## QUERY

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UniRef90 L0M8Z0 UniRef90 ${ }^{-}$V3VDI3 UniRef90_-UPIO0047904C8 UniRef90 G9Z3A0 UniRef90_UPI00046A0F0D UniRef90_D6DXG5 UniRef90_J0ME53 UniRef90_W0AR61 UniRef90-J7SL74 UniRef90-V3PYW7 UniRef90 R9NIR1 UniRef90_UPIO003797706 UniRef90_G9AQ03 UniRef90_D4HUJ1 UniRef90_A0A023V9V0 UniRef90 W1J850 UniRef90_A0A014M9C6 UniRef90_V1TH48 UniRef90_S3IMI2 UniRef90_B2VG62 UniRef90_UPI00036B047C UniRef90_C1J8U6 UniRef90_J1GDV9 UniRef90_W6J9P4 UniRef90_B4F1V8 UniRef90_K8DS27 UniRef90_D4E8P1 UniRef90-J2IXC1 UniRef90_V5AU8 UniRef90_IODV09
UniRef90_E0SKQ6 UniRef90-N0C3Q6 UniRef90_H3REH6 UniRef90_D2BYS1 UniRef90-G2BS24 UniRef90 UPI0004650BC1 UniRef90_G0D037 UniRef90_D3VL58 UniRef90 V3I641 UniRef90-W8G8X2 UniRef90_E5YCS0 UniRef90_W1IT83 UniRef90_C4SX57
UniRef90-UPI000470A64B UniRef90_D2TWT2 UniRef90_V0KF36 UniRef90_C6CGI1

K WTSTAIIT QPDVGQDAGYNNAMNVITGQAAPKVSDLQET K WTS TAIVVTMPDAGQIASYNNAMNILYGTTAPNVTDVQQR
 KWSTTAVTDRPTVNMLSSYYSQQQFLNNLDSPSVDYYKQR


 K WTS S DA VTAP DAGQLLASYNNAMDVLAFGANAPEMTADVQAG


 EWSATAIJTDKPTVNMLGSYYSQQQFLSNLDAPSAMDYFQR
$Y K Q R$
$V Q N R$


 EWSSTAMTDRPTVNNLSSYFSQAQFLRNLDVPPDSDYKRR
 $K W T S V A V I S A P D A G Q Q V N Y T S A M S I V S N D N R F D I T T G I Q E R$
 E WSATA I TD R P TVVNMLGGGFYSQEQR L R S L D S P S V M E YK QR
 K WS A TAA T TASP T I N T L G GYY S Q Q Q FL R NLA QL S A S S YY Q D K WS TTAA T D LDPTVNNLGSYYS QQQFL RNLDS I NVMGYK QR
 K W

WS T T A VIT Q


K W
EWS A A A I
 K WT SIIAVISAPDAGQIA GYSNAMSILSNDERYDIAGIQQR

 E WS A T A I T D K P TVVNMLGGFY S QQQ F L R NL DAK S Q S A Y Y R A




 $K W T S ~ Q A T V T L P A A G Q V A N Y N A A L A D V Y P Q D K P S G B G G Q N Q$

 TAIITDRPTVNMLLGDFYTGQQFLLNLDVRNQSDYYQR

QAN
 WTSKS VVTRPTVNALSGFYSQQQFLNNLDTPVIDEVYQE KWTSSAVVTVPSAGQVANYNVALNALYPQDKLAITDLQRQ

 K WT S EAVVS $\square P E T R Q L D E L Q R V L Q V L D V D A A D D A A S L E N M$
 $\begin{array}{ll}\text { K WT S } \\ \text { K } & \text { QAE } \\ \text { K }\end{array}$ K WS S TA A

K WTS TATVTLDPSAGQVANYNATLAVLYSDDKPSIDNIQNQ





Q WT S T A I I VP P G DE Q $\quad$ Q A L $\square S N L T V L D \square K V D V S A N Y L L S T$
 K WTS TAAVVQPGLEEFQPLKNELNVLNLESSLTKESLYKR

 K WS A NAVTVLPTVNNL GAYYS QQQFLRNLDSLNSDYYKT R


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UniRef90_UPIO00470A64B UniRef90-D2TWT2 UniRef90-VOKF36 UniRef90_C6CGI1
 $V V G R F S S A F S A L S E S L Q N Q Q E P E Q L T I D T A V P L K V S Y Q S D$
 KSGNAHEDAALLVELI DNDQF QPADPARGLNDTVRLVAE QEGDAKADAALLDELVNNLQFTLHDDKK VL NDSVVKTAE VIGRYNAAMSALAESLDNQTDPEKDTVEQAVPDKISYVGS LEGDAKADAALLDELVNNIVFTPRDDKKM LNDSIKKTAE KSGNAKSDAALLDEMVNNIVFTAAADALKNTSDSVKLVAE
 VVGRFSTSFSALAETLANQEKPQKDS DEQSVPDELSYVAS
 FFNRFSTALFALLGENLDNLEKPEKLII EPSSLPLAVSYVGQ
 FFNRFNALISALSEELDNQDEPEKLTDEPTVPLKI SYTAK VFERFSAAFSALAGALENQDDPEKLKIVEVVPLQI SYTAE FFSRLNAALSARSLQLNNQEEPEKLSIEEPTVPLAISYESD
 QENDARADAVLLDEMIVNDQFTARDVPKVPN DIVKLTAE F DKKFQSQSLLISEKMKAVDNTKDADKAPYVSWTLSFTAP FFGRFNSAISALADELQNQPEKESLKDEQTVPDTISYTAN
 QEGVTRAADATLLDELI NNIIKFTPRDDKKTPN DSVKKLTAE QSGNSKADAALLDELINNIQVTFAADPTHNTSDSVKLVAE F $\square$ KKFQSQSLLEEYMTSSPFVKDADKAPYASWTLSFTAP NKEGSARADAALLDELINQQVVFLPGEAAKKTSDSSVRCTAD FIKKFQSA IVALSEKMKAVDENSSKKKDEYTAWRLSFTAP A I GRFNSSFSALAQALENQEMPEKLTDDSTVP LSV TYQGE
 K SGNAHNDAALLDDLINNDQFM PADPAHNTLNSIK LVAE FFNRFNSLISALDEELDNQSKPENLVIEPAVPLKISYVGS KTGNAHNDAALLDDLI GNDLET PADAAHNLPDNVK LKAE KKGDAHADAVLLDELI NAIQFLPRDEVKK DRPDSARLVAE HRKGDVRVDAALDDELVNDIQR FIKKFNSAGVGLSDKMKAVDNNFGKKNEPALGWTLSFTGP FIGNRKADALLLDKLINNIQFTSHNDVKKTN DSVKLTAE HQKGDTRADAALLDELVNQDQFTPYDEAKKTNDSVKLTAE FLKKFSSADVAMSEKMKNDNAMKKDDSQPYSSWTLKSFTGP LFVRFSASLSALS RSGQNDENPEDDKAEPVVPDSITFSAH

 MENDAKADAALLDEMDNNITLTPRDDTKKLVNDTLTLTAE
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 RDDSVKADAELLEKLINNI QDTQGDDKKE DNDSI KLIAD
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 KENDAQADAALLDELINNIQFT PADEKKLVNDQLKLIAE FLLKKFDSTLVAQRIKMTSNDNPKAPTASPYSSWTLSFTAP LFNRFNGTMTSLSMSLQRMKTPLKLNVNPNDPLRISFTAT
 LENDPKADAALLDELI NNTEFT PADNDKNGTDSIKLIAE
 QFGRFGASMSALSSSWLNLDDPLTVNVKTTDSDNVSFVAS RRKGDNKADAVLLDTLINDDQFIPHDEAKKTNDTLKLAAD L L GRF S SAF S ALLAETLDNQEEPEKLTVEPSVVKLTVSYVGQ FLKKFDSA TANVAQRFKMQSNDNPKDAS PYSSWTLSFTAP

 FKQNFDSQ_NTREQYLVNTNYFKRLMKDNYRYYKLSYSAS FVRDFDSQTLRREYLVKTDFYKRLSETAYSYYKLSFTAD FVENYNSRVLSLLIEQVVNKNDPKKDKEDEFYETTLSSFSAG FVQNFNSED LREQYILNSDYFKY LIKNNDGGYKLSFSAT

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TAEGAQMKLAQYTQQVDDKVNQELERDLKDNTALGRKNLQ
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## T

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 TAPDANNLLRQYVAFASQRAASHLNDELKGAWAARATQMM SAAEARKTLATYLEKDNQRVISELDEDLNQSVNSNDVSLK TAESAQKDFTQYI QKVDEQVAKELYVDLKGNI ELQQITLCN
 TAEGAQKQLNQYI RQVDEQTAKELGVDLKDNDTQQUSALKN NAADANKGLKQYVDFASQRAAQHLYDELEGAWAARTQSMK TAGDAQTVLKGYVDYDSQUVEQETMENDRNQDTDKTKVVE GAEQAQKTLDKYI QQUNKQVVQELDADLQVNI DSKLDEDLK TAADANKLLRQYVSFASARAAQHLYDEVEGAWAARTQSMK TAADANHLLRQYVAFASQRAASHLNKEIQGTWAARVTSDK TAQDANNLLRQYVAFASQRAASHLNDELKGAWAARSAQMT TATDARTVLEGYI QFVSALVEKETMQNIRNQVTLKTRMEK SAAQANQLLRQYVAFAAKRARANLDAGLQGAWAARTVSMK TATDANQLLREYI EFANKRATTNLLDELKGTWATKTQSMK TKEEAQQVLAGYI QY ITSNLVVTESLENI RNKLEDKTRFEQ
促 SAEEARKTLTSYI DKDNQRVIDNELNQDLVTNDNATMKDLK TAGDANNLLRQYI AYASERAARHLNDELKGAWRARTDQLQ GAAQANQLLRQYVAFATHRASANLNESLQGAWAARSIFLK

