UniRef90＿R5IGN： UniRef90－KKNS40 UniRef90－R5UVS2 UniRef90－A4XKV5 UniRefefo－COROM9 UniRef90－R7RPG3 UniRef90－D9PK27 UniRef90－DoRPL9 UniRef90－BoG7Y4 UniRef90－H2J6Z6 UniRef90＿UPIOO040C2C66 UniRef90－D6GPQ7 UniRef90－D3NRA6 UniRef90－UPIO00471F8CC UniRef90＿F3ZS53 UniRef90－W6N706 UniReffo－$\times 5 \mathrm{MGB5}$ UniRef90－R5W916 UniRef90－R7D1M4
UniRef90－G5GK52 UniRef90－U2DRQ4 UniRef90－G5KE68 UniRef90－F6B8D8 UniRef90－UPIOOO3825648 UniRef90＿G9RW54 UniRef90 ${ }^{-}$W6KPL1 UniRef90＿UPIO0036637FF UniRef90＿UPIooo3740D9B UniRef90－F7V456 UniRef90－R6BEG0 UniRef90－B2KB81 UniRef90－G9WI72 UniRef90－UPIOOO3B7AEED UniRet90－F5X9W3 UniRef90－F3A5V0 UniRef90－G5KO13
UniRef90 TORD11 UniRef90－M2TAP6 UniRef90－E4KNB3 UniRef90－R6G2D3
UniRef90 E3DPH9 UniRef90－A9RR03 UniRef90－AOLLD8
UniRef90－H8FMM4 UniRef90＿UPI00047B01DD UniRef90－C0QEQ8 UniRef90－ETMQ92
UniRef90 R7M5J3 UniRef90－UP10002DFC82D UniRef90－D7AOF6
UniRef90 R5VNG7 UniRef90－UPI00047BB447 UniRef90－W9DZU8 UniRef90－C5AW08 UniRef90－W7C1N9 UniRef90－－T1Z3H1 UniRef90＿UPIO003748863 UniRef90－SOFX80 UniRef90－W2E6U3 UniRef90－K2LKW9 UniRef90－B7CB08 UniRef90－ 10 AO 26 UniRef90－R7MB02 UniRef90－K6D4M5 UniRef90－TOUEZ9 UniRef90 E1QGRO UniRef90－COGKX2 UniRef90－K9EUSO UniRef90－F2NCE3 UniRef90－B9E9T2 UniRet90－X8K4S9 UniRe990＿WOJ843
UniRet90＿UPIOOO30A9999 UniRef90－D3QGM6 UniRe90－F5YIE9 UniRef90－V5SDL0 UniRef90－UPIO003CFEEFC UniRef90＿G9ZLU1
UniRef90＿C1MVG5

1
HPTFNPAA高KAGEVTGSALDASPGAAAGKVYFTADEAKA LHPTFDPAALKKAKVVGTGLAASPGAACGQIVFSAEKATD LHPVFDEKALATHQVIAKGLPASPGAAFGRVYFNAEDAQR LHPVFDKVAQSKAKVLTKGLPASPGAACGRVVFFADEAEE LHPTFEPSALKAAKPI AKGLPASPGAATGKIYFTAEEAKA LPPMFDPTAKKGAKVLAKGGNASPGAAVGKVVFAADRAEA LHPMFDQEELKKAKEIAKGLPASPGAACGKVYFTAEEAKQ LHPDDPKLEMSHKPLAKGLPAGPGGASGQIVFSAHDAVE LHPTLDPKAEK DDIAKGLPASPGAASGKITFSADDAET保 LHPQFDQKVLKRATALGKGLGASPGAACGKVVFSAEDAVE
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LHPNFDNNSLKTAKVIAKGLPASPGAATGQVVFFPDDAEK LHPTLDPDAPRNEVIATGGPASPGAASGAVVFTAEHAVE
L H P VF DATAMKNAKVLTKGLPASPGAATGEVVFFAEDAAK
LHPIFAKEALAKAKVIAKGLPASPGAACGRIVFFADDAAK
LHPTFDTNVLKDIKPI AKALAASPGAASGQVVFTAEDAKK
LHPQFNADEMKKAECVGKGLAASPGAACGKVVFTAEDAKE
LHRRTDPNA KLEVIAKGLPASPGSACGAVVFDADDAEK
KPRDDEKKGKVKPI AKGGASSPGAVSGKVVFDADTAVE
LHPTDDPSSVAKAKPMGKGLAASPGAAVGQVVFNAQDAKA

L L
H P QF D S K A L K K A A K K $\quad$ G E A GLP A S P G S A A G R V F F H A A E D A K E
 LHPEFDPEDLKKHQVLASGLPASPGAATGQVYFTSADAKK
 LHPTFSPKALDKSPVLAKGLPASPGAASGRVYFNAEDVVA LHPRDDPNVKKK VITKGLPASPGAGSGMIVFNSEKAHA
LHPTLDPDAKR DVI ATGLPASPGAASGUI AFTADEAER
LHPMFDPNQVANFPVITSGLAASPGAAVGHIYFDAATAKE
LHPTFEATSLKNTKAI AKGLPASPGAACGKVAFTAEEAKE
L H P N F K E E E L E K A D L L A T GGLAA A S P G A A T G KVVY F N S E DA A Q

 LHPVVDPEAEKKTTPLAEGLPAGPGGAIGQIVFTSEDAVR LHPQFDVEDLKKNDVVAKGLAASPGAACGEIVFTAEEAKT
LHPMFDKDELAKGEVIGSALPASPGAAAGKIYFNAEDAKN LHPMLDPKAERN VLGTGLPASPGAAAGRVVLDADTAEQ LHPGFDQKALKQATPITKGLNASPGAACGKVVFTAERAKE HPNFDSDELAKTKVIAKGLPASPGAASGKVAFSTEEAKR LHPTIDPDAERT VIATGLPASPGAAVGEIVFNSEEAEA LHPSFDEGSLRAATSLATGLPASPGAATGQIYFNAEDAVE

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\end{aligned},
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| :---: | :---: |
|  | H P 1 IF |

 L H PVVFEPTALK QAKVI GTGLNAAPGAGAGKVVFTAAEA K E
 L H P I F S P E S L A K K A S P
 LHP TLLDPKAERT II AKGLPPASPGAVSGEVVFSADEAEA
$\mathrm{L}_{\mathrm{L}} \mathrm{H}$

L H P R F D E E E E E L L K G V S S V I A K G L $L A P \| F D L A E V K K A$

 | $L$ | $H$ | $P$ | $N$ | $F$ | $D$ | $D$ | $K$ | $A$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $L$ | $L$ |  |  |  |  |  |  |  |
| $H$ | $P$ | $T$ | $L$ | $D$ | $P$ | $K$ | $A$ |  |
| $R$ |  |  |  |  |  |  |  |  | L Y P R L D P S F


