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 $V N D D I E N D L A L N P T V N K F A T F K P T A V S K K D K A H W$

 $N V \operatorname{V} V \mathrm{~V}$ D S MVVDDETAKAR LSKLLDKTRGFMKY

V LDVE D T VT D S A A A K K
$S Q \square L N V Q \square K D \square E D A \square A N \square D M A Q H$ $P$ V VK MGKTTGFMEY $R S V M A D P T G F D K H$ K LADPK GFLTT $K \square D K D R G F M K Y$ $M G K V T G F L E Y$ MADPKGFLK MGKPTGFMEY
 M GKI T G F L E $M G K P$ T GF $L$ MGK L K GFMEY Q NLMSLDARVLRHATVLPTETTKSEKKLDW M GKTTGFMEY
 LD K T R GFMKY MGKPTGFTDS MSKDTGF LE Q $\begin{array}{llll}M G K V & G F & L \\ M G K P T & G & K & \end{array}$ MAKPTGFKE I $\boxed{V}$ Q D L E D T L L DK A E S K K P N $\square$

K L MAEKKEKV MGKPT GFKEF $M G K \square T G F M E F$ S L N EKAPKRPS QVTDAVKHRGFVA Y
E S VLA L P K S Y S GAK SI P T HKGQKAKAHW
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 DIE NI HMLNDSKKNNEPLN K KL R GF MK Y
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$\bigvee$ S R H S A E $\square E A V L R L Q P K V L T A A T V K P T T E \square R Q E K R N W$
MAERMLKTVA ET $\square E E L T$ NRDSEWRKELDRAAMKPAERKAI $\begin{array}{ll}M G K P T & G \\ M & L \\ M & E \\ M & G \\ M\end{array}$ M GDPK GF MTT
$M$ GKTTGFME I M GK $\square$ T GFMEF M GKPTGFKEF
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80
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 KRNADRKCTSCPSLERNFDDI KHTTLSERGALKEAARCLK KRNDHSKCDSCTPLTKNFDDIKHTTLSERGALYEASRCLK


 SRETMMYR PAEKRLNDWDEIYNFQHVRKGLRVQAARCME KKND RCKTACDLKNDFSDVKPTTLTERGALFESSRCDK

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KRRNEKYR PAT

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 RRLNE VSLPVAERLKNYREFV QPDADEQAADQGARCMD

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$\mathrm{V} F \mathrm{~K}$ K M N I RQI VSKEVR
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ERCEMRELPPAYRARSLKEEV

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D R P Y A P VA ERVT N Y N
TERFTPDRRPVDLRLLDWKEFVVVPLNEKDTRDQAARCMN
 PRRRPVPAR P V E E R L S D WDEVVYA GQADLLP LVAAEQA GRCMD KRV DENSGAVKDRIKNFNEF HKHRNEDERIKQAARCMD QRQKESY LDPADSRVKNYKEFILDPLKDVQAKTEGARCMD
 K DRVP MREQDPKVRIKNFDEVALGY TEEEAULEASRCLQ

 QA QPPKRLADERRKDFDEI YKE FSPEQAATQASRCSQ
 DRTDRKGKVPAQERKTHFKEIVQG LDARAAEYESTRCLY

 $\begin{array}{rl}T R E E A P H & P \\ D & P \\ D & K\end{array}$
 KRENPTKRDPFE RTKNWQEFQ I
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 ERVEEAY LPPKERLKNYKEFVI G TRSPDAYR PAKARVHDWNEIYTHDR $M P E K R E A A D R S Q D F H E I$ YRE M I R\|P VRE Q NPKVRATNFEEVCLGY NAAKA TEQAASRCS Q KREAPSKLDPLE RVKNWQEF QVMMPEDK QFQAKACLQ MF LA KP P RF GA QKRKTHFEE IVYYG LGCSEAEYESERCCLS


RVDP S E Q D P K K VRATN F E DRQAPKYR PASARDRNYNE KRRHETHRDP RTRVNDWKEFTN P TVKKDAKYQTARCMD
 QRQPDA YRPP FE RVVDWNEVMLSERDDPHERRVQAARCMD
 DRV DSEAFDPKERDKNFNEF HTPLSPEKQRDQAAR CMD K K T P A K R K R TAE DRAK D F L E YERFTTQA GEM QAASRCS Q
 $P$ REVA GRR P V E E RVND WN V V Y P G G A GRPDIT K QA GRCMD K RVDP K K K Q I H R R K HE FVVEI Y DS F EK S QV SMQA DR C I S ERNPN
AREE $\square$ AHE PAADR $\square E H S R$ RHDMPCQDP $V N L G Y$
$\square \mathrm{I}$ KK KMPEKRTAQTRAKDFGEI YAG FAPEQAATQASRCSQ MPS QEPDVRNKNFDEVALGY TEEMAIDEAKRCLDN
 DRQ EQRYEPASDRVRHYHEFT DPDTEPEVKNQAARCMD REDTTKEPAGARVQKFTEVYGDFSSEHAASQADRCVE




UniRef90 A3K546 UniRef90－F4A3G2
UniRef90 C1D4B8 UniRef90＿UPI0002FAB4A3 UniRef90＿J2FUX8 UniRef90－U1MNN3 UniRef90－X8CK61 UniRef90－UPI0003F9EE21 UniRef90－W7DBB7 UniRef90＿UPIO002E117BE UniRef90－W0SFD3 UniRef90－B6IW84 UniRef90－B7FZB0 UniRef90－F4LM68 UniRef90－N4WRG5
UniRef90＿M7PJY8 UniRef90＿UPI000381F37A UniRef90－A1WVX1 UniRef90＿UPI000479C389 UniRef90－C8WFS3 UniRef90－A1BDR9 UniRef90－R6HPQ7 UniRef90－UPIO0046FBC6D UniRef90－D6XTE2 UniRef90＿U2PQX1 UniRef90－R5GIY5 UniRef90－K9HNS5 UniRef90－Q21BA5 UniRef90－M0QLI1 UniRef90－X2H5T3 UniRef90－H6SP22 UniRef90＿UPI0003667AF5 UniRef90＿UPI0003B43954 UniRef90＿M1F858 UniRef90－H5T8J7 UniRef90－W2TEQ1
UniRef90 Q8RC72 UniRef90＿UPIO0046A67C3 UniRef90－F3X1V0 UniRef90＿UPIO003615E0C UniRef90－UPIO00226022E UniRef90－A5CVW7 UniRef90＿W0BLU9 UniRef90＿G9YYW4 UniRef90＿A1S3V7 UniRef90＿I6YDQ3 UniRef90＿UPI0002192A02 UniRef90－R7UB76 UniRef90＿UPIOO0371E9F3 UniRef90－J8TPI2
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UniRef90-A0A059G951
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UniRef90_UPIO003B490CA
UniRef90-G7YC94
UniRef90-G4RC96
UniRef90-R4V5N7
UniRef90-M2PLJ7
UniRef90 ${ }^{-}$M8CZS4
UniRef90_UPIO003B3E16F
UniRef90-D9SRD5
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CGVPYCQSHCPLHNN｜IPDWLLR｜LTATGRMEEAYELAQSTNT CKHPFCVEGCPVHVQI PQFI KLITEGRFEDAAQKIKETNN