$T$




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## +

 TSKEAHDVLSGYUNYVSSLVVRDVMEDLRNKLEVKTNVEK
##  <br> \section*{}

T AKKA QQELTKYI QTINAQVVDDYSADIMRSLAIRQRELGG
 KAHDAQRVLKEYI NYAALAVQREVLENLRA VVELKAKSEE




 SAKKA QEELSKY I NQVNYVVVVEDGGDDIKRSVVNVKTRELDK NPQDASNDLRRYVQFANQRAVNHLNQNLAGNWEARDRSER



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 QQLELDRVRLTNIHNTNLQRLNYSLAVANAAGIKKPVYSN AQVKRQEDVAQAVFTRQRQRI EQALKVASQQGI KENRAPV SSLDTQELVAKEKRDKRLQVLRQALVVAQQSNIKSTEVQQ A QVKRQEDVANAVFQRQQHRLEQALKIASQQGI NEKQTEA AQVKRQEAVAAAVYQREQQQLNQALKLALTQGI DRSRTDV A LVKRQEMVAKAVYNREMNVLQQSLKVAEKQGIRRNQTDT EKLALELIKLKNQLDAKI NRLHYSLEIATAAGIAKPVYSN SQIKQQEAVSQAIYNRELHNVEQGLTIARQQGINHNQTSK SQ KQQESVAKAAYDRELHAVEQALQAARQQG| RHNAAET DALELERAKLANDQDTRUKRLNYSLQVAKAAGIVRPVYSN
 GLLDTKVKVAKEKQQKRLDELNQALLVAQQSNITKYAVSQ ALVKRQKMVAESQYQRETGQLKNAA AAAQKQGUSRSRTDV QQLEDDRVLTNIHNANLQRLNYSLEVANAAGIKKPVYSN AQVKRQEAVAKAIYGRQVNSVQQALKILQQQGLEQAKSNM SQVERQDRVAQAVFQRREHLLEQAVKIASQQGLRENRSGT
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UniRef90_B6VNS2

T QDVT QDTMFLLGSDALKSMIQNEATRPLAFSPAYYQTKQ
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 MLATLNVGPTLDKTE QTYRYLRTPEDPVTRDS






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





 $M L A T L N V G P V L N A K F Q T Y R Y L R T P ~$
$M L T T L V G P A L D E K F Q T Y R Y L T P B$


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

 Y L A QL K KLLS F A DVVKLE P F R Y QL S P S M P V K K D G $M L S T L Q A G P R V D Q Q F Q T Y R Y L R T P E E P V K R D S$ S Y M AV K A L A HKA DTAFS F Q Y V M K P N L P V R R D S








 Y L A Q L K K L L S F S D V K L E P F R Y QL S P S M P V K K D G ML NTLNVGPTLVNTEKTWRYLRTPEEPAKRDS MLASLQAGSGLDKLFQTYRYLRTPEEPVTRDS


 TLLDI K NLKVTADTVGVYRYVMKPTDPVRRDS YLSKLQQQVKVNDVDFQPFRYQMNPSLPMKKDG $M M M T L N V G P T L V K S F Q T W R Y L R T P E E P V K R D S$ A L LAA E N N L N L QV D N L Q S Y R A I M Q P D L P I R R D S
 Y L T K L E Q V K V G N DV D F Q P F R Y Q M N P S L P L K K E G
 RLA E L K KLLNLAADVDFQPFHYQMVPS LPVK S D G AL DA L N N Y E EN L D GLS A Y R Y I QR P D L P ELLR D S R L A A E L E K
 AL A ML E N GPALLA DRFQTYRYLHTP E EPVVQRDS YV E QL A A M NVSDVK F TP F K Y QL S P S L PVVK K D G


Y IE NLK AVN VNK DDFEPFRYMQQPYEPTAKDS R L A E L K K L N V E ETMCTMVNF QMSAS LDPMKNDG
 Y I K S L E KVNNVD KV DFKP F RYMQE P Y EP TSSK D S YLA QL K KL SFADVVKEPFRYQLSPSMPVKKDG YL D K L N R L E IP NVN V VP FKY LQQPTEPTKK D
 Y L D K L


VLA MLE S GP ALLA DRYQTYRYLHTPEEPVQRES $Y \mid \operatorname{INELK} S L R I N N K V D F Q P F R Y M Q A P Y E P T A K D S$

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UniRef90_A0A023S933
 K WTS TS I VPA GEEQLQVLDKNLAVLDINLGDTSNYLLST K WASTAVIVPPGNEQMQRLTN SLTV KWTSQAA TKPMLDEMKQLRATLNDLDVDTGVNASSVYQK
 K WS S SAS $\quad V K$ PQLEE $\square Q P L K D \square L T K \square E V L N Q P S V T S V N T E$

K WTSTA ITTQPDAAQVATYTNALNVLYGGNAPK】SEVQAN KWTSYAELVPAQARELSSMHKELNDI QVDASPAQSDYYRQ QWT STAIIIKPSDESIQVLDKALDII IDVDADYLLSTFKQ SRVAVLPPSDSDVAGFNVVRGKDSGLPPFTVSQVYSV


 $K W V$ E ATI SPPDLGQLANYPEAVNLNFPTTSPNGNELTTR K WTSAAVVTPPEPVQWQELEKTFTVLDLD IK IDDRTEVFNL KWSSTAVIVQPRAVGFQPLQKVLQVLNIESGISQKLLYER

QWTSKSVVIPPKVANLGDYRSEYASTLDTKDFSQDKVSEK QWTSKSVVI APKVANLGDYRSEYASILDIKDFSQDKVSEA

 $K$ WS STAVVIPPSSEDDNTLSAQLSVLDVKIDLSAQQIFNA WSAKATVSQPQLQDUAGYQQVVKRYQPLFDVYQEDIFKR
K WS STA LVDPPELKEVNAFKAQLDVLDVPVDLSAQRVFTA WS SNAKITEAQPQDLAAYQRQVKQFQPVFDVYQEDLFQR WS SDAKVAEAQPRNLSTYQQQVTVLVSQELDDQVDVVEV QWTSTAVIVAPRSTELGKKLRAEYARIIGGDNDSTGGLSNS WS STA K V
Q WT S
WS S S A K I T K A Q P Q NLL A A Y Q Q Q V T V L V S K E L D S L V D L


KWT SQALAP TINDVA NLNYGRTRESELAPYTVKDVYDV SLPE GQLSNYPTAVSLSLLNSADTYDMSLPTK


Q WT SKSVVIA PKAANLGDYRSEYAS ILDDKDFSQDKVSEK
 SQPE GQIAEYYNAMNVMND VGYDYD $K W T S$ A $V$ SQP QLQ G A S Y QQAVKRYQPLFDVYQED I F K R
 WS S K A KI TQPPQTQDIAAAYQQQVK QFQPVFDIYQD DLFKR QWTSKATVIAPKLTELGEYRREYNRDLRVDPIDPNALSAR
 QWS AS AVVVAFA QLQQD S A YQQQVNVYQEDGTVLVSDD F QR WT S E A V V L V P P R R L S D KWSAK GYVVPP T QK DI E NF N Y GRAK D S QLTP Y T I K DVV G V


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WT A R A S V L P P S L N EI S GFN L G R K E S D L G V F S V K D I Y DV
 QWTS Y K A EVVIVT S D G K M Q P L E S S L S V L N I D L N I I T A D D L L M D AKYY STP WS S K A K V V WS A K A TVVSQP QLQ N T T A Y Q Q A V K R Y Q P L F DV Y Q E D I F Q R


Q WT A HAI I Y K P K QR D T L E LD R LR T A LD DQ GLK S N NALYN D $A K L Y I Q P P S Q N E \| A Q L N Y G R G E G T G L A P L S V K E V Y E A$ WS SNA K I A A S Q S Q N E A Y Q Q Q V K K F Q P I F NV Y Q D D L F Q D

I LPPSLSDVAGFNQGRTRETGLGPFKVQDVYSV E WRSTARVVAPRLSNTTELRSVQR\TDNSSDVDVSALMNR Q WT A K T Y I Q A P R I A E L G S Y R Q AY A R L L N Q P L D T A N GL F S D AKVSVQAPKI S QVVGFNTGRDKGDGLAPFSPNDVYAD
QWTSKATTIAPKVADMGSLRSEYAN LLNGKEFTSKDVVDN WS SKAR V VEPQVNDFA IVRQQVK SFQPDNLVNPSQI FA Q