L H P T I D P T V EK
H K QI E A S GKK T A DLLTTKGLLPASPGAAVGQIVVFTAEAAAB


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| :---: | :---: | :---: | :---: |
| QUERY | A HEKGERVILVRDETSPEDI |  |  |
| UniRef90_R5IGN3 | WAKNGHKVVLVRLETSPED | EGMHYAQGVL | TVRGGMTSH |
| UniRef90-K2NS40 | AHASGQKVVLLRTETSPED | E GMIV ${ }^{\text {S E Al }}$ V | T SRGGMTSHA |
| UniRef90-E0QLV5 | A ${ }^{\text {K S GQEVI LVRQETSPED }}$ | E G MVSAQGIL | T SRGGMTSHA |
| UniRef90-R5UVS2 | WKNKGEKVILVRLETSPEDL | R GMHVSEGIL | TARGGMTSHA |
| UniRef90-A4XKV5 | AVERGEKVI L V R TETS P E D | E G M V ${ }^{\text {A A A G }}$ I L | T SRGGMTSHA |
| UniRef90-C0R0M9 | MKEAGEQSILVRIETSPED | K GMNAAEGIL | T ARGGSTSHA |
| UniRef90-R6QY97 | HHEAGEKVILVRLETSPED | EGMHAAEGIL | TARGGMTSHA |
| UniRef90-R7RPG3 | RRQLGERVILVRTETSPED | E GMVAAE GIL | TARGGMTSHA |
| UniRef90-D9PK27 | WAKQGKKVILVREETNPEDV | - G MRAAQAI L | TARGGMTSHA |
| UniRef90-D0RPL9 | SQNQKTILVRLETSPED | GMNAAEG | TCRGGMTSHA |
| UniRef90-W0EKY3 | WAEKRKKVI MVRIETSPEDL R | R GMNVA Q G | TARGGMTSHA |
| UniRef90-B0G7Y4 | WAKRGEKVVLVRLETSPED | T GMKSAQG | TVRGGT T S HA |
| UniRef90-H2J6Z6 | K E GTPVILVRPETSPEDVG | GGMNAAEGI | TATGGMTSHA |
| UniRef90-UPI00040C2C66 | WSKRGEQVILVRHDTTPED | VGMHHAEGI | T SRGGMTS HA |
| UniRef90-D6GPQ7 | AKERGEQCILVRQETSPED | EGMNSAEGI | T ARGGMTSHA |
| UniRef90-D3NRA6 | MAGKGEAVI L CRDETSPED | GMHAARGIL | T SRGGMTSHA |
| UniRef90_UPI000471F8CC | WKAEGKKVII VRQETSPEDL | Q GMEASEGI | T TRGGMTSHA |
| UniRef90-F3ZS53 | WHNDGKKIVLVRQETSPEDL | A GMAVAEGI | TVRGGMTSHA |
| UniRef90-W6N7Q6 | RGEKVILVRLETSPED | EGMAAAEGI | TVRGGMTSHA |
| UniRef90-X5MGB5 | CMQEGKRVI LVRIETSPED | HGMHAAEGI | TTRGGMTSHA |
| UniRef90-R5W916 | WNRDGRKVILVRI ETSPEDL | S GMNAAEGI | T ARGGMTSHA |
| UniRef90-R7D1M4 | WAKDGHKVI MVRI ETSPEDL | A GMQVAEGIL | TARGGMTSHA |
| UniRef90-G5GK52 | WT Le GK ${ }^{\text {a }}$ VVLVRLETSPEDI | EGMKAAKGI | TVRGGMTSHA |
| UniRef90-U2DRQ4 | WAEKGEKIVLVRRETSPED | E GMNVAEGI | TVRGGMTSHA |
| UniRef90-G5KE68 | EAKCGKKVLLVRQETSPED | E GMVSAKGI | T ARGGMTSHA |
| UniRef90-F6B8D8 | EQGKKVILVGTETTPDD | H GMVA SQGI | T SRGGMTSHA |
| UniRef90-UPI0003825 | WNKKGERVILVREETKPDDV | H GF Y A S VG | T SRGGMTSHA |
| UniRef90-G9RW54 | AVEKMKKVVLVRLETSPED | E GMAVAQ | TVRGGMTSHA |
| UniRef90-W6KPL1 | WASRGKKVI MVRLETSPEDL | A GMHAAEGI | TARGGMTSHA |
| UniRef90_UPIO0036637FF |  | A GMDAAQG | T A HGGMTSHA |
| UniRef90-UPI0003740D9B | LG NAGEKVI L V R P E T T P D | H GVVA A Q G V L | TSRGGMTSHA |
| UniRef90-F7V456 | AKARGERVILVRKETSADD | E GMHAAEG | TVRGGMTSHA |
| UniRef90-R6BEG0 | EGKKGEKVVLVRLEETSPED | EGMNHAQG | TVR |
| UniRef90-B2KB81 | LKAK GEKAILVREETNPEDV | E GMRAAEAI | TQRGGMTSHA |
| UniRef90-E0E414 | QVK A GEKVLLVRQETSPED | E GMVS A E GI | TARGGMTSHA |
| UniRef90_G9WI72 | A S D Q $\square$ KVVLVRSDTSPED | EGMIIASQA | SRGGMTSHA |
| UniRef90-UPI0003B7AEED | GMMQDTI LVRLETSPED | H GMHAAKGI | T ARGGMTSHA |
| UniRef90-F5X9W3 | WKEDGKRVVMVRIETSPED | A GMSAAEG | ARGGMTSHA |
| UniRef90-F3A5V0 | A AK SHPVVLVREETSPED | E GMVSSQG |  |
| UniRef90_G5K013 | NSKGGAQAI L V R Q ${ }^{\text {C }}$ S PED | E GMIIS A VG | T ARGGMTSHA |
| UniRef90-T0RD11 | L NETGHKVILVRQETSPED | A GMAASKA | TARGGMTSHA |
| UniRef90-M2TAP6 | ASLGEDVLLVRVETSPED | HGMHAAKG | TARGGMTSHA |
| UniRef90-E4KNB3 | HNLMGERVI LMRQETSPED | E G MVS S A AI | $\checkmark$ T SRGGLDT SHA |
| UniRef90-R6G2D3 | RAEKGEKVVLVR | E GMI A A Q Gl | TVRGGMTSHA |
| UniRef90-E3DPH9 | A A A G EDVILVRKETSPED | E GMVESNGI | TSRGGMTSHA |
| UniRef90-A9RR03 | WHLQGKVVILVRNETSPEDVG | G G M HAAAGI L | T ARGGMTSHA |
| UniRef90-A0LLD8 | WARQGEVVI L V R |  |  |
| UniRef90-H8FMM4 | WVNVREKVI LVRVETSPED | GGMHVSEGIL | T TRGGMTSHA |
| UniRef90-UPI00047B01DD | LTKEGHAVILVRLETSPED | QGMACARGIL | T SRGGMTSHA |
| UniRef90-C0QEQ8 | WARTGKKVLLVRDETNPED | EGMRAAVGIL |  |
| UniRef90-E7MQ92 | KATMGRKVILVRLETSPED | E GMHVSEGIL | TVRGGMTSHA |
| UniRef90-R7M5J3 | AGKRGERVILVRLETTPED | E GMVAS Q GV | TVRGGMTSHA |
| UniRef90-UPI0002DFC82D | WA GRGEKVILVRV |  | TARGGMTSHA |
| UniRef90-D7A0F6 | LK S Q GRKVI LVRIETSPED | H G M HAAQGI | T TRGGMTSHA |
| UniRef90-R5VNG7 | L HAQGEKVVLVRLETSPED | E G M 1 A S Q GIL | TARGGMTSHA |
| UniRef90_UPI00047BB447 | RHKLGENVILVRLETSPED |  |  |
| UniRef90-W9DZU8 | MAKANEKVILVRTETSPED | GGMDAAQGI | TVRGGMTSHA |
| UniRef90-C5AW08 | AKKAERKCILVRDETSPED | H GMHAAEGI | T TRGGMTSHA |
| UniRef90-W7C1N9 | KVVLVRNETSPED | E GM | TAHGGMTSHA |
| UniRef90-G3C914 | WKKRGERVILVRPETTPED | A G $\square$ A A S D GV | T SRGGMTSHA |
| UniRef90-T1Z3H1 | L H A L G K NVILVRQETSPED | E G MVVS Q A | V S HGGMTSHA |
| UniRef90-UPI0003748863 | RANKGESVILVR | A GMHAAKG | T TRGGMTSHA |
| UniRef90-S0FX80 | MAK】GENVILVREETSPED | E GMRAASA | T ARGGMTSHA |
| UniRef90-W2E6U3 | WAKEGRQVILASTETTPED | H GVI A A E GVL | TTRGGMTSHA |
| UniRef90-K2LKW9 | WHNRGRKVILVR\ETSPED | GMHAAEG | TSRGGMTSHA |
| UniRef90-B7CB08 | EASRNHKVILVRLETSPED | E G M HVS Q GI | TVRGGMTSHA |
| UniRef90-F5TCK4 | AVKAGEKVILVRQETSPEDI E | EGMVEAEGI | TARGGMTSHA |
| UniRef90-10A026 | WAKRGKEVILVRVETKPDDV | H GF | SRGGM |
| UniRef90-R7MB02 | LGGKGERVVLVRLETTPEDI E | EGMAAAQGI | TVRGGRTSHA |
| UniRef90-K6D4M5 | GNEGKKVILVRPETTPDD | H GlVaA Q AVV | VTSRGGMTSHA |
| UniRef90-A4XDY0 | WAELLGEKVILVRHETSPDD | H M M | A |
| UniRef90-TOUEZ9 | AHQAGEKVILLRQETSPED | D GMVVSEAIV | VTSRGGMTSHA |
| UniRef90-E1QGR0 | WAADGKKI I L V RVETS SPD | RGMNVAEGIL | TSRGGMTSHA |
| UniRef90-C0GKX2 |  | HGIVAAQGl | SRGGMTSHA |
| UniRef90-A1AUT3 | EAKTGRKVILVR】ETSPEDI H | H G M ${ }^{\text {A A A GI L }}$ | T ARGGMTSHA |
| UniRef90-K9EUS0 | TVQAGDSAILVRRETSPEDL | A GMVK ${ }^{\text {a }}$ T GV | TSRGGMTSHA |
| UniRef90-F2NCE3 | LGNEGEK\ILTR\\|ETKPED | HGFFAAQG | T S |
| UniRef90-UPI00036C1CD4 | LVAEGEKVILVRTETSPEDI G | GGMHAAEGI | TARGGMTSHA |
| UniRef90-G0UBI5 | WNAKGKKVI MVRLETSPEDL | A GMDAACGI | TARGGMTSHA |
| UniRef90-B9E9T2 | KAEAGEKVI LVRPETSPEDİ | EGMDA A E A | THGGMTSHA |
| UniRef90-X8K4S9 | AVKKGEKAILVRETTSPEDL | A G M I A A G GI L | T AKGGVTSHA |
| UniRef90-W0J843 | A AEKGEKVLLVRVETSPEDLR | R G M I A A E GIL | TARGGVSSHA |
| UniRef90-UPI00030A9999 | LS ASGRKVILVRTETSPEDI | HGMHAAEG | TARGGMTSHA |
| UniRef90-D3QGM6 | QADSGKKVILMRPETSPEDI | E G MVA S E AI | T THGGMTSHA |
| UniRef90-UPI00026CC3E3 | RAAAGEAVILIRTETSPED | HGMHAAKGIL | T ARGGMTSHA |
| UniRef90-I3BNN7 | LGNQGIKVILVREETKPED | HGFFAARGI | T SRGGKTSHA |
| UniRef90-F5YIE9 | WHLLRGEKVLLVRQDTSPEDI G | G G M VVS Q Gi L | TATGGMTSHA |
| UniRef90-V5SDL0 | QKQQGHAVILVRTETSPED | HGMHASAGI | TARGGMTSHA |
| UniRef90-UPI0003CFEEFC | VVLVRTETSPED | QGMHASQG | A |
| UniRef90-G9ZLU1 | HDDQHRKVILI RQDTSPED | EGMVVSEAIV | V TSRGGMTSHA |
| UniRef90 C1MVG5 |  |  |  |

## QUERY

 UniRef90_R5IGN3 UniRef90-K2NS40 UniRef90-EOQLV5 UniRef90 R5UVS2 UniRef90_A4XKV5UniRef90 CoROM9 UniRef90- R 6 OY 97 UniRef90-R7RPG3 UniRef90-D9PK27 UniRef90-DORPL9 UniRef90 BoG7Y4 UniRef90-H2J6Z6 UniRef90_UPI00040C2C66 UniRef90-D6GPQ7 UniRef90-D3NRA6 UniRef90-UPI000471F8CC UniRef90 F3ZS53 UniRef90-W6N7Q6 UniRef90-X5MGB5 UniRef90-R5W916 UniRet90-R7D1M4 UniRef90-G5GK52 UniRef90-U2DRQ4 UniRef90-G5KE68 UniRef90-F6B8D8 UniRef90-UPIOOO3825648 UniRef90 G9RW54 UniRef90 ${ }^{-}$W6KPL1 UniRef90_UPI00036637FF UniRef90_UPI0003740D9B UniRef90-F7V456 UniRef90-R6BEG0 UniRef90- B2KB81 UniRef90-EOE414 UniRef90-UPIOOO3B7AEED UniRef90-F5X9W3 UniRef90-F3A5V0 UniRef90-G5K013 UniRef90-TORD11
UniRef90
M2TAP6 UniRef90-E4KNB3 UniRef90-R6G2D3 UniRet90-E3DP H9 UniRef90-A9RR03 UniRef90-AOLLD8
UniRef90 H8FMM4 UniRef90-UPIO0047B01DD UniRef90-C0QEQ8 UniRef90-E7MQ92 UniRef90-R7M5J3 UniRef90-UP10002DFC82D UniRet90_D7AOF6 UniRef90-R5VNG7 UniRef90-UPIo0047BB447 UniRet90_W9DZU8 UniRef90-C5AW08 UniRef90-W7C1N9 UniRef90 - T1Z3H1 UniRef90_UPIO003748863 UniRef90-SOFX80 UniRef90-W2E6U3 UniRef90-K2LKW9 UniRef90-B7CB08 UniRef90-F5TCK4 UniRet90_IOAM26 UniRef90-K6D4M5 UniRef90-A4XDYO UniRef90-TOUEZ9 UniRef90 E1QGRO UniRef90-COGKX2 UniRef90-K9EUSO UniRef90-F2NCE3 UniRef90-UPIOOO36C1CD4 UniRef90-GOUBI5 UniRef90-B9E9T2 2
UniRefo - $\times 8 \mathrm{~K} 4 \mathrm{~S}^{2}$ UniRef90-W0.J843 UniRet90-UPIOOO30A9999 UniRef90_D3QGM6

UniRef90_C1MVG5

A VVARGMGT ${ }^{90}$
SGCGETKIINEEAKTFELGGHTFAEGDYI AVVARGMGTCCVSGCGA:KMNEEAKTFELSGKTYKEGDWI AVVARGMGVCCVVGCETLNDNEDLKQAQYASQETKEGDLI
 AVVARGMGKCCVAGCGDISUNEEEKYFTTDGKVYREGDW
 AVVARGMGTACVAGCGDVQ ALVARGWGKCCIVGCGALHVDYDKKQLSI DGKTLKEGDWI AVVARGMGKPCVSGSGT, QIDYQSKEFKVGNRVFKEGDI
 A VVVARMGTCCVSGCGD, AMDEENKKFTLAAKTFHEGDA AVVARGDGRCCVSGLSSLEFTDDGGCRLADQDIKEGDWI AVVARGMGKCCVAGCQEI RVDEESKVLKYADKEI HEGDVI AVVARGMGRACVSGAGDLRIDYKTRQMSVRGVAVKEGDLL AVVARGMGKCC1 TGAGEMIVDYKERTDTVGGTVLHE AVVARGMGKCCVSGGGEKKVNYKNRSFEVDGKTYKEGDF $A V V A R G M G T C C V A G C G D V N V D E L K K V F E V H G H K F G E G D Y I$
$A V V A R G M G R P C V S G A G T V R V D Y A K T F T V G G E T V K E G D V I ~$ AVVARGMGRPCVSGAGTVRVDYAGKTFTVGGETVKEGDVI AVVARGMGKCCVSGAGMLNINYKERTIEVDGLTLLKEGDFI AVVARGMGKCCVAGCSDIAMDEANKVFRLAGKEFRE AVVARGMGTCCVSGCGEIVIDEEAKEFSLGGKTGHEGDFL AVVARGMGKPCVCGCESIKIDYENKQFLVGQLVVKE
 AVVARGMGKCCVCGCGDMQ AVVARGMGKCCVAGCGDINDDLKEKKFFVNDVEIK AVVARGMGKPCVAGCEAIKI DLDKREFTVGDVVVK AVVARGMGTCCVSGCSEVEDDENKKTDRLGGHKYT
 AVVARGMASTGVVGA DEVDYSKTASVKGMI EGEWD AVVARGMARPCVSGASELTIDYELKKOKAGEVMI
 AVVARGMGKPCVAGCSQLRVNELTKTIEI GDLSIK
 AVVARGMGTCCVVGCEDIRTKEAEKVVEYPGGVLH AVVARGMGTCCVAGCGELKVDEEKRTLEVGGKVYTDKDYıI
 ALVARQMGKVCVVGCSDLEVDYQKRRMLVGDRVIREGNYV AVVARGMGTPCVAGAGEIVVDHAARQMKVAGQILSEGDVI AVVARGMGKPCVSGAGALKIDHKAGTMTVLGKTYGEGDVI ALVARGWGKCCIVGAAAFKINPEQRKLVIGSKVFNEGDVL AVVARGMGACCVSGCGDVKVNEAKDQFTVKGEVFKDGDII AVVARGMGTCCVSGCGEIVIUEEKKEFTLGNYTFHEGDYG1 AVVARGMGKPCVCGAGTIRVDYAAGTLTSGGVTLKKGEDL AVVARGMGTCCVSGAGEVLVNEEEKYFTVKGKRYNELDW AVVARSMGKCCVVGCSNVINOKERYDEVNGTKYFDNDFIV AVVARGMGKPCVSGVGSI RIDYKAKTGTVGGVTLKAGDVI
 AVVARGMGTCCVAGCGELSINEYAKTIVCDKVTLREGD AVVARGMGRPCVAGAGGVVVDYAAGTLSAGGQVVHAGETI ALVARGWGKCCIVGAGAMKI NAKNRQVQVGTRVFNEGDVF AVVARGMGKPCVCGCEAAVVDASKRELRTGGRTVCEGEWI AVVARGMGTPCVCGAGQ1KDDYTNTMMSGGVTLNEGDVI
 AVVARGDGKTAVVGAEEI QI DYEKKEFRVNGVVIKEGDII AVVARGMGACCVAGCGDi K NEEKEEFELGGRTFHKGDYI $A V V A R G M G K A C I I C G C E D L K$
$A V V A R G M G R P C V A G T A S L K$
$K$ AVVARGLGVCCVAGCDQLAVDSFLK QARCGEVII QEGDYL AVVARGMGTPCVAGCSEIAVDYANEQFTAGGVVVKQGDWI AVVARGMGKCCVAGCGDIKVDYADESFDANGVEVKKGDLI AVVARGMGKCCVAGCSDIKVDGDHGTFTYQGGQVQEGDY। AVVARGMGKPCVSGAEGMDVNYELKEARDGKHTIKEGDIV AVVARGMGKCCVAGCSDITVNEGAKEFQAGDLQLTEGDYI AVVARGMGKCCVSGCGDMVNDKGKQFTLNGQTEREGDYI AVVARGMGKCCVTGCSDLEINTKEKYVKYAGKTLSEGDVI ALVARQMGKVCVCGAAAI QI DYDRKVATVAGQTFAEGDYL AVVARGMGKPCVTGAGALR DYDEQCFTVAGKRFAKGDK AVVARGMGKCCVTGCSDLEI NTSAKTVYYPDGELHEGDTI AVVARGMGRPCVSGAGGI SIDAKAGVMRVGARVVNAGDII AVVARGMGKPCVAGAEG| HVDVQLRKAFVGNTVIKEGDVI AVVARGMGTPCVAGAKAI S VQGNSVTI NSTVFHEGDWL AVVARGMGVPCVSGAGALRDDEKAGTLAI GPKKLATGDVI AVVARGMGTPATVGVNGLQVNYQTKTATI SGNQLHEGDWL AVVARGWGKTCVSGCSELVVDEENRWLSLGGVKLHEGDWL

