## QUERY

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QEHHYKFNVSMSCGGCSGAVERVLKKLD
TVELKVRMDCDGCEDRVKKTLSSL QKHEFFVDMTCEGCSNAVTRVLHRL
DQTHVLRVNDHCDGCKHKVKKLLQKIE QTWVLKVSUHCEGCKRKVKKVLQK D
 QKHEFQVEMTCEGCSGAVTRVLNKLD QTVEDRVGMSCEGCVGAVKRVLGKME TLKTYFGKVNDNCQGCKNRVKKTLRKVE QTYEFQMAMTCEGCAGAAKRVLGKLG
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KSCVLKVSIHCQGCTRKVKKILQSID

GVYTTETMDR
QGVNKIDVHSK
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GVFTTSI DSQ
GVYATE, DLR
GVYCTSI DLR
GVHHVS:DRM
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GV KHH| DAD
NG1KNDDUSL
GVESVECNLE
N GLL T R F D DD L
GVKSVEVIRK
GVYMTTVDAB
GVYKISVDSQ
$S$ GVK S F DV S LDE
$\begin{array}{llllllllll}G & V & Y & K & V & T & I & D & A & A \\ G & I & Y & D & L & Y & D & D & F & P\end{array}$
$G V S T V E I D B$
VE DMD
$P G V T D A A V N L A$
A G I H GVVEVQLE
GVS SVVVD P K
GI E K V E V D LS
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GV R S VA V D R Q


Q】Q T V A V K I R M M D C E G C A R K V K K K V L

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QVELKMRLLCEGCIQKI RRALDKFKGTNEISVDAQ MTSVELEDGMTCASCANRIEKKLNKLDGVTATVNYATE AALHTIELSVMHCGGCTGRVQRALAAVPGVVATVDDDAH

ELSIVMTCASCVGRVERALKKV PGVREVSVNLA
 VHEVELSNGMTCASCAARIEKKLNRMDGVTATVNYATE SPQTVELTVGMTCTSCAARLEKKLAKDDGVVASVNYATE ELHVRMDCNGCVGKMRKTLTGGDGGVGEVHVDQA QSVDLQVGMTCASCVGRVERALKKVMPGVQNAVVNDA MQRTELSLGMTCTACANRIEKKLNRVDGVEASVNFATE VELSGGMCASCAARIEKKLNRMDGVTATVNYATE
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 Q\|IELKVIN MTCGGCVGAVERVLKRLEGENDVETNMD MTCASCVTRVERALGKVPGVSHVTVNLA SLSEVELLATGMTAACVARVAKAKMEGVAVVNA
 AAPQPTVLKVDLHCAGCANKVRKAIKHAPGVESVTPDMA TTSTVELQIGMTCASCAGRI ERKLNKLDGDVTASVNYATE KMVMLRVSMHCNGCARKVEKHISKME GVTSYKVATE EAQYVEMKVPLYSYGCEKKVKKALSHRRAGIHSVHVDYK TEQLSFAVVQMSCATCANRVERKLNGLDDVSAEVNYATE SPTRVVEDDTGMTCASCVSRVEKALAKVPGVTHASVNLA GMTCASCASRVEKALTK PGVARASVNLA VEIKUKDDCEGCERRVRKSVEGMK GVTSAEVSPK SGMATVELLVNMHCEACAEQLKRRILKMR GVQTADTDLS AQERVVEFRVGMTCEECSSACTQULEKIEGGSNVKCDIE TRVVELDLEMTCASCVNRVEKKLGKLAGVAASVNDPLE MTCASCVSKVHKALLSVD GVENARVNLA MTCASCVRHVEKALTTSTPGVRSASVNLA MSCASCVGRVEKALKAV PGVRNANVNLA ELSDTMSCASCVGRVERALGAVEQGATSANVNLAA QQVRLALTMTCASCSARIERKLGKVEGGVESATVNLAA TRQTELETGMTCAACANRIEKKLNRLDGVTATVNYATE



## LT R WDFGVEMSCA

VY NVP
MT C A
EQQKFE【D
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T E K A S I
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D QLVA VEGTAAPSAIVSAI EATGRDA
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NETAQAQ $\square$ D APES DVMTALDEAGYPARTQDV
$G N K V V V T G A A D A A E L K E R I E R T K K A D Q$
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GDRVIVKGNADPLKILERVKK
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QQAAVYGDADPQTLVAAVEQAG
NQ QVKVTGDVPYETVLEKIKKTGKE
TEKVSVTGQGDLLSALLEAVQEAGYT
TERARIESDVDPETLANAVRKAGYDA
EA HVT
GSASAQALIDTVKQAGYGA
K A TVVHAPDSASEQDLVTQIERAGYGA
GKTASVSAEVGAASLVEAVVRAGYPAKA
SARVSHPADLSPLRLVAAVRQAGYTAR
ERTALVMGSASAADLVQAVEKAGYGAEADIE

DKSATVVGTTDPAQLARTVTKAGYPAHPAR
TGKATVEFDTTPVSLVDSIKDTGYQVQSAE
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K A KIIT FEGEASVE DLVA QVEKAGYTA