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 E WNDAV Y R GE WREA L D L L L LK TN N WN DLV YY K G K WR E A $\square$ E T L L H S T N N N WN N L V
 NWLKLVSEGNLA QAAELSHQTNT
 NWLKLVQD GRIILEAAT LMHETNP D WL K M T A E G RL Q D A Y A L S S A T S T

 P E WN D L I Y R G K WK L A A L K R L L K T N N



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
































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| $P$ | $V$ | $S$ | $I$ | $D$ |
| $P$ | $L$ | $G$ | $N$ | $N$ |
| $P$ | $V$ | $N$ | $N$ | $Q$ |
| $P$ | $L$ | $G$ | $N$ | $L$ |
| $P$ | $L$ | $H$ | $N$ | $N$ |
| $P$ | $L$ | $A$ | $N$ | $N$ |
| $P$ | $L$ | $G$ | $N$ | $L$ |
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E WNDLVWRDDWEVA I ERLLHQTNN

 D WL L K L TA AE F $\quad$ I A K

D WNDLV Y QD DWE A A S RNLLHSTNN
$\begin{array}{llllllllllllllllllllll} & N & W & K & L & I & A & E & G & N & L & F & E & A & A & E & L & S & H & K & T & N\end{array}$
$P$ P Q
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| UniRef90_A3K546 |  |
| :---: | :---: |
| UniRef90-F4A3G2 |  |
| UniRef90-C1D4B8 | EAFKAGWRPDMSHVVWNDKKV |
| UniRef90-UPI0002FAB4A3 | RGFAEGWПKPQ |
| UniRef90-J2FUX8 | KGWAEGWI TPQAPVRRTGKSI |
| UniRef90-U1MNN3 | YAFLQGWVEPQKPTVSTGKRI |
| UniRef90-X8 | KAFEEGWVVPLPPDKLTGKTV |
| UniRef90-UPIO003F9EE21 | KAYELGLI TASPPASRTGKKV |
| UniRef90-W7DBB | RAFEEGWIKPQAPLKRTDKRI |
| UniRef90-UPIo002E117BE | KAWEMGWI RPEPPARLTGKSV |
| UniRef90-WOSFD3 | KAGENGWVVPQPAAKKTGRKI |
| UniRef90-B6IW84 | TAWERGWVKPVQPVRERAGSV |
| UniRef90-B7FZB0 | RAWKDGLITP |
| UniRef90-F4LM68 | RENGLQSVPEAAPETGKKV |
| UniRee90 N4WRG5 | KGFENGWITPRIPEHRTGKTV |
| UniRef90_M7PJY8 |  |
| UniRet90_UPIOOO38 |  |
| UniRet90-A1WVX1 |  |
| UniRef90_UPIOOO47 |  |
|  | TA WKEGWVEPLQPITELGISV |
| UniRef90-A1BD | YERQTGHVEIPEVKPPTGKKI |
| UniRet90-R6HPQ7 | HGLDNVNEKAAPNGKKV |
| UniRef90_UPI00046FBC6D | KAFELDLVKPRILPKKRTGKKV |
| UniRef90 D6XTE2 | KGFSEGWVKPEPPKKRTGKTV |
| UniRef90- ${ }^{\text {2 }}$ PQX1 | RAFEEGLIKPEPPKVIRSGKKV |
| UniRef90-R5GIY | YDREHGEHAASVKAPANGHKV |
| UniRef90-K91 | TA WAEGWVKPRTPEKENG |
| UniRef90-Q21B | RAWENGWLKPEPAAVKSGKKV |
| UniRef90_M0QL1 | NAFEQGWVTPVLPAATTGKTV |
| UniRet90-×2H5 | QAFAQGWHPDISKVEKVGKKV |
| UniRef90 | TA WENGWVTPLRPVR |
| UniRef90-UPI0003667AF5 | (eqGFTVPHPPERLSGKSV |
| UniRef90-UPIOOO3B4 | EGYMKP |
|  | G WVMP |
| UniRef90-H5T8 | KMGWRPDMSQVVWTDKKV |
| UniRef90-W2TEQ1 | YAFMQGWlirahPPTENTGK |
| UniRet90_Q8RC72 |  |
| UniRef90-UP100046A |  |
| UniRet90-F3X1V0 |  |
| UniRee90-UP10003615E0C | KAFEMGWKPDMSHRKWTDKKV |
| UniRef90 UPIOO0226022E | TAFENGWVKPVMP |
|  | RALAEDGVRPDMSDVSSVGKRV |
| UniRef90 G9YYW4 | TALAMGWRPDLSAVQPRAERV |
| UniRef90 A1S3V7 | TALAQGWRPDMSKVTPRKERV |
|  |  |
| UniRef90-UPIO002 | A WDAGWVTPVTASFSTGOSV |
|  | TALILLGWRPDMSKVSWT DKKV |
| UniRet90_UPIO00371E9F3 | TAFAMGWRPDMSQVQWTDKKV |
| UniRet90_J8TP12 | RGFQEGWITPQPPKTRTGKKV |
| UniRef90 OSFPV7 | NAFEQGWVKPALIPDRDLGRSV |
| UniRef90-A0A059G UniRef90 A4VH17 | TAFAMGWRPDMSKVKPTGKKV |
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| UniRef90_LOKBG8 |  |
| UniRef90 R7IK27 | YAMTEGTVSAETAAPTGKK |
| UniRei90 G6AlGo | YERESGQVALPEVAPSNGDKV |
| UniRef90-V5ACB8 | RAWAEDWVQPVV |
| UniRef90-TOQ723 | RAWDEGWI VPRIPAQRSGLKV |
| UniRef90-S5) | TAWEEGWVRADTPREER |
| UniRef90-UPI00040137A5 | WAREHNIEFLEK EESKGKKV |
| UniRef90-UP10003B61427 |  |
| UniRet90-W7P981 | TAFAMGWRPEVAGVTPRKERV |
| UniRef90-B9MPK7 | WFRQNCEFEFSKP QPNGRKV |
| UniRef90-D2SAO2 | QAFQRDLVKPVPPQEHTGKQV |
| UniRef90-U6HSW1 | FGWEHGVPRPLPASKVTGKRI |
| UniRef90-D4J2K6 | WARENGI KPKNTSTPNGHKV |
| UniRef90-EOMQX3 | KAWENGWVTP |
| UniRef90-Q12680 | NAFKEGWIKPCPPSTRTGFTV |
| UniRef90-UPIOOO36CA6: | RAWERGYVAPQPPDRLSGRTV |
| UniRef90_A0A024FSZ6 | RAFEEGWVSPR |
| UniRef90-D6L | WAREHGFVPKAPETKNGKRV |
| UniRef90-R5LS | YAFEHGYVKPKDPAVRTGKKV |
| UniRef90-UPI00037A22AB | TAWDQGWVKPLDAAPETGLSV |
| UniRet90-V4ROF8 | MAFENGW1 E |
| UniRef90-A77 | NAFKEGWIKPCPPEVRTNRST |
| UniRef90 UP10003C7F | KAWDDNNVRPQPPEFLTGKTV |
| UniRef90-UP10003B318BB | AFDMGWRPDLSKVVKTGLTV |
| UniRei90-UPIO0036C8108 | RAWAEGWITPQAAEHKTGKRI |
| UniRef90-K4KVJ1 | YEMAKGTSKLEK VAPTGKKV |
| UniRef90-13TGY5 | TAFENGWVKAPK |
| Un |  |
| 3B490CA | WDKGWVKPFKVKRELKQTV |
| UniRef90-G7Y | KAWENGWFRPSKERPPTGRRI |
| UniRef90 G4RC96 | KA】RGGWVRPQIAEKKTGKKI |
| UniRef90 R4V5N7 | EAFKQGWRPDMSGVVATGHKV |
| Ref90 M2PLJ7 |  |
| UniRef90 M8CZS4 |  |
| UniRef90 UPI0003B3E16F | AFSNGRVTPQEPEWLSGRTV |
| UniRef90- D9SRD5 |  |
| UniRef90_R5K6L9 | YAYANGLVNDQPPKGKTDKKV |

