QUERY
UniRef90_R4FIZ2 UniRef90-AGMFK6 UniRef90-C1IC47 UniRef90-P0C555 UniRet90-F5CPD6 UniRef90-P80958 UniRef90-P01412
UniRef90-P80548 UniRef90-F5CPD8 UniRef90-P01422 UniRef90-P01417
UniRef90 R 4 FIP 4 UniRef90-R4G2P2 UniRef90 P01432 UniRef90-F5CPD2 UniRef90-A0A024AX16 UniRef90 P34075 UniRef90-R4FJG1 UniRef90- FFJLG7 UniRef90-P01420 UniRef90_F5CPD7 UniRef90-A8HDJ7 UniRef90- R4FIB8 UniRef90-R4FIC0 UniRef90-F5CPE1 UniRef90-P86420 UniRef90-A8N286 UniRef9-R4G715 UniRef90_D5J9P3 UniRef90-A3FM53 UniRef90-F8J2G5 UniRef90_D5J9P1 UniRef90_O2VBNO
UniRef90 A8S6B0 UniRef90-R4G2G2 UniRef90-P86097
UniRef90-POCAR4 UniRet90-R4G2D8 UniRet90-H8PG68 UniRef90-R4G7H1 UniRef90_A0A024AXD8 UniRef90_C5ILC5 UniRef90-B2BRQ66 UniRef90-R4G352 UniRef90-P01386 UniRef90-Po1384 UniRef90 ${ }^{-}$P01395 UniRef90-Q53B54 UniRef90-F8.22E1 UniRef90-Q53B56 UniRef90-P01382 UniRef90-S6CB76 UniRet90-A8HDK6 UniRef90 R4G2T5 UniRef90-PoC8R6 UniRef90-Q2VBN1 UniRef90_R4FIK4 UniRef90-P60237 UniRef90-P82662

UniRef90 F5CP UniRef90-P58370 UniRef90_R4FJQ3 UniRef90-H8PG67 UniRef90_R4FJH6 UniRef90-P01404 UniRef90-P183299 UniRef90-Q53B49 | UniRef90-R4FJS5 |
| :--- |
| UniRefo - |
| $8 . J 2 F 5$ | UniRef90-P10808 UniRef90-R4FKG3 UniRef90-V8N212 UniRef90-P25683 UniRef90_P22947 UniRef90-UPIOO00112B0E UniRef90 R4FJX3 UniRef90_R4G2H8 88 UniRef90_Q9W717 MTCYNQQSSEDRTTTTCPGGVSSCYKKTWRDHRGT\|IDRG TCCNNQQSSQPRKTTVVCPDGEKSCYKKSWRDHRGTRSERG ICFNHESS QPQTTKTCSPGESSCYNKQWSDFRGTDIERG $V C H N Q Q S S Q P P T T T N C S G G E N K C Y K K Q W S D H R G S S I T R G$ I CLN QQQSSEPQTTETCPNGEDTCYNKTWNTHRGSRTDRG LICYNDHGY DGKTTETCENGMTTCYEERWREARGTRRIERG LECHNQQSS QTPTTKTCS GETNCYKKWWSDHRGTII ERG

 $M$ II $C$ N QQSSSQPPTTTTTCSSEGQQCYKQRWRDHRGWRT ER G MICHNQQSSQPPTIKTCPGETNCYKKRWRDHRGT\|IDRGG
 MQCYNHPLLQDKTVITCAFGVSSCFKKTWKVQRETMIERG LNCHNQMSAQPPTTTRCSRWETNCYKKRWRDHRGYKTERG LICYNDFSHTAHTVEHCQKGDT TCYMMTWRDVRETVVDERGG $M L C C N Q Q S S Q P K T T K C C S G G E T S C Y K K T W N G D H G S I T E R G$ I CYNQPSSQHPTTKACPGEKNCYRKQWSDHRGTIIERG
 $M I C Y K Q Q S L Q F P D T$ TVCP GEKNCYKK QWS GHRGT I I ER G

