

## QUERY

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 $M T V G L V L V S H V A E L A D G V R A L A A Q M A P D V A B V A A G G A D D G$ MS SA I L L V S HVVE EI A K GI QRLLLLEVAK DVVVVVVAA GLED G

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 VIVSHSEDI ANGTKVLLEQMAGDVSILIQGGVEG V G I V I V $V G L V L V S H S S K V A E G T A E L V E Q M A G E V R V R S V G G D A E G$ $V G I V I V S H S R Q L A D G V A E L A T Q M T Q G A A L A V A A G V D D N$ M T I GIV V L V S H V T E L A Q G I A K L I Q Q VA P DVVP L TVA G GTA D N $M K$ TS S L L L S H S K E I T D D GlL K K M I I L L V SHS R DI A E GTR QLLKK QMA G DVVDVY A V G G V E D G $M T V S L V V V S H S E K I A D G A A E L A A Q M A P D V V I L P A G G T D D G$
 K A DIL L V S H S K MI T D GI K EMI E Q M S E EIITI HS L G GTS D G

 $M T V A L V I V S H S A R L A E G V V E L A G Q M G Q D L S M T A V G G T E D G$ $V$ GIV L V S H S K K M A D G A K E I D
 V V V V I SHSKEIA E GTKALLNQMAGDVNVIVQGGV DG


 $K V G L V F V S H S S Q Q A A G E V E L A R Q M A P T A A L E P A G G T D D G$ $N V G L V I V S H S K E V A M G T A E M V L Q M V G D V P L A W C G G N P D G$





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 GL G T S F E R I R L G T N S I M I M E A I E E E N D C H H H I L I F F C D I G S A A L L S S E T A I D L



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## S




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a

## A <br> G

## R

## a

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## S

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 KE MID QMA ENVTVFSLAGTSDG $T V G L V L V S H S R A D A M A T E T L I R Q V T G N V R M A D A A G A G D E$ GIVVVVSHSNKLAEEVDNFSKVLQQEFNDENGGNVNQE 1 GLVVVVSHSEQAAQGI AEVAAEMAEEVTI EPVGGNGDS VGLVVVSHSATVAQAVARLAA QLAEDVRIEAAGGTEDG
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 $M T V G I L V V S H S A A I A T G T V E L A R Q M A A D V P L V A A G G T D D G$ $V G L V V V S H S N K L A E E V I N F A K Q L Q Q D F K I E N G G N D N Q K$ $V G I V V V S H S N T L A Q E I I N F V K V F K Q E D F A L D N G G N A S R$
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 VIVSHS VRLA QGIEELALQMSGGVPLAVAAGDDDN

M M

$V G V V L V S H S K E V A E S V A R L A A G L A G G V P V A A A G G D A D G$
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| UniRef90-UPI0002DC07 | LGPRARLSPAPFVEGLI GAYGAAGIGLDL |
| UniR | VDPRCLI SAGPLVEGLVAAVVSAAGGASLQEVAS |
| UniRef90- 2 2H518 | DQKIHIVNCPLVEGAFMAAVQUENTDSLESIFEELLK |
| UPIOOO2625 | 俍 |
| UniRef90 MOLUF3 | ADGPVLEGAVNAAIAATGN |
| UniRef90-D9UQH2 | RSALVDAPLVEGTIAAAVAASAGADLEGVRAAAAEA |
| UniRef90-L9X5 | EAVVADAPVLEG |
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| UniRef90-UPIOOO420 | VPDRVLLVDAPFVEGAVAAAVAAQNGGEL |
| UniRef90_UPI000287 | DI RL |
| UniRef90_O18GW0 | LNATVEASSSATVESVIDAAED |
| UniRef90-F6FRU2 |  |
| UniRet90_D2PZU0 |  |
| UniRef90_A0A022LWV2 | LDDRVHVSPAPLVEGTVAAAVAAQTGG |
| UniRef90-U2R145 | KEEVKIADAPLVEGIISAVAANFD |
| UniRef90 U2UPH9 | EGQVK ADAPLVEGVI SA A ANFDGIS |
| UniRef90-14BYG5 |  |
| UniRef90 E3CWL3 | LDPRVAVADAPALEGAMMGAVESSLGSDLAKVVATAEGA |
| UniRef90-D4XUY7 | $\angle D D R V V L A K T P F L E S S D D V V Q A G$ |
| UniRef90-D9WJ | GSRLVDAPLVEGAVAA |
| UniRef90-C9P, | VAAP VEGTMAASVAAAAGLIPMATVVEEARQALL |
| UniRef90-W0JW | VDAPLLEGTLNAAVEASSNATLDSVERAAAE |
| UniRef90-J3A915 |  |
| UniRef90-K6PRB5 | ERVVLADAP AEGAVDAAVAASVGDGAAAVRERAEEA |
| UniRef90_UP1000377 | ADPA AVVA |
| UniRef90_11A7E3 | VDKKVHVSKGS |
| UniRet90_D818B6 | LDKEVRISFAPI |
| UniRef90-JJA6U3 | LDDDVRIADAP! |
| UniRef90-10GS566 | EDKKVMMLDCPLVEGGAVLAAVESTGGLTLDELAVKIDKEA |
| UniRef90 U1LTE0 |  |
| UniRef90-UPIO00474DA0F | aderv |
| UniRef90-A0A021VKY3 | DEDVRLADAPFLEGAVAAGVAAQQGEDL |
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| UniRef90_A5G | ADDRLHLAPAPFVEGALAAGVAAAAGQAADRVAAEALAGL |
| UniRef90 UPIO0040660B0 | LDPRVRLSPAPLVEGLVGAYAAAG |
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| UniRet90-COW3K2 | DERTVVSPAPLVEGLLAAYAAAGTGCPFDQVCERAANAA |
| UniRef90-UPI0003B53DOC | LDDRVEVVDAPLVEGGVAAAVAAETGGDLGA |
| UniRef90-UP10003B7111D7 | ERVRLSAAPLVEGLIAAVVAAGTGADLDACAAEAVRGL |
| UniRef90-UPI0002 |  |
|  | EHAVLA |
| UniRef90-E3G884 | E EVHL |
| UniRef90-LORXJ2 | VEDKVYVAKGAFVENTFSAYVLANVGASFDEVKKAAEEKV |
| UniRef90-UP100047EB182 | R |
| UniRef90_UP1000469ED92 |  |
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| UniRef90-K6WBF | LAERVVLSSAPLVEGLVAAAASAATGADLSTVRREAESAL |
| UniRet90 K6WR |  |
| UniRef90-F3N185 | Ler |
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RALAQAAVGLAAEMTQGAVMAVAAGLDET VGIVIISHSPTLAEGAAEVARAMGGKAVVEPAGGDTEG GILLVSHSKQLAEGLAQLLHGVAGDLLIETVGGMK
VGIVLVSHSREVAESVARLAAGLAGGGPVAAAGGTEDG $T V G I V L V S H S A K L A E G V A E L D E Q L A R P G S V V V A G G G P D G$ RVGVVLVSHSAAVAESVAQLATGAGGAPVTAAGGTPDG VGVVLVSHSAALARATAELATGLAPGVLIEAAGGTEDG RVGIVLVSHSADLAAGVAAMIGELGTEVDUAVAGGTDDG MTAGLVVVSHSRQLARAAVALAREMVHDVRFELAAGLDDT