SARVEHDGSVTGEDLVKAVESVGYTAQ
SKKATVEGEVNPEALKAAVTDAGFEV
TERAHVQQQVPLGDLDKAVETAGYEARSLEE
RK QVEVDPVTTPATLVETLERLGFGA

| $T$ | $R$ | $K$ | $V$ | $S$ | $V$ | $D$ | $G$ | $W A$ | $D$ | $Q$ | $E$ | $K$ | $L$ | $L$ | $K$ | $T$ | $V$ | $R$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $T$ | $K$ | $T$ | $G$ | $K$ | $K$ | $A$ |  |  |  |  |  |  |  |  |  |  |  |  |


ERSALVLGNADPHQLVAAVDAAGYGAQ
SARVVVLEEEVPDEVLDAHAVEEAGY
TENATI PN S I S V DTLI Q KI Q K LGGY DA QLKK E
SERATVPSDAGWSDLVAAI ERAGYGV
S E K LTTVKVDVK T S QI KA A V E K A G Y K
TARVT L P A S A D GSELVETVVKA GYSA Q RAEVTGSASADALI ETIVKAGYGA


TERATVPSAVSPGQLKAAVRESGYAV
Q GTVVTIT GDAPVA TMDKAVSAA GY GAKS
NEQARI EAPQDAPALREAITTRAGYGV
TA V VT L S A DVA D DVL K K A V E D Q D Y K V L G V E
TETATVRATVPLSALDAAVEKAGYAVR
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KNEVTI K GVVEP QAVCNRIMMK KTKRSAKVL
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LHKVMVT GTVDAETLIVRLHK
RATVRYTPGLSADAI KAAVVRAGFEV
DK QAVVEGSAT DEALTAAIVDAGYEVKGDE
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E QSVLV ETTAAAERVQELLVNSGRAVLKG
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E GRVIVVQTTAPWSEVQDKIE STGRAVLSG
N E S A D I T E GA D F S Q V A T A L E S I G Y P L R
TERAHVVDSLDGADLVAAVERAGYGA
KKE $\square \mathrm{HV}$ E G DAD TNEML QALLLKWSKA $\quad$ S GKSV
TERATVQGAPDTQAVLRAI EKVGYE
$S K R V V I$ GGEDDA GRAAEA I EAAGFDVKAA
T E R A RV R GVVSAAELEAAVE QAGYKA H
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T E R A TVVT DTVVAAAVLQQAIE GA GYEAR
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$S K K V T V V G$
ERSALI SGHAEPNALVAAVEKAGYGA
SARITTKHDYSDAQLEEVVKAAGYEVRS
$\square Q K V V V T G Y A H R N K$ L L A A R R G G L K A
T G EVVRVE G S L S D T A V L E A I R E E G Y Q A
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Q A IVTLNKEVPNEELRKAVEAEDYTVTGDE

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MDCASCANTVVEAAL ERLD

$M \mathrm{~N} T \mathrm{Q} V \mathrm{~F}$ R R V
$\mathrm{S} M$
$\mathrm{~K} M$
MTCASCVQRI EKALLAV

Q S $\square \mathrm{E} \square \mathrm{L} \square \mathrm{D}$
MTCASCAARIEKKLGKVE
MT C A S C A GRVVERA L A A V
 $\stackrel{\text { L-H C }}{ }$
T K K $V \underset{\sim}{\mathrm{~N}} \underset{\mathrm{~F}}{\mathrm{D}} \mathrm{D}$ I MCAACSNRIEKVI GKME MTCASCAMRIQKALSKT PGVITVTVNLA M H C A A C C V R R V



 MTCAGCVGRVDRTLAALPGLRDVSVNLA
 $M T C G G C A R S V T N A I G K L A P G A A \quad V G V D L D$
$\square$ Q F Q VE
 TKVIELLKVGLHCKKCVQKILLSSLTQMRGVSRIDTDLE M S C A S C V S S S V E K A V S R V P P GlV D K V


 M T C A S C $V$ V R R V E N A A A K V M S C A A C Q A RVEK AVNAV D GVVD C A V S L L
T R E $\square$ AVS M TCA T C S G R R V


IE F MVE M R C G K C V E K V E K S V L S L E G V I Q V A A S L



 APVTTAVIVVAFHCLGCIEKIHKILSKAK GVQEMTVDKQ
$F$ V $V$ K VDMM H C E G C A K K $\quad$ I

 S C G H MTCASCVKRVE D ALLKS SE CASCVKRVEDALKS SEPGVT T CEL H FT
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MEQYTV TGMSCAA
CAA CSAHVEKAVAKV $P G V T S C C V V L L$


 MSCAACATRI EKVLNRQPGMQATVNFATE D T A $\square$ Y K A A VA M T C G S C V G A I T R GV Q H L P Y V S S V N V D L N MTCAACSNRI EKVLNKMDGVEAQVNLTTE











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$S Q T L S$
$S$ MSCAACOAHVEKAVSKV ASSQTLSLLIKMTCASCVASVEKALLSVE SGLTtVELNVD MTCGG AQEQVVVLKVSMHCKACARKVKKHLSKME

