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AMDPEFMEMWHEGLEEASRLYFGERNVKGMFEVLEPLHA RVAVLWHEQWHEGLEEASRLYFGDHNIEGMFAVLRPLHD RVAGL WHEMWHEGLEEASRLYFGDRNVEAMFATLEPLHQ RVAI L WHELWHEGLEDASRLYFGERNTSGMFATLEPLHA RVAILWHELWHEALEEASRLYFGENNVKGMYEVLEPLHA RVALLWHEMWHEGLEEASRLYFGEHNVEGMLEVLEPLHA R的L whemhe RVAVL WHE QWHEGL RVA:LWHEMWHESLE RVAILWHELWHEGL RVAVLWHELWHEAL RVAVLWHELWHEALEE RMA L WHEMWHEAL RVAILWQELWHEGL RVAI L RVAVLWHEQWHEGL

AIL WP EMWSEGL RVAILWHEMWHEALE RMAVLWHEQWYEGLD RVAIVWHEAWHEAL RVAI L WHEMWHE RVAVLWHEMWYEGL RVAVLWHELWYEGLE RVAVLWHELWHEGL RVAILWHELWHEGL RVAVL WHELWHE

AIL WLE MWY EGL RVAVLWHELDWYEGLE RIAVLWHEQWYE
 RVAVLWHEDWYEGL RVAILWHEMWHE RVAVLWQEQWYEGL RVA L WHEMWHEAL RVAILWHEMWHEGL RVAVSWHEQWYGGL RVA L WNEMWHEGL RVAI LWHEMWHE RVAILWHELWHEALE RVGAVLWHEMWYEGL RVAILWQELWHEGL RVAILWHELWHEGL RVAVGLWEELCWYEGLE RVAI L WHELWH

WN EMWYEGL RVATLWHEQWHE RVA! L WHELWHE A L WHEQWHD RVS:LLWHELWHE RVALL WOEMWYEGL RVAILWHELWHDGL RVAMLWHELWHE
RVAI LWHELWHE
VA: L WDERWY E RVAIL WPE MWHE KVAILWHDQVYI

$R$ VA $\backslash$ LWHEKWHE GLE
 AIVHAEIWNEAI EEASRIYFGQNDAKAM NYLAPHHK RVALLWHEQWHEGLEEASRLYHGDHNDPAMLKFVEPDHK RIALLWHEQWHEGLEEASRLYFTEKNPEGMLAVLEPLHA RLSVVSMEMWFECLEDASRVYFGEKDTSKMFRLMYPLHEL RLSITWVEMWSEALEDASRVYFGEKDIAKMFRLLHPLHQ RVA LWLELWHEGLEDASRLYYGEGNVSAMLDVLDPLHQ

## QUERY

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UniRet90 GOW9K0 UniRef90-A0A059ASK4 UniRef90-H2APE4 UniRef90-M1VGL7
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MMERGPOT $\square^{50}$
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SFNQAYGRDLMEAQEWCRKYMKSGNVKD MLERGPETLREDSFQQAFGRDLDEARECCDRFEQTGDISD MLDRGPETLREESFVQAFGRDLQEAQEWCHRYRETRDLNN MLDKGCHTLKETSFNQAYGHDLIQAQDWCKKYQRSGNVKD MLEKGPETLKETSFNQTYGRDLVEALEWCNRYLVSGNNRD
 QLDKGPETLREDSFAQTFGRDLQEAREWCYTYKQSRDVGD LLEKGPETLRETSFAQTHGRDLNEAREYVRRYRQHGEDND MLEKGPKTLREVSFAQAFGRDLKEAYDWIQRYLSAKNESD SLERGPETLREVSFAQAFGRDLKEALEWCHQYENSKDVAD MMQQGPTTLKEIAFVQAYGRELAEAYEWCQKYRMSRREAE MLERGPETLREAAFHQTYGRDLQDARESCRRYKQYGEHND MLEKGPETLREVSFHAFGRDLHDARDWCNTFRRTGDVGD MLEKGPETDRESHFAATYGHDLMEARACCRRYRERGDVND MLDKGPETLREVSFQQAYGRDLQEALEWCKKYSRSNKVAD MLKRGPETLREISFQNSFGRDLNDAYEWDMNYKKSKDVSN MLERGAETLQEMSFAQAYGRELREAREYCEKFKESGREED