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| UniRef90-C4UEK2 | TQNFNSED LREQYI INSDYFRSLMKDNVDDYKL |
| UniRef90-B4F100 | NNYNSR VLREEYLVNTDYYKNLDEEF |
| UniRet90-G9Y1M4 | A F F S RMSALAFMPEKP |
| UniRef90-H5 | AI VELSK KMKSVDDNTSKKNDKSSLYVS |
| UniRef90-Q7NOP7 | KLIEKIVNDNUSSSSKAEKDDETKLTFSAG |
| UniRef90-A0A018RCN2 |  |
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|  | LYGQFKRKFLEQSEWLKNDPKKKDLTELDKIGLKVTFSAE |
| UniRef90-UPIO00368 | FNSANNLYSDWFKRITASMENIENRN |
| UniRef90-16SUET | NLQSELPSLEERVGSVDSV |
| UniRef90-C5BCN1 | LLRERLLSSLAQKAFTLKNSQLDQATESKEYTYYRLGVSAR |
| UniRe99_-VSU48 | VFNRYQANETEAYTRLQEKATSPVSTITKSKEMGYYVIS |
| UniRet90-K3K7W9 | KKFQSAIVALSEKMKAVDDNASKKKDEYTSWTL |
|  | RFKALVAKDNSISTPKKKNND |
| iRef90-DOJFR4 | VFNDFKTAFNALIEERUENDSSVNPLKDKEYRYYKLSYSAS |
| UniRef90 R9WN05 | NDFKTALKLLCNSLVDKNTGPDPKKDPNSIGGV |
| UniRef90-13DHW5 | NDPKKKDLTELDD |
|  | IQYRSKFKAMLDKLDNKNDPLDVKDSDDSD |
| UniRef90-UPIO0031E6456 | F\|SAYNSSNNLYSEWFQRUSG |
| UniRef90-M7 | FLQEFNANFTEFNKEMMNQDEPEQLQKKEEGMFTLSFQSM |
| UniRefocters | MKKNPNDEFKKQSLLDVISNDKSASTKDNNYFRLK |
|  | NQYRSKNNLAEKİ |
| UniRef90 UPI0002DB9487 | KRFVNTFALYARWFERISASKVDKKDRNSP |
|  | LYGQFKREFLSQSSLIKNDPKKKDLTEDDKDGLKITFSAE |
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| UniRef90-X6ZLU7 | NLEADENTLDESDFNEDFTDKVPDKQQPGYTLIIERK |

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FLLEFKSYDNTFKQY\|LEQDLDPADKKGEQPGПRLSFSFF VRDKFFRTAFLLYA QFNNMLKMTLAGKDMPDRYVLTASLE F $\square$ DTFNSSNNKR】FWFEKDTSS\|ANKGNKSSPYFVHFQSM K STDDDASKKNDKSSLYVSWTLSFTAP FVRNLQADFNADYKRFTDQ\|S DSDPGKDFPGRYLVADEQE AFRTFLRKTSALFQELMENEDTNAPDDKEQTTDYTLSFVAD LITKFKETQSLSSEQAKKDWDTPPKEKDNDSYYT


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| $S$ | UniRef90_X6ZLU7 UniRef90_F3VUC7 UniRef90_D4C4E0 UniRef90_J1EMX6 UniRef90_UPIO0037AE5AF UniRef90_W7NLG3 UniRef90_G2L6W5 UniRef90_K8WQW4 UniRef90_D6NLY6 UniRef90_B0BR52

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 TPE EA QKSL LAVLNKVNKETSSSFYSNASKALQVRMDADN TS K E A H DVVL S G Y I N Y V S S L V V R D L M E D I R N K L E V K T N V E K
 T A E G A Q R R R L A E Y I Q Q Q V D E E



 D P E L A A A E W I R R R Y L K A K TA Q L E L A D L L A E L N Q Q TRT T L Y Q T A A Q A L D TR R H A V Q




TKES SYTLL LN EY

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D LEAQETLQQQFIITFAGKEAYQLEVENF LIDDFNEVVS DUT

 Q F $V V_{V} N$ Q SAAK GVELVGGKYERASELAKKEIVKKDMGSEADVLARNNDR
NKEEAASLLTGYMNY VGSLQNNELCDALENNRNSQHSVLL D PRLLA ATWVSNYAEMAAERAK SELLLSGARSDDS DMA D NL D
 D P E R A A S WV R R Y I A D A A E I S I Q EMML N N A H R E I E V V K A R D I E

 TPK E A Q E V L T E Y I N F I N A T V L T E D K I D F L A D I K I A D D N L E
 D P ALA K K NL Q S A L D S L S D D A R K Q L D A LMY S SL R ERA N S L K





UniRef90_A0A018RCN2 UniRef90_D4F3J1 UniRef90_C4U0G8 UniRef90_U9DP30 UniRef90_I2NF21 UniRef90_UPI0003682E63 UniRef90_I6SUE7 UniRef90_C5BCN1 UniRef90_V5SU48 UniRef90-D4C4B9 UniRef90_K3K7W9 UniRef90_W1IXJ9
UniRef90_D0JFR4 UniRef90-_I3BGV0 UniRef90_R9WN05 UniRef90_I3DHW5
UniRef90 K8XCJ8 UniRef90_UPI00031E6456 UniRef90_IODR95 UniRef90_M7KYL2 UniRef90_C4SZ47 UniRef90_K8W5R3
UniRef90_UPI0002ECA75E UniRef90_UPI0002DB9487 UniRef90_M9QXJ0 UniRef90_UPI0002D5DC41 UniRef90_UPI00029A866F UniRef90_J0UJB6 UniRef90_A5KZS4 UniRef90_UPI00037F5E39 UniRef90_K0GEV9 UniRef90_D1P4F6 UniRef90_X6ZLU7 UniRef90-F3VUC7
UniRef90- S2FV48 UniRef90_D4C4E0 UniRef90_J1EMX6 UniRef90_UPI00037AE5AF UniRef90_W7NLG3 UniRef90_G2L6W5 UniRef90_K8WQW4 UniRef90_D6NLY6 UniRef90_B0BR52
UniRef90-J2MHL3
UniRef90 F9T0J3 UniRef90-W0Q5B5 UniRef90_B7VHQ6
UniRef90_F9SJ67 UniRef90-K1IPS8 UniRef90_J7UK60 UniRef90_W0BVG8 UniRef90_UPI000472B1D3 UniRef90_K8X9B9 UniRef90_M4XRE4
UniRef90 C4L7N8 UniRef90_UPI0002D939D5 UniRef90_A6V2R5 UniRef90_A0A010SRV1 UniRef90_U9CH62 UniRef90_UPI00047D6EB1 UniRef90_Q8KHM2
UniRef90_A1JMR4 UniRef90_UPI00035D6D67 UniRef90_J3A6K2 UniRef90_C9P0E2
UniRef90-D6NLW0 UniRef90_D0IMS9 UniRef90-K9NHD9 UniRef90-V2LNF1 UniRef90_V9WTC5 UniRef90_UPI0002EFB2B4 UniRef90_I6CP78 UniRef90_G3XCY2 UniRef90_UPI000361284B UniRef90_W0FTW7 UniRef90_S6BF76 UniRef90_Q65UU8 UniRef90_V5FA94
UniRef90 D0Z7Z5 UniRef90_U5VB82 UniRef90_U4E657

GATFKDDSDFS LGGVDALRQKLDIE Q T DPSELDAALKNS QL G TVIVND DP D F TVIG S D T L S K K L E I I E K S D P V L I I D D P D L L N R K L $P E N D S D S Y L F M L G E K Y L Q A Q L D D A K N S P V V Y P T N Y Y S T E R$


 $G Q A V K D D P L F L S V Q T V L N A N W K L K K Q S D T$
G L L K D D P D Y S L G A D AL K R K L Q V E D T D PT KTN F DMA NRLL

 S G NV S G S Y L F M L G E K Y L Q A QV D TILK N T P L V Y P L N Y Y NIQ A S G NVVSGS Y L F M L G E K Y L Q A Q V N T L K N A P L V Y P L N Y Y N I E K | S | $K$ | $L$ | $A$ | $D$ | $G$ | $T$ | $Y$ | $L$ | $F$ | $M$ | $L$ | $G$ | $E$ | $K$ | $Y$ | $L$ | $Q$ | $T$ | $Q$ | $L$ | $D$ | $I$ | $A$ | $K$ | $N$ | $N$ | $H$ | $V$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $S$ | $V$ | $Y$ | $T$ | $N$ | $Y$ | $Y$ | $S$ | $T$ | $E$ | $R$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $S$ | $V$ | $A$ | $I$ | $N$ | $D$ | $D$ | $P$ | $D$ | $Y$ | $A$ | $L$ | $G$ | $S$ | $E$ | $A$ | $L$ | $E$ | $E$ | $K$ | $L$ | $G$ | $L$ | $L$ | $K$ | $N$ | $R$ | $D$ | $L$ |
| $A$ | $L$ | $I$ | $S$ | $E$ | $K$ | $L$ | $Q$ | $N$ | $R$ | $V$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |




S
I
$\square$ G N D K E I I F GIDE L G S K G L
S K LAA D G Y L F ML G E K Y L Q A Q L D I A K N T K I V YP V D Y Y S TE R




