

## QUERY

## UniRef90_E0RC30

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 RD GVVMVTHDTS L R R CTGRNENIV DLDTYNEVR KP TLLE EVVL

 S D G R L V L I H D E TLLSR GWVK DT TY Y Q L L RT RDA G S WF H T E E L



 S D GKIVVVFHDEELDNGF LKDHTWAELKNLEDTDNNENE KLL KDGQIVAMHDNTVNRTTIKQLDAGSWFNKHHPMYAREEYA K D GRRLVLI H DETLLKRGFVK DYTYE E LDSK LDA G G WF GE E E L
 K D GVVVVVMHDELVVDRGY I KDKTYEELAQLDASY YFKEYGP



 R D GVLVV MHDS NL KRTTGVN KDIWDVDYA DIQNLDA G S WF


 K DGYIVVMHDTSAYRTTGVLKYWYSEQYKGEKVPTLDEVVL



 A DGERKV WDVTMME VA Q A D G Q MVVLH DE DVDRTTD GSGP DA QLDA GYHWTAD GDENH ADGQVV L HDPMLDRGLVSAHTFDEDGDVTINGSAR G GNF K DGGVVVLSHD GTLLKRCF GVDK K DNECEWEYTDDDPAPARLS K D GKLVIIHDETVNRTTVGEGYFSEKYVNERDPTQQEVVD

 S DKKL CVI HDHTLLERTTMNELDNADAGSWKHPRFRGEKV P MDGELMVIHDPTLKRTTDRRMDARKGGPGWVSPCPDPRLE K D GVVPVIWHDP TVLDRGYSFTK DGGNTYPFREKG DRLATMLE A D R QL MVI H D P T L R R T T G L R GK I A H HS A A E LMQMDARRGP
 K D GRIVVVIHD ETVDRGFVK DTAYDKGRTADAAGKWKAAGV KDGEIVII HDETVNRTTNGKGADERMTYWFHPKFAGEKIL
 T D G R L CVVI H D H T L E RT T S GF GP VA WF SP E F S E QK VP E L A D A D G E L WV F H D R R L S L A Q Q S S R Y L R Q L R V
 A D R I L V L H D R WL H H T TS G Q G L L A N Q L A QV D A G D G Q P I P D L K D G H L i V C H D E R V D R T T N G S G F I M D L T L N WF D Y K Y T N E K I K D GQLVV DHDETIDRGYVRDYTLEELKKFVFNKTHPEGEV K D GKL I V MHDEKL DRGWVK D H T L A D I K K L DA G S WF NEA Y P ADGLVILSHDSDLMRTAADPRGI GELTWKELSELDAGDGR




 K D GHLVAAMHDET L D RGFVK KYT LKKE KELDA GSWF NEAYP K D K I P V LI H DENVKRGYVK DLTVQQLDNLDMGSWFSTENF

 REGRLVVRHDLT T P K GPVFALSLEELRALEPWVPTLEEVL K D K K L V I I H D D TVV R T CIIK DL T S K E L L Q M E F G S H K G S E F L
 R D GVVVVLSHDAT L K R C F GLLEHK V VDCDWAF DEPDRT DRKP

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120

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 EALAAFPAANFTVDLKDQAADAPLAG VLADPGDARRVC
 FK L V Q GK G T L L N L E L K N G IV S Y K G M E E K V I Q A I R D WQ QVV
 E LIF E K C D F E H WQ L E V K S A S RV R A T A I Q E L V E R H G L R E R I T $\stackrel{E}{E} L$

 RIF T A F GRETHYI LEIK DSTYNPGDEEKLLETIYQYRQVI
 $K V C R G K \square H L N D E I$ K PS GHDKDLEEQVAKLLKKYHMRD TCV QKVPKDTDI ITNNIELKTGVFEYTGIEEQKVYDMLREFDMVD
 $T L A E V C V F R G M Q L N V E L K A R G I G A D V V R L L R N E Q V I D D Q T L$ EKADNY YHSNYYI EI K DPDPVMTDKFLSMLEDYHEENKVI


 E L A R G K V R V VI E LLK Y Y G H D Q R L E E R V A E I V E S T G MVV S DVA

 DL WE VWW Y LIK SNVVE WK S GA YE EDP I D TPP I EQELIDDYT K QN QLAK GK DKLNDIEI KTADNSDEVAKKVVKLIQKYSMQDSCV

 PMLESDARYCLNI EIMKPTPGLDSPTGTEVANQAARLLWQGE
 LS WA EKK D F L I N I E L K N S VI R YE GME E K V V K R F K DE E R T I







 A WP E ECP DP S LLE QLFTT CPEF EHYAVTEELVTRYGLQQEKVV HLLK E L N F K G E L N N E L K T D Q DE Y A G D CVIA L Q EKM Q P N F A I I





 Q DVLKTIQVPLNI ELKTSDRVNFDTDYYIREMGWTAD QFL
 EKAKPQYHANYYI ETKSPDTYPGMQKHKLLGKHSKPGQV

 SEEFA GEKDP T FEEVLDDY GMEEKVADAL KERNMDHKKII K K F K G H T E L I I N N I E L K T G I Vir Y N Gll E K K V I D L Y G F M K R V il

 LQ WVQ D K P L H L N I E LIK N N K DD Y K D L E K IV L E L L T N Y Q L L N


 $V$ A L L C H Q D 1


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UniRef90 $12 C 7 J 4$ UniRef90-UPI00037A1DBD UniRef90_A7GSI8 UniRef90_10QMW0 UniRef90-M8DFL3 UniRet90 UPIIOO04693FEA UniRef90_G9Y2V0 UniRef90-UPIOOO1745881 UniRef90_K2JGT7 UniRef90_A4CJ44 UniRet90-R1CSL9 UniRef90-F7K866 UniRef90-P37965 UniRef90-UPIIOOO4088110 UniRef90 W6RX17 UniRef90-C2PFPO UniRef90_UPIO0036BB1B7 UniRef90 W2BYA6 UniRef90-UP100047D64CC UniRef90-A0A031MJ22 UniRef90_Q117AO UniRef90-Q65CZ7 UniRef90-W9A859 UniRef90-R8B695 UniRef90-UPIO00288413D UniRef90-10JNQ4 UniRef90-UPIOOO3B53E86 UniRef90-D1B7Q6 UniRef90-UPI000468EEFD UniRef90-K1X811 UniRef90-UPIOOO395C014
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 VTSMNYEALKGVKQDNPKIRTGYVGNVAYGNFYNRPYVDA SSFNHYSLVLCKKLAPEDRTGLLYLEGLYRPWDYAKSDA ISSFDHQSLVGLKRLDERVKDGLLYDCKPVRHARMVDVYS FSSFNHYSLAYCQSLAPEIRTGULYGEGLYRPWDYAATTA LSSFNHASLVRCKRLAPEVRTALLYMEKLYRPYDYAEVTG VTSFKQRSLVRIKKDDPDVVTGYMSFGYSNRTNYEAMDV VTSSSREVLRALRRLAPDLSRGLVAEYAWLDPARNHGCEL VTSASREVLRALQRDTPQLARGLVAEYAWLDPGKHYDCHL VSSFHHDKIKRLQELEPKLKLALLTDSEFIEDEKYLSTNG ITSSVSLDYLKRVKEAEPELKTGYL LAAAYGSYYKNEFVDF I QSFDAKSLKKDHRLNDRI ELLQLMWYNTPANKDKKYATG ISSFNHYSLLHCKRVDSDI RTGULYMEGLYEPWEYAKRIGQ
 RIIFNHYSVLRMKADDPAIKCGMLEESWLINYVASTGVEC YSSFNHESLIRMKKIDPNAELALLLWERLADPWRYTQQVG DS SFWDEALAEDAADDPDDPRALLMGDPTFRPDVRDRESW VQSFSAETLEQ HAKYESIPLAQLDYKDEAKSANYNQIRQ VSSFDHQALDKIVARLEPGVKLGMLMADRLYRPGQYFPVYS LSSFNHYSMKKVKD:IDNN:IKTGLLYAANLYKAEEYAEKVG ACYFSYGSLKKVKEANPEIRTGYLMSVAYGQFYSLKYADA AWEFDWDSMEESKDLMPSVSHGLLGEVPEDELGDYEWSHM MMSLSYEAVQKMRALRPDWRDGLLSATADG DLTRDDADF ITSMNYGFLQQVKKANPNDRTGYIMTMTYGSUSRDTAADF VASFHSENLKQFRDQFPEFATYLGFGSSYPSPAEFFQVPP VQSFDWRSMRTLHGHLPHVPGGLGGTPPAAELPRLATFAD SLFHCWESLARVRELSVDAKLGGLDGEETSSWMFRLNAFS FSSFNHLSVKRVKELRPVAKCAFLYADMPEYAKLHGMSALD KDSFSWDALMMCRNLAPEMPLGLLWDEQWLQKAKQLACCS TVPFQPAALEAARAAQPQLPRGLLDDENWLETAAKDQCVA YSSFNHNSVAFDKHMKPDAVTGVLYSDGDYDPAAYAQADG TTSVKLKYLERIKAMDPDLRTGYLDAAAYGNYYESGDFDF VMSLKYPAVQKMRRLRPDWRSGVLAATAVGDMSGLDGDF FSSFSHESLAAARDTAPAVARGGLVWELPGDWQKTVDVVA CTYYVSARLQRURQAAPELNTSLGQLEVARLFLAAQTR YSSFNPKSVSVLHQLQPEVEAASLFKDNTKAARRFSRRRD IGSFNTHNLKMFRDECPHVATSLGRSEDTWAYIYSVQLPY ASYYESNLVRLRHYCPGVATSASPSSURLWLAMEWLGLG ISSFDHKVLEEVYRADPTLDLGLLFEARSYURSLPFPVYG AASFRLENLKAVRMDAPEGQTSVTTSERSFPRRIMFQVPV
Y LS
$\frac{\mathrm{L}}{\mathrm{S}}$
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QSFSEASLQKDHSLDVNIPRVQLDPYKKAMKKYKTYCDG FSSFNHYTVKRVKELRPEAKCGFLYMDGPIDMPGYGKFHG LSSFNAESLGRVRELHPALQTGYLMPEDVLETAKRIGGAS
 LQSFSPESLKLIHNANPNIPLVQLLWYDKPAKQYQSYSVG DAAADWTTLREVERLEPGLKTALL AQFVVGPLWEDNYDI VQSFQFRSVQRFRELYPSFPTAVITRPNFGMKACQSTANY RTVFNSDTURMKKINPS DKTAFLTSTKMTNLPDYAKSDA LSSFNHESMELCKQMDPTFKTGLLEESPMMNTVEYMRGVH IS SFDHQAL LRTQHIDPDVKLGVLDANHLIEPWKYDEYYS WSCWNAKCLPDCSKYLPGFHUAHIGWNDPYARQFVSFNVF
FTSFKADSLRGAREAAHDPRGLLGGAELQLALELGCQA

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 LS DDA RYLT R QVV T GA HK K GlVMVCA WTVVNTSSSEMRRMMA I IL H P E F N S S I T
 VQCYHPRHNNEVI DELKKYNLEI NTWTVNEEKDMRYYYSK L K S Y S Y H P E DN L I S K K H K N D V K V F V WT V N K E E D L D Y L V T L
 I S P N F P K I N A A YV H K V Q K S G L R I Y P Y T V N Y Q L N M D R A L S W L H A Y K K AVLDPEWVAEAQRNGVVYHPFTVNDENEMKSILI EA

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 FSVVKYT Y ID E E FVVREA HS LGGKEVHAWTVNYRGD GK RMMDV S S G A L P VI TAK S F L Q T A E E N N DR V C H A WT I D D R A E M T R L L D M
 F S V



 LA $\operatorname{A}$ V A G R L S A R L L A Q A Q S V G K RLLSSPSYQALQQ PERSS DRGLDNVQLWTV NEQPAMRHLLDM IHAD HAT LIKPD QVAAVVAAGYRVLAYTVNDEATARALVET SLVSRQN WTKRFVSFAHSLGVAVVVWTLNEPEEDVQALDA EW $W$ V Q $\quad$ WHP SIIA WVRSHRFF L
 CNVWHHYVTPAFVDALHREGLVAVYTYTVVDKME DVERMASA


 EAVHPDYRLLKEAFEIHSQ YPKRVWTVNQEKEMNHCFEL


 L H L WH G LI T A E I A R Q A H A A GL L R V FA Y T V D E P E E V A R L TA A


 $\square H P V F H S V N K E Q V K E C K R N N L Q V N T Y T V N E E Q D D H N D G N M$
 V P A H WPVV TERFVA QAHRDGLEVVHVWTVDEPEEMRRLAAM


 I HCCE E VF A L S E F G R E A Q K A GF P L R V V Y T V N D E T R S E F L A K A LVLN WKLCTPARIA QA QRQGLHVSVWTVNDPQLMLRLRDM
 I HIK YR LL N S RLMEKSKQHH L NVVRVYTVNKPSHLIDRCFNQ L GLRSNRATPAAVARAHRDDNELHVWTVNRRAAMSKFVDM $V$ N I K Y T R L N R L M A A S A H K H G L K V F A WTVVKNQKTAAA K L Q A M


