDLDKKL |
| UniRef90－C7IV68 | YKLYVVMNA VKDLS DLI GFDFDKKL |
| UniRef90－DOZ7Y6 |  |
| UniRef90 UPIO00407DCD0 | DEVGSUVSSLEERLRVELINWDFDMEF |
| UniRef90＿J8J4U2 UniRef90＿N9X0K8 | YVEFVTNELKALLQKRHALIFFTDDA |
| UniRef90－R2NP25 | KSTKTYNDSYQEAVEELI ADLLGNLLNDDFDQEL |
| UniRef90－F8F340 | TLLAD NDQVLPEITLLI QKCEETLGQGLSEDL |
| ef90－UPIO00248C739 | LPFFQEEKLAEVYELVTRCEKTLGLEFTDDM |
| UniRef90－C4VSP | KKDDDKIQELFQEIVGFVRRTYNLNLNERLL |
| UniRef90 UPIO0047DDA36 | F RLLGLVVQKEKLII EDLINKINSRLPYPLADSS |
| UniRet90 UPIO0036C4FFB | FKSVTDEISQQYLPIVERIVATMSALLHMDLNKRLL |
| UniRef90＿Q67QV8 UniRef90 W40500 |  |
| UniRef90－UPI0004244 |  |
|  | KLINKSTIIETDLQHSDDKQT |
| UniRef90－E3ER84 | AELLSEDPPE\｜ |
| UniRef90 W7CWG3 | YREFMLVNKMLEQUQKRYGYALDQAL |
| UniRef90－A0AO2408K7 | NLENLSMIEACVQEASKSLPYELADNA |
| UniRef90－D9TQF66 | DYRKLAERLIKTASSLLGMDLDRQL |
| UniRef90 D2MNU4 | SLSM R L EECFSQDFD |
| JP100 | RATVRMI DQFERDGCVFFHEQL |
| R ${ }^{\text {a }}$ |  |
| UniRef90＿M1K3Q1 | MFGVVNKAELLKMDRLLQLKEKIVA ALSDSS |
| UniRef90－S5TH |  |
| UniRef90－F5LTG7 | PDAFAVTKKLIDKVSESVHVRFDPDL |
| UniRet90－G5IAW8 | DQ\｜IGRECRTLVDEILQSTQEYYLLNMDKEL |
|  |  |
| 隹 | VGNETSS\｜VAKMSEDAEKRLG PLDKSF |
| UniRet90－R5R5X1 |  |
| UniRef90－D137A6 | RDAEAVARLLLDHFARSLDRRLDPQL |
| 00040 | NENELKKIAVVIMDTLKKEKFN |
|  |  |
| UniRef90＿SOS621 |  |
| RRef90 S8BDG0 |  |
| iRef90－R6RMX6 | R11 S |
| UniRef90 A0A0372463 | KKM LSMAGKKLNRENEK |
| UniRef90－U5MXB6 | LKVVSDIVDFAEE K L LAETKLNKKLNERF |
| UniRef90－UPIO004 | LKVVEDILEFSEEVMDM1 EKK |
| 2A7B2C | 俍 |
| UniRef90－UPI00030B7A4D | QLVLAVVEEFELLACVSFADRV |
| UniRef90－M5QW16 |  |
| UniRef90－UPIO0026C8B73 | NLT DRLYDVAEERLDRKYNPKA |
| UniRef90 H3NPQ9 |  |
| P100039A0620 |  |
| UniRet90－K6QEU7 | VVVARLVQRAEAALGEPVDPHI |
| C50S889 | YQTLVEMGEDHVVQA |
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| UniF | GVDRNT何QMEMPENILKLSEQVVAYAKKHLTKKFSKNF |
| UniRef90－UPIo00464239B |  |
| UniRef90－Q045H5 | UNDLTTLLSNVPLDFVTTSYDLIDQVQAKYHFAAEPY |
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| UniRef90－UPIOO047BE741 | VQKII EKVNDSYLVDLDEEF |
| UniRet90－E2SGX2 | DLLEYMI QEVNKVYLIDL NDDF |
| UniRet90－U3U4K0 | QALVHYFGEEDVAFVQALLQQMEQQLSYPLGDAW |
| niRef90＿U2PWH2 |  |
| UniRef90－UPI0004271 C86 | KLS |
| UniRetio－ceskil |  |
| UniRef90－C9KQ73 | VNGLDPHAVEDAARVLDEARKSFPA MTDDI |
| UniRef90＿SoNQ96 |  |
| UniRef90 L8DWU6 |  |
| UniRef90－18SCU2 | EDSNMFTNMNDPFIESC UVIEAEKQLETTFSDEA |
| UniRef90－H5T2DO | KLYE GIDPEIQLTKKIYAFAQKKLGYTLQSNF |
| UniRef90－UPIO00349647C | VWDVVGEMLDRIWQVF Hid ${ }^{\text {d }}$ |
| UniRei90－UPIOoo3709D2A |  |
| ef90－UPI00047DFEAF |  |
| UniRef90－UPI00028855BD | K LK VVDED LK FSEEVMDMI EKKVDKKLT YRF |
| UniRef90－W1Q1K4 | QIMDEII KQVKANTGLEFPMHF |
| UniRet90－W7ZRY3 | F |
| UniRef90 UP100036591C7 | － |
| Ref90－W7D2G5 | D ${ }^{\text {a }}$ |
|  | A |
| U2YME9 | RIAALPPADVELATVVAEAAGGEFGAHTVDRL |
| Ref90－D7UUU5 | TVAKQLITSVEAKIDRRLDQ |








