## QUERY

 UniRef90_W6MB87 UniRef90_UPI0003B6289D UniRef90_C7RAB1 UniRef90 UPI00036C69E0 UniRef90-D0ZDB4 UniRef90_Q1D9V4 UniRef90_UPI000370DFC3 UniRef90- D5CTU1 UniRef90_UPI000372C030 UniRef90 UPI0002556095 UniRef90 UPI0003757261 UniRef90-UPIO00361CA06 UniRef90-K8W2V2UniRef90-D0JN48 UniRef90-Q3J9X5
UniRef90_UPI000382AA39 UniRef90_UPI00037D9A40 UniRef90-UPIO0046A728D UniRef90-UPI0003A15C8A UniRef90-H8GQK0 UniRef90-D3RTL6 UniRef90_UPIO004766E34 UniRef90-M4RGN6 UniRef90_UPI00037E6590 UniRef90-UPI00036B23D9 UniRef90-Q7NWE6 UniRef90_UPI000377F343 UniRef90 E1W3C4 UniRef90_UPI00036F4314 UniRef90-C9RQC3 UniRef90_UPIO0036C47AA UniRef90_W0DWH0 UniRef90-J2UU38 UniRef90_QOVRG5 UniRef90_M5DT33 UniRef90_C6NIOH8
UniRef90_UPIO00381D456 UniRef90_UPI00047C2216 UniRef90_A2SGN1 UniRef90_R5PKR2 UniRef90-P43847
UniRef90-W0JA00 UniRef90-B7RT04 UniRef90-H5UU63 UniRef90-D5X139 UniRef90_W9A121 UniRef90_JOUR60 UniRef90-F8WSR6 UniRef90_UPI0003704CE2 UniRef90-UPI00031FFE20 UniRef90-UPIO00369580A UniRef90_UPI000401D3D5 UniRef90 R7UQ10 UniRef90_UPIO00302DC24 UniRef90-S3NC13 UniRef90-A4BPN3 UniRef90_UPIO004217832 UniRef90-B8GRN1 UniRef90-G4E6L8 UniRef90_C0AVS8 UniRef90_L8XBB4 UniRef90_A0A023NMS2 UniRef90-W8X495 UniRef90-Q82Y68 UniRef90_Q15R69 UniRet90_K6XIZ7 UniRef90-J4WUM9 UniRef90_Q0A5S3 UniRef90_A6F918 UniRef90_A0A011ME36 UniRef90_UPI000416F4E5 UniRef90_Q9JWC5 UniRef90_EOWRJ6
UniRef90-A8FY00 UniRef90-H5TB88 UniRef90_K7A9U3 UniRef90_U4TBL1
UniRef90 D1KBR3 UniRef90_UPI000255BBFC UniRef90-WOPBL1 UniRef90-G8QGB0 UniRef90-I3BNE0 UniRef90-I1XJ70
UniRef90-L2F7Y2 UniRef90-X2HAW6 UniRef90_UPI000477B523 UniRef90-NOE1C6

QPAPVSSVDGGRALTDANLRLGLALAEDETDYLQE

 HQPRPLAHVDILGGGREALVTANSEIGLALAEDEI DYLVE HEPQPLVNVAVI E QGREALDKANAELGLALSDDEIDDYLTD
 HTPRPFTTVDVLGGGRAALVTANRELGLALADDEMDYLVA HAPAPLETI DVLGGGREALAEANARLGLALADDEIDYLLD P Q P L S S V DI LA G GK A A L E T A N R E L G L A L S A DEIID Y L V A HAPKPLQTVAVI EQGRDALEEANSDLGLALSADEI DYLTA Q Q P K P L V S I DIL G R GREALE EANDELGLALSSDEMDYLVD PRELATVDVMAGGRAALEAANRELGLALSDDEVEYLVD


 EPRPMQRVDVI GAGRPA VQA

 K P LE SV DVI GMGTAA L K A N NEMGL A L S P DEVV





 QPRNVNHID L Q G GREALVQANQSLGLALSADEIVDYLVTT HQPR E L QPAPLTEI DLLGGGREALVAADQNLGLALADDEI DYLAD PKPLSTIDVLQGGKAALNQANNEMGLALSPDEVDYLED
 QPKPMETVDVI GRGRTALEAANRDFGLALSDDEI DYLVA RPMETVPLLA Q GRKALEEANADMGLALSDDEIA YLAD QEPKALTTIDDLNGGRQALEQANDALGLALADDEMDYLVE QPRPVKTVPVLKEGRAALVTANRTLGLALADDEIDYLVN EPAALTSVDVLAGGREALQKADKALGLALAEDEI DYLLA P EPMAHVDVLGRRADALVEANRELLGLALSDDEI AYVVD $P$ Q P L Q H V D V L S G G R A A L A R A N V Q P A A V K S V DIL V G GR Q A L E Q A N L T L

H T P
 KHID GEGREALEKANRQFGFALSSEDIDYLMN
 PAP M T TVV S V L G G G R D A L E K K A N DE L L G L A L S D D E K E Y L L D E A K P L E Y V D L L G G G K N A L V R A N S E L G L i A L S E D E I D Y