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$\qquad$ A HRGS $S$ L R A MVAHRGGSIE SLENTIESFHYSKSDGCEFIDTDVQVS

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R A L $V A H R G S S G D R P E N T L P A F A F A V R V K A D D I E$
 VLGHRGAS VIA HRGAAGIHPENTMEAFVAA E!DGAD GI E $P K$ AHRGANKLAPQNTIHAFLKAAELLKSDGVETDVVMVT PKIVAHRGGGKLAPENTMAADD』GASFGHQMIEFDAKLS
 RPRLFGHRGNSGDFPENTLPAFSDALACGTPYLEDDVRAT

 $P \vee G V A H R G A S G A A P E N T L A A F R A A A R M G A D M V E V D V Q E T$ II A H R GAS G LAP E N T L K A MA K A L E L G A S A I E I D V Q A
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 P WLV A HR GGSALDAPENTLVAFDRAVALGGADALDDDVRRT


 Y GHRGGYSGQY ENTMAAFRGA

## K N

$1 A$ AHRGY ARGGSSLAPE $V$ A HRGAWK G $\square P$

A A R GASSAAPENTLASSDEVARRAGADWIGNDVVPT K P D M M A H R G A S T K N E S A E N T T L
R PA H R G A WK N T A H R $R P L$
$R P A$

G
$K T$
$K ~$ $\vee$ LA A H

K VE
 $P\left\llcorner\vee \frac{L}{F}\right.$ A HRGASAYAP $P Q A l A H R G A R G E A P$ GHRGLA G $\square A P$
PT
 VIA HR GA WRDFS H N S M S S L K E S V V D S GA D Y A E V V DV Q Q T
 IA HRGSSGVVPENTDAAVERALAQGADTI ENDI QRT
 $\square V$ A HR GASAYAPENTI A AFDK AVEMKADYDE $\square D V Q R S$ VIA H RGA WK E LP Q N S I A S LK E A I S L N C F G TEEF DV H DT $P K I A A H R G G G K L A P E N T L V A I D T G A R Y G H K M \square E F D V K L S$
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K D R QL V V F I D



 K DGELVVIHDTTLDRTTDVESKYPDRAPYNVGDFTLAE R R

 A D GELLVI MHD T T L A R T T I K K QL D A G S WF S A A Y A G E R VP T L G


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D S GVVFHDRTTLS RRRAR E P GY L L LDV P WQ S L R E M N DGE GE R I P





 R D G K V V L H H D S S L S R E TVV DVGSWF G DP FVV T R I A GLD EVV




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 E Y LT T P G LIE D IWWI L L DIIK LD N DA D QLMMS LIA S S IV EVK P T WQVMS LVAG G CD L HI E L K GP H TA Q P I A D L A ELHFHP Q Q W L $T$ L R E A L D T F P G L V Q V E I K A P E A V A A LAA E F D R H T P L P A R A V


 TLL TVET L N C K WCCN I E I K H L H D D V D S WV K N A V K E S N I S I D K K L

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 S S F N Y K S L K R I S K L N S K V K T A Y L V G K K I L K I C K D C K C T Y

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 AVPP F S A E A L H A A R I A A A P E L I T S F D L K I H Q A L Q K Q Q S K F K R G L L I E D D I G L K S I D Q E C C Q

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 I L V
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 L PRGQGYVSKKLLEKAHDAGKRVAVWTVNKLKEAEKLSHW EDFHPDI RWVKKHPFYAAARHLRPWLVNSTEDMQYCFER YVHVDMRI LKHKPKDFWRSNWHTRVWTVDNEADMRRVFKA TYEGQTLVTPQSTAAAHTLGTEDHVWTVNQAQDMERLLRM RSGMFPLDLPPFIRFAGRLNGPVYWTVNDRSAMERLIAA VTALNPQFPPELPGKVRAAGMQCMVWTPNEPHEWAQLLELC VNPDHRDLTAAYVDKVHAAGMDVLTWTVNDAKGMRKALGL
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 IAPDYASLNAANVSKIKKEGLKIYTWTVNDPKDIQEMLAL YSVEENSCTQRFVQYAHDNGKRVLAWTINRPANMERALEN YHPNVKILTKE IAEECRMRGTGI NAWTVNDVETLERMREW WN AHYRDLNRTRVENAHDLGLKVFAYTVNAPDDIGALIDM LHCNYVFLKEQQAKLIKKSGYQLYCYTPNSPQQVSQHWDW I HINHRLLDAGRVAEILKAQGLRILVYTVNRPQRAAQLLGW RPDVNSRLDEALVTRAHANNMGUFVWTVNDPDAARRLKSL FDYNDKREKPEWIKEAKDLGLTVNSWTVNNPEDMKWLLDQ LTSYNPMTRPD\|VKDLHAAGIAVMVWTVDSPASWQRLEAA IHPYFLLLTKENTEQLQKKGFQVEPWTVNEDEDIKKIKTY FCDEKEVVTNEMDRK QKNGKRVY WWTANTHEDUTKAYSS YHFSVYKKNPTWIKELQDLGLKVNAWTVNTEEEMQQLLDQ YGSVIMLDTKHFLQFLDQLNIPVMYWTVDDPLDMKELINR SYHGVPVVTRRFVASAHAADLEVHVWTVDEPERMRQLADL YSHGIRVVTKRFIKYAQRRNLKIMVWTINDEKTLKKLINL HPALYHMQDKDLVPAAMAWELGLHVWTVNEEPHMEMLVKQ DHPNIKAAPNMITSAMNEGUAVRPYTINNEEQMTNLFSQ FVLSI DLIDPETVSRITHSGGKVIDAWTVNDAYSVDKCRKA LNKIHLDKSLIKHIKMTSDISMQDVWTVNKTSELIYFLNK LHPNYITLTKEFIDKAYINNFEVNPYT NDEANMKSLIKN LHCHHASLNLALVESTHSAGYAVMAYTVNDVMEARLLQSW I GWMNQLASDEMI HATQKAGLNLSVWTVNDVERAKHLRELL NVDFNLMQHMRFISKDRKAQRKLYIWTVNEERWMEWGIRK DHPHHLVITEDFVREDKKKGFFI NTWTVNDKQEFKRLSEL PSGRAVRVNPGVVRAAHKRGLSVNVWTIDKPAQTQALDDL TNPNHNQVDAEFIDTVHEYGMVTWPYTVDDPARMGELAGL YSDETTFISKAMIAKLESGGKPVYVWTVNEEEEMRKVVEK
 VNPADGVTSEGTVTAVHDAGMEDNVWTVNGGQDMRRALSW LINPSHTTVTSEYRGPHHRRLQMYVWTVDDAVNARKAAGY VGIDRLRAHPEYVAKAHRAGHQVHVWTVNDEADVELCERL FNPSYG VT EDLVNVHSLGMK GSWT RSQEAADFLLDA LDYNHYKNNPTWIKEAQELGLKKVNVWTVNKEEDMKYFLEQ
 VKY EFLSDPNVNFNMMADAKAAERSMLVWTVNEEQWMRWCDKN LLNCDVDEVNQALIEEDAHARGLRVLVYTVDHPDEWRWLEEM VNPSLEFVDERFVMDAHARGVRVFAYTVNELIADLERMAAM LVLNYKGITPEKVQKIKAAGLEPGAWTVNDPALMQKLLQQ
 VNIDA DDAVDKQFVQTAQKDGFDVFVYTVDEPRDMLMLKEW $L L P Y Y E A L S R D L V E R I G K R G F K V I T W T V D D P E V A E R L Y R L D$
$F Y T I H P H N S L D Y K K P H K K Q A R V L P W P V N N R E E A I K L A K S H$ FYTVHPHNSLDYKKPHKKQARVLPWPVNNREEAIKLAKSH LIMEEREATPEKVHVIHRAGKKSYVWTVNSKSSMERFVDS VNI ALDAVDKSFVHEALRDGFDVFVYTVDEPRDMLMLREW VHPFHEACTPERVAEWNAAGLRVAVWTVDDPGRARALEEM RYGPLAIVTRRFVEAAHRHGVRVHVWTVDDATQGEELDD MTYLHLEASLLKDRYFLNQLDLTRVWTVNDEETLTLLEKL LHPDLRFVSRELIEEAHENNLKVNIYTVNMPIVMRLLIKN
 LYEGEPVIDAHFDEQAHANDLLVHVYTINDKDRMRRLLDW HVSLPTAYRKSVK QALAEGASVRVYTVNEEQDARYGQQL


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| UniRef90－D7C864 | G |
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| UniRef90＿11DUS3 UniRef90 18 R 6 F 2 | GVDG FSNYPARSRQQL |
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$A D G V A F L L H D D T V E R T S N G A G A A R D M R Y W Y D A R S G E R M P ~$ ADGVAFLLHDDTVERTSNGAGAARDMRYWYDARFSGERMP KDNEVVVCHDWLIDNGKVSDFALVEGKKNDFGSYFLEDFE RDGELVVDHDPTLERTY AELQQQLDAGSWFDPAFAGERIP
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$K D G H L V V I H D E K V D R T T N G T G Y V K D L K M P G V R I D P T F D E F L ~$ KDGHLVVIHDEKVDRTTNGTGYVKDLKMPGVRIPTFDEFL KDGEVVVIHDETVDRGRVRHLTVAELKELDAGSWFLEVLE KSGEVVVFHDDNLKRLHTEDLTLEDLNKVQLKNGSQIP RI EGEEVVFHDRRLDHKSSGTGVIHLDDNSYQKKNGSQUPQ
 ADEVAFLLHDDTVNRTSDGWGAAARKQYWFDGRFSGEWMP KDHKLAVIHDENLKRLSGKNVNVFDLDGFEGYDS SLDEVL KDRVPVVMHDERIDRGFTKDYQFAELKKFKDADGQUDPSL KTGELAVI HDSSTKRTKVEDLSSWEELQKYDFGUWFSKEYL ADGELVI HDDLLERTKLDCGAWKGLEFAGERMMHLDELL KDGKLVAMHDVTVDRGR|KNLTYDDLAALDAGSWFSPRFE KTGELVVVHDSNLKRVSGKDVIVEELTFHKGMEYAGEQUP KDGQLLVIHDPVVDRGRVNDMTLAQVQDLDAGYHFQDEAG KDGVVVVLHDANLLQVGGVDRNIWDLNYSEERVPTGEETM ADDVLMVNHDDHYQGHTIETTNSSILKNLKLANNENMPTL QDGRVVVSHDP WMSPAFCQTPDGAPVQSLQHVLYQMPEAY
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 ADRVPVLLHDATLERLWGHDRSLASLTYGLVAELTAGGVP ADGHLVCVHDRRVNRGAVSALELADLAALDFGSWKTREAW RDGERVCTGPEVPPHTAVRSLTLEQVKQYDCTRWPTFDEV EEEVYVFHDRRLEATSSGRGLIDVVSAEYLRSITVSGEVI ADDVVFLLHDDTVDRTSNGHGDAARMTYAEIEKLDAGSWF RDGVPVLLHDETLQRLWEVDRPLNSLSVDEVRGLTGGGVP ADGHLVCVHDRRVNRTADLAALDFGSRHSRAPWRGRDEEP NDGVVVLMHDKSLKRLTGLNKMVNQLDYNEEKDPTLNQVI ACGTPVIDHRTTNGRGNVSDYPYSYLKTLDAGSWFDPRFL KDNQKHLYECNRQDGTQYNHAMAWSEWNKAEATPLLDDQTL
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A D GIVLL A F H D H T L D R V V T D R R G R I A D L

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 VLAAWARGRTKVVI EI KQGP IFYQGUEAQLLERTGMRDQVL

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 P T L H Q L V D F M N NI EI K S NEAGATMTRRQLI KAVIG DGPEVI



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C1833

V A E E Y MIL NK S L VK A A RK L N K S I IYVVWTVVNDMESFK K Y Y K|L I HPD F Q L L NA E NV H QMQEK GF LVVAPWTVVNSEEDDQKVK S Y


 I H DD H K A L T P V S A A E I V D A G V P L V C Y T I N DVEERAK E L F S W




 T Q G G V R V V D E R F V R T A H A R GLLQV HVVWTV N E P E R M R A L L D L | $A$ | $Q$ | $S$ | $G$ | $V$ | $R$ | $V$ | $V$ | $D$ | $H$ | $R$ | $F$ | $V$ | $R$ | $T$ | $A$ | $H$ | $A$ | $R$ | $G$ | $L$ | $Q$ | $V$ | $H$ | $V$ | $W$ | $T$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $L$ | $N$ | $D$ | $A$ | $A$ | $R$ | $M$ | $H$ | $A$ | $L$ | $L$ | $D$ | $L$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $L$ | $N$ | $C$ | $D$ | $V$ | $D$ | $F$ | $V$ | $D$ | $A$ | $G$ | $L$ | $V$ | $A$ | $D$ | $A$ | $H$ | $R$ | $R$ | $G$ | $L$ | $K$ | $L$ | $L$ | $V$ | $Y$ | $T$ |