 LLERGPVTVKEQQFVQNYGRELAEANECCTKYKRTGKEAE MMDNGPQTVRETGFQQAFGRELREAHEWLQRFLNNRNESD MIERGPETLRETSFVQSFGHELRMARDFCRRYKLHGDTND LLEEGATT KEKAFDEAYHAELMEAHECCKKYKRTGKDAE LLSHPPETLEEASFENTYGRDLNDAYEWIQNYKRTKDVSH LVEAGPSTAREASFMREFGRELAEAREWCRRYGASGRDSD MLDEGSTTIQERAFDEAYRHELKEAHECCCNYKDTGKDAE ALDNGPETLREDSFAQAFGRDLTEAREWCRQYQHSRDTSD MIKKGPETLRETSFRNSFGRDLNDAEEWMDNYKKTEDVSN LMDRGPTTSREDSFGHAFGRDLDDRRACHRYRMYGETRE

 LLERGPQTI RETSFYNAFAKDLSDAYQWIINYNRTKDTAY MLDNGAETDAEMEFLRDFGQDLRDAASFCERYKSSGKESD MLVNGPQTQKENADQSYGHDLNDAHECCRRYQLTRNNKE MLDAGPTTARETSFAQVFGRELHEAREACQRYSKYGETKD

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LMARGPDTSKESSQQAYGLDLVRANECQTYRKNHNLKE
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 < VMKQGATTLNEVAFEDTYGRDLAEAREWCQRYRVTGNERYD QLEGGASTTREKSFLQNFGEQLAQAREHTRAYQAYGNLRE MLDTPPETLKEVSFLQMYGRDLQEARRWCELYKESNEERY LLERGPQTLKEI KAQDWCRKFTQSSNTKD HLEAGPTTLREAAFQQAFGRELAQAYSCIKRYQRQQSLAD LLQRGAQTQRELEFQQKLGQNLDEAKEFCDKYCQSKQEKD MLEKGPTTKEDAFVQSYGRELSEAYEWLMKYKASRKEAE ELSAGPTTLREAAFQQAFGRDLGEAAACLDDYERHREDAD KLDNDAPTLREDAFHQAFARDLQQAKAWTDRYQLTNQTDD MMEADPETMNEIAFYQGYASDLQEAEGWCKRYQQTKNQTE ELEKGASTAKEDSFQKAYGKELSQAWASDKKYQAGGALNH Ql EEEAPTLREDAFYQAFARDLKCAKAWTNVYERTKNVGD KLEAGPQTARETSFAQVFGRELADAREACRRYRDRGDTSE VMERGSETSNEAAFLQEFGKELNNSRDYCERFESQGMGAD MMQRGPQTLKETSFNQAYGRDLAEAHEWCRRYRSSGE MMDRGHETIHEATFLQENGNDLAESRLCCERYELTQVRDD QLEKGASTRREQDFLKSGRDLLDAHKHDKDYA