 TCCNQQSS QPKTT DDCPSGEDSCYKSSWRGQHGMRSERG LLCYTHMSNSDETTECCQNGMT TCYNKDDWSDFRGTVVIER G


 LC Y NHQSTNPKTTELCGHSMYFCYKNSWDYRGVEKIERG C Y K T P GVK TCYRTHPYKP MTCYNQQLSQPQT ETCPPGQ $\square C Y N Q$ ESSTTPPTTTTCA ESYKKTWS ENCEPGKNVCYKMYFSDHRGTRSSRG

 | L | C |
| :--- | :--- |
| L | $\mathrm{Y} V \mathrm{~V}$ |
| C | K K Y N AP |

 SKTSRTCPPGENVVFTETWCDARGKRVDLG QTCPP GQNLCYTKTWCDARGKVVELG QTCPPPGENVVCFTK T WCDAARGKRVVEMA

 L L C Y K T P S S T



 T C Y K T P S VK P
L IC Y Q A Y N SETCP

C Y K T H
T P
P Y K SETCPDGGNLL
$\square$ T C Y K T P $\square \mathrm{P} \square_{\mathrm{K}}^{\mathrm{D}} \mathrm{T}$ S
L IC Y LD F S VP H T CPPGQNLLC $\xrightarrow{C}{ }^{C}$ G A P R D E
 SEA
$T E T C S D G Q$
$S K D C A A G E$
$\sqrt{\square} \mathrm{CHSQMSSSQPPTTTFCR}$
D L C
V
 T C Y K Y Y S SFWK $\square$ TE T CPD GQNLC YKRWHMLAP GYD I LR G CNFKTCPTDELRHCASGETI CYKTFWNTHRGLRIDDR MSCYK TPDVKSEPCPPGQNLCYTKTWCDARGKVI ELGG
 L DCFEGY