 L S Q Y S $\operatorname{V}$ A
 I N P Y H K M L





 I T T L H L S HK WY F HN Q S T YK K G V R L WTVVNNEEVMMK KAFR S V HPPPLE G LTTEAEVADMRAA GF DVVNVWTVNDVVECAQRLA Q W



 I NHLA GL H L K HYQK L



S
1
$Y$



 TMS A E Y Y A A V H A L E GP H G K QL L E S Y T WT V D D P A R A V E L A E W
 L $\operatorname{H}$ P P R S T L M D D H A L G A C I A A G L H V



 C L G L S F I T Q E M I A A A A H R R G A K V Y V V L H A S H R H L D G P R V A Q DK A A G L H M L L V Y TVVN D P G L A R E L A A W LCVNWKICSKAMVD DAHRRGMHVSAWTVNRDHDMLDELEK F
 Y S V Q E N AVT R NLVMMQI H K S N K K I Y V WTV D N K V Y M N D ML K L V HVNQK I L DPKKAKRI KATNRLLLVYTVDDVKRARDLESW
 I C L P P A N AVV Q EL V S R CK Q L G L E V R A WK V K D A E VM DS A L K A I H P E D T G L T R E K V R A F R D A G F G V
 V $L$
$L$ C C E P Q Y A F S A E G K R A Q A S G L E

| UniRef90_C3AHE4 | $\mathrm{N}\|\mathrm{~V}\| \mathrm{D} \text { G\|\| V\|T D Y } \stackrel{210}{\mathrm{P} \mathrm{~V} \mathrm{D} A \mathrm{~A} \mathrm{E}}$ |
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| UniRef90_B9DN92 | GVDGII T D GPNYYFELL |
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| UniRef90-E3H7Q6 | EADGIMTDF |
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| UniRef90-UPI0004786463 | GVDAVAADFPDRPQQAL |
| UniRef90-Z5XRW8 | GVDGI FTNF |
| UniRef90-F6FSB5 |  |
| UniRef90-U5C5A9 | GVD G I I T D Y P NL |
| UniRef90-S2Y286 | GVNGFFTDRPDVANWVR |
| UniRef90-K2PUU6 | NIS GLFT D Y P EKA |
| UniRef90-R6VDE0 | GVDYI TTDYPELLQQQL |
| UniRef90-H1ZB13 | KVDGIIT NFPER |
| UniRef90-E8WAW3 | GVEAI I T NRPKQVLSQLG |
| UniRef90_UPI0004116AB1 | GVDNI I T D DVA Q |
| UniRef90-Q1D076 | GVSYLI TNRPGAVRQAL |
| UniRef90-V2UGF7 | G\\| DGLI T DFPKTMQQQLG |
| UniRef90-Q03VI1 | KLPGI I T N QVA L A |
| UniRef90-S2XRR6 | GVDGI FTD Y A N |
| UniRef90-C7DHE1 | GVDGIIT D NPKLG |
| UniRef90-N8RZW6 | GI NGLI T DFPKMM |
| UniRef90-D5T1H8 | GLR GI I T N QVALDA |
| UniRef90-UPI00036874C7 | DIRAI I T D K P E E |
| UniRef90-U1R1N7 | GVT GVFTDV |
| UniRef90-W2UK12 | KVDGI DS D YPDRV |
| UniRef90-F7RIR2 | GVDGIFSNYPDRAMKVL |
| UniRef90-UPI000408B2A3 | GVDGI VT D |
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$M \square A G H R G A A S L A P E N T L^{L} S G F K K A|L Q S G A K W I| E L D T Q L S$ $F K S$
$L R C$
$F$ A
G
L
L $L$
$L$
L
A
H $L G G$
$H G$

$H$ G | G | V | W | E |
| :---: | :---: | :---: | :---: |
| G | H | A | V |
| E |  |  |  |
| G |  |  |  |
|  | K | W | I |
| E |  |  |  |

 | $L$ | $D$ | $A$ | $L$ | $S$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $L$ | $D$ | $I$ | $F$ | $K$ | $T$ |
| $F$ | $D$ | $V$ | $M$ | $L$ | $S$ |
| $C$ | $D$ | $V$ | $D$ | $L$ | $L$ |
| $C$ | $D$ | $V$ | $R$ | $L$ | $T$ |



YAHRGFSGEYPENTMDAFQRA YE LGGVDGIVEDVQMT

## PR

$\begin{array}{ll}\text { S A A K } & \text { G } G A D \\ \text { A }\end{array}$
I V GHRGAAALA A A A E $\begin{array}{ll}A & A \\ H & A \\ G\end{array}$ QNS I ASLLEKA $P R Y$ V A HRGAGKLA P
 AHRGSSMVAPENTLAAVDQALIDRADYVELDVRLT TI A HRGAKAKFPENTMGAFDHALDVGAQVI ETDLHLLS
MLI SHRGFSAKFPENTLLAAFRKSNK

 R V V
$G \frac{L}{D} A$

 | L | $A$ |
| :--- | :--- | :--- |
|  | A | $F E A$

$L R A A$

$F$ A A L A Y H HPD | $F$ | $E$ | $E$ | $D$ | $V$ | $R$ | $K$ | $T$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $M$ | $L$ | $E$ | $T$ | $D$ | $V$ | $H$ | $R$ | A $L$ L WV $E$ | C |
| :--- |
| C |
| T | | $T$ |
| :--- |
|  |
|  |
|  | $D V$

$D V$

$D V$ $\checkmark$| $R$ | $L$ |
| :--- | :--- | :--- |
| $K$ | $L$ | $T$

$S$ TLA GMAEAVVKHFGAV E TMAAFRQAAEF

|  | $\stackrel{\text { F }}{V}$ |
| :---: | :---: |
| R |  |
| P L |  |

LAA |  | $L$ | $A$ | $A$ | $M$ | $A$ |
| :--- | :--- | :--- | :--- | :--- | :--- | $\mathrm{~K} A$

I K
$H$
$A$
$A$
A G S
 $P I P F A H R G G A G B R P N S M A A F Q R A L D L G Y R Y L E T D A H A T$
 QTKVIAHRGYWDGSAQNSVTALNKAHEVGAYGSEFDVSTT


K F

 AHRGAS A YAP VIAHRGAWKKNPENSVAADKEAI R L K CF GAEFFDVMMS

 II A HRGDTMNADENTVEADESAAHAGADYSEDDDQET AHRGASAYAPENTMAAFKKAFQQGTNGDELDLQUKT

## $P Q \square$






V I GHRG PSIAHRGAWKKNP QNSI A SLLREAIIRLLGCE GSEFDVVWMT $P D P M A H R G G G L L A P E N T L A A M R A G A R H G F R M V E F D V K L S$




 PRAFAHRGWHLLEGLVENLDAFQRAVAEGYRYLVTDVHAT



 $P \mathrm{~V}$ I V A H RGAS A YTPENTVLEAVDKADDDLGFDWVENDVQRT
$R$ P
R V L A H R GMSSSLAPE
A HRGFS DGGVVE

UniRef90_UPI0004792EC2


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UniRef90_F0RA57 UniRef90-S5QZ38 UniRef90_K5BZK9 UniRef90_C5BY91
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UniRef90-A9DI87
UniRef90_K7YTV5
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 TLLVEALAAATEDTRVMVVDLPGTRDVRVARRVVDAVREAGAAA WLSSDQKRS I V L N I E L K N S I I R Y H NMEEK L L TVLLYWP H QVV I N A A K K N K IVDL L V E V K L H G G E S S D M F DT L L K K E K Va D K Y L

 VEFRK DVWI L LDDI KRDNHPETDMD TLLA DLLEHKPWNERII








 I Q GK K N Q G T Q L I L IL F WE M N Y R G T V VMI $\begin{aligned} & \text { E } \\ & \text { T } \\ & \text { LI }\end{aligned}$






## LGCWA

IA TAKKNK IDDLLIEVKLHGAESGDMVNNLI ALLLKKE QVTAD

 SPAYA GERIPI II EMKS PENQPGMTEINMLHSFKPDNEDK KYANKNYKNNYYI ETKSPNVYPGMEKQLLNTLDQHGMHVM


 REGMKQKKTKLILEFKPSEERVGELAVLTVQKLQAQDWVE
 GNKCTVPKIKLNI EIVKTGNNDSENFVPDVVKVIDETNFVD




 A ARCAQLGMAANDEIM PCPGGERETGRAVAEMWATGRTPD















 QLA Q A D R P V T L F I E T K H P A Q H G L K I I E R EVVVA A L E R H G L T D

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 KSNCVKKAIDDIGKKLNAEAWVGFNDGSVSKMKEVKKEVNT $F S S F S F D A L L A A R A A A P E D P R G Y Q V E T D P P D W R A R L D A C A ~$ DRVVYCRAMLAAVRGADASAEIAALTHTSSLAPDVRPTAADRPR W


 L G C WT T K Y L S L A H R L F P A Y P V S L I S F S L A FA R Q F L R V V H
 FSSFEPACLA HL QPLAP TVAARGLLVERDPPDWHAQVQCTA

 I S S F N H P Y L R E L K Q A L P K A L V A P L L A S I P L D N A A V V N A Y S



 $\square T S F S T R R L A Q M R A R L P M F T D R E V C M A L G P R G L M C A Q V P Y$
 Y S S F N LD S L K IAA Y K LDD P T QQY CYL S E ED DK NPRELMA K E H




 YISSFN Y D A L K Q V LAA LQPP DA KVVY Y L N G E A S P EK L K Q D G FA G

 IT S F I Y N A L L N V R K Lid K T I K I G WL I K E D I N Q K N I L E F M N Q
 V Q S F H I N EI K K F H QLAA PEIM A GLL L S K HLDDLF H Y R E F A S F L Q S F S G D S L Q K LLH QMMN N V P P L I KL
$V$
1
 GPSFSEAALEAARVAAPERPRALLVEEVPQDWLQRYECVA


 L T S F D H E II I K R V V E L Q P S
 A A SFSDSRLA RLLRRLAWANGWAPLLGVSRLAR GWLAQVPV



$\qquad$  VV
 VSS F NHLLALTEFKRRSPETQQACLLFESHHLLWNDWNCNA D Y


 V S S F D W DLVVDLI R K E E P E V L R G L L V E K G N S L N K N Y Y E P D L I T S F LDP D A L R L A A S A A A P E V R R GLI I EVVH P T R E S P S L L T E L IL A S F H H R T L V E A R A R C P R L K T G WER G GR A R M P F Q A V Q Q V P L V S S F N H H L L L A F K S I A P K D $\quad$ K I G A L T A S N Y A R F A E D D

 DQSFN K K S I Q K FQ AL R P Gl K L GVLLIK KK DK F I S K S T Y A N Y





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UniRef90_K7YTV5 B
7
7
$B$
$B$

VHLDHK\| LN QTMAKTDT DA G LIKLLVIWT|LNDVT QADKFRS W I PVVFWDRPTKAKVDKVHKAGIVEAGAWTVNDPETMKT LLGM
 I HPEDEGGTTREMVE SFKA A GYKI NVYTVNDLARAN QL FNW L N Y R F S LVDRPLAERVHRDGHLLSVWTPDTARSLRRLIDLD

 L D Y H DGGTMRA H E EWF D EAR R G L E I NNV WTVNNDE E S M K Y L I G K L DANHREELDADVVIAAAHAAGYRVLSYTVVDPARAA QL L E W


 V GAS $\square$ T EAKNNPRMLPAS YMWTVDEPDDMR WARRH






 $V R \square R I V R N H P G Y V A K L K R A G H Q V H V W T V N E P A D V E L C A R L$ CNLN YTWTS EK HI DELLHQHGYQVWCYTVNRAEKFKHEDK
 LVGLHLSHYVPMRH V K ERI WT L DYHYKVF DKHPEWIQEAKGLTINVWTVVDGMVGHLGGL







 $L S V H H L L L S K S F I N Q A E L F G F E I$ Y S WT I S K Q Y Q FA D M Q R L

 $\square H P C Y Y G L T E E A D H A M T E A G F Q V N V W T V N D L E R A A Q L G S W$
 FDYHFKQLKPNWIN FARNDGGLTNSWTVNDPNVMQF RAM $\square N D N H R D A T P A D I$ DADVHEAGFRDAAWTINDPARARLLLSW


