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 NSQNKKMFLHMDLI QGLKNDEYATEFIQELKPYGIISTKS
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 03F7676D

K
K
Q

K
K
E

K | $E$ | $K$ | $H$ | $K$ | $K$ | $K$ | $M$ | $M$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| K | $H$ | $M$ | $D$ | $L$ | $I$ |  |  |
| $K$ | $A$ | $D$ | $L$ | $V$ | $Q$ |  |  |





## R

K
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|  | A ${ }^{\text {a }}$ S |
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| UniRef90 UPIOOO40D9C59 | AVTTSRKELWD |
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| 047B5DE3 | AVTTSRKEL |
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| UniRef90-F7Y | AVSTSEESL |
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| Un | AI STTRKSL |
| UniRef90-N0AL | A |
| UniRet90-R5XN | GVSSTSHQV |
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UniRef90- $\times 8 \mathrm{~K} 610$
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 S N I K Y A K Q L GF Y T 1 Q R V


 S NI K Y A N Q I N L F S I Q R M F All D S L S L K T G I K S I H DT N P TA V








 SII R H A K R H H L L T I QRF F L L D S S A L E N V E R QLLG Y TEA D V V



 $S V I$ A K T R Q N G L L A I Q R V F L L D S G A L N K S Y A L L E R S Q P D $Y$ I
 $N$ LI K Y A K E E GLLMTI Q R LF $K V$ I $Q K A K S L D K$ NLI KYAK K E G L M A I Q R I F I D S Q A L S R S I N L I K K V E P D F V

 $N \vee I Q K A K Q H B /$
S V I

 , SLVVKK A LIE E N I DVVVQRIV L L D







 QVVVK LAA K K Y N L L G V Q R V F V F D T L S L N N V K N H M I S E C D A V
 SH I K IGA K E K GM F T I Q R F F LI D N Q S Y N M T I K S V E L T H P D M I








 $N$ L TVE Y A K S L G M N T V L R Y F M I D S L V L E N I M K Q S K E I Q P D I I AMIKRANELGMFTIQRFYMMDGFTYANIEKHVKNCNPDVV



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| UniRet90_W7ZVZ0 | A V ${ }^{\text {a }}$ |
| UniRee990-V2 | A V |
| UniRef90-25J2 | A ${ }^{\text {d }}$ |
| UniRef90-LOEA11 | A V T T S |
| UniRef90-B8C | A V S |
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| UniR | AISTSNEEVWYM |
| UniRef90_V6J1 | A S S SNMELWN |
| UniRef90-UP1000225BD5A |  |
| UniRet90_UP10003B7AD7C |  |
| UniRet90 UPI0002E465C9 | ${ }_{\text {A }} \mathrm{V}^{\text {V }}$ |
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| UniRet90-UPI | AVSTSN |
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| UniRef90-UP1000248D2 | AVSMGSRKL |
| UniRef90-A0A0372 | AIS T T S $\mathrm{D}^{\text {d }}$ |
| UniRet90-C6Q2 | AISTTASQL |
| UniRef90-SOS | S |
| UniRef90-M81 |  |
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| UniRef90-F9DR96 | AVTTSD |
| UniRef90-W6N8E4 | AVSTTDSSLW |
| UniRef90-X8K6 | DVSTGEVELW |
| UniRef90-U1X | AVSMGNHRLW |
| UniRef90-D5D |  |
| UniF | A V T ${ }^{\text {S }}$ N |
| UniRef90-B9K | Al STTSC |
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| UniRef90-5LR2 |  |
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| UniRef90-Q8E | Al SSGDPSLWND |
| UniRet90-C6PW18 | GVTTSEKKL |
| UniRef90 W4RUF9 | G P P |
| niRet90_Q4L |  |
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| Ref90-UPI |  |
| UniR |  |
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| UniRet90 | STSTPTLW |
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| UniRet90-UP1000360 | A |
| UniRef90- J2V7 | A $V$ |
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80 KAGKVVFVHVDMIDGLKNDQKGI EFIKEVEPFGII TTKQ
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UniRef90'I4BYG8 UniRef90_I4BYG8
UniRef90-UPI000 UniRef90 UPI0004795E6 UniRef90-UPIOOO3A04904 UniRef90-X1SY47 UniRef90-R2XTP4 UniRef90-E5AKC8 UniRef90-J3AF49 UniRef90-T0BD65
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UniRef90 A9B.J77 UniRef90-A9BJ77
UniRef90_W7Z0F5 UniRef90_UPIO0047E5730 UniRef90-E6TU08 UniRef90-U5F7F1 UniRef90_FTNP62 UniRef90_UPIO0036C29FE UniRef90-UPI0003805F23 UniRef90_Q9KDY6 UniRef90_A0A023V5M4
UniRef90- S3BFT5 UniRef90-S3BFT5 UniRef90_U2DT12
UniRef90_UPIO00477D47A
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UniRef90_CBEFYY
UniRef90_Q1AX50
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UniRef90_U1LLN0
UniRef90_UPIO00428473C
UniRef90-UPIO0030CD4F2
UniRef90_B2TIT7
UniRef90-U1RPC5
UniRef90-G7WGA8