|  | $\mathrm{ShDGSIGK} \mathrm{~S}^{130} \mathrm{KGD}$ |
| :---: | :---: |
| UniRef90_R5IGN3 | Sidgstanli |
| UniRef90_K2NS40 | SIDGTTGNIY |
| UniRef90-EOQLV5 | SLDGSTGAVYEGD |
| UniRef90-R5UVS2 | SLNGSTGEVY口G |
| UniRef90-A4XKV5 | SLDGSTGYVYEGE |
| UniRef90-C0ROM9 | Sid ${ }^{\text {d S }}$ SEVMLGG |
| UniRef90-R6Q | SIDGSTGKVYYGE |
| UniRefefo-R7RPG3 | S1DGSTGKV |
| UniRef90_D9PK27 |  |
| UniRef90_DORPL9 UniRef90-WOEKY3 | TLDGGSSGEVMSGE |
| UniRef90-BoG7Y4 | SLDGTTGNI |
| UniRef90-H2J6Z6 | SI D |
| UniRef90-UP100040C2C66 | SLDGETGKVY |
| UniRef90-D6GP | SLNGSTGEVYLGD |
| UniRef90 D3NRA6 | TIDGSTGEVMLGE |
| UniRef90_UPI000471F8CC | S:NGSTGEVVFLGE |
| UniRef90-W6N7Q6 | SLDGSTGNVY |
| UniRef90-X5MG | TIDGSKGQVILGE |
| UniRef90-R5 | NGSTG |
| UniRef90 R R D | SLNGTTGQVYEG |
| UniRef90-G5GK | SFDGTTGN Y GGE |
| UniRe990 ${ }^{\text {a }}$ |  |
| UniRe990-G5KE68 |  |
| UniRe990-66B8D8 | S Didsigavilige |
| UniRef90-UPIO00382 | TI DGFTGNVYLGE |
| UniRef90-G91 | SIDGSTGNIYGE |
| UniRef90-W6KPL1 | TLDGSRGLVY |
| UniRef99-UP100036637FF | S DGSTGEV |
| UniRef90-F7V456 | SLNGTTGEIYDGD |
| UniRef90-R6BEG0 | Stidgstaki y Ge |
| UniRet90_B2KB | NGTKG |
| UniRef90_EOE414 | SIDGSSGC |
| UniRef90_G9W172 | N |
| UniRef90-UP10003B7AEED |  |
| UniRet90-F5X9W3 | S NGSTGE |
| UniRef90-F3A5VO | SFDGATGAVY |
| UniRef90- TORD | EGATGE |
| - |  |
| UniRef90 E4KNB3 | D G |
| UniRet90_R6G2D3 | SIDGSTGNIYGE |
| UniRef90-E3DPH9 | SLNGSt |
| UniRet90_A9RR03 | SLNGSTGEVIMG |
| UniRet90_A0LLD8 | D |
| UniRet90_-H8FMM4 | TLDGSTGEVFLG |
| UniRef90_UPIO0047B01DD | DGSSGE |
| UniRef90-COQEQ88 | TLEGTRGLVYEGGE |
| UniRef90 R7M5J | SLDGSTGKIYKGD |
| UniRef90-UPIO002DFC82D | TLDGATGQV |
| UniRef90-D7A0F6 | TI DGATGQV |
| UniRet90-R5VNG7 |  |
| UniRet90_UP100047BB447 | S1 DGSTGNV |
| UniRef90-W9DZU8 | T D GSTGGL LGE |
| UniRef90-C5AW088 ${ }^{\text {UniRef90 W7C1N9 }}$ |  |
| UniRef90-G3C914 | TidgTtGsvyVGE |
| UniRef90-T1Z3H1 | SVDGTSGKLYTGN |
| UniRet90-UPIO0037 | TLDGATG |
| UniRef90_SOFX8 | N |
|  | TLDGSSGRV |
| UniRet90-K2LKW9 | TLDGAKGEVMLGE |
| UniRet90 - ${ }^{\text {B7CB }}$ | SLDGSTGN Y |
| UniRef90-F5TCK |  |
| UniRef90-10A026 | T: DGNTGNVY |
| UniRet90-R7MB02 | SIDGTTGNI Y GE |
| UniRet90-K6D4 | TIDGGTGEIMLGE |
| UniRef90-A4XDY0 | TIDGSTGEVFLGE |
| UniRef90-TOUEZ9 | DGTTGNLYQG |
| UniRef90-E1QGRO UniRef90 COGKX2 | Sto |
| UniRei90-A1AUT3 | TLDGA |
| UniRef90-AAUT3 |  |
| UniRef90 F2NCE3 | Tidgala |
| UniRef90-UPIO0036C1CD4 | TLNGSTGEVIEG |
| UniRef90-GOUB15 | TIDGTRGLIYAG |
| UniRef90_B9E9T2 | GStGA |
| UniRef90-88K4S9 | DGYDGK |
| UniRet90_W0J843 | G |
| UniRet90-UPIOOO30A9999 |  |
| UniRef90 D30 |  |
| UniRef90-UPIO0026CC3E3 | T 1 |
| UniRef90_13BNN7 | DGTRGDIFLGE |
| UniRet90-F5YIE9 | GSTGEVYEG |
| UniRef90_v5SDL0 | dGATGRVYAG |
| UniRef90_UPIO003CFEEFC | LDGSTGEVFAG |
| ef90 G9Z |  |
| f90 C1MVG5 |  |

## UniRef90 W1JIA5

 UniRef90-UPIO003B2F4F0 UniRef90-R5LL84 UniRef90-X1FS65UniRef90 S6CXY5 UniRef90-C2B193 Uniinefoo-S6anR1 UniRef90-R5ZBFO
UniRef90 G7VCY9 UniRee90-G7VCY9
UniRef90-UPIOo036D7D77 UniRef90-W3AIT1 UniRef90-J3JBX4 UniRef90_UPIOOO37E5650 UniRef90-D6PK42 UniRef90-D1B5K0 UniRef90-X1KIV0 UniRef90-XOT8Q4 UniRef90-M1P357 UniRef90-D7GID2 UniRef90_Q01QF5
UniRef90_E6NTLT UniRef90-UPI0003A399F4 UniRef90_UPIO003FEC181 UniRef90-R5B5A1
UniRef90 R7F4R UniRef90 Q73H79 UniRef90-B3TB66 UniReffo-D8UAX2 UniRef90-U5Q4Y3
UniRef90 G8PR79 UniRef90-A7H7A4 UniRef90- X1FGV8 UniRef90-W7WAL6 UniRef90-UPIOOO3626827 UniRef90-W7X1X1 UniRef90-G2FUl6 UniRef90_D4H5X1 UniRef90-FOSVC6
UniRef90- UPIOOO46A454B UniRef90-D1COK3 UniRef90-UPIOOO347E649 UniRef90-UPIOOO3A4B5F5
UniRef90' UPIOOO476768D UniRef90-T0M484 UniRef90_ADLT14 UniRef90-DOMYC2 UniRef90-V6KXB6 UniRef90_BoEBK3 UniRef90-W5WDF3 UniRet90 A3V848 UniRef90-ETNWY9
UniRef90_B4S5D8 UniRef90-Q1RH78 UniRef90-E8PPU4 UniRef90-LONBV3 UniRef90-A0AO17TD66 UniRef90-E3EXQ8 UniRef90-UPIO0046349CD UniRet90_U1Y836 UniRef90-F9END2
UniRef90-H2CEM8
UniRet90-UPIO0037DFC79 UniRef90-UPIOOO4790323 UniRef90_UPIOO046310AC UniRef90-B8C332 UniRef90-UPIO0047EBEB7 UniRef90_C8SOD5 UniRef90_Q2LIW0 UniRef90-A0A024K8Z7 UniRet90_D3QZ45 UniRef90-T1D717 UniRef90-R5STS3 UniRef90-1016J2 UniRef90-GOEDW3 UniRef90_W2V1C3 UniRef90-G9PGX6 UniRef90-W6T4K4 UniRef90-X1J1C4 UniRef90-Q010Z3 UniRet90-F9VNY5 UniRef90-UPIO00463887E UniRef90-X5GBH2 UniRef90 UPIO00372ED7E UniRef90-UPIOOO3FDOB4A
UniRef90-UPIOOO371E81F UniRef90_UPIooo31632F3 UniRef90_N6VSJ2
Unire90_UPIO0036E7A95

## L H R R $\square D P N A$

$\qquad$ $K V E V I A K G L Q A S P G A A Y G K V V F T A D E A E E$
LRPAFEPDVLMQTKPLLEGUGASP GHAYGDAVLDADRAA T MFPAFDPQRLT EPDATGAGASPGAAVGRVVFAAHRA


 | $L$ | $H$ | $R$ | $R$ | $D$ | $E$ | $G A$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $L$ | $H$ | $R$ | $Q$ | $D$ | $D$ | $P$ |
| R | V R R |  |  |  |  |  |



 $L$ L K N I I E P D S L V G V S A V G S G L $L H R A I S E E A Q Q Q S$ A K GLIPASPGAAVGQVAFHAETAVA $M H P Q V K K T G K E T \quad V L G N G L P A S P G A A T G Q A V F S S E R A I E$

 PLVVKGLPA SPGAATGAVVFDAADAVE

 YPA I DPK QKNKESYI MS GI GAVP GAATGKI CFSASSKAE Q
 L K P TVVDRE K K AP K P I L R GL P A S P GA A F GHAVVFSNEAAER
HPGDPKVERV

LHRQVDPTAPR
L H R Q V D P A A K R TID P T A $\qquad$
D L A R GL
D V V GI A A SPGAATGRIVFSANAAQA
FEFKY LK L NVI GKGGLDASSGAA TGIIVVDAEAAER