 RGRRR IVRVLSP GLI E R A H S V G K Q V






 L H T N H K HLTPAL A A AVVKAAGYGLF CYTVNETARAAE I TA W


210

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| UniRef90_S7WUW0 | GV D R Y T D D PRAL F K |
| UniRef90-UPI000473F5F4 | GVVDGFCT D R DD L |
| UniRef90-L8JEL5 |  |
| UniRef90_UPI0002882183 | GVV S I T T N R D D L L H G L G |
| UniRef90_UPI0002E8CD24 | DVK A V M T D F P NRLF |
| UniRef90-A0AG72 |  |
| UniRef90_A8TYZ5 | GI E G I V T D N P P A L L GL |
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| UniRef90_UPI000377A1C9 | GV D A I I T D HPSRLR |
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| UniRef90-F0KEB2 | K AD GI 1 T D RPS $\square$ L M |
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| UniRef90_UPI0002EA5740 | GV A GI I T D CPEELYEVL |
| UniRef90_E5Y370 | GATGII T DFPAACRKALG |
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| UniRef90-B5EVA4 | $\mathrm{G} V \mathrm{D}$ \| 1 CT D |
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| UniRef90-D5DGA0 | K S D GV IT N Y P DEVV |
| UniRef90-H8KTD8 | KADFI TTTNEPELLLEEV |
| UniRef90-D1A2Z1 | GVD GI M T D D L I TL R EVL |
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| UniRef90-C1G7X7 | EV D GVIT DNPELSRKI |
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| UniRef90-F9L8E8 | GV D GVFTNYA DLYKAV |
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| UniRef90_UPI00035ED8E2 | GVDGI I T NKPDVVRDAL |
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| UniRef90_UPI0003B6787C | GVDGI M T D R A D L L K V L |
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| UniRef90_UPI000479BB57 | GVVDAI CT D R I D L |
| UniRef90_UPI00047E0F55 | GVDGLVSDR\\|DLLK Q V L |
| UniRef90_K2NIM4 | P I D GVVT D H P |
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| UniRef90_UPI0003796B03 | GVMGIVTDRPDLLREVL |
| UniRef90-UPI000365FC29 | $G V D L L C T D R L D L L K P$ |
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| UniRef90-D6M6C7 | GLDD GVT T D EPEIVR A |
| UniRef90_U5L6T1 | PADGIVT D F I ELLL |
| UniRef90_UPI000372FB2D | G V D GI M T D RLEAL R A V |
| UniRef90_UPI0003B71CEE | G\| N G I I 1 T D F S DRI |
| UniRef90-R9AS77 | GI D GLI T D F PKLMQQQL |
| UniRef90-D8IQI2 | GVVA F C T D R $\square \mathrm{D}$ L I |
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| UniRef90-F4G163 | G V K G V I G N S P HLLFL |
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| UniRef90_C8WVE9 | G V D GIVT N S P Q I |
| UniRef90-A3U765 | QV D A I I T D D P L L F |
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| UniRef90-A7JYY6 | D G I F S D PQRFMP |
| UniRef90-UPI000349698B |  |
| UniRef90-C4LLQ6 | GI D WLA T DKPRQAREW |
| UniRef90_UPI0003054AA7 | HVD GI I T D Y A Q S $\square$ E E WL |
| UniRef90_W7DU24 | DVD GI I TE $\square$ P E EAMK V |
| UniRef90_UPI00039CF6E4 | GI D Gl I T D FP D R I |
| UniRef90_UPI00047610FB | GVDGIVTDNTTALRDLL |
| UniRef90-D8LEM7 | GV D GL C T D Y P L V H E |
| UniRef90-X5L6I8 | $G \vee D W V A T D H P G R T G T L V G$ |
| UniRef90-A9DI87 | NV D A I $\square$ T D Y P D $\square$ |
| UniRef90_K7YTV5 | GV D CLGT DVP |
| UniRef90 UPI0004792EC2 |  |

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UniRef90 L8EHM6 UniRef90-C2U0E1 UniRef90-UP100035C6D4D UniRef90 JJ7M7F4 UniRef90-M1HE48 UniRef90-G5BRC1 UniRet90-A3TFT1 UniRef90-S3ZJP3 RPLHISHRGGAAENDENSMEAFKFAESVGTEMFELDCHLT RPDMVGHRGYPAKYPENTMSSFQAADELGFTHMELDVHLS


 KPLH AHMRGGALLAPENTLCAFRMAVEYHTEMLELCDVGRS QTLNIGHRGAKGYVTENTIASVNKALEDKVDGIEDDVHLC R $V V A H R G A W K N L P E N S M A S G K E A T R M R C A G S E F D V R M T$ RPRLAAHRGGSGERLENTLEAMENSMAQRADLLEDDCCLT KPLVFAHRGMSSLAPENTLAAFRLCHMHKVQWLECDVDVL KPLVISHRGVSNNGVQNTVQSGEKTAQQEPDFVETDVQET
$\qquad$ JAHRGASGAPE RPLI IAHRGASAYTTGHTLAAYEMAVNMGADYIEIDLHMT RPLLFAHRGCSSDAPENTMEAFQMAQQLGSPGLEDVHQC

 QTQVIAHRGFWKTEAQNSITSLRKAAEAKVYGSEFDVQLT
$P A$ AGHRGDKMVAP
1 GHRGAPLEAK -AHRGGGKLAP

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KT\G/F
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    GHRGARGEAPENTLGGFQYDHDGGRAVEFDVRMT

KTLLVGHRGVAGKYPENTKVSVQAADDMGLAWVEVDVQPT
PG AHRGAABP
RPL
$R \vee R$
$P$PVILAHRGGAVDYA


PAN
GHRGARGLAPE


QTRVAHRGYSAGGVENTLGALDAAAEHHADYVEADFQET
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GHRGARGLMP
$\square$ GHRGCRGLLP
MGHRGARDAP

GMSSLAPE
GYPKFPE
GSSMAFPE
GASAYGPE
GARGEAPE
GVAGKYPE
GASAALPE
GYSAAAP


FAHGLSSRFPELTESAFRAALELTITGIEDVRLS




NTLEALGHALDSAADYVETDVQLT
保
K T LI F GHERGYP K Q F P E N S S L A A G F S R Y A $L$ L A H G L




PANI GHRGARGLAPENTMAAFRRAAELGAEMWELDTMLT
KPGMGHRGARDRAPENTMRSFEALLESNTPVVEFDIHES
KPGLVGHRGAPMGAPENTGMSFEALAECNTPAVEFDIHES
$K P G L V G H R G A P M L A P E N T L M S L R K T A E C G A A V F E T D V M V S$
$R \square P V A H R G F A Q N A D D N S Y A F D D A L Q S G C P Q I G E D V R S$
TFAHRGAESVAPENTEDAFNTALDYGARAI ELDVQLT



PHVAHRGGGRLAPE
VAHRGLPSKAP
YGARGYSGKYP
IAHRGGKS GP
PDLAHRGGGRGAPE
$P G V V A H R G D R T G G T E$
I

K P GLVGHRGAPMLAP |  | $V$ | $F$ | $A$ | $H$ | $R$ | $G A$ | $E$ |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

$K F L^{T} T$ GHRGMMGVEP
 A HRGGlGMTT

PRHRGLALVLTEN
PRLVAHRGGS GERLENTMEAVENSMAQGAELDEMDVAT
 DPRRENTMGAFRHAVELGYRYLE I DVRT
UniRef90 A1U1Y4 UniRef90_UPI0003599FF2 UniRef90-A0A024Q7T9 UniRef90_S0K7G9 UniRef90_A3WLR4 UniRef90_K6BQ4 UniRef90_UPI00037CE807 UniRef90_UPI0004652AB6 UniRef90_E3FYJ3 UniRef90_F6GDZ8 UniRef90_U4TR61 UniRef90_UPI00037DECEE UniRef90_G0L0U3 UniRef90_UPI000331635E UniRef90 T4W3T6 UniRef90_C9P2L0 UniRef90-I2J494 UniRef90_W6TLV0 UniRef90_K9APV8 UniRef90_UPI0002F94602 UniRef90_F8F4H0 UniRef90_UPI0003682D9C UniRef90_U1GUP7 UniRef90_U4TV98 UniRef90-R5B1A1 UniRef90-R5FE69 UniRef90_UPI00028883D7 UniRef90-M1ITY0 UniRef90_UPI00036F18C2 UniRef90_UPI0002E95B06 UniRef90_UPI00046890F0 UniRef90_M9VGX6 UniRef90_K6CVA1 UniRef90_UPI0002485B2E UniRef90_A7N254 UniRef90_UPI00037B7473 UniRef90_UPI00037CE53F UniRef90_G4D214
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A







 RDGHLVIIHDETIDRGYVKDMTLA SDGEAVI CHDLSSLTRYGITGYVEAMSWPWFSPYLVQGEKL


 ND GKVVVTHDDYLSPGFMLTSSDGKDIPTADSKKYPVYQMN K DGHLV AMHDEEVDRGRVEDYTGAELKQLDA GSWFNEENP K D GK H D SVV T L H N A Q Q AVADVT FDE I QLLFPGKEFHKNHLL $K$ S G H L VVL H D D T L L R T T GLD R P V E D CT WD E L K D L D C G S WK
 K D GA L V I I H D E KI D R GWI K D M T LAA ELLH QY QMAN GERVVP LL RDGRLVVIHDERLDRTTDGSGRVCDHS
A



$\begin{array}{lllllll}R & D & G \\ A & A & V & L & H \\ V & 1 & 1 & V & F & H\end{array}$


 RDGHHDREVQQGNKKYDIVKSTTLGQLKRYMPYVPSLKEVV


## R

A

K

## A

## R <br> 

A K D S V V P Y V I V VHD YKLKRYNVNQYTYDE

A D QVPF I L HD GTV DRTT NGRGAL NALTAPA LDLLDA G S WF K D GHLAVI H D DVVDRVSNGTGAVADLTDNPQHIMVLEELL K N GE I F L L H D D NL E R TS N GWGVAGA L N WQ A L Q HVDA G S WY




 K D GALVVMHDADVDRGPVAD RTLAELRDLDAGYGERDPVF K D GQLI AMHDTAVDRTMIKS LDAGSWFNKAYPEKAKQEYI

 R D GVVVVVSHD E NL S R Q S GL N R DVVS S L H F A H G S D R H M L R R E

 A D GTVLVV F H D E E L
 UniRef90_GOLOU3 UniRef90-T4W3T6 UniRef90_C9P2L0 UniRef90-I2J494 UniRef90_W6TLV0 UniRef90_K9APV8 UniRef90_UPI0002F94602 UniRef90_F8F4H0 UniRef90_UPI0003682D9C UniRef90_U1GUP7 UniRef90_U4TV98 UniRef90-R5B1A1 UniRef90_R5FE69 UniRef90_UPI00028883D7 UniRef90_M1ITY0 UniRef90_UPI00036F18C2 UniRef90_UPI0002E95B06 UniRef90_UPI00046890F0 UniRef90_M9VGX6 UniRef90_K6CVA1 UniRef90_UPI0002485B2E UniRef90_A7N254 UniRef90_UPI00037B7473 UniRef90_UPI00037CE53F UniRef90_G4D214 UniRef90_U5WUL5 UniRef90_M7WW00 UniRef90_R6PSF0 UniRef90_A4BA91 UniRef90_M1V0M9 UniRef90_UPI000462C8E4 UniRef90_A8ABR6 UniRef90_A3DL64 UniRef90_E9UW95 UniRef90_UPI000378AB47 UniRef90_S3BC59 UniRef90_U1Q8K8 UniRef90_R9PTZ4 UniRef90-UPI0003990CE4 UniRef90_F4BX17 UniRef90_WOIWE4 UniRef90_B0S9G9 UniRef90_UPIO00258EAC5 UniRef90_B2SWZ4 UniRef90_UPI0003B55B91 UniRef90_H1HK47 UniRef90_UPI00047603A7 UniRef90_F8EKZ9 UniRef90-W4EXN4 UniRef90_UPIO0036F30AA UniRef90_UPIO00479C3CE UniRef90_W5WTP5 UniRef90_G311F9
UniRef90 UPI000 UniRef90-UPIO0047B819E UniRef90_E1WZP5 UniRef90_H5TQZ8 UniRef90_D3FF05 UniRef90_UPI0003B3290E UniRef90-D2TLJ5 UniRef90_E0D519 UniRef90_C3PK92 UniRef90_K4KK51 UniRef90_C1DD26 UniRef90_W2EGT2 UniRef90-X5DX92 UniRef90_N0CQR0 UniRef90_G8TBJ5 UniRef90-L8EHM6 UniRef90_UPI00035C6D4D UniRef90_J7M7F4 UniRef90_M1HE48 UniRef90_G5BRC1 UniRef90_A3TFT1 UniRef90_S3ZJP3

UniRef90_UPI000377DDAD
 DFFQSMYHMPVNVDIKVVNELLMQKVDGLIRQYQREDLTA RLLAK N Q VI V S I E M K NT K L Y D S SV E E K V F E M I Q K V D M I






 Y F F Q R F P R T P M S V E V K A D N E E L I I H K I A D L V R H F N R N E I TVV

 E YAKASYDANYY I ETK S P DVY PGME EKLL ST LDDRHNGHVL
 D MMD D HP D K H L F I E S S K H P M R Y GR M L E E E L V K T L R Y R P H I H

 A D A G K Q L N V Q M L E I K P H K D Q IT E Q T V K MV K E A GME K QV E
 ARYA IANGIACNVEIKPCPGRDAQTGEAVARLTQALLWAGM




 A SLLEAMLELINELEMGVNLEVKVNKGRDPIVGVDRVMPLV






 A QYCRAHGVWMNDEIK PAPGFERATGATVARLAAAMFASS
 WLKK S A N K I T L L N I E LK R Y N N S L A L VP A L L E S L K E Y P Y P V I SAAD Q GERMA TL EEEMLLALI GELGGL GLNLEELKVNRPADRLI


 $\begin{array}{lllllll}T \\ G & A & E & A & A & R & C\end{array}$ A R N I LE MK MMRKTKII E IKKKHAERNANLAAA QAEKYGVA GKVVE








