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B3MMQ1 UniRef90-V9P292 UniRef90_M3AWK9
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## QUERY

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LQ P A E V Q E I I A A F S N A D QV
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,


 $\Gamma$ PE
 $L S P Q E Q Q A V L R V F T D P S A A Q A S G V R L A G K K F F A V Q V D D Q H$ QQP E ITE I AK GF DSAE GLQTS GLLHVQGQKYF LLRADDRS

 $V$ SPAN GAALANAFKDATAI RSNGFELAGTRYVTIRADDRS
 $\stackrel{\text { E }}{ }$ S A N E DAA E L S A E E Q K A $V$ V




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 1 S P E E Q K A L T A G Y V N S D G V Q A N GVVR L G G Q K F F C L A A A N K E S


 VQK EI FELARGFDDPSQLQATGLHVLGVKYFLLRADERS

 I S K D EVVA K V $V$ A GF E N E S LL L T S G GlV L K LIN E L L T T L A S G F D N P S Q V Q A A S G F Y P S E I K EI S Q GFD NA A GL Q A N G L HI Q GQKFMLLRADERS

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v
V v


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| QUERY | L G D Y LID T G ${ }^{130}$ |
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| UniRef90_Q9SNW7 | MGDYLVDQGL |
| UniRef90_A9P8K3 | LG D Y I D Q GL |
| UniRef90-S8CNS6 | I GDYLI DQG |
| UniRef90_C5J3U0 | L G D Y V V Q G M |
| UniRef90-Q42449 | L G ${ }^{\text {P L I E }}$ |
| UniRef90-A8VT57 | L GDYL I EQGL |
| UniRef90-UPI0002B41B77 | LGDYL I DQGL |
| UniRef90-G7KQH7 | L GDYLAEQGL |
| UniRef90-Q1EMQ3 | I GDYLIDDQGL |
| UniRef90-U5CPU0 | L G ${ }^{\text {P }}$ L V D Q |
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| UniRef90-Q5EF31 | L GDYL I EQG |
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| UniRef90-A9TUU0 | L GEYLFEQG |
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| UniRef90-Q7Y253 | L GDYLAEQGL |
| UniRef90-D8RML7 | L A D Y ا E Q N |
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| UniRef90-J4GKU7 | LADYLI GVG |
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| UniRef90-H0EVP8 | L A D YLI STG |
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| UniRef90-P39825 | L A D Y L V GVG |
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| UniRef90-V2X9C7 | L G D Y L R V ${ }^{\text {N }}$ |
| UniRef90-Q68HB4 | L GEYL $\square$ T C G |
| UniRef90-E9H2U7 | L GEYLMGH G |
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$K$ T A F T A P D E V ${ }^{60} \mathrm{R}_{\mathrm{R}}^{6}$ KFMVV/R


## 는

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 SQQEAMELLKSLKDGSVSAK VASSELVAVSKTFDNPYEAQSNGMKLGGLSYMLLRSTSES ITPEEIKVI HDALNNDEKLQSEGIFIAGVKYVF SNKGVR VKPEEVKAVVASLGNDSPFFQGGIYIGGEKHI NVAHDEEH LNDEEARKFVAAFDD ANVSDASVMLAGAKYLKTSAD GT LAPEEEKALIANFANPANASATGLLANKVKYLTLKADPRS Uniref90_A0A059LJ38


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| UniRef90- W9XEB6 | LGA Y LVSVG |
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| UniRef90-D8U668 | L GDYLEHQG |
| UniRef90-A8NNE2 | L A D Y V V V ${ }^{\text {G }}$ |
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| UniRef90-A1KXJ2 | L G D Y K A N |
| UniRef90_UPI000455E87E | L A D Y L 1 GVG |
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| UniRef90-E7D158 | LG D Y LRA S N |
| UniRef90-F7VNK5 | L A D Y L K S G |
| UniRef90-P26199 |  |
| UniRef90-F9F117 | L A D Y $\quad$ KK S |
| UniRef90-C5FGJ6 | L A E Y L M GV |
| UniRef90-A7S5R6 | LADYFRVNG |
| UniRef90-I2GWE0 | L A D Y L G V |
| UniRef90-P32006 | I A EYLESLSM |
| UniRef90-C7Z4J3 | L A D Y L 1 G |
| iRef90-G9B5N7 |  |