LAPDFDPAARSEKRVLAKGLNAGPGAASGYAVFQSAHAVE
 $M F P Q F D D R G S V N E A R G D P A S P G A A V G E V V F D S K K A Y E$
 L RVIA T T S QST PIAVGLPASPGAASGUVVFDPDVAER H P QVDPRGAR DVFAKGI GASPGAATGKIVFTSAAAQA
 LLPC C D S K A MA E A H K Li A T G LVA A S P G A A V G S IV V F S S D R A V E
 PEKAEVIVVRGLPASPG■ASGVARVI LDDSEE
LHPVVDYS $L H Q Q V A P K A K R$
$M F P Q F A T D V E R$
$\qquad$
AFAD
RDDPK GLENLQVLAHGIAASPGAVFGLAIFDADTAEK LPVFETSAEYS GKIVAKGKPASPGAAVGAIICFSAKAAKE LHPRFAAEVV DVLTRGLGASPGAAVGRVYLDAASAVE


## UniRef90 W1 JIA5

 UniRef90-UPIO003B2F4F0 UniRef90-R5LL84UniRef90 - 1 ESK UniRef90-X1FS65
UniRef90 S6CXY5 UniRef90-C2B193 UniRet90-S6ANR1 UniRef90-R5ZBFO UniRef90-G7VCY9 UniRef90-UPIOOO36D7D77 UniRef90-W3AIT1 UniRef90_J3JBX4 UniRef90-UPIOOO37E5650 UniRef90-D6PK42 UniRef90-D1B5K0 UniRef90-X1KIVO UniRef90-X0T8Q4 UniRef90-M1P357 UniRef90 D7GID2 UniRef90-Q10 UniRef90-UPI0003A399F4 UniRef90-UPIOOO3FEC181 UniRef90-R5B5A1 UniRef90-R7F4R2 UniRef90-Q73H79 UniRef90_B3TB66 UniRef90-D8UAX2 UniRef90-U5Q4Y3 UniRef90_G8PR79 UniRet90- X1FGV8 UniRef90-W7WAL6 UniRef90-UPIOOO3626827 UniRef90-W7X1X1 UniRef90_G2FUI6 UniRet90_D4H5X1 UniRef90-FOSVC6 UniRef90-UPIO0046A454B UniRef90 D1C0K3 UniRef90_UPIOOO347E649 UniRef90-UPIOOO3A4B5F5 UniRef90-T0M484 UniRef90-A0LT14 UniRef90-DOMYC2 UniRef90_BOEBK UniRef90-B4SDJo UniRef90-W5WDF3 UniRet90 A3V848 UniRef90_ETNWY9
UniRef90_B4S5D8 UniRef90-Q1RH78 UniRef90-E8PPU4 UniRef90-LONBV3 UniRef90-A0A017TD66 UniRef90-E3EXQ8 UniRef90-UPIO0046349CD UniRet90_U1Y836 UniRet90_-F9END2 UniRef90-H2CEM8
UniRef90 UPIO0037DFC79 UniRef90-UPIOOO4790323 UniRef90_UPIOO046310AC UniRef90-B8C332 UniRef90-UPI00047EBEB7 UniRef90_C8SOD5 UniRef90_Q2LIW0
UniRef90 AOAO24K UniRef90-D3QZ45 UniRef90-T1D717 UniRef90-R5STS3 UniRef90-1016J2 UniRef90-GOEDW3 UniRef90_W2V1C3
UniRef90 S9S119 UniRef90-G9PGX6 UniRef90-W6T4K4 UniRef90- $\mathrm{X1J1C4} 4$
UniRef90
O10103 UniRef90-C7LZN5 UniRef90-F9VNY UniRef90-UPIO00463887E UniRef90_X5GBH2 UniRef90 UPIO00372ED7E UniRef90_UPIOOO3FDOB4A
UniRef90 UPIOOO371E81F UniRef90_UPIooo31632F3 UniRef90-N6VSJ2 UniRe90_N6VSJ2

LUQGDGRKVI ${ }^{50}$
50 - 60
60
HGMHAA 70
70
80
 WAKAGEAV LVRPETTPDD|HGLLAAKGLLTSRGGMTSHA WVEAGKQVVLVRVETSPEDLRGMNVAKGILTARGGMTSHA RAAKGEDVILVRVETSPEDVHGMHAARGVLTTRGGMTSHA RAKDGEVVVLVREETSPEDLEGMVSAVGULTARGGMTSHA RGRAGEK ILVREETKPEDVGGFQAQGILTSRGGKTSHA WAAQGRRVILVRVETKPDDVHGFYSAVGVLTSRGGMTSHA EAAKGENVILVRIETSPEDIHGMHASKAVVTARGGMTSHA AHEAGEQVI MGRAGEKI EASRGRNV MKSEGRKA AVQEGEKV VKAEGRKV QSTKAKPV RGNKGEKVI WADRGEKVI QGKMGEKVI ПHEAGEKL AHAAEEPVI WKARGERV
AKKEGRKVI WGARGERVI

 QGELGEKV: AAVVGEAVILVRAET LGNAGEKVILVRTETT RGKNGDAVV AGAKGKK WSKEGKRVI LSKEKKPLI LVRRETAP WSRSGEKV L AGKRGEAVI WSRSGEQVI WKARKEKCVLVRRET VKERGQLA
LSHHHK
YAAQGLTI AEAAGRKVI RAAQGTAVI SAARGEPCI
AAMRGEAAILVRRET
 MAAKGKTPL
WAGRGEDVI
ASKSGRKV
RHQQGEQVI
SASRGEPCLVREETPE
KAHGGEDVI MVRQETAPEDDR VRARGRHCLEVVTETG
VQATGEKAVLVRREETS
LSKKKKKIVLVRPET
RGEAGEKVILVRME
WGKAGKPVIMVRP

AKOFREGDIVTKMTKPDDVGMDAAKGMTRGGATSHA MTSQGKKVILVRNDTSPEDIEGMSVSAGIVTDEGGMTSHA AAAQGEACILVRRETSPEDVRGMHAAKGILTERGGANGHA RAAEGQKVILVRRETNPDDLPGMVAADGVLTARGGKTSHA ПDKFKQGEVLVTLMTSPDWVPAMKKAAAIVTNNGGMTCHA LNESDKDVILVRPQTKPEDI HGMYASNGVLTQFGGKTSHA A HAA GEPVILVVRKETSPEDVRGMLAAEGILTTRGGLVSHA KDFEKGDILVTKMTDPDWVP TMKI ASAIVTDEGGMTSHA | $\square T S E G Q K V V L V R P E T S P D D: H G L A V A E A V V T S R G G M T S H A$ |
| :--- |
| $F R K D G R N A I L I R Q E T N P E D$ | RADAGEKVVLVRNETTAADLPGMDAAQAVLTARGGKTSHA AAADGKDVVLVRPFTEADDVAGFHAAKGVLTAEGGKASHA

RAAGGERVVLVREETYPDVPGMVAAQAVLTSRGGRTSHA RAAGGERVVLVREETTPDDLPGMVAAQAVLTSRGGRTSHA MDKVEEGDVEVTKMTTPDMVPAMKKAAAVVTDEGGLTCHA

## UniRef90 W1JIA5

 UniRef90-UPIO003B2F4F0 UniRef90-R5LL84 UniRef90_X1FS65 UniRef90_S6CXY5 UniRef90-C2B193 UniRet90-S6ANR1 UniRef90-R5ZBFO UniRef90-G7VCY9 UniRef90-UPIo0036D7D77 UniRef90-W3AIT1 UniRef90- J3JBX4 UniRef90_UPIOOO37E5650 UniRef90-D6PK42 UniRef90-D1B5K0 UniRef90-X1KIV0 UniRef90-X0T8Q4 UniRef90-M1P357 UniRef90_D7GID2 UniRef9-Q010F5 UniRef90_UPIO003A399F4 UniRef90_UPIO003FEC181 UniRef90-R5B5A1 UniRef90-R7F4R2 UniRef90-Q73H79 UniRef90-B3TB66 UniRef90-D8UAX2 UniRef90-U5Q4Y3 UniRef90 AㄱTA UniRef90 ${ }^{-}$X1FGV8 UniRef90-W7WAL6 UniRef90-UPIOOO3626827 UniRef90-W7X1X1 UniRef90-G2FUI6 UniRet90_D4H5X1 UniRef90-FOSVC6 UniRef90-UPI00046A454B UniRef90 D1COK3 UniRef90_UPIO00347E649 UniRef90-UP10003A4B5F5 UniRef90-UP1000 UniRef90 ${ }^{-}$AOLT14 UniRef90-DOMYC2 UniRef90-V6KXB6 UniRef90_BOEBK3 UniRef90 B4SDJOUniRef90 W5WDFs UniRef90-A3V848 UniRef90-ETNWY9 UniRef90-B4S5D8 UniRef90-Q1RH78
UniRef90 E8PPU4 UniRef90-LONBV3 UniRef90-A0AO17TD66 UniRef90-A0A017HBD5 UniRef90-E3EXQ8 UniRef90-UPIO0046349CD UniRet90_U1Y836 UniRet90_-F9END2 UniRef90-H2CEM8 UniRef90-UPIO0037DFC79 UniRef90-UP10004790323 UniRef90-UPIOOO46310AC
UniRef90 B8C332 UniRef90_UPIO0047EBEB7 UniRef90_C8SOD5 UniRef90_Q2LIWO UniRef90-A0A024K827 UniRef90_D3QZ45 UniRef90-T1D717 UniRef90-R5STS3 UniRef90-1016J2 UniRef90_GOEDW3 UniRef90_W2V1C3
UniRef90 S9S119 UniRef90-G9PGX6 UniRef90-W6T4K4 UniRef90- X 1 J 1 C 44 UniRef90-Q010Z3
UniRef90_C7LZN5 UniRef90-F9VNY5 UniRef90-UPIO00463887E UniRet90_X5GBH2 UniRef90 UPIO00372ED7E UniRef90_UPIOOO3FDOB4A
UniRef90 UPIOOO371E81F UniRef90_UPIooo31632F3 UniRef90_N6VSJ2
Unire90_UPIO0036E7A95
$A \vee \vee$
$A \vee V A R G F G K P C V A G A$
 $A V V A R G M G K P C I T G A G G M R I D K H N K A L V A G G V M L R G G D Y L$ AVVARGMGKPCVCGCDTLRINARDKTLQVGERVLAEGDVM
 $A \vee V A R G M G T C C V A G C S S I V V N$ AVVARGMGRACVCSAQG AVVARGWGKPCVCGCEALHIDAKAGSMTVKGMTIREGDKI ALVARGWGKCCIVGCDALHIDLKSKKVNGKEVVLNEGDWL AVVARGMGKPCVAGAGSIRVDARNEIMSVDGRSFGKGDVI ALVARQMGKVAIVGCEALSFDYHGRQMRVATRVVREGDW1


 $A V V S R H M G K P A V C G C D A L$ AVVARGMGKCCVAGCGAIKIDEKAKKFSVGSKTINEGDII AVVAR HMGKPAVCGCEALRMDYNSRKDTIVENQEYTENDVI $A V I G R G L G L P C V V G V S N M K F N L V Q K Q L T K D G R V F N E G D E I$ $A \vee \vee A R G M G K P C V A G A G$ AVI A R GMGAPCVVCGAEAI QI DAAAKEARVAGTVLRE GDVI ALVAARGWGKS CVVGCQTLHINNNQRSGSI GDIKIKE GDWI $A V V A R G M G K P C V C G C E T I Q F L E A E H C D Q I G N Q V I Q E G D W V$ AVVARAMGKPAVVGAESIKVNVAERKMVSGD\|TVKEGDII $A V V A R G M G K T C V S G A E Q I D I D L A N R R F T P N G E V V Q E G D V I$
 $A V V A R G M G K P C V S G A E G I V V D V A K K V A K I G T L E V H E G D I L$
 $A V I G R G L G V P C V V G A S D L L I D R K G R V V A P D G R T F A$ AVV A R G WG K C C IV V G C E K L Ti N Y E A G E C S Y N G IV L K ALVARQMGKVCVAGCGELDIDYQKGEMRDEGTVLKEGDY I

 $A V V A R G M G K S C V A G C S S V V V G R D A M T V T T G T K S F K A C D V I$
 AVVGRGGGVPCVVGATGLVIDRRARVIAPDGRVI HVGEVI
 $A V \vee A R D L G T P S V V G C E$

 A $V \vee V$ $A \vee V A R G M M G K T A D V V G$ A $V \vee V$ A R $G W W G K P C B C$ A V V A R GMGKC A $A V I G R G L G L P C V G C T$



 $A \vee V A R Q F G T P A V C G A E E$ A I V SRELGIPAVVGT $A V V A R G M V R E A T K K I K T G M V V$ $A V I A R G L G L P C V A G A T M G D V N T K A R T V T A D G R V F G E G D V V$ AVVARGMGKTCVCGAEELEVDAEARTLTVNQUVLHSGDVI AI V S REMQ $\square$ P CIVGTESRHV