UniRef90 W7Z463 UniRef90-F0GV90 UniRef90_R2QJK9 UniRef90 E3IHC8 UniRef90-D3FY68 UniRef90-A0A024PGI6 UniRef90 UPI000427D9B3 UniRef90_H0DGJ5 UniRef90-G4L8X9 UniRef90 U2HZH6 UniRef90 G5HMY5 UniRef90_U2U7U3 UniRef90_C7TNE9 UniRef90 UPI00036A707A UniRef90-D4J2K2 UniRef90-G1VWX7 UniRef90_K8AE26 UniRef90 R6UKX8 UniRef90-W7BZH6 UniRef90-W7CNV9 UniRef90-UPI0003815068 UniRef90_B5QLA0 UniRef90-H1LJ00 UniRef90-V718J0 UniRef90 R2QTC9 UniRef90_UPI0003808DDA UniRef90-A8U5T3 UniRef90-UPI00031E23FB UniRef90 N9WXG5 UniRef90_UPI00042A08C0 UniRef90-X4ZHC8 UniRef90_V6Z0J9 UniRef90-E2SHI6 UniRef90_UPIOOO3FCOF29 UniRef90_E2SQ98 UniRef90_HODHS1 UniRef90-E7G639 UniRef90-R6QE21 UniRef90 C0CV60 UniRef90_UPI0003FB17DC UniRef90-G4HG12 UniRef90_J2ZTYO UniRef90_I3RTS2 UniRef90-R9LTE6 UniRef90_UPI0004649CD7 UniRef90_UPI0003B438B6 UniRef90_TOVNZ9 UniRef90-B5QP84 UniRef90_UPI0003815BA6 UniRef90 I0GU37 UniRef90-S2XGZ3 UniRef90-R2QBR9 UniRef90_SOPBL5 UniRef90_U5F7F6 UniRef90-A8GHY9 UniRef90_C9RTV4 UniRef90-UPIO002DA0D64 UniRef90-T4VBG5 UniRef90-G9Y6Z8 UniRef90_UPIO00372A0E9 UniRef90-I3U551 UniRef90-SOPOG2 UniRef90-E6FQL1 UniRef90 F4BQM9 UniRef90_U2TC57 UniRef90_V6EQ47 UniRef90_UPI0002E304FD UniRef90_Q1J8Q0 UniRef90_UPI00047B9F0A UniRef90_UPI00030BD4AF UniRef90_UPI0003F9E40F UniRef90-A6LPX9 UniRef90-F9NSB0 UniRef90_W7YJ82 UniRef90_R2RGR1 UniRef90_UPIO0046AA184 UniRef90-C9A6E0 UniRef90_W7CQ73 UniRef90-L2J591 UniRef90-R5XL17 UniRef90_G4L5W3 UniRef90-U2N1V4 UniRef90_UPI00046AD604 UniRef90 J3JQC7 UniRef90_D3AMK3 UniRef90-D3FQ07 UniRef90_UPI0002E06061 UniRef90_G5KH46 UniRef90-UPI000463302F UniRef90_UPI0003190D7F
 LE K E Q Q TVK $\square$ D DAFAAY