| QUERY | $\text { LT Q A WD LYY Y } \mathrm{H} / \mathrm{V} F \mathrm{R} R \square \mathrm{~S}$ |
| :---: | :---: |
| UniRef90_B6K105 | L NQAWDLYYQVFKKi |
| UniRef90-I1CFD8 | L N Q A WELYY QVFRR |
| UniRef90-G6DN97 | L NQAWDLYYHVFRRIS |
| UniRef90_V4C2F5 | LT QAWDLYYHVFRRIS |
| UniRef90-J9JW15 | L N Q A WDL Y Y HVFRR |
| UniRef90-M2Y939 | M ${ }^{\text {a }}$ Q WDL Y Y HVFRR |
| UniRef90-R7YU23 | L N Q A WDLY Y QVFRKI A |
| UniRef90-L8G8Z7 | L N Q A WDL Y Y Q V F R R |
| UniRef90-B3RZ12 | LT QA WDLYY HVFRR |
| UniRef90-M5E5N5 | L NQAWDLYY HVFKR |
| UniRef90-T0PYQ9 | L NQA WDRYYHVFRR |
| UniRef90-G0S9M0 | I GQA WDLYYAVFRR |
| UniRef90-M1VWU6 | L NQAWDLYYQVFKRVA |
| UniRef90-F4PD42 | LS Q A WDLYYQVFKKI |
| UniRef90-IOYPN5 | L H Q A WDLYY HVFKRI |
| UniRef90-G7DS05 | L NRAWDLYYHVFRK |
| UniRef90-E9CAC8 | L N S A WDL Y Y HVFRK】S |
| UniRef90-G1X2T9 | L N Q A WDL Y Y Q |
| UniRef90-F4S1X9 | L N Q A WDL Y Y QVFRRTS |
| UniRef90-M0SK54 | L T Q A WDL Y Y HVFRR |
| UniRef90-L8GIV8 | L NQAWELYYHVFRRL |
| UniRef90-P32600 | L N Q A WDi Y Y NVFRKI |
| UniRef90-T1P964 | L D HAWDI Y Y HVFQKI |
| UniRef90-K8F506 | L N Q A WDLYY HVFKRIN |
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| UniRef90-A9U2T5 | L T Q A WDLYY C VFKR |
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| UniRef90-K3WQY9 | L N R A WDLYY HVFRRI |
| UniRef90-J5RHF4 | L NQAWDI Y Y S TFQRL |
| UniRef90_G0W9K0 | L N Q A WDI Y Y NVFRKI S |
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| UniRef90-M1VGL7 | L NQAWELYY S |
| UniRef90-F1KPT5 | L N Q A WDLYY IVFRKIS |
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| UniRef90-UPI0004413AB7 | L D K A WDI Y Y MVFRKV |
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| UniRef90-E5SVY4 | VT QA WDLYYNVFRR |
| UniRef90-D2VN06 | LS QAWDLYYHVFRR |
| UniRef90-W6MNZ9 | L N Q G WDL Y Y S VFRR |
| UniRef90-M2XYB9 | M ${ }^{\text {Q A WEI Y Y QVFFRKIN }}$ |
| UniRef90-T1ES35 | LT QA WDL Y Y QEYQ |
| UniRef90-G0V817 | L N Q A WDI Y Y NVFRRTS |
| UniRef90-W4K273 | L D T A WDLYFGVFRKV |
| UniRef90-X8IZU1 | L NQA WEI Y SMVFKKV |
| UniRef90-M5G050 | L NKA WDi Y Y VVWKKI |
| UniRef90-UPI00044173C5 | L ERAWDTYYGVFKK |
| UniRef90-K5VYM0 | LEKAWE\YYGVFTRI |
| UniRef90-S8E905 | L D RAWEI Y Y SVEFKKI |
| UniRef90-Q5KEY7 | QQA WDVYYSVFQRL |
| UniRef90-Q6FNE7 | L NQAWDI Y Y S I F K K I N |
| UniRef90-M2QPY1 | LD K A WEI Y Y GVFK K I |
| UniRef90-G4TT16 | MD R A WDI Y Y AVFRRI |
| UniRef90-U6NRU3 | LT QA WEI Y CQVFKKI |
| UniRef90-UPIOOO2659534 | L G T A WDL Y Y NTFRRI |
| UniRef90-S9PYC0 | L NQS WDI Y Y Q VFRR |
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| UniRef90_G4TGL4 | MD K A WEVYY GVFRKI |
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| UniRef90-R7S8N1 | 1 E $\square$ A WEIYYYEVFKKI |
| UniRef90-X6NQP0 | L NQAWEYYAFVFRQI |
| UniRef90-B6K384 | L NQA WDLYYQVFKKI |
| UniRef90-X8J310 | LTA A WEVYY LVEFKRI |
| UniRef90-D6N9W5 | L N E A WDL Y Y HVVRRI |
| UniRef90-H2Y9H1 | L N Q A WDLYY HVFRRIS |
| UniRef90-W7TTX4 | L NQAWDLYYSVFRRI |
| UniRef90_L1JCG9 | L QKA WENYYNVFRTIN |
| UniRef90-A8J7V3 | L H Q A WDLYY HVFKRIN |
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| UniRef90-J91S96 | I NQAWDI Y L NVFRKI S |
| UniRef90-D7G264 | L NQAWNLYYDVFRKIN |
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 $R V A \| L W L E Q W H E G L$ H A
YEQWYDK LEAAATAFFGRRSTDEMDRTLLP DHE WHE I WY IAALTEASKLHFEEDDTAGMLTKLQEAHA $R$ RAVSWWELWF GVLDDASRAYLIKQDVNEMLSLLLPAHE $R V A V T W W E Q W F G I L D E A S R A Y L L R N D I N E M C E L L E P L N E$

