## QUERY

UniRef90_G3UME8
UniRef90-E4X3T0 UniRef90-UPI0002651615
UniRef90-T1KLG8
UniRef90-C3Z6B8
UniRef90-T1EGM8
UniRef90-UPI000454917B UniRef90-U6I6A5 UniRef90-K1PYH8 UniRef90-T1DKU9 UniRef90-V4B5G3
UniRef90-G1RL54
UniRef90-W2TX00
UniRef90-G4VA40
UniRef90_UPIO00298B4CB UniRef90-A4ZYA4
UniRef90-X1Y018
UniRef90-G3NGD9 UniRef90_UPIO00388F467 UniRef90-G7YLB5 UniRef90_UPIO00454544E UniRef90-UPI000359E6E6 UniRef90-A0A044UPN7
UniRef90-G4VN82 UniRef90-M7AYN3 UniRef90-F6TP54 UniRef90-G0PK52 UniRef90-G4LXV9 UniRef90-T1EEK2
UniRef90 G3S7U0 UniRef90_G3S7U0 UniRef90-UPI0002ADA722 UniRef90-F6TJW3 UniRef90-F1Q7U8 UniRef90-U6CXC9 UniRef90-H2UNN5 UniRef90-UPIO004546389 UniRef90-E9HG77 UniRef90-E5S850 UniRef90-R7TTA4 UniRef90_UPIO0042C3ECE UniRef90-G3NXB2 UniRef90-A0A016TU20 UniRef90-E9HG78 UniRef90_W5M9C3 UniRef90-G7YP76 UniRef90-H2TC26 UniRef90-K1QLY9
UniRef90 G1SQG9 UniRef90-G7Y2S5 UniRef90_UPI00035951E7 UniRef90_UPI00042BAFAD UniRef90-UPI0003C184AC UniRef90_H2TC27 UniRef90-V8NFN6 UniRef90-UPI0003833C0C UniRef90-UPI000350650C UniRef90-M0R1J0 UniRef9-V8PEW7 UniRef90-K1QWP3 UniRef90-A9CP48

```
UniRef90_UPI0001CE1C7F
```

UniRef90-Q11122
UniRef90-H2TC28
UniRef90-J9AX36
UniRef90-H3EGC9 UniRef90-U6NXE4 UniRef90-K7H8C4 UniRef90-W5LAP1 UniRef90-G3RRAN8 UniRef90-K7FM58 UniRef90-H2VJQ1 UniRef90-U1NZN5
UniRef90-GOM8P0 UniRef90-K1RDQ4 UniRef90-V4C8V4 UniRef90-V4ATG1

1
$10 \quad 20$ 20
GRKLELTKAEDTQLTKRVKNAAANVLRETWLIYKNTKLVK A R K L

 A R K L E L T R R A E D T Q L T T K R L K K N S A A N V L R R E T W L I Y Y K H T K L V RK K
R K
R
L
L
A RKLLEL T R A
T R A
T G P A R R LLELSKA E N S L K KLLKHYAANVLRETWLI YKYTKLVK KKLERAEDTRLSKRLKNAAANVLRETWLIYKYTKLVN KFTRAEDIQCTKEMKCSAANVLQEAWLLYKHTK
 A R K
A R K L L L K A

A RKLLLTKA
D QLC
ARKLELSRAEDSH口SKRLKNAAANVLRET WL A D K L L S R K L E LS KAEKNE IT K R VKHCAA NVL RETWLLYKNA RLMP ARKLEFNKAED DHYAKEMKESAARLLQEAWMY

 A QKLEFTRAED DRCMKQIKCAAANVLGEAWLLHRHTK
 $K$ TLLELNKGED IQUSKRIR HAAANVLRECWLL HRTNLK
 RK■ELS RAEDVELDKRYKDAAANIVKAGWFVYKNKKYGK MKESAARVLQES WMFYKHTR
 A R KLLELTRAED T QLLTK QLKHSAANVLRETWLI YKFRKKVE K K M E L T Q A E D T Q FT K E L K N A A A N V L R E S WL I Y K Y K K $\square$ AK K K L S L N K GE D DQVS KE I QVAA A NVL RECWLLHRSNRS A R K L E L S K A E E N QLL N K K V K K N Y A A N V L R E T W W I


 KPSPAKRSNPMKNSAANVLQAA WLLFHKHSTAA A NK LQ L N K A Q N $\square Q Y K K Q Q E A A A A T V L Q L R W R L Y K$ GRKLLTKTGSKS PEHAQRVERATSRGGRHRFIFHRFLLLFQ

