UniRef90 Q9AM8 UniRef90-Q4570s UniRef90_C7BC47 UniRef90_Q45716 UniRef90-Q9AM82
UniRef90 Q45718 UniRef90- Q6Q7C6 UniRef90-O85805 UniRef90_Q45774
UniRef90-E7E1K8 UniRef90 - 45709 UniRef90-P19415 UniRef90-C31AA7 UniRef90-Q03749 UniRef90-C3IBA6
UniRef90 G5DMQ UniRef90-E5DHK2 UniRef90-Q3B9W6 UniRef90-Q45715 UniRef90_Q65553 UniRef90-R4V3T3 UniRef90-U5KRN3 UniRef90-B7NZX8 UniRef90-C4PFIO UniRef90-Q9ZAZ66 UniRef90-U5KRH8 UniRef90-Q5XLA8 UniRef90-Q45704 UniRef90-C7BC48 UniRef90_Q45746 UniRet90_U5KRN7 UniRef90-O66377 UniRef90-ETCGR3
UniRef90 ${ }^{\text {Q9X597 }}$ UniRef90-POA381 UniRef90-U5KRQ8
UniRef90 P17969 UniRef90-K0G104 UniRef90_E6Y2M1 UniRef90_U5KRR4
UniRef90 O5EF82 UniRef90-Q45744 UniRef90-Q45733 UniRef90_B8K258
UniRef90
O765 UniRef90-AOELQ3 UniRef90-16R138 UniRef90-Q9AM80 UniRef90-Q56B08 UniRef90-U5KS12
UniRef90
R4VBN UniRef90-Q8VW62 UniRef90-A7LHM8 UniRef90-C3CCG22 UniRef90-C3CBU1 UniRef90_O45706
UniRef90 O 06014 UniRef90I6QMAO UniRef90_UKKS17 UniRef90_U5KRR0 UniRef90-O6QAN9 UniRef90_U5KS08
UniRef9O_GOWRD3 UniRef90-U5KRH5 UniRef90_KoG510
UniRef90_M4ZRJ6 UniRef90-C3HSF8 UniRef90 C4NZQ8 UniRet90_B4F6G0 UniRef90-A9VV88 UniRef90 O 323237 UniRef90-LOGEB4
UniRef90 O8RQU6 UniRef90-M1E9Q8 UniRef90-P05519 UniRef90-U5KRX2 UniRef90 Q 6 BCH 5 UniRef90-Q75QQ5
UniRef90 F6GPL2 UniRef90_U5KS18 UniRef90_O87905 UniRef90_Q99031

1
10
20
30
PTRTVSQLTRETYTNPVLENFDGSFRGMAQRTEQNTRQPH PIRTVSQLTEEIYTNPVLENFDGSFRGSARGIEGRFRSPH PLATTAQLREVYTDPLGASWYDKAPSFSEIEKAABRPPH P QPVSQLTREVYTDPLTENFNQLPTFNVNESNAMRNPH PI RTVSQLTREI YTNPVLENFDGSFRGSAQGTERSIVRPH
 PMNTSAQLTREI PTISAQTREYTDPI GNWFNNNAPSFSAIEAAVDRPPH PINTSAQLTREVYTDAIGTWFNNNAPSFSAIGAAVTRPPH PIKTTSQLTREVYIDAI GTWYNNNAPSFSAIEAAVIRSPH
 PMETTAQLTREVYTDPIGYNPSTESPGFNQMEKEVIRPPH
 PMQTVTQLTREVYTDPVGMTWYD五APTFATIENAVIRKPH P $\mathrm{P}^{2} \mathrm{~T} T \mathrm{AQLTREVYTDPVVAGPNNSWFSFAIENAIIRQPH}$
 PIEVSTQLAREVYTDPIITSFVESDPSFSFMESNAIRKPH
 PMRTISQLTREI YTSPVSEFYYGVINSDG PMPTKSQLTREIYTDPI ISPGAQAGYT PIETTAQLTREVYTDPIVFNSLINSDITSFSEVESAVIRSPH Y DPVGFGWQNNAPSFAEIENLATRAPR PIETTAQLTRDVYTDPI AFNFCNPWSTFYEVENNVIRPPH PIKTSAQLTREVYTDLVVAGPNNSWFSFSAIENAII RKPH PIPTQSQLTREI YTSPVVAGN GNFGLSIAAVLRAPH
 PTQTSSQLTREIYTSSVIEDVSANTPNGFNRAEFGVRPPH PINTSAQLTREVYTDAI GNWYNNNAPSFSADEAAAIIRSPH
 P【ATTSELTRIIYTDPIAYTQDHPWYSFSDIENSAIPSPS PTKIGNELTRMMYTDPVGTEGNDNAPSF
PTETRAQGTRMVYTDPAAFGFLDNAPSFSVIENSVVQSPR
UGTSVQLTREVYTDPMGATWYDDAPSFTAIESSVVRPLH PTGSNPQLTREVYTDPIVFNPPNPYNTFSELENAFIRPPH
 PDESTVEETTRTVYT GLGYYSSAKP

P ПK T T TELT

PNGANPQL PLETEAQLTREVYTDPIVFNFCESFYNFSQLENAVIRPPR PMETVTELTRQUTDPIGETKYPDWYGAASIENRAIPKPG PMDTVVETREYYTDPVGYSSGTYSGAFNTLEANGTRGPG LDETVESREVYTDPLGYDVDWYSEGVSFSEIDENMHPPR PQKTKTELTRMIFTNPVVYEGKQQYPSFSEIEDSAVPKPD
REV

PGNTVTE
PQATTTE
PNGANPQ
PIDSTVE
P DPGNAE
PMETNTE
LPVNVE
PNGANPQLRII
P DQTKTELTRKVYMPSFLLEGLPEYSNVEPLENAFLRPPH PMPDHAELTREI YTDPVGSYLPMSWYEMFQDDLENLILKPS PTEVKTELTREVYSDVINGEVYGPYFSFEKAESLYTRAPH
$P V A T K T E F R G V Y T D P L G F N G W T S V G P S F S S D E L U T G S P D$


KREVYTDVAYDEWYPVSSFTDFESILIRPPH PTSTKTELTRKVYM PSFYDQADQHSNDETLENQLTHPPS


 L P T K S QL T R MV Y T P K V G E T A A S F K P S I NVIE N S I VA S P R


UniRef90 Q9AM81 UniRef90_Q45705 UniRef90_C7BC47 UniRef90_Q45716 UniRef90-Q9AM82 UniRefefo-Q45718 UniRef90_Q6Q7C6 UniRef90-O85805 UniRef90-Q45774
UniRef90 E7E1K8 UniRef90-Q45709 UniRef90-P19415 UniRef90-C3IAA7 UniRef90-Q03749 UniRef90-C3IBA6
UniRef90 G5DMQ UniRef90-E5DHK2 UniRef90-Q3B9W6 UniRef90_Q45715 UniRef90-Q65553 UniRef90-Q03745 UniRef90-R4V3T3
UniRef90 U5KRN3 UniRet90-B7NZX8 UniRef90-Q6PYW6 UniRef90-C4PFIO UniRef90-O9ZAZ66 UniRef90-U5KRH8 UniRef90-Q5XLA8 UniRef90-Q45704 UniRef90-C7BC48 UniRef90_Q45746 UniRef90-M1E9P1 1 UniRef90-O66377
 UniRef90-Q9X597
UniRef90_POA381 UniRef90-U5KRQ8 UniRef90-P17969 UniRef90-K0G104 UniRef90-U5KRR4 UniRef90-Q5EF82 UniRef90-Q45744 UniRef90_Q45733
UniRef90-_8K258 UniRef90-Q765X5 UniRef90-AOELQ3 UniRef90-16R138
UniRef90 O9AM80 UniRef90_U5KRN2 UniRef90-Q56B08 UniRef90-U5KS12
UniRef90
R4VBN UniRef90-Q8VW62 UniRef90-A7LHM8 UniRef90-C3CCG2 UniRef90-C3CBJ9 UniRef90_C3CBU1
UniRef90 Q45706 UniRef90_OO6014 UniRef90-I6QMA UniRef90_UKKS17 UniRef90-U5KRR0 UniRef90-Q6QAN9 UniRef90_U5KS08
UniRef90 GOWRD3 UniRef90_U5KRH5 UniRef90-K0G510 UniRef90-M4ZRJ66 UniRef90-C3HSF8
UniRef90-C4NZQ8 UniRef90-Q9ZNL9 UniRef90-B4F6GO UniRef90-A9VV88 UniRef90_O32307
UniRef90_LOGEB4 UniRef90_Q8RQU6 UniRef90-M1E9Q8 UniRef90-P05519 UniRef90-U5KRX2 UniRef90 Q 6 BCH 5 UniRef90-Q75QQ5 UniRef90-F6GPL2 2 UniRef90-O87905 UniRef90_O99031