A A T DVLKTGDVV $A V V A R G M G K P A D V G A S E D H \square D \square E N R E F T V G D D V I D R E G E V I$ AVVAR GWGKPCVSGCGDIFKNDREDRFGSSDKTFRSGNVI $A V V A R G W G K P A V V G A D A \| V \quad \square E E G G F R V G G R Q V G V G D W I$ A I V S RELG I P AVVGTGN AVVAR GMGKPCVTGGESLSDNDEQG\|LQK AVVARGMGKPCICSANGIFIDKSEQFFYIGDIVLSAGDFII $A V V A R G M G T V C V C G A E D M I V D A R A R C L V A A G S T V Y K G D S$ A L V A R R G M G TVVCAV C G A E D M
 A I V S R E L G V P C V V G T K
A I V S REMQ\| P C|IVGTTS

| UniRef90_W1JIA5 | TI D G S L G QV L A G |
| :---: | :---: |
| UniRef90-UPI0003B2F4F0 | S I D G G T G MVYLG |
| UniRef90_R5LL84 | SLD G S T G NVY G |
| UniRef90-X1FS65 | S L N G |
| UniRef90_S6CXY5 | T L D G G T G A V Y K G |
| UniRef90_C2BI93 | S I D G S T G E I Y A G |
| UniRef90_S6ANR1 | T I D G G T G HVY A GE |
| UniRef90_R5ZBF0 | S L D G S T G A V Y E G |
| UniRef90_G7VCY9 | T I D G H T G G V Y $\square \mathrm{G}$ |
| UniRef90-UPI00036D7D77 | TVV ${ }^{\text {d }}$ T GEVFKG |
| UniRef90-W3AIT1 | TI D G G T GEIFAGE |
| UniRef90-J3JBX4 | S V D G A S GQL Y Q G |
| UniRef90_UPI00037E5650 | TI D G S T GLI Y Q G |
| UniRef90_D6PK42 | S I D G S L G |
| UniRef90-D1B5K0 | T I D G S R GLL |
| UniRef90-X1KIV0 | T I D G G $\square$ GQVLK |
| UniRef90-X0T8Q4 | S L N G S T G A V Y L G |
| UniRef90_M1P357 | TI D G G S GEVFEG |
| UniRef90_D7GID2 | T L N G S T GEV |
| UniRef90-Q01QF5 | S L D G S T G M V Y A |
| UniRef90_E6N7L7 | T I D G S T G NVY L G E |
| UniRef90-UPI0003A399F4 | T L D GNK G QVLEG |
| UniRef90_UPI0003FEC | S I D G A S GRVFLG D |
| UniRef90-R5B5A1 | S L D G S T G CI Y D |
| UniRef90-R7F4R2 | S L D G S T G NVYD G |
| UniRef90_Q73H79 | T I N G G T G EVML L |
| UniRef90_B3TB66 | TI D G S T GEVMLG |
| UniRef90-D8UAX2 | S L N G T T GEVIN G |
| UniRef90-U5Q4Y3 | S L N G S K GL |
| UniRef90_G8PR79 | T I D G G N G Q V |
| UniRef90_A7H7A4 | S I D G T A A EVIEGE |
| UniRef90-X1FGV8 | T I D G G T G E V FLG |
| UniRef90-W7WAL6 | SVVDGAT GKVYS G |
| UniRef90-UPI0003626827 | S I D G T T G A V Y L G |
| UniRef90_W7X1X1 | S I D G LT GEVFAAE |
| UniRef90_G2FUI6 | S I D G S T G R V I K G E |
| UniRef90_D4H5X1 | TI NGS T GEVI N G |
| UniRef90-F0SVC6 | S I D G G T G H V I Q G |
| UniRef90_UPI00046A454B | $T V D G S S G Q I L A G$ |
| UniRef90_D1C0K3 | TLD G S T GAVYA G |
| UniRef90-UPI000347E649 | S I D G T E G IVVA G |
| UniRef90_UPI0003A4B5F5 | TLNGS T GEI FLG |
| UniRef90_UPI000476768D | TI DGHRGLI CL G |
| UniRef90_T0M484 | TVVDGTS GEFYL G |
| UniRef90-A0LT14 | S I D G T S G AVYLGE |
| UniRef90-D0MYC2 | SMNGTTGEVVQG |
| UniRef90_V6KXB6 | S ID G S T G K V Y L G E |
| UniRef90-B0EBK3 | T I D G S T G CVVYK G E |
| UniRef90_B4SDJ0 | SIIDGS T GEVIA G |
| UniRef90_W5WDF3 | S V D G G T GEVFLGE |
| UniRef90-A3V848 | $T \vee D G T T G Q V L A G$ |
| UniRef90_E7NWY9 | TLIDGARGDI YK GE |
| UniRef90_B4S5D8 | S L D G T T GEV DQGE |
| UniRef90_Q1RH78 | TI D G G T G K V FLG |
| UniRef90_E8PPU4 | TLDDGS T G EVY T G |
| UniRef90_LONBV3 | TLD G S S G Q V L R G N |
| UniRef90-A0A017TD66 | T L D G G T G R V Y Q G |
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| UniRef90-H2CEM8 | S I D G T S GEVFVG |
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| UniRef90_B8C332 | S I N G G T G EV I |
| UniRef90_UPI00047EBEB7 | TLD G G T GRVFA G D |
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| UniRef90-Q2LIW0 | SVVDGS T G Q VFVG |
| UniRef90-A0A024K8Z7 | TIDDGSDGSVYA G |
| UniRef90-D3QZ45 | $A F D G S T G Y V Y G E$ |
| UniRef90_T1D717 | TVD G T N GEFI I G |
| UniRef90_R5STS3 | S L D G GK G V M E G |
| UniRef90-1016J2 | $S$ L D G G T G EV F L G |
| UniRef90_G0EDW3 | TV D G S R GVVYK ${ }^{\text {K }}$ |
| UniRef90-W2V1C3 | TI D GSNGNILL |
| UniRef90_S9S1I9 | TLD D T K G Q V L V G |
| UniRef90-G9PGX6 | AV D GTTGEVFLGE |
| UniRef90-W6T4K4 | $T \vee D A K N G V V Y Q G$ |
| UniRef90-X1J1C4 | T I D G T K GLV $\square$ A G |
| UniRef90-Q010Z3 | S I N G T T GEV |
| UniRef90_C7LZN5 | S I D G T S GVVVA G |
| UniRef90_F9VNY5 |  |
| UniRef90_UPI000463887E | $T V D G S Y G R V L L G D$ |
| UniRef90-X5GBH2 | TIN G CNGEV I L G |
| UniRef90_UPI000372ED7E | SV D G S E GVVRLG |
| UniRef90_UPI0003FD0B4A | A I D GT T G TVV |
| UniRef90_UPI000371E81F | SVVGSDGTVRLG |
| UniRef90_UPI00031632F3 | A I D G S S GEV FVG D |
| UniRef90-N6VSJ2 | TVVGEK GVVYEG |
| UniRef90-UPI00036E7A95 |  |


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 ADVGDVILVRPTTSPEDVAGMSASVGILTTRGGLVSHA FSQFQKDDILVCKTTTPGWTSLFRDAKAVITDAGGLLSHS MHTVQPGDVLVADMTDPNWEPVMKRASALVTNRGGRTCHA
 DAKVQAGDVLVTDMTDPNWEPVMKRAAAI TNRGGGRTCHA LDKVQEGDILVTVMTTPDMVPAMKRANGIVTDEGGVTCHA RAADGEPVVFVARTTSPEDVHAMDAATAVCTETGGSTSHA
$M D K V Q A G D V V T D M T D P N W E P V M K K A S A I V N G G G T C H A$ MDKVQPGDVLVTDMTDPDWEPVMKRAAAIVTNRGGRTCHA MDTMRTGDVLVAEDTDPDWEPVMKRASAAVITERGGRTCHA
LDTFQPGEVLVTYKTDPDWEPIMKKASAIVTNQGGRTCHA

## 2

$4 \frac{1}{\mathrm{~F}}$
FSQKDGEILVTEMTAPDWVPVMKKAKAIITDAGGMTCHA MGRIIPGEVLVTDMTDPDWEPIMKRAAAIVTNRGGRTCHA MDEFEPGEVLITCFTDTAWTPLFNDATAVVVDDGSLESHS LDQVVEGDIIVTEMTMPDMVPAMKRAVGIVTDEGGMTSHA
 MAAAEPVVLVRPETSPLDMRGLAVAAGIVTARGGPASHA LINRGKGELLAAERTDPDMVPGMRVASAILADVGGDTSHA AGEFQPDEILVARFTDASWTPLFALAAGIVTDLGSTLSHS MHEVKEGDVLVTDMTDPDWEPIMKRASAIVTNRGGRTCHA MAKQGGQVILVRDETNPDDVHGMDAAEGVLTSRGGRTSHA LSKVKEGDILVCPNTSPAWGPVFAKVKAVVSDDGGLMAHA MDQLQPGDVLVTDMTDPDWEPIMKRASAIVTNRGGRTCHA



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| UniRet90-A0A037Z | TVDGTSGEAL |
| UniRef90 H2C8D | TVDATRGV |
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| UniRet90-COW5z9 | AI DGQTGEVF |
| UniRet90-D2EFH7 | TVDKNG |
| UniRe990-O27190 | GN |
| UniRef90_AOB9NO | TVDGTKGQVYEG |
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| UniRef90-S2KC30 | TVDAKNGVV |
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| UniRet90_R6AMN3 | T |
| UniRef90_E3GX | V VDG |
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| UniRef90-D3HJ60 | TVEGDNGY |
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| UniRef90-C3X1G8 | TVEGEDGRI |
| UniRef90-V6DZY7 | TLDGDKG |
| UniRet90-K2CDI5 | D |
| UniRet90 X1B558 | D |
| UniRet90-K2HDY9 | TLDGHGG |
| UniReigorgiov |  |
| UniRet9o-Iown | TVDAT GRVYGE |
| UniRer90_R9NAY8 | G |
| UniRef90_B5YLA1 | S DGRNG |
| UniRef90_A5EEB6 | D GD |
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| UniRef90-K5WBV8 | TVEGET |
| UniRef90-L7K4V4 | TI DGTSG |
| UniRef90_A0A059NE3 | TVDGSNGR |
| UniRef90 AOP6T | TVEGETGUV |
| UniRef90 l4EJ60 | TV |
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| UniRet90-H1Y1E4 | EMDGSTGI |
| UniRef90-K6T7T6 | TLDGNKGMVWEG |
| UniRef90-F4CV |  |
| UniRet90-D5CM | GDTGYVYHG |
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| UniRet90_A0f | V ${ }^{\text {G }}$ |
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| UniRet90_1419088 | VVDGNEGK |
| UniRef90-F8A7Z4 | TVDGDKGY |
| UniRef90-V4JOB3 | TMDGDKGTVREG |
| UniRef90_U1P3U4 UniRef90 O9YG73 | TMDGGYRGAVYKGE |
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| UniRef90-T1CTW1 | T |
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|  | G |
| niRef90_S4XHV8 | TVID G A H G KV LE G |


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LNKII QP GDII LIA AERTDPDMVVIPGMRASAIILADAGGDTSHA ADD DVILVRPETKPEDVAGMAASVGLLTTKGGLVSHA F HRDRE GDVLVCPYTNPAWTPGLFQRAAAVVVDSGAVASHA
INNFKPGEVLVTNRTDPDWEPDMKQASAVVTNQGGRTCHA EANAKPGEVLVTNRTDPDWEPVMKQASAIVVTNGGRTCHA
 MHLVEAGDVLVTDMTDPDWEPVMKRAAA VVTNRGGRTCHA
 LK SKGKNVILVRDETSPDDIEGIIACDGIVTDQGGATSHA MSEVQPGDVLVTDMTDPDWEPIMKRAAAIVTNRGGRTCHA MDQFQPGEVLVIEKTDPDWEPVDKKAAAIVTDRGGRTCHA $\begin{array}{ll}M A D F A P G D V L V A D M T D P D W E P I M K R A S A & V \\ A & \text { M }\end{array}$ IDEEFEPGEVLVTNKTDPDWEPIMKRASAIVTNQGGRTCHA GHRDEDGEVLVASMTDPDWLPTIRRAAALVTDRGGQTCHA MAAMQDGEVLVTDMTDPDWEPVLKKASAIVTNRGGRTCHA PS FRPGEI LI ADTTTPDWEPVMKTAAAIVTNKGGRTCHA GEKFNAGDVLVAD DTDPDWEPIMKKASAVITNRGGRTCHA MDQFQSGDVLVTHRTDPDWEPIMKKASAIITNSGGRTCHA MARVMPGDVLVADMTDPNWEPVMKRAAAIVTNRGGRTCHA MNKVQAGDVLIADMTDPDWEPVMKRASAIVTNRGGRTCHA IGSFIDGAVLVTSTTDPDWVPIMKRAAAVVTDHGGRTSHA I R D LQQEGEVILVAPTTSPSWAPAFAK DKACI T DVGGVMSHA LEKMRPGDVLVVEQTDKDYVPAMKKAAA I T TE EGGLTSHA GNRLQPGDVMVAPSTDPGWTPLFDKAGAVVMETGGFLSHG LTQFVPGEI LVADTTTPDWEPVMKTAAAMVTNRGGRTCHA LNHFEPGEVLVASSTNKEFVEVVMKAAGIITEEASLTSHA STFGAGEVLITTKMTDPDWEPIMKDASAIVTDQGGRTSHA


