## QUERY

 UniRef90_Q005Y0UniRef90-Q07591 UniRef90- 443261 UniRef90 H3JUK5 UniRef90_OO6896
UniRef90_O6KAV7 UniRef90_O31000 UniRef90-17CD43 UniRef90-17CD43 UniRef90-BEA5T6 UniRet90-UYG62 UniRef90-W1J5R5 UniRef90-U5Y6W1 UniRef90-A7ZRD2 UniRef90_A7ZRD2 UniRef90-A7ZRD2 UniRet90_D3VAU6 UniRef90-D3VAU6 UniR Refo D3VAU6 UniRef90-UPIOOO35F0870 UniRef90-UPIOOO35F0870 UniRef90-T9A7N2 UniRef90-T9A7N2 UniRef90-T9A7N2 UniRef90-A0АОЗ4T7P0 UniRet90_A0A034T7P0 UniRef90_K8VYA8 UniRef90-N1NSX4 UniRef90-N1NSX4 UniRef90_A0A034T600 UniRef90-Y11887 UniRef90-Y Y1887
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UniRef90_S5UP
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ASTTETKADKTTAVANGQDATTYTVKVMKGDKPVSNQEVT ${ }^{20}$ ASITETKADKTTAVANGKDAIKYTVKVMKNGQPVKGYDVT ASITE:KVDKTDATADNKDT: EYTVKVMKGGNPISGQKVT ASITEIKADKTTAVANGKDAIKYTVKVMKNGQPVNNQSVT A S:ITE:KADKTTAVANGKDAVTYTVKVMKNGLPEKGHVVT
 EVTDFTHDKNSAAANNTEYITFTAKVTKGGSLQDNVPVS ASITDFTADKTSAKADGIDEATYTATVKKNGVAQANVPVT -TEVKADKTTAVANGKDAVTYTVKVMKDGKPEASGEEVT QVTANRTQAKADGQDSVRYTVVVKDDGEPVSDQPVN
 LICDKSTATADGQDSALCTVDVRDADQPIAGREIV LICDKSTAIIADGQDSALCTVDVRDADQPIAGREIV
 GGEENILTATVKDAGRPVEGQTVS akTaAmQDTANNAVARGDHNTVAVTVRDHQNLLQGQNVT AKIAAMQI TANNAVAR RDHNTVAVTVRDHQNLLQGQNVT AK】AAMQUTANNAVAR RDHNTVAVTVRDHQNLLQGQNVT ETTADKSTALANGTDADSYTVRVSKNGVSQANTDVD strvvota aladgk QVTANKTQAKADGHD
QVTANKTQAKADGH
AK $\square \mathrm{Y}$ ALTA ASKKQLLADGKDNVKLTMLLQDNNHPITGETIL SVIIADKTHANGNGQEAIVLTAMVEDIGLPVENQAVI
 SDISADKSNAYANGEDADEWTIQVRKSDGSAAGVKIL LEANQTSVAASGYDNVTFRAKITKDGSPVAGETIF LEANQTSVAASGYDNVTFRAKITKDGSPVAGETIF
 LTVTADNAFANGTATNAVQALVMDAGQPI ANQAVS AQUVAMQVTTGNVLANGSDRHTVNVRVEDQGNVLPEQTVT AQUVAMQVTTGNVLANGSDRHTVNVRVEDQGNVLPEQTVTT AQUVAMQVTTGNVLANGSDRHTVNVRVEDGNVLPEQTVT AKI AAMHITANNAVAR AKI AAMHITANNAVAR AKI AAMHITANNAVAR AKIAAMHITANNAVAR

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 A AlVAMQVTTGNVLANGSDRHTVNVRVEDQGNVLPEQTVT A ${ }^{\text {a }}$ - MOVTTGNVLANGS AQUVAMQVTTGNVLANGS
AQlVAMQVTTGNVLANGS
SSLTADK
ATH ATHSTLTINKNIIASDGKDAIVLSVTARDNNNPVTGAVIT AQIVAMQVTTGSVLANGSDQHTVNVRVEDQGNVLPEQTVT A QLVAMQVTTGSVLANGSDQHTVNVRVEDQGNVLPEQTVTT AQIV VMQVTTGSVLANGSD AQIVAMQVTTGSVLANGS
AQUVAMQVTTGSVLANGS ASVASFTVTTNDAAANGS AKI AAMQITANNAVAR A K A A A M O T A N N AVAR
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AK】AAMQ T DROANAVAR SKLEVSKNEVVADGNDSATMTATVRDKGNLLNDVKVT SKLETKDGAVADGVDYNEATATIVDAENPI ANKDVV SKLEVTKDGAVADGVDYNEATAT:IVDAENP:ANKDVV
SKLEVTKDGAVADGVDYNEATATIVDAENPI ANKDVV $A M V A E L K V V S D G A T A D G K A E N Q L K V S V T D N G N V I E D K P V T$

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UniRef90-O6KAV7 UniRef90_O31000 UniRef90-17CD43 UniRef90-17CD43
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 FFTDFGALDKTKVTTDQSGYATVKLSSSTSGKAIVRAKVS FTTNFGMFNGKSATTGSDGRATITLTSSSAGKATVSATVS
 FSIVSGTLGANSARTDGNGKATVTLKSATPGQVVVSAKTAA FTTTLGTLSKSTEKTNTNGYRKVSLTSANQGKSLVSASVT WSSDKGELSQTTQKTDAQGLATVLLRSHHHGEHRVQVSVG WHVDSGN WQTQGTTDAQGRTTTTWESTTPGTATI TADAY WHVDSGNLWQTQGTTDAQGRTTTTWESTTPGTATHTADAY WSTDHGQ GDEQVITDSRGKARARVISRKAGVARVRADIS WSTDHGQUGDEQVITDSRGKARARVISRKAGVARVRADIS FSTNFGDFNGKSQTQNADGRATITLTSSSAGKATVSATVS WSVTNGGAVERTSVTNSAGKAIATLTNTSKAKTDISAMAD FTVVNGAANGGVTTDKDGTASVNLASDQAVNSLIKAEIN
 VTTTAGSLSSPRVTTGADGVATVKLTSNVANNVIVSAKTA VTTTAGSLSSPRVTTGADGVATVKLTSNVANNVIVSAKTA FSATRGKISAQGVTNQK GUIEMPLTSMTSGISEITATAN WASDKGELSQTRQNTDAQGQTSVVLCSRQRGLHRVRVSVD LIAATSGTLSKNTVTTDDNGVAYAKLTDTAAENVTVTATTP FNSSLEGTTVSEVVDGGDGTYVAYLTGUKTGTVTVVASVK WHTDNGILSSAETRTDSQGLTQ1QLTSTVAGAHRVWIQVD WHTDNGILSSAETRTDSQGLTQIQLTSTVAGAHRVWIQVD FSASNGATVTPTVLTNSNGVAIASUKSTQSGISTITASFN FATTHGELSKTTAETDTEGKVTVRLTAKAPGEAVVSAACS WASNLGMLLSAASAVTDHEGVATVSLVSDKPGMAHVTASI
 FTASNGATVTTIGTTDADGUASATLTSTTVGIGSNVMASVN FTVTKGAAVSADIRTDAHGMAEVDLSSTVADASTVEAKVN FTVTKGAAVSADIRTDAHGMAEVDLSSTVADASTVEAKVN FTVTKGAAVSADIRTDAHGMAEVDLSSTVADASTVEAKVN FTVVNGAANGGDVTDKDGTASVNLASDQAVNSLIKAEIN
 FTVVNGAANGGVTTDKDG|LASVNLASDQAVNSLIKAEI N F VPDDVEGQISAVSEHDGVYTATETSTKPSVGSIAVSVN WSADA VGQSAVEHGVATF WSADAATLLQQMTTTDEQGVAQVTLHRDKAGTAKVTALLS WSADAATLLQQMTTTDEQGVAQVTLHRDKAGTAKVTALLS WSSTGGKLSKAATKTDAKGKSSVKLTASTAGQLTVTATVD FTVTKGAAVSADTRTDAHGMAEVDLSSTVADASTVEAKIN
 FTVTKGAAVSADIRTDAHGMAEVDLSSTVADASTVEAKI N FTVTKGAAVSADI RTDAHGMAEVDLSSTVADASTVEAKI N FTVTKGAAVSADIRTDAHGMAEVDLSSTVADASTVEAKIN F VQDGLEGQLSAVNEQNGVYTATFTATKPGLGSLGVAVN FAAPTGTGSQI SDVTEDNGVYSAAFTATQAGSGQIAVFVD FAAPTGTGSQISDVTEDNGVYSAAFTATQAGSGQI AVFVD FTVTKGAAVSADIRTDVHGMAEVVLSSTVADASTVEAKIN FTVTKGAAVSADIRTDVHGMAEVVLSSTVADASTVEAKI N
 FTVTKGAAVSADIRTDVHGMAEVVLSSTVADASTVEAKIV N
 FSAPGDVKIGTEATTNEAGTATSTMTSTKAGSYTITALVN
 FTVVNGAANGGIVTTDKDG|ASVNLASDQAVNSL:KAE: N FTVVNGAANGG| VTTDKDG|ASVNLA
 FTVVNGAANGGIVTTDKDG|IASVNLA FTVVNGAANGGUVTDKDG\|ASVNLA FNVNSAAAKSQTEVNSHDGIIATATLTSDQAVNSLIKAEIN FDITNGTTSQQTVTTDAAGKAVVRITSTSAGQATIAATVD FDITNGTTSQQTVTTDAAGKAVVRITSTSAGQATHAATVD FDITNGTTSQQTVTTDAAGKAVVRITSTSAGQATIAATVD


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UniRef90 O6KAV7 UniRef90－Q6KAV7
UniRef90＿O31000 UniRef90－17CD43
UniRef90－17CD43
UniRef90－B5A5T6
UniRef90＿U5Y6R2
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UniRef90 UPIOOO419C644 UniRef90-UPIO004
UniRef90 C4UDV UniRef90-C4UDV3 UniRef90-C4UDV3 UniRef90-C4UDV3 UniRef90-X8LIDO
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UniRef90 - $55 B 6 \times 7$ UniRef90-UPI000419C644 UniRef90-UPIO00419C644 UniRef90-UPIOO0419C644 UniRef90-UPIO00419C644 UniRef90-C4UDV3 UniRet90_C4UDV3 UniRef90-C4UDV3 UniRef90- 88 LIDO UniRef90-A9MKL6 UniRef90-A9MKL6 UniRef90_A9MKL6 UniRef90_A9MKL6 Uniinefol-A9MKL6 UniRef90 C5B8S8 UniRef90-C5B8S8 UniRef90-C5B8S8 UniRef90-C5B8S8 UniRef90-K1C222
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 GFSKNPTHKFSQAQQSPGRYE:EDTGTQSGTAQUGVMVN FHADVAHFLSTDYATDSRGDASASLVSPSALEARVTATVN
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F S
 WRAQGGGQYQGQSYTGKTGVAETKL RASVLGTYKMEAQV N
 $W R A Q G G G Q Y Q G Q S Y T G K T G V A A E T K L L R A S I L G T Y K M E A Q V$
 F TVVTVK GA A V S A D I F TVVTK GAAVVADI RTDAHGMAEVVDLSSTVAADASTVVEAKVN
 FTVTKGAAVSADI RTDAHGMAEVDLSSTVADASTVEAKVN