HEPAPLTRINVLE E GRVALEE A NSRLGLABLAPDE

 HQPRPLII ALGEQPRQALHQANQDMGLALSADEIEYLAQ Q T P A P L K T I DV L A R G K D A L V K A N DIE M GILA L A D D E V
 K PGPLVYI DLAGDAKAALDKANKELGLALADDEI EY L V D D




 QARPLKSVDILA G GREALVDANVKLGLALAEDEI DYMI A
$P$ Q P L L R R I D L L A G G R A A L V ESTRATVDLNGGRNALETANRELGLALSPDEM SETFSTVDVLGGGKEALVKANTEMGLALSA DE LK QV D L S Q GRTA LEHANNQLGLALAKDEID YLFD


 PRPMGTVDVLSGGRNALSEANVNLGLALAEDE K P L A H I P L Q A R G R A A L E E A N D S L G L A L S P M E I
 $P R P L D S V D L N G G R Q A L V E A N Q N L G L A L A E D E L E Y A E$ H T P A P L Q H I DVLLKDGRKA L E Q A CVVT F GF A L S D Q D MD Y L L N




## QUERY

## UniRef90_W6MB87

 UniRef90-UPI0003B6289D UniRef90-C7RAB1 UniRef90 UPI00036C69E0 UniRef90_DOZDB4 UniRef90_Q1D9V4 UniRef90 UPI000370DFC3 UniRef90-D5CTU1 UniRef90_UPI000372C030 UniRef90-UPIOOO2556095 UniRef90 UPI0003757261 UniRef90-UPI000361CA06 UniRef90_K8W2V2UniRef90_D0JN48 UniRef90- Q3J9X5 UniRef90_UPI000382AA39 UniRef90_UPI00037D9A40 UniRef90 UPIO0046A728D UniRef90-UPI0003A15C8A UniRef90-H8GQK0 UniRef90_D3RTL6 UniRef90-UPI0004766E34 UniRef90-M4RGN6 UniRef90_UPI00037E6590 UniRef90-UPI00036B23D9 UniRef90 ${ }^{-}$Q7NWE6 UniRef90_UPI000377F343 UniRef90_E1W3C4 UniRef90-UPI00036F4314 UniRef90-C9RQC3 UniRef90_UPI00036C47AA UniRef90 WODWHO UniRef90 J2UU38 UniRef90_Q0VRG5 UniRef90_M5DT33 UniRef90_C6WUH8 UniRef90-UPI000381D456 UniRef90-UPI00047C2216 UniRef90 A2SGN1 UniRef90-R5PKR2 UniRef90-P43847 UniRef90_WOJA00 UniRef90_B7RT04 UniRef90-H5UU63
UniRef90 D5X139 UniRef90_W9A121 UniRef90 JoUR60 UniRef90_R4YT03 UniRef90_F8WSR6 UniRef90 UPIO003704CE2 UniRef90-UPI00031FFE20 UniRef90-UPI000369580A UniRet90-R7UQ10
UniRef90_UPI000302DC24
UniRef90_S3NC13
UniRef90 A4BPN3
UniRef90-UPIOOO4217832
UniRef90-B8GRN1
UniRef90-G4E6L8
UniRef90_COAVS8
UniRef90_L8XBB4
UniRef90 A0A023NMS2
UniRef90 W8X495
UniRef90-Q82Y68
UniRef90_Q15R69
UniRef90_K6XTZ7
UniRef90_Q31FD1
UniRef90-J4WUM9
UniRef90 Q0A5S
UniRef90 ${ }^{-}$A6F918
UniRef90_A0A011ME36
UniRef90_UPI000416F4E5
UniRef90 Q9JWC5
UniRef90-EOWRJ6
UniRef90_A8FY00
UniRet90_H5TB88
UniRef90-K7A9U3
UniRef90-U4TBL1
UniRef90_D1KBR3
UniRef90 UPI000255BBFC
UniRef90-WOPBL1
UniRef90_G8QGB0
UniRef90_13BNEO
UniRef90-I1XJ70
UniRef90-L2F7Y2
UniRef90 ${ }^{\text {X2HAW6 }}$
UniRef90-UPI000477B523
UniRef90 N0E1C6
UniRef90_UPI000362451F