QLLAK ITAREQGMIVVQRLFIIMDSEAVRTGTHLL|SNFKPDA|L $N \mathrm{~N} I \mathrm{~K}$ H A H N L G LYT T Q R I F V I D S L S L IT G I K NI H A V S P N A V
 SMI NRAKK LGGMYTVLRFFLIDSMAIKNDENLGNQHEPDVV NVI LKAKQHKVLAI QRDFMI DSSANTKGKALIDKVQPDAB
 N VVSFAVKMKVPVI
 HL I K $\quad$ GKE E G L L T V Q R L F L I D N S A I K K GI S MVEEK S K P D A L $N L V N \overline{M A K K D G L I} S I Q R I$ FLLDSQSLITGUAQAKSHKPEYV QMI RMGKKLGFIAA QRVFMIDSQSKENMKNHLVE ECDAV HLI RFAKEMKLMAILDRTFLIDDNAVTKGIKAVEQCQPDAV NLVKCALDEGMLAVQRFFMVDSESLKTAIKVAQNVTPHAV K IVNRAKDVGLI GI HRFFLLDSRSLENGLKGLEMSELDAI






,










 Q V I $Q$ H A K K L $G \operatorname{L}$








 QT: NLAKKKGELGAVQRAFAMOD
 HLIAFAKKANLFGILHLFIIDSLALTSAKKMLGDRSVDAV HAD A TVARYS LEVGLETILRIVALDSAAVATAVQVI RRTQPGAV

## N

 KAIEAAKSNQCISILRIFMIID $H L A K H A R A E G M L V I V Q M F V M D S$
$N L V R A A K R A G L V A V Q R F F L V D S$ NLVRAAKRAGLVAVQRFFLVDSFSYHQLPRVVEQAGPDAI ATI QRANRAGLMTMQKVFVTDRSTWPRSVKAVEQSDPNLV NIVRAARERGMLAVHRFFLVDSFSYHSGGRQUAVSKPDYV
 SLVEKGRPGGLLTMQKVFVTD