 WK L R G L A D D DF S T Y T D A Q GI A K T K V T S H V A G L L Q M S A Y L D WK L R GLA D D D F S TY T D A Q G I A K T K V T S HVA G L L M S A Y L D FTVVTK GAAVFANARTDAHGMAEVDLSSTVADASTVEAKIVN
 FTVTKGAAVFANARTDAHGMAEVDLSSTVADASTVEAKIN F TVVTK GA A V F A N A R T D A H G M A E V D L S S TVVA DA S T V EA K I N

 | F | $T$ | $V$ | $T$ | $K$ | $G$ | $A$ | $A$ | $V$ | $F$ | $A$ | $N$ | $A$ | $R$ | $T$ | $D$ | $A$ | $H$ | $G$ | $M$ | $A$ | $E$ | $V$ | $D$ | $L$ | $S$ | $S$ | $T$ | $V$ | $A$ | $D$ | $A$ | $S$ | $T$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $F$ | $T$ | $V$ | $E$ | $A$ | $K$ | $I$ | $N$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |





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 F TVVTK G A A V S A DI R T D A H G M A E VVDLS S TV A D A S T V E A K I N $\left.\begin{array}{ll|l|llllllll|llllllll|l|l|lll|l|llllll|lll|ll}F & T & V & T & K & G & A & A & V & S & A & D & I & R & T & D & A & H & G & M & A & E & V & D & L & S & S & T & V & A & D & A & S & T & V & E\end{array}\right) A$

 F TVVTK G A A V S A D I R T D A H G M A E V D | $F$ | $T$ | $V$ | $T$ | $K$ | $G$ | $A$ | $A$ | $V$ | $S$ | $A$ | $D$ | $I$ | $R$ | $T$ | $D$ | $A$ | $H$ | $G$ | $M$ | $A$ | $E$ | $V$ | $D$ | $L$ | $S$ | $S$ | $T$ | $V$ | $A$ | $D$ | $A$ | $S$ | $T$ | $V$ |
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| $F$ | $T$ | $A$ | $K$ | $I$ | $N$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |




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| UniRef90_S5UPS1 | G T |
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| UniRef90-S5UPS1 | G T |
| UniRef90-V1X5P1 | G S S VS |
| UniRef90-V1X5P1 | G S SV S |
| UniRef90-V1X5P1 | GS SVVS |
| UniRef90-A1JJL5 | GTSAPVQAGKl |
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| UniRef90-A1JJL5 | GTSAPVQAGKIE |
| UniRef90-V5B6X7 | G T S |
| UniRef90-V5B6X7 | G T S |
| UniRef90-V5B6X7 | G T S |
| UniRef90-UPI000419C644 | SGTTP APDVI |
| UniRef90-UPI000419C644 | SGTTP APDVI |
| UniRef90-UPI000419C644 | SGTTP APDVI F |
| UniRef90-UPIO00419C644 | SGTTP APDVIF |
| UniRef90-C4UDV3 | ANDLLIN Q D |
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| UniRef90-C4UDV3 | A NDLLINQD |
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| UniRef90-F1ZR72 | A DKNIH Q SVTVT |
| UniRef90- X8LRZ2 | YSTYTAQSPTI SVYT |
| UniRef90-X8LRZ2 | YSTYTA Q P T I SVVYT |
| UniRef90-X8LRZ2 | Y STYTA QSPTISVYT |
| UniRef90-V6MWI8 |  |
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| UniRef90-V8KJU0 | QS S D K TVNFV |
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| UniRef90-F0JY33 | NSQKAV |
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| UniRef90-X7IWI5 | QS S D K TVNF |
| UniRef90-X7IW15 | QS S S KTVNFI |
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LK|IT K N N S\|IA D GKTPNHAVAT|V|TDNNHP|I|ANTQ|V|Q EVTDDGALADGSTPDTVKFTVTDSDSPIVGQEGV
 A T ITS N IEEVIG S G A R A N G $\square D V N T V T A M V T D A G R R V S D E T V L$ SRALAD GKAKQTYKV D R A L A

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## A

## AD K


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AKVISITGAEKTITV
AKVI S:I TGAAEKT:ITV
AKVISITGAEKTITV
TVTGDKALANGS
TVTGDKALANGSAAVGVDFVVKDAGNAVVNREVV AHFATLDASKTTALANSQDAISMTAHVVDANNPVQGVTVH AHFATLDASKTTALANSQDAI SMTAHVVDANNPVQGVTVH AHFATLDASKTTALANSQDABCMTAHVVDANNPVQGVTV H AHFATLDASKTTALANSQDAGISTAHVVDANNPVQGVTVH AK 1 KNVAVVGNHPEPNGSSSLSYDTVVEDNGPVGGVILN AKIKNVAVVGNHPEPNGSSSLSYITTVEDNGNPVGGVILN AKIKNVAVVGNHPEPNGSSSLSYITTVEDNGNPVGGVILN AKIKNVAVVGNHPEPNGSSSLSYITTVEDNGNPVGGVILN
 A T T S E L
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V V $T$
AKVVTIDSNKKQVVANNNDTGRVTALVMDGSHPLSGVTVN
 AKVISITGAEKTITVGGENITLRILVQDANNVIAGQRVR
 A K V I S
$L Q G A E K$ GQPAD G
 1 A DPNS IVGDGF




 AKI I ELAPVPDDSI A GNSSGSVI TATVVDNNGPVKGVTVN AKII ELAP V V P D SII A G N S S G SVI T A TVVDNNGPVKGVTVN | $A$ | $K$ | $I$ | $I$ | $E$ | $L$ | $A$ | $P$ | $V$ | $P$ | $D$ | $S$ | $I$ | $I$ | $A$ | $G$ | $N$ | $S$ | $S$ | $G$ | $S$ | $V$ | $I$ | $T$ | $A$ | $T$ | $V$ | $V$ | $D$ | $N$ | $N$ | $G$ | $P$ | $V$ | $K$ | $G$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $A$ | $K$ | $I$ | $I$ | $E$ | $L$ | $A$ | $P$ | $V$ | $P$ | $D$ | $S$ | $N$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $I$ | $I$ | $A$ | $G$ | $N$ | $S$ | $S$ | $G$ | $S$ | $V$ | $I$ | $T$ | $A$ | $T$ | $V$ | $V$ | $D$ | $N$ | $N$ | $G$ | $P$ | $V$ | $K$ | $G$ | $V$ | $T$ | $V$ | $N$ |  |  |  |  |  |  |  |  | $V V V L Q T S K A E I F G N G V D E T T L T A T V V D F D N V V K N L S V A$ $V V \vee L Q T S K A E I F G N G V D E T T L T$




 A Q A DLVVIKDGSVADGAMANMLQVKVTDNGNVLAGQTVS





$A R V \vee L L T P G E A S G V A N G T D A L V F T A T V E D G G N P \vee A G I T V N$ UniRef90_UPI0004721100 UniRef90_UPI0004721100 UniRef90_UPI000472110C UniRef90-X8LR39 UniRef90-X8LR39 UniRef90_X8LR39 UniRef90-X8LR39 UniRef90_S5GHF3 UniRef90_S5GHF3 UniRef90_SOVVD6 UniRef90_G9Z4V5 UniRef90_S1F9X7
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WK\|IDKATTKNLQTTTNASGQVTTDFTSTAAGTVILITADAG
 WS A D SA QL S A S Q T S T DE TG A A Q 1 QVV S SK DVITTTVVVTA QL Q WS A D S A QLL S A S Q T S T D E T G G A A QI Q VV S S K DV I T T V V T A Q L Q

 WS A S E V K F S Q A K T K T NA Q GE T T T TTITTSTKAEMVIVVTASTN
 WSVP GI KVVREASVTDNNGEDQTSTS STVAGGVIVTGRAG

 $F$ TLPA G L S T Q V R V T T D S N GVVAK L D L I S L T P G T Y S L Q A QV G
 WSTDDGT FEQP QTRGD A DGFATARLRSDLSSGEALV DARVN


 $V$ T A G N G A T V A A P T $V$ V
 FRTSPA QLSLNARNTNENGDAEVTLKGTVLGVHTAEATLL

 F T A T N GVVA T T S A K T D E N G K V T T N
 FEANNGAIIT PSAVT DALGRVVATLTNMNVGVTTVTASAB LS A T A H I Ti G D T A Y T D N N GY A Y V N L L S T Q P GVVY QV T A T L D













 LS A T T NITIIGDTAYTDNNGYAYVNLLSTQPGVYQVTATLD LS A T T N I T I G D TA A Y T D N N GY A Y V $L$ S A T T N I T T I G D T A Y T D N N GY A Y V

 A SVVSGANLVKDS QVTDNSGKVRFEVTSTKAESVSVVVDVG A SVVGANLVKDS QVTDNSGKVRFEVTSTKAESVSVVVDVG
 FTSNAATTNGGQAVTNEQGKATVTYTNTRARPDTVEASLE

 | $F T S N A A T T$ | $N G G Q A$ |
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SSNASRNVTFV SSNASRNVTFV SSNASRNVTFV SSNASRNVTFV SSNAASRNVTFV SNNS LQAATVN SNNS LQAATVN SNNS LQAATVN SNNS LQAATVN SNNS LQAATVN
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UniRef90 H7EGBO UniRef90-H7EGBO UniRef90-UP1000465CCC6 UniRef90-UP1000465CCC6 UniRef90-UP1000465CCC6 UniRef90 UP1000465CCC6 UniRef90-UP1000465CCC6
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ARVVLLTPGEASGVANGTDALVFTATVEDGGNPVAGITVN ARVV ARVVVLTPGEASGVANGVDALVFTATVEDGGNPVAGLTVN

 A Q AQI ALEVQYAVADGSANTLRARTDAGNALAGQTVS AQUAVLEVTGQYYAVADGSTANTLRARVTDAGNALAGQTVS A 1 AVLEVVTQDYAVADGSTANTLRARVTDAGNALAGQQTVS
 AQUSALDIIKNKALADGQSSNKLQVTVKDNGNPLANSQVD
 ПTTMTANPGS\|DDGVS ATLEVDGSTPVANDNDAFTLTATVKDGGNLLPGAVVV ATLEVDGSTPVANDNDAFTLTATVKDQGNLLPGAVVV E $\square$ AA QMSKDE:TGNGVD VKSDDQPADGKSASVITASVVNANGPVSGVTVN SPSGAIANGOAAVTVITSITDNGHPVADQQIS