LGDY LRDSGF
LGDYLREQGF
LGDYLKG
LVDYLLENGF
I RDY R R R R

L A D Y L
LGDYLVSVG
VGDYLRG
LA D Y L K K S N
$L A D H F R R T G$
LAEHLKKSG
LDA D YLVGLG
$M G D Y L I D Q G L$
$L A D Y L R E K G$
 LA D Y L V GVN


$\begin{array}{lllllllll}L & A & D & L & L & 1 & G & G \\ L & A & D & Y & F & K & S & G & G\end{array}$

I A EYLESLGM
LGDYMK KN N
G G D F LK K S G
LADYL $\square \mathrm{DNN}$
LGDYL
1 RDYLLNTG

LAEYLLREKG
$L A Q Y$ AKES G
LAKYLLE
G
LGEYLLEECNF
LASFMRDN N
L A D Y L K GVG



$Y A D Y$
$Y$
$L G D Y L R G Q$

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SWDSY QSLLDCLIRTKHVEHAAII KKDDSVWESTVGFNL SWDSYI DNLIAQSKGTVHVDKASII GID GGAWTAHPNALK

SWQAFVDTS LVALV WQGYV WQGYVDSSLM LV

SWDSYLDNLCAQSN WQGYVDSSLM SNDSAHCGKAAIISDDGGASWTSPNHPH WQGYVDSSLM GSGLFDKAAVLSYNLSGDEAKSSGFS
SWQAYVDQSD CSLVGTGHIDKGAILSAAGSVWAASADDQH
SWA Y K KNLLD D S SQGI QRAAIVGYDGSVWARSEGDR
SWQAYVDTSL
S WQGYVDNLM 1 D S L L

$C \quad G \quad G$G T
WA A Y IT NLLAS S S G S WQS YVDNL M $\qquad$ $\square R$ R A A WQ A Y $V$ V $\begin{array}{lllll}D & N & L & L & D \\ R & S & L & I \\ R & A\end{array}$ S WQ A Y V D NQI R A QV S
SWQ GWVDQTL VGSKKVDKAA

S WQEMMENLLPD GT
S W D S Y I T
TKHVRRAA

WSEYVTNVL $\square E$

|  | $G$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $S$ | $K$ | $D$ | $A$ | $C$ | $A$ |
| $T$ | $Q$ | $A$ | $A$ |  |  |
| $S$ | $G$ | $Y$ | $V$ | $S$ | $R$ | $H V S K A A$

SWDS Y $\square$ D N L I A Q T K D S S H A D K A C
A L I A T GHVVENCA LVATGHIDKGA
 GS G QFD K A G L L S H D L S GVVA G S P GF S WD P Y LD N LIA R S K D GA HI D K A C I GMN G S L WA THAANA DQ S WQD YVDK QL L A

S R CVVT K A A A GHD G NVWA K S E D

 WQA YGQS LL ERGAVSAFAVVSRNGRVWTETPDLDA
Uninefor
Un


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LAEYLREKG
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|LAEYY|
G GEYLRKKG
पGEyTRKKG
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MASHTRRS
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${ }^{1}$ WKSY\|D HMMAD GTCQDAAll VGYKDS ${ }^{20}{ }^{30}$ VWAAVPGFTG WKSYID HMMADTGKAHCGKAAA I SLDGGASWTSPNHPY
 SWDGFITKD VASGKVAQAA YGRDGCDWADSPGF Q SWQTYVDEPLLCDIDGQRLT AAALGHDGTAWAQSESFPE
 SWDGYLSQHIMADVGGHVDKAAI IDQTGAIVGKSS ETV SWTLLNESLVIRTKHVEAAAI AINEREVCASTSGFYV SWDGYLNDHVVGSL $\quad D K A V V I D V T G A V W A K S N G A Q$