 RLAAAARVCRENVVEIMPCPGREAETGRVVATECAHGWQRA


 $\square F Q K Y G R S M K Y Y \emptyset E T K S P D V Y P G M K K Y N L I G Q N M S S S R V M$
 FHVEF QN NVKF DlEDK S K DTAEAVLQD\|LSA GISTDNVI
 $T L E A A L K E T A G H R V L V D L P G A T P E S V R T V V G D V A D C A A A D$ K MAVANNKRKLII EI KP YGNTRDLTTKVVI DKNNFTKMCM


## UniRef90 A1U1Y4 UniRef90_UPI0003599FF2 UniRef90_A0A024Q7T9 UniRef90_S0K7G9 UniRef90_A3WLR4 UniRef90_K6BQ41

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UniRef90-12J494 UniRef90_W6TLV0 UniRef90 K9APV8 UniRef90_UPI0002F94602 UniRef90_F8F4H0 UniRef90_UPI0003682D9C UniRef90_U1GUP7 UniRef90_U4TV98
UniRef90 R5B1A1 UniRef90_R5FE69 UniRef90_UPI00028883D7 UniRef90-M1ITY0 UniRef90_UPI00036F18C2 UniRef90_UPI0002E95B06 UniRef90_UPI00046890F0 UniRef90_M9VGX6 UniRef90_K6CVA1 UniRef90_UPI0002485B2E UniRef90_A7N254 UniRef90_UPI00037B7473 UniRef90-UPI00037CE53F UniRef90_G4D214 UniRef90_U5WUL5 UniRef90_M7WW00 UniRef90_R6PSF0 UniRef90_A4BA91
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UniRef90_UPI00047603A7 UniRef90_F8EKZ9 UniRef90_W4EXN4 UniRef90_UPI00036F30AA UniRef90_UPIO00479C3CE UniRef90_W5WTP5 UniRef90_G3I1F9 UniRef90_UPIO003626E32 UniRef90_UPI00047B819E UniRef90_E1WZP5 UniRef90_H5TQZ8
UniRef90 D3FF05 UniRef90_UPI0003B3290E UniRef90-D2TLJ5 UniRef90_E0D519 UniRef90_C3PK92 UniRef90_K4KK51 UniRef90_C1DD26 UniRef90-W2EGT2 UniRef90-X5DX92 UniRef90-N0CQR0 UniRef90_G8TBJ5 UniRef90_L8EHM6 UniRef90_UPI00035C6D4D UniRef90_J7M7F4 UniRef90_M1HE48 UniRef90_G5BRC1 UniRef90-A3TFT1 UniRef90_S3ZJP3
UniRef90_UPI00028881CF UniRef90_A0A010NF54
UniRef90_UPI000377DDAD
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 WGNRSNS I CDKLYK L N P QVPLIFSMRKVVSLLVLFWKWF F
 $V$ S SFNHHWLQQRLKHRRPNDNVGALTTCCPLDYCDFANAYS







 $V$ QSFSTESLLKMNHLNGRVPLVQLLDKASVPY LDDEDDWNF I Q S F D A P S L K EMFALLE P S I PL I QLL Y K F K K E L R E L T K Y A S

## W Y K


 APRWHPKYDEPAVRHLPYCRRAHDGMRRYFWDACDTESMN
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 LHPSVVRAFTDAEIEALVEAGIFVRPYTVKTGEQLARFLKL

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R A 203990CE4 , IVN QQWL NAWRL F SAQQRGQEVVVWTVNNAA DVERLYY


 RTVVN L L L M R P C C L F K H L K A A R G I M V Y F WV L N K E E E F K K A F D L


 D A DH A NKT WY Y K S E Y L D A A CKK K CRF Y N I T G D E E Y L K N P H K Y S PY Y K GVVT D QTVVK T CH QK GMQQII P WTVVNTK E E I S S N L V K L






 FNPSLSFDNRDLVQAAKRAGLKVFVYTVNHPEDWAWLSEL L H L E H A L V D A P L V G A A H A V G L A V L A W W V N D L A TAAR R L R T L $V$ S V R H D TLL S A A RVGRA Y R A A G V P V Y A WT P D D PA S WR R L A G Y



 DPGFRFY P D R A MVVAA H A R GL E V I P WT C D D P A T V R A L M D L

 $V L Q \square P V A H R M R G H R L G K Q V H V W F H S W S D E S T T E M H R ~ L D D M$



| UniRef90_A1U1Y4 | $\mathrm{G}\|\mathrm{~V}\| \mathrm{D} \text { S } \mid \mathrm{I} \\| \mathrm{T} \text { D Y }{ }^{210}$ |
| :---: | :---: |
| UniRef90-UPI0003599FF2 | GVAGIMTDRV |
| UniRef90-A0A024Q7T9 | P SVLV |
| UniRef90-S0K7G9 | GVDGI $\square$ T DRMD |
| UniRef90_A3WLR4 | GVDGIFTNHPSFAQK】 |
| UniRef90-K6BQ41 | GAQSILSDYP |
| UniRef90-UPI00037CE807 | GVDGI I T N Y P DVVRD |
| UniRef90-UPI0004652AB6 | SVDGII T D |
| UniRef90-E3FYJ3 | GVGG\\| M T D R P D T R Q $\mathrm{L}_{\text {L }}$ |
| UniRef90-F6GDZ8 | NVNAIISDFPDRV |
| UniRef90_U4TR61 | KVVAI I T D K F E E A Q D VR |
| UniRef90_UPI00037DECEE | DCDG |
| UniRef90-GOLOU3 | DFDYI TTNEPEL |
| UniRef90-UPIO00331635E | GAT GV $\mathrm{T}^{\text {T D Y P T AL }}$ R R Y L |
| UniRef90-T4W3T6 | G VT GI F T D |
| UniRef90-C9P2L0 | GV D GVFFT D |
| UniRef90-12J494 |  |
| UniRef90-W6TLV0 | QVDGII S D Y P DL |
| UniRef90-K9APV8 | GVNGVFTNYADVYNDVS G |
| UniRef90-UPI0002F94602 | GVNGI F T D R P DVAYRVKN |
| UniRef90-F8F4H0 | GAAGI $\square$ T NRPQD |
| UniRef90_UPI0003682D9C | G VQ WL A ${ }^{\text {a }}$ N LPA L |
| UniRef90-U1GUP7 | EVDGV1T D DV |
| UniRef90_U4TV98 | QVFGI I T D N F |
| UniRef90-R5B1A1 | GCEGI IT NFPGVAS GWL |
| UniRef90-R5FE69 | NVDYI TT DE |
| UniRef90-UPI00028883D7 | GVDGI VT DRPAELGQW |
| UniRef90-M1ITY0 | GIDALTTDNPRKMIEV |
| UniRef90_UPI00036F18C2 | GMDALFTDQ |
| UniRef90-UPI0002E95B06 | GVDGVFTDFPS |
| UniRef90-UPI00046890F0 | QVAGIETDDFVQMMQDR |
| UniRef90_M9VGX6 | DV D A V I T NDPATA QRVL |
| UniRef90-K6CVA1 | GVDGQFTNYPDQ |
| UniRef90_UPI0002485B2E | A INGLIT DFPKMMQ |
| UniRef90_A7N254 | DGI FSDHPSR |
| UniRef90_UPI00037B7473 | GVGWI ATNHPDRVYA |
| UniRef90_UPI00037CE53F | GI A S VIT DEPA |
| UniRef90_G4D214 | LVTGLI S D NP D |
| UniRef90_U5WUL5 | GVDGI I T D R A DL |
| UniRef90-M7WW00 | GAKA\\|LT DRTKELLDLR |
| UniRef90-R6PSF0 |  |
| UniRef90-A4BA91 | GVDGIIT D R |
| UniRef90-M1V0M9 | GVDMLATNYPERA |
| UniRef90-UPI000462C8E4 | NVNALFVND\EWARTHL |
| UniRef90-A8ABR6 | GVEAFATDRPDLARAWL |
| UniRef90_A3DL64 | DVVIT N NVEA |
| UniRef90-E9UW95 | DV D GLMT DRTDVLKAFL |
| UniRef90_UPI000378AB47 | GVDAFCTDRI |
| UniRef90-S3BC59 | GLDGVVTDMPG\| R R A V |
| UniRef90-U1Q8K8 | GVDGIVTDVPELMRDAL |
| UniRef90-R9PTZ4 | RVNGVVT D SPIMALETL |
| UniRef90-UPI0003990CE4 | GVDAVI S D P S L |
| UniRef90-F4BX17 | GADGLVTDDPCLIREA |
| UniRef90-WolWE4 | PVLGI CT D LP DL |
| UniRef90-B0S9G9 |  |
| UniRef90-UPI000258EAC5 | GATGIMTDY |
| UniRef90-B2SWZ4 | GVDMICTDRI |
| UniRef90_UPI0003B55B91 | PVDGIVTDQVEMA |
| UniRef90-H1HK47 | GVDFI TTNKPLEAMSV |
| UniRef90-UPI00047603A7 | GVDMLATNKPELAL |
| UniRef90-F8EKZ9 | NIDFITTDE |
| UniRef90_W4EXN4 | A V VGWI T D F P GRVRR $\square$ |
| UniRef90_UPI00036F30AA | GVDGII T DYPNL |
| UniRef90_UPI000479C3CE | KVDGI I S D P P RVLE |
| UniRef90-W5WTP5 | GVD 1 L GTDV |
| UniRef90-G311F9 | GVDSVTTNDCRLLQQ |
| UniRef90_UPI0003626E32 | GVD GVIT N |
| UniRef90_UPI00047B819E | GADGFF |
| UniRef90-E1WZP5 | GVD Y I G T D F P S KV |
| UniRef90_H5TQZ8 | GVRWVATNRPAKVRDWL |
| UniRef90-D3FF05 | GVDGI $\square$ T NRPGAL |
| UniRef90-UPI0003B3290E | QVPFL GTNDPEVALQV |
| UniRef90-D2TLJ5 | GVDCI CTDADDLI |
| UniRef90-E0D519 | GVDGI FTDSADKMVHL |
| UniRef90-C3PK92 | GVD\LATNQPEVAL H |
| UniRef90-K4KK51 | GVD GVFTDVPERLID |
| UniRef90-C1DD26 | GVDALCTDVPDELAA |
| UniRef90-W2EGT2 | GVTRVVTDRTSAYLD WA G |
| UniRef90-X5DX92 | GVS GITTTNRPKWI |
| UniRef90-NOCQR0 | GVDG1 M T D H DETLR TV |
| UniRef90_G8TBJ5 | GVDGI I T D Y PNYFAE |
| UniRef90-L8EHM6 | GLD GVIT DFPE\\|RRAVR |
| UniRef90_C2U0E1 | GATGMFTNYPDRLHSVL |
| UniRef90-UPI00035C6D4D | GVDGVIT D Y P NRVRQV |
| UniRef90-J7M7F4 | PI QGI I T DQPALTN |
| UniRef90-M1HE48 | GVAKVIT DVPT |
| UniRef90-G5BRC1 | GATGVMTDYPTAL RKYL |
| UniRef90-A3TFT1 | GVDGIVTDHTARLRDVL |
| UniRef90_S3ZJP3 | GVDSITTNRVDALAA |
| UniRef90_UPI00028881CF | NVDGI 1 T D K P T L L |
| UniRef90-A0A010NF54 | GVDGLI TDDAEA |
|  | G\|V|D G|I V|T D N T A A L R ELL L |



UniRef90_R4LQD1 UniRef90_D7BRJ2
UniRef90_M3E1Q6 UniRef90-A5FE31 UniRef90_UPI00047BB5EA UniRef90-UPI000345C081 UniRef90-E1BJ80 UniRef90-R7T1S7 UniRef90-M7NYD9 UniRef90_-Q01R14 UniRef90-E7RFL6 UniRef90_UPI000464BFF1 UniRef90-M9LUW3 UniRef90_UPI0004690BA2 UniRef90-W9WXM4 UniRef90-R5FVJ0 UniRef90_UPI00047540C7 UniRef90_UPI0002E89E06 UniRef90_UPI0003B72898 UniRef90_X5EFW1 UniRef90_R6TG35 UniRef90-A0A059ML03 UniRef90-LOHJA6 UniRef90_UPI0002F8E37C UniRef90-S2JC78 UniRef90-W4KDZ9 UniRef90-A1ZPD6 UniRef90-A6DS11 UniRef90_UPI00047075FD UniRef90-Q6L1D1 UniRef90_UPI0002A49365 UniRef90_UPI000475E5C9 UniRef90-A3XL27 UniRef90_UPI000366D151 UniRef90_UPI000474A2F2 UniRef90-K9W4B7 UniRef90-M2NDZ0 UniRef90-UPIO002FBF277 UniRef90_UPI000464F305 UniRef90-S6BWM1 UniRef90-L9WRG5 UniRef90_UPI00041BD45A UniRef90-D7W129
UniRef90_F3ZR14
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UniRef90-G8QK17
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UniRef90-M1ICP4
UniRef90-L9W474
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UniRef90-B1Y145
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UniRef90-UP10003F721DD
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UniRef90_G9MHZ4
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 KDGVPVIIHDADLYRRADKDGRNRWKRMFGKPAMTFAEFLC