 AQFTSLSPDKKEAVADGNATIRWTATVEDANNPLSGVDVA AQFTSLSPDKKEAVADGNATI RWTATVEDANNPLSGVDVA AQFTSLSPDKKEAVADGNATDRWTATVEDANNPLSGVDVA LNVTENNF:ANNVGMTQLQATVTDHGNPLANEPV䍝
LTVTKDNALADGTDRNTLATTVADRGNPVGNPVVG AMMNNMMVTRNNALADGNSANAVQVEVTDNGNALAGESVT

DETTK SGAVADNSATNALSGTVKDHGNTVPNVSVT SGAVADNSATNALSGTVKDHGNTVPNVSVT SGAVADNSATNALSGTVKDHGNTVPNVSVT AK $\square$ S DMRVMTVNVVADTDDMHTVQVTVNDHGNTVKQSAVS VMTVNVVADTDDMHTVQVTVNDHGNLVKQSAVS
 SALQLSQSTIVADGNTSSTLQLTLKDRGNPLVRTRVA AHLDKLTSSTTSVLADGKTAITLTANVVDSGHPVKNEQIN AHLDKLTSSTTSVLADGKTAITLTANVVDSGHPVKNEQIN A HLDKKTSSTTSVLADGKTAITLTANVVDSGHPVKNEQI N AHLDKLTSSTTTSVLADGKTAITTLTANVVDSGHPVKNEQIN A HLDKLTSSTTSVLADGKTAITTLTANVVDSGHPVKNEQIN



UniRef90 E3HUS7 UniRef90_E3HUS7
UniRef90-_7BVVH2 UniRef90-T7BVH2 UniRef90-T7BVH2 UniRef90-T7BVH2
UniRef90- T7BVH2 UniRef90_U2M9K1 UniRef90_L4ETZ6 UniRef90-L4ETZ6 UniRef90-L4ETZ6
UniRef90-L4ETZ6 UniRef90_L4ETZ6 UniRef90_G9Y4N6 UniRef90_G9Y4N6 UniRef90-G9Y4N6
UniRef90 UPI00046 UniRef90-V4BSE8 UniRef90-V4BSE8 UniRef90_V4BSE8
UniRef90_V4BSE8 UniRef90-V4BSE8 UniRef90-V4BSE8
UniRef90-W8UM79 UniRef90-W8UM79 UniRef90-W8UM79 UniRef90_UPIO003490D31 UniRef90-Q1IFC7 UniRef90_UPI0004639665 UniRef90_L4JUW1 UniRef90-L4JUW1 UniRef90-DOZAL1
UniRef90-D0ZAL1 UniRef90-DOZAL1 UniRef90-DOZAL1 UniRef90-DOZAL1 UniRef90_DOZAL1
UniRef90_DOZAL1 UniRef90-DOZAL1 UniRef90-B2U5LO UniRef90-E3FWA8 UniRef90-E3FWA8 UniRef90-H1FHZ3
UniRef90_H1FHZ3 UniRef90-H1FHZ3 UniRef90-H1FHZ3 UniRef90-H1FHZ3 UniRef90-H1FHZ3
UniRef90-H1FHZ3 UniRef90-D4BH79 UniRef90_UPI0004635F59 UniRef90-WOLCT5 UniRef90-AOAO29MQ84 UniRef90_A0A029MQ84 UniRef90_A0A029MQ84
UniRef90_A0A029MQ84 UniRef90-A0A029MQ84 UniRef90_A0A029MQ84 UniRef90_Q4ACI6 UniRef90_C9WKN4 UniRef90-D5CHN3 UniRef90-D5CHN3 UniRef90_D5CHN3
UniRef90_F1ZIR7 UniRef90-F1ZIR7 UniRef90_V1TLD1 UniRef90-J2IX83 UniRef90-W8U8X1 UniRef90_C4SU11 UniRef90_C4SU11
UniRef90 C4SU11 UniRef90-M0Q430 UniRef90-W0AV15 UniRef90_UPI000465AF48 UniRef90_UPI000465AF48 UniRef90-UPIO00465AF48 UniRef90_UPI0004204CFB UniRef90-H7EGB0 UniRef90-H7EGB0 UniRef90-H7EGB0 UniRef90-H7EGB0 UniRef90-UPI000465CCC6 UniRef90_UPI000465CCC6 UniRef90_UPI000465CCC6 UniRef90-UPI000465CCC6 UniRef90_UP1000465CCC6
UniRef90 W1 AH57 UniRef90-W1AH57 UniRef90_W1AH57 UniRef90_W1AH57

WT A NLLGVI|ASASIVT NANSQATVLLTA\|V|PGMATITAKAA WTANLGVI ASASVT NANSQATVLLTAIVPGMATITAKAA



 VLGGNGATVSPTVI TGPDGTVEDSVTSQTAGASTVTASIN

 VLGGNGATVSPTVITGPDGTVEISVTSQTAGASTVTASIN
 LSATNGATNGSTVMTDAEGQALLLVTNTTVGDSTITARINN WT LSS SA LLKAFDTTTNEKGQARAEFVSDKAGQVTLKVNAG


 F E A D N G A V $T$ T TV 1





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 WRVVDN S K L A S A S T K T N E A G Q A V V T A S T T T A G T A T V

 FTANKGA
FTASSDTLTPASGMTNSSGESSVTKSGSTGGKTTDTATDS



















| UniRef90_E3HUS7 | DGDAGKTASA\|V| |
| :---: | :---: |
| UniRef90-E3HUS7 | DGDAGKTASAV |
| UniRef90-T7BVH2 | NGNRDTKTVNI |
| UniRef90-T7BVH2 | NGNRDTKTVNI |
| UniRef90-T7BVH2 | NGNRDTKTVNI |
| UniRef90-T7BVH2 | NGNRDTKTVNI |
| UniRef90-T7BVH2 | NGNRDTKTVNI |
| UniRef90-U2M9K1 | GAAVEMKSHDVV |
| UniRef90-L4ETZ6 | S S SLS RNVT FVV |
| UniRef90-L4ETZ6 | S S SLS R NVTFV |
| UniRef90-L4ETZ6 | S S SLS R NVTTFV |
| UniRef90-L4ETZ6 | S S SLS R NVTTFV |
| UniRef90-L4ETZ6 | S S SLL R NVT F V |
| UniRef90-G9Y4N6 | GS SKT QVVTFV |
| UniRef90-G9Y4N6 | GS SKTQVVTFV |
| UniRef90-G9Y4N6 | GSSKTQVVTFV |
| UniRef90_UPI000462F2AA | E LSAEQQSTFV |
| UniRef90-V4BSE8 | NGNRDTKTVNI |
| UniRef90-V4BSE8 | NGNRDTKTVNI |
| UniRef90-V4BSE8 | NGNRDTKTVNI |
| UniRef90-V4BSE8 | NGNRDTKTVNI |
| UniRef90-V4BSE8 | NGNRDTKTVNI |
| UniRef90-V4BSE8 | NGNRDTKTVNI |
| UniRef90-W8UM79 | GVS Q T K D |
| UniRef90-W8UM79 | GVS Q TKD |
| UniRef90-W8UM79 | GVSQTKD |
| UniRef90-UPI0003490D31 | GI N A K V D T R F $\square$ A D $\square$ T |
| UniRef90-Q1IFC7 | LDSQAIAPP |
| UniRef90-UPI0004639665 | NGSSKSVQVAVT |
| UniRef90-L4JUW1 | GNDQPSNAQSVTFV |
| UniRef90-L4JUW1 | G NDQPSNA Q SVT FV |
| UniRef90-DOZAL1 | G N |
| UniRef90_DOZAL1 | G N |
| UniRef90-DOZAL1 | G N |
| UniRef90-DOZAL1 | G N |
| UniRef90-DOZAL1 | G N |
| UniRef90-DOZAL1 | G N |
| UniRef90-DOZAL1 | G N |
| UniRef90-DOZAL1 | G N |
| UniRef90-B2U5L0 | S GG K VT A P DVIF |
| UniRef90-E3FWA8 | GKVGSV |
| UniRef90-E3FWA8 | GKVGSV |
| UniRef90-H1FHZ3 | N NGAS DNKTVHFI |
| UniRef90-H1FHZ3 | NNGAS DNKTVHFI |
| UniRef90-H1FHZ3 | NNGAS DNKTVHFI |
| UniRef90-H1FHZ3 | NNGAS DNKTVHFI |
| UniRef90-H1FHZ3 | NNGAS DNKTVHFI |
| UniRef90-H1FHZ3 | NNGAS DNKTVHFI |
| UniRef90-H1FHZ3 | NNGAS DNKTVHF |
| UniRef90-D4BH79 | GS SKS |
| UniRef90-UPI0004635F59 | DKSESV |
| UniRef90-W0LCT5 |  |
| UniRef90-A0A029MQ84 | NGNRDTKTVNI |
| UniRef90-A0A029MQ84 | NGNRDTKTVNI |
| UniRef90-A0A029MQ84 | NGNRDTKTVNI |
| UniRef90-A0A029MQ84 | NGNRDTKTVNI |
| UniRef90_A0A029MQ84 | NGNRDTKTVNI |
| UniRef90_A0A029MQ84 | NGNRDTKTVNI |
| UniRef90-Q4ACI6 | DQTQGVDITTFAN |
| UniRef90-C9WKN4 | DVDTEVKAAAVE |
| UniRef90-D5CHN3 | GSTAAINAEPVTFl |
| UniRef90-D5CHN3 | GSTAAI NAEPVTFI |
| UniRef90-D5CHN3 | GSTAAI NAEPVTFI |
| UniRef90_F1ZIR7 | S Y GV ${ }^{\text {S }}$ |
| UniRef90-F1ZIR7 | S Y GVV |
| UniRef90-V1TLD1 | GSGNHRD Q TVT F |
| UniRef90-J2IX83 |  |
| UniRef90-W8U8X1 | GF A ENDS LLVNF LT |
| UniRef90-C4SU11 | TNTTAAKNST |
| UniRef90-C4SU11 | T NTTAAKNST |
| UniRef90-C4SU11 | T NTTAAKNST |
| UniRef90-M0Q430 | N N N Q A S V IT T |
| UniRef90_W0AV15 | G $\$ S Q S VD V ${ }^{\text {V F }}$ |
| UniRef90-UPI000465AF48 | G K T Q |
| UniRef90-UPI000465AF48 | G K T Q |
| UniRef90-UPI000465AF48 | G K T Q |
| UniRef90_UPI0004204CFB | GQPLPLSPVAV |
| UniRef90-UPI0004204CFB | GQPLPL S PVAV |
| UniRef90-H7EGB0 | NQAETLKTDTLS F |
| UniRef90-H7EGB0 | NQAETLKTDTLSF |
| UniRef90-H7EGB0 | NQAETLKTDTLS F |
| UniRef90-H7EGB0 | NQAETLKTDTLSF |
| UniRef90-H7EGB0 | NQAETLKTDTLSF |
| UniRef90-UPI000465CCC6 | VNPQDS GLQKTVT F |
| UniRef90-UPI000465CCC6 | VNPQDS GLQKTVTF |
| UniRef90-UPI000465CCC6 | VNPQDS GLQKTVT |
| UniRef90-UPI000465CCC6 | VNPQDS GLQKTVT F |
| UniRef90-UPI000465CCC6 | $V$ NPQDS GLQKTVTF |
| UniRef90-W1AH57 | Q GSQA |
| UniRef90-W1AH57 | QGS QA |
| UniRef90-W1AH57 | QGSQA |
| UniRef90_W1AH57 | QGS Q A |

