## QUERY

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UniRef90 U4LK17 UniRef90-S2K1W4 UniRef90_K5W5I1 UniRef90-M9M0V9 UniRef90_B2WK79
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UniRef90-14Y917 UniRef90-I4Y917
UniRef90 E3QAF6 UniRef90_A8NXF5 UniRef90_L8HI44 UniRef90-M7SEZ7 UniRef90_U5H1K9 UniRef90_E2B615
UniRef90_G7E1F5 UniRef90_E9C319 UniRef90_F0XT19 UniRef90-L8WUU5
UniRef90-K2RJY0 UniRef90_A8Q6X0 UniRef90_G2WT89 UniRef90-E9C0G6 UniRef90_E6ZQR3 UniRef90_B7Q1I5 UniRef90_A0A058Z073 UniRef90_F4S5T4 UniRef90_A0A026W882 UniRef90_Q6CFR5

K P VK Y T A 10
20

## Q

 S L R Y TA A QL LE K G V L V E $V L H Y$ TAA R L Y E K G V L L E

## K

 PVRYTASRLHDKGVLEI SVKYSALLRLHEKGVLLA SLHYTAARLFEKGVLEET SYKYTAQKLFEKGVLLS SLKYSAAKLHEKGLVLEDGG
QTVKYSATRLHEKGVLLEI E VKYTAQRLHEKGVVLEIDGLPKHQFRNAQDEI TSGD R LHYSATKLHQKGILIDIDGLPHAHFKSTFFDISPAVES SFKYSARNLADKGVLVSWSGYTEKQYEK NV TISCDEV SYKYSAQYLYEKGILLSMDQYSPRQFDRIDV ILSSNKA
k
 KVKYTGHQLHVKGVLLDIEGLITKQFKNV:MFHF:PGKEV SFKYTARALSEKGVLISWTGYST SYKYSAHNLVEKGVLVSMEGY HHYDK SF SFKYSARTLAEKGVLVAWTGYAERQWDKVNL SYKYSARQLADKGVLVSWAGVSERDLDSINL TIUSCDEV SYKYSAAELHKKGVLISDDDYSPKQYGQLSLDLSSDEA

## K S

 SFKYSAQRFYDKGILLGII SYKYSAQELYDKGILLSTDKFSPRQFDRIDLVI S SYKYSAQQWYHKGLLLSID DGFSPRQFDRVDIGI LK
 A GFP SYKYSARQLADKGVLLSWQGYSPNSRNVFDTP SYKYTAADLYGKRILLSVNQFSPRQFDKL SYKYTAKQLAEKGVLVMNGWDREGWGRVE TLGSDEV SYKYSAQHFYEKGILLSIDQYSPRQFDKLDVVLSSNNV SYKYSAAKLLEKGVLVSDDGVAKSAAPDAAGETVSSDQA SFKYSARNLAEKGILYSWSGYHERQWDRLDMTVS