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 SDQFQAGEVLVTEKTDPDWEPIMKKASAIVTNQGGRTCHA
 GAMREREGEDVLVASMMTDPDWWPTISKAAAALVTDSGGMTCHA DARFVDGSVLVTGTTDPDWVPVMKRAAAIVTDRGGRTSHA


 AKLNKGDILVAPFTDPGWTPLFYSAQALVVE $\square G G M M T H G$ MHLVQAGDVLVTDMTDPNWEPVMKKASAIVTNRGGRTCHA
 A A Q $\mathbb{C}$ Q D GE E L

 KH Q R DGEVLVAPMTNPDWVPAMRRASAMVVTDGGGMTCHA
 ADEFQAGEILVARYTDASWTPLFAIAGGVVTDIGSMLSHS

 KGKETEGTILVTKATDQDMMEI IGKVKAIVTEEGGLTSHA






 MNDFKEGEVLVTXDNTDPDWEPMCMKASAVI TNRGGGRTCHA





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| :---: | :---: |
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|  | EGDVGR |
| UniRef90 ${ }^{-} \mathrm{V}$ | VEGDT |
| UniRef90-G7CH | TVDATGGRIYPGE |
| UniRef90 K2EAB8 | SVNGLTGDVF |
| UniRef90-G3MBK5 | TIEGQTGKVFLGE |
| UniRef90-Q81ZR7 | TVEGDIGFVYEG |
| UniRef90_10JY6 | TVEGEIGKVYEGD |
| UniRef90-UPIO003B63CEC | TVEGDDG |
| UniRef90 D3SN | TMEGEI |
| B4VY |  |
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| UniRet90_G2J811 | EGE |
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| UniRee90-H123X9 | TVDGA G |
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| UniRef90 LobrD1 |  |
| UniRef90-UPI0002DFE2C0 | $V D G A G G$ |
| UniRef90-C8VX | TVDGDEGRVF |
| UniRe90-081/ | OGDTG |
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| UniRer90-UP100036C4F45 | MDGRGGLLLAGE |
| UniRee99-UP 1000265564 | DGSA |
| UniRef90-UP10003FE53A3 | TVEGKTGFVYRGE |
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| UniRef90-UP100036CDF4C | TVDGT |
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| UniRef90_A3Q3 | RVDGS |
| UniRet90 S3C7 | D G D |
|  | VNGNNG |
| UniRef90-F2JKF9 | KLDGAKG ${ }^{\text {d }}$ |
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| UniRef90-M1ZLT5 | TVDASHGHI |
| UniRet90_U4WV46 | $\mathrm{DS}$ |
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| UniRef90_A1TCl3 | VEGDTGRV |
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UniRe90_6D652

50
60
70
80 MNELLKPGE|VLV|TDITDPDWEP|I MK LTASA|IV|TNRGGRTCHA

 L G E $\|$ Q Q G E LKE Q D P P DI L I R Q DTVPEDDK E I AVA D GLLTAR G G Q T S H A
 $L Q E V R D G E V L V C S V T E P S W A P V L A R D R G M V S D D G G V M S H A$
 V N




 SKKWPKNPI IVAKATMPGWTPVFDRAKGII VERGGALCSHC T A T I R S G DI L VAA E R T D P G W IT I F PL V K GL I MERGS L L S H S
 S A A A A A S A P D $M$ G E DID R L T I L L V V P Y T D S G WA A V L A R A G G L I A E V G GR L S H G $V$ S KV T E G D L L T T S S T D K D M M DAF EKA GA V I T E S G GLLT S H A ADEFQA GEI LVTTRYTDATWTPLFADAGGVVTDDGSMLSHS UniR UniRef90-I2GI65 UniRef90_K7JPF5 UniRef90_UPI00036A2683 UniRef90-B4WGE9 UniRef90_A0JRW5 UniRef90_UPI0004659E89 UniRef90_E8U6X9
UniRef90 S5KG44 UniRef90-S5KG4

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| UniRef90_A4BDEO | $T \mid E G D T G Y V Y^{130}$ |
| :---: | :---: |
| UniRef90-UPIO002E3156D | TiNGDNGEI |
| UniRef90-88H911 | TLEGEEGRV |
| UniRef90-K3UEL7 | TVESDSG |
| UniRef90-A3XEU2 | RVDGNTGQ |
| UniRef90-DEZ5N0 | SIDGRKGL |
| UniRef90-D6TS91 | TI DGTSGTVTLINE |
| UniRef90-P73534 | TIDAQKGLI |
| UniRef90-B9L4R6 | RVDGENGVV |
| UniRef90-W7ZX14 | TVDAKTGNIYS |
| UniRef90-14EWMO | RVNGSTG |
| UniRef90-UPIO002EBCA70 | RIDGYRG |
| UniRet90-K9Va | D |
| UniRef90-U5DJZ55 | TVEGDDGYAYAG |
| UniRef90 O1NL13 | S ${ }^{\text {I DGRKGLVLQGD }}$ |
| UniRef90-B6FXT1 | TVDAKAGIIYKG |
| UniRef90-U2N808 | RMDGGAGTVTrLE |
| UniRef90-L8LQC8 |  |
| UniRef90-TOROJ7 |  |
| UniRet90-A5CFR9 | ELNGASGH |
| UniRef90-D7DVP 0 | LLDGDRGE |
| UniRef90 K9SEY3 | TVVDGTTGMVTSG |
| UniRef90-UPIO00344D3B9B | RVDGARGVV |
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| UniRef90_L8MZ80 | TVEGEEGKV |
| UniRef90-UPIO001758406 | ILSGENGTV |
| UniRef90-W8T1Z4 | TTDTPRG\| |
| UniRef90-B7PUG4 | LDGNTG |
| UniRef90-UPI00036ACBB6 | TLQGKTGYI |
| UniRet90-F6D65 | TVESRTGN |
| UniRet90_12G165 | RVHGTDGYV |
| UniRef90-K7JPF5 | TLNGYTG |
| UniRef90_A6MC | DGGHGV |
| UniRet90_UPIO0036A2683 | TVDGAAG |
| UniRet90-B4WGE9 | RIDGQNG |
| UniRet90_A0JRW5 | TLDGGAG |
| UniRef90-UPIO004659E89 | TVDGVRGVVYAG |
|  | EtVDGASGT |
| UniRef90-I7IZW7 | TVDSRRGAVYQGE |
| UniRef90-UPIO0036AF4A6 | RVDGDRG |
| UniRef90_H5UJL1 | D |
| UniRef90_U2KYP4 |  |
| UniRet90_UP10004669 | LEGEEG |
| UniRef90_W01 | CVDGDHGRV |
| UniRet90-B7JWP9 | RIDGQQGI |
| $\begin{aligned} & \text { UniRef90-F6D9C0 } \\ & \text { UniRef90_A0A049DP36 } \end{aligned}$ | TVVEGEQGKV |
| UniRet90-K7X2 | RIIDGYKGTV |
| UniRef90_K2FBA8 |  |
| UniRef90_A4FR07 | SVDGDVGRV |
| UniRef90-T2JD11 UniRef90 - 8 ClP 71 | TVDAEKGQVY |
| UniRef90-V4N194 | MDGATGI |
| UniRef90-UPI00045E75DC | TVEGDVGKVYPG |
| UniRef90-UPIO0040BB514 | RVNGNMGY। |
| UniRef90-K2BIW9 | KVNGTKGVV |
| UniRet90_UP10002002 | TAEGDQGRV |
| UniRet90_G2FRK8 | L |
| UniRet90_B7K561 |  |
| UniRef90 A0AO1: | TLYAEHGFIY |
| UniRef90-UP10002E5EEE7 | RLDGETGQVI |
| UniRef90-UP100037F3D24 | RVDGTAGTV |
| UniRef90-D11120 | TVDCSQGRI |
| UniRef90-B4WT71 | TVEGEV |
| UniRef90-Q7MZ03 | D |
| UniRef90-TOT9C4 | WIDGNSGT |
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| UniRef90-UPIO004261B | VVDGDAG |
| UniRef90 UPIO0040318F4 | T DGTNGIL |
| UniRet90-O11012 | TLDAQRGMV |
| UniRef90-UPIO002F93D70 | WLDGDRGVV |
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| UniRef90-B6A |  |
| UniRef90-B113H0 | TI DALLRGLVYSG |
| UniRef90-s934T7 | RVDGNTGT |
| UniRef90_V5C1D2 |  |
| UniRet90-H1LXD4 4 | TVEGEVGFVYEG |
| UniRef90-A9ASS8 | RVDGTVGWVYEG |
| UniRef99-UP10003B6A06D | RVDGTAGTV |
|  | GEQGEVFEG |
| 22 | EVDGTTGRV |

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PRGPAVATERGPAVLTGTPGSSGVVEGVAKVMHDPSEQ

 A GDATLS $G$ A
A G D A T L S GLGVV G GRRI T GRVRRIV D DES
$\qquad$ TGFGVASGRAVGRARLI YHPHKG $\square L R G D P \vee S P G T V T N P A S L I N S P T$ I

GSK L V $G V A \vee S S G V I$ E GRAKVVLKL
GSKLV Q GQGVVGKTVVGGKAVVAKNAADA $I L A K G Q A V G T R \| G A G K V R V I N N V K$ $T V L L K G K A V G T K I G A G K A R V I N D V V K Q$ $V L G Q G \square G I G K G S V S G L A R D A Y S A A E$ $K P L A T G I I A T P G Q A L G P A L V I T E S M A A$ $G S K / A D G Q G V G D E T V I G K A V I A T S A Q E A$ $S G T V L V S G V A V G Q R D A S G K V V V L E S M R D A$ GDVI LK GTGIGTK SVHG VA YVAK T L K E $K \square H H \nabla G E L L A Q G Q G I G S Q T A T G R I V V A R T T P E E A$

 L L T G $\square G A S P$ GTLDEGKV QVLNTLDT L I K G M A A S P GTYR GVARVVF Q S IDD D A G DLLAK
T A K K R L $G \square A A S$ G GTVVE G
 $G D \square L V K A Q G \square G R H S A Y G K V V T A K T A T E A$ K GDVAFTG■ANGKAVIHLSWTGT
K
G H L L V S


DDTAPEHGPDVLIGQPAATGワVTGPVR\VHHPSE
 GQPAGPGI GIGKSRVIQSQQ P GP T T A GSVTDSGEPASPGVASGPVRLVRGPADF
 1 LK G $\square P S S P G G V V M G K V L V A R T A E E A$ $\square L K G$

$R G T P V S A G R A Q G P A F I A R D P A Q A$
 $V L G E G S G \square G Q G A \square S G R A R D V A H N Q E$ $P L L A G G Q A A S P G T A S G \quad V A Y V V Q T S H A$
 E A AKTGKVLI K GLLAA GAPKVVEGVVVVVVGPHE GD S\|AK GQG\|GK TVAMGKTVVVRNAEQA LR GMTI S Q GI VE GTAHVVKTTMET
$K G E V I A B G R A V G A K I G A G T A R V V K S$ $G N I L L R G T G \| G Q Q A V T G Q \square V V V T S \rrbracket K E \square$

EKDAEKDG $G I P T A S G D A Q G Q A R V I E E P S D A$

PR $\square E P D S G L P$


$R G V A T G T G R V Q G R V R I L R H P S D$ $G I G A S A G Q V E G L V R \quad V L S L Q Q$
$S V R A G D V R I E A T S V C G G E V V A R A C V V K E L S$