ПAEGVRDMAKKVVPE LKTIAAGGTADG


> GLLLVSHLQATAEGVRQLVKSAGNDQLALGGHPEP

VGVVVVSHSPRAAKGIRDIAVEMSSDTRIVVAGGDVSG $M T V G \mid V V V S H S A K V A E G T A E M V R Q M V G E V P L A W S G G D P G G$ $V G I V L V S H S A A V A A S V A D L A R G L V G G V P V A A A G G T E S G$ VGGVLVSHSSEVADSAAQLARELGGGAPVVGAGGAAGG VGIVLVSHSADVATSVAELAKGLAGGGTTAPVGPAGGIT RVGVVLVSHSRELAAATAGLAAALVGTAPVALAGGLPDG VGIVVVSHSRRLAEGVAELATQMTQGAKLAIAAGIDDN
I GIVVVSHSRALAEAAVELACEMVAERPPIAVAAGAGA VGLVVVSHSRALALAAVALATEMVPPVPIEIAAGLDKT RVALVLVSHSAELARGAAELAGQMAPDVLVRGVGGGPDG IGIVVVSHSHALAEAAVELAEQMVGGPRLMTAAGTADG VGLVVVSHSERAAEGTVEVAAEMAGDTPIEAVGGDGQG LILVSHHPD DARGUAALAAQMSAAPTIHTAAGDDDN
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RVGIVVAAHGNSMASSLVEVATELLGSTPTVAV DM
VNLVIVSHSSRLGEGVGELARQMSDSCKI AIAAGDDDN $V G V V L V S H S A E V A S A V A G L A L G L V G G G P V V P V A A A A G G$ RVGLVLVSHSRALAEATEALARQMTGEACAAGAGDGGAE RVGVVLVSHSAEVAASVADLARKLAAGGAAADVAPAGGT VGLVLVSHSAQVASAVAQLAAGLVGPAPVAAAGGAPDGB VGIIVAAHGSSTASSMVDVAKQLLGNSSIEAL DM LLLVSHSAALAEATEALTRQMTGTDARAAGAGPGGR
 KIGVVVAAHGKSSATSMVEVVTQLLGVEQLRAVDMPDDM $K$ VGILVVAHSKKLASEALVKLAQDIKNNFK: YAVGFVKSK
VAIVVVMHGNGVASAMADVVNQLLAAACVHAV DM
VG|LVVAHGNSMATSMVEVTKELLGESNIDAI DM

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## S


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 $G L G T D P N A I T E A G S T D E D D D V V L L V D L G S A V M N A E L A D E M$


 $G V G T S A E L V R T A V E A G E G A G V V V L C D M G S A V L T V K S L E G T$ P I GT DAAIAVMEAI EVQDQQGVVVLMDLGSALLSTEMALDL

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 GLGTD A DAI REAARAVDGAGVLLLADLGSAVLTVRALLDE

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 P L D A D P K R $\quad$ DY E QVK AVVSKK G A L L L V D M G S L V S F S N F L E K E PLSCSPTEMTERI ARNEGLGVLLLVDMGS
 P L DI S F E E I V A A V K K DD G E GVL MLV D M G S P L E V S P K D I L E TVVEMDD GK G V L L L V D M G S L A M F E S T ITT E R




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