 TDNVIVMFHDPTLERTTIEQLRTLKQPAQQUPTFQQVCDL



A D GE PWI I A D GVVPVVIM DATVDR GAVAAMPLA QL R E L N V G TA H R P QR

K D E K L V V A H D E D F K R K KI K D S T L A D L K K I D L G M G Q N V P T L




K D SVPV I F H D L D A K R L A NVD R K I Y N M S A R D DK NERVP T L I


A D D S L V I NHDPHYNKLP ILEKTPYAELDKTPLSNGEQLPTL

K D G K L V L L H D Y K I N R T D L R Q Y D F H G K F K I K A T I P T L E E L L

A D G E V V V F H D E R L D D A S A E TVVCRA EVVLDS GE TVVPTVLREVL

A D S L L V V V S H D D P Y M F R H D L F N M P Y S K K I A T Y

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 RDNEVVVLHD AMVDRGPVYD HTLAE L QMLDFGYRFTDTLS



 K D SVVFYVLHDSMMLDRTT NGTGNDKEWWFAPEFAGQRMPRF K DKQFVI SHD DNLKRUAGR\|IGQT\|RQNGHTSQUVSFKTF $R D G Q V V V M H D E S I D R G A L A A L T A A E L A E V R L E A G E P V P L L$
 ADRQVVVSHEPWMRQHNLYQLDPYARIRREYDCGRTRHPENL

S DGHLV CVVHDRRVDRG LVSEMTLS QLQRLD YGAWHHKGQP NGQPIVLHEPWLERT TGIKKKYLDELSEAEFPVPTMRQAL


## UniRef90_R4LQD1

 UniRef90-D7BRJ2UniRef90 M3E1Q6 UniRef90-A5FE31 UniRef90_UPI00047BB5EA UniRef90-UP1000345C081 UniRet90-E1BJ80 UniRef90-R7T1S7 UniRef90-M7NYD9 UniRef90-Q01R14 UniRef90-ETRFL6
UniRef90
UPIOOO464BFF UniRef90-M9LUW3 UniRef90_UPIo004690BA2 UniRef90-W9WXM4 UniRef90-R5FVJo UniRee90-UPIO0047540C7 UniRef90-UPIO002E89E06 UniRef90_UPIO003B72898 UniRet90 X5EFW1 UniRef90-R6TG35 UniRef90-A0A059ML03 UniRef90_LOHJA6 UniRef90-UP10002F8E37C UniRef90-S2JC78 UniRef90_W4KDZ9 UniRef90-A1ZPD6 UniRef90-A6DS11 UniRef90-UPI00047075FD UniRef90-Q6L1D1 UniRef90_UPIO002A49365 UniRef90_UPI000475E5C9 UniRef90-A3XL27 UniRef90_UPIO00366D151 UniRef90-UPIO00474A2F2 UniRef90-K9W4B7 UniRef90-M2NDZO UniRef90 UPIO002FBF277 UniRef90_UPIOOO464F305 UniRef90_S6BWM1 UniRef90-L9WRG5 UniRef90-UPI00041BD45A UniRef90-D7W129 UniRef90-F3ZR14 UniRef90-W2UEA7 UniRef90-UPIO0040FCC4B UniRef90-D1BSM8 UniRef90_UPIO003F182E1 UniRef90-C5C366 UniRef90_UPIOOO37566E5 UniRef90-G8QK17 UniRef90_UPIO0017458D0 UniRef90-R6PWZ6 UniRef90_UPIO0037F3870 UniRef90-UP10002C3DF76 UniRef90-S2XUJ9 UniRef90-D2MNH4 UniRef90-A0A011PFE9 UniRef90-F8NN55 UniRef90-M1ICP4 UniRef90-L9W474 UniRef90-lopmHO UniRet90-S5A4C7 UniRef90_B1Y145 UniRe990-D2BZZ UniRef90-UPIOOO468DEA9 UniRef90-FOLTH8 UniRef90-UP100036C2E07 UniRef90-R7CA40 UniRef90-O4AOS7 UniRef90-B9EB39 UniRef90-Q040R6
UniRef90_R5RD75 UniRef90-R5RD75
UniRef90-D5B113 UniRef90-B9LOG5 UniRef90-D2BF61 UniRef90-E7QUP8 UniRef90-X0T8Z5 UniRef90-UPIOOO4560B21 UniRef90-E6SP05 UniRef90-UP100036CED56 UniRef9O-UP10002622997C UniRef90-UPIOOO3680F9F UniRef90-UPIO0035DE595 UniRef90-M115M7 UniRef90-UPIO003B3FB42 UniRef90-UP10003F721DD UniRef90-UP100035DOC2A UniRef90_G9MHZ4
UniRef90_D2ERA6
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 PELDE G MGFNDEDKEKGDERQVLNSLPSTSNVVFSSEEEG GPKFKNEKLPTFDEVIAFANKYQMNLNEKLKDLDKSDNVL DGFRRFPRTPMSVEVKERNEELIHKIACLVRHYDRNEITI KGPQQC TPFDTDVKVFNEPLHLFTLMHEVISTQPNWPRIL EWARAAGSPSLNIELKEFLDQPDAVEQAVMAAKGYPDLH DEVLNYARGKiNIYVDVKQVAAKELVAHVVDHGMADHVVI FEAKDPSFDDYLIEIKTNKFTSDDIVDLFIKRYKENILEN LMRPDCKHVKLNLDIKPDPDRLFPLMRSVIESYPNFPRLI VF QDOKKGLYVEFEMKTSPEYCDKLYKKVMEKRPSDALYV LSLKEHGKVGVLEMKNHFEEQEVWDMCAEIIERLGYMDHI AQLDDLRTRGGNLLLEDKGRHTRDEVARVVKDIRDTGMVE GERLPTFSDFTNVELKSCTAGWEMSDKLILKNLNTTSDLL DVVKGGTAKLLLEIKSPETEAEVRNIIDHVRAKGMVRRTV PTLREMLEFIRDVQTSDYAAMNRELHAVGLADGGPDTLVH R CKHYNKYPVIELKWGFDNEAVDKLMELLDEEDMFDKSM TLDWTSRPVKLFVETKHPVRYGGLVEAKLLAELARFRRVV GEDFDSMPEKTLINVEDKDIDTVEKVIALIEKYGDEDRVM QLPQGLFMNLELKEQGPLDALEVDRLVPLMEHDHWKNRLL
 ELYEVLNGIPQVIELKCGRQVEKILIDTLRSSQIKFESTT EVLENFKGMNIFLELKFRDDVGEKRI HSII NARNALNRIV CVCEAFPNTPVNVDIKVNNDKLIQKKVSELIVKYNRQHLTV TFAEALGRELGTGLYVELKAPGTGLKCWQELKDQDQRYAS YAEEGLKPVKFNIIEIKSVPEEYDVFQPQVIQEKQMEEHITN RTYLLEGMKNNRVISKERGQLYAQRAVALVGELGAARMTV
$Y$ SMSFRGGWLLLELKGDWEAGGVAAVVDLI
TGHGMADRVV TFQEAKTQNLPNLKKLITYAEVKQADFWKII DEKKSETQCI MLVKESGKIANLETKENVLNLTVEKTVEMVKTFDVLEQTY LAFAKENNLALNVELKETFVDAPSQDDILSKRSYTNINUH
 EAARPSVTMNVEFKAAGEYSWSTVAERTLEDASEFPGEFY KDYLKKGKKDKSLKLIKTPEIENEITEKTUKMDKDMKLES NRVNIPCKMPYNIEIKSHADTFПQLVMEVLAPYYLGNRLI
 AEVLDATSVSLQVEIKATTAIEPAVEGLRQRPEDARRCE HLDDAGDRIGVFIEVKSPPGIEQVLADALQRKPEWQPLVR TLAAALDLCWVNLELKPSRGREAETGAAVAEVAARAVAAG DYLK DKPGMYVEFEMKTIDDYAAKVYRKVTAHVPAGSSYV EICKKYGKHCVLELKNEFKASDVYKIVSMIEKAGYDDHVI LALDWGRPVKLEFETKHPVRYGALVESKVLALLHRYGDAA L AFAAKNELABNVELKETFVNAPEQLALLFKRTYSHLNHM TLAAAAAACHANVEVKPAVGCETVVARQVQALWVGRAQDL PSLERVFQYFYDVEIKTRDTAS LVVDALRASGIPKNNFL DALEMLVDADVSLYLELKDVGYTDAVLETVAEYELLERLT DTLAQURMLDCGKLLSEFPNAEVVWGNKDATLPDVFGRVE
 DECVLELDMGLQLELKPTAGDDVETAEVALAVLKSMWPAN DKYKGKTKFYYELKNKANPGMAKLVADKLKKHGLNSENVV EEALKACKGK| NYYDFKAADVEKTYKALKKVGMEHQVLVI LELAATNDLGLNLEVKDVAQVASQLKAQLDQSPLAQEKLL SIMARSETVHPIVELKDYTTVELREIVDLVKQKGLLERTVV KAFEAERLPTFKDVIKMANETQINLNIELKKELDSNIEVL HRAKAKDKQKLLIEVKTTPNDSTKMLQNFNKKYDIKRKYQ AKYLKAAQPLHTLKAHTTPQRETKAIEKVVALVKDMGLEN FSVPSLA EVLMLSKDKDLLDLDLKLNTRVIKEQEAVNSVV ELVQGGAVEVLVELKEVPDARDLRSLEDAYDRYGAHRWAS SLETALDAVPAGTA|NLELKHVGMADRVLDAVGAVENEML DMRPDGKHVKDNLDIKNDPDRLFPLMRELIESYPDFPRLI ADLLHKARLNGMKLTVDFRNGDMHKMLQLIRQEGMLENCN PELLAVTGVPLFI EVKA PAAATAVGKLLAALPTSSPAAT TEVLDATNVFLQVEVKAVEACEAAVAAVVEDRPEDASR|R TRQLGRRPVNYSVEIKSEPAHDLAL VLAELQALQDMPRTM LQVEFKNDVKFDIEIKTENTAAAVLQDIATSRVSPEDVI PILEEFPQGHAYVEVKYESDKQWGRQELLDELLPMDTPYA GVLDWRRPVKIFIETKHPVRYGAMVEREVLALLQRFSRAV


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UniRet90 UP 100046 UniRef90-W9WXM4 UniRef90-R5FVJo UniRef90_UPIO0047540C7 UniRef90-UPIO002E89E06 UniRef90-UPIOOO3B72898 UniRef90-X5EFW1 UniRef90-R6TG35 UniRef90-A0A059ML03 UniRef90 LOHJA6 UniRef90-UPIO002F8E37C UniRef90-S2JC78 UniRef90-W4KDZ9 UniRef90-A1ZPD6 UniRef90-A6DS11 UniRef90_UPI00047075FD UniRef90-Q6L1D1 UniRef90-UPIO002A49365 UniRef90-UPIOOO475E5C9 UniRef90-A3XL27 UniRef90_UPIO00366D151 UniRef90-UPIo00474A2F2 UniRef90-K9W4B7 UniRef90-M2NDZO UniRef9O-UPIIOO2F2FBF277 UniRef90_UPIOOO464F305 UniRef90_S6BWM1 UniRef90-L9WRG5 UniRef90-UP100041BD45A UniRef90-D7W129 UniRef90-F3ZR14 UniRef90-W2UEA7 UniRef90-UPIO0040FCC4B UniRef90-D1BSM8 UniRef90-UP10003F182E1 UniRef90-C5C366 UniRef90_UPIOOO37566E5 UniRef90-G8QK17 UniRef90-UPIOOO17458D0 UniRef90-R6PWZ6 UniRef90_UPIO0037F3870 UniRef90 UPIO002C3DF76 UniRef90-S2XUJ9 UniRef90-D2MNH4 UniRef90-A0A011PFE9 UniRef90-F8NN55 UniRef90-M1ICP4 UniRef90-L9W474 UniRef90-lopmHO UniRef90-S5A4C7 UniRef90_B1Y145 UniRe990-D2BZZ UniRef90-UPIO00468DEA9 UniRef90-FOLTH8 UniRef90-UP100036C2E07 UniRef90-R7CA40
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150
160
 VIGSПKALDKKVKTAQPGKPFSYWRDYFPEKRLKAAGADV ISSFNDYLVKLAEVHMPAYKRAVIFQGDWRTLLDECRSTI WASEKSSIMKKCKAANPFYYLGLLPFISDPEKFFMCF LPT FSSFHYPLLMQVKQTDPGRETALIGTKKSRWDNVYGSSDG LSSFNSQLLQEMKQLMP STEMAWI VKKNKAYSKEMDWVDS KHIVQCKVVTELKKKSPEDNVGYI LPYNLAGMPSDRADF LGLWHPKFLESALQNVPSMKRIH GASPRAARRYFWNDCT FTSSDYRAL RY QSHYPGVDLLLITSKPCNAECRTVGDNR QRAWEERVVLGI WAAKFLPLCMQYCPGYPISHIGFSTMYA FTSFYLENLVALRKKYPLQPAQYLHYNKNVLKTLIEHKLD VQSFEVDALVFTHEVAPDLPPLGLLRSTLDADPVALARQLD VSCFNPLVLAEFKRRSPRTSVACLFSREMLLEGDWCKADA IQSFDDNIVRWAKAYEPNDPTMILRGGLDADPVATAKEGG LISFDHGSLARFSSLNPQLHRDYLRKEYLLWRMLKHLEPM IVCYTMSTVLYMKEKYPEYHTQFLLGFLYSEKDIEQCNDN VSSFNDDALRKAREDNKNI LLGLLDEDEKTDYSVNDPIDA FSSFSGTLLTLLEKRLPHISRAALWASWLPDPEEFVHVDA DQWNVEFLKKAKELFPKFKLCFIGLSVTAARTHFIDNVD LGLWHPRFIVHAKKHMPYCRRSYIGGSTDTARKYFWEHCD VISFRLPTEDRHRKMCPQMKLWMRNRLSKEKNNPCCNF
 WGNSSNQVVKKCYKENPQ $\square P V G L L P F V P \square K E Q F L E D P M P S$ LGSFDTAQVRELRDAGCDHPLAVLVGMGKDPMVHLCWEKD
 LQSFSQHTLHNCQALAGHTPRLLLRGDVELVQRLEGLGYA FSSTSLEQMLLIKKLLPDSYCALISDYDYPWYKQMIVKYH VQSFWPPTVAALRDAAGHLARALLDELVAVCADLGVVACN VSSFEAAALKREVAGVDPSVPRAKLVGANPAENEEVAREEAB - 0 VGSFYSRTVNENFRQUCPEVPTSYLEEGRRYPGKDMFTPTD SFDVELHARLQRNKTLQHIVRGLLIRTPKPQTALQLGCVQ
SFSTARRRATLARLSAPVEVVGFLIAGRVDALDQVPAQKA
 DGRYDAASNRAFAALAPEMPLQQLADEVPAAGEDAGYAHA LPSFAEEALAAARQTAPGLARALLVTAVPADWEARALHCA FTSFDQRPLIAMKKDDPKADDMLIKGGPLTPELMEDGSKR
 CFCTADNEMSDYFKEKTNYQLCYEGSEKDVAMYLITGLAG FSSFHYDVLERDKKCNPMLQTAYDGTKKTNWEELGRLTAA QNRFYLDALLEAKKALPSUQTGYLDPFQLGSLENYPVDFY LGLWHRFAAFAKNRLPYCRRSHIGNSQQLARQYFWDDVE I TSFKWDEI ATVRELDEEDFTGLIRPALALRKAFSDGCKV VIAFETAALDPAQRLDGSAPTAQLATDAADYGADGAFCHY IESFDWRTLPMVRQAEPSMPLVALWNEATWTPGSVWGADI HDQVHYHVVTTLRKKVPTLKTFFLDPDCTLVFPATPASG RDRFSVRSUQAAARLMPDVPRAFVPPKNPGALLQETNCQV LSGGNSDY SWRKTAPEMPLMSRLDPGDTAGDGAFAKTP VSSFNYQALVSFSDRSDIQVGCLFERLPMNWRKKRVNAVT FISMHLLALLRLKKDIDPASRLQYVYGAVGGNKWTKVSDELL