 $\square T G \square G A A P G Q \square Q G T V Y Y L L N E D N N S$
VA GAEVLIEGQTACS GVGAGPVHLVR TDD D
VVD EKSEK GE DLAS GQ G I G R N S AVVGRTVVVVN GS E L
D AVAEATAGTVLTGGPSSPGVVTGRAVVV
K V HV I S E E IS T GMGVGRETVE GKVKIVVNGET

 VTGLPGSGGVAEGPVRVVATVE $K \vee H V V S E E I C Q G I G G G R T T I E G N V R I V V S G G E S$ $K V E V V T T V L G H G T G I G Q V S V S G R A R \quad V A R S A S D$

AEK D S TVVI I G $\square T$ S S P GVGF GKVFHV D K A V D




| UniRef90_K9YG31 | $\mathrm{T}\|\mathrm{~V}\| \mathrm{DA} Q R \mathrm{G}\|\mathrm{LV}\| \stackrel{130}{\mathrm{~S}} \mathrm{G}$ |
| :---: | :---: |
| UniRef90-B8FWG8 | TVDALDAGVVYEG |
| UniRef90-K9TEK0 | TMDMER |
| UniRef90-M0PGT9 | R\D GERGTV |
| UniRef90-C5BUW8 | TV D GTA G |
| UniRef90-I3R7Z4 | RLD ${ }^{\text {dKRGT }}$ |
| UniRef90-K6W8C1 | RVVGAAGT |
| UniRef90_C8X0P9 | S L N GATGH |
| UniRef90-14EEG6 | LVNGDAG |
| UniRef90-F5YRP1 | EVDGTS GQ |
| UniRef90-G2G232 | EVDGDEGKI |
| UniRef90-X1E2Z6 | TVD G N |
| UniRef90-A6TNE9 | RI NGTE GYV |
| UniRef90-F4FUT7 | TVDSHRGVIYHG |
| UniRef90-UPI0002657CD0 | MLD G NAGTV |
| UniRef90-K6YZL5 | TVSCAEGE |
| UniRef90-V9QZ79 | TI E GES GIV V D G |
| UniRef90-B4VSA1 | TLDTQRGLVY |
| UniRef90-K9RZH2 | Y L D GQ T GHV |
| UniRef90-C6VQL7 | TVDSRRGLVVY |
| UniRef90-UPI00047A92AS | CAEGH $\mathrm{C}^{\text {GR }}$ |
| UniRef90-D9S2K6 | TVDCQRGLVYRG |
| UniRef90-D6STP9 | TVDGYRGTV HE G |
| UniRef90-C6D8B8 | TVV GET GVVYS G |
| UniRef90-E9GD24 | D G S K G |
| UniRef90_K9XQ11 | L NGNT GKI Y R |
| UniRef90-K2EYK4 | EVVA ${ }^{\text {E }}$ NGI |
| UniRef90-G7WJ91 | LVDGGRGIVILGN |
| UniRef90-C8X1K1 | AVDGFKGTV |
| UniRef90-K9FLG7 | RID GQQGTV |
| UniRef90-UPI000380ECEA | VVDGSNGVV |
| UniRef90-UPI0004712E97 | TMDAETGVVYKG |
| UniRef90-L8NT34 | RLDGSQG |
| UniRef90-UPI00035FCF68 | RVD G D R GVV |
| UniRef90-T0RV74 | TI DGDAGA |
| UniRef90_UPI00037B0306 | TVDAARGII Y C |
| UniRef90-K2F2Y3 | EVDANEGIVV |
| UniRef90-UPI0003F76AB6 | LI DGDKGEI Y |
| UniRef90-F2JRE4 | SLDAGRGI |
| UniRef90-D8F9A4 | S I DGHRGNI YRG |
| UniRef90-UPI0003748F87 | TI D GATGL |
| UniRef90-E3HCX0 | VVDGYTGTV |
| UniRef90-W4EPS9 | SI DAVS GVI Y Y G |
| UniRef90-LOF3J6 | RVDGNAGFV |
| UniRef90-UPI0003B52F6C | TVNGNTGHI |
| UniRef90_UPI000406203F | TLDMERGVVYS G |
| UniRef90-UPI000367D5B3 | SI YPEVGVIYTG |
| UniRef90-W3AQ74 | EI DAYEGT |
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| UniRef90-UPI00046A081F | DVDATRGV |
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| UniRef90-UPI00034CD278 | TLDAKRG\\|VFS G |
| UniRef90-S7ULA5 | TLDATNKVVYPG |
| UniRef90_14D6D4 | IVD G GQ GL I |
| UniRef90-B4VYV1 | LVDGDRG |
| UniRef90-C6A4Z1 | R L D GVK G |
| UniRef90-W3AE50 | TI DAES GLIY H G |
| UniRef90-V9K949 | ILNGSEGFV |
| UniRef90-E2GMN9 |  |
| UniRef90-T0JTQ7 | TVDAS R GlV V Q G E |
| UniRef90-L9X6M0 | RVDGNRG |
| UniRef90-U1X2Q5 | RLDGKKGVV |
| UniRef90_UPI00037D9FF9 | TLDASRGLVFS G |
| UniRef90-E4NUY5 | RIIDGTR |
| UniRef90-E4KLW7 | TLDARRGRVFNG |
| UniRef90-UPI00037C7B4B | TVDGSTGTVT $\square$ G |
| UniRef90-W9GA85 | TVDGGAGL |
| UniRef90-G2J5F9 | EVDGLS GE |
| UniRef90-B4VWK6 | RIIDGRSGI |
| UniRef90_U5W154 | TVDGAAGTV |
| UniRef90-UPI0003684C0A | EVDGTAGTV |
| UniRef90-H9IZJ8 | RLS GTNGV |
| UniRef90-K9YVI9 | TLDGDQGEVLR |
| UniRef90-UPI0002D840E0 | RVD G GRGVV |
| UniRef90-UPI000368E351 | RVD GEHGTV |
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| UniRef90-A3ISI6 | LLDGDNGTIIL |
| UniRef90-G7Q7X2 | TVVAASGRIVRG |
| UniRef90-E8SIV3 | TVDATQGRVYEG |
| UniRef90-UPI00022C95D2 | LLTADTGV |
| UniRef90-W9B3Q8 | SVIDGAGSV |
| UniRef90-R5XDZ5 | TVDAARGVVYRG |
| UniRef90-X1AGD1 | TI N GYNGTI I |
| UniRef90-UPI0003472D99 | TVDGYAGT |
| UniRef90-UPI00036D63C3 | LLDGAAGTV |
| UniRef90-W7ITX1 | RVD GAA G TV |
| UniRef90-UPI0003621C71 | TVDTTRGAVYRG |
| UniRef90-U5DPM5 | TLDARRGLVYSG |
| UniRef90-E1YE27 | TVDANGLAI HAGE |
| UniRef90-D8WWB1 | RIIDGTNGV |
| UniRef90_UPI00037906DA | R\|V|D G E H G T V |

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UniRef90-G7CJ94 UniRef90 UPI0003B5ECA1 UniRef90-J71Z70 UniRef90_G4L6Q1 UniRet90_R2NVC1 UniRef90-D6GS31 UniRef90-A1T8E0 UniRef90-A0A024GXR6 UniRef90 A9KJX3 UniRef90-UPIO003701090 UniRef90-UPIO0047DC24F UniRef90-F0Y8E3 UniRef90 G1UX48 UniRef90-BOS229 UniRef90-Q315J1 UniRef90-R5E126 UniRef90-B9LT45 UniReffo-N1V2G9
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UniRef90 G5Q3F9 UniRef90_UPIO002FE2561 UniRef90-J1RDZ2 UniRef90_UPIO003B41F3C UniRef90_SOJKJ7 UniRef90 F5SLF2 UniRef90-K2B014 UniRef90-BgJoN9
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UniRef90 W4OFJ7 UniRef90-G1UN56 UniRef90-V4IYY1
UniRef90-L9XBF4 QPEPETTSEPEAVLSGVGACGGVVEGRAVLVTDPGEG DPDK पEKDGYLVEGTA PTLAPAERRT GSQLTSGHGIGRTSVIGKAVVAKNAEEA
 GSPASTGEVIGKSAYYRN LKD GSPLSPGVYEGTVRVLHSPV
HGQAAADAPTEG LTGTAGSPGQVEAEVYVVHSPDD
VHVAGQVLLKGMGVGNGSATGKI JVLAKPQN GHILLKGRGMIHKTVCASLCVCKDEEEVV PRAGLARDGVLRGASSSGRARGRALVVRDTRVP PEPAAGALAVGASLTGTGVSSGVVEGTVKLVDNSDDD EHTLLAKGTPAAGGQA\|APAIVVTDPCAP PKPPPADVQGAPLLDSGVASPGAACGPVRVIQRDADA GTQLAKGEGVGNGNFDGKAVLATDAATA


LTGVPASPGVATGTVARPADPYDP GLLVSAGVVEGRARVVADLA QGFGTSPGTYTGRARVITS LDD LARGQGIGKQVVTGPVVTGRTAAEI GNTVAKMGIGGKSYSGTARRVQVPGKD $K V H V G S K L L Q A Q G I G E S T V V A H A V V A K S A E E A$ FDTATPGAETDVLIGTALSPGVHVGTVRVLDSPV GHILVKGRGLIDREVCSSLCVCNDTEEL GDVLVNAQGIGRKSAVGEAVVVKSVQDI FAAGNLAPGAAVLRGMPASSGAGADRARVRVVDEAT

ALKHMRPLLSGAVAAKGVGCGPVVPV QPDED
KVHTDGDILIEGTGIGKKSVTAKARVAKGVEDL
$K$ VHVVGHLLVKGRGVNNGKGTAVLCVVEHCAE GTGVSAGVVEGVARIVVDPA PDATTTAVGPTFGTPASPGTAHGRLRII EGLDD $G N V L T K G V G F G N K S I T A R A S V I K V L D E A$
$R G L G C S$
$I G N V R V R V V D P R ~$ RGLGCS LGNVRGVVRVVHDP
 AGSGSATGRVFRVADEPDA


## VGSR\|IKNVLGDTSD $\square L N G V G A S T G R A L G A A R L I$ HPDE

 ASPGVAEGFVVVVRGY DDPRVETCPG $\square A N P V L L S$ GQAVSAGVVEGAARVMRRLDDP S GLI
TGMPDCKGRVTGKARVVK T EE
LS GDPASVGFVT GRVRVVTVES PVTDTPPATPGTVLA GTPSSSGVVEGGAVVVDEPRDV DPDLP APLLSGGKTASPGVGIGPVFAI RKSADK VSKRVQRHLSGAKA
HAQGK\TAEGRATGHRTGAGTVKVIHDTGE K TETVSEILGRGTAIGKKKKKARAVVANTIEDL TAAPTGVRELRGTPSCPGVVEARAVVTDTPVE PAPPDARLLLADASRASAGAAHGRVFHFVPPGHT KVHVAGHILLTGDGDNEKSVSASLCVCKNVADL KVHVIGDILAKGQGVGKKVLTGEVVSGVTAAEL

QG $\square T V S S G T V Y G T V M R D E D A G D L$ VAERIIRNLTGTLVD SVCPGIGCGKVYRLNQLS G
$G E V V A K G Q G \square G R R T A A G R V V I A R N A E E A$
$P$ VPDEAALPS PLLAGGMTANPGRVCGPVVPVRTW ED $K$ L HVA A E T V A T GRSVVAGRAAGPVVRVRD G D L KVHVAAEALTTGRVVVEGRVTGPVAELSDGDLS EEPEGAEVLLSGTRTSSGПGYGRVVHAVGVPD VTGRAR VASSGME PVLRP伿DSAVLMAGGVRVSGGIAAGKVHHVLKSASA

KVH VGGDLISGKGDSDGKVVGNपCVCKDEDEA
 $K V H I V G D V L V K G K G M G \quad L S T Y G N A C V I K D A S K L$



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UniRef90-H01710
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UniRef90-K8EGK6

## UniRef90-AOYU59

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UniRef90_A0A017RW40


EVDGAAGRD
RVDGTTGTV
TVVADGHAVYSG IVDGDKGEVH
$1 \vee D G S S G \| V$
T I EPMDGTVRR
$R L D G G T G A I T L L E$
TMDADTGSVYEG
TLDAKEGIV
TVDAERGHI YSG
TVNGATGDI YKG
$\frac{R I D}{D} \operatorname{DNSGRI}$
TVVDADRGMVYDG
$T L C A D L G R V Y D G$
TLDGERGVVYEGD
TVDAERGVVYGGE
VMDGYKGIVYL
$T V D A D T G T V Y A G$
$T M D D Q R G V Y S G$
$T M D \square Q R G V V Y S G$
$T V D A D G R R V L K K$
EVDGGAGTV
TVDGGTGRVHAG
$T L D A S N D R V L Q G$
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IVDGYQGTV
IVDADEGKVIL
KLDATKGVV
SVVD K R GMVYQG