QT QLS MVD M DKDFRVE RLL LMD Y LDD S L P Y T L DE S S I A S N N W N L T N Q L L Y D DA E K K L E R R S Y N E K A


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SSQKKLHTDVDNVNSD TLL

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—KRNLI S GMEQQLEVRFNESF

  LE K E QQTVKIDDAFAAYLTQQLF
 $D \square R \square F E \backslash S S R$ LVETFERTACVSFDDDL




 $N L K Q L S K \square V D S R V I E V V H B F B Q T S K K E L G K N Y R T N V$

1 T Q E M D N F I S E A F E E $\$ C R R N F G V D F T D N
$E \operatorname{L} C Q S$ L

DED LREFVVK LVI E T I D SVLLDVDLLD D LL

S R DF S F VYQ QVQRE H ER Q A L D Q S F L T F


D $\square$ F D HR D I E I I K N L T N A I I Q Y D L K L






$N L K E N L W A G C Y N L V D Q V A D N M K H F Y N D D L Y D D A$
E S VA EVIA GI P LIE RIALI ERVFRSAARELGTGVPS ST


VV D R
 NFK DLSNSLIEWAHA QLLSLDQL I Q F VVE C Q T K I I P F S E E L



Y DNLDE $\qquad$ G D Q I N N
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S QID A Y VA Q EVVSESLQHAL KEI SEVVFLI DF DEKF




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| UniRef90 S5VUB1 | AKNQFQQपMAD |
| UniRef90-UPIO00219370E | TNY |
| UniRef90-S2QDF1 | D N VRAMNS |
| UniRef90-B2TQY1 | PEIVQUIKESFIDESGECIKNID |
| UniRef90-D9TS28 | RLVSELVKNDEDMIDRKID |
| UniRef90-R6NPK5 |  |
| UniRef90 K8E1K7 | KFKELTTAI ERVQVLTGTIYPDKL |
| UniRet90-J9YTN2 UniRef90 $1678 E 4$ | VFPDKVSEIVTSYYLK |
| UniRef90-R3TSW9 |  |
| UniRef90-JoL6N3 | GMNEEISTNYNSELSEFLEKNIEDYDQDL |
| UniRef90-B9DVZ2 | VSQKLLNLYQEMVQEVKDSLLTNFDEKL |
| UniRef90-Q82ZT1 | LDIS |
| UniReforo-SoM3H5 | QEKDS SYDVNFDTSLLEYVERKLQNGDAYPY |
| UniRef90-K1LGM3 | (lat |
| UniRef90-C5ERF8 | RRMFQRUEEKFGLRFSEQL |
| UniRef90-UPIO00363B49C |  |
| UniRef90-UP1000360C838 | WVFDEQL |
| UniRef90-R50ZN UniRef90- 8 NFA |  |
| niRef90-G5IOK | F |
| UniRef90-B6G892 | GVWNVVAGMLDAVYQAYRFDFD |
| UniRef90_R6K2L9 | EQWEDVLRHAGDMFRENLDETL |
| UniRef90-S5RL81 | ELLNQDS FEELT |
|  |  |
| UniReef90_G5 | SHFEPELVKQVQDLIA |
| UniRef90 UPIO0031FEB1E | SKDVIDI TNALIKGASHELNHSFNAD |
| UniRef90-UP1000422 |  |
| UniRef90-UPIO002F3A794 | D EVL |
| Ref90-C6VM |  |
| UniRef90_UPI00036C7618 |  |
| iRef90-B9DM94 | A |
| iRee90 UPIO0036F6FF2 |  |
| UniRei90 SoRNG1 | TSEEVNTFILHALKELNEKFDIDFREEL |
| UniRef90-UPI0004069CD3 |  |
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| $\begin{aligned} & \text { UniRef90_LOIMY4 } \\ & \text { UniRefan-UPIOno408R635 } \end{aligned}$ |  |
| UniRef90-UP100040CC730 | K T L G A A CVSDC |
|  |  |
| G1V | NQKEIRFVREALLHVLNEYATRFSDLS |
| niRet90_Q8CLH | AA TPGEYURLVLEAMERAGLSEK |
| E6U8C8 |  |
| UniRef90-F216C | SSKVVGCSTNEYUNEFQRIMSAVE |
| UniRef90-G51982 | ETUVGAEVMKПTRDUYQAAKREUPD |
| UniRef90-A0AO24Q7T2 | RLLSQSLHAY |
| UniRef90-E2NVC2 | SI HNLIDSFLEGTYKGYNFDLRDD |
| UniRef90-R6VS | A |
| R5GP | PR1KKSV |
| UniRef90-S5KJ74 | RFNHEDELVPGKTLPTVEEMIEQVAAKTNMP NKK |
| UniRef90 R2Q318 | MQLLINEFI FNLTKELGMKLNSDL |
| UniRef90_UPI0002F70143 | VKEYCHD\\|IAAMS QVT DIVVNDNYLL |
| UniRef90-R5T4R7 | DEHNLGLVMKGMKK\RNNYGVDLDEA |
| UVC | EMlLDFNSYTKENAED |
| UniRef90 E6U9F6 | SQEIVNDMRPF:LDSFAQUKNHLS |
| UniRef90-FOFM32 | QVVFMQVQKVKEKMLVHFDEEL |
| UniRef90-TOJAA2 | LLHVVEKMAADFQRYAAIEFREQM |
| V6YZF2 | OKNDNT |
| UniRef90 M1MBBO |  |
| UniRef90-D7V523 | LQELSK【VPKDUIDLTAGYLTEATKVLK |
| UniRef90-G4L2T9 | Q Q QVENETHIPFSEAL |
| UniRef90 U3SUK4 | QLI DFVEQETEIPFDNUL |
| UniRef90 W1VP33 |  |
| iRef90-O5 |  |
| UniRef90 J1TPF3 UniRef90-R6UGN |  |
| UniRef90-UP100047D1ECB | D HKL |
| UniRef90-R3TTZ9 |  |
| UniRef90_J3F8W9 |  |
| UniRet90_R2SFR2 | SLQKFVNPKITKIVDVLKAQAERQLNRKFDRRF |
| UniRef90 F7NLN5 UniRef90 D7UWC | KEFPQEDFAF |
|  |  |
| iRef90-C5EFS9 | TKLVPFFEETDLQEIHTILHDMEDDYGFTFADSS |
|  | K V |
| UP100037D9994 | QVALSFIE RVSKKLNKKFSRE |
| UniRef90-UPIO00299DBE5 UnRefo-UPIooo3648FC4 | VDQDIIDLTK |
| Ref90_UPIO003648 |  |