SWASYVENLM SDGSCQDAAVGCAKYVWGAQEGFAN WDAYISN LMAD GTCQDAA VGYKDSIWAAVPGFAN
 SWQAYVDSSL VGSGNDDQAA\|FDKDGSAWATSPGFK

## WAPYVETLL ADGTCQDAA $\mathbb{V}$ GYRDAVWAAAPGFAN

SWQGYVDSLKANYAD NTAAAGLFGFNGSTWAQNFDHAA ALLSTKHVQHCA $I R K D A S L R A S S$ VGLTL

WKEYVNT\|L
WNAYVDSGM

ПDKAA TYSTDNSPCASSQGF KDKNVEDAA!VGHNKCVWASKPGGNA ADGTCQDAA $\square G Y K D S V W A D P G \square A N$ AEAGGSP HNAY
NnLLALIATEHVEKCAlLDKEKEQRAGSPGF L WQQYDDRHL VVGTRQMHGA LGRGSTWGASAGFAV SFDSYINDLVTQSKGTAHVDRCCII GLNGGDWAASPYALK WDSY LDNLVCQDGDYDVTKRRUTSSDGGFW F F
 WVDFVNNNL VGSGNVSKAAAIGFDGSLWGKSDNFKA DAYSDNL IIEDGTCQDAAL GYKASVWAVPGKTFN WNVYVKNLIESESS SGQTYVDVLM MAEPGVLAHAAVVGADGSMKAASAGFRV WTAYI DNLHACTA WNAY $I N N L M A A$ GTCQDVAIVGYKDS VWAQSSAFPA WQPYIDNNLVGAGFANAQIIGLDGSNWAASKGFSL KTYVEEHLMG AGSK LAAGAVVGPGGFAWAQSDHFPT

S WDAYVTNL
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SWQSYIDTMKTADQSGVPVAEAAMCGDASVWVSTSGLQG WKNYINTIL KDKNVEDAAIVGHNKSVWASKPGGVA SWTPFVDSQFVAP SNGLI QKGLI MGRDGTVWGVSDGW-A WKDYVAA LLKEET GVEDAAVVGCSESVWASRPGGVA
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TYGKKGKEGTVVVKAKSCVMTAHHGESVQTTNAATVVEN VLFCAMGKEGIIAAKCTSSILVSHFPDTVPANRAVTLITQ DLRTKSQGGN|AVGKAVRVLVFAMGKEGVHGGGLNKKTFA II YLKNADGGLIVVKTKAFILIAMYRVGMYPSVCVEAVEK TLHVAKGKEGVVASKCTQGILIAHYPEGVFFGDAIDAVVK THYKKGKEGVVASKCTQG|LIVAYPEGVFFGDAVDAVVK I CLQNPDGGMIVVKTKTFILVATYKAGMCPSVYVEAVEK
D
RTKSQGGNISVGKAGTVLVLVMGKEGVHRGRLNKKAYS DMVGRDNGSGCVIYKCNTCIVI I CVVHDENMSLGGCYSVVER VIRGKK
LYGKKGKEGVIIARASSCTTIAHHTEAVQTPNAATVVEN VI RAKLGKVGVHCMKTTQAVVVSDYEDPI QPQQAASVVEK D RTKSQGGNI AVGKATKTLIMVKGKEGIHGGQLNKKTYT DLRTKSTGGNIAVTMTARTLVLLMGKEGTHGGVINKKCFE CLDGRKLREGUVIVKTGTYLFIAHQPPDMP円FQVNEHVKS DIRTKS

## V YGKLVRFHF

VYGRQGRTGIC\|VKTKQAlLVGHYGENAQAGNATQTVEA
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DLRTKSTGGNDTVTVTDKMLVLLMGKEGVHGGMVNKKCYE LI FGKRNKTGVFVFKTGKEMEMGGGNSASQSEEVQDVTSY I YGKQRGGGVIAVKTDKVFLIGTYDKSEQHETAASVVES LIFGKKDRTGFFAVKTAQAVLIAVYE
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IY GAAASVVEK
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MACYLRSS
MA DYG E SVGM

LVDY!
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MAKYLRDMGF
QAKHLDANSL
LAD Y L REKG
NASHLVKN
LADFFREEG
LADYFREKG
MAKY LRDV
【GDFLCNKSF
LVDYL

MANHLLRRS
WATY LIRS MAKYLRDSGF

TA D Y L K A N N
LGEYFREK
LA D Y LI GVG
WARYLINA
MIGY IKGKG
LAASHLRRA
LGEYLRKKG HDDYLTESGL
LT DYFREK G
LARRLLD
VAECLESLG

LGDFLRRAGL
MI T S MKSQG
MASHLQRS FKDYMENVN $\square A D P L I S Q G$

MASHL
LA D Y LID Q G
LGAYI EG
YADHLI ${ }^{\circ} \mathrm{KG}$

MDNFLKQKGL
VADSLVNAG

L R D Y LA GNND
I A DYLEDNGF
LADYFKS
MVSHLRRV
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MTAYLRKMNL
MGDFFLRRG
MASHIRRS
VA N L R S Y G
MAKYLADSG
LCNVFI S $C$ GL
LGKHII
MAKYLADSG
LVTYLKNNN
LI KGGRFQGM
-ADYM
FADYLISMQM
MASHLRRS
CAKYMLD
LGK
LAFY $\square R R$ S D M
V
MANHLRRS
FADYLMK
$\frac{\square A}{M} A$
M A
MMQY L R K S G F