 HI E AGRSAGGT,
 $N V V$ E S A R G T GLV T V QR L F A I D S


 MS SIM A A K K E G L L A I Q R I F LI D S N S L H TA M H N I K V N K P D
 QVVSAA QKCGLWAVQRVFLMDSRS LERSLEILAESHPD GI


|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  | $V M P G$ I ASKIIRSLEKEPI AGGLI STKKEIMESIISSGA $V \mathrm{LPGVVPKVIKMVIEKPVFAGGLIDTEEVEAALAAGAS}$ |  |  |
|  | VLPGVVPKVIKMVIEKPVFAGGLI DTEEVEAALAAGAS |  |  |
| UniRef90－D4LP60 |  |  |  |
| UniRef90－W7AX65 | IMPGVI PKVIDQLSRTPVIAGGLI TEDSEVHDALKGAL |  |  |
| UP1000 |  |  |  |
| Ref90－E3DQG |  |  |  |
| iReef90－13DLM4 |  |  |  |
|  | L P GIMPRVIYDEKVSLPL AGGLI QTEEEVLSSLRAGA |  |  |
|  |  |  |  |
| UniRef90 F6DKM5 | V P S |  |  |
|  | DVME T |  |  |
|  |  |  |  |
|  |  |  |  |
| $5 \mathrm{~S} 2 \mathrm{C}$ | LPGPFAKPFLRAVKNVPILAGGFI DSVEVIHELFDAGI |  |  |
| G7 |  |  |  |
| UniRef90－FOKDB6 | IMPGIIPKRIIKSEDPEDPIIAGGLI ESKEDIMDVLKGGD |  |  |
|  |  |  |  |
|  | A |  |  |
| $\begin{aligned} & \text { iiRef90-LOKC } \\ & \text { iRef90- R9JP } \end{aligned}$ | VICGGLI SDKEDIVNALSAGA |  |  |
| UniRef90－U5MVY3 | VLPGIMPKVILSEYSSKPVVAGGLI ETKEEVMQALSGAT |  |  |
|  | LPGI MPK\LISKRTR\PLVAGGLINEKSDVIEALNAAD |  |  |
| UP | V PGG P P V M |  |  |
| UniRef90 S6FAX8 |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | L LPAVPARIIKEITKNPVLGGGLLKTEDDVREALKGMD |  |  |
| 4D |  |  |  |
|  | LPGIMPKIIKHIAGVPVIAGGLISEKEDVMRALDAGA |  |  |
|  |  |  |  |
|  | MPG PSVVSQDS |  |  |
|  |  |  |  |
|  |  |  |  |
|  | PGGIMPD ${ }^{\text {P }}$ |  |  |
|  | APA M |  |  |
|  |  |  |  |
| $\begin{aligned} & 4 \mathrm{BY} \\ & \mathrm{yPIC} \end{aligned}$ | AMPGVLMPRVISELCEQPVVAGGLIKENYEVELALLAGAV |  |  |
| UniRef90－UPI000 |  |  |  |
|  | S OPVITGGLVSEKED ENALNAGA |  |  |
|  |  |  |  |
| f90－R2XTP4 | EHIYKKPVIAGGLIS SDKNE：EKKLFKGVL |  |  |
|  |  |  |  |
|  | MPGMAPSLI DKEHLAQP I I LGGLI WNMEQVNEALKGAD |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | DPI VASGLI QTKAEAAESLQAGA |  |  |
| UniRef90－UPI0002D |  |  |  |
|  | MLPGLL FKVIKELSKKPLIVGGLISDKEDVMEALSGAT |  |  |
| UP100047 |  |  |  |
|  |  |  |  |
|  | PALASVEVIKKEIJNKPVILGGLIDNEAQIDSGLNAGA |  |  |
|  |  |  |  |
|  | LPAIAAPHFIVKSQQDKII AGGLVEEKKEVEYLVKGVF |  |  |
| 5A5T4 |  |  |  |
|  |  |  |  |
|  | PAIIAAPYFLENITKVCLIAGGLISKEEEVLELFKNGI |  |  |
|  | GGLFKTKDEMNQALQAGA |  |  |
|  | ALVAPRVGRSLPELTTIGGGLIETVKELEALLAD |  |  |
|  |  |  |  |
| f90－U5F7 |  |  |  |
|  | LPASVPAEVISKATNLPVLGGGLLTTEADVRAALKNGC |  |  |
|  | 俍 |  |  |
|  |  |  |  |
|  |  |  |  |
|  | GLIMPRILEELVARHIVSGGLFQEKEEMDLALRAGA |  |  |
|  |  |  |  |
| 仡 | MPAPVVARMSPERAMTPHVAAGFVQSPEDVAAALDGAV |  |  |
|  | LP GCLFKM I K ENLNVEVIAGGLI ETADEYKQA K GA |  |  |
|  |  |  |  |
|  |  |  |  |
|  | 㑑 |  |  |
|  |  |  |  |
|  | MLPAIAAPLVVDKLRADHI AGGLVQDLQMVVRLIDAGD |  |  |
| A0 | LPAVAYPEFYEREVARPVLAGGLVEDFKTASRLVEAGA |  |  |
|  |  |  |  |
|  | M MPAPITGRMSQEARRSPSVAAGFVETAEDVALLALSGSV |  |  |
|  |  |  |  |
|  |  |  |  |
|  | M M G LMPRVIQELKERPLIVGGLIRHEEEVQQALKGAD |  |  |
|  |  |  |  |
|  | ELLPGULPKVIEDMSKNKP ITGGGLIENKQEIDSALQGAT |  |  |
|  |  |  |  |
|  | EVLPGVLASRFARWHSAATLMAGGMI ASADDADTLFARGR |  |  |
|  | VPGWTVVEWTVEEHKKPVIVAGLVCDKKIVMDNLVNAGA |  |  |