UniRef90_Q9AM81 UniRef90_Q45705 UniRef90-C7BC47 UniRef90_Q45716 UniRef90-Q9AM82 UniRefefo-Q45718 UniRef90_Q6Q7C6 UniRef90_O85805
UniRef90_Q45774 UniRef90- E7E1K8 UniRef90-Q45709 UniRef90-P19415 UniRef90-C3IAA7 UniRef90-Q03749 UniRef90-C3IBA6 UniRef90-G5DMQ7 UniRef90-E5DHK2 UniRef90-Q3B9W6 UniRef90-Q45715 UniRef90-Q65553 UniRef90-Q03745 UniRef90-R4V3T3
UniRef90 U5KRN3 UniRef90-B7NZX8 UniRef90-Q6PYW6 UniRef90-C4PFIO UniRef90-O9ZAZ66 UniRef90-Q8KZL7 UniRef90-Q5XLA8 UniRef90-Q45704 UniRef90-C7BC48 UniRef90-Q45746 UniReffo-M1E9P1 1 UniRef90-O66377 UniRef90-E7CGR3 UniRet90-Q9X597 UniRef90_POA381 UniRef90-U5KRQ8
UniRef90 P17969 UniRef90-K0G104 UniRef90-E6Y2M1 UniRef90-U5KRR4 UniRef90-Q5EF82 UniRef90-Q45744 UniRef90_Q45733
UniRef90-_8K258 UniRef90-Q765X5 UniRef90-A0ELQ3 UniRef90-16R138
UniRef90 O9AM80 UniRef90-U5KRN2 UniRef90-Q56B08 UniRef90 $\mathrm{UKSS12}$
UniRet90 R4VBN7 UniRef90-Q8VW62 UniRef90-A7LHM8 UniRef90-C3CCG2 UniRef90-C3CBJ9 UniRef90_C3CBU1 UniRef90-Q45706
UniRef90 O 06014 UniRef90-I6QMAO UniRef90_U5KS17 UniRef90-J7H1B3 UniRef90-U5KRRO UniRef90_U5KS08 UniRet90-GOWRD3 UniRef90-U5KRH5 UniRef90-KoG510
UniRef90 M4ZRJ6 UniRet90-C3HSF8 UniRef90-C4NZQ8 UniRef90_O9ZNL9
UniRef90 B4F6G0 UniRef90-A9VV88 UniRef90 O 323237 UniRef90-LOGEB4
UniRef90 O8RQU6 UniRef90-M1E908 UniRef90_Po5519 UniRef90-D5FGK1 UniRef90-Q6BCH5 UniRef90-O75QQ5 UniRef90-F6GPL2 UniRef90_U5KS18 UniRef90_O87905 UniRef90_Q99031
 PLYGTLGNAAPPPIGAQTGQGVYRTLSSTLYRR PFYUGDG PTYGREAKQEPPRSFTFNG PVFRTLSNPTLRPLQQPAPA PLAGTRGDAAPPFNVRSVNDGIYRTLSAPFYSAPFLGT
 STHGNTNTSDNPTLQFTSRDVYRTESFAGD

GL

 GIYGKTSGY ISSGAYSFHGNDIVYTLAAPSVVVYPYT
 NYVKLGSNNYPYV FVDRDIYQTESLAGCTYDII YPG VYGA ITNPVSVSDIPFVNRDVYRTVSLAGGLGSLSG1R
 PIYGNASNYESTGNYSFRGNSTYQTLSAP

 NYGT $\square T S N K \square K Y Y D D A N K D \square F Q V R S L G A D L A N Y Y A Y G V$ PLYGSTGTIIRTDNYEMGNRDI YTITSEAVGALWPHG $R N Y G \square T T P U I N S$ YNFANGDVYQUNT ANYGRITSEKNSFALEDRDIFEINSTVANLANYY LVYGAITNPVSTSSLSFVNEDIYRTTSLAAGLGTLSGYGLD PLYGVAANAEPPVTI RPTG GFTDEQRQWYRSRVVSFRS
 $P$ I YGVFNPGGA 1 WDADEDPRPFYRTLSDPVF VRGGFG
 RNYGTDVNHDSVEELNFEGKNIYKTGSIPGGVPPYQDGYV PFYGNKS SEPVQNLEFNGEKVYRAVANTNLAVWPS


 PFYGNKS TLDVQNLEFNGEKVFRAVANGNLAVWPVGTGG Y G LITTTRATDNPGVDGTN R TESTAVDFRSAL

## VQYGDTDTPEL DSSSFENVDIYKVSAS VVGGSYK <br> PTYGSTAFPIQRTNTLTFS GDVYTIESSVVTRS

YDYGSSSGSENKDVFDLYGNDVYDTQS VVSSYKP GFIGSDQRRVSYYDFNFVGNDVFRDYSRVMSNQV $P L F G N A G N A A P P V R \square Y Q L G Q G V Y R T L S S T L Y E D L F D R D K V$ ANYGDRTNPVAVDRYNFEQADI YR
 F N Y GTSS GS T L S H T F D L L S K D I Y Y T Y S $\square A A A N K S A C T W Y Q A$ THGDTNNPDKEFVVDTKKEDIYQTIAYPHAVANEVFY
RSYGSTESVEESEGI SFYPAEIYKVVSVVGSERNA
FNYGTSSGSTLSYTFDLLSKDVYQTYSLAETNKSATWYFA


PFYGTEYGGTSSNMDUAEGSYIYQ LWTKNYEYDYPWLDP

 YGATTSTRVTINTGVNGTN RIESTAVDFRSGLLG

 $P$ I S G N PT GVSS DL TI D N N F S I Y K L L I L R GY Q L S P D F S F
$N G S G D \square$
$P Y E G F Y F E G L F$


TYETSYGQT PQR TTVGNTDIFK TNGARAM D S RARNFGN PFQG LLGTKTTP LISSDNQFVYK

## VLCN

FRGQDTDYGGTSSTDNDPSNSYVYNLWTENYEYDYPWGGR
 KSYGDTAGT PTDIYFGYSDVVSTITKA
G $\square Y G S S G F G S N L T H Q \square Q L N S N V Y K T \quad S \square T D T S S P S N R V$ $P A Q G$ I T NGTP I P I GL Y S Y GENTNLI TTI N P S S RAI NRVDSSII NLRNPFGVSG NMY GE I A H E D P $\square$ T N I R D N $\quad$ D I Y K V