 UniRef90-A0A029LZA0 UniRef90_G9YOE3 UniReffo-H5UZX5 UniRef90-H5UZX5
UniRef90 W3V7B3 UniRef90 EOWQD2 UniRef90-W0LFT2 UniRef90-D2U3C1 UniRef90-A4V7E0 UniRef90-WoLK95 UniRef90-W0LK95 UniRef90-W0LK95 UniRef90-C6VBU7 UniRef90_СС4ТWH0 UniRef90_C4TWH0 UniRef90_С4TWH0 UniRef90_С4TWH0 UniRef90_С4TWH0 UniRef90-F8CMN8 UniRef90-E9XVE7 UniRef90 W1G7X9 UniRef90-C4SDT7
UniRef90-C4SDT7 UniRef90-U2NNP2 UniRef90-A9E8N8 UniRef90_WOH2B7 UniRef90-COAZ19 UniRef90-R9VPX2
UniRef90_M1SGG4 UniRef90-M1SGG4 UniRef90_M1SGG4 UniRef90-M1SGG4 UniRef90-M1SGG4 UniRef90-M1SGG4 UniRef90-M1SGG4 UniRef90_M1SGG4 UniRef90_M1SGG4 UniRef90 M1SGG4 UniRef90-M1SGG4 UniRef90-O7N599
UniRef90-Q7N599 UniRef90-Q7N599 UniRef90-W1AGS9 UniRef90-W1AGS9

UniRef90- W1AGS9 UniRef90_W1AGS9 UniRef90_W1AGS9 | UniRef90 ${ }^{-}$W1AGSS |
| :--- |
| UniRef90 | UniRef90 W1AGSS UniRef90-_6T8F6

UniRef9O-B2VKC8 UniRef90-D4BAQ2 UniRef90-D4BAQ2 UniRef90-D4BAQ2 UniRef90-E9XVD2
UniRef90 F8VEE7 UniRef90-F8VEE7 UniRef90-F8VEE7 UniRef90-D1CBO2
UniRefo-UniRef90-E3DHH7 UniRef90-XI7794
UniRef90
U71794 UniRef90-G9Y1H6 UniRef90-G9Y1H6 UniRef90-D2U3C0 UniRef90-D2U3C0 UniRef90-C4S919 UniRef90_C4S919
UniRef90 A7N7L UniRef90-A7N7L3 UniRef90-C7BN31 UniRef90-C7BN31 UniRef90-C7BN31 UniRet90-E5ARL3 UniRef90-B7UF58 UniRef90-B7UF58 UniRef90-B7UF58 UniRef90-H5V5B4
UniRef90

H5V5B4 UniRef90-H5V5B4 UniRef90-D4BAW5 UniRef90_D4BAW5 | $T$ | $N$ | $V$ | $K$ | $L$ | $N$ | $G$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $T$ | $A$ |  |  |  |  |  |
| T | N | V | K | L | N | G | A



 A ANGTDSFEFIAEVRDNGNPVSGVTT A TII T N V K ATI A T | A T | I |
| :--- | :--- |
| A T | T |
| T |  |

 $\mathrm{N} V \mathrm{~K} \mathrm{~L} \mathrm{~N}$ -E TG PALA DGNAKQT

 TVVTMEKDNAVADGAQUNTARALVTDNGKPLAHTEVV SLLSVNTTTDPVAD GNAKYVYTATLADRRKTPIENAKLV | $D$ |
| :---: |
| $N$ |

 SLEGSETQKIADNNSFFTFTAQLVDGNNPIKGLEVN

 | $S$ | $T$ | $L$ | $T$ | $T$ | $P$ | $T$ | $N$ | $V$ | $A$ | $N$ | $G$ | $S$ | $D$ | $T$ | $S$ | $A$ | $L$ | $T$ | $L$ | $V$ | $L$ | $K$ | $D$ | $N$ | $D$ | $N$ | $P$ | $V$ | $T$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $G$ | $K$ | $N$ | $V$ | $V$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $S$ | $T$ | $L$ | $A$ | $T$ | $P$ | $T$ | $N$ | $V$ | $A$ | $N$ | $G$ | $S$ | $D$ | $T$ | $S$ | $A$ | $L$ | $T$ | $L$ | $V$ | $L$ | $K$ | $D$ | $N$ | $D$ | $N$ | $P$ | $V$ | $T$ |
| $G$ | $K$ | $N$ | $V$ | $V$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | STLTATPTNIVANGSDTSALTLVLKDNDNPVTGKNVV

 $D L L V L H N N A L A N G V A T N S V K A D V K D N G N A V P N Y R V S$ DLLVLHNNALANGVATNSVKAIVKDNGNAVPNYRVS DLLVLHNNALANGVATNSVKAIVVDNGNAVPNYRVS


 | $D$ | $L$ | $L$ | $V$ | $L$ | $H$ | $N$ | $N$ | $A$ | $L$ | $A$ | $N$ | $G$ | $V$ | $A$ | $T$ | $N$ | $S$ | $V$ | $K$ | $A$ | $I$ | $V$ | $K$ | $D$ | $N$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

A A $\square$ S VQAFNDTK DNADA D AMANTLVRVRVTDAGNVLAGQTV S
 $K V N R T T F K A D E T D Q V T Y T A K V V D N N N P L E N F P V S$

 DGTPVMGAEVT NKTEA I A D N H D T $\square T \square M A H D T$ D A N N P L DK Q S V F $E \square T V V A N N G V V G E T A G N T I K V T A Y D$

$A K \square Q$ A K AKI SVV AKI S $V V V V T Q D N S A A D G K A K N S V L V T V T D N N N P I A A A P V T$ AKI AKIVSVVVTQDNSAADGKAKNSVLVTVTDNNNPIA GAPVT A KI Q S V V V T Q D N S A A D GK A K N S V L V TVV T D N N N P I A G A P V T | $A$ | $K$ | $Q$ | $S$ | $V$ | $V$ | $V$ | $T$ | $Q$ | $D$ | $N$ | $S$ | $A$ | $A$ | $D$ | $G$ | $K$ | $A$ | $K$ | $N$ | $S$ | $V$ | $L$ | $V$ | $T$ | $V$ | $T$ | $D$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $A$ | $N$ | $N$ | $P$ | $A$ | $A$ | $A$ | $P$ | $V$ | $T$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $A$ | $K$ | $Q$ | $S$ | $V$ | $V$ | $V$ | $T$ | $Q$ | $D$ | $N$ | $S$ | $A$ | $A$ | $D$ | $G$ | $K$ | $A$ | $K$ | $N$ | $S$ | $V$ | $L$ | $V$ | $T$ | $V$ | $T$ | $D$ |
| $N$ | $N$ | $N$ | $P$ | $A$ | $G$ | $A$ | $P$ | $V$ | $T$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | AKII QSVVVTQDNSAADGKAKNSVLVTVVDNNNPIA GAPVTT AKI QSVVVTQDNSAADGKAKNSVLVTVTDNNNPIA GAPVT

 $T V E V D K D K A Y N N G S D S Y T F T A T V K D H G N L V V G Q P V N$ TV $V \underset{V}{E}$ V AK $\quad \mathrm{K}$ K TLELTNNKAVAD GQAKNDAVATVTDQDNQVENFPLT AKI K T L E T N N K AV A DGQAKNI AVATVTDQDNQVENFP T A K I K T L E L T N N K A V A D G Q A K N I A $\operatorname{C}$ V A T V T D Q D N Q V E N F P L AKI K T L E L T N N K A V A D G Q A K N I A V A TV T
A K I K T L AKIKTE
AK I K


 $T L K I T K D N S V A D G Q T A N Q A Q A T V T D N G R A I A N S K V S$ TLKI TKDNSVADGQTANQAQATVTDNGRAIANSKVS
A Q $\square \mathrm{A}$
 V A V T A N N A LLA
HVTHVTVVK E GPLY N G T LSELTLSPP VIA A GKDP THTATVEDAGNLVADKPI E



L S VKNNSKPDGTDENTGGEVVK


 DKVVSANADGGS
$T V D V D K V S A N A D G S E Q I T V T V Q L K D A R D G A S S G G G D I T$


 S T L V A A P V S STLVAAPVSI EANGSDTSLVVTLTLRDNNNPVTGQTVA A K N L S V SVMAA D N AP A D N A S V N R V K A L L V T D G G K P I I G A T V G


 UniRef90-G9Y0E3 UniRef90_H5UZX5 UniRef90-H5UZX5 UniRef90_W3V7B3 UniRef90_EOWQD2
UniRef90 WOLFT2 UniRef90_D2U3C1 UniRef90_A4V7E0 UniRef90_W0LK95 UniRef90-W0LK95 UniRef90_R6VBU7 UniRef90_C4TWH0 UniRef90_C4TWH0 UniRef90_C4TWH0 UniRef90-C4TWH0
UniRef90-C4TWH0 UniRef90_C4TWH0 UniRef90_F8CMN8 UniRef90-E9XVE7 UniRef90-W1G7X9 UniRef90_C4SDT7 UniRef90-U2NNP2 UniRef90-A9E8N8 UniRef90_W0H2B7
UniRef90_C0AZ19 UniRef90_R9VPX2 UniRef90_M1SGG4 UniRef90_M1SGG4
UniRef90_M1SGG4 UniRef90_M1SGG4 UniRef90-M1SGG4
UniRef90-M1SGG4 UniRef90-M1SGG4 UniRef90-M1SGG4 UniRef90 M1SGG4
UniRef90 ${ }^{\text {M1SGG4 }}$ UniRet90-M1SGG4 UniRef90_Q7N599
UniRef90_Q7N599 UniRef90_Q7N599 UniRef90-W1AGS9 UniRef90_W1AGS9
UniRef90_W1AGS9 UniRef90_W1AGS9 UniRef90_W1AGS9 UniRef90 W1AGS9
UniRef90-W1AGS9 UniRef90_-W1AGS9
UniRef90_Q6T8F6 UniRef90-B2VKC8 UniRef90-D4BAQ2 UniRef90_D4BAQ2 UniRef90-E9XVD2 UniRef90_F8VEE7 UniRef90_F8VEE7 UniRef90-D1CB02 UniRef90_A0A022PGR1 UniRef90-E3DHH7 UniRef90-X7I794
UniRef90-X7I794 UniRef90_G9Y1H6 UniRef90_G9Y1H6 UniRef90-D2U3C0 UniRef90-D2U3C0 UniRef90_C4S919
UniRef90_C4S919 UniRef90-A7N7L3 UniRef90_A7N7L3 UniRef90_C7BN31 UniRef90-C7BN31 UniRef90_C7BN31 UniRef90_E5ARL3 UniRef90_B7UF58 UniRef90_B7UF58 UniRef90_B7UF58 UniRef90 H5V5B4
UniRef90 H5V5B4 UniRef90-H5V5B4 UniRef90_D4BAW5
UniRef90_D4BAW5