50
60
AFTKLGRNPND IELYMFAQANSEHCRHK SFSRLARNPTDVELMMFAQANSEHCRHK SFSRLARNPTDVELMMFAQANSEHCRHK SFTKLGRNPSDVELMMFAQANSEHCRHK SFKALGRNPSDVELMMFAQANSEHCRHK AFTRLERNPSDVELYMFAQANSEHCRHK RFTELKRNPTDVELMMFAQANSEHCRHK AFNGLGRNPNDVELMMFAQANSEHCRHK NFTKLKRNPTDVELMMFAQANSEHCRHK SFQDLGRNPTDVELMMFAQANSEHCRHK SFTKLNRNPNDI ELYMFAQANSEHCRHK NFTRI GRNPTDVELMMFAQANSEHCRHK AFTQLGRDPNDVELMMFAQANSEHCRHK AFTGLKRNPTDVELYMFAQANSEHCRHK AFTGLGRNPTDIELYMFAQANSEHCRHK NF QAL GRNPTDVELMMFAQANSEHCRHK NFQKLGRNPVDVELMMFAQANSEHCRHK SFQGLGRNPTDAELMMFAQANSEHCRHK YFMRI GRNPTDVELMMFAQANSEHCRHK SFKELKRNPSDVELMMFAQANSEHCRHK AFESLGRNPTDVELMMFAQANSEHCRHK NFSALGRNPTDVELMMFAQANSEHCRHK NYQRI NRNPTDVELMMFAQANSEHCRHK NFTQLGRNPNDI ELYMFAQANSEHCRHK NFSKIGRNPTDVELMMFAQANSEHCRHK AFTKAGRNPTDVELMMFAQANSEHCRHK NFTKMKRNPSDVELMMFAQANSEHCRHK AFTGLQRNPTDAELMMFAQANSEHCRHK NFTQLGRNPHDDELYMFAQANSEHCRHK AFVGLNRNPTDVELMMFAQANSEHCRHK NFTELKRNPTDVELYMFAQANSEHCRHK NFQRLNRNPNDIELYMFAQANSEHCRHK NFKQLQRNPTDAELMMFAQANSEHCRHK AFTRAQRNPTDVELMMFAQANSEHCRHK QF $\square A L G R N P S D A E L M M F A Q A N S E H C R H K$ SYRTLGRNPTDDELMMFAQANSEHCRHK NYTRMQRNPTDVELMMFAQANSEHCRHK SFTKLGRNPTDIELMMFAQANSEHCRHK AFTQLKRNPTDVELMMFAQANSEHCRHK AFTGLQRNPTDVELMMFAQANSEHCRHK AFEKLQRDPTDVELMMFAQANSEHCRHK SFTAAKRNPQDVELYMFAQANSEHCRHK AFGTLGRDPNDLELMMFAQANSEHCRHK AFTGLGRNPTDVELMMFAQANSEHCRHK AYRKLGRNPTDVELMMFAQANSEHCRHK NFTKLGRNPNDI ELMMFAQANSEHCRHK AFTRLGRNPHDVELMMFAQANSEHCRHK A YKKLDRNPTDIELMMFAQANSEHCRHK NFGKLGRNPTDVELTMFAQANSEHCRHK A YVDLKRNPTDVELMMFAQANSEHCRHK SFRQLGRNPTDVELMMFAQANSEHCRHK AFTDLRRNPTDVELMMFAQANSEHCRHK GFKEI GRNPNDI ELMMFAQANSEHCRHK S Y QKLERDPTDVELMMFAQANSEHCRHK AFTQARRNPTDVELMMFAQANSEHCRHK AF DK LGRNPHDLELMMFAQANSEHCRHK SYQELGRNPTDVELMMFAQANSEHCRHK AFTRLKRNPTDVELYMFAQANSEHCRHK A YGAGGRAPTDVELMMA QANSEHCRHK AYETLGRDPTDVELMMFAQANSEHCRHK AFNRLQRNPTDVELYMFAQANSEHCRHK AFVKLERNPTDIELMMFAQANSEHCRHK RYAELGRNPTDAELFMFAQANSEHCRHK A YRDLGRDPTDVELMMFAQANSEHCRHK YFTRUQRDPTDVELMMFAQANSEHCRHK SFEKLGRNPNDI ELYMFAQANSEHCRHK NFQRLGRNPNDIELYMFAQANSEHCRHK AFKGLERNPVDAELMMFAQANSEHCRHK FYKKENRNPTDAELMMFAQANSEHCRHK QYQALGRDPTDVELMMFAQANSEHCRHK SFTQLKRNPNDIELMMFAQANSEHCRHK LF R RAQRDPSDVEEMMFAQANSEHCRHK NYQALQRNPSDVELMMFAQANSEHCRHK SFTRLERNPTDVELYMFAQANSEHCRHK NFNRGGRPNDVELMFAQANSEHCRHK SFEGLGRNPHDVELYMFAQANSEHCRHK NFTLLGRNPNDVELYMFAQANSEHCRHK KF IGE ERNPTDAELMMFAQVNSEHCRHK SFTRLERNPTDDELMMFAQANSEHCRHK SFSDLGRDPTDVELMMFAQANSEHCRHK
 NYAELGRNPTDVELMMFAQANSEHCRHK NFSALNRNPNDI ELMMFAQANSEHCRHK A YVDLKRNPTDVELMMFAQANSEHCRHK NYQQLQRNPTDVELMMFAQANSEHCRHK YCREAGRNPTDAELMMFAQVNSEHCRHK AFTGQGRNPTDVELTMFAQANSEHCRHK
UniRef90_UPIOOO3673624 UniRef90_Q1LU83 UniRef90-Q60B11 UniRef90-N6WZV2 UniRef90-R4VDY9
UniRef90_C5CNT3 UniRef90-H8L623 UniRef90_UPI00047647F4 UniRef90-A0Z857 UniRef90-M2YWD6 UniRef90-E9C0C3 UniRef90-K2R8Y3 UniRef90-L8Y283 UniRef90-UPI000365AB34 UniRef90-UPIO002375E6D UniRef90-।2JRB0 UniRef90-AOSPH8 UniRef90_Q47XX7 UniRef90-D5EL74 UniRef90-B5RUY4 UniRef90-A1AW53 UniRef90_M2PDE9
UniRef90_H1VVT0 UniRef90-R411F8 UniRef90_I8T677 UniRef90-UPIO0035D7B36 UniRef90-M1SGF9 UniRef90_UPIO0037B6694 UniRef90_UPI0000E0E624 UniRef90-F8MH48 UniRef90-G1WLE9 UniRef90-UPIO0038017C5 UniRef90-E8UCT9 UniRef90_C7MLA0
UniRef90_M1LW71
UniRef90_UPIO004408451
UniRef90-H1G601
UniRef90-L8G6Z3
UniRef90-UPIO0035F2B56
UniRef90-G8NYG3
UniRef90-S4RA46
UniRef90-W5AED6
UniRef90-B5YJQ7
UniRef90_UPIO00363C440
UniRef90-M5BPH0
UniRef90-C4Y3Q5
UniRef90-C5DRE1
UniRef90_UPIOO04449215
UniRef90-R6IUE1 1
UniRef90-M2LIB7
UniRef90-F2KXD2
UniRef90-Q3UTT7
UniRef90-I2GWW2
UniRef90-U4LTK8
UniRef90 G3JRH4
UniRef90-D1NUNO
UniRef90-G8ZUW6
UniRef90-M4CHX6
UniRef90-C1GER1
UniRef90_W4K301
UniRef90-T1AVR3
UniRef90 J3NHV5
UniRef90_J3NHV5
UniRef90_UPIO00262CE66
UniRef90-V9KKV8
UniRef90-D8QAY1
UniRef90_UPI0003B45EB4
UniRef90_FOSRHO
UniRef90_Q896H5
UniRef90_UP100046BEF8A
UniRef90-D4T2V1
UniRef90-K7GDK9
UniRef90-G7EA87
UniRef90-A7RFF5
UniRef90-AOP7N8
UniRef90-FOXLK3
UniRef90_T1FS56
UniRef90-S8FFM9
UniRef90-A0A023Y7M2
UniRef90-M1V618
UniRef90-T0RH76
UniRef90-L1IXI9
UniRef90_R6D250
UniRef90-B7FQE5
UniRef90_A9UXN4
UniRef90-R7YM02
UniRef90-D4JSA2
UniRef90_L7I730