## QUERY

UniRef90_Q9AM81 UniRef90_Q45705 UniRef90-Q45716 UniRef90_Q9AM82 UniRef90_Q45718 UniRef90_Q6Q7C6 UniRef90_O85805 UniRef90-Q45774
UniRef90 E7E1K8 UniRef90_Q45709 UniRef90_P19415 UniRef90-C3IAA7 UniRef90_Q03749 UniRef90_C3IBA6 UniRef90_G5DMQ7 UniRef90-E5DHK2
UniRef90 Q3B9W6 UniRef90_Q45715 UniRef90_Q6S553 UniRef90_Q03745 UniRef90_R4V3T3 UniRef90_U5KRN3
UniRef90-B7NZX8 UniRef90_Q6PYW6 UniRef90_C4PFIO UniRef90_Q9ZAZ6 UniRef90_Q8KZL7
UniRef90_U5KRH8 UniRef90_Q5XLA8 UniRef90_Q45704 UniRef90_C7BC48 UniRef90_Q45746 UniRef90_M1E9P1
UniRef90 U5KRN7 UniRef90_O66377 UniRef90_E7CGR3 UniRef90_Q9X597 UniRef90_P0A381 UniRef90_U5KRQ8 UniRef90-P17969
UniRef90-K0G104 UniRef90-K0G104
UniRef90-E6Y2M1 UniRef90_U5KRR4 UniRef90_Q5EF82 UniRef90_Q45744 UniRef90_Q45733
UniRef90_B8K258 UniRef90_Q765X5 UniRef90_A0ELQ3 UniRef90_I6R138 UniRef90-Q9AM80 UniRef90_U5KRN2 UniRef90_Q56B08
UniRef90_U5KS12 UniRef90_R4VBN7 UniRef90_Q8VW62 UniRef90_A7LHM8 UniRef90_C3CCG2 UniRef90_C3CBJ9 UniRef90_C3CBU1
UniRef90_Q45706 UniRef90_O06014 UniRef90_I6QMA0 UniRef90_U5KS17
UniRef90_J7H1B3 UniRef90_U5KRR0 UniRef90_Q6QAN9 UniRef90_U5KS08
UniRef90_G0WRD3 UniRef90_U5KRH5 UniRef90_K0G510 UniRef90-M4ZRJ6 UniRef90_C3HSF8
UniRef90_C4NZQ8 UniRef90_Q9ZNL9 UniRef90_B4F6G0 UniRef90_A9VV88 UniRef90_O32307 UniRef90_L0GEB4
UniRef90 Q8RQU6 UniRef90_M1E9Q8 UniRef90_P05519 UniRef90_D5FGK1 UniRef90_U5KRX2 UniRef90_Q6BCH5
UniRef90_Q75QQ5 UniRef90_F6GPL2 UniRef90_U5KS18 UniRef90_O87905
UniRef90_Q99031

130
140
150
160 NNQELFVLDGTEFSFASLTTNNPSTTYRQRGTVDSLDVIP N N Q H L S V L G GVEFA Y G T S S Y L P S A V Y R K R G TV D S L D E I P
 PPFNLRGLEGVEFY

SVLGSSRGEEFMFANNDSPPPSARYRNPGTVDSLVVIM

 S
V
V
N
N $\begin{array}{ll}\mathrm{V} & \mathrm{N} \\ \mathrm{V} \\ \mathrm{N}\end{array}$ TQPVN



TKA
QNY GVE QVEFYGVKGH
 Y TYTFFALEPTSFSYSKAHTILPSKl QNAPLF Y G L N NQQ $\square S V L D G T E F A Y$ GTS S
$\square \mathrm{G} \| \mathrm{N}$ T S K QYY
$Y$ T SKYY

S Y GlVS YY A K L Y GVV K V D F S $\quad$ V D
$\square R Y R T S L V E G V G F$

QTVLGVASARFTLRHLSNNFTQVLVYENPDSNSFNEDPB P

$T K A$
 T G Q R V L G GVA S A R F T L LR NLLFN NLT Q NPHYVL GL R GVGFQQTGTNH TVRTVNENGSSTLTTHELS
 N S A V Y S S G V






 T RAQF HY GS G II I WS YVVGQNNNVLVS



L F G V S R A E F S ESTTA
TYD
 $V$ NQFEMQTLNTSNAKNVLSYNHPSE WSNRQTADSTTEELP


 VTKAKFEVIYTFN QLDWEFNYEPP G $\square$ SN FFN QWKN T DT E L P P

V Y GV H R A S F V P G GL F N GTISANAGCRNLHDTRDELP



T NPLRSYGDINSKFFMTNGSTPTYTGSVGSMHTQTGDAALPD
 ECRAA S GIVP KVVTFY DS DYY GN S RPN K E Y S S G I QL S S V I T S Y D N S L V G V N QVVEFH Y LD N N TPRK K E Y K K DI R V T N Q S Q K

 TKMDFYKI DGT LAS YNSNDTPTPE GLRTTFFGFSTNE

 GTAYYFGVVKGHRHDATDRRTGNSSQK LIGEDSKTG』SE DP



UniRef90_Q9AM81 UniRef90-Q45705 UniRef90_C7BC47 UniRef90_Q45716 UniRef90-Q9AM82 UniRefefo-Q45718 UniRef90_Q6Q7C6 UniRef90_O85805
UniRef90_Q45774 UniRef90- E7E1K8 UniRef90-Q45709 UniRef90-P19415 UniRef90-C3IAA7 UniRef90-Q03749 UniRef90-C3IBA6
UniRef90 G5DMQ UniRef90-E5DHK2 UniRef90-Q3B9W6 UniRef90_Q45715 UniRef90-Q65553 UniRef90-Q03745 UniRef90-R4V3T3
UniRef90 U5KRN3 UniRef90-B7NZX8 UniRet90_C6PYW6 UniRef90_C4PFIO
UniRef90_OQZAZ6 UniRef90-Q8KZL7 UniRet90-U5KRH8 UniRef90_Q5XLA8 UniRef90-Q45704 UniRef90-C7BC48 UniRef90_Q45746
UniRef90_M1E9P1 UniRef90_U5KRN7 UniRef90-O66377 UniRef90-ETCGR3
UniRef90 ${ }^{\text {Q9X597 }}$ UniRef90- POA381 UniRet90 U5KRQ8 UniRef90-P17969 UniRef90-E6Y2M1 UniRef90-U5KRR4 UniRef90-Q5EF82 UniRef90-Q45744 UniRef90_Q45733
UniRef90-_8K258 UniRef90_Q765X5 UniRef90-AOELQ3 UniRef90-16R138

UniRef90 O9AM80 UniRef90_U5KRN2 UniRef90-Q56B08 | UniRef90-U5KS12 |
| :--- |
| UniRef90 | UniRef90-Q8VW62 UniRef90-A7LHM8 UniRef90-C3CCG2 UniRef90-C3CBJ9 UniRef90_C3CBU1

UniRef90 Q45706 UniRef90-O06014 UniRef90-I6QMA UniRef90_J7H1B3 UniRef90-U5KRR0 UniRef90-O6QAN9 UniRef90_U5KS08
UniRef9O_GOWRD3 UniRef90-U5KRH5 UniRef90-K0G510 UniRef90-M4ZRJ66 UniRef90-C3HSF8
UniRef90_C4NZQ8 UniRef90-Q9ZNL9 UniRef90-B4F6GO UniRef90-A9VV88 UniRef90_O32307
UniRef90_LOGEB4 UniRef90-Q8RQU6 UniRef90-M1E9Q8 UniRef90-P05519
UniRef90 D5FGK1 UniRef90-U5KRX2 UniRef90-O6BCH5 UniRef90-Q75QQ5
UniRef90 F6GPL? UniRef90 U5KS18 UniRef90_O87905 UniRef90_Q99031