MANMSL
MRGTTDF DDK
MADPRGFLKT
M GKP TGFMEY
M G S VT GFMD H
M GKP T GF LEF
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M S LKET
K K GRSLQ
A PKAKKQIIP
MGKPTGF
MAK Q I K
METKPKKTI
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MADPKGFMTT
A AKRT@RS $\quad$ TP
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ERAQEWREADRKSDKNKDRITY $\square S E K A K K W N D L K D K ~ T L T X ~ K ~ K ~ R ~ T ~ T ~ Q ~ I ~$
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M GKMTGFLEF WR QPMADPRGFLTN

QERDAEWRAELRKKTKNKDRMLI
M G K A T GF LE Y
MGKRTGFMEY
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F D D
$P T Q S L T L I D Q D T L I Q Q Q R Q K Q Q K T A F C A T A D R T M L M E P P$ $P$ TQALLHLVSEHSLEEQRREKQLDRSTFAATACRPLDRKHW

MGKPTGFMEY
MATGHF
MGKATGF LEY $\square \square G \square P R A \square P T F A G \quad T T C R P D D K K D W$ M $\square P \mathrm{~V}$ K E TKQNK LV

K K GK S P T

MGNPTGF MK V
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EELAA QRAEQWREELRKSKKAKERTD
EELDT NRRSKPWRVELRNKDSPKERMSM

MGKETGF\EF
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UniRef90_R5Y9G5 UniRef90-B1QYX8 UniRef90-D7GU10 UniRef90-S7VXF0 UniRef90-UPIO003616AFC UniRef90-V6MQC0
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5DE43E

RHPMPCQDPL VRNRNFKEVALGY DAETA TEEAKRC L ${ }^{80}$ ERKVGKDR DIKERLNDYDEFHTRLTDEEQQIQGA RCMD KKVPVREQEP KVRATNFEEVCYGY NEEEAVAEASRCDN QERELPKRRPVSLRLMDYKEVYQQQESGQLA RQAGRCMD PREGARRR PVNERLRDWNEVYPGGALLP I DTKQAGRCMD


 ARKESGYRPVVERDDDYGEV EQTDNEQDRKLQASRCMD

 LPQQTPEKRPATLRREDFNEIYD K
 KHKLPQ QITTPASERLGDWLI
ERELDK KKR PVPVRGLDWR KRVP EKIKMPEQAP DVRNKNFKEVSLGY KREKPKEVDALKRVQNWNE $R R D K T I Q P V E V R L Q N Y D E$ PRQ GAQARPVDVRLKDWKEVY DRTTSRSDAPAQRVKNFK RRNAGNYR DTDERIKDWREDSVL DR IDD KKRPPRERI GDWKEI KL P L
 PRVPMP CQPAHERVGNFD HKHPMPAQDPVERARNFNEVALG GRELPGRVPVIER\KNNKEFVKNDEF KKRIAVPEQDPQAR!HNFNEVALGY APRVDMPCQPADVRAHNFDEVATGY
$R \quad$ VDMPCQPAAVRAHNFK $K K V P V R E Q D P V V R A T N F E E V C L G Y$
$P R E T V P T R P V D V R D Q D W E V E P G$ QERTPVREQPPLERARNFVEVNLGY DASEARARAQRCMF RERELPARRPVPVRDQDWREVYQAQPVDE LDRQAGRCMD KKVEMPALLDPKQRSTNFEEVALGY SEEMAMEEAGRCLH PRK NAGYRPDNERDYDFGEV EQTLNREDRKLQASRCMD
 DRQLPARRPVPVRIMDWREVYPPAGEQLIREQATRCMD PRVMPEVDVVRSRTYDEVNLLG EREESAA KPKEKRAKNFDEFAHTPGSEGKAETEAARCLN EREVSAETAP KDRIRNWNEF HTPLNEEERKKQGARCMD RERRDRPSRPVPVRIMDFKDVYARQDPAVVRQQAGRCMD EQQEMPCGEPKVRARQMSEVADGYTREQADVEANRCLQ QRMNPKKRPPEERMKDWDELRLPQDPEDLKKQQAARCMD QRMNPKKR PPEERVKDWDELRLDQDPEDLKIQQAGACMN AREGPKRK PVELRVLDWKEMYEPDAEDKLKVQGARCMD