|  | A VVIS T N K R ElL WK\|L |
| :---: | :---: |
| UniRef90-UPI00047DDCE0 | AVSTTAHELWD |
| UniRef90-W7CFK2 | A I T T S NYELW |
| UniRef90-B2TN11 | CVSTTRNEI WNM |
| UniRef90_D4LP60 | AV S T T N Q K V We L |
| UniRef90-W7AX65 | AITTSSDKKLW |
| UniRef90-UPI0004727875 | AVSSGNPDMWNL |
| UniRef90-E3DQG0 | AVSTSKQDLWN |
| UniRef90-I3DLM4 | AVSTTDTELW |
| UniRef90-UPI000404944D | AVSTSNMSLW |
| UniRef90-X0RT36 | A I SVG ST NL WNL |
| UniRef90-F6DKM5 | AIS TSLRDLWNL |
| UniRef90-A8F678 | AVSTSEDSLWN |
| UniRef90_V9H1S3 | CISTTKKEI WYM |
| UniRef90-UPIOO0379433E | AV S CGRSDL W |
| UniRef90-F6CNT5 | AISTSLRRKLWN】 |
| UniRef90-L5MZA4 | GVKTSKRDLWN |
| UniRef90-G7W1L3 | A V S L S R S EL W |
| UniRef90-FOKDB6 | CVSTTRKEI WEM |
| UniRef90_E3PT70 | AV S T S K E S L WD I |
| UniRef90-UPI000289C1B0 | Y V S $\square$ G D |
| UniRef90-LOKC48 | GIS TSKEK ${ }^{\text {S }}$ WK |
| UniRef90-R9JPC0 | AISTTNPVAWAM |
| UniRef90-U5MVY3 | CVSTTKKEIWD |
| UniRef90-C7REA0 | A I S S S T DVWK M |
| UniRef90-UPI0003FA853E | AVSTTKREI WDM |
| UniRef90_S6FAX8 | CVSTTKKEI W |
| UniRef90-UPI000248C447 | AV S T S R $\square \mathrm{ELLW}$ |
| UniRef90-M5E0G2 | AVSTSNHQLWK |
| UniRef90-Q8RGG5 | SVSTTETKLWE |
| UniRef90-T4W468 | AISTTDDD M W |
| UniRef90-F6B4C2 | AI STSLRHLWN |
| UniRef90-14DC88 | AVSTSLLQHLWD |
| UniRef90-A4J8E8 | FISTSRRAL WN |
| UniRef90-G2SZE2 | AISTTNQAVWKM |
| UniRef90-C4KYP5 | AVSTGDERLWHV |
| UniRef90-UPI000478A750 |  |
| UniRef90-UPI00042892AB | ATSVSNPALWSLL |
| UniRef90-N2A7X5 | AVSTTNHALW |
| UniRef90-E4RPS6 | AISSSDKNIWK |
| UniRef90_U6SQC0 | A V S G S |
| UniRef90-I4BYG8 | AVSTSE |
| UniRef90-UPI00047ADE6C | A V S L S D 1 |
| UniRef90-UPI0004795A64 | GVSTSKENLWHT |
| UniRef90-UPI0003A04904 | SVSTTNDKL WDI |
| UniRef90-X1SY47 | AIS TS RKELW |
| UniRef90-R2XTP4 | GII S T T NKECWS |
| UniRef90-E5AKC8 | AVSTSDSQLWNL |
| UniRef90-J3AF49 | AVSLSS S E M W |
| UniRef90-T0BD65 | AVSSGNPEDWK L |
| UniRef90-D3EAQ9 | DVSTGDTRFW |
| UniRef90-N9WBP7 | CI STTKEAll WY M |
| UniRef90_UPI0004720CAB | ALSVSDSALWN |
| UniRef90-D3L4D3 | AVSTSEKSLWQ |
| UniRef90_UPI0002D8690F | GI T T SEKHLWK |
| UniRef90-H7CZQ8 | CISTTK |
| UniRef90_UPI00047A6AE2 | GMTTSCKDI WKL |
| UniRef90_C2BGZ2 | GVS S S NTKI WK M |
| UniRef90-E4RMR1 | GLT T S S K E L W |
| UniRef90-W1U816 | GVSFSKDNLWN |
| UniRef90-E4RIH7 | AISTSRQELWN |
| UniRef90-X5A5T4 | SLS VS E Q S W W L |
| UniRef90_E6SH88 | AVSTSNPALW |
| UniRef90_A9BJ77 | AI S T S AKDLW |
| UniRef90-W7Z0F5 |  |
| UniRef90-UPI00047E5730 | AITTS NTRLW |
| UniRef90-E6TU08 | SLSVSAKHLWND |
| UniRef90-U5F7F1 | AVSTSHRELWE |
| UniRef90-F7NP62 | AVSTSRRELWN |
| UniRef90-UPIO003455167 | AVASSDRDVWGM |
| UniRef90_UPI00036C29FE | AVSTSDA |
| UniRef90-UPI0003805F23 | AIIASSNVDVWA M |
| UniRef90_Q9KDY6 | A AVS GS HIVL |
| UniRef90-A0A023V5M4 | AVSSSDSALWDV |
| UniRef90-S3BFT5 | A A A T S D PRLWHL |
| UniRef90_U2DT12 | S 1 T TSKKELLNL |
| UniRef90_UPI000477D47A | FVSVGDMRFW |
| UniRef90-C4X452 | GI T T SEPGLW |
| UniRef90-C3EFY0 | AISTSHYEVW |
| UniRef90-Q1AX50 | AVSTSDPSLW |
| UniRef90_G8NP91 | AVS $\square$ G DPGLW |
| UniRef90-A0A023X2S1 | AISTSERLLTWKL |
| UniRef90_UPI00036BC0C3 |  |
| UniRef90-A0A022MFQ8 | A AATSDPRLWHL |
| UniRef90-UPI00041AB946 | A IT T T R K EL W |
| UniRef90-U1LLN0 | GVSTSERTLW |
| UniRef90-UPIO00428473C | FVSVGHEKFWN |
| UniRef90-UPI00030CD4F2 | GI SLLSKEKLWN |
| UniRef90-B2TIT7 | CISTTKQELW |
| UniRef90-U1RPC5 | AITASSTAL |
| UniRef90-G7WGA8 | AVTASRRNLWKL |
| UniRef90-UPI000470CFFD |  |