## QUERY

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UniRef90 I1F9L9 UniRef90_E9GUA4 UniRef90_L8G409 UniRef90_UPI000440730A UniRef90 F6PH72 UniRef90_UPIO00443210E UniRef90_G9PAF6 UniRef90_U9SKY3 UniRef90_G1XEC1 UniRef90_R7YZS5 UniRef90_F4PAN1 UniRef90_H2SFH4 UniRef90_L5JUL1 UniRef90_R7T1V2 UniRef90_UPI00046B9B95 UniRef90_UPI0004449360 UniRef90_C5GBU6 UniRef90_M5FRD4 UniRef90_G4T7F9 UniRef90_C3YQ65 UniRef90_UPI0004416850 UniRef90_UPIO00224779F UniRef90_M2NJ54 UniRef90_UPI000455FD39 UniRef90 F9WXI9 UniRef90_UPI0002740581 UniRef90_D5GG58 UniRef90_J9NU96 UniRef90_N1PSH4 UniRef90_E6R0T5 UniRef90 S2K1W4 UniRef90_K5W5I1 UniRef90-M9M0V9 UniRef90_B2WK79
UniRef90_M7XH55 UniRef90_S8EHF4 UniRef90_K1 VIT3 UniRef90-A9USM2 UniRef90_UPIO00441493A UniRef90_G3J7R5 UniRef90_UPI0003F49347 UniRef90_V2X9X5 UniRef90_N1JLK5
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UniRef90_14Y917 UniRef90-E3QAF6 UniRef90_A8NXF5 UniRef90_L8HI44 UniRef90_M7SEZ7 UniRef90_U5H1K9 UniRef90_E2B615 UniRef90_G7E1F5 UniRef90_E9C319 UniRef90_F0XT19
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$G \square F D V R S K F W G V E M E K V Q L N D Q D L L Q M Q Y E G V A V M K M F D K$ GKF QVKAKFMGI DMENFQLHYQDLLQLQYEGVAIMKMFDK
 G DFEVVKAKFMGVEMEKVELNFQDLLQQLQYEGVAVMMKMFER GDFEVVKAKFMGVQMDSVMLHYQDLLQQQYEGVAVMKMFNK
 GHFEVVRAKFR GVVEMEKVVHLDDQDLLQQMQYDGVAAVMKMFDR GVV.
 GKF Q V TARFMGI DMEKFQL HYQDLLQQLQYEGVAVMKMFNK $G V F D V S A K F L G V K M D S V Q L V F Q D L L Q L Q Y E G A A V M N M F G R$ GLIFTI EASVLGGVSGGSCDLVIDEDLLEAQFNHQQTLVLMDG GVVFEV QAKLL GMEVK K DDLVFRQDLLQLQYE GVAVIVELFN D
 GVFEVKGRVLGVALDKFELVFQDLLQMQYEGVAVMKILGR





## G

## G

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 $G V F C V V E V T E M V V P G E G G R V R Q E D M L Q M Q F H G N Q F M L D C D G$

 GI F EI Q GS S M M $\square P G A F A E V P L D G L L Q A Q F D N H Q F M N L G G V$ GVFEI KVEFTGKTLSAVELKLEDLLEAQWVGKQTVSIGEA GVFTIENHTLGDTNASDDVKMEDLLQAQFEDRSSYSVSKG


 GVFSLEMASSASA $\quad$ SGHEELRMEDLLQAQFDNEQSLLLLFD G
 GI FALE GSKGS IP GASASVVSMDSLLAARFANHQYMEL FEG


 G $I F D V R$ SKF LGVEMEKVQLVDQLAL GEQQE
 $G$ I IT FE G YFL NT Q D L HVVDV QYE DL L Q T Q Y E GVQ TMK V LD G

 GVVF T V E S T M L A V K I I A Q E D I K K M E D L L Q A K Y E K R P P
 GKF E I A V V Y K D TTMVK A V E V K L E D L L E S Q F V G K Q T V GLFAVNNCRFMGLLEMEKLDINUQELLQQQYEGASIMNMFDR GVVAVT TA WNGVKGGHSEFKMEDLLEAQFNNQQGIAVVEV GV F EVVSAS F M GVVK Q D D M E L H L E DLL L Q L Q Y D G V A V M K L F N
 GI F HI E G S S M M IP G AS A MV P L D D L L Q A Q F E N K Q F I N L F G