 RREPEKK DIVTRSTEFVEIY SPFEATEAAQQAHRCLE KKVPVKEQ DAKVRVTNFKEVCEGYNDEEAVREASRCFG EREEVGYRNEADRVHDWEEVLHPTSSDEHLAKQTSRCMD KREV SVAEDPKKRIQHFNEF HEHLPKEKQRLQGARCME KEGIAGGRLPAEAYTENFADL HPPLDHEEALVEADRCYF ERVENPGQEPLERDKTYYREFHTPLNPEERQKQGARCMD
PRVPMPTOEPVEKR1QHF
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ERKDGPVTAP KKRDENFKEF HGQLPEEEQRLQGARCME


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8

| $\frac{F}{L}$ |
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130 LP A VC G R|V C ${ }^{130}$ Q E R Q C E S K C $V_{V}^{140} R$ G | F | $P$ | $E$ | $F$ | $T$ | $S$ | $R$ | $V$ | $C$ |
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160 | $L$ |
| :--- |
| $M$ |
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$F$
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$\begin{array}{llllllll}Q & C & E & G & Q & C & V & R \\ P & G & E & S & S & C & V & L \\ P & G & E & T & A & C & V & L\end{array}$
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| UniRef90－UPI0003616AFC | RAWDQGWVTPQPPEWLTGSRI |
| UniRef90－V6MQ | TALDAQGWRPDLS HVTMTDKKV |
| UniRef90－W9 | TAWDQGWVEPVLVGKPRGQSV |
| UniRef90－R4K97 | WCRENSTEFGEKAESNGKKV |
| UniRef90 UPIO000418F236 | RAFKEGWVKANPPKTRTGKKV |
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| UniRef90－W7XUL7 | KAFAEGYUQPRTPKVRTGKKV |
| UniRef90－V9X7T9 |  |
|  | ANGWRPDLSQVVESGKRV |
| UniRef90－B5GKN1 | KAWDTGDVAPSVPERLSGKTV |
| UniRet90－K5YPD2 | TAFENDWVKP ${ }^{\text {S }}$ SPITAERPQSV |
| UniRef90－U2F1F3 | WHSHSTEAPQRPA PNGHKV |
| UniRef90－F3ZTL3 |  |
| UniRef90－UPI0003788 | WY DANNKGQAETP VSNGKKV |
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| UniRef90＿UPIO003B6AB48 | EGYMKPR\｜PKVRSGKKV |
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| UniRef90－F4R0M2 | TAFDNGWVEP |
| UniRef90－G5H | KAYDQGVACP |
| UniRef90－UP1000255EBBA | A AFDND |
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| UniRef90＿UPIO0035E4D0E |  |
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| ef90－R5GZY3 | YAYANGLVKGEEPKVRTGKKV |
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DF QE LMARQKRFKS QCE LERK LFK K $\square$ K Q $\square E \stackrel{4}{P}$
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MGKATGFMEF MADPTGF LKKV

MPNMSP $L L Q E E A C Q R \square A Q L Q G K E \square K M K D R T Q Q$ M A N M S P
$M \mathrm{~T} \square \mathrm{~K}$ E R L A $\square$

M K A
R K A K K K T LA
A LR A A P D GQRATS $\square L N Q T T C H P L E K K D W$
MADFKGFMKY


MA VDRM
M N M E D R L IT E R R K E E WRE T LR K S VK T K D R M D A

K K $\square A$
M A L M K P
M GKVT GFMEF K V R K T R A S GL $M$ GK T T GF L L $\stackrel{L}{Y}$

M GK P T G F LE Y MKRRDQFMTV $M G K P T G F I D Y$ M GKP T GFLEF M GKA TGF I D T MAKPTGFLEY

M A DK $\square \mathrm{F}$
MADPKGF LRY

A S N K K E G T A MRKLE P

M GKP T GF MK S
K A KRSY
M D Y
MGKATGFKEF
MANPRGF LKV
MHSPTAFLRII
$M P K \square \quad \mathrm{D}$

M R N T P F

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

MAK $\square N^{\stackrel{P}{L}}$
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 KTKTPMREQEPEERUKNDEVPGY QQQPEKR PAEERRRNFDEVALGY NKTPMREQDPA VROHNFKEVALGYDDKEQAKTQASRCSQ ERVNPEKRDVLQRLKDFDEVYQV FTKQRATEQADRCMQ RERELPGYRPVSVRLMDYADVKRDPTSPYLA RQASRCMD SR SEPAKRPAAQRIGDWNEVYAGPERDQQVRTGAGRCMD PPRVGAKKDASEERKQHFAEIY SPLAGCDATYESGRCLY
 KRETAK VLPPKVREANFNEFRTPGSKEKAKGQGAARCMA AREDAKADEPKERIKNFKEFMHDPLSMEKQQDQGARCMN TREMPAKRPVQERLLHDYKEFVELY PKDKLNQQAARCMN
$K R E D L N N R P K E R V K D Q E K Q D H Y K E L L Q A Q A G R C M D ~$
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> G EEYAKRFADA $A G R D D A A$
$M P E Q D P N$