 KPRSLNHINILEKGKSELEKANNSFGFAMSDQEI DYLYD APMEHVDVLGAGRGALQAANSRFGLALADTEIDYLID PRPLVTVDILK SKDALAKANKELGLALGKDEMAYLI K PKELEFVNVLEKGAQAI KEADRKLGLALSEQEDEYLAD EPGELTAIDI ESGGKNALVQANDELGLALAEDEVNYLEE

 PS PLRTVDLLSEGRERLVAANRELGLALLSTDEI DYLVD

PLEVVDIFGNADATLKSYNKQFGLAMDDSEI EYLVE QQPAQYELVNILGAGRNALNQANANLGLGLAQDEMDYLLN ERRPLRTVDVLAQGARALEDANGEWGLALSADEDAYLAK
H

EPQPLQTIPLHAGDREILQEANKRLGLALDESEIDYLVE


H


S P
P
P
HS
EPK P C V N Y L
PVED GFNSAEE QL QAF DAERGLAMMDADD

$P G D L V H I T L G G D P L A A L A E A N A R L G L A L A E D E \| E Y L A A$
Q Q K P L

PEPVVSVI P V ME K GREA L E E I NLLK M G L A F D E Q D

$\qquad$
 HSPPKP L V E V D D S G
 P A P L V H V S L D D S S P K D R L S Q A N Q E L G L A L A P D E I D Y L V A
 H E P E P P A P L K S I DILLA E GRP A L E K A N Q E L G G L A A L D S W DMLD F Y T K HEPKPLLLVVPLTKDNEDILKKANNEFGLALDDGEIDDYLIN


 H R $\stackrel{P}{P} \stackrel{\text { E }}{\mathrm{P}}$ D PKP L Q T I P L Y GEGKEVLQEANTRLGLALDQSEI DY LVD



 EPADIPVVEFID MNDEEI EAYRNKMGLAMDHAD IVFL QD HKP F ELLK HV D L L N A D D D QL M Q IS R D NLL S L S L VEMK TIQK
 D PGQLQRVP L D G L E Q A N R D L G L A L A Q D E I D Y L R E $R P$ L P V W D I D L L C E D R T V L E R A N K K L G L A A F D S W E L E Y Y N E
 HEPEP S $L$ E Q F N E Q E G L A A L P EPCY DV DVME G GRGALEKVNKDLGLAFDEWDLNYYTK