 SA EMS GDMTYMRGSK A L E A ELVNLLET R D DP F I K E L R G

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G
SKLLA DGSYLFMLGEKYLKA QIDVASEKGIVYPPRYYQiNA


 G GNMA GQLIVMRGTKALKAEI ENLESRDDPFTDRLRELQAA

 Q N F G D K E L F Al L G S D A L K A K V E A L S K N L S S V I E P R L E Q L N S D Q M M S G N L M Y M R G S K A L K E Ell LVL E A R D DPF:lPAL R T L Q E
 S K LIA D S S YL F MLG E K Y L K A QI DVA N E K GVVVYPPRYY QI D Y
 SK L S D GA Y LF MLLGE KYL K A QV EVLN QEA I VYPP RYYQV T A
G
$\begin{array}{ll} & \\ & G \\ & G \\ & \mathrm{~S} \\ & \mathrm{~S} \\ \mathrm{~B} 4 & \mathrm{~A} \\ & \mathrm{G} \\ & \mathrm{G} \\ \mathrm{BB} & \mathrm{E} \\ & \mathrm{G} \\ & \mathrm{A} \\ & \mathrm{P} \\ & \\ & \text { A } \\ & \mathrm{S} \\ & \end{array}$

|  |  |
| :---: | :---: |
| UniRet90-C4UHK4 | YLDKLNALKEI PKVDVVPFKYLQQPTEPTKRDA |
| UniRef90-C4UEK2 | YIDKLNALEISKVDVVPFKYLQQPTEPTKRDA |
| UniRef90-B4F1Q0 | NIQQLEQUKLGDLQFVPFKYMLKPYEPTKKDA |
| UniRef90-G9Y | TLQALQKIKLSDDKFEAFSYSQKPSLPMDKDA |
| UniRef90-H50 | VVNQLVVAK |
| UniRef90-O7N |  |
| UniRef90-U9 | NLLD |
| UniRef90-D4F3J1 | YTERLSQ |
| UniRef90-C4U0G8 |  |
| UniRet90-U9DP | QLALYENEKLNFDRVAVFRQV |
| UniRef90-12NF2 | QLAKLTKLAPQLESVQAYHYLSSP |
| UniRef90-UP10003 | KLDMLNNLEDDSVFQTFRFLENV |
| UniRef90-I6SUE | QLALLESKQLS ${ }^{\text {P }}$ |
| UniRef90 ${ }^{-}$VSU48 | QEKLYSSLRVNTVEVAVFRQV |
| UniRef90-D4C4B9 | WLTLLSNFRLDERHFHAYTLVSPPSLAVHRSS |
| UniRef90-K3K7 |  |
| UniRet90-w |  |
| UniRef90-13BG |  |
| UniRef90-R9WN05 | 㑑 |
| UniRet90-13DHW5 | QLSKLTKLAPLVENVKAYYYLSSPDYPVVKD |
| UniRef90_K8XCJ8 |  |
| UniRet90_UP100031E6 | ML |
| UniRef90_10DR95 | Y: KNLSELDDIDTL |
| UniRef90- C4SZ47 | N1 DLLRNIKIDNTEFTPFKYLQKPEVPTKKDG |
| UniRef90-K8W5R3 | Y D DLQELTSKELDFTPVKFILTPDLPLHKDS |
| UniRef90-UPIO002EC |  |
| niRef90_UP1000 |  |
| UniRef90_M9QXJO | QLTKLTKLEPSLLDNVKSYYYLS |
| UP10 | KLDMLNN |
| UniRef90-JoUJB | ELEQLEPLRHYKINSLLYFTQRAP |
| UniRef90-A5KZS4 | KLTMLNNLDTDTV |
| UniRef90 UP1000371 |  |
| UniRef90-KOGEV9 | QLKKLDVLRLKDLKAQAFSYLASPSYP |
| UniRef90- X6ZLU7 |  |
| UniRef90-F3VUC7 | DVNFTPFKYQLSPSLPVKKDG |
| Ret |  |
| D4 | SLI S S FQLK |
| UniRef90 UPI00037AE5AF |  |
| W7 | RLEELEKISIRNTNFPVFSYQVPPSYPEKRE |
|  | QLSELEKKVEKESAVSGYDYLSSPDYPVVKD |
| UniRef90 G2L6V | R |
| UniRet90 K8WQW4 | F DT SAEKWS |
| UniRe | SQLGLETHSAEKWSVNGFYY DQPEQP |
| UniRet90-J2MHL3 | GVKVKVGDVSVYRMD |
| Un |  |
| UniRef90-W005B5 | Q EQLEPLKAKTVKTKAYRYQASPDYPIINKD |
| E9S | ML ANFKVDNVEFQTFRYLENVSQPVTRD |
| UniRef90 K KIIP | EGIAFRPFSYLDAPDEPLSRD |
| UniRef90-J7U | QLEFLNRVDV |
|  |  |
|  |  |
| UniRef90 K8X989 | T |
| eef90-M4X | EKKLPEFKVDTKSYRYQRAPSEPLTRDG |
| 4L, ${ }^{\text {d }}$ |  |
| UniRefo- AbV2R5 | E |
| UniRef90-A0A010S | QLDFYKGLERGTYEIAVFRHLDQPTSPIK |
|  |  |
| UniRef90-UPI00047D6EB1 | D |
|  |  |
|  | YL |
| UniRet90_UP10003 | V |
| $\begin{aligned} & \text { UniRef90_J3A6K2 } \\ & \text { UniRofan_CaPNE? } \end{aligned}$ | WYDDMLKY |
| D6N | K WSV |
| UniRef90-Doim | EKWSVNGFYYLDQPEQPLTRD |
| UniRef90-K9NF | KYDFYSSLESSULNVEVYRTVELPDSPVKK |
| -9 | Q |
| 俍Ret90-V9ZXS7 | L ALEGM DALAFRPFSYLDTL |
| $\begin{aligned} & \text { UniRef90_V9WTC5 } \\ & \text { UniRef90_UPIO002EFB2B4 } \end{aligned}$ |  |
|  |  |
| UniRefo |  |
| UniRef90-UP1000361284B |  |
| Ret90_w |  |
| eef90-S6B |  |
| iRef90-Q65UU8 |  |
| UniRet90-V5 | NRDA |
| UniRef90-U5VB82 | AMAFYRSTQVDPAVIQVYRQTESPDRPVK |
| Ref90_U4E6 | KLDLLGKLKINDIQFDNFRLLDDITKPNSRD |
| Ref90_A0AO | QLIS SLIKAlLKFENADFQSFNUI I D S PEEPFTRD |

UniRef90 A6ADU0
UniRef90 C5S1B1 UniRef90_UPI000382CA97 UniRef90-A0A018ZL94 UniRef90 UPI000363ED9A UniRef90-V3A7K8 UniRef90_UPI0002197CB7 UniRef90 J8V7R1 UniRef90- F4HEY6 UniRef90-A0A024E7N2 UniRef90-F4DHZ UniRef90 Q1ID96 UniRef90-C9Q3M2 UniRef90-W9TAL4 UniRef90-F5PKF2 UniRef90 S2KQSo UniRef90-UPIOOO4670C44 UniRef90-Q2C7A7 UniRef90 J3GU52 UniRef90-UPI0002E5377B UniRef90-P44063 UniRef90 C4S6D6 UniRef90 UPI0003955B5E UniRef90-UPIO0046E509F UniRef90-UP100030BACFE UniRef90-UPI00036C86D2 UniRef90_Q9JRS3
UniRef90-E3BJ74 UniRef90 UPI0002556BD3 UniRef90-UPIO003132912 UniRef90-D4FB19 UniRef90-V8GAD7 UniRef90-W8UFU1 UniRef90-X4XRL8 UniRef90-DoGV84 UniRef90-UPI00037E641B UniRef90_E4RDS5 UniRef90-G8Q1S0 UniRef90-K8D6E2 UniRef90-UPI0003785B80 UniRef90_D4C4B4 UniRef90-L1LSG8 UniRef90-UPI0003F4BED8 UniRet90_Q842P3 UniRef90_B3FN90 UniRef90-J2UZW4 UniRef90-UPIO0036A35C9 UniRet90-R1GU00 UniRef90-UPIO00306DCE6 UniRef90-F9RKG4 UniRef90_A0A024EZL3 UniRef90-J2YDI6 UniRef90-A0A059L6A2 UniRet90_WOLLP5 UniRef90- J3F1G3 UniRef90_UPIO004747E15 UniRef90-UPIO0046F9CEF UniRef90 M9S5H8 UniRef90-UPIo002EF71F4 UniRef90-H1RTE9 UniRef90-W0A132 UniRef90_F6CZ43 UniRef90-J3E1V3 UniRef90-O9XBT8 UniRef90-W8PGQ8 UniRef90- XoNXL4 UniRef90_UPIooo36B8944 UniRef90-W7NHD9 UniRef90-F9THH1 UniRef90-BOKTY6 UniRef90-J3GAH5 UniRef90 UPI0003A13F84 UniRef90_UPIO003B2F588 UniRef90-UPI0002F72303 UniRef90-Q1ZRK1 UniRef90-UPI00036002C0 UniRef90-R8ARZ4 UniRef90_UP10004650A92 UniRef90'UPI00042A4745 UniRef90-F2P9Z7 UniRef90-UPIO0036C79FD UniRef90-C4S7J8 UniRef90-UPIO0026C7D04 UniRef90-UPIO003736BEE UniRef90-J7U1U5 UniRef90'UPI000374959B UniRef90_UPIO002FE0424 UniRef90-A1SRR6 UniRef90-M4U5Q5 UniRef90-Q1Z8B9 UniRef90-T2HBE8 UniRef90_UPIO003B58AAE
 QWTSKAEVIAPKVTDLGSYRKEYARILGQ EFDAGALANG QWRSSAAVVAPRLVDUQH $\square N N P K S \square N N P K E D \square D \square N K F L I N$