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SWDAYVD LLA KQTHAAAIISVEGADCAKT NNFS WEAYI DATTGQYKMTNVNEHAGIFGLDGTPWAVSAGFNL TWQTY』DDHLVPA GFMYAA』VGHDASTWANTKDFQV

WK E Y IDETVL


GKVTGGCI I GLDGGlWASTPGFYG
QALLNDSL $\square R T K H V E N A A I I D I K D K C H Q S A$
SWEGYLTRLKGTDSGTQPIAEAAIWGQNPSVWATTDGDKD S LS SPS GCQVGGRWVLGE E GGVLTLMGASFP S WD S YVNT LMAHEL I EEVAIWGKQESQWAATPGLSN WKGFISGVL RDQSIDDVAIVGHNRCVWASRPGGAA TWDTYITNLTSKDADGSQVEHAAI WGREPSVWATSEGFN WNAYVDTQLVA TGAVCQAGIFGKAGYNTAVTGDDGV SWQSYVENQMA ADGSCQDSAVVGYTDAVWAAHPGFNN SWDAYVKSL EDGSAKCTYAGIYGRQGGCWAESENTFN WKTFIS AVLRDQRDDDVA VGHNRCVWASRPGGAA SWNDQLVTLKTQSSG CAIITQQGSLCA SEGAWK
 T WQQHVDEQL $\quad$ IARGPFRHAAIFGLDGRQWAASAGFEV WD Q Y VD

## $Y L V K D K \square C Q H G Y I V G Q D G L I W A T N S G L K T$

## 

WDVWTRQLLHRNDDGVSAHHGGLFGFDGKLWAGTDDFMR SWVELLSDIVGTKRFGEAAGSMDGLTYGSTHGFRV

 WKGYDS ABVRDRQRDDDVAVVGHNRCVWASRPGGAA


 WAA YIT NLLASSSG $\square R R A A I V G Y D G S V W A R S E G D N E$ SWDGYTASM $\square$ GAGKGHGG I LATNGA $\square$ MSQVG $\square T$ S WAD LVNNND VGSGNVSKAADCGFDGSDWGKSDNF K SWDEQMKY LKNCTGDKMYF GA CGKDGNVWASSKDSMN

 HSGA IVDQEG


## WDDMVKE WL

1 D T GSVCAGGLCS DDGAFYAASADENVV

WT A WVQGAL $\square$ AP WA AY Y KNLLD WA AYVKNLLD
SWPD WAN
$A Q S G A S A V L L M G A D G S M W G L A G Q W ~ N$
$S S Q G \| Q R A A I V G Y D G S V W A R S E G D R E$
$S S Q G D Q R A A I V G Y D G S V W A R S E G D R E$
$R D G L C C D A A V I S V A H Q Q L L A A H P G G V N$
 AAA』FSDKGALCAKSSNFAG WNAH $\square$ NND $\quad V A E G T C Q D T A A V G C K D S V W T A X P G F S N$ GKCAGAA IFSHTG VVWYTTPGFYT
$S V Y G V K$
SWQD WAN
WK G Y $\square$ S
VGPHKGNGGAVCGNDGGVWGRSE TMD RIKSDAS LQKAA I GKT GGTWGATEGFAD


WEA ADGTCQDAAVVGYKDSVWAAVPGFVN WKDYINHFLPTD $G$ G GH $\frac{1}{L}$ SCAI SSEYGDTLASSKNW D WKDY INHFLPTDM
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AT DAELLKKFAALLFANDKSVIPGTGADLLEGVHYVVPRDEE ATPTNMIHWSKMLKDPSLARQHGDP FDQRKLFPLEYSKN
 ADPAEV GVLVGGKDRSSFFVNGLTLGGQKCSVIRGEFTM

 STA EFSHFKDAFDP

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| F |
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| E |
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| A |
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| T |
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| R |
| S |