PQDNSVPPRAGFSHRLSHVTMLSQAAGAVYTLRAPTFSWQ HQNTTVKPRQGFSHRLSHVSMFRSSNSSVSIIRAPMFSWI
 PQDNSVPPHRGSSHRLSHVTMRNSS PQNNNVPPRQGFSHRLSHVSMFRSSNSSVSDIRAPMFSWI PEDENEPPYVGYSHRLCHARFARSSLEPSNFARAPVFSWT PETTERPNYESYSHRLSNIGRLI RGNTSGNTHRAPVYSWT
 PETTGQPNYESYSHRLSHDGLSSAS GRGHKALVYSWT $P Q D A S V S P A D G Y S H R L C H A T F L E R I S G P R D A G T G V F S W T$
$P F N P V G L P R N Y S H R C H A T F V R K S G T P Y L I T G T V F S T$ PD GEPDHEKYTHRLCHATADFKSTPDYDNATIPIFSWT QKTTEQPDNKSYNHRLSHDTTYPFSSNG Y DGVLPVFAWT SLDPNEPDSRSYSHRLSHITSYTDDGDNDYSGNLPTYVWT PETTEQPNYRAFSHLLSHISMGPTTQDVP

 PQDNSGAPWNDYSHVLNHVTFVPGEDAGSDSWRAPMFSWT PETTERPNYESYSHR
PNSTAEPEHDAYSHRLCHVTFDSVSNGNKYSKDDPDESWT DAANPPTTFGNYSHRLAYISEAYSSNPSKYPAYUPVYGWT PETTDEPLEKAYSHQLNYAECFLMQD R GETTEMPNSSNFSHRLAHMSSFPVGNN
 VRY GSVLSYGWT
$G S V L S Y G W T$ PDESTG
VQDSTPPTYGD
SSTHRLSHVTFFSFQTNQANAGSVPVFTWT GVDSGRPNATNYSHRLSYISGFSLGYSPRMGFGLVYGWT GENSDPPLIFEEYSHRLSHVSEVIKDYG DEGIVPVLGWT HQNNNVPPRQGFSHRLSHVSMFRSSNSSVSIMRAPMFSWI
VQLSSPTYGDYSHRLSYVSTEYSSGGHLILGLIPVGGWT
 DELLDEPDYEEYGHRLSYVSEMFKETGS PTDTPQPNQVTYSHRLDYATTI KANKSYGSGYIP DGWT RETSDPKYGEYSHRLSNDTVAPKMNSDDFGLVPRULGWT VTTNPPTTYGDYSHRLGFISEVQHSSSRPNGGVPUYGWT SLNPEGDITRNYSHRLSHITQYRSGSPSTVSANLPTCVWT DGDSDTPDYEEYSHRLSSFISEDMHNSGSVTGSNTPVVGWT ПQIVDPPTFGDY LEENNGSP



| QUERY | HRSA |
| :---: | :---: |
| UniRef90_Q9AM81 | LR S A |
| UniRef90_Q45705 | HRSAD |
| UniRef90-C7BC47 | HRSAD |
| UniRef90-Q45716 | HRSA |
| UniRef90-Q9AM82 | HRSAEF |
| UniRef90-Q45718 | HRSA |
| UniRef90-Q6Q7C6 | HRSA |
| UniRef90-O85805 | HRSAD |
| UniRef90_Q45774 | HRSAD |
| UniRef90-E7E1K8 | HRSAD |
| UniRef90-Q45709 | HRSAD |
| UniRef90-P19415 | HRSA |
| UniRef90-C3IAA7 | HRSA |
| UniRef90-Q03749 | HRSA |
| UniRef90-C3IBA6 | HRSVNL |
| UniRef90-G5DMQ7 | HRSADL |
| UniRef90-E5DHK2 | HRDVDL |
| UniRef90_Q3B9W6 | HKSASL |
| UniRef90-Q45715 | HQSAD |
| UniRef90-Q6S553 |  |
| UniRef90-Q03745 | H H S A |
| UniRef90-R4V3T3 | HRSADY |
| UniRef90-U5KRN3 | HRSADY |
| UniRef90-B7NZX8 | HRSAD |
| UniRef90-Q6PYW6 | HRS |
| UniRef90-C4PFI0 | RKSADL |
| UniRef90-Q9ZAZ6 | HRSA |
| UniRef90_Q8KZL7 | HRSAD |
| UniRef90-U5KRH8 | S R TV |
| UniRef90-Q5XLA8 | HRDVDL |
| UniRef90_Q45704 | HTSADL |
| UniRef90-C7BC48 | HQSAD |
| UniRef90_Q45746 | HRSATL |
| UniRef90-M1E9P1 | HRSADL |
| UniRef90-U5KRN7 | SATVD |
| UniRef90-O66377 | HRSA |
| UniRef90-E7CGR3 |  |
| UniRef90-Q9X597 | HS SVD F |
| UniRef90-P0A381 | HKSVD F |
| UniRef90_U5KRQ8 | H T SVRY |
| UniRef90-P17969 | HRSVD F |
| UniRef90-K0G104 | H H SV |
| UniRef90-E6Y2M1 | H HSVD |
| UniRef90-U5KRR4 | HVSADL |
| UniRef90-Q5EF82 | HRSA |
| UniRef90_Q45744 | HKSVDF |
| UniRef90-Q45733 | R R DVD $\square^{\text {a }}$ |
| UniRef90_B8K258 | $\mathrm{H} \square \mathrm{SV}$ |
| UniRef90-Q765X5 | STTA |
| UniRef90-A0ELQ3 | H V S V |
| UniRef90-16R138 | HRSVD |
| UniRef90-Q9AM80 | LR S A E |
| UniRef90-U5KRN2 | HT S |
| UniRef90-Q56B08 | HRSVDL |
| UniRef90-U5KS12 | HRSAEI |
| UniRef90-R4VBN7 | H V S V |
| UniRef90-Q8VW62 | H T S |
| UniRef90-A7LHM8 | HRSVD |
| UniRef90-C3CCG2 | HTS |
| UniRef90-C3CBJ9 | HVSV |
| UniRef90-C3CBU1 | HTSVND |
| UniRef90_Q45706 | HS SA |
| UniRef90-O06014 | HRDVDL |
| UniRef90-16QMA0 | HS SVD |
| UniRef90_U5KS17 | H T S V |
| UniRef90-J7H1B3 | HR |
| UniRef90-U5KRR0 | HVSVD |
| UniRef90-Q6QAN9 | RQDID |
| UniRef90-U5KS08 | H V S V |
| UniRef90-G0WRD3 | HS SVDL |
| UniRef90_U5KRH5 | H T SV |
| UniRef90-K0G510 | H N S V D |
| UniRef90-M4ZRJ6 | HRSVS F |
| UniRef90-C3HSF8 | HVSVD |
| UniRef90-C4NZQ8 | HKS |
| UniRef90-Q9ZNL9 | R E DVD F |
| UniRef90-B4F6G0 | H T SVD |
| UniRef90-A9VV88 | H H SV |
| UniRef90-O32307 | H S SVD |
| UniRef90-LOGEB4 | HRSVD |
| UniRef90-Q8RQU6 | HESVDF |
| UniRef90-M1E9Q8 | HASA |
| UniRef90-P05519 | HK I V D |
| UniRef90-D5FGK1 | H T SVD |
| UniRef90-U5KRX2 | RQDVDL |
| UniRef90-Q6BCH5 | HK |
| UniRef90-Q75QQ5 | HVS A D |
| UniRef90-F6GPL2 | HTSVD |
| UniRef90_U5KS18 | HVSAD |
| UniRef90-O87905 | HAS $\square$ D |
| UniRef90_Q99031 | H K S |