## 1

 VQSLDYRVIEGLHQDNPKLFVLYIQP YNFTYPQSVANG TTSQHAASLRRLAKSLPTAMRGLSHGHAFTRFPRRVAGRS LMSFSPSALEAVRSIPARKG LLSKTAPPLSLAGKFSF

 NQFMSLDLIETREKRRPDLKTGHVITFQFG DFISDKVDF VTSFHPEALAQVVRDAPGTPVSLLIDEAAVAAATELGASG GFDDRRLRMARLLTSMGPGSVAWLWVGSRPVVGPVAQVPR LLCFDKRVLQLARRAVPT LPLCLLIEDALPLADHGFTPAV ITSFKWKEI EEVRKDAPEVKTGLISSVFPLRCDRKCHKIG KQCFDIDKVLEMIREQSGLSIGWVLNEHDEATKQTAEMVKP VMSFSAAAVWRIRRAAPLLPTVLLGSGARYLGGTAATTVG


## UniRef90_R4LQD1

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UniRef90_D2ERA6
 LVLNLRRUTLELVQRAHAAGLKVVGWTVNTPDQLKLARGL VDYHYFQKHPEWI QEAKDNKILLNAWTVNDAKDMDWI IE H ICPHFRMATPRFIQRMHRKEYKVYVWTVNRPERWKRLLKS VNDEDAKLTKNRVRAMKDAGYELNVWTVNNKMRANQLANW IVNTYFPFSHPVQHLQQRGVQVVFWCLNEESDFEAAFNL
$V F S D N F W E G A R F R E C K Q A G K K V A V W T V N D P A Q M L E A V Q W$ VFSINFWEGARFREECKQAGKKVAVWTVNDPAQMLEAVQW KPEITKLAKDSGAEAYVDRQGSDHGVPTDNPAGWQAADDA FTVEYTSTEGRFVNKAHKLGKKVFVWTVNDEEVINNMLEL GFSMYFACGQAFIADAQEAGKDVYVWTVNRKDEMLEATRW LGATMNGTSRESVQKAHKEGIIVSLWPGKSVEDFMLGAY品 DDINFRALRPKAVREMHENGTKVNCWTVDWKPVARWLVKM LRAYNPSTRPGVVADLHRAGVAVMAWTVDDAAGWKTLDAG NVDDTGLTKDQVDEMKSHGYAVNVYTVNHLGRANQLFNW $V V S Y N P R G K P E V V Q A D N D A G Q A V M P Y T V D S P A D W L T L R D L$ GVAPSQGFSVYRARQAPQHGERTYVFTANRQDDLLWLHRH
 VEVFAMEQFKQAL LQFKALGLLHVVIWADRDALFYKLK AP VHVAAPFILNLESLNRYHQAGYRLAVWNLQNAQVMTEWI HH AFSMWFPDGERFRRECKQSGKHLMVWTVNEPAQMMEAARW
 LELYHEADTKDIIEEMHKNNLKVAAWTVNNLTSDERLVET VLLPFYELVDNEFMKNYSK YKVIPWTVNDMDEFNRLKNL GPRPQDKVTAGLCDRIFRSQRQIVLWHEERADDLKDMDDL YSPYFKLLDTAEVAQIHKDGLKVITPWTVNEPEDIDAVI AL VDYHYFQKHPEWIAQAKQQH:ALNAWTVNTAAEMDWLLAN PSFRGFRSRRELVVEDREDDLCVNVHTVDAPEGWDALLSA
SQYNILLN SOARYTDLTRDEVRYFKEHNVMVGAWTVKNQKEFDYFKEQ LHARKRYYKTDRLDLAFQSNMPLGFYGVDGYETYLSNPHP PDVALLAHEPGLVEAVRGAGLRVHCWTANTTDEWDDLLGR IN PSDDVLDADLVATAREEGRDVNVYTVDSWREARRPIGEL YSPAYKLVTKEMIEACKKQGMKVIPWTVNTKEEDEKLKALL LGP YYQLVNPDLVEQCHRRGI QIVAWTVDHRPDILELWDM HLYKSPGYSVQLPFEYDELNLAVDVWTVNDPQKMLKLIEGL GPLHLTVVDATTVAAAHAAGRQVHVWTPNARTEMERLVDL VVSKWFIVRKSLIRHCEERGDQVIFWC NEESDFEVAFS
 AAGLDEYTVRQLAAGLAARGGALACYTVNDAARDSALLQW
 DD ARNLYYSUYNYNRFHHEPNLENFYFTVNKREDAAKCIDD DALHMHKRHYSKRKLDLAYKANMPLRFYGIDGNEKYLVDP LHCDAALVDDGMLAEARACGVPVLCYTVNDPLLASALFAR
 VSPDYEVVDEAFVNRAHALGLKVIPATVNDAETMRAQUAA YTDESTTLSTTVTDQAHARHQAIVAWTVNDSDDMQKMTFM VLEHSLIDGPDLIARRHAEGLRVLVYTVNDARRAHQLFAW GGLSTKSVNQSMLDKLEKHHMQAHVFTVDNKDEYQKLKDM ANLNYRWLTEKHVQTLRQEGYQI WCYTVNDGDKFPLLNQ IHLNSKRTSKRQLSRVKSKGYELYCYTVNSGTFARQLMGY VNIDEDAKLQARVKMKKAGYTLNVWTVNKSLRANQLANW YSMEYSTLNNDFI WQAQLQNKPVYAWTVNAPNMMMKMMYD YHYTVFRKHPEWIRECHDLGMKVNAWTVNKTDDMKWLIDR VHLGNSERDRNPALIKKVQQYYKKPVFANNPDTLEYFLNK TGVRYRN TGVRYDNLSEALTREYRDHGMAVYAWTPDDESAWRRLADY VHPRADLCDASFVARAHEAGLTVNSWTVDDEEGAATLAEA FACLVGAEGQAFVAEAQKAGKDVYVWTVNRKDEMVEATRW YALEEFSYTNHDATLAHDKNKDLYDWT NDQKQLETYLET VGPGLDGLCLAAGRAVHAAGLRLNPWTVNTAEQLAVALAC GWGGLRVVTPRLVELARRWGTEVHVWTVDEAEEMARLLDL GGPDFRLLTSALAAQLAAQHIRLVPWTVNEPADLRAVLAL ADVFHACIVDADVVAYAKSRGVEIVVFTVNDKQRIGTLLEY EYLIIDQAEMPLTEAPWAGSWKWMVYGVKSADLAFQHYEN



|  | GVD Gl IT 210 |
| :---: | :---: |
| UniRef90_R4LQD1 |  |
| UniRef90-M3E1Q6 | GANGIFTNDDEAV |
| UniRef90-A5FE31 | KFNYITTNE |
| UniRef90_UPI00047BB5EA | GADAIFTDEDGMGRHFR |
| UniRef90_UPI000345C081 | GVDGVFTDKADELVHLL |
| UniRef90-E1BJ80 | GATGVIT D Y P |
| UniRef90-R7T1S7 | GVDVILT DKTKDWLDLR |
| UniRef90-M7NYD9 | F IR GWI T D F P D |
| UniRef90-Q01R14 | GADGl Q T D RPGELVSFL |
| UniRef90-E7RFL6 | QMDGI I T D Y |
| UniRef90_UPI000464BFF1 | NVDGI I T D NMTLLNRV |
| UniRef90-M9LUW3 | GVKAVLT DKTALFQDVR |
| UniRef90-UPIO004690BA2 | GCDYMCTD ${ }^{\text {CP }}$ QQLKKW |
| UniRef90-W9WXM4 | NLE GVIT D D P K F F K $\square$ |
| UniRef90-R5FVJ0 | GVD Y I TT N |
| UniRef90-UPIO0047540C7 | GV D A FIT N R P A E L A G WL |
| UniRef90_UPI0002E89E06 | GVD G VFT D |
| UniRef90-UPI0003B72898 | GV D G I D ${ }^{\text {N }}$ |
| UniRef90_X5EFW1 | GVRWAAT D Y P D R A R R T L |
| UniRef90-R6TG35 | GVD Y ${ }^{\text {T T T N }}$ |
| UniRef90-A0A059ML03 | GVGWVATNHPGRTKLLL |
| UniRef90_L0HJA6 | LVDIVVITD DV |
| UniRef90_UPI0002F8E37C | GI D GVIID NP |
| UniRef90-S2JC78 | QVDGVI GDNV |
| UniRef90-W4KDZ9 | GVNAILTDTTKTWLNMR |
| UniRef90_A1ZPD6 | GVDGLIT D Y P G Q |
| UniRef90_A6DS11 | GCHSISTNR |
| UniRef90-UPI00047075FD | G 1 D Y I TT D |
| UniRef90-Q6L1D1 | GVS GII |
| UniRef90_UPI0002A49365 | GATGVMT DFPTKLK D |
| UniRef90-UPI000475E5C9 | $P \vee L G I C T N R P E M M Q$ |
| UniRef90-A3XL27 | KVDAI DT D Y P ERVLE |
| UniRef90_UPI000366D151 | GFEFITTNEP |
| UniRef90-UPI000474A2F2 | GV S GII IT N QLG RLLQ |
| UniRef90_K9W4B7 | $\mathrm{G} 1 \mathrm{QR} \mathrm{\\| V} \mathrm{~V}$ N |
| UniRef90-M2NDZ0 | DIMFIFTN |
| UniRef90-UPI0002FBF277 | AV $\mathrm{C}_{\text {G WIT D F P G R }}$ |
| UniRef90_UPI000464F305 | GV D A I M T D P D RLA G WL |
| UniRef90_S6BWM1 | NI D GV VT NYT S |
| UniRef90-L9WRG5 | NVDSLI A D Y P SV |
| UniRef90_UPI00041BD45A | GVDGI I S D Y P NL |
| UniRef90-D7W129 | GI GFVTTNIPDQ |
| UniRef90-F3ZR14 | GVDGI IT N CPKQALEW |
| UniRef90_W2UEA7 | GVDGI I T D R P D L Q |
| UniRef90_UPI00040FCC4B | QVDVI I T D P T |
| UniRef90-D1BSM8 | GVD Gl VT DRADLLKEVL |
| UniRef90_UPI0003F182E1 | GAT GVMTD Y P TAL R R Y L |
| UniRef90_C5C366 | GADGFTLD DPRL |
| UniRef90-UPI00037566E5 | G VDR 1 T G D F PQLARHVQ |
| UniRef90-G8QK17 | GVAGVFTDRLD |
| UniRef90_UPIO0017458D0 | GVDAI CTDVPVKVQE |
| UniRef90-R6PWZ6 | GVD Y I T T N |
| UniRef90_UPI00037F3870 | GVGWVATNHPGRTK D WL |
| UniRef90_UPI0002C3DF76 | DCDGMTSDRPD I EELL |
| UniRef90-S2XUJ9 | HVLGWIT D Y P DKV |
| UniRef90-D2MNH4 | GVDGLLTD |
| UniRef90-A0A011PFE9 | GVAAVETDRIDL |
| UniRef90-F8NN55 | GVDVILT D F TR RWLGLLR |
| UniRef90-M1ICP4 | GVAAVIT D D |
| UniRef90-L9W474 | GPDVFVTNRPDYA |
| UniRef90_IORMH0 | GAD GIVTD Y PTLLRR M M L |
| UniRef90-S5A4C7 | DADGI I T DQ |
| UniRef90-B1Y145 | G $\mathrm{L}^{\text {D GLI }}$ S DAVDHL |
| UniRef90-D2BZZ0 | GAQTVLSDIPNL |
| UniRef90-G5JHA6 | K VK GFFTNIGD D |
| UniRef90_UPI000468DEA9 | GVQGLQT DHPEALI KY L |
| UniRef90_FOLTH8 | VDAI F S D WP S R FI |
| UniRef90_UPI00036C2E07 | GVDGVFS ${ }^{\text {d }}$ - |
| UniRef90-R7CA40 | GVDMVTTE |
| UniRef90_Q4A0S7 | GVDGI F T D H A D D $\square$ H/L |
| UniRef90-B9EB39 | GAHTIVTDRPD $\mathrm{V}^{\text {A M M L }}$ |
| UniRef90_Q040R6 | NVNG1 IT D QLA E |
| UniRef90-R5RD75 | KVDFITTTNEPVQLQNLLL |
| UniRef90-D5BI13 | GI N I Q T D R P D IVLE YL |
| UniRef90-B9L0G5 | GVRAVTT DVPQQLLEAL |
| UniRef90_D2BF61 | GVDRVIT N E T S A Y L A W |
| UniRef90-E7QUP8 | GVDG1 V |
| UniRef90-X0T8Z5 | GVDGI I T N Y P QVLK |
| UniRef90_UPI0004560B21 | GVKAVLT DK T ALLFQDLR |
| UniRef90-E6SP05 | GVD IVATDRPEQF |
| UniRef90_UPI00036CED56 | P I E GL 1 T DYPNKA |
| UniRef90_UPI000262997C | EADTITTDDPAWL |
| UniRef90-UPI0002F19171 | GFGGGTVDDPRAAMDWL |
| UniRef90-UPI0003680F9F | G VDGVLTD P P DVLRELL |
| UniRef90_UPI00035DE595 | HPWGI T T D Y P D RLLAMR |
| UniRef90-M115M7 | GVSKVIT DVPT |
| UniRef90-UPI0003B3FB42 | GVEYVETDFLP RLL |
| UniRef90_UPI0003F721DD | GVA WI A T NQPAR |
| UniRef90_UPI00035D0C2A | KVDGYFTD |
| UniRef90-G9MHZ4 | NI D GVIT D D P |
| UniRef90_D2ERA6 | S \|V|D G M I IT D D M E MLLQ E T L |




