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S GVT DVLA A Y K S E G D P R R Y E S F Y S SiL K N F lle K S L D

V S LS R P D N D P A R Y Y D GYN K L R S WA Y N S L D Q Y K H
EADVNSVLAA

 S E AT N L L S S Y K S E G D P N A Y E K A Y L S Y R R F V E S S S L D V Y K H S EVVS SVLSSTYKS E G N P D QY Y E E A Y M D L
$\square P \square S R$ E SAGGDPDVYDISYKSLREWIENSLDWYKP
Q P D
SAAWLD GTPKAYQHAYNLLRDWTEASLDDYKP
$T \square \mathrm{~N}$
SSQKE SYFS D L S E V S Q A L A

AV Y K S D D
S K K K R E N
A EGRP I I S IE ES GG DRYRRAFE IL



 EASIT NLISS FTDDRSPERYDEAYDALRDWIMASLDRYKF

P D GKP $\square \mathrm{Y} Q \mathrm{Q} \mathrm{AN} \mathrm{L}$
S I E E T P P
NHLLFYGLTRGNP
PNGNPILNS IDEMGG
K K Y GRAF DLTYNWVDNVLDDYK P
 A EVVSSLLLSAYSNEAADPSSYDRNYYRILQQQFVQSSSMDAN KC DSDGNLVS QQANNSPRMYFDAYSML KNWVDSSDDMYKP P D GR P $\qquad$ AQRNEENGPRKY LKAF
$S N L Q$ $N H V L$ FHGMSGGAPTD
A D GRP $1 \vee T$
NKGRKGF E A T L R A EMA S L D S D G R P S Q F D K A Y R E R L Q Q S WV D G S QPDVSAVLSAYN QQGDPTMYEEYYSGLKHFIECSSLDCHRA S NI Q NL L A S LLGSSTDPT DKQE GFREL E S WVVEGSLDMYRP


QANGQP

 $\begin{array}{rl}G G T & P R Y R A A \\ G P & K \\ K & Y \\ V & E\end{array}$ K Y R N G F

 A AVIA A LRSRGDPA ERAEAFRRQLES WV D GS L D D Y R H
$N \mathrm{~N} I \mathrm{~S} Y \mathrm{I}$ K Q E T S P E S Y DR A Y R L L K K E WV D S S L E M Y K S
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## QUERY

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 E L V R V V L Y P V F V V H GFM DLVAA K G HI Q E A ARSFFNSFR G D H DVI ELLRVLYYVFIMCFMDLVAQGHIQEARTFFNSFREDHTMM

 ELLRVLYPVFI HSFMDLVAKGHLQEARTFFNAFREDHEDM
 E L L R V L Y P AF I HC F M DL V S E GH T LIEARAF F L K F R E D H E LDM E L L H V L Y P V FI H C F M D L V A K G H I Q E A R T FF N N F R E D H E M M
 ELAQI LYPVFVVHMYLELVYNDHDNQAVAFFSGFSDEQESY
 E L G M I L Y P P V F F V H M M Y L E L L V Y N K H E K Q A D R L M E K F G K D Q E H Y E LVRV Y S V Y I HCFMDLVA K
 ELRSVL F P I FVVHS YLDLVSKNDPEKAKEFMDTYRRDHVEL ELRKVLIFPIFVVHSFLDLVNKGHTDAAKEFFDS GKDEHSVL ELLRVVGP LFIMHCFMDLVAKGNDQEANNFFNTFREDHEMM E L L S S I L Y P P V ELLSTI L Y P V FVVHMY LE LVVNGHEWNAWEFYSKFWQDQEE H



 ELS Y I M Y P I FI Y L F L N L VAKN PVVARRFFDRFSPDFK DF

 ELLSTLLYYVFVVHMYLALI LVYDHNEHAYKFFEKFGLEXEDY E L M GVL Y P V F V V H L Y L D M V A D N R P D A A M G F L Q K H L V E H E D L

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 DL K R L E Y P I F I H F Y L T M I S G G HLLT P GK T F WK N HV V E H E A T
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100
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## QUERY