UniRef90 E6Y2L6 UniRef90-U5KRG9 UniRef90-Q5W7N9 UniRef90-C11JT3 UniRef90-Q7X3F7 UniRef90-Q765X7 UniRef90-G8XQF5 UniRef90-K0G0L7 UniRef90-O86170 UniRef90-K0GOZO
UniRef90 K9JGF8 UniRef90-Q2AAUO UniRef90-U5KS15 UniRef90-D5FIH1 UniRef90-U5KRN4
UniRef90 U5KRW5 UniRef90-A4GZY2 UniRef90-Q8VNX1 UniRef90-V9HZX2 UniReforo- 8 SN2R UniRef90-Q8VUK9 UniRef90-E9K6H8 UniRef90-H6V6J3 UniRef90-J8JK75 UniRef90-s5PLK6 Uniinefol_UKKRM8 UniRef90-R8G619
UniRef90-D5FGK2 UniRef90-Q25BT2 UniRef90-F6JS441 UniRef90_U5KRX8 UniRef90_J8MY88 UniRef90-UEKRI2 UniRef90-O32321 UniRef90-V9HXE4 UniRef90-H6WA86 UniRef90-M1E9M66
UniRef90-B7NZY UniRef90_-V9P860 UniRef90 UPI00034B23FC UniRef90-U5KRW3 UniRet90-VgP934 UniRef90-C3GCL9 UniRef90_J8HQM8
UniRet90_U5KRP2 UniRef90-Q6BE03 UniRef90-Q6BE09 UniRef90-J8N566 UniRef90-N1LSG22
UniRef90 U5KR1 UniRef90-R8G5P2 UniRef90 -FOPZ70
UniRef90
D3G992 UniRef90-A1KXP3 UniRef90-C3GBS6 UniRef90-O9X682 UniRef90-GoWLG5 UniRef90-A7WK64 UniRef90-R8S483 UniRef90-N1LPH2 UniRef90-Q765×3 UniRef90-R8G6W9 UniRef90-U5KR14 UniRef90_-J8N797 UniRef90-A7WKZ4 UniRet90-V9P8S1 15 UniRef90_U5KRN5
UniRef90_U5KS19 UniRef90-U5KRG6 UniRef90-O87906 UniRef90_N1LT74
UniRef90_J3JRW7 UniRef90_R8R4U7 UniRef90_J8NTT9
UniRef90_Q7M155 UniRef90-С3СВ UniRet90-M1E9P2 UniRef90-Q45882
UniRef90-Q8VNX2 UniRef90_N1LIK5 UniRef90_R7ZW70



LP TKS Q
PRPTNVELTR\|VYTDPTSPGFPRTNPPSFNQMENLIISGG P MPVHA ELTREI YTDPVGSYLPMSWYEMFHDLESLI RKPS

 $P$ L P V K A QL T R E I Y T DL R G C

 $P$ VK S ELT REVVYTD I RGTTWDANLDTIDAI ENRMVRQLQ LP TK S QLTR IVYTPRVGNTTAQPAQPIGVI ENSIVATPR
 P T N TA M M L L T R E


 $M \mathrm{M} \| \mathrm{K}$















|  |  |
| :---: | :---: |
| UniRefo-EGK2L6 |  |
| UniRet90-Q5W7N9 | LFTWLNELNLYTIRENFVSSLSGLQATSRYTQNPN RIS |
| UniRef90-P16480 | LFTWLDSLNFYEKAQTTPNFFTSHYNMFHYT LD NTSQKS |
| UniRef90-C11JT3 | LVTWLQAI DTYSHPVGYLDGWGGTRHYEDYTKGN |
| UniRef90-Q7X3F7 | LVTWLKKIDI F T DEVTEYRGWAGTRHYEDYTGS |
| UniRef90-Q765X7 | VT WASYARVTTGTLEYNDFWKSHYMNYTETNGSGLIQG |
| UniRe90-G8×QF5 | LTW S |
|  |  |
| $\begin{aligned} & \text { UniRef90_O86170 } \\ & \text { UniRef90_K0GOZO } \end{aligned}$ |  |
| UniRef90-K9JGF8 | PFRWLREI EFFRDSQDEAEQFAGFQQGYQYTLD TTMYRP |
| UniRef90-Q2AA | LFTWLKRLNLYTDSENYSSSLSGLSAVYSHTHQQQALYVG |
|  | LFSWLRKQEFSFKDWADVYPIAGYKMTFQNTLSAALWEG |
| UniRef90-D5FII- | LFTWLRGLDFVT NVLT WVYRWS |
| UniRef90 U5KRN4 4 | LFSWLFL ESYTKAAQDKECLTGQRQAFAYTTGRDLIFQEF |
| UniRet90-U5KRW5 | LFTWLREL NFNLKSQSLINFVAGDEMDFDYTGSLGQTRET |
| UniRef90-A4GZY2 | LLK WL NS EVYTGADDRIGVWYGNRNT Y |
| iRef90-Q8VN | N |
|  | NGATMFVGGSGPVHTUQRYMRSRTSGPNSGHSTS |
| UniRef90-J8N2 | LFTWWRGLDLINTQYGGWRF VGFQQQYQYTLDSTV YET |
| UniRei90 O8V | LVTWPINFTVYTQ NDYYYPMAGLQHKFNYT ESTVSLES |
| UniRef90-E9K6H8 | LFTWPKRLDFWTNMYPDTRYLSANRHGFSYTNSS EIEDS |
|  |  |
|  | RWLRKVTFFTGEDRAYTQYSGYQMTLQQTMLSSTSQLET |
|  | NPTESTVYTQNHTYYPM AGLQTRSYYSNSYTYQ DS |
| UniRef90 R8G619 | NRLGGQSYTISRTRTAHHSUGRSVFFTT |
|  | LFSRLNKFTLITAKNOLPGLHAVQNHFSYTNDSTVRLS |
| UniRef90-F6JS41 | LFTWLNELNLYTIS |
|  | WLRKVDYYAATFSHPALWCGLLVQYYHPTLLS DVLEE |
|  | AWLRELSUGETTFPYYTGFCGRKQIFQNTMD NNLIWEE |
|  | LFTWLDRFSFQQTNDPGGWVWTGGSQYRKYTLGNSFEKQF |
| UniRef90_U5KR12 | LFTWLREDEDPVGUVDRAPLLC M KQ |
| UniRef90-P09662 | RVSFLNQMNTYTSFYFRPYYWSGNQNFISN |
| UniRef90-V9HXE4 | LFT WLKTDK GGTKNCSQDDQYADDKVTLHHTNDNNLWDQT |
|  |  |
| UniRef90-M112 | RWLVQ |
| UniRef90-B7NZ |  |
| UniRef90-UPI00034B23FC | QFTWLKDLKMYTRKYEYYNYWVGHQLKRALIGEVYRRETT |
| UniRef90 U5h | RDDELTQY AGUMQTLRYT SSLSLFQT |
| UniRef90-V9P934 | LFRRLEQMELHTYEYQGAQFLSGHQNKFRSMNYNHPLDDG |
|  | WLDQUDFHTGDFTSGELLTGVQQTVRRTLANPSL |
| JH | LFPFFQSATLYTGNNPFTPY VGLQQSGHYTL S GPSFTT |
| UniRef90-Q6BE03 | LFTWLESVDMHRPTSAGYYYYAGTKHRYKYTLDS QTLLT |
| UniRef90-Q6BE09 | TWLTEMKFYTGSDT SYTHMVGLEKKDRKTNDNDQWL |
| UniRef90-J8N566 | A WLREVELLYA WGTRNNDIVSYKQTFQNTLEDTQWSIS |
| UniRef90 N1LSG? <br> U5RP1 |  |
| niRe990-R8G | STLFRVDFSGVPVFTRFNTRSGVATPN |
| UniRef90-FOP: | FMDWFQLYTKAVRYTEYLSGITTSFDNVGGISTADTS |
|  | - |
| UniRef90 C3GBS | QWLRSFTFHQNVHSDWTAGTG |
| UniRef90-09X682 | TWLSDDELYTESVAEGDYLS Gl |
|  |  |
|  | T WL Q $k$ LIFASKNDYSTFLTANQNCVIKTNER UCSTE |
| UniRef90-A7WK64 | KWLTSLKFRTLYQPGFPFLIGNMNSFTNTNGNNQQQLW |
| UniRef90 No |  |
| UniRef90-Q765×3 | WI SGLIVYTGRLYGYDYWAAHRLDFLETNGY RFEG |
| UniRet90-R8G6W9 | TSRHLSELTISSGPLGF |
| UniRef90-U5 | THLDALDFYVDYNLHFNNTMGERKVYNYT SEREIES |
|  | LFRWLRSLDMGAIDGVQTTVLKGGQQKFETTGSSTIIDEG |
| UniRef90-J8N | LVTWLKNLAFYSNNTKYYDQFNGIDMTLKYTESSNTFEDG |
| V9P8S1 | NVKOLVASTGFTNVASAOYAFIGNRNRYKKSLLGGEPLEG |
| UniRef90- U5KRN5 | TELTNLKIIEQGATLDM |
| UniRef90-U5KS19 | VTWLEEMFVHRDKEQGAPDMAGTS |
| UniRef90-U5KRG6 | LWLDKLTFYRRNEELGQY AGUTQRFKTTFDSQSLYTQ |
| 087 | YLNSVQLFASTVSNSNVLRGNLNKTMFEGGWTASRSG |
| UniRef90-N1LT | FTWLDNI EMYYNMYPDFNRLSGIIKQKISYTCSDVQEYLL |
| UniRef90_J3JR | FSWLEKLKVGVERUDHITSWS SNMELKYTLDSNIR |
| UniRef90_R8R4U7 UniRef90 J8N7T9 | VTELTK RFDRNLYEAETYPVAFRNTLQYVGSNTNENS |
| UniRef90 Q7M155 | QQRIVAQUTLSSISVLDGTQGFSHRLRSGFSNSSVSIIRA |
| UniRef90 ${ }^{\text {c }}$ - ${ }^{\text {c }}$ |  |
|  | LTKLTFDERNLTVPVAFKKVTNTLRNVGSSTT WEQS |
|  |  |
| $90^{-N 1 L 1 K 5}$ | VTWLEDATDNDRNYKOYP DSGV DTDHYDSGYDNKVOY |
| UniRef90-R7ZW70 | LLTDITGLYFHTNVERESHFTSSNSLATTRTFLSNISV |