50
60
70
80
WT S TA G S|L|SATSKQTDAAGNAT|V|K|L|TSTKTP|V|YD|IVV|SAA WTSTA GSLLSATSKQTDAAGNATVKLTTSTKTPVYDIVVSAA




 WEIGGGSGASATTPQTNENGUATMSVNDRNGBKGEVVAHAGG
 F N R D D E T GT R L S D DT E E K G V Y R A K L K A V K A K A V T I T P H V E
 WSTTS GTVGASQTATDANGQTSVTLLRSSNVGGATVTA L N P T L G TVVD
 LNPTLGTVD

T A V





 LS QVKVVANGENVATTDAKGEARFSLTSSSTPGTYEVTMNVGO WR LT Q GE GQKSLSYTGPTGEAETKLSASRLGQYKMEAQI G


 WS STMHNVL S ENMVKTD DNGNV QUVI K GTEAAQPTTVVTATGLE



 1 K $V$ P G T A T QP A G G L | 1 | $K$ | $V$ | $P$ | $G$ | $T$ | $A$ | $T$ | $Q$ | $P$ | $A$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $I$ | $G$ | $G$ | $L$ | $T$ | $D$ | $S$ |  |  |  |  |
| $I$ | $K$ | $V$ | $P$ | $G$ | $T$ | $A$ | $T$ | $Q$ | $P$ | $A$ |



| 1 | $K$ | $P$ | $G$ | $A$ | $Q$ | $P$ | $A$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $K$ | $P$ | $G$ | $T$ | $A$ | $T$ | $Q$ |
|  | $A$ | $G$ | $G$ |  |  |  |  |
| $K$ | $V$ | $P$ | $G$ | $T$ | $A$ | $T$ | $Q$ |
| $P$ | $A$ | $G$ | $G$ | $L$ |  |  |  |


 WQTEPPKATKGNNSVVSNAGGQVTATGISTAAVKVQVAKAV
 ARADNGATVDPNQQTDDNGQVTDRFSSETAGDSKLVVEGT A R A D NGATVVDPNQQTDDNGQVTIMRSSETAGDSKLVVEGT





 WSVSPAVLKNAGGTTDANGNVTADFTSTVAGAATIISVTAG
 WS L S S T TA S ATTATTXASGVATVLVTVTVAESVTATAKAG WSLSSTTASATTATTDASGVATLSITTDTVAESVTATAKAG
 GQSDNGTVSNGEEIPDKPGNYRMTVTASKAGKAMLSVKVN 1 T A T GP SII DNTMVTTNASGTATVNVHGQKA GRYTLTATMA
 WTVVDH GA $V$ V H Q Q S I T D S H GKA V V GF T NV H A G E V R L N A T V D
 $F N V S G G Q I T T S P L M T \quad D E Y G S I T A S F S N L K A G Q T R V T M A R F N$

 WQT DPAVVTKQP GAVSNA Q GQVTATVTSSTAAVVVQVIA KTA
 WQT DPAVTTKQPGAVSNA QGQVTATTLTSTAAVTVQVVAKTA
 L V S T L G T L G A $\quad$ V T E Q A S GlV Y T A T L T A T V A GVVA S L




|  | 90 |
| :---: | :---: |
| UniRef90_W1AH57 | Q G S Q A |
| UniRef90_W1AH57 | Q G S Q A |
| UniRef90-W1AH57 | Q G S Q A |
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| UniRef90-W1AH57 | Q G S Q A |
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| UniRef90 ${ }^{\text {W }} 1$ AH57 | Q G S Q A |
| UniRef90-A0A029LZA0 | Q A D GQESTKTAE |
| UniRef90_G9Y0E3 | GHS Q TVNT T F VA D $\square$ T |
| UniRef90-H5UZX5 | GQQGQVNAT |
| UniRef90-H5UZX5 | GQQGQVNAT |
| UniRef90-W3V7B3 | GERVT T D K K V S F |
| UniRef90-E0WQD2 | G Q A V VGN |
| UniRef90-W0LFT2 | GS S Q S V T T T F V |
| UniRef90-D2U3C1 | S T K R V D A D E V A F |
| UniRef90-A4V7E0 |  |
| UniRef90-W0LK95 | GS ALLNVAPVTVT |
| UniRef90-W0LK95 | GS AL NV V P PVTVT |
| UniRef90_W0LK95 |  |
| UniRef90-R6VBU7 | GNDQPSNA Q SVT F V |
| UniRef90_C4TWH0 | G V S Q S V |
| UniRef90_C4TWH0 | $\mathrm{G} V \mathrm{~S} Q \mathrm{~S} V$ |
| UniRef90_C4TWH0 | G V S Q S V |
| UniRef90_C4TWH0 | G V S Q S V |
| UniRef90_C4TWH0 | G V S Q S V |
| UniRef90_C4TWH0 | G V S Q S V |
| UniRef90-F8CMN8 | G GAVVL G A R P V I G F T |
| UniRef90-E9XVE7 | S SNQ S |
| UniRef90-W1G7X9 | $\mathrm{N} \square \mathrm{S}$ S S LS $\quad \mathrm{V}$ T F |
| UniRef90-C4SDT7 |  |
| UniRef90_C4SDT7 |  |
| UniRef90_U2NNP2 | $\mathrm{NGVVSA} \quad \mathrm{T}$ V NV VA F F |
| UniRef90-A9E8N8 | G ALLS PQT T TVVT F |
| UniRef90-W0H2B7 | A P TKD |
| UniRef90_C0AZ19 | N S Q S A T |
| UniRef90_R9VPX2 | GHRA SASVT F |
| UniRef90_M1SGG4 | D S |
| UniRef90-M1SGG4 | D S |
| UniRef90-M1SGG4 | D S |
| UniRef90-M1SGG4 | D S |
| UniRef90_M1SGG4 | D S |
| UniRef90-M1SGG4 | D S |
| UniRef90_M1SGG4 | D S |
| UniRef90_M1SGG4 | D S |
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| UniRef90_M1SGG4 | D S |
| UniRef90_M1SGG4 | D S |
| UniRef90_Q7N599 | A NP SWVEADKVS F |
| UniRef90_Q7N599 | A NPSWVEADKVS F |
| UniRef90_Q7N599 | A NPSWVEADKVS F |
| UniRef90_W1AGS9 | GTSKSVTS QFV |
| UniRef90_W1AGS9 | GTSKSVTS QFV |
| UniRef90_W1AGS9 | G T S K SVTTS Q F V |
| UniRef90_W1AGS9 | GTSKSVTS Q F V |
| UniRef90_W1AGS9 | GTSKSVTS Q F V |
| UniRef90-W1AGS9 | GTS K S V T S Q F V |
| UniRef90_W1AGS9 | GTS K S V T S Q F V |
| UniRef90_Q6T8F6 | NTS STAK |
| UniRef90-B2VKC8 | P S GK Y S A P DVEF |
| UniRef90-D4BAQ2 | DKSAS |
| UniRef90-D4BAQ2 | DKSAS |
| UniRef90-D4BAQ2 | D K S A S |
| UniRef90-E9XVD2 | N S |
| UniRef90-F8VEE7 | $N$ VQ G Q A A A T |
| UniRef90-F8VEE7 | NVQGQAAAT |
| UniRef90-F8VEE7 | NVQGQA A A T |
| UniRef90_D1CB02 | GTDLS |
| UniRef90_A0A022PGR1 | TQQTA ENADKVSF $\square$ S |
| UniRef90-E3DHH7 | G K P S Q S K T L T IT |
| UniRef90-X71794 | EHGSNVSAN |
| UniRef90_X7I794 | E H G S NVSAN |
| UniRef90-G9Y1H6 | A K S S SVVS Q |
| UniRef90_G9Y1H6 | A K S S SVVS Q |
| UniRef90_D2U3C0 | S G S LDI NANKVS F I |
| UniRef90-D2U3C0 | S G SLLDINANKVSFI |
| UniRef90-C4S919 | EQERQLWASFI |
| UniRef90_C4S919 | EQERQLWWASFI |
| UniRef90-A7N7L3 | G S ALS S S ID |
| UniRef90-A7N7L3 | G S ALL S S Sid |
| UniRef90_C7BN31 | RQPTAVKA A KVIS |
| UniRef90_C7BN31 | R Q P T AVK A A K V S F |
| UniRef90_C7BN31 | RQP T AVKA AKV S F |
| UniRef90-C7BN31 | RQP T AVK A A KV S F |
| UniRef90_E5ARL3 | GTNSGRTFP T I T F V |
| UniRef90_B7UF58 | GSALGVAPATVT |
| UniRef90_B7UF58 | G S AL GVAPATV T |
| UniRef90_B7UF58 | GSALLGVAPATVT |
| UniRef90-H5V5B4 | G 1 T NRATVNF |
| UniRef90-H5V5B4 | GIT T $\quad \mathrm{NRAT} \mathrm{V}$ N F |
| UniRef90_H5V5B4 | Gl T N R A TVNF |
| UniRef90_D4BAW5 | NGDKVSTS S |
| UniRef90_D4BAW5 | N G D K V V S T S S |