YVKNF
 HPPGSA
HPRLGA RTPDNEE PAAERACDFR NVDK ERKVGIN TPAKERITHY


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| UniRef90-Q5LSJ2 | T L M A R G |
| UniRef90-U2SZW1 | Q |
| UniRef90-U2Z9N3 | Q |
| UniRef90-S7VFW7 |  |
| UniRef90-A5FP33 | WE REHEVNLPKSLKPKS G |
| UniRef90-V3T3E6 | T A L K M G WR P D LT HVIPP T G |
| UniRef90_UPI00036B3D7 | AFMASD |
| UniRef90-D7GDU6 | K G WD D L R VT P Q M N W H L K T V |
| UniRef90-M5DZS0 | Y NMEK |
| UniRef90-A1HTT3 | Y A R A RGRKQVILPPEPLGK |
| UniRef90_G6EZQ7 | FQNGLI K P V V |
| UniRef90_UPI000219 |  |
| UniRef90-G2HYH3 | E N GL |
| UniRef90_C7R419 | Q GFLP |
| UniRef90_W5WQC8 | V S WETA AVPPQPAA |
| UniRef90-D2TP36 | TADKMGWLPSDGDV |
| UniRef90_UPI000359 | MRVPQVRDPSL |
| UniRef90-UPI0002 | WHRNNVQDQVKEK |
| UniRef90-R6ZQZ2 | MAGEVGEAPECKPS NG |
| UniRef90-A5N5D3 | WSRENDID LS DKEA |
| UniRef90-W6EN61 | EGFKKGL KPSFPGI |
| UniRef90-N9WCC1 | WSREHNID LS DREE |
| UniRef90_UPI00047019A9 | YEREAGNVAIS EPEVP |
| UniRef90-S7ULC2 |  |
| UniRef90-E3DRK4 | Y N L E K E A E K L K $\square$ A E L T D K K V |
| UniRef90-D1B5Q2 | WKYQH MTDPKPPQGPHKGRV |
| UniRef90_UPI00046F50F3 | MGFEEDWIQPNPPQ |
| UniRef90-R7L6Y7 | Y VRQNNLEKLPEKAA |
| UniRef90-UPI000422DADB | YAFEHGLADEEKPAV |
| UniRef90_Q164H9 | TLMQRDI HPYTRAA |
| UniRef90-UPI00035F8953 | K A $\square \mathrm{A}$ QK WPLFQ R K P |
| UniRef90-D4LUB2 | TA WQE GWVKP Q |
| UniRef90_U6B9F9 | GFEKGWVVPR |
| UniRef90-D4KNA3 | NAYAKGYAAAKPPRVR |
| UniRef90-UPI0004715BB6 | L $\quad$ A F E NGLVKSKKPNVR |
| UniRef90-UPI00035DAF43 | DAFKSGLVKATPPQVR |
| UniRef90-B1BZH1 | TAFKNSLIKAN |
| UniRef90-A9BVY6 | AFMASGGAP |
| UniRef90-B5ZE72 | WQMRQG RQPFVR |
| UniRef90_UPI00046A6DC6 | HLQEQGH HPFTRAA |
| UniRef90-H5XEN5 | HAWESGRDRAQHAA |
| UniRef90-C9YC56 | A L M ESAKPQVFTRA |
| UniRef90-A0A023D4W6 | WQMAHGPAF |
| UniRef90-B9JR58 | $\square \mathrm{L}$ DEHGH_QFYTA |
| UniRef90-X8J7K5 | S K G C |
| UniRef90-R6P7B2 | F DADMNLIREK $\mathrm{D}^{\text {P }}$ |
| UniRef90-R5ZB18 | R P ELASTPKMAPKNG |
| UniRef90-R9C053 | K A F NDKK\VATPPKYRNNKKV |
| UniRef90-K8WEU5 | A M G WR P N L S H S PVNKRV |
| UniRef90-R2SLM7 | WA LEQPDEY KEVAGDKGKV |
| UniRef90-R6TDA1 | NAYACGYASARVPKV |
| UniRef90-UPI0004083A92 | A K G F V K P L K P L L |
| UniRef90-H9UAN2 | FASQEG |
| UniRef90_UPI000370 | QA WK LD |
| UniRef90-G2E2K1 | HA WQRGWVRPQRPTPAS |
| UniRef90-B9YC62 | PVLPEKPQPNGVKV |
| UniRef90-F8AJ77 | REHG\MEVVPN】RGNG |
| UniRef90-D7BHP1 | Y VLVQGID V F K P |
| UniRef90-A0A024PH | WAI K NEQ LL F K P GK |
| UniRef90-UPI000378 | TVRSQDEPQEETAAAD |
| UniRef90-Q28NT2 | IVMDAGVHPFQRAEV T GKKV |
| UniRef90-C6AUF7 | AAMQAG RQFYARAEP |
| UniRef90-13TW50 | WVYGSDTTQLFRRAAPSG |
| UniRef90-R7MMJ1 | NGFNS GLLM NPQUPAYR |
| UniRef90-M1SZ56 | TAFEMGWRPVAEDVV |
| UniRef90-A0A024KDPC | $\square$ A M E D VQFFGRAP |
| UniRef90-W1ASC2 | QA LA S GWRPD LS QVKPS GKRV |
| UniRef90-X1RQR2 | WERAELVNSPVIQPTPTGKWV |
| UniRef90-A0B8C1 | FGRDCR RA |
| UniRef90_UPI00046FAF66 | WA Le N |
| UniRef90-R5P803 | E D F VKVVVPER |
| UniRef90-W0LA71 | M G WTP DLS HVIP S GK R |
| UniRef90-D0L9Y4 | ESWAEGIIGPEPPA |
| UniRef90-UPI0004731DE6 | WA $\square$ Q E QVLIFTK GKPNGKR |
| UniRef90-E5AUA7 | MAREAK |
| UniRef90-R2S4H7 | NAFENDWVKETL |
| UniRef90_R5BC20 | YSATTGANPVEAPAAPT |
|  |  |

UniRef9 R5H2T
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UniRef90-G8P1U5
UniRef90 R7TYY9
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UniRef90 H3ZM97
UniRef90-W6NG70
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UniRef90 D7CUR0
UniRef90-I2F1M5
UniRef90-Z4WRN1
UniRef90_UPI0002F82574
UniRef90 W4V087
UniRef90-J1F918
UniRef90_A4EAE1
UniRef90 Q5WBE8
UniRef90 F9MS12
UniRef90-E1TCT0
UniRef90-W7AMD7
UniRef90 C8S011 UniRef90-Y5NV80
UniRef90-T1GHA0
UniRef90 A5W1E4
UniRef90 F9D1B3
UniRef90-UPIOOO2628462
UniRef90-UPI0002F8ACDE
UniRef90 G7LTG5
UniRef90_UPI00029A6C6A
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UniRef90-E4G3Y3
UniRef90 UPI00037086FF
UniRef90-F5IUM9
UniRef90-V8A7X2
UniRef90 UPI00036A1E78
UniRef90-J1QRH4
UniRef90-UPI0004693F3F
UniRef90-B1GZW2
UniRef90 B6YXQ3
UniRef90-Q30RC8
UniRef90_R7L9N2
UniRef90_C2FZE0
UniRef90 A0A015NR17
UniRef90-G9ZMD7
UniRef90_G8TUS8
UniRef90 J1H8J2
UniRef90-R7DQ53
UniRef90_D8EZP2
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UniRef90-B6GAW5
UniRef90 Q8X645 UniRef90-A4BFN5 UniRef90-A0A031GLW8
UniRef90_R5M7B5
UniRef90 V2Q804
UniRef90-F9MMF8
UniRef90-UPI000366FA15
UniRef90 M7BMC8
UniRef90-19MFS7
UniRef90-R9PKG9
UniRef90-R6HKN0
UniRef90 UPI00030CA9A2
UniRef90-C6PRE0
UniRef90-X1FEX9
UniRef90 UPI0003B31D86
UniRef90- X1M040
UniRef90-C0CYI1
UniRef90-F7JQH6
UniRef90 C5L5Y0
UniRef90-IOJXK9
UniRef90-C3L2M4
UniRef90-UPI0004631794
UniRef90-R5PKZ5
UniRef90-G9RQ22
UniRef90-T1C2R6
UniRef90 X0Z4JO
UniRef90-R5IVP3
UniRef90-R7DRC8
UniRef90_R619W5
UniRef90 ${ }^{-10 I N B 0}$
UniRef90-C4LTET
UniRef90-A8ZY01
UniRef90 F4LIV8
UniRef90-D6Z134
UniRef90_D3L558