UniRef90_R5ZCI9
UniRef90 Q74I81 UniRef90_C6VLN1
UniRef90-R2QS04
UniRef90_COCTEO
UniRef90_UPI000317C567
UniRef90-D9R2Q6
UniRef90-D3UQ57
UniRef90-19KX82
UniRef90-UPI0003B342E2
UniRef90-F2EQT5
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UniRef90 T3DR07
UniRef90-T3GHX8
UniRef90-Z4WWH3
UniRef90 UPI000472D36C
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UniRef90 U6SUQ4
UniRef90 UPI000382CA7A
UniRef90_U3TZQ2
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UniRef90-UPI0003B4C103
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UniRef90-S4ZZP9
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UniRef90-G5KFQ3
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 HA A LRKYVSSNPAVDNDSFV AFVTGHF



 KEA DNKLYSTNPYVVNDTFI TLICLHFLLS $\square$ SN K E A F S V V E E H Y S VTMI P P S E V A Y Y

## K

ARALQLFSSDFGTQFSAEEVSYVA D NA L R P L K D DV G Q S
 KVSTEVFKQRYQLETIE ETEDTSYLSAVYF MVMDDKLEE ILGGUGADVE DNYLTVYFEMALQHAD DLSLKEVFPGDITFTKEEMAYI II HYASSI ERQ QIVVSCFEKAFGFKVPETEVTFI ALYVAMAI EKI KD Y L R T TFDFKMSSDEQVYLTI HIQ K ILS QNIENK IGGPDVKNELVYLTIYF

[^2]


[^0]:    lupas 21
    lupas_14
    lupas_28
    jnet
    conf sol25
    sol5
    sol0
    jhmm
    jpssm

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

[^2]:    lupas_21
    lupas_14
    lupas_28
    jnet
    conf sol25
    sol5
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