KAPKTCPPG
M IC Y S HK T P Q P S A
1 C Y SHKLLQAAK T T KT C E
SKICP PGE

\section*{$L$ I C V K Q Y T $\square$ F G VT} | ETCA |
| :--- | :--- |
| QT |

GQ


|  |  |
| :---: | :---: |
| Ref90＿R4F |  |
| UniRet90－A6MFK6 | TVKPGVN |
| UniRef90－P60775 | CGCPTVKPG1 K |
| UniRef90－C11C47 | CGCPTVKKGIK |
| UniRef90－P0C555 | CGCPKVKPG |
| UniRef90－F5CPD6 | CGCYKVKPGVQ |
| UniRef90＇P8095 | CGCPKVKPGVNLNCCTTDRCNN |
| niRef90－P01412 | CGCPRVNPPISIDCCKTDKCNN |
| UniRef90－P80548 | CGCPTVKPG |
| UniRef90－F5CPD8 | CGCPKAlPEV |
| UniRef90－P01422 | CGCPSVKKGVG |
| UniRef90－P01417 | CGCPKVKQGIHLHCCQSDKCNN |
| UniRef90－R4FIP4 | CGCPHVKPG |
| UniRef90－R4G2F | CGCPNVKPGV |
|  | CGCPTVKKGIQ |
| UniRef90－F5CPD2 | CGCPNVKPGVKLK |
| UniReef90 A0A024AX16 | CGCPTVKRGISLM |
| UniRef90－P34075 | CGCPTVKPGVKLHCCTTEKCNN |
| UniRef90 R R4FJG1 | CGCPKERRS |
| UniRet90－＿8JJG7 |  |
| UniRef90－P01420 | CGCPSVKK |
| UniRet90＿F5CPD | CGCPNVKPGI |
| UniRef90－A8HDJ7 | CGCPPRKPLIDLICCETDECNN |
| R4G223 | CGCPKEVPNLLLMCCKKDKCNN |
| UniRe90－R4FIB8 |  |
| UniRet90＿R4FIC0 | CGCPHVKKGTLTCCQTDECNN |
| UniRef90－F5CPE1 | CGCPKTEYRV |
| UniRef90＿Q690 | CGCPKTEP |
| UniRef90－P8 | CACPNVKPGM |
| UniRet90－A8N286 |  |
| 㖪90－R4G755 | CGCPEVKTGVG KCCETDECNN |
| UniRet90－DJJ9P3 | CPD NGKY YCCTR |
| UniRet90＿R4Fİ0 | CPTVMGVD C CST |
| UniRef90 A3FM53 |  |
| UniRet90－F8J2G9 | PPMKP |
| UniRef90＿D5J9P1 | PTN RY |
| UniRet90－Q2VB | 俍 |
| UniRet90 A8S6B0 |  |
| UniRer90－R4G2G2 | CPPVKYDMDVKCCKT |
| UniRef90－P86097 | CGCPPVKYDMIVKCCKI |
| UniRet90 PocAR4 | CGCXKVKPGVQMKCCKT |
| UniRet90＿R4G20 | K |
| UniP | ACPGKPGVD |
| UniRef90－D5J99881 | CPDMK |
| UniRe90＿R4G7 |  |
| UniRet90－A0A024A | CACPIPKHYEDVICCSIDNCN |
| UniRef90＿C5ILC5 |  |
| UniRet90＿B2BRQ6 |  |
| UniRef90＿R4G352 | VKPGV |
| UniRef90－P01419 | CPRVKS |
| Uirefo－P01384 | A |
| UniRefo－R4G2E4 | d |
| UniRef90－P01395 | G |
| UniRef90 Q53B54 | GVDIKCCSTDN |
| Un | V |
| UniRef90－F8J2B3 | TTKPYEEVT |
| UniRef90－Q53B56 | CPEVKPGVNIECCSTDNCN |
| UniRef90－P01382 | D |
| UniRet90＿O8UW28 | D |
| UniRet90＿S6CB76 | CACPTVKPGVDICCSTDDCN |
| iRet90＿A8HDK6 | KP |
| UniRef90 R4C | T |
| UniRet90－POC | DKCN |
| UniRefo－ 625 | CACPDKMP EVNCOM |
| UniRef90－R4FIK4 | CACPTAKPRVTVKCCSTDNCN |
| UniRef90－P60237 | CPRMKPGTKLECCTSDK |
| UniRef90－P82662 | CPKVNPGDDitccston |
| UniRef90－F5CPE5 | Q N |
|  | P |
| UniRef90－R4FJQ3 |  |
| UniRef90－H8PG67 | CACPIRTPGLDETVCTTDNCN |
| UniRet90－R4G209 | CACPDPKPREEVTCCSTDNCN |
| UniRef90＿R4FJH6 | ， |
| UniRet90－P01404 | ML |
| UniRef90 P1¢ | D |
|  | AGVEIKCCSTDDCDK |
| UniRef90－O23B49 |  |
| UniRet90＿R4FJS5 | CACPTVKPGVK VCCSTDNCN |
| UniRe90－78J2E5 | TKPYEEVTCCS |
| UniRef90－P10808 | CPKVKPGNLRCCKTKCNE |
| UniRef90 R4FKG3 UniRef90 V8N212 |  |
| Uni | K |
| UniRef90－P256 |  |
| UniRet90＿P22947 | K |
| UniRef90－UPI0000112BOE |  |
| 俍90＿R4FJ×3 | C |
| ef90 R4G2H8 | CACPTAKPGVTVKCCSTDNCN |
| Ref90 Q9W717 |  |


| - |  |
| :---: | :---: |
|  |  |
| UniRef90_P25670 |  |
| UniRef90-P01383 |  |
| UniRef90_V8N9N7 |  |
|  |  |
| UniRef90_A6MFK4 |  |
| UniRef90 P01388 |  |
|  |  |
| UniRef90_R4G319 |  |
| UniRef9 |  |
| UniRef90_P79688 |  |
|  |  |
| UniRef90-P81 |  |
|  |  |
| UniRef90_Q7T213 |  |
| UniRef90_P8178 |  |
|  |  |
| UniRef90_P24778 |  |
|  | P01379 |
| UniRef90_R4FIT |  |
|  |  |
| niRef90-R4FK7 |  |
| UniRef90_R4G2J4 |  |
|  |  |
| UniRef90_P82462 |  |
| UniRef90_P28375 |  |
|  |  |
| UniRef90_P24776 |  |
| UniRef90_E2IU15 |  |
|  |  |
| UniRef90-P18328 |  |
| UniRef90_E2IU19 |  |
| UniRef90-P25681 |  |
| UniRef90_D5J9P4 |  |
| UniRef90-P24777 |  |
| UniRef90_P07526 |  |
| UniRef90_Q802B2 |  |
| UniRef90_Q53B55 |  |
| UniRef90-P81030 |  |
| UniRef90-R4G2F2 |  |
| UniRef90_P14612 |  |
| UniRef90_U3FYQ9 |  |
| UniRef90-P84716 |  |
| UniRef90_P49122 |  |
| UniRef90_Q9YGI8 |  |
| UniRef90_P0C554 |  |
| UniRef90-Q9YGH9 |  |
| UniRef90_C6JUP0 |  |
| UniRef90_V8N440 |  |
| UniRef90-Q8UUK0 |  |
| UniRef90_R4FJH1 |  |
| UniRef90_P62394 |  |
| UniRef90-D5J9P9 |  |
| UniRef90_P25517 |  |
| UniRef90-Q8AY51 |  |
| UniRef90_Q9YH67 |  |
| UniRef90_E2IU01 |  |
| UniRef90_B2BRQ7 |  |
| UniRef90_P86096 |  |
| UniRef90-P17696 |  |
| UniRef90-P01467 |  |
| UniRef90-E2ITZ2 |  |
| UniRef90-P15815 |  |
| UniRef90_U3EPI1 |  |
| UniRef90-P86419 |  |
| UniRef90_Q9W729 |  |
| UniRef90-Q53B61 |  |
| UniRef90_P01415 |  |
| UniRef90_P01400 |  |
| UniRef90_P01452 |  |
|  |  |