I K N A A A N V L R E T WL I Y K H T K L L K


 A D K L E F T R A E D I QCDCKEMKCCSAAANVLQEA WL L HKHTTK

R K L E Q S R A E K I K LDD K L L H R H A A A D V V K Q A M M V WK L R R T GL ARKLEFNKAEDIHYAKEMKESAARLLQEAWMYYKHTR

MYYKHTR
D S K LA REHKEAAARRVLQHT WHDHK CDQQGSD

D S KLTRREHKNAAAKVLQQQTWRIHKCLGRCGP
 K K L A L N K G E D $\square \mathrm{Q} \square$ S K E $I$ R N A A A NVL RECWLL H R T T Q A A R KL L L T K A E

ARPLPSSSAPPLQAAGFCHRHSRARA RKLILLTSSEENKTTNEHKNAAACVLQNTWRTVLYQKSSS $R R M Q L S L S E E S Q L S Q Q Y K H S A C A R V L Q S T W R A L V Q K R Q M N$ D S KL A RE HKEAAAARVL Q HTWHHIHKCGLQGGE Q K L E Q S R A E K A Q L D K E R K DA A A D T I K Y V L Q L WR MK K N N E QKLE Q T R S E K V K L D N A Q K H A A S N V I K QV L S L WR I K R R G


[^0]
## QUERY

UniRef90_G3UME8
UniRef90-E4X3T0 UniRef90-UPI0002651615
UniRef90-T1KLG8
UniRef90-C3Z6B8
UniRef90-T1EGM8
UniRef90_UPI000454917B
UniRef90-U6I6A5

## UniRef90-K1PYH8

UniRef90-T1DKU9
UniRef90-V4B5G3
UniRef90-G1RL54
UniRef90-W2TX00
UniRef90-G4VA40
UniRef90_UPI000298B4CB
UniRef90-A4ZYA4
UniRef90-X1Y018
UniRef90-G3NGD9
UniRef90_UPI000388F467
UniRef90-G7YLB5
UniRef90_UPI000454544E
UniRef90-UPI000359E6E6
UniRef90-A0A044UPN7
UniRef90-G4VN82 UniRef90-M7AYN3 UniRef90-F6TP54 UniRef90-G0PK52 UniRef90-G4LXV9 UniRef90-T1EEK2
UniRef90 G3S7U0
UniRef90_G3S7U0
UniRef90- UPI0002ADA722 UniRef90-F6TJW3 UniRef90-F1Q7U8 UniRef90-U6CXC9 UniRef90-H2UNN5 UniRef90-UPIOOO4546389 UniRef90-E9HG77 UniRef90-E5S850 UniRef90-R7TTA4 UniRef90_UPIO0042C3ECE UniRef90-G3NXB2 UniRef90-A0A016TU20 UniRef90-E9HG78 UniRef90_W5M9C3 UniRef90-G7YP76 UniRef90-H2TC26 UniRef90-K1QLY9
UniRef90 G1SQG9 UniRef90-G7Y2S5 UniRef90_UPI00035951E7 UniRef90_UPI00042BAFAD UniRef90-UPI0003C184AC UniRef90-H2TC27 UniRef90-V8NFN6 UniRef90_UPIO003833C0C UniRef90_UPI000350650C UniRef90-M0R1J0 UniRef90-V8PEW7 UniRef90-K1QWP3 UniRef90-A9CP48 UniRef90_UPI0001CE1C7F UniRef90_Q11122 UniRef90-H2TC28 UniRef90-J9AX36 UniRef90-H3EGC9 UniRef90-U6NXE4 UniRef90-K7H8C4 UniRef90-W5LAP1 UniRef90_G3RAN8 UniRef90-K7FM58 UniRef90-H2VJQ1 UniRef90-U1NZN5
UniRef90-GOM8P0 UniRef90_GOM8P0 UniRef90-V4C8V4 UniRef90-V4ATG1 UniRef90_K1Q120

$K \square D H A K V R K H Q R K F L Q A D H Q L R S V K M E Q R K L N D Q A N T L V D$ KPDHARVRKHQRKFLQAI HQPRSVKMEQRKLNDQATTLVD RVDTTRVRKHQRKFLQAI YQLRTYKMEQRKLNDQANTLVD HSSTRRI RKHQRKFLNAI HKLRKTKMDQRKLADEASTVVD KVNPSKIRAHQRKFLLAI YSLRKCKMDQRKLKDNDKTITD RNHAKI RTHQRKFLLAA HQLRRVKMEKRKLSDQANTLVD KVKCERVRTHQRKFLQAI HSLRQVKMEQRKLNDSTNSLI D KI DHAKVRKHQRKFLQAI HQLRSVKMEQRKLNDQANTLVD K L NA STVRKHQRKFLCADH GLRQVKLEQRKLQDNANTLI D K DAAKVRAHQRKFLQAI HSLGRKVKMGQRKGAENQNTLVD KVHAGRVRAHQRKFLQADVHRQVIMKMMDQRKGLTENQSTMI D XXXXXXXXLKGLPVTILDHRLRSVKMEQRKLSDQANTLVD K I D A R I RQHQRKFLVAIVEMRKVKRDQRKLAENFVSLGD