YEQWHEKLEMAANLFFGRNQKEEMDQVLMPIHD
A LWW WQ WHDALDDASRVYFHDNNVA AMFDALRNMNE





A LLLKEAWREGTQEAWTSFSQDKNKTHVERILRGLHD AVLWSELWFDELERTWHNWDRDQNVNNVLLSLAPLME AVLWTELWFDELERAWFQWGRDKNAHNVFLVLQPLLE AI I PYEMWKEAI E LASKEFY DNKNFKQMMEVLKPLMK $R$ VAVLWTEKWRRGI E EASTQYYEFRNVHKMLLI FDDLYR AVGWDE LWFDELERAWHQWGRDKNAHNVLMALD PLDD RVSVSWFELAYQCI DESSHEFCPDVNKQMMLKFLDPLKE A L L WEELWFEQLDEASRLYFAERKPDKMVKLLMPNHE AVLWPELWFDELERVWFQWGKDKNANNVLSAL NPMLE WFEIWTQALEETSKMY DHVKAANILLPLHA
 A L LKEQWHEGI ESFERFQSEKSTS SDLIGNVMELHE RVA LLWPE】AYDLIT QASTAFCEERDLVKFFNYACQLQL
$R \square A \square L W A E K W H S H \square Q Q A A \quad G K Q S D V N A \square L R \square F G P L F W$ AVLWP K WHEGLEEASRLYFGERNVKGMFEVLEPLHA GKMAIVWAEK YQRLTNTILESYANKNLEKCQKKLKKVFN $R \square A \backsim L W T E K W H A A I Q Q A A H$ KPDNTKVIEQCFGNLYE ERWFAALDAASHLAFDQQQTAAAVQLLLPLHQ
 RIAILWTEKWHAAI QQAA YKPSNADTIFSMLQPLYE R $\square A V L$ WP E L RVASSWFERWFAALDTASHLAFDKKQHAAAVRLLLPLHE DESSRLYLHQNDPKSAAKLLLQHHD KVA LLWHDQVY $\square A L D E A S R F C F S G K D Y K R M F K T L D K M H A$
 R DA I L WA EKWHNHIHRAA VKLESAPDVLNILSPLYN K I A ML WHDQVYTALEDASRDYFSEKDYRGMFRTLDKMHA



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| UniRef90 Koss | UniRef90-A0A015NKM3 UniRef90-GOTTR7 UniRef90-H9XVZ6 UniRef90-Q95Q95 UniRet90_W9ZT34 UniRef90-H9JHC7 UniRef90-BOLLII UniRef90-A0A059CX05 UniRef90-R1F871 UniRef90-W6KFZ1 UniRef90-C9zLN5 UniRef90-U1MFQ3 UniRef90-A9UPW2 UniRef90-S9TQG4 UniRef90-G0QV49 UniRef90-F2US79

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| :--- |
| UniRet90 A2ESW1 | UniRef90-A2ERB7 UniRef90_UGGJZ1 UniRef90_A2F9M3

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 $L L E R G P E M L R E D S \quad$ T GVVD R Y D T S Q DVV D ML ERGPETVVKASFSHAYSRELNEAQDWCNRYK
 ELLNRAPETVVEAEFTCKYSSRLLQEAREWLKSYTRTES DAD SLMEGAETIVYERAFDKAYYVGEMEAYDCCMRYKRTGKDAE QII S R G P V VT TEE N D F LIRTYY G A E T L A R T P E T V I E A E F I IA K Y S S N H L N N E A K E E WV V



 MMERGP QTHKETSSFNQAYGADLLMEAQEWCRKYMKS GNVKD
 ITEKEPKTYYE DAFVA QF GES L QRAK KMLMMY KK TN D D DH VIS K EPS TYFEVS FLAAQF GLDSLANAHSCI KEYRRTQNEQC



 LLLGK PETMMAETHFVTE FGQMMEDACACVVEKAA SSRNNEAF




 T I G V P S E T R DE DY F HR MY E R Q I Q S T R E Y LL L R Y I E T K N V T D


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 ELEN PKTPNECAFEKTYGPTLLRHAKAALQN MMERGPQTLKETSFNQVWGK
QL KKPETMAETQFAAEFGKS LEDARSFVQRSAALDCESL F D D K P Q NFYEVVSF DRNFGHQLMQSRNWMENYLESK D





 $K I S N P P Q S F L E L S F K A Q F A A T L S K A H T L T Q C Y F E G K S ~ G \square E$ MLDTPPETLKEVVSFLQMY
ELLGH AMTPNECNFEKTTGPLLMRAKAELL NERS

 NLSK PQCEEDKIVARAFTVQLQRVRGAFDRYKA NTDKS


lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm



$\square \mathrm{Y}$ QAF D $\square \mathrm{Y} \mathrm{S} \mathrm{Q} \ \mathrm{Y}$ QK L
L N I VMKHYK EI Y D RI

MEDARRHLVSVERRL
LD K A WT F LK Q V V G QLT
LT RAWE TYYTTFKK ${ }^{\text {L }}$ TA
L T V WC L L K QV Y

| D | $E$ | $A$ | $W$ | $G$ | $L$ | $L$ | $R$ | $Q$ | $V$ | $Y$ | $A$ | $Q$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

F H L A WQ F Y T G $\square Y$
LD K A WT Y L K QA Y T Q LS I K M M WA GFK E I Y Q S L N I K K S WE LL LK QV Y A E L N

MS QMWDLLK QLYQ


[^1]


[^0]:    lupas 21
    lupas_14
    lupas_28
    jnet
    conf
    sol25
    sol5
    sol0
    jhmm

[^1]:    lupas_21
    lupas_14
    lupas_28
    jnet
    conf
    sol25
    sol5
    sol0
    j̣hmm
    jpssm