## VLPPSLSNVAGFNGRTKEVGLEPFKVQDVYEV

QWSTKAVITDPKPEDLLPMRKQAGALGLQGFPSGKDLYQE
QWTSKAEVIAPTTVSLNNYRREYARTLGSD FDVK AK TYMLPPTQNDIADFNYGRALNSDLPPYSVKDVYDV AKALVSEPSFSQVAPLQLAVDKIQALSSLLEQPAVYNS WSAKATVSQPQLQGITSYQQAVKRYQPLFDVYQEDIFQH ASVSVVPPTLSQVAELNKGLKASGNSPADAEKUYQT AKLYM QPPSQNEVAQLNFGRGEGTGLAPLSTKDVYSV WTSDATVTRGQYKDTANLRSQVTNLYSVDDVSVNNIFER
 KWTSKSFQS DDS $\square N A S \square S L L N D D A N \prod H Q D D F F E E$ WS SKAETGTPNVTNVASFQQQVNQYQPIFSYDREQTFTR


QWTSKAETIAPRDTEDGDYFKEYAR\DG SEFDASMTANN WSSKAKIIQPQDQDFAAYQNVFNVFQDDGTVLISKGFKR VEPPSRDEDAQLNYGRGGDSGLSTYSVKDVYDK EWTSKAQTMVPKAVQLGSY四EAERLVYYLDGVNGSSVYQK QWTVKAYVSPPRIAQFEDYRRAFARVSGIGADPQV DANQ EWSATAITDRPTVNMLGGYYSQQQFLRNLDKPSVMDYKQR WSSKATVTQPLLQDUAGYQKVVQRUVSEALDSLDDVFKR

AK $\square$ F $\square$ MPPTQNG $\square$ AE $\square$ NYGRGKSTE $\square D P Y S \square Q Y \nabla Y D V$
VSNFNSFNNKRQFLIEKGY【D MDAEAA QWTSVVFTSSPELGQLSNYPEAVDLLREQT WADKADLSTK ARVFVLPPTQNGAADLNYGRTRESELDPFSVKDVYDV KWNAEVTLAKPYLNQLANYPRG VILSQMLLSPTDDTSN

AKAFVIPPTQNDWENGNYGRDDQSKDPQFTVKDVYSV
WS S SAKTAVPQVQDFTQYQSQVKQYQPVFDVYQEDVPQQ WSSKAlI AAPQIQEFSAYQKQVTVLVSQSLISPNSLLQQ RWSSQALI GEPTLQQПGALQLKIDLIRGDSQRDFADLKTQ KVYVSPPTQNGUAELNYGRGTSTEDEPYSVKQVYDL KWTANAVLLPPRTAQLGDYRRNYGLVLQQSVLQQSDYYKK WTAKAYULAPTDGD AAFNLSYDKASGLKPFKVKKVYSV KWTSTA


KWTAQA VTVPQVSDFSQYQKMVNGFQPAFDTYQEDLFSL AKLFVEPPTQNDRAQLNFGRGGDSGLTPLTVKEVYET $K A T V T Q P E L S Q V V T F L Q Q V K Q Y Q P L F D L Y Q E D I F Q R$ AKLFIIMPPTQNGIIAELNYGRGKGSGLEPYSTQYVYDV WTSKAVITAAQYQNTANURSQMTNGYUDDSSKUNSIRES WTSKAKVTTPQLYN AEYEKQVSQFQPDFDTYQEDLFAQ


WT AKAVITTPKVAEVADFSQTVKRDEDDNLIERESLFNR WTSTAVI TTNKARDI RIFSENIDNLYVNSLVSQALDEKR WVAK GKV IAPQDNDVATLYSQVGAILNADLFEPDTLFKN E WSANAMTDRPQTTQLGSYFAQQQFLRGLDLPPVQDYRSR KAYLDRPYSSEIAEDNSGRTSASGLEQYTPEQVFAY

WПSKAVITTGQYQNTANDRSQVTNDYDNDSSK DNKDSDA WSSEAEITKAELQDR $\square M Y Q Q Q V K Q F Q P A F S \square Y Q A N \square F Q R$
ARTYPPYPTDTEALNYGTTFTKPGKADTVYNTESS WSSKARIVEPQVNDFAVYRQQVKSFQPIFDTYQDDiFAQ K WT STAEVTATELRDMPELSQQMNALNVTAVSDLPAAFNV WTSVALI SEPSLKQVNEFQLNDDKLKNSIPPDVSSLQQE WA Q KPPSLQEVESLELSVNQLINASPFEKGALYGD


AKVFLAAPATSDIADLNYGRTSQTGLEPFTSRKVFDI

## UniRef90 A6ADU0

 UniRef90 C5S1B1 UniRef90_UPI000382CA97 UniRef90-A0A018ZL94 UniRef90-UPI000363ED9A UniRef90_-V3A7K8 UniRef90_UPI0002197CB7 UniRef90_J8V7R1 UniRef90- F4HEY6 UniRef90-A0A024E7N2 UniRef90-F4DHZ1 UniRef90- Q1ID96 UniRef90-C9Q3M2 UniRef90-WTAL4 UniRef90-F5PKF2 UniRef90-S2KOSO UniRef90_UPIO004670C44 UniRef90-Q2C7A7 UniRef90-J3GU52 UniRef90-UP10002E5377B UniRef90-P44063 UniRef90 ${ }^{-}$C4S6D6 UniRef90-UPI0003955B5E UniRef90O-UP100046E509FUniRefon-UPIOOO30BACFE UniRef90-UPIOOO30BACFE
UniRef90-UPIOOO36C86D2 UniRef90-Q9JRS3
UniRef90-E3BJ74 UniRef90-UPIO002556BD3 UniRef90-UPIO003132912 UniRef90-D4FB19 UniRef90-V8GAD7 UniRef90 W8UFU1 UniRef90-X4XRL8 UniRef90-DoGV84 UniRef90-UPIO0037E641B UniRef90-E4RDS5 UniRef90-G8Q1S0 UniRef90-K8D6E2 UniRef90-UPI0003785B80 UniRef90-D4C4B4 UniRef90-L1LSG8 UniRef90-UP10003F4BED8 UniRef90_Q842P3
UniRef90_B3FN90
UniRef90-J2UZW4 UniRef90-UPIO0036A35C9 UniRef90-R1GU00 UniRef90-UPIO00306DCE6 UniRef90-F9RKG4

FLLQEFNATF ${ }^{50}$ LIRKDLLNK ${ }^{60}$ DQRDQAKE ${ }^{70}$ GAFTLLSFQSV


## FTRNDQADETRपYESFSKVLS TKAPDKNQPNRYQVVVEHE


 FTNDFNATESKDAQRIKASFDAEDATMEENDTVVLSAQSU
 LFGQFNLTSESYAWFQKISASIVDKNDENSPYELSFQAT FTDAFNSTLSTLAERESTPDEMRSFYASDGDFYEVAFQSM LWDRFNSDFSVQA PDAKNNPDYFVVKVEGK YVRELNSEDVLYAQFLSKLTVEQVTKDGPNRYVIAASTE FINNYNSR VLREEYLVSTDYYKSLDEEFSGEVNLSFTAP FLKNSTSKEIARNKLAEKNDSPKPLNKDTKDVLEVVTFTAD MVGNSKADAAMLDELINNIQFTPG DFTRALNDNVKLIAE HLQALQSELPSLSEEFANLLTVAPAGKGSSTVFTVSFQSVAS YATVTVLAE FTRNLQAESDRQDERFSRELVIKAPGKGNPDLFSVTAEGN TLVAQR $\square K M V S N D N P K A A S A S P Y S S W T L S F T A P$ GITDDKGKRALLRKMVNGDSAVALD APSDNDTLSFGAA VFNLFLANDDAYDEREKPNSPVAIFKPEVGNYRVLTFSST FLRNLQAEDSLYSEFSQSLVVSGDAKASP DGYSLTLRGE
 KLYEEWFERIQASAVDKKA NDDFTLSFQSVV F LKKNFKNTYLALYEKLSKNLVISMVGKDALDRYSVVILNN FTSNLQSEKSRRDQRLGSQDFAEVLRIEPPTKYIVIVEGH LF LLKKMAEGDDAKAPDKLSENDI LSFAAG LFQSFDMAFESNKNKRNFLDSNAHADKSNQNIMEEKKVQAA IFNSFVAAFNLLNSLADGI SARVQDKNSSNVM LTFSAE FARNFFRDVYLLYENFSRVLIVGGPGKDTPERFSVVVQSD F LRNFFEEYYLLYDRFSKDLTVALTDKSSPDRFSLAMQST FTRNLRSENNOLREAFNKKLVVSPDVKNNPDRFEVAAOSA FEQRSEAALNSGYHGFSG\|VTVKPDPSSPDKYTVAARSAS VFANFVSRISA ETLTFLPETPLDTGPRNDSYTVSFSAE FRKYYSSQNVLYSSNVKNNDQNAKNYSDNRGNYTLTYNSS FVRRLITDEAKQRQALYGRMQKIVLKVTPPSVYSVDVESR Y TQQARSKSNKLDQLLYSKWSDKLDSKDNSSLYTLNGTWE
 FARNLQGE SMLRQSFFNDVYLPSDDKDTPDRFSVTVQGG FIKKFKSSFLLSSEYVHRKЏTGHKDDADKTTSWTLKFTAD