## UniRef90_D4BAW5 UniRef90-J2XM35 UniRef90-JOSTA3

 UniRef90_UPIO003775275 UniRef90-UPIOOO3775275 UniRef90-UPIO003775275 UniRef90_D7VPW0 UniRef90-D7VPW0 UniRef90-D7VPW0 UniRef90-K4MCK7 UniRef90-V9GWN3 UniRef90-V9GWN3 UniRef90-V9GWN3 UniRet90-VGGWN3 UniRef90-B8FHA1 UniRef9-B8FHA1 UniRef90-UPIO00470AB3C UniRef90-UPIO00470AB3C UniRef90_J3DT40 UniReffol-K8AMB1 UniRef90-K8AMB1 UniRet90_K8AMB1 UniRef90-G9YAJOUniRet90 G9YAJO UniRef90_G9YAJO UniRet90-H1C3F6 UniRef90-D7JWF6 UniRef90-FOJSM2
UniRef90 $074 Q Z 6$ UniRef90-Q74QZ6 UniRef90-Q74QZ6 UniRef90-Q74QZ6 UniRef90-Q74QZ6 UniRef90-Q74QZ66 UniRef90-Q74QZ6
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UniRef90-D8MX37 UniRef90-D8M×37 UniRef90-D8M×37 UniRef90-D8MX37 UniRef90-Y1GPL3 UniRef90-18EVF7 UniRef90-I8EVF7 UniRef90-18EVF7 UniRet90-V1GFY3 UniRef90-V1GFY3
UniRet90 V1GFY3 UniRef90 ${ }^{-}$A0A034UV51 UniRef90_K8WQ15 UniRef90-K8WQ15 UniRef90-K2B6P9 UniRef90-T6JRVo UniRef90_T6JRVO UniRef90-D4BB07 UniRef90-D4BB07 UniRef90-D4BB07 UniRef90-D4BB07 UniRef90-M9FAH3 UniRef90 M9FAH3 UniRet90_F8VD80 UniRef90-F8VD80 UniRef90-F8VD80 UniRef90-EOWU27
UniRef90 F4VOP7 UniRef90 C7BN24 UniRef90-E5XZP5 UniRef90_UPIOOO47D4220 UniRef90-UPIO0047D4220 UniRef90_UPIOOO47D4220 UniRef90_UPIOOO4664323
UniRef90_UPIOOO4664323 UniRef90-X1LG02 UniRef90 A9KZLO UniRef90-K8A191 UniRef90-K8A191 UniRef90_A6AMD8 UniRef90_AGAMD8
UniRef90_FOJNP7 UniRef90-F9S2D3 UniRef90-T9P6Q0 UniRef90-T9P6Q0
UniRef90
T9P6Q0 UniRef90-T9P6Q0 UniRef90-A0A023LFL7 UniRef90-A0A023LFLT NALVVKVTDAGNPVADETVT NALVVKVTDAGNPVADETVTT N A L V V K V T D A G N P V A D E T V T
 SKLVI I KDGATANGVDKNILEATIVDADNPIAGATVD
 D F VI I D D G A VA N S V D A N E V R A R V T D N G N A I A G Y S V I
 D FVVI I D D GAAVAN S V D A N E V R A R V T D N G N A


 S EVVTSA QP T LAA A D GTSSQTTVVTVK LK DA QVATGGAAAVA A K N V V $\quad$ L $S$ V AKNVVLSVLNDEAPADNVSLNRVKAKVTDGGKPINGASVA AKNVVLSVLNDEAPADNVSLLNRVKAKVTDGGKPINGASVA



 $T L V T T V N N A F A D N S A T N T V Q A T L K D S G N P I V G E V V A$



 A T I A A TII A S L T A T P A GI I A D GV A V
 A TI A S LT A T P A GII I A D GVVAVS TI K A L

ATIAS

A T I A A S $\begin{array}{lll}\text { P A G G } & \text { A } & \text { A } \\ \text { A } & \text { A } & 1\end{array}$ | $A$ | $D$ | $G$ | $V$ | $A$ | $V$ | $S$ | $T$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $A$ | $I$ | $K$ |  |  |  |  |  |
| $A$ | $D$ | $G$ | $V$ | $A$ | $V$ | $S$ | $T$ |
| $A$ | $D$ | $G$ | $V$ | $A$ | $V$ | $S$ | $T$ |

ASAVTVTASAASVEANGLNTITYTAT
 $D F V$ D D





TEKVANGTNTFTYTAKVVENGNPVKGVLVA $\square Y$ AD A S N II S D N S S A AVLLTVS L R N S S N A I VGEAI N
 A Q I Q D L AQI QDLKII KDKSTANGSMANSAEVYVRDNGNAVSGAQVN A QI Q DLKII I K DKSTANGSMANSAEVYVRDNGNAVSGAQVN





 NNAWIDSSTDENKVVATMYDRGNGVKN QKI T A K K S T LTADVDGSAVAD GKA $\square$ RTVVQAMVKDS GNPLANAEVA

 A A HSTLAASEASAEANGTSSSTLLVAIVKNDNPLS GHAI S


 L NV SVDNVISNLNNK GKVVETLYSNNQPATGMDVS
 $T L Q R L T D N S P A D G V T S N R I T L H A T P D G A P A P N I P V Q$ D KVSANAD G S E Q ITTVTVQQLK DAD G A S S G GEI T
 A E D S E VT S D K T T L LK P D A Q IA E LEEVTQDNAVADGAMANMLRARVTDAGNTLAGQTV S




## UniRef90_D4BAW5 UniRef90-J2XM35

 UniRef90-JOS7A3 UniRef90_UPIO003775275 UniRef90_UPIO003775275 UniRef90_UPIO0037UniRef90_D7VPW0 UniRef90-D7VPW0 UniRef90-D7VPW0 UniRef90-K4MCK7 UniRef90 ${ }^{-}$V9GWN3 UniRef90-V9GWN3 UniRef90-V9GWN3 UniRef90-B8FHA1 UniRef90_B8FHA1 UniRef90_UPI000470AB3C UniRef90_UPI000470AB3C UniRef90-J3DT40 UniRef90-K8AMB1 UniRef90-K8AMB1 UniRef90-K8AMB1 UniRef90-G9YAJO UniRef90_G9YAJ0
UniRef90_G9YAJ0 UniRef90-H1C3F6 UniRef90-D7JWF6 UniRef90-FOJSM2 UniRef90_Q74QZ6 UniRef90_Q74QZ6
UniRef90-Q74QZ6 UniRef90_Q74QZ6 UniRef90-Q74QZ6 UniRef90-Q74QZ6 UniRef90-B1PWD5 UniRef90-D8MX37 UniRef90-D8MX37 UniRef90-D8MX37 UniRef90_D8MX37
UniRef90_D8MX37 UniRef90-D8MX37 UniRef90_D8MX37 UniRef90-D8MX37 UniRef90-Y1GPL3
UniRef90 G4E3L4 UniRef90_18EVF7 UniRef90-I8EVF7
UniRef90- $8 \mathrm{EVFF7}$ UniRef90-V1GFY3 UniRef90-V1GFY3 UniRef90-V1GFY3 UniRef90_A0A034UV51 UniRef90-K8WQ15 UniRef90-K8WQ15
UniRef90 K2B6P9 UniRef90-K2B6P9
UniRef90-T6JRV0 UniRef90-T6JRV0 UniRef90-D4BB07 UniRef90-D4BB07 UniRef90_D4BB07 UniRef90_D4BB07
UniRef90- M9FAH3 UniRef9O-M9FAH3 UniRef90-M9FAH3 UniRef90-F8VD80 UniRef90-F8VD80 UniRef90-EOWU27
UniRef90 F4VOP7 UniRef90-F4VOP7 UniRef90-E5XZP5 UniRef90_UPI00047D4220 UniRef90-UPIO0047D4220 UniRef90_UPIO0047D4220 UniRef90_UPIO004664323 UniRef90-X1LG02 UniRef90-A9KZLO UniRef90_K8A191 UniRef90-K8A191 UniRef90 A6AMD8 UniRet90_A6AMD8
UniRef90_F0JNP7 UniRef90-F9S2D3 UniRef90-T9P6Q0 UniRef90-T9P6Q0
UniRef90-T9P6Q0 UniRef90-T9P6Q0 UniRef90-A0A023LFL7 UniRef90_A0A023LFL7

WS A D A GVIT 50
50 G 60
70
 FSCDMGSLSRALAVTDGSGVARSTFTATTSGAAEITASAD FSATGETLSATSVTTDANGEASTQLTGTKAGSYEISAQVT


FDLTDGLAKTANIVTGANGKSVLELTSSTKIGABVT
 FSSQNDATIT TSGITGVDGWVSAKLTHTKAGESGILARIL FSSQNDATITTSSGITGVVDGWVSAKLTHTKAGESGULARLL
 FTSQSGTLSDATA D
 W S T L G A I WNTDLGVMLTPESMTDNEGRTEALLLQANTVGTAHVTFNLDD WSI S GSGTAHLTTTTDANGETMAELKDSVAQSVGVIASAD WSIVSGSGTAHLTTTTDANGETMAELKDSVAQSVGVIASAD


 LS LDP S G DT GEHAVSTDENGNAVFALVSSTPGSYVIKAHAG FAASNGAT!TATGVSNANGIVLATLTNGTAGVSTV FAASNGATITATGVSNANGIVLATLTNGTAGVSTV FAASNGATITATGVSNANGIVLATLTNGTAGVSTV FAASNGATITATGVSNANGIVLATLTNGTAGVSTV
 FAASNGATITATGVSNANGUVLATLTNGTAGVSTV F SKDFGTMDKTEATTDQNGYATVKLSSSTPGKADVSAKVS FSAP GTLSKGQVQTDSAGMAVTTVSSSQAMTMDVMASTK

F S A
FSA
FSAP
FS A P
F S A P GT L S K G FS SQNGATITTSGGTGVDGWASAKLTHDKAGESGILAR
 WS LTS S S T A S A T T A T T D A S G $\square$ A T L S
 GQSDNSNDS DGEEDPNNPGHYRMTVTADKAGKATMSVKVD WSKTA GAPAFPGTVVTDAEGMASVVLSSTTKMDLNIQVSAQ
 WT TT R GTLLSASSSTTDANGLLATVTTLTANTTGLLATVTAA FTIPQDVAANFTADTQANGEAHVTLKGKKAGTHTVTATLG F TIP Q DVA A N F T A I T Q A N GE A HVVTLK GKK A G T H TVVTA T L G





 F E S D A A K A A P T S V T D D N G A A TVAN




 WS I S G S A L S A E I GTTTDRD GKLLSVTTFTDTKA EAVVNVRVQLGG $F K L N G G R L K E D K V T T D K D G K A S T A Y T A G T$ FKVNNGALD S I I V R T G S D GK A SVVELTNATE GVVTVVTANYK WRAS GAAALGTANGVT DARGVAETTMLTDTDAEPVTVEATAG WRASGAALGTANGVTDARGVAETTLTDTLAEPVTVEATAG