 RVNPGRVRTHQRKFLLAA YALRKVKMDQRKLMDNANTITD ERDHSRVRMHQRKLLLAAHQURQVKDEKRULADQGNSLVD


 KTDEARLRQQQRRFLQAMVYEFRRIKWDQRKLQERGNLLI D
 PRLHARRRFCSNYLVPFFNRLRSVKMEQRKLNDQANTLVD KPDHGK IRKHTRKFLLADYEMRRVRRDQRKLAENLVSLGD RVKPGRVRRHQRKFLTAISRLRKAKDNQRKLKEDANSMVD

 KGDKAQTRQHQRNLLRADHVFRRSRDSHKNLKDQMNAMVD K $\square$ DHAKVRKHQRKFLQAI HQHR
KPDQARVRKHQRKFLQAI HQLRSVK\EQGKLNDQANTLAD RGNRGEHRRHQRCLLEAI RVFRHLRLKQRKLRDYVSEMVD RKEQGASRTHQRRLLAAA HEFRQVRLKHRKLRDQVNSLVD

 RKDSRAARRHQRRLLAAAI SRFRQVRLKHRKLREKVNSMVD KGNPAEHRRHQRCLLDAIADVHHLRFKEKMLSDYISEMAD K I DYAR ${ }^{\text {DRQHQRKFLVAI YE }}$ RANPGRVRTHQRKFLQAI HSMQNAKMKHRNDMDD KRQGLENRQRQRHLLEAI RDFRYVRLRQRKLRDHANEMVD RVDAAKVRTHQRKFLRAI HGQ
KYRFLLSPEHAQRVERATSRLRSVKMEQRKLNDQANTLVD KANSSMA LSYQTKLLEATYNIRQIKAAQRRLVDASDTMTE RKESGATRRHQRRLLAAI HTFRQVRDKHRKLREQVNSMVD RVNASRVRRHQRKFLAAI NR
KTDERVVLDRLTKLLHAI YN $\square R E L K K N R R R D T D N A V T L V E$
RAGRRARTHHRRLLAAI HRFREVRVRHRKLRDQVNALVD SGSQAQDRRLHRKLLSSIKVFQRAKWEKRKLQDQASSMLD KVSLISSLMSHRPFSQL SELRSVKMEQRKLNDQANTLVD RI DHGR I RKHQRKF LQA $\square$ H HPRLI
KI DHAKM
KI DHAKVRKHQRKFDQATHQ
$H V Q V T S L H G C V C A C P C L S R F R Q V R \square K H R K D R E Q V N S M V D$ RKDGLRTRKHHRRLLAAI H D
SFHCPRVLKHRRKLLDAI RRMKKSQFSKSQMRDSVIGVVE RKDSRAARRHQRKMLAAI HTFRQ
RKESGATRRHQRRLLAAI HTFRQVRDKHRKDREQVNSMVD GGN RRLRTYQRKFLKAIHKFRSVKSEMREFSEN PPPPPLSMKETRKTLPASTRDRSVKMEQRKDNDQANTLVD
 DSRLRTYQRKFLRA IHDFRAIKNEMRVFSEN
KADFGK
KNNNGEHRHHQRCLLEADRV
KHVHNFMQLTKRLRSVKMEQRKLSDQANTLVD
GPRAR
AHHRRLLAAIHRFREVRDRHRKLRDQVNALGD RRNHHK DAKSQR ILLCSVLTFRKTRWK LRM RRAF LRFRAEQCNLLRAI TGFRRARWKLRM GGN RRLRTYQRKFLKAI HK NNSRKRIRLHG KLLQAI AAMKEAKNEKAS!GETADGFDE KDDKYRI RVYG KMLQALREMRAARNGKAII GETSI GII E