$E L Q L L S K$ Q

 K D R $V R R G G$ R VT $S N A F F V N G L T L G G Q K C S V I R G E F T M$ | $S$ | $N$ | $A$ | $R$ | $C$ | $C$ | $G P H$ | $G$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $R$ | $T$ | $M$ | $K$ | $C$ | $M$ | $F$ | $R$ |
| $R$ | $D$ | $N$ | $S$ | $D$ | $S$ |  |  |


 I S P Q E V A V L A G P D R H K Q D E IV MK Y I T Y F Q E P S PALLA GFF Y G GEKY V C C N Q A N T E M


 T NDLKHLLEAFRDTRYVRENNLVYDGRNWLCLRADABA
 $\square$ N P TS L K K M H DA ID R GAAA VS KVVEGGKKYFVLKN D P S S
 S S $\qquad$ Y YK GIS F H G EVVY SV S SVVF D

 IN EEEAK QFI K DLKNNEQD L KLAGKKYNTMIDNK KE 48 DRRTFLQS GLSSLAGRRCCVIRAAEGD





 I T P A EVGVLVG KDRSSFYVNGLTLGGQKCSVI R

 ATADELVVKYTTYFTDPSPALLS GFMYGNQKFDCNSANSEM FTPEN GKT IAK LMENPQEAMKSK LHMLGQRD YLVVYA DS H T $P Q P A E V A A L V G P E R G P$ LLVVGGLTLGGLRCSVIRGEHSM VTPKEVQEIVVASTGTPK TSLHVAGIKYIVLNQDKDE SPBEVGA AGSPF G




 FTDAELKKFVGLTFGNISEVPSTGCDLE
 $\square Q Q A E A T T I A N A \square M N \square A D F Q S K G L H I G G G V K Y T V T R A D E D G$ I NP GEMKLITS FFKDMGSTYS CGFSVVNGRYLTMACEDN I T QEEAAAAGRGFANKDGLLGTGLKFEGEKLVVTS
$V$ S K E EA A TMS K ICA E LG N A QC G GlV Y LGAN KF RF VR G DEK S FKDSDVKTINYALSGQYSSLVR MKFGNEMFMCFRCEDND ■TPQEI DVIVGGKDRQSFFTNGMSLGGSKCSVIR
 LA P S DV QKLD A Y LE GTNN SERITTLNGYSY I I K D DD Q K H $L$ N Q E E A T LI S Q K V G E V D Y F Q M N GVVTIVGNHKYAVVTNSDEEG

 $V$ S A Q EAA T L A N AI K TSA GAP DS C T L G G V K FM GMRAD D S E








1 P Q E E I I S I V R S L L E N Y N K P
1 T P A EVGVLVG $\begin{array}{llllll}L & K & E & N & R & S \\ M & Q & N & I \\ \square Q & L & L\end{array}$


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LI IFGKKEQT GFFAAKTNQAIIVI ${ }^{100}$ VMYEDNAQSAAVVRAGVEY 110
100
110
120 YIHAMQDEWNVYMKKTNTVVVISVCGGGKPQDEAKNQVFN AYLGREGGGGACVARTKQCVVIGVWNKAQNAGDCNDLTEK FLQGRCKEEGVIIMCTAQSLIVGVHDPGASFGKANTDDGR DLRTKSTGGNITVTMTAKTLVLLMGKEGVHGGMINKKCYE LYAKNENTGVVVVKTQLYLLVATYTEGMYPSVCVEATEK DIRTLGDEGSICIGKSSKALVFLMGHKGVHGGVLNKKMHD VVAKKGANSLVIVKRPTCIVLGYNDDQIKFETCFNAVTK MYRQNPDGGLIVVKTKTFILLATYRAGLYPSVCVEAAEK
 VKDEQGNSHSVCVGVCKTAFVIVKGTPASNGGTLAEALFK DARTKGPDGALCVGHTPRALLVLMGRRGVHGGMLNKKMHE NTMQKNSEGNLFIGKTAKTFVIVKGSATAQGGQVANKLYN VLYGKRTKGSACFACTNTLVIVGVFDDSSTAGACNKAVED D RTKSQGGN SVGRAGKVLVLVMGKEGVHGG
LLQGKWNDYSLVISDTATGVII GLNHTPVKTQTVCTAVEG VLDARTDGRAI CVGRTPRALLVLMGRRGVHGGMLNKKMHE V FAMKGKQAVVLQKTKTLIVAGYTDGAFVPAALSANVAK
 ITGSDRSCHLTI QRTSKAVLTLLEAKRKPLEDAGEVEEQ TWYGKKDKGGASIABTNKALLVGTFELGQVPGKVNEICEK VMDVRSKGGNI CVGRTPKALIFLMGNRGVHGGVLNQKIHD
 VI LKSTDRGGCTVAKSNTCLVVGIVYDSVQPANNTSQDCD TLHAKSGPSGVICVRARNCVLVATYYPPTSAPQALITLEE LIFGKKDKSGFFAAKTKTALLIAMYEENQVSAEVRTAVEK FIYGRKDTDSVCIVKTMKTFLICVFKEGIQPDNCAKTVEA VWQ WY DGEFSMDLRTKSTALVLLMGKEGVHGGLINKKCYE $V W Y G K K D H G G A C I A D T N Q A L V I G T F D V A Q N P G Q V N K V V E S$
$Y$
$Y$
$Y$ VLDARTKGRAI CVGHTPRLLLVFMGRRGVHGGFLNKTAHR DLRTKSTGGNLGIAMTAKALVLGMGKEGTHGGTLNKKCYE VYGRNGATGVALARAWKSIVIVVGNETIVGGPNAIFACEG DTRSRGGDSSICLGKTPKALIFLMGNRGVHGGVLNLKTHD