UniRef90 E6Y2L6 UniRet90-U5KRG9 UniRef90-Q5W7N9 UniRef90-C11JT3 UniRef90-Q7X3F7 UniRef90-Q765X7 UniRef90-G8XQF5 UniRef90-K0G0L7 UniRef90-O86170 UniRef90-K0GOZO
UniRef90 K9JGF8 UniRef90_Q2AAUO UniRef90-U5KS15 UniRef90-D5FIH1 UniRef90-U5KRN4
UniRef90 U5KRW5 UniRef90-A4GZY2 UniRef90-Q8VNX1 UniRet90_V9HZX2 UniRef90-J8N2R5 UniRef90-K9JHX5 UniRef90-O8VUK9 UniRef90-E9K6H8
UniRef90 -H 6 V 6 J 3 UniRef90-J8JK75 UniRef90-S5PLK6 UniRef90-U5KRM8 UniRef90-R8G619 UniRef90-D5FGK2 UniRef90-F6JS4 UniRet90-U5KRJ3 UniRef90_U5KRX8
UniRef90_J8MY88 UniRef90_U5KRI2 UniRef90-P09662 UniRef90-O32321
UniRef90 V9HXE4 UniRef90-H6WA86 UniRef90-M1E9M66
UniRef90 B7NZ1 UniRef90-V9P860 UniRef90-UPIO0034B23FC UniRef90-U5KRW3 UniRef90-V9P934 UniRef90_C3GCL9 UniRef90_J8HQM8
UniRef90_U5KRP2 UniRef90-Q6BE03 UniRef90-O6BE09 UniRef90-J8N566 UniRef90-N1LSG22 UniRef90-R8G5P2 UniRef90-FOPZ70 UniRef90-D3G9V2 UniRef90-A1KXP3 UniRef90-C3GBS6 UniRef90-O9X682 UniRef90-GOWLG5 UniRef90-A7WK64 UniRef90-R8S483 UniRef90-N1LPH2 UniRef90-Q765×3 UniRef90-R8G6W9 UniRef90_U5KR14 UniRet90-J8N797 UniRef90-ATWKZ4 UniRet90-V9P8S 15 UniRef90-U5KRN5 UniRef90-U5KS19
UniRef90 U5KRG UniRef90-O87906
 UniRef9O-R8R4U7 UniRet90-J8N7T9 UniRef90-Q7M155 UniRef90-C3CBI6 UniRef90-Q45882 UniRef90-Q8VNX2 UniRef90-N1LIK5 UniRef90_R7ZW70

90
100
110
120
PFRGYPSGGSASNIITIEEGSYIIYNLDPKS FEY $\$ SPWYFT DTKGTPTNDVRNTTPYFPYDDIWKI WNEFFDP
 MSGTTSN DPHSISFGNTDIFKISSLARVELQPFV DSGTTSNDVS NIDFIDNRUFIGTSARYALAGAAAGN
 PWIGRLHSPTPSRTFELNGSDIYFURSUASTYSTGSGYGN PIYGYRLSDDSSTPIQIPNQYVYNML
PVVGTRTSLVDSDAMGLGSDDVYRMKNDSHNGWYPKKLDF SFITGTRSYVVEKQTLTDPNDDIWQIGTNSTVYGWYFPFTQ K WYYNWSFSGLSCRVWWKNFQHYRFLYLELVAKKLS DYFP K GNLNGTYRGQLVAEPGLGQYVVWALELYGSGYLWDGY RFTGELAYENPYTFISFFDNDIYKVALRAAA VVSTGG PVQG PVREGTPTKISUANYY:YKLFMSQYRHPNLPTSG\| SFQGREGTATTSLETVSPKDDVWGISASAVGRQDLFTRPD YAGYHDDGTSNSFLYPSNNERDYTVTAQRFGEQRNDPQAD GlYGSPTFGTVLTHQUPLNSNVYRT SSTDTVAVPNQV PFYGNKS SDPVQNLEFNGEKVYRAVANTNLIAVWPS
PVVGH TSD DEDILNI GQPNVEVYKMSN DRMAYTPGKNMWQ STQGSTNTSUNPVTLQFTSRDVYRTESWAGLNLFG
PVIGVTGT PNRINFDRADPFITVT\|IGFGQLGTSGGT WQGATQNPDEQRSLDFDNFNVFNLNSQDRFNQNELLALGT
 DVKGSRDTYMGSLTVP EPVLEDDVSLITTNYSYMGYP PYKGSPGVKDTQTLIPEVNDDVWRTLVTYLKKMA GQTGTMTPRQRTVDLPNSPVTKVITRQWFEPREVALYK AVHGNUTSQDTSKVFPFYNKPIDKVEMTIVRHREYSDII TVIAAPRTGEQV LDENSSFGRVELSGTYSPYMFFYTP PFYGNKS SEPVQNLEFNGEKVYRAVANTNDAVWPS
 VSGEDTSEENDTFTFEDYDVHRVLCNVGELDNTSYMGR
 AVNGISEGAPNTVTANP SLRGASGN NFNLVPAEETINRV, QNQHGEGL PLEGQNTSYTRDDRTEGGKNYWYYARTQQWFETRLLQLWA K GTPTDAVRTIPSPQSGDDVWK!QNGDNRNAAFDDNED TSTGTTENTVSSCNAMGRVETRYPVTKVNVLFNGR PIVTTGPNSTPDQTFNLTRRYDFRTNSTATTHNYGSRTGM SDYGDVKDY DDKKQHRINGRDCYRIRATYFAHVT RPNTS PGLDTTTRATMNPGVDGTNGTHESTAVFRSAL N YGNT NRLSKQLTTLDPGEFMTHLSSQWNRPFQTTAG PLQGYRSSNINKTTINLGDYDTYSDKTESYSRDGTSSUKT KLYGEKRTNDTDNQI NLDRFNI DK』 SFPGTTENEESPANIDQVTMY\|Y TMFSP
 PTYGSTINTISRTDSIPMNS
SAPTDVSGVISNRTQTDPARNTFRVDSR VYTDDWRLYGV $P$ DSGKQTQNKKTLTVRGNPANT\|RCHYVEASULDFPGRLR WKGDDEHNSDYWPMSPVATKFFK GAVTGFAFGLDDLGR SFPGTTSVSENVVAGVPTNESTEKEVFPSPANUDKVTMYIY PKYMKVTNTLHYVGSSSTWEQSSSADPDRPDTQ ILQGYPATGGSQIRVLAKSNVIIQEKNRADYNTDIQHDKL D GVTTGTPFSTMDWSYGWGYPRKHYAEITSRS QALPG GVLGSPVCSVKKSRDIETKVDITDADSTQLNDTSDEFLDQ KRYGNTGNQSLYDNKDDTNQTUYFCDSUYHATQDMYGTRA SMFSGQHTRSNEFGPGFTGGD DRRTS
RWWGEKSKYDYK TVNDQEYPVYNSDAQNSYESNQKVIKY FSSTGGSLKTVH NVWATDIGN THYGNYGSNYEVESMAFDD DKAYSNNYFNNTQNNNPTS RSFGKQSSYDDKVPVIPNDKSHEKNEMVLNAEGYVGKIRA