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## FKVT

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VD

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P $\square$ MKFSVDMSCAACVGKVETALQRT ngVrRávNLa
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| Ref90-E8RBV1 | A Q V ${ }^{\text {a }}$ |
| iRef90_DIVUY3 | M V VF |
| UniRef90 R5URZ3 |  |
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MQQ $\square \mathrm{T} \square \mathrm{NVQ}$ MTC C S C V N K I E S TVMK K I

NGVFSASVALT

GlVK F A A V NLA HEFHDDM K $\square Q \square D V S M S C A A C A S R V E T K L N K V P G V R A S V N F A$ MEQTVLSVQMSCAGCALLTVEDALRAV MEQTVLSVQMSCGHCVKAVEGALSEL SGVKSVKVNLE
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V DMHCASCATT IEKELRKLPGGLKKAVVNGA
IE FELPMSCGHCVTAVTEALHEVDPA A GVEVDLA
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 $M T C D H C V R R V E N N L K A D E G V T S V Q V D L Q$
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 MKK $\square$ T FP $\square$ GMHCASCSR LIERQLKSVPGVLNSVNYGSE

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60
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T S TAVL
GRK $\quad$ TV
QS A E ERDVLA ETLTEAGYP

S A TVVEVESKVSLE TVKESIVDDQGYDV
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ST $\square H K Q T F P V G M S C A A C A A R V D K T L N R Q P G V C E A S V N Y A$
$\mathrm{T} \square \mathrm{Q} \square \mathrm{NV} \mathrm{E}$
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MNKETFNVK MTCGACVET
$C G G C V A T V K$ DKLSKLENVVSVEVNIQ MSCGSCANHVENALNSLDNVYAKVDLRKN $T L E L N T R M D C S G C A R K I V E A V A A A L A G V T K A T V V L A$ VVVSVPVHCDGCARKLHRSLDRLE GVDEVIVDHS MSCNHCVNHVKNALMEIK GI NDVNV D DE
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 $M \square T S T F T V R M T C G H C V S S V R S E V E A L D P G V S R V H L D L S$ TVVLKVDGECARCYRKMRKVLCKI QDKIKTISFDEK MMKVE

$T T Q L R V S M T C S A C V G S V E T V L S K A D G V S K A K V N L L$ SNDHTVNFD $\quad$ KMTCAGCEEHVNHEVNKLDGLVAS KVSYE MTCAVCVNAI TDDLKKKDWVVKVTVNLI

 MTTTTDTVSMTCGHCVASVKEEVGALDPGVSDVAVDLDN
 ASVAEVEFKI NMVCEGCAETITTALKDL H G I R R E V K P K V V

 MVTTTYQVQMTCGHCVAAVSAEVGEL TFSVMTCAACVMSVEGVLKEL
 AHMATTTGKVG MTCGACTSA

TTEYSVNDDCQKCVDKI TKELAFTR GVV E Q QVDLA GVVRAVVSLT | $P$ | $G$ |
| :---: | :---: |
| $S$ | $A$ |
| $S$ | $D$ |
| $T$ | $D V$ | VD A GVVGNVMVSLV A QKETVVVFHVGMMCKHCADHVEKALAFTR GVVRDLDQFSIE MTCGHCVASVTEEISGI AGVTDVAVD A $M$ D EFYVRGN QTYQV TGMTCAACANRI EKRLRKVQQGVEVHVNLT

THEFNVG MTCAACSAS:IERAVGRM
THEFNG MTCGSCVAHI ENHVSK
 C F GVV E S V A A

VEYKVSMHCNACERTVVKAI SECKGVEKFITDMN TTSYKVKMGCMGCVTTVSDRLSAVAGVTAVQVDLA


## MKT

 MAT$M$
$M$

MKTTVLAL

K V H M H C H K C E Q D L


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|  | UniRef90 ${ }^{-}$VoU5M6 |
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NNSATVIEFTG ${ }^{50}$
60

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SClVRSRQNI DESAI RNAVLDAGYVVMKYKE ERKVTVDVNVREEDILKAI ARTGMQADSGVE SETATITGGLDRSEVEKLVASLGYVAR TEKLVVDADSD $\mathrm{L}^{2}$ AAVEQAVKQAGFEIK AQTLTVQGTIGSDDLLSYI RK TNSAAVSYDPDVNAGGTELERDGYEFKG LDETIAVEYDVETTEMITAVKKMGYE SERLHISYDVNEKTIYDRI QDLGYTVEEGVE QALVEYDPAVAPEQLLQTLRDIGYTI QGNAIVESKTS $\square \mathrm{PK}$ KI EEAI NSTGYSV QSNALVKSE I S PEEI CQEI GDMGFDAS $\square A E$
 AKYAVI ETDIKDEDIRFVI DDAGYEVTEDQEV RKEATVAGEAPDEAWLDELQAVGYPAQ A GT LITVTAGVDHAQVIAAVRDAGYTA



[^1]


[^0]:    lupas_21
    lupas_14
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    jhmm
    jpssm

[^1]:    lupas_21
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