875 も


| QUERY | LA K T Q L |
| :---: | :---: |
| UniRef90_G3UME8 | LA K T Q SV |
| UniRef90-E4X3T0 | FAKMQ |
| UniRef90-UPI0002651615 | MAKTQNVMF |
| UniRef90-T1KLG8 | MVT T Q S SV |
| UniRef90-C3Z6B8 | LAKTQST |
| UniRef90-T1EGM8 | MAK T Q S N |
| UniRef90-UPI000454917B | LA K T Q $\quad$ DMY |
| UniRef90-U6I6A5 | LAKTQS |
| UniRef90-K1PYH8 | 1 A KVLSS SV |
| UniRef90-T1DKU9 | IS K M Q Ml M |
| UniRef90-V4B5G3 | MAK T QVN |
| UniRef90_G1RL54 | LS K M Q NVM Y |
| UniRef90-W2TX00 | VAKTSSNTY |
| UniRef90-G4VA40 | L A K T |
| UniRef90_UPI000298B4CB | LAKTQNMMY |
| UniRef90-A4ZYA4 | S S Q Q NVMY |
| UniRef90-X1Y018 | MAKTQNTVY |
| UniRef90-G3NGD9 | LCKMQNQM |
| UniRef90-UPI000388F467 | M S K V Q T |
| UniRef90-G7YLB5 | LA KLLQT $\mathrm{N} V \mathrm{~F}$ |
| UniRef90_UPI000454544E | 1 SKMHMIL |
| UniRef90-UPI000359E6E6 | LaKVSLV |
| UniRef90-A0A044UPN7 | FGKLHNDMH |
| UniRef90-G4VN82 | LAKLLQTNVY |
| UniRef90-M7AYN3 | V P Q M Q NVMY |
| UniRef90-F6TP54 | LAKTQNIMY |
| UniRef90-G0PK52 | VAKTSSNTY |
| UniRef90-G4LXV9 | L A K S Y I |
| UniRef90-T1EEK2 | $\checkmark$ S R |
| UniRef90-G3S7U0 | L S K M Q NVM Y |
| UniRef90_UPI0002ADA722 | L S K MQ NVMY |
| UniRef90-F6TJW3 | 1 S K M Q M I M |
| UniRef90-F1Q7U8 |  |
| UniRef90-U6CXC9 | LAKTQNVLY |
| UniRef90-H2UNN5 | LPKMQMI M |
| UniRef90-UPI0004546389 | 1 S K G Q |
| UniRef90-E9HG77 | MAKNNI |
| UniRef90-E5S850 | VAK L Q S M H |
| UniRef90-R7TTA4 | M H K T N |
| UniRef90-UPI00042C3ECE | 1 S K M H M |
| UniRef90-G3NXB2 | LS K M T I |
| UniRef90-A0A016TU20 |  |
| UniRef90-E9HG78 |  |
| UniRef90-W5M9C3 | LS K L Q V IM |
| UniRef90-G7YP76 |  |
| UniRef90-H2TC26 | LA K T Q NVM Y |
| UniRef90-K1QLY9 | VNKTQNE |
| UniRef90-G1SQG9 | 1 SKMHMLL |
| UniRef90_G7Y2S5 |  |
| UniRef90_UPI00035951E7 | VS K A Q E M H |
| UniRef90-UPI00042BAFAD | $\checkmark$ S Q |
| UniRef90-UPI0003C184AC | I S T ME |
| UniRef90-H2TC27 | LA K T Q NVM Y |
| UniRef90-V8NFN6 |  |
| UniRef90-UPI0003833C0C |  |
| UniRef90_UPI000350650C |  |
| UniRef90-M0R1J0 | $\square \mathrm{SKMHM} \mathrm{\square L}$ |
| UniRef90-V8PEW7 |  |
| UniRef90-K1QWP3 | $\square \mathrm{SK}$ |
| UniRef90-A9CP48 |  |
| UniRef90-UPI0001CE1C7F | 】S K M H M L L |
| UniRef90_Q11122 |  |
| UniRef90-H2TC28 | LAKTQNVMY |
| UniRef90-J9AX36 | FGKDHNDMH |
| UniRef90-H3EGC9 | VAEMHSSM |
| UniRef90-U6NXE4 |  |
| UniRef90-K7H8C4 |  |
| UniRef90-W5LAP1 |  |
| UniRef90-G3RAN8 | LS K M Q NVM Y |
| UniRef90-K7FM58 | A S K |
| UniRef90-H2VJQ1 |  |
| UniRef90-U1NZN5 |  |
| UniRef90-G0M8P0 |  |
| UniRef90-K1RDQ4 | A K S VN D |
| UniRef90-V4C8V4 | V S K SVNDVF |
| UniRef90-V4ATG1 | LSTGLNNM |
| UniRef90_K1Q120 | IS K |
| lupas_21 |  |
| lupas_14 |  |
| lupas_28 |  |
| jnet |  |
| conf | 010214799 |
| sol25 | B B B |
| sol5 | B |
| sol0 |  |
| jhmm |  |
| jpssm |  |


[^0]:    lupas_21
    lupas_14
    lupas_28
    jnet
    conf
    sol25
    sol5
    sol0
    jhmm
    jpssm