 $G V F K L E A Q Y L D V R N G S V Q L R M E D L L E D Q F S G K Q S V V K$ GI FVV R CK F M GVVELEKLEI S I Q QLL E LQQYE GRSCMDMF GK UniRef90_M7B0R6

| QUERY |  |
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| I000441B |  |
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| UniRef90_U3K611 | A IVNV N L L I FLL N K |
| UniRef90_G3WR34 | A KI N V N L L I F L L N K |
| UniRef90_S4RYF3 | A K V NVNLL I F L L N K |
| UniRef90_V9K813 | A K V NVNLL I F L L N K |
| UniRef90-T2MFN7 | A K I NVNLLI FLI N K |
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| UniRef90_V4AGA5 | A K V NVN L L I F L L N R |
| UniRef90-T1EEJ2 | A Q V NVNLL |
| UniRef90_G6CYL9 | AKINV NLL MFLL |
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| UniRef90-W4YZL3 | A K I NVNLLIF L L N K |
| UniRef90-UPIO004560BBB | M K V N L N L I I HLI N K |
| UniRef90-K1PNK5 | A K V NVNLL I FLL N K |
| UniRef90-B7PYN3 | A RVNVNLL L Y L I N R |
| UniRef90-I3IYT7 | A K V NVNLLI F L L N |
| UniRef90-11F9L9 | A K I NVNLLI Y L I N K |
| UniRef90-E9GUA4 | A K I NVNLLI F L L N |
| UniRef90_L8G409 | L K L N V N L F H L I Y K |
| UniRef90_UPI000440730A | MK F NL NLLL Y Q I N K |
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| UniRef90_UPI000443210E | V K M N V N L L I F L L N K |
| UniRef90_G9PAF6 | A K L NVNLL L HLI Y R |
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| UniRef90_G1XEC1 | M K L N V N L F L H L L |
| UniRef90_R7YZS5 | A R L N V N L F L HVV |
| UniRef90_G4N6J2 | LR L N V N I L L H L L |
| UniRef90-F4PAN1 | A K V N L N L I F |
| UniRef90-H2SFH4 | A K V N V NLLL |
| UniRef90-L5JUL1 |  |
| UniRef90-R7T1V2 | AKFNLNLL |
| UniRef90-UPI00046B9B95 | A K V N V N L F |
| UniRef90_UPI0004449360 | AKFNLNLLLLYQ |
| UniRef90-C5GBU6 | A RVNVKMFLHLIMR |
| UniRef90-M5FRD4 | A KVNLN L L L Y Q ${ }^{\text {V K }}$ |
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| UniRef90_C3YQ65 | A K V N V N L L I F L L N |
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| UniRef90_UPI000455FD39 | AKANLS LLL Y Q ${ }_{\text {L K }}$ |
| UniRef90_F9WXI9 | A R L GVNLLL HLVF K |
| UniRef90_UPI0002740581 | VKVNGNLLVHLL N |
| UniRef90_D5GG58 | MK F NVNLL L HL I F R |
| UniRef90-J9NU96 | A K V NVNLLI F L L |
| UniRef90-N1PSH4 | A K L A V NLL L HL V |
| UniRef90-E6R0T5 | A A F NLNMLI HQ $\mathrm{L}^{\text {L K }}$ |
| UniRef90_U4LK17 | MKFNVNLFL HLI F R |
| UniRef90-S2K1W4 | M K V N V N L L I Y L I N K |
| UniRef90-K5W5I1 | AKFNLNLLLWQINK |
| UniRef90-M9M0V9 | A CVNVNLLV HLI N K |
| UniRef90-B2WK79 | $A R V N V N L F L H L I F$ |
| UniRef90-M7XH55 | VKMNL VELL DLI N R |
| UniRef90_S8EHF4 | A K F S L NLL L WQIN K |
| UniRef90-K1VIT3 | A AFNLNTL I HQ ${ }^{\text {L }}$ N |
| UniRef90-A9USM2 | M TVNINLL L F LIN K |
| UniRef90_UPI000441493A | MKV HVNFLL Y Q I N K |
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| UniRef90_UPI0003F49347 | M T F S I N ML I H Ql N |
| UniRef90_V2X9X5 |  |
| UniRef90_N1JLK5 | $\square R L N Q N L F L H L T Y K$ |
| UniRef90_G0RK35 |  |
| UniRef90-E4XCX1 | A K V V V L L I L L N |
| UniRef90_A0A024J867 | MKFNTNLLMLHFI K |
| UniRef90_F2TWA6 | C TVNVNLLI F LI N K |
| UniRef90-S9WVH9 |  |
| UniRef90-B3RR54 | VMFDVNSLI G L L N R |
| UniRef90_S2JS04 | M TVNVNLLI Y L I N K |
| UniRef90_14Y917 | V K CNL NVLLF QL Y K |
| UniRef90-E3QAF6 |  |
| UniRef90_A8NXF5 | MK V N F E L F L Y Q $\quad$ N K |
| UniRef90-L8HI44 | V T L D V M T I HLI N K |
| UniRef90-M7SEZ7 |  |
| UniRef90-U5H1K9 | AKANLGMLV |
| UniRef90-E2B615 | A K |
| UniRef90-G7E1F5 | AKFNLTMLLHLIGR |
| UniRef90-E9C319 |  |
| UniRef90-F0XT19 |  |
| UniRef90_L8WUU5 | L CHVRLL I Y L |
| UniRef90_K2RJY0 |  |
| UniRef90_A8Q6X0 | A Q F H L K P L I H F $\square \mathrm{NK}$ |
| UniRef90_G2WT89 |  |
| UniRef90_E9C0G6 |  |
| UniRef90-E6ZQR3 | A EVNVNLLVHLI N K |
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| UniRef90_A0A058Z073 |  |
| UniRef90 F4S5T4 |  |
| UniRef90_A0A026W882 |  |
| UniRef90_Q6CFR5 UniRef90-M7B0R6 | M K M T N L L L H F $\square \mathrm{FR}$ |