UniRef90_E6Y2L6 UniRef90_U5KRG9 UniRef90_Q5W7N9 UniRef90-P16480 UniRef90_C1IJT3
UniRef90-Q7X3F7 UniRef90_Q765X7 UniRef90-G8XQF5 UniRef90-K0G0L7 UniRef90-O86170 UniRef90-K0GOZO UniRef90-K9JGF8 UniRef90_Q2AAU0 UniRef90_U5KS15 UniRef90-D5FIH1 UniRef90-U5KRN4
UniRef90 U5KRW5 UniRef90-A4GZY2 UniRef90-Q8VNX1 UniRef90_V9HZX2 UniRef90-J8N2R5 UniRef90-K9JHX5 UniRef90_Q8VUK9
UniRef90_E9K6H8 UniRef90_H6V6J3 UniRef90-J8JK75 UniRef90_S5PLK6 UniRef90_U5KRM8 UniRef90-R8G619 UniRef90_Q25BT2 UniRef90_F6JS41 UniRef90-U5KRJ3 UniRef90_U5KRX8 UniRef90-J8MY88 UniRef90-P09662 UniRef90-O32321 UniRef90_V9HXE4 UniRef90-H6WA86 UniRef90-M1E9M6
UniRef90 B7NZY1 UniRef90_-V9P860 UniRef90_UPI00034B23FC UniRef90-U5KRW3 UniRef90_V9P934 UniRef90-C3GCL9 UniRef90_J8HQM8 UniRef90_U5KRP2 UniRef90-Q6BE09 UniRef90-J8N566 UniRef90-N1LSG2 UniRef90-R8G5P2 UniRef90-FOPZ70 UniRef90-D3G9V2 UniRef90-A1KXP3 UniRef90-C3GBS6 UniRef90_Q9X682 UniRef90-R8S3D4
UniRef90-GOWLG5 UniRef90_A7WK64 UniRef90_R8S483 UniRef90-N1LPH2 UniRef90_Q765X3 UniRef9-R8G6W9 UniRef90_U5KRI4 UniRef90_J8N797 UniRef90_A7WKZ4 UniRef90-V9P8S1 UniRef90-U5KRN5 UniRef90-U5KS19
UniRef90-U5KRG6 UniRef90_O87906 UniRef90_N1LT74 UniRef90-J3JRW7 UniRef90-J8N7T9 UniRef90-Q7M155 UniRef90_C3CBI6 UniRef90-M1E9P2 UniRef90-Q45882
UniRef90 Q8VNX2 UniRef90-N1LIK5 UniRef90_R7ZW70


YRAEFFQ DASQNSQRRVFAENPPTG AGAQSANNFRF LP $\square$ GNVVS GWGGAW STAEIP YRYL F F FMASVV HLP PG GSYFS GLPCRPE GNSDCEDPLP LK F DLYTAS GRFS G GEVT TGAS QRQLYNVSET $\square$ V


 VDRFVFYQNSGEVNYA GRDNPSSYKTF
QT F S FY L L NP TITLGNDYNT@SNTTY GLPCSTNTTGCTSNP



$L S L N L G A V P$ L G F SF Y N E N D Q H LTT TVGYS G G L WN G
 FNQANELINQCGDPSANNFDFDHSDPDSKEGVESSFSSEEG


UniRef90 E6Y2L6 UniRef90-U5KRG9 UniRef90_Q5W7N9 UniRef90-P16480
UniRef90-C1IJT3 UniRef90_Q7X3F7 UniRef90_Q765X7 UniRef90-G8XQF5 UniRef90_K0G0L7 UniRef90-O86170 UniRef90-K0GOZ0
UniRef90 K9JGF8 UniRef90_Q2AAU0 UniRef90_U5KS15 UniRef90-D5FIH1 UniRef90_U5KRN4 UniRef90_U5KRW5 UniRef90_Q8VNX1 UniRef90_V9HZX2 UniRef90-J8N2R5 UniRef90-K9JHX5 UniRef90_Q8VUK9
UniRef90 E9K6H8 UniRef90-H6V6J3 UniRef90_J8JK75 UniRef90-S5PLK6 UniRef90_U5KRM8 UniRef90-R8G619
UniRef90-D5FGK2 UniRef90_Q25BT2 UniRef90-F6JS41 UniRef90_U5KRJ3 UniRef90_U5KRX8
UniRef90_J8MY88 UniRef90_U5KRI2 UniRef90-P09662 UniRef90-O32321 UniRef90_V9HXE4 UniRef90-H6WA86 UniRef90-M1E9M6
UniRef90 B7NZY1 UniRef90_V9P860 UniRef90 UPI00034B23FC UniRef90-U5KRW3 UniRef90_V9P934 UniRef90_C3GCL9 UniRef90-J8HQM8 UniRef90_U5KRP2
UniRef90 Q6BE03 UniRef90-Q6BE09 UniRef90-J8N566 UniRef90-N1LSG2 UniRef90-R8G5P2 UniRef90-FOPZ70 UniRef90-D3G9V2 UniRef90_A1KXP3 UniRef90_C3GBS6 UniRef90_Q9X682 UniRef90-GOWLG5 UniRef90-A7WK64 UniRef90-R8S483 UniRef90-N1LPH2 UniRef90_Q765X3 UniRef9-R8G6W9 UniRef90-U5KRI4 UniRef90-J8N797 UniRef90-A7WKZ4 UniRef90-V9P8S1 UniRef90_U5KRN5 UniRef90-U5KS19
UniRef90 U5KRG6 UniRef90_O87906 UniRef90_N1LT74 UniRef90-JJJRW7 UniRef90-J8N7T9 UniRef90-Q7M155 UniRef90_C3CBI6 UniRef90_M1E9P2 UniRef90_Q45882
UniRef90_Q8VNX2 UniRef90-N1LIK5 UniRef90_R7ZW70