ESNLTEEQVK\EASRCLLN HPPLEKHEALVEADRCYF HPAFDKTAAVTEAHRCLY K GLRTQAARCMD
MKRTDLEDLTVNFME AKPGLT DREALEEANRCLY
 DRV DNTTRDALERDKDYNEFHDALNKEERVKQAARCMN MRQTPNNDPPPEIRKNTFKEYADGFGHTAAKDEADRCIL ARQGN HCQPPLERVAYWNEF HPRLGREERQRQGARCMA
 ERVPTPER PVEERLKGFMEVNLGYTGELAVKEAERCLQ

 DKTAMPE LPDQQRVTSFHEEVALGGYSMEEAMAEARRCLD ELALNFSD AHPPGTHAQAVVEADRCFY
 $D R V A$ HELRPVEERSRDFDPLYVERDDDARRAQASRCMM

DPEVRKNNFQEVCLGYYTKEEADKEAHRCCLO
$R D S P E Q L A C E F S D I A A P L L D A S G A A A A A N R C H Y$ ERLSHP LKD IS S RVLDYSEUAKSKLHNQLLKTQASRCDD PGRLAAEAYARNFADAAPRLGRHEAMVAADRCYF
 TVTNPRPRAGADQLAERFSDLAPPPLTARQAALESARCLY VVHQAFTMREAVEEAKRCLN EDLAQNFAESKPSY
MRNDSRTF $\square$ S $\square_{A}^{A}$ NLHRNFDEVNAG $\qquad$ NAQEALDEA

PRVNNPFRK GQYADNFSD SVAPLGKDQAVDEAERCYY PNDLQKNFSEVVSALKPKEADDEANRCLY TRQ EAERRPVEERVQDWKEVYPGGPGHP I TDDASRCMD RLAPADYAQRFADAGEPFTAQQAVLEAERCLY RLPQD LAARNAD AHPGLTPEQAALEADRCFY RPD $\square$ HS GRLSAEEYCRNFAD DK PALSNYEAHI EANRC $\square$ Y

PGRLTPAEYARAFSDCCDPALSSTQAVLEAERCYY QKVKMPERDPKDRKKDFKQVNTGYTRDEMALKEAKRCLQ ERVPTPEVPVEERVRSFVEVNGGY
 ERTLPKKE AVENRKQHYQEFVKSYGSDTQLNEQAARCMN
 VDYKSYTMREA DDEAKRCLR SKVQVKPDKKEVELLGNFEETNLGYDTLELAKEEAERCLH KRK DPGYRPVSERLNDYA AV ERQLYDDDVRDQSSRCMA

TERVTQPKRPVPVRLMDYKEVVERQKAGT LKEQAGRCMD $D R V A B E L D P V D Q R V Q D F D P L Y D E P D T A T R$ RAQASRCMM Q NY DDELTPAFTPLLA DKEASRCLL
 PR $\square E N \square Y R \quad P E A T R V E D Y N E V$ ERKFNAEEATMQASRCMD FSEVRR DLTTQEAVEEANRCLY
F NEDDEG FTTKEA $\square$ AEAKRCLN FKD N P P A L S AR Q A Gll E S S R C Y Y PRQEAGYRP $\quad$ H DR $\square$ SDYSEV EQTLNSRDRKLQASRCMD

L E S N

 ARKREKME
 YKESTTEKFNTRAAMEEA
REMPTPAPAQQRRQNFNPVDQT FSQTAAVLQASRCUS PRQPDAVKWGPEKWDVDYRD LREDPVDRAPDE EQIPMPEQEPKE RIIYNFEEVPLGGY T DQEXLA