 P T T V V K T I E F F DA K S E D E L K D MI A E M G L A M D L D D D





60

UniRef90 UPI0003673624 UniRef90-Q1LU83 UniRef90 A4A479 UniRet90_N6WZV2 UniRef90-R4VDY9
UniRef90 C5CNT3 UniRef90_H8L623 UniRef90- UPIO0047647F4 UniRef90-A0Z857 UniRef90 M2YWDG UniRef90_E9C0C3 UniRef90-K2R8Y3 UniRef90-L8Y283 UniRef90_UPIO00365AB34 UniRef90-UPIo002375E6D UniRef90-ㄴJRB0 UniRef90_A0SPH8 UniRef90 Q47XX7 UniRef90-D5EL74 UniReffo-B5RUY4 UniRef90- M2PDE9 UniRef90-H1VVT0 UniRef90-R411F8 UniRef90 UPIO0035D7B36 UniRef90-M1SGF9 UniRef90 V5F856 UniRef90- UPIO0037B6694 UniRef90-UPIOOOOEOE62 UniRef90_F8MH48 UniRef90 G1WLE9 UniRef90-UPIO0038017C5 UniRef90-E8UCT9 UniRef90_C7MLAO UniRef90 M1LW71 UniRef90-UPIO004408451 UniRef90-H1G601 UniRef90 UPIO0035F2B56 UniRef90-G8NYG3 UniRef90_S4RA46 UniRet90_W5AED6 UniRef90-B5YJQ7 UniRef90_UPI000363C440 UniRet90 M5BPH0 UniRef90_C4Y3Q5 UniRef90-C5DRE1 UniRef90_UPIOOO4449215 UniRef90 R6IUE1 UniRef90 ${ }^{-}$M2LIB7 Uniinefol-F2KXD2 UniRef90-12GWW2 UniRef90-U4LTK8 UniRef90 G3JRH4 UniRet90-D1NUNO UniRef90-G8ZUW6 UniRef90-C1GER1 UniRef90 W4K30 UniRef90-T1AVR3
UniRef90- 3 NHH5 UniRef90 UPIO00262CE66 UniRef90 V9KKV8 UniRef90-D8QAY UniRef90 FOSRHO UniRef90 ${ }^{-0896 H 5}$ UniRef90-UPIO0046BEF8A UniRef90 D4T2V1 UniRef90-K7GDK9 UniRef90-G7EA87 UniReto Divat UniRef90-A0P7N8 UniRef90-FOXLK3 UniRergo-D8Lip UniRef90_S8FFM9 UniRef90_A0A023Y7M2 UniRef90 M1V618 UniRef90 TORH7 UniRef90-L11XI UniRef90_R6D250 UniRef90 B7FQE5 UniRef90-A9UXN4 UniRef90 R7YM02 UniRef90 DUJSA UniRef90-D2RFS
UniRef90_L71730