CDPCTTPCNDGYSGRLSWlGL SNASPQTLDQTTYGWT PETTGQPNYESYSHRLSHIGLISAS $V G D N P P N T \quad$ L GTNSATPTASDYTHKLSFlKSTRIVRGLVSAANIIAYGWT A GK $\square$ PPYTKYTHILSY

 NPTDPCDDKALYSHRFAYMGAGFVSNLAAM TYFSYGWT PNNPNAPMSQKDSHRLSYFKYEPIRSDSPFQDGAVAFGWT NTSVPCDDKQHYSHRLSYVGAGRRDVSTPFELDRFGYGWT KQTWK NEEYGHTLSYIIKTDNYIFSVVRERRRVAFSWT





LES CCNDPNKA SHLLVSVTA NVQNHDR DASY GWN GVESATLDYRNYTHYLSNCIFQSNRNGPDYNTQSY I FGWN KTDPNKPQSEDYSHRLSWFWYYP DREDAPMQDGAMACVWT LEGDQTLAN $\quad$ HRMS WIS S LRPASTGPMGTQDPPYGWT VEGDQTQAN
 NTTMPCED $\square Q \square Y S H R L S Y M G A A Y A G Q T G R S Y F T Y F G Y G W T$ PF $\quad$ NK $\square Q P$ HRLSWMYDGKSAAANDPADDAVGCAWT WY I GTEDPYSSHNHRLSYVDSYPGDGNTFNWVSSFVFAWT GPASEPPTALNYSHTLSTMTT SGVGFLQGFVTAYGWS


PFWAEGPKWRVYEHRLSWMTYEPVRSNAPFQLGADALGWT QETTNYPNSQKFKHNLSHFLIIDKLEFAEYFHS IFALGWT GVESTQLDYSNYTHYLSDCMFDSRTITGKDNSQSY\|FGWN PVTR NNKTFNHULSYMTTAVDNSDATDPSRQDAFAWT A GNTNAPTRS LSNHYLSCLNSYYPLTATTDGMNMYSFGWT GTNTSVPTENNFTHULSRVANDTAGLQPVVQGSVVIHGWT

GENSDTPTPQDYTHLLSRVVNATVGATGNQRNSVLDFGWT DNHI SWI TTTFPTPSLVIKKGRAVGFSWM GQADC DDPNF LS SHRLSNVGFGMDTANGTKFAAYFSYGWT A GNTNAPTMG $\square Y K H Y L S C L N S Y Y P D T A T T N G M G M Y S F G W T$


CEPCNLSTSQEDTHTLATVNC
GGWYENLRYFAYSWA VQ $\square$ NPLEDYRNSDHWI SDMMT DNQSPTQTFAFSA LS LGWH SHNLSR $\square$ STPQGLSSDDRF $\square$ NY $I G F S W T$
$\mathrm{V} V \mathrm{~S} T \mathrm{~S}$
FPTNVQLTSLAYNY ILSRDTMTNFPDPGPFSSYTYMYGWT KDEGSNQN

 KGEGSNQN SHHLS YVAAALETGSTATYPVVNLWGF GWLL G Y L S N $\quad$ L N N E S Y T H S L S D M I L A N N D K $\square$ Q $\square$ N ID T S Y S Y S W
 N T L S D GIP YQN
$E F Y N N D S N G H \square D Y \square S L G W L$

| UniRef90_E6Y2L6 | HSSVD |
| :---: | :---: |
| UniRef90_U5KRG9 | HVSAD |
| UniRef90-Q5W7N9 | H T SV |
| UniRef90-P16480 | HS SVD |
| UniRef90-C1IJT3 | H T |
| UniRef90-Q7X3F7 |  |
| UniRef90_Q765X7 | STTV |
| UniRef90-G8XQF5 | H T |
| UniRef90-K0G0L7 | H $\square$ S A E |
| UniRef90-O86170 | HSSVD |
| UniRef90-K0GOZ0 | HFSV |
| UniRef90-K9JGF8 | HF SVD |
| UniRef90-Q2AAU0 | HTSVD |
| UniRef90-U5KS15 | H $\square$ S A D |
| UniRef90-D5FIH1 | HSSV |
| UniRef90-U5KRN4 | HIS AD Y |
| UniRef90-U5KRW5 | HVSVD |
| UniRef90-A4GZY2 | H S |
| UniRef90-Q8VNX1 | HTSVD |
| UniRef90-V9HZX2 | H 1 S A E |
| UniRef90-J8N2R5 | HIS A |
| UniRef90_K9JHX5 | HASVDF |
| UniRef90-Q8VUK9 | HP SVD |
| UniRef90_E9K6H8 | H K |
| UniRef90-H6V6J3 |  |
| UniRef90-J8JK75 | HVS A D |
| UniRef90-S5PLK6 | HRSAD |
| UniRef90_U5KRM8 | HPSVDF |
| UniRef90-R8G619 | H |
| UniRef90-D5FGK2 | HTSVNF |
| UniRef90_Q25BT2 | H K SV |
| UniRef90-F6JS41 | Y TSVD |
| UniRef90-U5KRJ3 | HVS A D |
| UniRef90-U5KRX8 | HVSAD |
| UniRef90-J8MY88 |  |
| UniRef90-U5KRI2 | HVS A D |
| UniRef90-P09662 | HTSVD F |
| UniRef90-O32321 | HR S |
| UniRef90-V9HXE4 | H N S V |
| UniRef90_H6WA86 | H K SVD F |
| UniRef90-M1E9M6 | HFSSD |
| UniRef90-B7NZY1 | HRSAD $\square$ |
| UniRef90-V9P860 | HR |
| UniRef90_UPI00034B23FC |  |
| UniRef90-U5KRW3 | H $\square$ S A D |
| UniRef90-V9P934 | H NT TD |
| UniRef90-C3GCL9 | HMSVD |
| UniRef90-J8HQM8 | H 1 S A |
| UniRef90_U5KRP2 | HVS A D |
| UniRef90_Q6BE03 | HLS V |
| UniRef90-Q6BE09 | HNSVDL |
| UniRef90-J8N566 | HVS A D |
| UniRef90-N1LSG2 | HPSVD |
| UniRef90-U5KRP1 | H N NVD |
| UniRef90-R8G5P2 | HK S A |
| UniRef90-F0PZ70 |  |
| UniRef90-D3G9V2 | HVDVD |
| UniRef90-A1KXP3 |  |
| UniRef90-C3GBS6 | HQSVD |
| UniRef90-Q9X682 | H N SV |
| UniRef90-R8S3D4 | H Y T I D |
| UniRef90-G0WLG5 | HS SVD |
| UniRef90-A7WK64 | H S SVD F |
| UniRef90-R8S483 | HR |
| UniRef90-N1LPH2 | HPSVD |
| UniRef90-Q765X3 |  |
| UniRef90_R8G6W9 | H K |
| UniRef90-U5KRS3 | S NTVD |
| UniRef90_U5KRI4 | HASA |
| UniRef90-J8N797 | H N |
| UniRef90-A7WKZ4 | HESVDF |
| UniRef90-V9P8S1 | HVEV |
| UniRef90-U5KRN5 | H N S |
| UniRef90-U5KS19 |  |
| UniRef90-U5KRG6 | H $\square$ S V |
| UniRef90-O87906 | H S S A |
| UniRef90-N1LT74 | HP S 1 |
| UniRef90-J3JRW7 |  |
| UniRef90-R8R4U7 | HS S VNL |
| UniRef90-J8N7T9 | H N S |
| UniRef90_Q7M155 |  |
| UniRef90-C3CBI6 | H V S ${ }^{\text {V }}$ |
| UniRef90-M1E9P2 | HNS |
| UniRef90-Q45882 |  |
| UniRef90-Q8VNX2 | S T T 1 S |
| UniRef90-N1LIK5 | HP SLL |
| UniRef90_R7ZW70 |  |

lupas_21
lupas_14