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R DLQKL E GVLS P NHLE EMEFAHSLRKSKFNI KI CEYSY

 H L R D L Q K L E GV L S P S H L L E E M E F A R S L L R K S K V V N I



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## \section*{}

## $+$



 HTPDLNTLETVTEVQHI QENELLAQMYRSNKYNLRMS GVPG



H G V E V K K K F A G L






HLDDEI QRL Q AVTVSK QQUE ENQVA QKFRKFKSPVRMCRYS A



Y G D D L K L L R GI R N S D HLLK EN ELLAYT F R N N R WNL K M C A Y S F


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HERDVT ALK K ALNLP QHVDENQVAQQYRRNKYRLNFSRDT F
 HEVDD R GLE R I S L P E H L N D D NVGK L Y R D NKYRVVLSN FAF
 Y Q D D L A K L C I V K K K D Q I K F N E L A Q I Y S A N K F E V Q L S R D V S





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1
$D G K P \nabla^{10}$ QANGQTLAAQSTESGGP KATKAFELLRKYTEDNLDIYKP
 DHLLWRSEQESDPRFAlAAYAKLRDWAHGSLEKYKG $\square S D$
$G Q P V A L Y Y N E D G D P V A L V H G Y R L L$
$V$

 ESGCANVVSAVPCQAEPQQYEVQFGRLRSFLTDSDSQYSH


 NHLLFHGLEASDPYRYEESYGKLMEWICNSLDMDKY
 EAADATLI QLYPETTTPQKYFEMYDQLVRWAHQS
 ESGCSNVVSAAPCQSGPPRYYEMFVRLQAWTDDALDIYKP SDGRP $\quad$ HR RVQDMGPNRF LQSFNMVRDWVENNLDVYKF SSGDSLNS F L L EAPSGKGFLQAYQSLTD WV FS SLEMYKN D S N $\square$ S S $\mathrm{Y} T$


TGPGRYLKAFDHFQKWI ENGLDLHKF
E $\square S S V G A \square P E E Q Q D S E T Y V Q V Y L L R D W I D G T L D Y K P$
ESGCANTVSAAPCQAEPQQYEAQFARLRNFLTESDSRLSH DQMETSYVSLKTWIEDSLDLFKN RAYKALSEWTENSLDLYKP
SDPEKYRMG PTPPGPPRYFEFFGDLCNFVDELDYKH
 ANQSALLFRSLRMSDPEQVLDGYARVRDWDFGALDMYK EANQSALLFRSGRMSDPMLYHRNYNELQTWTCNALEAYKP ALSRSENDPARYYDGYSKLRTWAYSYLDHYKH E DDGRPLPVSTTDH PKFRAAFEMTKDWVEDNLEDYKP SNПQNLISSIASVGDHTDKQEGYRELEAWVEGSLDMYRP
 ESGVSTSFTFSSCDPDPTDYEDQYSGLKVLIDDAPQAHQS DEDPQMFGRAYLLYRSWCENSXEMYKY

DAQHYEQAY K ELLRTAFVEEDSLDDUYK ETDVRQVLGQYESKTDKDSYKEAFDALQRFVDQSDDSTRA ESGTANVVSAAPCQADPHQYQVQFGRLKNFLEDTESKYSR ESSCTNAVSSVPCSPDAHQYEQGYAKLKAWIEDSLDQFRN $1 / L K K H I L D Y G T A K Y A R A F N L L$ $\begin{array}{rl}P D G R P I D Q A K V D D L G P Q K Y R K A F N M L R D W V P M A & D I F Q F \\ E S G V A T R L A S Y A S E T T P Q Q L I A S Y E S L A T W A D A T L D Q Y R T\end{array}$ GTPIATNINDMGG KKYGRAYDATQDWVDNVLEDYKT PESFGVKYQSLLRFIDTVPDVHKL SNYTN $\square$ NPPD $\square Y K$ KSYTALKRWI EGSLLDKFK D
$E \square S S R \square S \square R N D P A G P T$ DSGYAKLRQWVADSSLDSFKN A DSPDDPQSFASAYEQVLKFI DGCTYQHRD
ECG $\square P N D L S L S V N H \square D S S T F D E Q F G N L K S F I L D V N P A Y R S$ ESSCANVVSAAPCQADPQQYENQYSRGRSFLQEAEGPLVK DNKDQSYQKLK S WIEDSLDSFRG