AFAVLERDPTDVELMMFAQANSEHCRHK TFTRLERNMSDVELYMFAQANSEHCRH SYRAMSRNPSDIELMMFAQANSEHCRHK SFSGLGRNPRDVELMMFAQANSEHCRHK AFTRLERDPVDVELMMFAQANSEHCRHK NYTALERNPTDVELMMFAQANSEHCRHK AFTRLGRNPSDVELMMFAQANSEHCRHK AYAQLGRNPTDAELFMFAQANSEHCRHK AFVDLGRNPTDVELMMFAQANSEHCRHK AF QDLNRDPSDIELMMFAQANSEHCRHK AYTQLQRNPTDVELFMFAQVNSEHCRHK AYTQLSRNPTDVELMMFAQVNSEHCRHK AYTELKRGPVDVELFMFAQVNSEHCRHK NYQKLGRNPTDVELMMFAQANSEHCRHK FYNNEKRNPTDAELMMFAQANSEHCRHK AFSDLARNPSDVELMMFAQANSEHCRHK AFKDLHRNPTDVELFMFAQVNSEHCRHK EYTKLGRNPTDTELYMFAQANSEHCRHK NFTKLGRNPHDIIELYMFAQANSEHCRHK AYQKMERDPTDAELVMFSQVNSEHCRHK AFTQUGRNPTDVELFMFAQVNSEHCRHK SFTKLKRNSTDIELMMFAQANSEHCRHK AFVSI KRNPTDAELFMFAQVNSEHCRHK VFKRLGRNPHDVELFMFAQVNSEHCRHK IFTALQRNPTDIELYMFAQANSEHCRHK HY號AGNPTDAELMMFAQVNSEHCRHK FYSKTARNPTDAELMMFAQANSEHCRHK NF TRLERNPSDVELDMFAQANSEHCRHK AYGANGRDPTDVELFMFAQVNSEHCRHK QFSSLNRNPTDIELMMFAQANSEHCRHK SFTRLQRNPNDIELYMFAQANSEHCRHK KFSQLGRPPHDVELFMFAQVNSEHCRHK YFKDEDRDPTITEIRIVDTYWSDHCRH RFTELNRNPSTTELMMFAQANSEHCRHK SFNE GRNPTDVELMMFAQANSEHCRHK YFRSEGRCPTDTETKMDDTYWSDHCRH SFTILGRDPTDVELTMFAQANSEHCRHK AYVSLNRNPTDAELFMFAQVNSEHCRHK AYEALGRDPSDVELMMFAQANSEHCRHK AYSKIGRSPYDVELFMFAQVNSEHCRHK RYGDLGRDPTDAELFMFAQANSEHCRHK EFKKLGRNPTDVELYMFAQANSEHCRHK LFRRVGRNPTSVECFDIAQSNSEHSRH LFRDIKRNPTTVELFDIAQSNSEHSRH LFKRLKRNPTDVECFDLAQSNSEHSRH GYRALGRAPTDAERMMFAQANSEHCRHK AFTVIGRKPTDVELFMFAQVNSEHCRHK AFAELGRDPTDVELFMFAQVNSEHCRHK AYGGMSRDPTDAELFMFAQVNSEHCRHK YFKSEHRDPT ПTEIRMIDTYWSDHCRH AYTQLHRDPTDVELFMFAQVNSEHCRHK DEKQNGRPDTDSEIFGFAQUNSEHCRHK VFTKINRDPTDVELFMFAQVNSEHCRHK AFSKTGRNPYDVELFMFAQVNSEHCRHK YFTQEQRDPTITETKVIATYWSDHCRH AFVELKRDPTDVELFMFAQVNSEHCRHK LIF KDURNPTNVELFDDAQSNSEHSRH AYAPSGRHPTDVELFMFAQVNSEHCRHK AFVSIDRNPTDAELFMFAQVNSEHCRHK NYRALGRDPTDAELMMFAQANSEHCRHK TYTALGRPPHDIELFMFAQVNSEHCRHK AYAKLERDPTDVELMMFAQANSEHCRHK DFQKIRRNPTSVECFDLAQSNSEHSRH AYTHVGHDPTDAELFMFAQVNSEHCRHK YFKGEGRDPVETEIVVLDTYWSDHCRH HFADLGRVPTDIELETVAQTWSEHCSHK YFKKENRNPTITEIVVI DTYWSDHCRH LFKRFRRNPTSVECFDLAQSNS
RFGALGRDPADVELMMFAQANSEHCRHK YFQRIGRNPTSVEWFDLAQSNSEHSRH AFTDLKRDPTDVELFMFAQVNSEHCRHK TEKQNGRPDTDSELFGFAQUNSEHCRHK LFKKVGRNPTSVECFDLASNSEHSRH HYHVSQSNPTDAELMMFAQANSEHCRHK EFQRLGRNPHDVELFSFAQVNSEHCRHK LFKKLGRDPTDVELFDMGQANSEHSRH LFSKLNRNPTSVECFDLAQSNSEHCRH AYVSINRNPTDAEGFMFAQVNSEHCRHK RFGELGRKPSDVELMMFAQANSEHCRHK MFRELGRDPTNVELYDIIAQSNEHSRH LFKKLKRDPTDVECFDMGQSNSEHSRH LYKELKRDPSDVELFDLAQSNSEHSRH LFKKLGRDPTDVECFDMGQSNSEHSRH LFRDUKRNPTSVECFDMAQSNSEHSRH ACTELKRDLTDVELFMFSQVNSEHCRHK YFKKEQRDPTLTEIRMIDTYWSDHCRH


UniRef90_W5MXD2
UniRef90-Q5AUA9 UniRef90_R6M7F4 UniRef90-C1FFI8 UniRef90_UPI00039C773A UniRef90-W9CKJO UniRef90-Q87DN2 UniRef90-P38972 UniRef90-UPIO0035948A2 UniRef90-U1SFW5 UniRef90_UPIO00388BB80 UniRef90-V2PXJ7 UniRef90-W0FP49 UniRef90-R7B6E9 UniRef90_UPI000429C3EC UniRef90-F4P717 UniRef90_S2K2D5 UniRef90_V4ACV3 UniRef90-UPI0004072BBC UniRef90_U1HJF2 UniRef90-S9XGG1 UniRef90-N1JES6 UniRef90_UPIO0047C4912 UniRef90-R6MQ30 UniRef90-B51H31 UniRef90_C5K566 UniRef90_C5DF96 UniRef90-V9DCC4 UniRef90_B1GYZ3 UniRef90-E2ACZ3
UniRef90 UniRef90-W5IK06 UniRef90-K1XLQ2 UniRef90-G7UW75
UniRef90 A9B7C5 UniRef90_G4T514 UniRef90_C3JBR1 UniRef90-UPI0003FDE2CF UniRef90-G3WG55 UniRef90-R6PQ24 UniRef90-A7TT24 UniRef90_Q6FMX3 UniRef90_C7H4Z3 UniRef90_Q54JC8
UniRef90- J0DFY7 UniRef90-A7BUZ1 UniRef90-R6PB78 UniRef90-D5SYD1
UniRef90 A5UWJ5 UniRef90-W3AQ24 UniRef90-19C586 UniRef90_UPI0003B65B7C UniRef90_UPI0003B6E032 UniRef90_R7UFJ6 UniRef90-R6ESO2 UniRef90-J7S622 UniRet90_UPI000468E31D UniRef90_UPIO0036D6B2F UniRef90-F4LKJ7 UniRef90-R6MAV5 UniRef90_UPIO003825A15 UniRef90_14Y6T2 UniRef90-Q8D364 UniRef90-A5D2D1 UniRef90_Q5KB97 UniRef90-F4XHF7 UniRef90_B3MKJ4 UniRef90-E6JZI7
UniRef90
IBWJ12 UniRef90_A1WNW9 UniRef90_UPIO0016C4306 UniRef90-M7SKD2 UniRef90-W1U452 UniRef90-J3Q303 UniRef90_FOZOX7 UniRef90-B8I619 UniRef90-S6FLB2 UniRef90-U2N425 UniRef90-A5N7P7 UniRef90-M2UF10

```
UniRef90_UPIO002B417EF
```