UniRef90 UPIO0024919D0 UniRef90-W8U912
UniRef90 BoTDC2 UniRef90-A9BSE9 UniRef90 UPIO00288915F UniRef90-UPIOOO47A3712 UniRef90-E6U3H8 UniRef90-U7VAH1 UniRef90-R4XY06 UniRef90-E3GNH1 UniRef90-UPI000476D1D8 UniRef90-A4JOS7 UniRef90_UPIOO0414B163 UniRef90_R5PQ16 UniRef90-J9E8C0 UniRef90-UPIO004794991 UniRef90_UPIOOO4774331 UniRef90-R5BYS7 UniRef90_UPI0002891E6F UniRef90-E3CX25 UniRef90-E2ZK50 UniRef90-C7HRX3 UniRef90-E6VYZ8 UniRef90-UPIo0023772F8 UniRef90-K9CK13 UniRef90-UPIO002895E11 UniRef90-K8DZS1 UniRef90-B2Q5T0 UniRef90-E3GM06 UniRef90-HOUNI6 UniRef90-R2SQH2 UniRef90-D4S744 UniRef90_Q8RQG7 UniRef90 E3DLL2 UniRef90-UPIOOO4747774 UniRef90-B1C750 UniRef90_UPI000318C3F9 UniRef90-D1B6Y8 UniRef90-E6MG54 UniRef90-D2B009 UniRef90-C5CIG0 UniRef90-UPI00037FOA2B UniRet90-A6X1S2 UniRef90-E3ZGC7 UniRef90-E3GJK1 UniRef90-R6FYA1 UniRef90-12F2M4 UniRef90-R6QEJ5 UniRef90_UPI00037D94E3 UniRef90-J9DLQ4 UniRef90-U4KSK3 UniRef90_U5L8G9 UniR Refo-S4ZT59 UniRet90-G7U918 UniRef90_U1PFC3
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UniRef90 D7GF60 UniRef90-F4PFI7 UniRef90-J2FR58 UniRef90_W7C0E3 UniRef90-D2ULR1 UniRef90-W7BV35 UniRef90-E5Z1S9 UniRef90-B9K8F1 UniRet90 W1HSQ6 UniRef90_W1HRQ0