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| :---: | :---: |
| UniRef90_V5GQ |  |
| UniRef90-U9USE9 | PYKFSYAQLERDGI |
| UniRef90-O <br> UniRef90 |  |
| UniRef90-86k | SFKYTADKLYERGVLVSMS STLQQDKLYU |
| UniRef90 -1'S |  |
| UniRef90-K9 |  |
| UniRef90-R9F | SYRYGAGKLMEKGVLVRMDGV |
| UniRef90-I1CJNO | HNNLEKDGVITETTVPENRRAN |
| UniRef90-M5E770 | YTASRLRAKGVLA ${ }^{\text {a }}$ |
| UniRef90-D8PR | AKELYDRQIVLS ${ }^{\text {S }}$ |
| UniRef90 W3X6Y5 | SYKYSVRSLADRGVVVSWQGVAERD |
| UniRef90_B0E6E0 | KPKEYSYNDLVKKGVIVSS |
| UniRef90_UPI00034F |  |
| UniRet90 ${ }^{\text {C5MGC6 }}$ | SAKKLMDQKVLVDYALNASSSASKLDF MFSCHQA |
| UniR | THQQLEKDGI IVESEVPEYRRAN |
| UniRef90-U5HA | QFEKDGU V V T NVPEDRRAS |
| UniRef90-HOEGN4 |  |
| UniRef90-F4RJ53 | KPFKFSHGQFEKDGVITESNVPENRAAN |
| UniRef90-G3AVI6 | YKYSSKRLMEQRVLLDVGGLMTRYYSKL |
|  | FTHQKLEQEGI I VES |
| UP100 | SLRYTADQLDEKGVLVETEDLPVSHFRN |
|  | YTAARLHEKGVLLEI EDLPVTQFKN |
| UniRef90 - M7PF | KSHKYSGRQLFDKGVI |
| UniRef90-K0KP52 | S |
|  | KYSARKLVEQG\| I I DFGGLAHSSSSKLDF MFSCHKA |
|  | KPYKYTHAQFEKDGVVVDSNVPDNRRAN |
| UniRef90-J3P | KYSAQRLYEKGILLAAKDFSPKQFDK |
|  | 俍 |
| UniRef90-A5DN39 |  |
| UniRet90-M7PMY1 | PYKYTHFQLEKELVI AE SNVPDDR |
|  | PFKFSFSELHKKGVI |
|  | KOKKVL |
| niRet90-F1K | QKVKCSAEKLDRQGILLSVDGYTTKEYGK |
| T1KL | Y SALKLKKKG1 |
|  | ( |
|  |  |
| 2VY27 | KSYKSSADKLVRKGVI |
| G8Y6X1 | YKYSAKKLMDQEILIDFGGADS |
| Q |  |
| iRet90-D2VET | YSQLSEKKV |
|  | PYRFTHYQLEKEDI RQSN |
|  | KPVKFAFSDLVKKGMIVNSE |
| G38 | S YKLS |
| W1 | KHSAKHLMDHHIL |
| - | KPHKFILADLVKKG |
| W6MQM3 | YRYSAKYLFENG |
|  | QLHK STVK KLF |
|  | QLUK |
|  | KProkrs |
| Uni | AASKLLDKGVVVSVDGLPVAAPAE |
| UniP | KPVKMAYKELSKKG\\| I VESE I PKASHGS |
| UniRef90-F8) | ( |
| UniRef90-L8V |  |
| UniRef90-L8C | QLEKDGIIKESS VP |
|  | KPMKISFKELTKKGVVE SDIPKLSHGS |
| UniRef90-F4QAL5 | FKFSYSQLEKDGII LESEVPEDRRSN |
| UniRef90-EOVGB8 | VKYSGARLREKGVLIS |
| UniRef90_R4X611 | RYTHAELEQRGI! |
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| JPI00021A4DF1 | SQLEKAGVIVESPG |
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| UniRef90-12JV95 | Y GKYLEEKXILDSITTSTXHAHDRR |
| UniRef90-K1WM | THQALEKEGVI QKSNV |
|  | YKFTHQQLEKEGVI RKSNVPENRRAN |
| UniRef90-A7؛ | KQDRFSYNQLEREGVIIETQGIPVHRKSDISVTLASPEP |
| UniRef90-13EJT2 | CKFtrablekegv |
| UniRef90-Q8SUAO |  |
| UniRef90-H8Z9S7 | SAKALLDEGV |
| UniRef90 X6NGM8 |  |
|  |  |
| iRef90_D2 |  |