F $\square \mathrm{QAFNSSNNKSDWFKNWAKESKKDDEQ} \mathrm{\square YEDSFAK}$ YARHLYSEFPSLSESQKAQPQNVLFTRDAAARYVVSVSDS FLQSLRARSNLLYSEQSKLLVVSQTRKDLPDEYVVTUQSS N FVOTFNATNNALNEWLKKINAIVEDEKKENVV TLSAESF LLRTFVNYFNAYNNKLEFLEGNKSTKNDSQVLYSLSYTAT FUNAFNSSVNKKVF LEKNSVF DEYLKENNTSELSLSFKTS TEGNARADGQLLDDLTNDITFTAKDDKKTP FDSIRLSAE FVRRFFQEDAAARQALYQHMSQKVLTDTPPDLYSVRUEAP LLNDYDTEFNAFDDWAKRVSASQPDKKNQPDVYQLSFEAT

## A LHKFFNQTYLLQKS\|LYNQFKRA TTDNEPNQY\| IKARGP

 F RSFNATANLYSEWYQKDSA APAEKNRRDEYIISLQAT FGTRLSQGDTAVSGSFGFQKT ADAEKNLKPATAKVSFTAA LYKSFIVAFNALMNRGAESTSARPSDKTGSDTGQLFSAE FVSNFNSFNNKLIEKMDAVASGMADDKGKRALLRESATALL FVRSFNSADATFLAYLDDHDDKVSTDNKKASVVELSFRAT FINEYNSEFTLSNDLLKDKMSNQKLYKKQGDNFKLDFESN

## UniRef90_A6ADU0 UniRef90-C5S1B1 UniRef90_UPI000382CA97

 UniRef90-A0A018ZL94 UniRef90_UPI000363ED9A UniRef90-V3A7K8 UniRef90_UPIO002197CB7 UniRef90_J8V7R1 UniRef90 F4HEY6 UniRef90_A0A024E7N2 UniRef90-F4DHZ1 UniRef90-Q1ID96 UniRef90_C9Q3M2 UniRef90-W9TAL4 UniRef90-F5PKF2 UniRef90-S2KQS0 UniRef90_UPIO004670C44 UniRef90_Q2C7A7 UniRef90-J3GU52 UniRef90-UPIO002E5377B UniRef90-P44063 UniRef90-C4S6D6 UniRef90_UPI0003955B5E UniRef90-UPI00046E509FUniRef90-UPI00030BACFE UniRef90_UPIO0036C86D2 UniRef90_Q9JRS3

## UniRef90-E3BJ74

 UniRef90_UPIO002556BD3 UniRef90-UPI0003132912 UniRef90-D4FB19 UniRef90_V8GAD7 UniRef90-W8UFU1 UniRef90-X4XRL8 UniRef90-D0GV84 UniRef90_UPIO0037E641B UniRef90_E4RDS5 UniRef90_G8Q1S0UniRef90 K8D6E2 UniRef90-K8D6E2 UniRef90_UPIO003785B80 UniRef90_D4C4B4
UniRef90 L1LSG8 UniRef90_UPI0003F4BED8 UniRef90_Q842P3 UniRet90_B3FN90 UniRef90_UPIO0036A35C9 UniRef90_R1GU00 UniRef90-UPI000306DCE6 UniRef90-F9RKG4
UniRef90-A0A024EZL3
UniRef90-J2YDI6
UniRef90_A0A059L6A2
UniRef90-W0LLP5
UniRef90-J3F1G3
UniRef90_UPI0004747E15
UniRef90_UPI00046F9CEF
UniRef90-M9S5H8
UniRef90_UPIO002EF71F4
UniRef90-H1RTE9
UniRef90-W0A132
UniRef90_F6CZ43
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UniRef90_UPI0003B58AAE



 DPEVAANWVRRYTEDVARRSLEEMDENAQREUVKERDVE SAEASLVMLEGY DDY I IK L QQQQRVVHRLSEERALQLLEGUS DPRLAATWVSNYAELAAERAKSELLSGTRSDDSDMADNLD
 KPSEA GNWVRAYVRNASVA AKNEMDKNVVREAQVRARNLID
 DVQRASRWL EQYV ELSSGKYAKEELIADARRQVI EGRKSLLAR DPRLAATWVSSYAEMAAEKAKNELLSGARSEUSVVADNLA
 DPARAVVVWVKDFAARAGAAAEEEMDSNITREAEVRARNLGG




## T



D P N Q A A Q WV A A Y A E M A S E L A K E E V L T G H R S E L A V K A E N L Q




 T A T E A Q Q R L E Q Y I A F I Q Q Q E I V S K S K E L E T D W Q N R



## t

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## s








 D P V R V T E WA K A Y V K R A S GA A E S E LI K N V T T E A S V K A R N L E

 E P A A A V K L A D A L A N T A A E M T K S E L V K N A L S D A S M R A V M L D


 M K E S S A E L L N A Y I V Y I S K TVVK D N Q F E K F L M F V E S S K Q E L E

 S S K LIS Y D L L V A Y S E E V S N K V R D E L I D E L D D A K I S Y S Q Q I L E T K E S S F D




 D PVVAS QWAAA YVVKA

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UniRef90 UPI00030BACFE UniRef90_UPI00030BACFE
UniRef90_UPI00036C86D2 UniRef90_Q9JRS3
UniRef90_E3BJ74 UniRef90_UPI0002556BD3 UniRef90_UPI0003132912 UniRef90_D4FB19 UniRef90_V8GAD7 UniRef90-W8UFU1 UniRef90_X4XRL8 UniRef90_D0GV84 UniRef90_UPI00037E641B UniRef90_E4RDS5 UniRef90-G8Q1S0 UniRef90-K8D6E2 Unireato-upiooing UniRef90_D4C4B4 UniRef90_L1LSG8 UniRef90_UPIO003F4BED8 UniRef90_Q842P3 UniRef90_B3FN90
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UniRef90_J3GAH5 UniRef90_UPI0003A13F84 UniRef90-UPI0003B2F588 UniRef90_UPIO002F72303 UniRef90-Q1ZRK1 UniRef90_UPIO0036002C0 UniRef90_R8ARZ4 UniRef90-UPIO004650A92 UniRef90_UPIO0042A4745 UniRef90_F2P9Z7 UniRef90_UPI00036C79FD UniRef90_C4S7J8 UniRef90_UPI00026C7D04 UniRef90_UPIO003736BEE
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UniRef90-W0LLP5
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UniRef90-F9THH1
UniRef90-BOKTY6
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UniRef90 - T2HBE8
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 SAAVDSKMDYQRGSKALAAEVNALESRDDAF SSDLRSLQM $N L T G V F P D Q L G T E G L K E Q S N \square L K S D L S F F E P S L T Q Q K$

 SKLADGTYLFILAAEKYLQAQLADIAKNTPVVYPANYYITDR $G E Q \quad D L F P I Q M G A S A G E A K L N V L K S D P S V L E P Q L S P L M A$
Q T S N D

QN LGGEQE DFA AGSRALKAKVDALKSNDSVFDPQLLQSK $\square$ PAAMGGALTYMRGSKALESEI ANLEARDEPFDRGLRPLQE SAGMNGSLMYMRGSKALESEI QNLQTRDDPFVNNLREREE SAAVDDRMDYQRGSKALDAEISALESRDDAFISDLRSLQM GQAVKDDPDYSLGADGLAQ
$\square N V R D G F N D E W G A K A L A E K L K V E L K N L E L L N P A D S D L R L$