|  | 90 |
| :---: | :---: |
| UniRef90_D4BAW5 | N G D K V $\$ S T S S  \hline UniRef90-J2XM35 &  \hline UniRef90-J0S7A3 & G GP VT ${ }^{\text {V }}$ S A S C V |
| UniRef90_UPI0003775275 | GLDAVSFEATA |
| UniRef90_UPI0003775275 | GLD AVS FEATAT |
| UniRef90_UPI0003775275 | GLD AVS F E A T A T |
| UniRef90-D7VPW0 |  |
| UniRef90_D7VPW0 |  |
| UniRef90_D7VPW0 |  |
| UniRef90-K4MCK7 | S G T S Y N LT N $\square$ T F L |
| UniRef90-V9GWN3 | R S GP MV HMLA P Y F I |
| UniRef90_V9GWN3 | RS GPMVHMLAPYFI |
| UniRef90_V9GWN3 | R S GPMVHMLAPYFI |
| UniRef90_V9GWN3 | R S GPMVHMLAPYFI |
| UniRef90-B8FHA1 | G V C G L D V T Y V |
| UniRef90-B8FHA1 | GVVCGDLDVTYV |
| UniRef90_B8FHA1 | GVVCGDL DVT Y V |
| UniRef90_UPI000470AB3C | G SP 1 |
| UniRef90_UPI000470AB3C | GSPIVVSTTSVQFV |
| UniRef90-J3DT40 | F GQPA Y GPATI |
| UniRef90-K8AMB1 | $\mathrm{G} \\| \mathrm{A}$ T R T TVVNF |
| UniRef90-K8AMB1 | GI A T R T TVVNF |
| UniRef90_K8AMB1 | G\\|A T R T TVVNF |
| UniRef90_G9YAJ0 | S S D T |
| UniRef90_G9YAJ0 | S S D T |
| UniRef90_G9YAJ0 | S S D T |
| UniRef90_H1C3F6 | S S S L S R NVT F V |
| UniRef90-D7JWF6 | S S S Q S |
| UniRef90-F0JSM2 | P Q D S E L T VT F |
| UniRef90-Q74QZ6 |  |
| UniRef90-Q74QZ6 |  |
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| UniRef90_Q74QZ6 |  |
| UniRef90-Q74QZ6 |  |
| UniRef90-Q74QZ6 |  |
| UniRef90 Q74QZ6 |  |
| UniRef90_B1PWD5 | DVD T EVKT T TVEEFFT |
| UniRef90-D8MX37 | GI E K TV SVT Fil |
| UniRef90-D8MX37 | GI E K T V S V T F I |
| UniRef90-D8MX37 | GI E K TVVSVT F I |
| UniRef90-D8MX37 | G I E K T V S V T F I |
| UniRef90-D8MX37 | GI E K T V S V T F I |
| UniRef90-D8MX37 | GI E K T V S V T F I |
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| UniRef90-D8MX37 | G I E K T V S V T F I |
| UniRef90-Y1GPL3 | G K |
| UniRef90_G4E3L4 | G R D $\quad$ S A $\square$ T P L N F T |
| UniRef90-I8EVF7 | RPMATV HTLMPYFI |
| UniRef90-I8EVF7 | R P M A TV H TL M P Y F I |
| UniRef90-18EVF7 | R P M A V $V$ H L M P Y il |
| UniRef90-V1GFY3 | S A Q GQA T A T |
| UniRef90-V1GFY3 | S A Q GQA T A T |
| UniRef90_V1GFY3 | S AQGQA T A T |
| UniRef90-A0A034UV51 | G K |
| UniRef90-K8WQ15 | GAT T K $\quad$ K A D K V V |
| UniRef90-K8WQ15 | GATTKIKKADKVV |
| UniRef90-K2B6P9 |  |
| UniRef90_T6JRV0 | N N N S D A Q P VT F V |
| UniRef90_T6JRV0 | N N N A S D A Q PVT FV |
| UniRef90_D4BB07 | NGSSMTASSS |
| UniRef90-D4BB07 | NGSS M T A S S S |
| UniRef90_D4BB07 | NGSSMTASSS |
| UniRef90-D4BB07 | NGSSSMTASSS |
| UniRef90-M9FAH3 | N G |
| UniRef90-M9FAH3 | N G |
| UniRef90-M9FAH3 | NG |
| UniRef90-F8VD80 | A V VA S Q N S |
| UniRef90-F8VD80 | A V V A S Q S |
| UniRef90-F8VD80 | A V V A S Q N S |
| UniRef90-E0WU27 | G N S I A A $\square$ P P K A VT L |
| UniRef90-F4V0P7 | N Q V S S |
| UniRef90_C7BN24 | D I EKAVA |
| UniRef90_E5XZP5 | GNA I G K G VT VEEF |
| UniRef90_UPI00047D4220 | T A GVVTVT Q T A SVVT F T |
| UniRef90_UPI00047D4220 | T A GVVTVT Q T A SVVT F T |
| UniRef90_UPI00047D4220 | T A GVTVT Q T A SVT F T |
| UniRef90_UPI0004664323 | S S I S E TK S S T |
| UniRef90_UPI0004664323 | S S I S E T K S S T |
| UniRef90-X1LG02 |  |
| UniRef90-A9KZL0 | D A S |
| UniRef90-K8A191 | $\mathrm{G} \square \mathrm{T}$ H S V V |
| UniRef90-K8A191 | GUT H SVVS |
| UniRef90-A6AMD8 | G S AL L N NID |
| UniRef90-A6AMD8 | GSALS N N I D |
| UniRef90_F0JNP7 | GK D A A K A SVTVV |
| UniRef90-F9S2D3 | G |
| UniRef90-T9P6Q0 | S S S Q S Q SVT FV |
| UniRef90-T9P6Q0 | S S S Q S Q SVT FV |
| UniRef90-T9P6Q0 | S S S Q S Q SVTT FV |
| UniRef90_T9P6Q0 | S S S Q S Q SVT FV |
| UniRef90_A0A023LFL7 | NGVV T I Q T Q T TV |
| UniRef90_A0A023LFL7 | N G V T \ I Q T Q T T V |


| UniRef90_S2KYF2 |
| :---: |
| UniRef90-S2KYF2 |
| UniRet90 S2KYF2 |
| UniRef90-S2KYF2 |
| UniRef90-S2KYF2 |
| UniRef90-S2KYF2 |
| UniRef90-S2KYF2 |
| UniRef90-A0A025ZG79 |
| UniRef90-A0A025ZG79 |
| UniRef90-A0A025ZG79 |
| UniRef90-D3EJK0 |
| UniRef90-D3EJK0 |
| UniRef90-D4B7P6 |
| UniRef90-D4B7P6 |
| UniRef90-D4B7P6 |
| UniRef90-D4B7P6 |
| UniRet90_Kowni9 |
| UniRet90-H1EEB1 |
| UniRef90-WoLGL5 |
| UniRef90-WoLGL5 |
| UniRef90-UPI000472E37E |
| UniRef90-UPI000472E37E |
| UniRet90-UPIO00472E37E |
| UniRet90-UPIOOO472E37E |
| UniRet90_UP1000472E37E |
| UniRef90-UP1000472E37E |
| UniRef90-UPI000472E37E |
| UniRef90-UP1000472E37E |
| UniRef90- UPIO00472E37E |
| UniRef90- T6UMY3 |

 UniRef90-TGUMY3
UniRef90 C4U9F4
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UniRefao-V310S1 UniRef90 ${ }^{-}$V3IOS 1 UniRef90-V310S1 UniRef90-UPIOOO3611404 UniRet90_M1JGS4 UniRet90_M1JGS4 UniRef90-14JZT3
UniRefol
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QMSKDETTGNGVDNATLTATVKDQDNEVNNLPVT

 DKDGSVADGVTPNSAII ATVTDNNRPITNGKIV DKDGSVADGVTPNSAIATVTDNNRPITNGKIV TVDKTEVVANKADKIVLTVTLKDADEALKGVYVY STLEASPAETPADGVAASLLTLSLRDNNQPVRGQDVH
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 A HVASLTIDPNGALANGVNTDNVAVIVTDNNNLVPNATVN AHVASFUAEPSTIAATNSDLSTLKATVEDGGNLIEGLTVY AKTADLVVIKDDSVADGAMANMLRARVTDAGNALNGQTVE AKI ADLVVIKDDSVADGAMANMLRARVTDAGNALNGQTVS AKปADLVVIKDGSVADGSTANTLRVKVTDAGNALAGQTVS

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| UniRef90_W8G669 | T $\mid$ V T D N $\mid$ I D T L F F V $\mid$ |

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UniRef90-Q66410
UniRef90_Q66410
UniRef90_066410


| UniRef90_W8G669 | $\mathrm{T}\|\mathrm{~V}\| \mathrm{T} \text { D N\|! } \mathrm{D} \text { T }\|\stackrel{90}{\mathrm{~F}}\| \mathrm{V} \mid$ |
| :---: | :---: |
| UniRef90-W8G669 | TVVTDNI D T L F V |
| UniRef90-W8G669 | TVTTDNIDD T L F V |
| UniRef90-W8CPA3 | GK S G S A S A |
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| UniRef90_G2GWU0 | S K P V A I P S P R V T |
| UniRef90_A3QF44 | G S S P E $\$ S S Q S  \hline UniRef90_R5NTS9 & G  \hline UniRef90_UPI0003B6B4D1 & G F S R T V  \hline UniRef90_A0A023YIR2 & S GVI I Q T Q T TV  \hline UniRef90-A0A023YIR2 & S GVIIQ T Q T TV  \hline UniRef90_X1CF62 & D K SKl VT  \hline UniRef90_UPI00040A541D & GSA】P T T A S VQFVS  \hline UniRef90_UPI00047B1791 & TVDQ Y D G S VVFF  \hline UniRef90-H1EEH4 &  \hline UniRef90-H1EEH4 &  \hline UniRef90-UPI0003B7647E & A S S S A G K V S V V ${ }^{\text {T }}$ |
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| UniRef90-D4BKB5 | NGNSK Q A S S S |
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 EVAKDTVNKQSPDASPNKSYKLTAKTKTNGNPVSGKKI T
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QLRVDYQNSVADGSDFIVVVAEVTDDGNVLAKENVV DKSGVI ADNKGLHDLTATVLDNGNAIEGULVT LTSGANWLVANGADSTQITVQVLDNGTPLMDCAVA
 $\square T A D R T S L A A D G R S P A F V T A E I V D$ A QlVAMQVTTGNVLANGSDRHTVNVRVEDQGNVABDVA ATRMDVVSGNNQTGTTGTALNPIVVKI TKAGAPAGGVNVT TLQVPENGVIANGTGRIDLTLSTLLDCGNGIANQQVN LKVDKDNALSNGTDFDLVTVTVTDGGQKFVGQGVT ITTDTEWLVAGGPQSSWI AVQVTDASTPVNGAEIT $T \square T K V S G D N Q T G A T G A T L P N P L V V Q V K D A G N P Q S G V T V N$
 AKS $\square K \square T A D R S R \square L A D G Q D D S F$

TLTATPDTIPPDGTSSST
LSVDRENVVADGS
AAMSVDPKSVSPN


V VIDEN

TASVTAT LSNG
AVIKSDT LDK STANDNNGDSD ILTVTY
AKLV LTADRTALWADGQDVAVLKVEAF 1 ISVTPSAAPYIADGKTAVTFTAVVEDAGRPVAGHLVT
 $T V T V V L / T S G G A P V N G E T I T$

A QVP E $\square$ T L D P D T L A L T VGETGT LIA TVKE DAVTEQITVI
TVTAGTGWLVAGGAESAAlTAVVTDSGKPMVGVTVT $S K L V A V G D G V D Q A S V A V K A T F N G E P L E G I V V K$ LSADRSA
 VT G $\square \mathrm{SVT}$ P A SVT $\square \mathrm{DEGQTSQ} \mathrm{\square TAT} \mathrm{\square APSNABSDQSVV}$ $T L T A N P S S \| L G N G A S T S V F K A V V T D E G H P Q A G V Q V V$ TARVLVISANTPLVNVEVM $\square T$ A DRTA $\square K G D G D D \square S F l R V A V V D S N G P R A N H A V T$
 VIVSGNNQTADQKLRNDLVVRLLDGNNPIPDEDLR SVSELSDD VAA DGQQSYTLTLTAVDDGNPVEGEASR