KSYHEEWEPAYSPDLVIEEASRCL L MTMSEAI NEARRCLIN
PNPVLST\RYFRAEYEDHDKRKKCVSQSCKELI

|  |  |
| :---: | :---: |
| UniRei90-UPI0003696F6D |  |
| UniRet90-G8P1U5 | CFDAPCTAACPTHLDVPRFLKKIARDNLEGSAKTILDANL |
| UniRef90-R7TY | CGVPFCQHGCP岛NIIPRFNDLVFQQNWKEALHDLLQTNN |
| Ref90-UP100 | CYDAPCDVACPTSDIPSFTKKIASGNLKGSAKTI MSANP |
| UniRef90 A3X8M7 | CYDAPCMTACPTSIDIPQFIRE: QAGHPSSAAKT1LDQNU |
| UniRef90_OPIOOO3B55 UniRef90-C5B888 | CGTHSCEWTCPLHNHIPHWDRLVKEGRILEAAERLSHQTNC |
| UniRef90-B2V8A | CKKPPCQEGCPVYGDINDWMEQIQNNNLIEAFRLGRAKNP |
| UniRef90-H1CGE2 |  |
| UniRef90 ${ }^{\text {Q5CCl1 }}$ | CKNPKCVEGCPVSINIPGF\\|SYVKDEKFEEAAKEI |
| UniRef90-H3ZM97 | CNPAPCTQGCPVHIDIPGFI RKLRENKDKEALEVI |
| UniRef90-W6NG70 | CADAPCQKGCPTQLDVKAFITSISNKNYYGSARQ |
| UniRet90 UP100046FE2DF | CYDAPCIKACPTSIN:PSFIKR1ATGNLKGSAQTVMDSNP |
| UniRef90-D7CURO |  |
| UniRef90-Z4WRN1 | CPNPGCVEGCPVGI HIPSFIKLIEKGQMIDAVNIIRETSS |
| UniRef90-UPI0002F82574 | CYDAPCIEACPTGIDIPRFIRAIATDNMAGSARTI DESND |
| W4V087 | K |
|  | DPYCSNKCPLHNFIPQWLKAVA |
| UniRef90-A4EA |  |
| UniRet90-F9MS 12 | CKVPRCRKGCPVSII PKFI YGI ANENFKEAIDSLLW |
| UniRet90-E1TC | CYDAPCVNACPTQID P PFIRKI GNGNLKGAALD |
| W7AMD7 |  |
| Ref90-C8SO11 | CFDAPCTTACPTSUD PLFURQATGTPDAAAKT FAQND |
| UniRef90-Y5NV80 | TPFCQTGCPIGNYLPEWNDLVYHQDFKEAYERLSETNN |
| URiso | GDAPCVNACPSETDTPSFTHRTSDENTQGAAER\LSANT |
| UniRef90- F9D1B3 | CKVPLCRKGCPITNNIPEFIHQLSKGNTGDAMSVINETSN |
| UniRef90 UP1000262 | CYDAPCIKACPTG\\|DIPSFIKKIASGNLKGSAKTIM |
| UniRet90_UP10002F | D |
| UniRet90 G7LT | CYDAPCTRSCPADIDVPSFIHRIAQDNVRGAAQA LISENV |
| UniRet90 UPIO0029A6C6A | VP HCHSGCPNDNLIPEWNDLVYRQEDKRAFERLIKMNP |
| UniRergo-L5Mu | CM |
| UniRei90-UPI00037086FF | CYDAPCATACPTSIDVPSFIHRISQGNVRGAAQA |
| UniRef90-F5IUM9 | CKNPLCDQGCPDEHNIPGFVNQLSMGNIGAAMQUINEKSN |
| UniRef90_V8A7X2 | DAPClEACPTDID PRF:KALASRNAGAART1 |
| UniRet90_UPI00036A1E78 | PACPTG1 NIPSF NRIATNNDDGAAQAI |
| UniRet90_J10R | CFDAPCTRACPAEIDVPSFIQRIAQSNDRGAAEVILRAN |
| UniRet90 UP10004693F3F | CYDAPCINACPSEVDIPSF:RN\| |
| UniRet90-B6YXQ3 | CPPAPCIKGCPVHINIPGFI RALRENPDKNALRVIWND |
| UniRef90-Q30RC8 | CGDPFCLNKCPLHNYVPQWLK |
| UniRet90_R7L9N2 | F |
| 2 | GCPLGNVIPEFND |
| UniRef90_A0A0 |  |
|  | CGIDPCHHGCPNDNLIPEWNDLVYRDQDRRAFERLSRTNC |
| UniRef90 G8TUS8 | CYDAPCDHGCPTA |
| J1H8J2 | VPSCQKGCPISND: PDF YQLSKGNLGEARELLARKTN |
| UniRef90- D8EZP2 | CGTPFCHAGCPLANVIPEFNDCARRGEWREGLELLLSTNN |
| UniRef90-E3FRM3 |  |
| UniRef90-B8C | VNNLIPEWNNLVYNG |
| UniRef90-E1VX | CGVPFCHSGCPLGNLIPEFNDLTYKGRMDDAAARLLSTNN |
|  | DA Cos |
| 28×645 | DAPCSQACPAQIDPGKF RS YFRNFKGAAET |
| A4B |  |
| UniRef90 A0A031C | CYDAPCSRICPSEDDVASFIRNIHDKN NGAAAGILKQNI |
| UniRef90-R5M7B5 | CKVPQCKKGCP SHDIPDWIHELSKGNLGNAMKI NDKSN |
| UniRef90-F9MMF8 | CKVPDCRRGCPIGNDIPKFTQALASGDTPQADGYIYNHSD |
| UniRet90-UPIO00366FA15 | CYDAPCTKACPTGMPVPSFIKKIASGNLKGSARVILEANP |
| UniRef90 M7BMC8 |  |
|  | CPKPLCRGGCPIUENEPNF QALAKGNVGEASAD A R S S |
| UniRef90 R9PKG9 |  |
| UniRef90 UPI00030CA9A2 | CYDAPCDRACPTGПDПPTF |
| Refo | CHDAPCSKACPAGTNPSKFIRSLRFRNFKGAVETIRTNNV |
| UniRef90_X1FE | RTPCQHTCPVELDIPGYISLI KEGRFAEAYCLI KQRNP |
| UP10003B31D86 | C |
| X1M0 |  |
| ef90-C0CY11 |  |
| UniRef90-F7JOH6 |  |
| UniRef90-C5L5 | 兂 |
|  | CWNPPCVNACPTGDEIPKFVKRIETGDURGAAEVILKANF |
| UniRef90-C3L2M4 | CHDAPCTKACPAGTNPGKFIRSLRFRNFNGAVAT RENNI |
| UniRef90_UP1000463 | CHDAPCSKSCPAETDPGSFIQSIRFKNVKGAADTIRTNNV |
| UniRet90_R5PKZ5 | CG ACVEACPQGNSIPSLTTALREERLRNAALLMLRPGA |
| UniRet90_G9RQ22 |  |
| UniRef90-T1C2R6 |  |
|  | CKNPKCVPGCPAE\\|NI PKFIEKIVEEDFAGAYLEILKTDD |
|  |  |
| iRe990-R7D | FIRSVRFRNFKGAAETIR $\mathrm{R}^{\text {d N A }}$ |
| UniRef90_R619W5 | CARPTCRTGCPTANNTPQFIRALSEGNDGLAYETIAERSN |
| UniRef90 IOINB0 |  |
| Ref90 C4LTE7 |  |
| A8Z |  |
|  |  |
|  |  |
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| UniRef90 R5H2T9 |  |
| :---: | :---: |
| UniRef90-UP10003696F6D |  |
| UniRef90-G8P1U5 | G A |
| UniRef90-R7TYY9 | YAWAHGYMVPEVPDCRTGK |
| UniRef90-UP10001E88F78 | WA 俍NEQVLF |
| UniRef90-A3X | TLMEKD VHPY |
| UniRef90-UP10003B55A9C | TAFAKGLMKPV |
| UniRef90-C5B88 | SAFALGWR |
| UniRet90-H1CGE2 | EAWEQGLMSP |
| UniRef90--05CCl1 | WAVSHNVD LSATEPKNGПKV |
| UniRef90-H3ZM |  |
| UniRef90-W6NC |  |
| UniRef90-UP100046FE2DF | WAVNSG AQLFKPGVPNGKRV |
| UniRef90 D7CURO | HLYSR RKLPFTPAPPTGKRV |
|  | R |
| UniRef90-Z4WRN1 | WQMDHG GQPFARAPATGYRV |
| UniRef90-W4V0¢ | FDTOM |
| UniReef90 J1F918 | KGFEKGL QUEFPKNK】GKSV |
| UniRef90 O5WBE8 | WADQNEKP LFTAGKRNGQKV |
| UniRef90-F9MS12 | ARDQGWR LEGKNQP |
| UniRef90-E1TC | WAMARG EALFTRAPA |
| UniRet90_W7AMD7 |  |
| UniRef90_C8SO11 | G |
| UniRef90-Y5NV80 | EAYDNGWVK |
| UniRef90-T1GH | HAFEQGWIKPEII |
| UniRef90-A5W1E4 | NAQFSAHPFEKRSA |
| UniRef90 UPIOOO2 | WSTKNEQVMF |
| UniRef90-UPI0002F8ACDE | WAIKNEQI |
| UniRef90-G7LTG: | A Y LS P |
| UniRef90 UP100029A6C6A | QAFKHDWVIDSM |
| UniRef90-E4G3 | KAWR RAM |
| UniRef90-UPI00037086FF | AVMHDPQSALFQRAPTSGKKV |
| UniRet90-5lum9 |  |
| UniRe990_-8A7 ${ }^{\text {d }}$ | WQMAQD |
| UniRet90_UP100036A1E78 | NRQADD |
| UniRef90-J1Q | RFFAAPGKPLFTRAASSGK |
| UniRef90-EP10 | NAQFSEHPFKRAPA |
| UniRef90-B6YXQ3 | YARKHG |
| UniRet90_Q30RC8 | EGFRAGYKPDF PGDT |
| UniRef90-R7L9N2 | R ${ }^{\text {d }}$ GYSEVPKCNPP |
| C2F | KNKFV |
| UniRef90_AOAO | AADRSG ERLFAPG |
| UniRef90 G9ZM | QAFKNGWVVDSKPL |
| UniRet90-G8TUS8 | METGAPSLPDKR |
| -e90-J78J2 | FDAEMGL K NLVAKTRGK |
| UniRef90-R7DQ53 | FDNGYITPTPPKRRTEK |
| UniRef90-E3FRM3 | S HP |
| UniRef90-B8C | E GL |
|  | GD |
| UniRef90-B6GAW5 | HGGPARFPQPGR |
| UniRef90-Q88 | (GM ERYQPGTKT |
| UniRef9 | HPISRAP |
| UniRef90-A0A031GLW8 | AQHP KRA |
| UniRef90-R5M7 |  |
|  | ENGYVKQl PENKS |
| UniRef90-F9MM | RAFEMGVT |
| UniRef90-UP1000366FA15 | WAMQAD |
| $\begin{aligned} & \text { UniRef90-M7BMC8 } \\ & \text { UniRef90 } \\ & \hline 19 M F S S \end{aligned}$ | VFKAMNIPQURS |
| UniRet90 R9PKG9 | VFVGHPF KREA |
| UniRef90-R6HKNO | A AFREGYПKPRN ПERN |
| UniRef90-UP100030CA9A2 | WADTNEQ QLFQRASN |
|  | YEKNINM KVLDKVEA |
| UniRef90-X1FE | YAFNLGVKYTPE\KERKK |
| UniRef90-UP10003B31D86 | A AMTLPASTFFTRAPA |
| UniRet90-×1M040 | YDQDNGDPDIPKPKPA |
| UniRet90_COCYI1 | TCFE RIDVHCAPKNGKKV |
| UniRef90_F7JOH6 | NGYEAWLSKVSAPAVTRGK |
| UniRef90 C5L5Y0 | HAFQKGWI QPMPPLTRTYKTV |
| UniRef90-10J) | YFWAMQKLPSQWHI |
| UniRef90_C3L2M4 | YEQLTGU KILEAVQATKEKV |
|  | EKLFNMEILKSP |
| UniRet90-R5PKZ5 UniRef90 G9RQ22 | Q ${ }_{\text {d }}^{\text {d }}$ NAATRYVPPVVAPTNR |
| iRef90 |  |
| UniRef90 x0Z4J0 |  |
| UniRef90-25IV | F NMK |
| UniRef90 R7DRC8 | DRQMKVYHKEVS |
| UniRef90-R619W: | FAHENNLKPLPP S |
| UniRef90-101NB0 |  |
| UniRet90_C4LTE7 | YSTEED |
| UniRet90-A8ZYO |  |
| UniRef90-F4LIV8 UniRet90-D6713 | FDAEMHLTHIRASRKNRG |
| D6 | GQR |
| UnRef90 D3L558 | RES E E WF P K IVIY E P D K |