## UniRef90_UPI00045E8368 <br> UniRef90_F4CA40

A D G V V V V H H DVT VD R T S D G S G P VA K K D E N P Q G M L T LDE L L


 A D GAHVLWHDDDHTLE EL RQLDDVGSWFDPV FSGARMTTWE







 UniRef90-G7SC04


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| :---: | :---: |
| UniReforo-3R7F3 |  |
| UniRef90-D41KR7 | RVTY |
| UniRef90-J3B9Z9 | SFDHELTRHVRTLDQEVQTGLI VYGRPVLMLEQ\EASI |
| UniRef90 UPI00041034A4 | SSFHYEVLERIKKCNPMLQTAY। GTRKTNWDERLKAADA |
| UniRef90-U4QDX0 | KYQVQYRVIEGLHEDNPRLEVLYIQP YNFTYPRSVADG |
| UniRef90_COXGL9 | ( ${ }^{\text {a }}$, |
| UniRef90-UPIO00289B68C | S |
| UniRef90-G0L2K9 | GVRLVNSDMLCNMERTSSRSDYUQTMQL |
| UniRef90-R5MEB3 | RTSFHKSNTRYLDEKYPDITRSATIHEVVRFYFQSFFH1P |
| UniRef90-UP100006663388 | VTSFSLWSLFWLKLTHRPLEAG\\|LYSPLVAK |
| UniRef90 UPI000370FDF8 | VTSFHDSQUDRFGLYTDQV |
| UniRef90 MoP070 |  |
| UniRef90-UPIO0034B1FE7 | QVRLDRARCAFDRP |
| UniRef90-S4NEF2 | IHSLDYDVISGLKKQAPKLFVSYILPYNFSFPQTKA |
| UniRef90-M4V8T4 | VSSFNPVSLYKVRLFNSKIFRALLLSFEKDEKNTNYLAKP |
| UniRef90-UPIO0036D125C | MSFNKDQLQR |
| UniRef90-S70960 |  |
|  | - |
| UniRef90-F4CV) |  |
| UniRef90-UPI000374D7F8 |  |
| UniRef90 MOCST? | WRPMAEKALAVVRDIDPDV |
| UniRef90-M7UYZ4 | WGSANDVVLQKLYLQN |
| UniRef90_R6YV33 |  |
|  | $7$ |
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| UniRef90-D5AFN | Q |
| UniRef90 W8A210 | FDHDCIDRILKKAPPKLEVGYI QRKPTKRLFKRMENQR |
| UniRef90_UPI00045E | ISSFDHEQLRRVRERSPDIATAVLTNERLALPGDYLLRTG |
| UniRef90-F4CA40 |  |
| UniRef90 UPI00047DA1AA | FSSTYLEHVRAQNKDIJKIQF |
|  | ISSFNHRSLLELHRLGCPWPLAPISSG\\|PLQELEQLLKPFS |
| UniRef90-V6DL07 | HEVHYNVVRQI KSKAPEVFVSYILP YNFTYPQTPANA |
| UniRe90-G9W19 |  |
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| UniRe990_A4BJ17 | ISSFDLSALALLRQCDSAISLGVLFEDLPADIUATVQDIQ |
| UniRet90_B918 |  |
| UniRet90_L9 | WRPMHEAALAVVRDIDPDVPIGCLFWDSIGETGAITREYD |
| UniRef90 UPIO003B55255 | RVNQVLSTPVATSGGWVALALIVALGPLGFLGRLSRRVAE |
| UniRet90-R5Jp |  |
| UniRe90-7LCNO |  |
| UniRe990-ulioue47A | K DVR |
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| H8GLC3 | ISSFDHEQVRQVRQRTPAVATAVLTNERLAAFHPGTEPLG |
| UniRef90 S5TM | SFSHAA |
|  | FERAAIRHTELAPEIRTGLIIDDDLAK |
| UniRef90-F7YVF8 | SFDHSLI FDLIERYKNLKFGFLVGEELRNDPYSM |
| UniRef90_UP10003672C02 |  |
| UniRef90 SOAQS |  |
| 5C |  |
| ef90_UP10003751 |  |
| Unil |  |
| UniRef90-M2MQU | AKYLPLCQAHLPTFPVMHI GFSTWYARHFFAIPKV1 |
| UniRef90-UPIO0028971BF | MYMPIIDILKPYREEGIVPLAYEI CWDRPAPEVETCMREV |
| UniRet90_S5IEC1 |  |
| 90-G5KXJ5 |  |
| iRef90_E6LCD0 | HHQVQYNVVEQ KTQAPTIKTGYITP FNLVSPPETKADI |
| UniRef90_E9T1 $\times 5$ | FTSFLPDALLRLRQLIAPDVPRGLI TVGYPDAERHTGGIEE |
|  | VVYHYAGERKIFFSCFNPDVICIALFMKQPSYPVVYLJT |
| UniRef90 Q7L5L3 | S |
| UniRef90-UPIO00369FDE9 | SSFDWGTILSNREKFNSRYGILIDEENQLFESKADSNLDD |
| UniRef90-H0ZAW3 | WGNVNYEIVSKCFKENSDTATIFLKLKEPEKMSRSQRFVI |
| UniRe990-FOJDS |  |
| G3T6X2 |  |
| UniRef90_L7ZJG6 |  |
| UniRet90-D1NW21 | RLD ${ }^{\text {a }}$ |
| UniRef90-F4PFL1 | StLer\|l HELAPPEVPLTLCLFGKFNLKEAKMADYPF |
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| UniRer90-UP10002DDDDF2 | RNRR |
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| 俍et90_UP100042 | E K |
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| F0 | DGASARFFYEKNPNFMFEAVQDYEDN |
| ef90_D9X4V2 | DPEVARRJVHRLIGSQVWRSAQQLITIDR |
| iRet90_A0A038F | GV |
| UniRef90 J1GV7 | VSSFSQPLLMAFHQRHPQYATAVLYKSATIRPDWRCGAVA |
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| UniRef90-B4VFI | V |
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| SJBN |  |
| Ref90_R5UGLO |  |
| riRef90 UPIO004665922 |  |
| UniRef90-FOL |  |
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| UniRef90-LLLE | DTYVNTLETVLNSRVPQAMVLWLPDEDRANVQKRAPRMH |
|  | Q |
| UniRef90 E7SC04 |  |

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QDYGQLGGNKTERPQFHQDNVSVNSFVVNKPWLFSLLWCA QPRWYTWDKESMDCFRSQGPAHIILFGVNTPQEYQQALALD DGMEASDVT LKNVNELHRHGKEVHVFFNDEKKEQERVKLL GANYWRCLSTWLVPRAKAVGLEIHAWSLERRAVAKLLELR


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UniRef9O_ETSC04

| UniRef90_I3R7F3 | $\mathrm{G}\|\mathrm{~V}\| \mathrm{DG} \mathrm{~V} \vee \square \mathrm{D} \mathrm{~N}^{210} \mathrm{P}^{2}$ |
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| UniRef90-D4IKR7 | GFDFITTTDRPD |
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| UniRef90-UPI00041034A4 | VVLGWIT D Y P D K V |
| UniRef90-U4QDX0 | QVDGLI TDKVSLAK |
| UniRef90_COXGL9 | NVDGII T D D L HELQ |
| UniRef90_UPI000289B68C | GVDSAIS |
| UniRef90_G0L2K9 | GVD F VLT DN |
| UniRef90-R5MEB3 | GADAVFTDLPDLLAYETLN |
| UniRef90-UPI000466B388 | GVDYLIT D DPQKLRSHL |
| UniRef90-UPI000370FDF8 | GAHTIVTDFPD |
| UniRef90-T2XMV9 |  |
| UniRef90-M0P070 | GVDG\IA D R WD |
| UniRef90-UPI00034B1FE7 | GVDGIVSDNTTAL R GLL |
| UniRef90-S4NEF2 | NVDGI I T DNL |
| UniRef90-M4V8T4 | EVHGI I S DKPELFS QL |
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| UniRef90_D5AFM9 | QVDGVIT DNMTDLQSLL |
| UniRef90_W8A |  |
| UniRef90-UPI00045E8368 | GVSGLIS D Y P N R VREVL |
| UniRef90_F4CA40 | GANUI QTDEPEKLLRYLN |
| UniRef90_UPIO0047DA1AA | GADAl T S N |
| UniRef90-A0YC06 | GVA GIF T D $\mathrm{I}_{\text {P T Q M R V VR }}$ |
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| UniRef90-G9WI19 | NVDSII T D Y PQRLKS |
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| UniRef90-B91869 | HVDAVVTNNPNLLQQL |
| UniRef90_L9UFP0 | GVDGLIA ${ }^{\text {d }}$ Y P NL |
| UniRef90-UPI0003B55255 | GVDGLMTDDAEALAEV |
| UniRef90-R5JRJ1 | GI D Y I T NEPVK |
| UniRef90-17L9N0 | GVDVVATNEPEVAGATLG |
| UniRef90-UPI00047AC040 | GATAVMT DRPDELLKYL |
| UniRef90-C7YRD2 | NTD GVIT D D PRL |
| UniRef90-H8GLC3 | GVTGLIS D Y P N RVREVL |
| UniRef90-S5TMI6 | GVEVLAT D P P Q L ALDDVL |
| UniRef90_UPI00026C590A | HPEMI CTN WPDRW |
| UniRef90-F7YVF8 | D A V IT D DV |
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| UniRef90-F4PFL1 | NVDGYFTND ${ }^{\text {d }}$ RFTKELL |
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| UniRef90-B4VFN4 | ELDGVTTDFPE |
| UniRef90-UPI0004695420 | GVDGVVT DRADLAVA |
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[^1]

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$G A S Y W R C L V T G L V P R A D V V G L E D H A W T \square E R P A L A R L L E C R$


[^2]

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