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1
DD QSVVS SLRRETTSPENYDRAYSMLRNNWTDS SLEFYKP $D V S D K V A G Y E A Y R R W V D G G L D V W K A$
 V SAAATQADPTDRARGFAMLKSWCHGSLD\|YQP DPPSWEKGYEGI RAFVENSLDIHRP D P T D TAR R F A M I K S WCT GS L D I Y Q P VS LS R S DNDPARYHDGYNKLRTWAYSSLDQYKH D P A A RYD GFRELEAWVD GSL D I Y R P
D N S $\quad \mathrm{V} F \mathrm{SA}\|\mathrm{T}\|$

D P T D R A R GFAMLK QWCQGS LD IV Q P
VT A D A $\square$ S N DVVVA A D QA Y Q K L K H C I N G A N E KL R M A $\square$ A F SSLNVVEAVD $\quad$ VQF N RLKNFVLDCEDSLQT D QAVAA GQMLADPPSWEKGYEGLTAFVHNSDDUHRP

 ESSHANSILYSCDNNDPSVAESQFLKWKNWINELTNTVKN T S VEN TLALT SIS GDATACDQQFTRFKHFILGAASPHHP WVNIVLDKLKM
 ANGQALVTHSTEAGGVGKTKAFELLRKYTEDNLDLYRP

## $\square L Q W G M E D T R A L R Y E E C Y V E \square R E W \square L K L L E D L K N$

 E D S F L K L K L W W E D S L D L F K N EASAVLRLLSKEPLDAT D LLREYGALLSSHVDASFDNFRA


 NYSRFKDWVMNSLDNTRE

VSNTDS $\square$ S F S VGC LDE Y F L S F Q D L K T F V E K D S K Q Q K QREAAPVLRNDSSGLP PEEDSVVEFDTFVQHAN DCTDVVVQA ESADRSSGGASNQLPSNEAVAAAEFATVLTHVDASFDEYQA

 NNNPA QVDQHFVKLCNFIKCQSESVRK F DTFVQHANDCTDVVQA
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NS L LY S CYNS $D Q Q F G R F S Q F V E S Q S D F D R D$
$D H N F T K F I T W$ DPVVIDHNFTKFDTWLDCSKTKNCP P D H Y T E S F K L L K K Y I I E Q S LD Q Y K E FEQFDEHANACTDVVQA VDNLLTYSS $\square$ SGDASSCDEQFSRLKAY MNKGSEPYRS ASRANSDFSONNDSSQDQFGFSQFVEAQPEALRN
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DVYERDYSRFCVWDLS $\square$ F E DCRE


D N Y T NE F QRMVEWALS SLNRSRE $P D L E S Y T L Q M N R M L D W T L S S L N R T Q F$

E Y Q Q T F L E IR K L VEEVPNEFK Y S R L E T W I S E NLDD R Q Q A VSVSSTFPSSEALLSEFESLVQFVDSSTDFFQA

E E Y E Q A V H RLI R MV P KVPSHHRF

 Y S S F F D WCCS TVVP P S C
A D YEQTFKT TGK $\square T E E M V D F R K Y$ R S Y A L L K S WID R NLS $\square Y$ Q E
E E Y D Y F F Q YTK S KV D A L
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UniRef90-T1NDW44 UniRef90-M5FU37 UniRef90-J9VZH8 UniRef90_A0A026WIS8 UniRef90-U6I8U2 UniRef90_UPIO0045612BB UniRef90-E1ZEQ5 UniRef90-T2MCY8 UniRef90-M9MF66 UniRef90-K7IYA5
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UniRef90_J7M4R8
 ELDNLSFPLEVLSFLDMIHSGFLKTAREFFEKHSAHHREL DLDPLLYP