V FAMKGKQAVVLQKTKTLITAGYSNGDFHPASLSGAVAK LTARKREFGIMVKHSKMYYILGTCDERTNPTKCLEYVTR DLRTKAAGNITAADTNKTVVLAMGKEGVHGGCVNKKCYE LLRGKAAEKGLTALKGKSYLLISQYNNSISPGNNCKQAYQ VLDARTDGRAICVGHTPRALLVVMGRRGVHGGILNKTMHE DLRTKS自KG
LYAKKGMTSWTVVH
KLFAQKTKGGCVCIKTAQSTVVGFYDEGQTAGNATKAVID VLFAQHGKNACALHRTNSAFVAAYTDGTDDAGLLLKIVTV TIEGKCGPGGFCAAKGETFVCVGFYNDGMVAYEMNMVIQR AVLIACFEENAAGAEARVAVEK D TRMKRQEGS TVFGKAGAAGVSI YKGDKVILIGYFDASVSAGQNSDAVYK ■IHGDCGNSGVIIAKTETAVIMGQYAGSS】RNAANNNMTN
VTFTRNLHNGFAD ETKQAVVICVCEEEGKGTAAATGACK TLLGKNGEEILVAHRKNGFLVVGLGHSD TPGSCLYEVTR

## 

LVAFSGSKYYT TAKSKSMYVTAVCEDRSQVAAATSLTKK VVTAMKGNSGVNIVKGKNTIVIGYYNKPVTAGQNHIATYA VVTAMKGNSGVNIVKGKNTIVIGYYNKPVTAGQNHIATYA $V V T A M K G N S G V N I V K G K N T V V I G Y Y N K P V T A G Q N H L A T Y A$
$V T F C N R P Q G G C F L V D T N G V V V A V Y D E S Q S S G N C K K V A L Q$ $V T F C N R P Q G G C F E V D T N G T V V V A V Y D E S Q S S G N C K K V A L Q Q$
$F V S N S T K T C V C L K K T V V V G A L D H A R N D A A V S K V A E A$

DLRTKQYTHAVTVALASPVCLILVGKKGDQGGTLNMKAFK LLHGVRRSEAVLVWALNTCYVVCVFDVPTTAQSVIPAVTT TVGGAENRVLVAHDCHQCMVIGFSDIQSPGSCIYDITE DIRTKSQGGNVAVGRAGRALVVV I HAMHDELNTYMKKANTVIVVGLCGGDKPQNDARNQVIN DLHTKSTSGSITVTMGVRALVLGIGKEGVXSGLINRKCXE Yi GTTNTSFAIMC KCKECIVFAYDENKITYDRLKQATVQ LYGIKNEEGVCIVRTRTALLVAHFGPPSY品EAARCIEQ WITAKKYKCGCTLVETGTGYVIGYYDSPDTEEENLNATLQ VVGRAKDFFVVGHTPRALLVLMGRRGVHGGILNKAMHE LVGRTAKDFFVAYRCDDFVIIAAFADIIVNPKSCIVGEVWT DLRTKSGSGNVTVTMT
VI LGLAAGTRIALCKRGEYIVIGFTDKNDKFEDTARVCKN DLRTKGQSRGVTVVQDESVYLVVMGDKGTEGGPLNVKSFE