UniRef90-P82935

20
$\square$ CY $\quad \square$ A P Y DHKTCPPGENVCFTRTWCDARGKVVVELGG $\square C$ S
 ICYRKY TNNVKTCDPDGENVCYTKMWCDGRGKVVEGG S EPCPPGQEV


LICYF GENY SRTCPDGHK CFTRTWCDPRRGPRVVEMG T CFNDDLTNPKT | $L T$ | $C$ | $V$ | $E$ |
| :--- | :--- | :--- | :--- |
| $L$ | $I$ | $C$ | $S$ |

CNFDTCRAGE NPHDTQTCPS GQEICYVKSWCNARGKVLEFG
 LT CVT S K



 SEPCPPGEDLLCYTKSWCYSRRNRV DRG SETCPPGQELCYTKTWCDRRGKVI ELG LKVCAS GEKYCFKE SWREAR GT RI ERG
 I CVK E K F LIF S E T T E T C P D G Q NV V F N Q A L I Y P G K Y K R T R G


## PF L

IT CYKRHASDSQTTTCLSGGSIIGKESWREARGTRIERG

 $\square C Y S H T T T S R A D L L K D C G G E N S C Y R K S R R H P P K M V L G R G G$ CLTKYSRDNESSSKTCDPSGQNNVCFKKWEMNSSEKNAKRG
 LT C L N CPEVF CKKF QTCRNGEKLCFKKFERKLFGKRYRRG $C G S R G R R V D L G$ LT C VT SK S $\square$ F G $\square$ T T E N CP D GQNDCFK K WY IVPRRYS DI T WG $L \mathrm{C}$ Y V G Y N A P

 MKCLTTKYSRVSETS QTCHVWQNLCFKKW QKGKKVVRG





 SK CQDA EKI CFKRFYEKQLGGKKFPRG
 VCYTK T RCDGRGRRV D TPGTCPPGQELCY IVWCGAHDRRVKLG LT CHTCPYNTCANSETCPA GKNI CY QKKWE EHQGERII ERR $L T C D T G K S \square G G \square S T E E C A A G Q K I C F K K W T M G P K L Y D V S R G$ P PFWKTCPKGKNLCYKMTMRAAPMVPVKRG
 CYK GKGTR K S VT CPKGEKVCYTDF LVVGPPEKVLKWG