 ELQGLLYPI FCHLYLEILHAGNRQAADQFDKAHQNEFSDT ELSGL Y YP I F VQLYMRLISGGYTAEALELMSKYRDYQDDF


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 ELKELLFPLLCHLYYI EMLRGGHKNAAGTFLKKNQSSTEEE KLQPLLLPMFVHTYLEMLCNGQKVPAQKFHERHGEMFTDE ELKGLLYPVFCHDYLEMLHAGNRQAADQFDKTHQNEFNET ELSTLLCPI FVHFYLDLVAKPDLPAAQSFFTKFNHDHEDQ


MPLLYPDEVY DHDLVAEGHTQEACSFFHTFREDHE ELS Y Y V

EFASLLFPVFAHLYDQLI FEGHSSLARVFGEKYARSVPSM ELSVLYPAFIHCFMDLVSEGHTLEARQFFLKFREDHELM



 E $\operatorname{L}$ K $\operatorname{D}$ D






 D L Q SNNF DDQARDFFNEEKFMF DAT ELSATVFPVFAQCFLVVVADGGEPASRAFLERWGASHADR
 EMKRF Y A P M L C H L Y



 (TKKHDHLSS L EMKRFYGPMLCHFY LDLLKAREPRGAVDLLRKYAHLVLDY E LGVLRFP LLLHCF IGIACRGDMAPARRFLQEHAP KL RDE
 EMKRFYGPML CHF Y L D L L K A REAKGAGELL RK F HIIRFARE $E$ VMP L L Y P L F VY L

SFYSRFHGMFNAS

 E D S A L L Y P M L V L G Y L Q M V V G G D H K M A K R F L E E N E D C L E D D


 SLREI AFVVFVELWSRLLPVDQKK SESFLRKFADPHFDA E V M P L L Y P L F V




YTSQMRAM $\square$ DWA $L S S G N K S R E$
REFS M TLKLQ H L S S S VS DRCHP
ESYAREFSTLLLSHDDSSFDNFRA
ESYAEDLLRSYLNWALSNDNKYKN
REFERDWNFI DHSLECYTA





ENYVEDLRSYLNWSLSNLNKYKN
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UniRef90-B3L5J6
UniRef90_Q4UAK7

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 ELSVFNFTVYAATFADFCYNDQFDLARDMKRHTQD AN ELSALDFPVFAHLY $\quad$ QQLDAEGRNLQAABFGEKFSRYIPSM ELUADVGFVI Y L EELYAKL FKLSKSHGKNYLLEFKNVFDKK ELIDDGFVVYLELYAKLVFKLSKSHGKNYLLEFKNVFDKK E F F ML Y P MMT EVYVMLYPTLADGYLQMVWSGKYERADSFVGRNEYKLDDS EI Y SLMYPTLTLAYL RMVSCGKYRKGKSFVESSMRYIDHS
 EI Y SLLFPTLTIVYFRMV DSGKFRKGRAFVESSRRYFDHS DL FDMLTP ALHLYSDLLSNGQKEKAVKFILD KRKLLIE
 QFSTMLFP




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UniRef90 L1IP13 UniRef90_B5DM75 UniRef90_G3IKV9 UniRef90-L0B049 UniRef90-G5BZJ8 UniRef90_E5S9G1 UniRef90- $99 \mathrm{DJM8}$ UniRef90-Q4N3A8 UniRef90-B5DYE9 UniRef90-D8M8S7 UniRef90-B5DM69 UniRef90 B4KVZ7 UniRef90_G8BXR4 UniRef90-B4LER8
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UniRef90-B4N6S8
UniRef90 UPI000185EE83
UniRef90-A2EQA5
UniRef90-B3L5J6
UniRef90-Q4UAK7

Y L

$R$ VLLNWLS $\square$ YYNN $\|$ V VI LLEKVEF
$\frac{L}{V} V \square H S F \square N E \square P C H T \square L D \square E N K F \square R Y D \square V D$ YVLLLHME
FSLISHLMNNGGQ\|ILGC ITFSR】EVQLV Y V L L
Y L L E I H
EKKLGF LDNNQDNGY $\underset{M}{L} H_{L} Q L L N T Y M D V S V$
$N R L Y D F F Q D N \quad F M L Q V V Q E W \square D I N$



lupas 21
lupas_14
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jnet
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