 TNNNQEDTADDLGSKALAAKVESLESNLSVI EPRLQQQUDA






|  |  |
| :---: | :---: |
| UniRet90－C5S1B1 | KELEPLLVKVKEAKANAFSYQASPDYPVVVKD |
| UniRet90 UPIO00382CA97 |  |
| UniRef90－A0AO18ZL94 | TLLDIKNLKVTADTVHVYRYVMKPTLPVRRDS |
| UP1000363ED | QRLFNSLS NPEK |
| UniRef90 V3A7K8 <br> NiR |  |
| UniRef90 ${ }^{\text {J8V }}$ | KLSFLRTLKVDPSLVAM |
| UniRef90－F4HE | Q T QLEALKEGKLETNAYTYLSSPDYPVVKDA |
| UniRef90 A0A 224 EFTN 2 | KYSFLKKLTLDP |
| ef90 F4DHZ1 | QLSSLKALKLQNAEFVSFNMLDSPEEPFSRD |
|  | SFYRSLR DPALL E |
| UniRef90＿C9Q3M | KLSQLNVDVLS |
| S2 |  |
|  |  |
| f90－Q2C7A7 |  |
|  | KQSFYKDLQVNPDTVSVYRQIEQPDRPIK |
|  | KLDVLSS KPENVNI ESFKFQKKPDLPEYKTS |
| UniRef90－P440 UniRef90 C4S | QLFKLNKLAELVEEDVKTYYYLSSPDYPVVKD |
| UniRef90－UPIO003955B5E | KLDTLNTUERSDVQVQPYSVLEN |
|  |  |
| UniRef90 UPIOOOO6CC86D2 | KLMMLENLTVDKVEFASFRFIGDV |
| UniRef90－Q9JRS3 | QLSELEPLKAKQVKANAFSYOASPDYPV |
| UniRef90－E3BJ74 | DSIQFQTVSF |
|  | N |
| UniRef90－UPIO003 | RLLAFYRGLKVDPQSVQVFT QVELPDKPVK |
| d |  |
| UniRef90 W8UFU1 | ELSLLAPLLEQQVTAQVYRYQLTPGEDVKK |
| UniRet90－X4， | D |
|  | KVTFYRNLKTDPSSINVFEQVELPDRPVK |
| UniRet90－E4RD | QAAVYRSLKVSPDQFSVYRQVEIPETPIK |
| UniRef90－G801 | GFYHKLNIDPGN【SVYRQVEVPESPUR |
| UniRef90 UPIO003785 | QLS SLRA面LEQQSFQSFSYLASPSEPLSRD |
| UniRef90－D4C4B4 |  |
|  |  |
| UniRef90－UPI0003F4BED8 | TSAEKWSVSGFYY DDQPEQP TR R |
| UniRet90＿E3FN | SLKAVKLGQQSFQSFAYS |
| UniRef90－J2UZW4 |  |
| UP100036 | QLGFLKGVQALISEELAVSRQVETPDAPVK |
| UniRef90 R1GU00 <br> 局 | KLSSLQALKL EELPFHSFAYLASPSEP |
| UniRef90－F9RKG4 | $K L K M L D G L V V D N T K F E P V R F I E G V Q E P$ |
| A0A024 | RLSNLKELSPQEVEFSSFVEIDSPEESISRD |
| UniRef90 A0A0591 | RYSFYKDSVSPN |
| UniRef90 WoLl | K A |
| UniRef90－J3F1G3 | Q |
| UniRef90－UP100047 | EYNFLRKIVVTPADVTVFR |
| M9 | KLS WN |
| UniRei90－UPIooo2EF71F4 | － |
| UniRef90－H1R | QL NLLKELDPAA |
|  | SSLQA |
| 6C | KLKLLNQLA |
| UniRef90－J3E1 | QVQQVELTKVKPAQV |
| 29x | QVQQVELKKVKPAQV |
| UniRef90－ O N | KLELLSQ KLD |
| UniRef90－UPI00036 | V |
|  |  |
| UniRef90－F9TH | NN |
| UniRet90＿BOKTY6 |  |
| Unif | KRAFYKSLSSNLLDVVAYRYDSSPDYPVVKD |
| UniRee90－UPIO003BB2F588 | LIA MLM |
| UniRef90－UPI0002F72303 |  |
| UniRef90－Q1ZRK1 |  |
| iRet90＿UP100036 |  |
| R8ARZ4 | VLAALAIAPKLDQNTQTFRYLRTPVEPVNRD |
|  |  |
| UniRef90－UP100042A4745 | Y QQL Q ALD K ${ }^{\text {d }}$ |
| UniRer90－F2P9Z7 | QLBLS |
| UniRef90－C4S7J8 |  |
| Ret90 | DYNMYKN |
| niRef90－UPIO003736BEE | KLDLMAKLELNDVELNAYRFIEEVEQPINRDA |
| Unif | ALKTUKSUAPFSLN\｜VPFTVTESPDLPVVKDG |
| 俍90－UPIOOO2FE0424 |  |
| UniRef90－A1S |  |
| ef90＿M4U505 | TLNALNTLTTDDASFVPFRYLNRVEPPLNR |
| ef90 Q12889 | EDKMLNDIDVNEMEFNVIGGYVNVELPLNSD |
| 90－T2HEE8 |  |



# A K ITLMPPAKNG\| A ELLNDGRDKDSEDAP YSVK D|V|YD|V 

 WT TKAVITTPRVADVVTFSQAVKRLEDDVLINERTI FER $\square \mathrm{M} N \mathrm{Q}$ S S AVLASPSESDLDEIRKIQQUIYYETASSTTDIFGQ KWTSTAEVIAPTGVDMGAYGNAFAQDAKDPDDTVDTVSKS TI STPGTYYQDDAGNSGLVISSSLKDISSSTEVYNM K WTSKALI TY $\quad$ DD DNQLQPFEYK EWSSSAEAVPASNGSILALLDLQQRLISNEPFSMQGIVSS

K WTS SAVIT PAEADQWQDLEKTFTKLRVLDLIDRGGAFNL WSSTA $1 \quad V D R P Q L S Q L A V Y Y D Q R Q L L D N S S A L N A S A V C D E$

KYVSKA VVSQPEDGQDAEYYNAMNLVMND VSGY D

RWTSYAELIPAQARELSAMNSEDNQLALLD\|DAQTDYYKT $K W T S S A G V T V V D S E K I A E L E N F F D D F L N F N E D Y L S D Y Y Q K$ AGGLSSYDNRLDFFLNN QDLFQQ AGGLSSYDNRLDFFLNN QELFQN

T E LS L VDVD T G VN GS S VY QK



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| UniRef90-UPI0002D2C920 |  |
| UniRef90-K8C390 | FLKKFDSTLVAQRIKMTSNDNPKAATASPYSSWTLSFTAP |
| UniRef90-T0QTB1 |  |
| UniRef90-UPI000380 | NS D Y LTTVA |
| UniRef90-Q1N5G1 | D R Lif S F SVSNAKKDTEQFTKLS |
| UniRef90-M5DTE4 | QNFS $\square$ SFSERFEY LDPGAKDGGD LT |
| UniRef90-UPI00036D | F L L F NSNENA K NYLRNTEQFRQYVETNNLGD |
| UniRef90-Q2BJF5 | FINRYKNSFLSKPELLDRNDNTTQLDTEE |
| UniRef90-W9A4D1 | NDNRFDNEDIN Q WS K RLI IT K D N N |
| UniRef90-A6VMI6 | R NFFSQSDEYKGLIQDQDEKAPDPKKNADMF |
| UniRef90-UPI0003642BF7 |  |
| UniRef90-F4GVY5 |  |
| UniRef90-C4K3Z7 |  |
| UniRef90-F4HBI6 | LLF NQFVNN\\|SLL |
| UniRef90-A5UI14 |  |
| niRef90_Q1PGY3 | K FQSAlVALLSEKMKAVDDNASKKKDEYTS WTL S F |
| UniRef90-UPI00046E | F LLQLSS WDDRLIS D 1 R F QPADAARGTHDTVVLLAD |
| UniRef90_UPIO002F | AY WVEDNDTFTAENQKKVNFNDS |
| UniRef90-X8MDY9 | Y VNEENS P L K I VK D K D Y Y I F S L V S S |
| UniRef90-Q1QWX5 | P |
| UniRef90-Q31F07 | Y TENFKNKEKEVREKEFNDSFSFGDTHPKDGAKRVMVEMT |
| UniRef90-G9ETS7 | QKEKYSSAYASFIKNFA I IE HPKGVS EAFSKFTIAIRGD |
| UniRef90_UPI00037D | A F NQFDEDFS ${ }^{\text {L }}$ K MPTGKSVS |
| UniRef90-A0A034 | LRERLLSSLTQQGFTLKNSQLDQATESKEYTYYRLGVSAR |
| UniRef90-UPI0003 | LVKKSKNTF V F D A $\square \mathrm{K}$ NFNDTYSKSDKKKDY |
| UniRef90_UPI0002D5BD76 | I ETRGDSTFANFNEEAFEVLFPDPKRKDNRSAFVLELTYP |
| UniRef90-I6ZZV3 | 1 PKRGDSTFAAFNETAFEMLHPDPKKTDNRSAFVLKLTYP |
| UniRef90-DOYWK9 |  |
| UniRef90-A4BIX4 | S |
| UniRef90_C0AX79 | F $\square$ N N Y N S R VLREEYLVS T D Y Y K S LDEEFSGELNLS F T A P |
| UniRef90_S6ATQ8 |  |
| UniRef90-LOGKN7 | LTERSEQAFAEFNEEAFEMLIPPDPKRTENRSAFVL |
| iRef90_T0P9Z5 | F $\square$ QEFNSYENLFAEVVKNHDWSKSATAQPVDKKELKFAAP |