 T T P S D T SETCPD GQNI CYEKRWNSHQGDVEDK G

TCRNGENI CFKRFYENLLGKRYPRG

LT CLDNCPEMFCGKF QDCRNGEKICFKKDHRRPDSWRYDRG

| 7 |
| :---: |
| UniRef90 R4G2D9 |
| UniRef90 P25670 |
| UniRef90-P01383 |
| UniRef90 V8N9N7 |
| UniRef90-P34073 |
| UniRef90 A6MF |
| UniRef90 P01388 |
| UniRef90 Q9W7J5 |
| UniRef90-R4G319 |
| UniRef90 R4FIH9 |
| UniRef90 P79688 |
| UniRef90-P82463 |
| UniRef90_P81946 |
| UniRef90 R4FK68 |
| UniRef90_Q7T213 |
| UniRef90_P81783 |
| UniRef90-P34074 |
| UniRef90_P24778 |
| UniRef90-P01379 |
| UniRef90 R4FIT5 |
| UniRef90_P25518 |
| UniRef90 R4FK75 |
| UniRef90-R4G2J4 |
| UniRef90-A7X3M3 |
| UniRef90 P82462 |
| UniRef90-P28375 |
| UniRef90_A8HDK7 |
| UniRef90 P24776 |
| UniRef90-E2IU15 |
| UniRef90 U3F5E9 |
| UniRef90-P18328 |
| UniRef90-E2IU19 |
| UniRef90_P25681 |
| UniRef90 D5J9P4 |
| UniRef90-P24777 |
| UniRef90-P07526 |
| UniRef90_Q802B2 |
| UniRef90-Q53B55 |
| UniRef90_P81030 |
| UniRef90-R4G2F2 |
| UniRef90-P14612 |
| UniRef90-U3FYQ9 |
| UniRef90-P84716 |
| UniRef90-P49122 |
| UniRef90-Q9YGI8 |
| UniRef90-P0C554 |
| UniRef90-Q9YGH |
| UniRef90-C6JUP0 |
| UniRef90-V8N440 |
| UniRef90 Q8UUK |
| UniRef90-R4FJH1 |
| UniRef90-P62394 |
| UniRef90 D5J9P9 |
| UniRef90-P25517 |
| UniRef90-Q8AY51 |
| UniRef90-Q9YH67 |
| UniRef90-E2IU01 |
| UniRef90-B2BRQ7 |
| UniRef90-P86096 |
| UniRef90-P17696 |
| UniRef90-P01467 |
| UniRef90-E2ITZ2 |
| UniRef90 P15815 |
| UniRef90 U3EPI1 |
| UniRef90-P86419 |
| UniRef90 Q9W729 |
| UniRef90- Q53B61 |
| UniRef90_P01415 |
| UniRef90_P01400 |
| UniRef90-P01452 |
| UniRef90-P8 |

UniRef90-P82935

60
C T C P TA K P G $V$ V $\mid$ K| IT C C S T D K C N CACPIPKSYQDVKCCSTDKCN
 CTCPKVKPY EQQ STCCCSTANCN




 CGCFTPRGDMRPRCCKSDKCN
CACPTPENGIEIICCSTDNCN

 CACPSVNTGTEVMKCCSADKCN CACPTPKTSDDVTCCCSTARRCN

 CACPKLQNRDVIFCCSTDKCN
 CACPKSSLLVNVMCCKTDKCN

 | $C A C P K V D N N D P I$ | $R C C G T D K C N D$ |
| :--- | :--- | :--- |
| $C S F T P Q E K G K Y: Y C R T R D N R N ~$ |  | CGCPPGDDYLEVVKCCTSDKCN C ACPK PKKNEMVQCCSSKDKCNK CTCPKSSGLVKVVCCKTDKCN $C A C P V V P P K V S I K C C S T D A C$

$C A C P E A K P R E I V Q C C S T D R C N$

 CTCPRRMPGLDFTCCTTDNCN CACPRKDPLEIVVCCATDKCN CTCPKPKKDEVI QCCAKDKCNK CACPRSSSLVKVVCCKTDKCN CTCPKPKK NEII QCCAK
CTCPKCNK
C
 C L C
CACPKSSALVKVVCCKTDKCN CACPR RLGVKVTCCSTDNCNQ CACPKSSALLKVVCCSTDKCN CACPEAKPHEIVECCSTDKCNK
 CACPKAK P NETVVQCCSTDKCN
CACPSKKPYEEVTCCSTDKCN CACPTVKTGVDIQCCSTDNCN
 CTCPKADEYGCVKCCKTDRCNK

 CACPKVGDGARITCCSTDNCN
 $C T C P E F R S N Y R L L C C R T D N C N$
$C A C P E G K P N E L V Q C C S T D E C N ~$ CSCPEFESRFYLLCCRDDNCNK $C A C P E A K P R E V V E C C S T D K C N$
$C V C P K N S A L V K Y V C C S T D R C N$ $C V C P K N S A B V K Y V C C S T D R C N$
$C A C P V G K P Y E M I V C C S T D K C N$

| 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 1 | 3 | 5 | 3 | 2 | 5 | 6 | 7 | 7 | 7 | 8 | 8 | 9 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| B | B | B | B |  |  |  |  |  | B |  | B |  | B | B |  |  |  |  | B |  |  |
| B |  | B |  |  |  |  |  |  |  |  | B | B | B |  |  |  |  |  |  |  |  |