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UniRef90-W0PH62
UniRef90 E1YER8
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UniRef90 UPI00037FDB01 UniRef90-A0A033V5G6 UniRef90_S6G735

V S D R $\square$ M K 【 L M G S E E


EVLLS GETAFPGVGFGPVVHVRDKEDL
T G $\square$ S $L T$ A GEVE GRAWVLREPATA


ATRTGVGELRGTPSSPGTTEGRAHLIVTDADD

GDEDANGQGDGRGSVVGTTLVAETVKDL
LK GVVASRG GQEK』RGIVNIVIR

$K$ VHLVGSSLIS GAGVGDENVKGVLCVCRTVEDV
$\square H P \square D D P S A \square K G \square P K W S G G \square A G A P G A A \square G R V Y F S T D A L L E$



QSVD
PELPPGLTVLAGGVPVSPGVGMGPAFVARKEADL

DESTSPPAD LLLRGNCVAPGVAAGPVYPV QREED
NQQQ
DGGDP
MVGQKQEP
GVMASSGFASARA WVPDAENP
DELLATLQQEALAHGQTASPGVAAGPVFVVRQGAHL $K V H V A A D A L T T G Q V V V E G R S T G P V V R V T D G B D L$

VD
GDILLQGKGTNDVSACGTADHVKDAKDA A GNIM\|RGKGVNGSRVSANVCIADSAESL

$$
\begin{array}{r}
\text { GHPSQSPSQSKE } \\
\text { KVLGHPSEVA } \\
\text { REYAPK }
\end{array}
$$

SGRARD TAD $\square K D D$
KAKDVLIRERAADLKDVCQRLIRLWNHENP
K QLE KATVLLDGETAQMGVTTGKLVHVTGNY H
VD

E A
KMKGTESPAEK
 $C M Q G Q P E Q \underset{Q}{D}$
$N \square A G G A R R_{R}^{D}$

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





| UniRef90 E6J9G7 | $R$ VD G D R G/VVITRILE |
| :---: | :---: |
| UniRef90_UPI0003B3DEDE | $T V D A D R R T V Y S G$ |
| UniRef90_W1W2S2 | TIIDGERGKVFA G |
| UniRef90_B1XMW4 | RLD GRLGQV |
| UniRef90-B8DQ69 | TVVHGDVGVVYP G |
| UniRef90_UPI00035D7BCC | I V D G L E G NV I |
| UniRef90-B0K5D7 | I V D GLE G V V I |
| UniRef90-C5NYG2 | I L D G L D GVV Y |
| UniRef90-E1YIG4 | I I D GS T GVV 1 |
| UniRef90-JOKW94 | I I D G 1 E G E |
| UniRef90_D8GIK3 | 1 V D GVEGEVI |
| UniRef90-O07126 | $1 \vee D G \\| N G D V \vee L$ |
| UniRef90_D9WU06 | SI N G S T GEV |
| UniRef90_L9ZS75 | TI D A ERGVVYEGD |
| UniRef90-W4BEC2 | I V D G L D G HV |
| UniRef90-F5L5L8 | $V$ D G N GKV |
| UniRef90-F3YW42 | TVVDA |
| UniRef90-UPI0002885A5F | II D G I N G I V I |
| UniRef90-W4LPD0 | KL R A DVGVV |
| UniRef90-A0LGB8 | IV D GTS GKV |
| UniRef90_E3PSB3 | TI D A Q S GLVYK GE |
| UniRef90-A0A059KM98 | II DGDAGLVI |
| UniRef90-X1KHT4 | $\overline{\mathrm{R} V} \mathrm{D}$ A T E GLLVFR |
| UniRef90-A4XCB5 | R M D G G T G T |
| UniRef90-V5WIS5 | TMN |
| UniRef90-V4XZA5 | T\VH A D R G VVY E G D |
| UniRef90_UPI00036A38FF | IVDGEAGHV |
| UniRef90_A0A028YU91 | TI D A A Q G K I F E G |
| UniRef90_K2EBL3 | EMNLK T GE |
| UniRef90_D8FC15 | V D G T G V V |
| UniRef90-M0M5X3 | TLD A G R GVVYE G |
| UniRef90-R6CEK5 | I V D GA S GEV I |
| UniRef90-D8ITX9 | 1 I D G A G V V I |
| UniRef90-R5HNU4 | SMD C R Q G SV |
| UniRef90-C2ETM0 | VVD GF S G T |
| UniRef90_R6N823 | AI N G K T G E 1 F |
| UniRef90_F8F0E6 | T L N G D P TV Y L G |
| UniRef90_UPI0002DF6A74 | IV D G D A GVVI |
| UniRef90_F6B692 | 1 I D GS T G T C |
| UniRef90-Q4A5P0 | ALD GAKGEVLL |
| UniRef90_S5LVIO | A L N GET G DV |
| UniRef90_K8Z9B3 | AVN G $\square$ E G DV $\square$ |
| UniRef90-R6K0C9 | VLD G S T GEVY |
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| UniRef90_UPI00039F4FF9 | TL D A NRNVI L A G |
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| UniRef90_L8TNU0 | TVV G S K G IV E T G |
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| UniRef90-A5G5R9 | 1 I D GAT GTV |
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| UniRef90-T2GDU5 | TVVDA D R R L V L P G |
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| UniRef90-UPI0003C19DFE | I V D G T L GVV I |
| UniRef90_UPI00047C6349 | I I DGDAGVL I |
| UniRef90_UPI000472C52F | । V D GND GVV I |
| UniRef90-F5YCQ2 | VLD G T A G Q V F |
| UniRef90-E8RFN1 | I L D GGT GQV |
| UniRef90-M5J9M7 | 1 LDGLD GVAID |
| UniRef90_R7IXZ5 | AI NGGS GEIFE |
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| UniRef90-W5TP10 | R V D G T A G TV |
| UniRef90-W0PH62 | IV D GEN GLV Y |
| UniRef90-E1YER8 | TLD A GDCKV Y H G |
| UniRef90_C6CD85 | II D G V N NQI Y Q |
| UniRef90-F9EFI3 | LV D G T K G V I |
| UniRef90-M1PKA4 | I I D GARGV |
| UniRef90_UPI0003B718D3 | 1 V D D L G H |
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| UniRef90_W0IYT9 | LV D G Y D G L V I |
| UniRef90_P45617 | AL D G S S G I V |
| UniRef90_UPI00037D26E7 | IV D A T K G EI Y L |
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| UniRef90-UPI00037FDB01 | G। NGSSTGEV W |
| UniRef90-A0A033V5G6 | II D G L S G DV |
| UniRef90_S6G735 | AL D GA S GVV |
| UniRef90_UPI00046FDE56 | II D G S A GlV V Y L |
| UniRef90-F4N7Y4 |  |
| UniRef90_UPI00046373C0 | LADADRGLVLAAD |
| UniRef90_B4SFU1 | $\square 1 \mathrm{I}^{\text {d G T G T V I }}$ |
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| UniRef90-A6GMV9 | VVDGKVGAVFL |
| UniRef90_E4RIH5 |  |

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UniRef90-D8ICD3
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UniRef90-R5XV00
UniRef90_K9AM46
UniRef90_D8FFIO


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| UniRef90_K4RC40 |  |
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| UniRef90-S6AHG2 | IVDGQQ ${ }^{\text {V V V I }}$ |
| UniRef90-B4S4E6 | I VDGSSGE |
| UniRef90_UPI00037C54BB | 1 V DGTQG V |
| UniRef90-E7RF13 | I V DGLDGTI |
| UniRef90-D2C7T6 | 1 V D GN】GLVH |
| UniRef90-B1C8S0 |  |
| UniRef90_UPI0004091C96 | IVDGFTGDIVL |
| UniRef90-UPI0004655829 | YLDAGAGNVYE |
| UniRef90-W4Q2F0 | IVDGLD GA |
| UniRef90-LOJRU4 | TVVDAERGVVYGGD |
| UniRef90-X1AHG2 | ILDGNEGKI I |
| UniRef90-Q82SW1 | VDGNQG ${ }^{\text {d }}$ |
| UniRef90-UPI000408268D | I V DGFS G DVVL |
| UniRef90_T2GFB7 | 1 L DGLK K S I Y |
| UniRef90-W6N578 | 1 V D GIE G |
| UniRef90-D5WYA0 | 1 I DGDSGLLI |
| UniRef90-M1P2L2 | $V \vee D A F K G Q V$ |
| UniRef90-F8F908 | $1 \mathrm{I} D \mathrm{GDEGQVY}$ |
| UniRef90-D8ICD3 | I L N G N G GVI |
| UniRef90-M7NCl8 | 1 V DGTAGEVI |
| UniRef90_UPI0003C0FD6D | TVEGDT GFI YE G |
| UniRef90-UPI0003B5DDA5 | II D GSS GTI |
| UniRef90-B8FEW3 | I V D Gla GLV I |
| UniRef90_UPI00020D98FB | IVNGLT GDV |
| UniRef90-K2J039 | ALDGDQGLLFYG |
| UniRef90-B3EB78 | 1 VDGTS GHI Y L |
| UniRef90-D0GML4 | $V M D G E A G E L$ |
| UniRef90-C8WZC5 | SVDSHAGVV |
| UniRef90-E1K186 | TVDAEMGEVRKG |
| UniRef90-W5UT02 | VFNGDTG |
| UniRef90-E0RVJ0 | \|IVDGTE G 1 |
| UniRef90-D5BUX3 | 1 I D GEQGILLLA G |
| UniRef90_UPI00040223FD | TVDGGTGEV |
| UniRef90-C0QJH9 | SVNATERTVYDG |
| UniRef90-Q1PXY6 | D GNRGLL |
| UniRef90_F3Z484 | TVVA T A RKI F A G |
| UniRef90-A0A058ZLV8 | RLDP D GTI |
| UniRef90-IORBD8 | LLDGESGEV |
| UniRef90-H1PUA6 | I V D A LK G D |
| UniRef90_UPI00036E2C76 | 1 L DGERGRV |
| UniRef90-Q21M99 | VVDGARGL |
| UniRef90-A1KC42 | 1 V DGTRGV |
| UniRef90_UPI000477847C | VLDGDRGI |
| UniRef90-C3XBU0 | $V$ D A A Gl |
| UniRef90-K2LKZ3 | I I DGGRGEVIL |
| UniRef90_UPI0002DDE3AA | ALNGGTGNVW |
| UniRef90-Q1CY71 | A MDG $\square$ R GV |
| UniRef90-V4JAM5 | TVDASRQEVYRG |
| UniRef90_UPI0002F05FD0 | IVDGLD GKV |
| UniRef90-G7UQN8 | I V D G D G QV |
| UniRef90-S0FWS0 | 1 LDGAEGTV |
| UniRef90-R6HMC9 | TVDTVSG\VYEG |
| UniRef90-G8QRL9 | IVDGVYGE |
| UniRef90-Q3SG83 | IVDGREGVV |
| UniRef90-E8YU17 | VLD GTS GRLLYVG |
| UniRef90-M0CQS7 | T L D A ERG【VYD |
| UniRef90-E3BIG2 | ILDAMNNKVI |
| UniRef90_R5D1M5 | IVDGMEGVI Y |
| UniRef90-Q6F0U6 | AL NGTT Gl ${ }^{\text {a }}$ |
| UniRef90_UPI000371F7F7 | VVDGLQ GR |
| UniRef90-A0A023Y608 | 1 MDGSDGTV |
| UniRef90-R5X2V7 | IV VD GFTGQ |
| UniRef90_R0ALL0 | 1 L D A L E GTI |
| UniRef90_D3ECC4 |  |
| UniRef90-B9M5S6 | 1 V DGTS GHL |
| UniRef90-R6U058 | I I D G S K G V I D |
| UniRef90_M4TYN3 | 1 V D A S GQV |
| UniRef90-R7GV34 | 1 V D GFTGE |
| UniRef90-R4U4V9 | MI N GET GIVV |
| UniRef90-A8ZVL0 | SVNATRRRVYDG |
| UniRef90-B6BVF5 | VDGDHGCV |
| UniRef90-R5XV00 | AVDGADGSVY |
| UniRef90-K9AM46 | RVDGGTGRV |
| UniRef90_D8FFI0 | EVNGTEGTV |




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    lupas_28
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    jpssm

[^2]:    lupas_21
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    jpssm