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        PV\AAVKS|SD\QKVP|NVILILYTDTFY\EKMTDLA
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    HPIMAAVYGLQAFLDSAAEVALVAHVELRQLQAMI ATV
    NPIVVSVRSEERAIKSRAEVVFI DHTDMDHLVSQVKKI
    NPVI ASVNSTPGFVTSECRICILAHLELHELDGALKVL
        RPVICAVRSEEALRRVEPRCVFVLGSTLQDLFKTVSSL
    
MLKGI TA ALWEPERV PNTIFFLNGGLLELPERVKRF
PVMA $\operatorname{CVK}$
QTIMPAAKDMEAFLDSKAEVGVVANIDALRHVAEVGNALL
SPATSDFAF DSYADWVMVKLGDINTLPNIVRRV
MLK
MF




PVTATLEQADARNSTNEVELLSGTVSDLRVTVNKL
DSAAEVGIVANVDLRRLQAVVAAL
MFKPY $ل$ AM MKDWEKTYKKLPMTVFLIMTGSMLELPERVYEL
NPVIAAVKDLQLADDSECQFTSVLYGNTC
PVIPAVSGLEGFLDSPTESCLLGGLSVIDADRALTQL
HIIPSVRELKNALSLDLLKYIYLSDVHI A


MFNPAVRTMKEFDRMLKTSFEYGVILNVHINMLASLVDYA
QTVIP A A R DVE K ILLH LDA E Y MVVMLE T QVG QLLK SLV NLA


 CNRKKAILLHHTDLI K GLSNDKEAI NFIMHDNPAGIV S TK S

 K T A A K TVVLV N V D M V D G L S G R D V S I D W L A H T Q V D G L L S T K T



 H T K D K K A L V N L E L L G GFGK D H V G M K L L K N Y HVV G GVMS T D S R A A R K S V L L Y P E L I A G L G R D P A A D D F L C GYR P TAAIV S T K K

 K K M K QL V FVVNIDDMVDGFSPRNSVVDFLKTMEDDGUIISSKP


 RANGKRVFI HFDMVDGVAPNPAGLDHLTSDDFPDVVITTR T K A G K Y A A I V $N$ N $\operatorname{D} D \mathrm{D}$ S S E E G L HR H GK E A I V N H E LI G G L G S D T V A F E M L K K Y K V V D A V I G A N P
 K E R N G L V F L H M DL I E G I G R D DG GII R HVVERT GIID GV I S T K S TSRGHMPFVHMDLVEGLKSDQSGIRYLVNARPWGIISTHK


 D Q A GK F T F V $V$ NMDACA GILGQD K G A L



 H E K R K K I I V H H D Si N G L S T D R T S V
 H D A NKK I IV NHEVVGGGLGADK TAAF F L K K Y HVVDCVMGVHN , R K E GLDPVVI H I



## ,

, HRA GK KV I I N H E L V G G L G A D R M A F QL L K N Y HII D G V M G T G N




M T K GLSSHDEFASEF



$\square A A D \square H P L V N L D S L S G L S R D R A G L D W L Q A M G V T G L V T T R G L$ A K N A GKY A F $\square \mathrm{H}$ VD L L E GASNKEVVIQ FLK LTEAA GI I S T K A
 N R S G K K M F L H A D L V S GL K T D E A G T E F L C Q

K D K GK TVFVDVDFVS G LVGEGEEAVLFVKKAGADGDIT DKP HQS GKKVLVHLELLGGFKPDQAGINLLKNYKVDGVISSNL


UniRef90 UPIO0024919D0 UniRef90－W8U912
UniRef90 BOTDC2 UniRef90－BOTDC2
UniRef90－A9BSE9 UniRef90＿UPI000288915F UniRef90－UPIO0047A3712 UniRef90－Е6 ЕЗН8 UniRef90－U7VAH1 UniRef90－R4XY06 UniRef90－E3GNH1 UniRef90－UPIO00476D1D8 UniRef90－A4JOS7 UniRef90＿UPIO00414B163 UniRef90＿R5PQ16 UniRef90－J9E8C0 UniRef90－UPIO004794991 UniRef90＿UPIOOO4774331 UniRef90－R5BYS7


EDMPSD KQLAEEDKFPDLQG
EIMPG $\mathrm{L} M \mathrm{MK}$ IIKKLSQEPIITGGLIKEKKDVINADNAGA EI LPGDAAPYFIEHUYKKPVIAGGLISDKDEUEKLFKGVL EILPGCMPKVWVTEKIRQPLIAGGLVCDEEDARNAINAGV