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UniRef90_F8WRF6
UniRef90 C5FXQ9
UniRef90_A0A016WQB3
UniRef90_B3TK21
UniRef90 K1R4T4
UniRef90-C1BK56
UniRef90_UPIO00388CFEC
UniRef90_R7VMB0
UniRef90_UPI0002C3ED15
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UniRef90-D2W5C2
UniRef90_A0A024NKE5
UniRef90_K7F0S8
UniRef90 X8J7T0
UniRef90_V4B434
UniRef90_G3IA72
UniRef90_UPI0000D9AF88
UniRef90-A2DRF5
UniRef90_UPI0002655D8E
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UniRef90 K1Q0J8
UniRef90_F4QBB4
UniRef90_UPI00032AF618
UniRef90 F0ZR72
UniRef90_UPI00038ECE72
UniRef90 UPI00027F7E24

LA S Y L E S A G
VAKILLDAG $M A Q Y L T A S G$
VA D Y I MEAG
MASHLRRS
L G K F L 1
MAK Y L R D S G F
MVD F L N K N G
LA Q S L
VLKY LRESG
MASHLRRS
Tl K Y L K D S G
$\begin{array}{lll}L I & C G L C K M G M \\ T V K H L N E S K K\end{array}$ LAEYLRSAG
$M K D Y$ K $N V G$
LLCQLCMEGM $V$
$V$
A K K Y L VAK LLADAG
L TDFLETYG LAQSLKASN MANHLRRS M
LASTLASKG MAKYLRDSGF I R D HLVDAG

MA K Y L E D S G L

L G D H L I
MASHLRRS
LA A TLK QAG
V A K N M K E $\square \mathrm{N} L$
L 1 IR G L R A E G MASHL R R S LI R L L K S Q G A A D A L
M
TVKHLNDMG M

V S N Y L I G S N L
V S E M MK
MANHRRRS
LK D Q L D G Q Q F

LAVY LR D C G $L A D Y L Q G N G \square$

VGQYL
LAQYLCDSG
MA TY I RKS G
$L K D Y M G Q S G$
$Q A Q Y L I D S M G$
MAEYLTS VG F A K

LARRLVEKD
L K T L I ND G
 LAEYLVSQG
$L A Q$
MARY $\quad$ K S
$\begin{array}{lll}L V G P & \text { L } \\ \text { F G K H } & \text { I } & \text { K R G L }\end{array}$
LA L Y L R R S
$\square A K \square L S D S G$
TA S YL Q R S
LA QKI K E N NL
LCDNLDEK
L A R H V V E R G
L V
LIH G L R A Q G
FGSELRS
LGKYLVEN
A VNYLNEN
MAGYI REA
MASHLRAA
UniRef90 UPI00045D66EF UniRef90_UPI0004419359
UniRef90_G5BVR6
UniRef90 C5LBS5
UniRef90-M7AW02
UniRef90-UPIOOO2741417 UniRef90_UPI0004541503 UniRef90-D3BEN6
UniRef90-A7WQ48
UniRef90-H3FB94 UniRef90 UPI000457415C UniRef90_UPI0003C2A75C
UniRef90-U6INN3
UniRef90-F8WRF7
UniRef90 A2FY23
UniRef90-K4G068
UniRef90-L1JLS5
UniRef90 Q307P5
UniRef90-S9XCJ7
UniRef90_C6X6S1
UniRef90 B6AAK8
UniRef90_G8F343
UniRef90_Q4N4T3
UniRef90-UPI000344F483
UniRef90_LOAX88
UniRef90_UPI00038C3C13
UniRef90-F4QAL4
UniRef90-U6HHZ7
UniRef90 Q5IFI5
UniRef90-W7JCM7
UniRef90-V4YLP5
UniRef90_K0J613


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 DLRTKNCTHALTVVLVNPICLILIGTKGDQGGTLNLKAFQ DIRTKSQDG
CLFGALGKKGVCVINTGTMLVMGMYDEGQTGGNCKSACAA DLRTKRQEENI TVALANPVCLILVGQKGDQGGTLNLKAFK
 LIY GQCQTGGCCLVKAEK GGIIADY WVQANYPKHGVHIVVTKTQVVVGFFDEDKQSGNCKKVTCD CIIAGRNNSGGFFATKTHSAVIIAVFEGSCPDGEVRNSVDK