UniRef90-U1FLP4
UniRef90_U2TEW3
UniRef90-BOTBD5
UniRef90-R6Y667
UniRef90-B3RXV0
UniRef90-R6ZUD0
UniRef90-A6G366
UniRef90_A6G366
UniRef90_UPI0004561459 E P K P L V H V P L T P D K D





Q P


H A P A K L E R I A L
$P A P$ A DLEAANARLGLALAD DEI DYLRQ HFP P Q P
 R P A DV EVI D GF T LDD S GLLE EF ITRRRGLAMMDLA DARF CQR
 V YEI E IL N A S E K D L K E IN E S L G L A L S L E EMK K L Q E QP H PVPVI EFIDD D DAQLEKFYQEWSFAFGLDDLKFIQD
 QEPGTLGTYDL YNGGNEILRDDNRKLGLALDDSEDRYVVE KDIEILNLSDKQLIELSRKNVLSLSLEEMKTVQN RPEKWFDVDLIKEGRKALEKVNLKLGLAFDDWDLDYYTK $P T E V A T L T G F T G S R D E L A D F I A N Y G L A M D L D D L A F C Q S$
$E P A P V E T V N F R A M T S Q Q L E E M I E D R D L A M D A D L A F C Q T$ QPYPLEVIELGEDEGEVLKGYNKVRGLALDQLEMEYLVIQ
 PR P L R T I A L S T L S E E EL R K A NVE L G L A L A E DE IT Y L VQ P A P I A Y I D D $\quad$ A A A Y N Q S E GL A L S E K E I D F L Q N
 $P T S V A T L D G F E M D E A A L A Q F V A D Q G L A M D L D D I D V C Q A$
 P K D I TT T FPPLVSDP K E L L L Q K T N K D L G L A L D A G E I D Y L V


$P T$ TVET DDFVDMDEKALDVRKA

HEP K P A DVK TITP F MT Q S A E E L L E R I P L A QL D A A N A R L G L A M S P D E I D Y L Q L V NEI NI L N A D DAE L MRDSREGTLSLN LDEMKT IQ T E DV Y DV EVVMECGKA ALK E ANDHLGLAFDDWDLEYYT D
 QPAPI MHI E NLLE E Y N EKKE GLLALS KE E DD Y L L K

 QPGPTRTVALRGMS DA QLME LSRRDK L F L N L E E MK A I QA P A P LLK T V QL P K D E S E A L DT A N S S LLGG A L S P D E D E Y L V G


 QP QPVAVLDFRQMGEQDLQSFDDFYGLAMDQADLLFCQD PGKVETI A GFNEMDAAAQKFIDERGLAMDLADLEFCQK
PARMEHVDVLGGAGLAA LAAAANTRLGGLADADQEMEYLVS
 $L V V V D I F A D E R A A L Q D Y N K E Q G L G L D I P N M E Y L V E$
 K P L R TID DF S D D P A R L Q S A N QEFGL A LAAPDEIN YLAN EPEDVKVFDGFNMPEEELKKLYDSLGLAMTFKDFQHIQN QPEDVVATLE GFSMNE K QLLSELLDREMGFAMSNDDDIDFCQN