A EANVNLLVHLINK
 L V E V G $\square \mathrm{N}$ MLVV L L N K $\vee \mathrm{K} \mathrm{L}$ NTNMLLQLI F AK V N V N L L I F L L N R VK V N F E P F L D E I N Q MEVSVNLLVHLINK I K L N V S K T L QL L T K



ME LDDVNMT $\square \mathrm{Y}$ VMNQ $V Q L N V P K V L T L F N K$ V T FD L D NFMALIFR $V$ K L S V N K I I QL L N K $\vee \mathrm{S} L \mathrm{~N} V \mathrm{P}$ K V L A L L N K
 $\vee Q L S V$ V T L A L L N K AV F D S S NLI A L L F K $V \mathrm{~T} L \mathrm{~S}$ VAKMLALLN

$V T L S V P M L I H L L N K$ $1 \mathrm{~T} L \mathrm{HV} \mathrm{NM} \mathrm{T} I \mathrm{HMLL} \mathrm{MK}$


V H F S VP K T LK ML N $V K K N V N K F L L L L R R$ I V F D S G N I TAA I I R K $\begin{array}{lll}V L L N A R R T L M M L & S \\ \text { MAFE T E N L A S L I }\end{array}$

VT F N T DEFAT F I F $V$ QFNVPKVLTLLNK $V Q F N V S K V L L L L N K$

LEFNSK GLLR LVN
$1 \mathrm{~T} L \mathrm{~N}, \mathrm{~V} \mathrm{~N}$ T L N TLLN K
sol5 sol0 jhmm
jpssm

$\begin{array}{lllllllll}B & B & B & B & B & B & B & B & B\end{array}$
B B B
$\begin{array}{ll}B & B \\ B & B\end{array}$
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