DLRTKHYTHADTVTLVS SVCLILIGHKGDQGGMLNDKAFE LRAAGNEYAIDCRILKTMIII TGNSKPKDPGVLSQAGCA 1 SAKSYQSGCTIILTRGGFVVGYFDSPNTSEQSIIATKK
 $A L E G S D K S Y N I G V A A T D K V L V I V L G Q E G S Q G P R D T D A A M E ~$
$I H C K R K G A S G U I F V R C R G A C I V V Q Y S A P I T A S Q C L C Y V E S$ IHCKRKGASGUIFVRCRGACIVVQYSAPDTASQCLCYVES MDLGTNNDGGVMVTMTAKMLVLLMGKEGVHGPRDNKKCYE $\begin{array}{ll}V A A D G V E N L I I \\ V & A \\ V & C T S D A V L V A H K D \\ R\end{array}$ VIFCTRNQGGCFLVDTNDNVVI CVVYDENQVAGNCKKNALV DLRTKGQSQGVTVVQ\|ESVCLVVIGRKGTEGGPLNFEAFE

 DLRTKGQSRAVTVLQMGSVYLVVMGKKGTEGGPLNDKAFE KVYAQNDRLGCIVIQSKKAFII GMFPKKVHPRICY
LSATGNDYAVDVRVLKTMVIITGNSKPKDPGVLATAGNA TI LGGNKGGGFLI KTPNENVVI A LY DEEQNKADALTTALAN VATCAKLKGGLHLVKPGGNILVVLYDEEKEQDRGNSKDAA


[^2]

| UniRef90_UPI00045D66EF | MA G Y I R D A ${ }^{130}$ |
| :---: | :---: |
| UniRef90-UPI0004419359 | TAKYLKE |
| UniRef90-G5BVR6 |  |
| UniRef90-C5LBS5 | F AEY |
| UniRef90-M7AW02 | $\mathrm{M} \backslash \mathrm{R} Y \mathrm{l} \mathrm{I}^{\text {N S }}$ |
| UniRef90-UPIO002741417 | MAS HL |
| UniRef90_UPIO004541503 | LI G GLREQ |
| UniRef90-D3BEN6 |  |
| UniRef90-A7WQ48 | FAAYLAGEG |
| UniRef90_H3FB94 | $L A D \\| L I A A$ |
| UniRef90_UPI000457415C |  |
| UniRef90-UPI0003C2A75C | $\square \mathrm{AR} \mathrm{Y}$ ПK D |
| UniRef90-U6INN3 | MATYLSDRGF |
| UniRef90-F8WRF7 | LA R Y V K E L G |
| UniRef90-A2FY23 | LA D GI D S Q |
| UniRef90-K4G068 | KAKELRNSGF |
| UniRef90-L1JLS5 | LA D |
| UniRef90_Q307P5 | LAEYMAANG |
| UniRef90_S9XCJ7 | $\checkmark$ A S HL |
| UniRef90_C6X6S1 | 1 V ¢ Y L K E Q |
| UniRef90-B6AAK8 | FAEYLAAQG |
| UniRef90-G8F343 | MAGYIREA |
| UniRef90-Q4N4T3 | LA E Y L A T N G |
| UniRef90_UPI000344F483 | V G Q Y L |
| UniRef90-L0AX88 | LAEYLANNGM |
| UniRef90-UPI00038C3C13 | 1 A G Y MKEA |
| UniRef90-F4QAL4 |  |
| UniRef90-U6HHZ7 | MAEHLSHS G |
| UniRef90-Q5IFI5 | FAEYLHQSGF |
| UniRef90-W7JCM7 | LAKELAES |
| UniRef90-V4YLP5 | LAEYLHQS G |
| UniRef90_K0J613 | LAEYMAANG |
| lupas_21 |  |
| lupas_14 |  |
| lupas_28 |  |
| jnet |  |
| conf | 9999874599 |
| sol25 | B B B |
| sol5 | B B B |
| sol0 |  |
| jhmm |  |
| jpssm |  |


[^0]:    lupas 21
    lupas_14
    lupas_28
    jnet
    conf
    sol25
    sol5
    solo
    jhmm
    jpssm

[^1]:    lupas_21
    lupas_14
    lupas_28
    jnet
    onf
    sol25
    sol5
    sol0
    jhmm
    jpssm
    

[^2]:    lupas_21
    lupas_14
    lupas_28
    jnet
    conf
    sol25
    sol5
    sol0
    jhmm
    jpssm