## E P

 H





UniRef90 M2Vwho UniRef90_F7V7U0 UniRef90-U2TF41 UniRef90-D4IQF5 UniRef90_D6DJ51 UniRef9O-UPI0004779FA9 UniRef90_R6F9U5 UniRef90-C3L166 UniRef90_R5Z465 UniRef90_C2CTA5 UniRef90-H1LRK6
UniRef90 R7G8G5 UniRef90_UPI0003F83D05 UniRef90-R4KIU1 UniRef90-W7HUS4 UniRef90-R5L4P8 UniRef90-D8M8K6 UniRef90_UPIO003823966 UniRef90-W0EJH2 UniRef90_S7USV6 UniRef90-A4CNM0 UniRef90-TONFE5 UniRef90_UPI000407AB4E UniRef90_A6C5H0 UniRef90_R9JK26
UniRef90-A7VT81
UniRef90-T1AP78 UniRef90-E2MWX6 UniRef90_R5BSI9 UniRef90_R9LN30 UniRef90_K9EHV6
UniRef90 E7G862 UniRef90-E7G862
UniRef90_UPI000475D417 UniRef90-Z4WR18 UniRef90-A3XMB6 UniRef90-R7GID3
UniRef90_UPIO0030B9F7C
UniRef90-R6RVC8
UniRef90 C6Y2G1
UniRef90-H2BWD1
UniRef90-R5R112
UniRef90-A1AN51
UniRef90_U7D7Z2
UniRef90-G8QVA9
UniRef90-B11460
UniRef90_UPI0003757CE5
UniRef90-A1V9W4
UniRef90_UPI00047B5A2B
UniRef90_FOWI18
UniRef90-17MQD2
UniRef90-U2K4K8
UniRef90_UPI00047BBA89
UniRef90-R5J190
UniRef90-B0S337
UniRef90-F5RL11
UniRef90-13YZP2
UniRef90-EONZ72
UniRef90_D9YC07
UniRef90_G5JQ03
UniRef90-D1AK44
UniRef90-X1J429
UniRef90_UPIO0046785D5
UniRef90-H1HS67
UniRef90-F6R0R8
UniRef90-R6AL89
UniRef90_R7J4K2
UniRef90-I3IQZ4
UniRef90_R5QLS7
UniRef90-TOLH34
UniRef90-TOPC20
UniRef90 ${ }^{-}$UPI00037A676A
UniRef90-UPIO003613BCA
UniRef90-UPIO003B4CCC4
UniRef90-K1ZAG1
UniRef90-W11515
UniRef90-U2ENA1
UniRef90_A8MIX6
UniRef90_UPI000289D8F6
UniRef90_UPI00035DE9BA
UniRef90_G5HLB5
UniRef90-K2EBA4
UniRef90-D1VUU9
UniRef90-A0A059LNW3
UniRef90-U2HUP5
UniRef90-K1ZP69
UniRef90-B6G294
UniRef90-TOD5Z4
UniRef90-U3Q5Z2
UniRef90-C7NB80
UniRef90_D7N8T1

$$
1
$$








 QPEA I KEDED IA

| $R P G G T$ | $R$ | $V$ | $P$ |
| ---: | :--- | :--- | :--- |
| $P$ A S A T Q | $R$ | $R$ |  |
| $L$ | $L$ |  |  |

A YN K QE GLLA A S E E E V N Y L N T


PADVE DLE FIIT SNDEELTAKRNEDGLAMSAQDFITFTAR EPADVV TMEFITKTP E EIITAMQQHMNLAMSVVDLLFCQS

 $V$ R I L G K A P Q Y L E K L S Q S M S L G L S Q E E M I M L Q N
 L V T I P I R E M N D K Q L E T L S R E GQ L Y L N L T E M K T I K A


PPDVARVKF $\square G W N G E E L K N Y Y G S M G F A M T L E D L A F C Q E$ E DE P L K E Y P GF E LD D E G L A E L LAA S D GMAMS LAA DLLK T I Q D DPQDVK DFHGFKDMEEALKELYDSLGLAMTFKDFQHI QN DI E FVP F I S M D D MLENLRSTLGLAMSLEDLAFVQQ


 V ELI DIAASMNDE E LLAALSNERRAALDI YEMRAI RE E Q A EVVK PVEVLA G L R E E L A P Y C A K M G L A M N A D D L R E V V N K P E D V A V F E GF S M D E A A L K E L Y G S L N L A M T F K D F L K P E P I L Q I S D IA EPTPVIEIKDIA
 AFNK P A DVSEI D L EVVSD DELMRISKE GILLALTLDEMKI DQA P E A V AVL E GF E G DEDRARALRELGGLAMNREDILHCQA

 QP DA A V Y I D DVVA
 KTIPTLDFFEYTVEELAGYKAEQGLAMEVDDIVFIQK

PEDIKKSFE GFAASEEELKALYDTLDNLAMTFKDFBLYI QK
 Q A I F E N N L L P E A DLLEDE E Y N Q K E G L A L N A E E V E Y L D N QPAMPGDVEVLALS REELARFHAAHGFAMSEEDLAFVQE K T $\operatorname{l}$ IV R R L
 $P$ D PDVK TVEGFAMPEDDFRALYASFGLAMTYEDFLEIRRH A PVGAI DVLAEGRPALERANRELGLAFDSWDLDFYTR
 V P LL D A D N A RLEE $\square$ SRLLG QL S L N L Q E MQA I Q G $K P V P T L T G F N D L D E A L N Q F L K D N G M A M N L D D L K V T Q D$ TIL LIT D L N N E S L L E L S S H S M G L S L N I E E M I R L R N
 QPEKV I SI T D D

PEQVIEV
$\begin{array}{ll}Q & D \\ E & G\end{array}$ RTYNEK
$P T \mathrm{~T} V \mathrm{AT} L E G F T A L D E G L$


QPDE \VY $\ \mathrm{ND} \square$
R R R G L L L L L K D I QII NF I D S D D R A L K D DF QKL N L A M S F E DLV F SRE
 K P V E I I E F I NLE E GQLE $\begin{array}{cc:c:c:cc:c}E & P & K & A & L & L & H \\ P & D & D & A & A \\ A & K & Y & F & D & G & L\end{array}$ $\qquad$ D F K E E LK
 LVVSDDELVKL SR RGP A A M F K D F L H Q S
 A YN K T E GLLALNPEEVVYLNN

 HK N E D K I I N N F F UniRef90_D7N8T