UniRef90 UPIOO024919DO UniRef90-W8U912
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UniRef90-A9BSE9
UniRef90 UPI000288915F UniRef90_UPI00047A3712
UniRef90_E6U3H8
UniRef90_U7VAH
UniRef90_R4XY06
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UniRef90_UPI000476D1D8
UniRef90 A4J0S7
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UniRef90_R5BYS7
UniRef90 UPI0002891E6F
UniRef90-E3CX25
UniRef90-E2ZK50
UniRef90 ${ }^{-}$C7HRX3
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UniRef90 UPI0002895E11
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UniRef90-B2Q5T0
UniRef90_E3GM06
UniRef90_HOUNI6
UniRef90_R2SQH2
UniRef90_D4S744
UniRef90 Q8RQG7
UniRef90 E3DLL2
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UniRef90 B1C750
UniRef90 UPI000318C3F9
UniRef90_D1B6Y8
UniRef90_E6MG54
UniRef90_D2B009
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UniRef90_A6X1S2
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UniRef90 F4PFI7
UniRef90-J2FR58
UniRef90_W7C0E3
UniRef90_D2ULR1
UniRef90 W7D3Z9
UniRef90_W7BV35
UniRef90-E5Z1S9
UniRef90_B9K8F1
UniRef90-W1HSQ6
UniRef90_W1HRQ0

GISTTNTTLWQ
GVSCSNSELWNIL
AVSTSLRHLWQ
AVSTS D SGLW
AVASSNRDVWTM
YVSTGYEALW
A I S T T K
AVSTSDVALW
G I T $\square$ S K KA F W
AVSTSAKDLWKM
A I T T S L R H L WNV
GLLTVS DK S L W
A V A T S R R P L WF
AVTSSVKELWE
S V A T S NLIL WD
AI STSRRRQI WQ
A I CTTNPDVWEM
Y V S T A GVQL W
$G \vee S T S T R S L W$
A $V$ V
AVSSSNYNVWKM
A I S A S T T GLLW
A I S T S D S GLL WNL
GI MT S T RELLWE
S L S V S NK A L WN L
A I S T S LRR F L WNV
GI TTTSEHTLW

| $N$ | $V$ | $C$ | $S$ | $C$ | $E$ | $A$ | $L$ | $W$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $G$ | $V$ | $S$ | $S$ | $S$ | $E$ | $R$ | $S$ | $L$ |
| $W$ |  |  |  |  |  |  |  |  |

$\mathrm{G} \square \mathrm{M} T \mathrm{~S}$ T Q T M WD
AI T T S K RELLWK
AI STSNKKLW
A L S T S D Q GM WNL
GV S S S S EKL
GI S T S A A E L WDL
$G V S T S R D V D L W$
GAT $\begin{aligned} & \text { AS R R D L } \\ & \text { Y }\end{aligned}$
G V C TS DKAL WE L
AI STSNKELW
A $V$ T T S N T K L WK L
A V S S S N K S L WD
GVTTSEKSDWH
GVMTSTKKLW
GV S T S S T A L W
GI T T S NEKLWN
A V A T S D P R L WDL
GV STANEEMWR
AVTTTSNKAFW
AVTTTSNTGDWK
$G \vee T \quad T \quad S \quad D R Q L W Q$
GV T T S Y L P L WQ
GVTTSEQSLW
A A ATS DRPLWD
AVT T S NVIK WR
GAMTSTVELWN
A A AVTKPALWQ
GVGCTS DE D L WD
GFCTTDKEIW
A L S T S K S E L W

| $G$ | $V$ | $T$ | $T$ | $S$ | $K$ | $V$ | $D$ | $W$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $G$ | $T$ | $M$ | $T$ | $S$ | $C$ | $V$ | $E$ | $L$ |
| $W$ |  |  |  |  |  |  |  |  |

A IS TSRKELW
A I S T S S L L E V Y R
A A A S S D S GL WS L
GVTTSYPPLWQ

Y V T T S Y D K L W
A 1 S T S SVKL

SVSTTEMKLWE
AVSTSIKELW
ALSTTNTGVWTL
GVTSSARGLW
A I T T S S K DLLWN
A $\square$ T T S Q K S $\square \mathrm{WK}$

G $\square$ S T S S K E $\square$ WR

G $\square$ T T S E P G $\square \mathrm{W}$




$\longrightarrow$