 S I TA D K S TVAPNTPVVLTVRATEADDSGAPLS GQDVR A K L S A L S A D K T E I T T A A D G T D T T A T V T T A A S F K N N D G T P A A E Y E K ATV ELSASNTNPE KGDTVTLTAKVKRNGQPAVGVPVV A N NVSAN QLAAK L L K D GA A V P GSRVVT $T \square T A \quad Y A V S V A D G N N Q A A L L S V K V V D E K R P D R G D V E V$ MSATVKDHNKPVANVPVY VD Q Q GQVSN QTS QNTVRATVTENGWAAS GVIVN




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| :---: | :---: |
| UniRef90-Q66410 |  |
| UniRef90-Q66410 | FSSANATAQ1 TTVTTGADGUATATLTNTVAGTSNV |
| UniRef90-O66410 | FSSANATAQITTVTTGADGIATATLTNTVAGTSNV |
| UniRef90-066 | FSSANATAQUTTVTTGADGllatat itntvag snv |
| UniRef90-UP1000 | 㑆GKPGSEATTDPEGKCSVNLS |
| UniRef90-Q0A4Y | FNASRGSLPQVTT T T D dogka Vil |
| UniRef90-D3E262 | FTVNGKTY TATSNSKGVATVKVSLNKKGTYSFTVKYA |
| UniRef90-14EGG1 |  |
| UniRef90-E8RN68 | GGGAVIGVGNGNP |
| UniRef90-W6 |  |
| UniRef90-UPIO003B6C3A2 | F |
| UniRef90-UPIO00360D7DE | FVPANGSVT |
|  | WSTTLGE RPSQTFTDKDGVSRV |
|  | Fear |
| UniRet90 UP10003F53373 | FSTTEGA |
| UniRef90-17J9F0 | FGR |
|  | D LGVTSVTD |
| UniRef90-UPI | D |
|  | FDVIGGSLAQASTRTAFHGKALALVRSTRPGTLKVI ARV |
|  |  |
|  |  |
| UniRet90 F4APM4 Uni | AANGLLSSTYPTTGTNGQVTVYYGNTAGVDTVSASAS |
|  |  |
|  | MGALTPCTAKTGADGTARARFSATTGGTAA |
| UniRef90-G6FXE9 | FAVTGGSVSPASAVTNASGQASTTLTA |
| UniRet90- S9PKK3 | FQVTGGTLVKASSRTAFNGKALIAII ${ }^{\text {a }}$ |
| UniRef90-W9DP17 | SGAGYDYAGTTD |
|  | FSLGNGTVA VGNADGRAMMVVRSTKAGNLQLTATAN |
| UniRef90-D8F | FVTSLGTILTPSVTTDDSGKVTVSLVATTAGTAI |
|  |  |
| UniRef90 DIYVC5 | GGTITPESGVTDSDGKFVAQYTAGSEGTYTV |
| iRef90-E6W8J1 |  |
|  |  |
|  |  |
|  | FAVNTGTTGSGPAVTDANGNASFTYTSATTGTDTVQATVT |
| UP100047E5789 | WTSSDETV VKVEATGLNTARITAVGSGVATVTAKCM |
|  |  |
| 9A | GGTUSNTTSVTDADG |
| Uni | WQVSPKVLTPGSSTTDDSGRITATLKSK |
|  | RGTLSATQVST ANG |
| UPI0003105D8D | FAVTGGSVSPPSAVTGANGTASTVLTTTPATNNTVTATAA |
| $\begin{aligned} & \text { Unir } \\ & \text { Uniin } \end{aligned}$ | DNEADA AV ${ }^{\text {a }}$ ANG |
| UniRef90-UPIO003786 | P D |
|  |  |
|  | GAN |
| UniRef90 UPIO0046600DE |  |
| Unil | D DVW |
| UniRet90-Woridz | FQVTSGTVSPSSAVTDASGQASTQLTGANAGAVQVTATVQ |
| UniRef90 UPIO00363EA17 | WSTSNAA |
|  |  |
| UniRef90-W4C259 | P A GNL MMISVL |
| A0A | S |
| UniRef90-D4GWR5 | GGGSUPEGPTTDSEGRIRVTVTGESAGTAEV |
| UniRef90-D9QIO7 | G |
| UniRef90-R7ZUG1 | WKVGNGSLEITSTTDEDGKVTANFIVGTDQEHIVSVTVP |
| UniRef90 D6JDQ4 | S |
| niRef90- ${ }^{\text {x1 }}$ | TDTDGI ATAELKSILLSTETVIA |
| UniRef90-UPI0003B5B049 | FKTTGEGFIAGVDNGDPHGLALALVQAKKAGNDTLSATAD |
| 促 |  |
| UP6000248E09F |  |
|  | GGKLVGVDNGSSPDGKVLALVQSTKAGEITVTAKAD |
| 3H | G |
| 409 | DGDNPVSGTAE |
| 000TO |  |
|  | FSTDVGSIIEPASGSVLANGVATVLLYPGNVESATLTASIS |
| 8D2A3 | A |
| UniRef90_C4SVX5 | F |
| Ref90-R6PEX0 | A |
| f90 G2GY58 |  |

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| UniRef90 Q664I0 | T $\mid$ V\|NA N|I|D T T $\mathrm{F}\|\mathrm{V}\|$ |
| :---: | :---: |
| UniRef90-Q66410 | TVVNANV D T T F V |
| UniRef90_Q66410 | TVNANI D T T F V |
| UniRef90_Q664I0 | TVNANI D T T F V |
| UniRef90_Q664I0 | TVNANID T T FV |
| UniRef90 UPI0003808277 |  |
| UniRef90_Q0A4Y7 | D V G V E T S T T A Q F VT |
| UniRef90_D3E262 | G D D T |
| UniRef90_14EGG2 |  |
| UniRef90_K2DHI7 | G |
| UniRef90-E8RN68 | G L L P S S VT L I |
| UniRef90_W6V2K1 | N A S |
| UniRef90_UPI0003B6C3A2 |  |
| UniRef90_UPI000360D7DE | N G Q S $\$ N N A P  \hline UniRef90_A0A031G4M5 & G S HSLTFSRP V V F  \hline UniRef90_UPI0003611F86 & T A E G PVVVA D A A A L F  \hline UniRef90_UPI0003F53373 & E GTHAPTPAEDEF  \hline UniRef90_F9S400 & D K S A D V S VEFV  \hline UniRef90-17J9F0 & A V E T T  \hline UniRef90-W8PP39 & E G E Q  \hline UniRef90_UPI0003738C33 & S G T V  \hline UniRef90_H2JZF9 & G  \hline UniRef90_Q329F9 &  \hline UniRef90_Q025Z3 & A F T AKFTA  \hline UniRef90_F4APM4 & E F S VTVQA D D F S F  \hline UniRef90_UPI0004763941 & D P A A GKRAT  \hline UniRef90_C0RFQ1 &  \hline UniRef90_J1L195 & E GD A P VT A S AV  \hline UniRef90-G6FXE9 & $\mathrm{G} \square \mathrm{G}$ S VT F S A T A N |
| UniRef90_UPI000361AB64 | G M A Q |
| UniRef90_S9PKK3 | GLT P G S T T |
| UniRef90_W9DP17 | NQEVVITS NEVN |
| UniRef90_D1PZT8 |  |
| UniRef90_D8FE14 | VG T S S LT |
| UniRef90_K6ZV18 | D A S E E N |
| UniRef90_W4UQM4 | E GA Q A P T A T E ${ }^{\text {P }}$ E F |
| UniRef90_D1YVC5 | $\mathrm{G} \square \mathrm{G}$ Q A S Y S T F I |
| UniRef90_E6W8J1 | GEKK P V |
| UniRef90_F2K532 | A HEQAVA |
| UniRef90_Q15ZG5 | D S TS S EN |
| UniRef90_W7SHJ5 | N A VG P $\square \mathrm{P}$ S N T V V |
| UniRef90_UPI00047E5789 | S K T A T CRVVT T F T P |
| UniRef90_V4QLR8 |  |
| UniRef90_C0AZ18 | NESLD A A L P T T F |
| UniRef90_UPI000379A5DE | L I G G K V N N SVT F |
| UniRef90_A0A024RFL0 | G A A A PV S A P PVT F |
| UniRef90_E4PMV5 | D G |
| UniRef90_UPI0003105D8D | $N \square G T$ |
| UniRef90 J2RTS7 | G G S |
| UniRef90_V2YJ11 | Y T V P D T T P |
| UniRef90_UPI0003786975 | G A |
| UniRef90-J1L318 | EAS AS |
| UniRef90_A7MRS9 | NSTSTRSAQ |
| UniRef90_UPI00046600DE | G GTEVVS |
| UniRef90_G2QV90 | G LA R A V |
| UniRef90_J2NNX4 | G G E G G WD T A L V VF |
| UniRef90_W0RDZ5 | G T T $\square$ S T T |
| UniRef90_UPI000363EA17 | D G G T D S A A VTV $\mathrm{V}^{\text {V }}$ |
| UniRef90_Q21J24 | MQP P T EATVTVT |
| UniRef90_W4C259 | D S P R D L Y V S TI H I |
| UniRef90_A0A059L1X9 | G GQA G WD TK S L V |
| UniRef90_R8BN16 | GL L T A T L G L Q V |
| UniRef90_D4GWR5 | D A T |
| UniRef90_D9QIQ7 | G |
| UniRef90_R7ZUG1 | G T NVQ】 |
| UniRef90_D6JDQ4 |  |
| UniRef90_C0B2E7 | D V Q |
| UniRef90_X1N571 | EANGS K G A T S VF F I |
| UniRef90_UPI0003B5B049 | G LT G S |
| UniRef90-19KGA2 | GS S A |
| UniRef90_UPI000248E09F | A D P H L M E S N SVT |
| UniRef90_R6N609 | G S T V K $\quad$ T T T P V |
| UniRef90_U3H974 | Y 1 A S A ELLS F NVT |
| UniRef90_UPI00037CE409 | LD GTSVAS A EPF T F |
| UniRef90_UPI0003715509 | K S D R S L A E A P VE F Q T |
| UniRef90-I0QQT0 |  |
| UniRef90_UPI000365C387 | G T D S DV |
| UniRef90_UPI000248D2A3 | D P M T GLTVQK |
| UniRef90 C4SVX5 | G T T |
| UniRef90_R6PEX0 | G D T V E $\square$ T T T E VE |
| UniRef90_D3DZB9 | G DETYKATSV |
| UniRef90_G2GY58 | NRSEQEK |

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