[^0]|  | 90 |
| :---: | :---: |
| UniRef90_V6UZM0 |  |
| UniRef90_UPI0002D2C920 |  |
| UniRef90-K8C390 | KAHDAQRVLKEY |
| UniRef90-T0QTB1 | Q ${ }^{\text {D }}$ GMK |
| UniRef90-UPI000380CF22 |  |
| UniRef90-Q1N5G1 | DSQESAELLNAFVVYALVKKLEEI KTTLSGKVQAEI L L L Q |
| UniRef90-M5DTE4 | D P QLA T SiL NQY GEFII ESYDARIKNQMDLAVTS QL NQYK |
| UniRef90-UPI00036D853D | T P DMA T QLL D GY IE YVIQLQHKEI DSVLENNRNMNLTNLS |
| UniRef90_Q2BJF5 | SPELSS SWLNEYI SFAHQQFSKELTNNLQAR】HAAQNNL |
| UniRef90-W9A4D1 | SADKSKS ILEA Y L DFVNKEVKNELYKKANSYKNDVVNELN |
| UniRef90-A6VMI6 | TPENAQKTLAQFVDFINEKAFELDKNEFQMK |
| UniRef90-UPI0003642BF7 | DPELSYDALIE YFKLTNQHADS Q 1 L L K NRQAEL N |
| UniRef90-F4GVY5 | APVLIA RWANQYVHAAMQAARAELLDTLAGEVAMRTRSTQ |
| UniRef90-C4K3Z7 | TAKDAQNLLNGYIN |
| UniRef90-F4HBI6 | D GQLLLK STL D GFVKYVNRITYQQE |
| UniRef90-A5U114 | TPKYAQSVLTEYVNFVNQYSLNQTN |
| UniRef90-Q1PGY3 | TSEEAQTVLSGYI D |
| UniRef90 ${ }^{\text {UPIO0046EADBA }}$ | NAAASSRLLS DYVRFASQRAVNVLNSNLREEWQSQWR |
| UniRef90-UPI0002 | KPQDALVLNQAYLDFDNALMMERIRDQIHSDLDLADQQVV |
| UniRef90-X8MDY9 | KPEDS QSIL L DLLIS FDDKTKFDLYESMGRLIFNKKIPQK |
| UniRef90-Q1QWX5 | EGESGHRILNGYVNATAEQVWSELKNRFARANQA |
| UniRef90-Q31F07 | , |
| UniRef90-G9ETS7 | NPQQVT ITWLKQFLHVVQAQTLTKILNNIKQQNSVLVYNLQ |
| UniRef90-UPI00037DC6 | EVADIL N DLVKI AELKTI QQFYQQILSKKQSRIGLLN |
| UniRef90 | AHALLQGYI DFVA GRVVDDLRYNIKNQLDQTLAREK |
| UniRef90-UPI00030C1CC7 | NGKDAQNCLNGYI NYVSAILNERLNTDIKNKINDRKN |
| UniRef90-UPI0002D5BD76 | QGMEGASVVNGFVAYVLELERREIADDLESLVRNRLASLQ |
| UniRef90-I6ZZV3 | NDFVSYVVELERQEI ADDLESLI N |
| UniRef90-DOYWK9 | DSFKLL N NYI K F TKNKYNS DVLLSLET FKR |
| UniRef90-A4BIX4 | Di E GAKQl A G |
| UniRef90_C0AX79 |  |
| UniRef90-S6ATQ8 | A NDLE |
| UniRef90-LOGKN7 | EGVAGASVVNGFVAYVLELERREDAEDVESLVNNRL |
| UniRef90_T0P9Z5 | TSEMSLAMLEGYVDY IVKLQQKQLTHR |

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jnet
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sol25
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jhmm
jpssm


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| UniRef90-Q1N5G |  |
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| UniRef90_W9A4D1 |  |
|  | UniRef90-A6VMI6 |
| iRef90-UP |  |
| UniRef90 C4K3Z7 |  |
|  |  |
|  | UniRef90-F4HBI6 |
| UniRef90-A5Ul14 |  |
| UniRef90-Q1PGY3 |  |
|  |  |
| UniRef90-UPI0002FF205A |  |
| UniRef90-X8MDY9 |  |
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| UniRef90_Q31F07 |  |
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| UniRef90-A0A034T008 |  |
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|  | UniRef90-UPI00030C1CC7 |
| UniRef90-UPI0002D |  |
| UniRef90-I6ZZV3 |  |
| UniRef90-DOYWK9 |  |
| UniRef90-A4BIX4 |  |
| UniRef90 C0AX79 |  |
| UniRef90-S6ATQ8 |  |
|  |  |
| UniRef90-LOGKN7 |  |

UniRef90_V6UZM0 UniRef90 ${ }^{\text {K8C3 }} 390$ UniRef90-T0QTB1 UniRef90_UPI000380CF22
UniRef90 Q1N5G1
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UniRef90 ${ }^{-}$A5Ul14
UniRef90 Q1PGY3
UniRef90_UPI00046EADBA
UniRef90-UPI0002FF205A
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UniRef90 Q1QWX5
UniRef90-Q31F07
UniRef90-UPI00037DC6F2
UniRef90-A0A034T008
UniRef90-UPI00030C1CC7 UniRet90 UPI0002D5BD76
UniRef90 I6ZZV3
UniRef90-DOYWK9
UniRer90_A4BIX
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> sol0
> jhmm

UniRef90_V6UZM0 UniRef90 UPI0002D2C920 UniRef90-K8C390 UniRef90-T0QTB1 UniRef90_UPI000380CF22 UniRef90 Q1N5G1 UniRef90-M5DTE4 UniRef90_UPIO0036D853D UniRef90_Q2BJF5 UniRef90 W9A4D1 UniRef90-A6VMI6 UniRef90-UPI0003642BF7 UniRef90 F4GVY5 UniRef90-C4K3Z7
UniRef90-F4HBI6
UniRef90-A5Ul14
UniRef90 Q1PGY3
UniRef90-UPI00046EADBA UniRef90_UPI0002FF205A UniRef90 X8MDY9 UniRef90 Q1QWX5
UniRef90_Q31F07
UniRef90-G9ETS7 UniRef90 UPI00037DC6F2 UniRef90-A0A034T008 UniRef90_UPI00030C1CC7 UniRef90-UPI0002D5BD76
UniRef90-I6ZZV3
UniRef90-DOYWK9
UniRef90-A4BIX4
UniRef90 C0AX79
UniRef90_S6ATQ8
UniRef90-LOGKN7
UniRef90-TOP9Z5
 QNDNKEE ITADGADAGSEKVNVLKSDGS ILDPNLGQURN

YNVQDR LLISLGSKGLEEKLSLLKS DDLVYQPKDQSLQV $\square \mathrm{GNLDESLLYIRGYEVLEAEI} \mathrm{EA} \mathrm{A}$ KSRKDPYDPEIRPIQE

 TQHIIDQMIYRLGSKSLNAELNALKAREKNDDPGLSDEKL

 PRLLSDEVMYLQGSRALQAQLNALAQRDDPFLPQLTPLRQ
 KNTPVVYPANYY ITDR
$\square P \quad \square E S A P E Y T K G Y E \square L A A E R F V L I Q Q \square A N Y D S H A T A M S G$
ETSDSGDPLYFMGYKTLEAERETLKGK LUDGLSNLRNDRE PAMNIQGPLYYLGYQVLEAEKDVLKKRDDAFTGKLRELEE EDDLFDSALYPPNPALLRAE DKNLSARDDAFDPKLRTLQA TETVHNSALYLLGSDLLVAERTVLRKNDDAFIPELRNLQE

GMAESPRPTYFMGTEALTAERDALAARDDFTEPRTAETQS AMTQSEDPLYFMGTEALAAERDALANRDDFIEPRIAEIQS FEKGS SFNIALGAKALRAEKNVISSDDAIFNDKITLLSS D WEASQGELYLKGTR $\square L S A E \square K S L E S A Q P N L S P$

EVNNQQ DP LYFMGTDTLKAERAALQSRRSDEEPRDADDQA EVNSRETPLYFMGTEALSAERDALASRDDFMEPRIAEIQS
lupas_21
lupas_14
jupa
conf
sol25
sol5
SOlO
jpssm


| UniRef90_V6UZM0 |  |
| :---: | :---: |
| UniRef90-UPI0002D2C920 | $K \square A \square L Q R E L P Q \square E N L T L F S Y L E S A E L P L C N D$ |
| UniRef90-K8C390 |  |
| UniRef90-T0QTB1 |  |
| UniRef90_UPI000380CF22 | RIS Y L ESI A YD K DVLKV |
| UniRef90-Q1N5G1 | RID QL K KLEVD |
| UniRef90-M5DTE4 | LLWNI S L E TLS ${ }^{\text {L }}$ D WD A VRYVQ |
| UniRef90_UPI00036D853D | SADRLKEVELKDITYRPFSYLDADSKPFTRD |
| UniRef90-Q2BJF5 | KLELLA A D DL D S KLI S A |
| UniRef90_W9A4D1 | KLS SI K S SNi PKIN F M S Y K Y Q T D Y PVT |
| UniRef90-A6VMI6 | QI NQLKALLQVKGLTAQTYTYQASPSYPVQRD |
| UniRef90-UPI0003642BF7 | NLEFYQDAKLPNASVQLYHDDASPVLPEK |
| UniRef90-F4GVY5 |  |
| UniRef90-C4K3Z7 |  |
| UniRef90-F4HBI6 | QMTELVKLETDKLEINTFQYKNSPSFPI |
| UniRef90-A5U114 | Q LF KLNKLA ELVEDVKTYYYLS SP D Y P MVK D |
| UniRef90_Q1PGY3 |  |
| UniRef90_UPIO0046EADBA |  |
| UniRef90-UPI0002FF205A | NALLIKK WRHFNDTFNFYRFTDEPK LP Q T R D |
| UniRef90-X8MDY9 |  |
| UniRef90-Q1QWX5 | E L E Q |
| UniRef90-Q31F07 | $R \mathrm{Y}$ NLLDSVETNGDLFKVVNVDQPPE |
| UniRef90-G9ETS7 | ELDFYKSLAVNRNQVAVFHLDETPNTPDS |
| UniRef90_UPI00037DC6F2 | LLQKLQSLKI ${ }^{\text {L }}$ K T DF |
| UniRef90_A0A034T008 |  |
| UniRef90_UPI00030C1CC7 |  |
| UniRef90-UPI0002D5BD76 | ELLA MLK |
| UniRef90-I6ZZV3 UniRef90-D0YWK9 |  |
| UniRef90-D0YWK9 UniRef90-A4BIX4 | QLNYLNNVKLSNLENNAFSY |
| UniRef90-A4BIX4 UniRef90 C0AX79 |  |
| UniRef90_C0AX79 UniRef90 S6ATQ8 | KLS L L |
| UniRef90-L0GKN7 | ELA MLEN |




[^0]:    lupas_21
    lupas_14
    lupas_28
    jnet
    conf
    sol25
    sol5
    sol0
    jhmm
    jpssm