K $\square$ GQK $\square$ CTKQGE $\square K Y$
Re90-X0VES
UniRef90-R5FEF3
UniRef90_R9LP72
UniRef90-G8QTX4
UniRef90 X1ET46
UniRef90-R7GMK1
UniRef90-J5GX94
UniRef90_B8FJ29
UniRef90-UPI0002DA68F5
UniRef90-R5CTW6
 KLGQKKLDAMDFKPF

K $\square$ G Q K $\square$ CK K D GSTYP

R D A A WR K E L R A Q $\square$ K P K D R L A $\square$

C P T N A $\square \mathrm{K} \square \mathrm{G}$ Q R $\square \mathrm{C}$
TPATFEDRERM
M S M L K F

UniRef90 R7A565 UniRef90_G5IN25 UniRef90-E6UTL6 UniRef90 B8FRF9 UniRef90 WOEBFO UniRef90-UPI0003810F70 UniRef90-R6WC52 UniRef90 XOVES9 UniRef90-R5FEF3 UniRef90_R9LP72 UniRef90-G8QTX4 UniRef90 X1ET46 UniRef90-R7GMK1 UniRef90-J5GX94 UniRef90 B8FJ29 UniRef90 UPI0002DA68F5 UniRef90-R5CTW6 UniRef90_R6TU57 UniRef90 R5EJJ8 UniRef90-U5MXV1 UniRef90-TOYPC5 UniRef90_A8MEG3 UniRef90 UPI00037EC3A3 UniRef90-C4GBM1 UniRef90-W6EE11 UniRef90 R6DT33 UniRef90 F9UA00 UniRef90-UPI0003B58226 UniRef90_F0JJH2 UniRef90 R6QP04 UniRef90-R6UCV8 UniRef90-R5HN49 UniRef90 R6PYW4 UniRef90 C0QAZ8 UniRef90_C5BRC1 UniRef90-D4M6P8 UniRef90 H6LDK0 UniRef90-UPI0003940A72 UniRef90_D4M2A4 UniRef90 G0HIW4 UniRef90- J9GQN9 UniRef90-R6PJ41 UniRef90-S7TLU7 UniRef90 WOEMCE UniRef90-F6B506 UniRef90-V2Z845 UniRef90_F7V575 UniRef90 ${ }^{-}$G5IIH5 UniRef90-UPI00036F0909 UniRef90_K4LH97 UniRef90 G4KVQ9 UniRef90-R5WWE5 UniRef90-R8W116 UniRef90-T0MWJ7 UniRef90 C5EGP1 UniRef90-B9K997 UniRef90-A1UMT6 UniRef90 R6QXU1 UniRef90-G1 WIF7 UniRef90_B8KVK0 UniRef90_C4L7H8 UniRef90 TOMHH0 UniRef90-M1ZHZ4 UniRef90_C7RRX7 UniRef90 W6K9J8 UniRef90-12F6A6 UniRef90-R5PY42 UniRef90_R6IEQ1 UniRef90 K0N5M9 UniRef90-A1RGE9 UniRef90-F7V8A6 UniRef90 Q0A830 UniRef90 UPI0003B52D0A UniRef90-D8EYX2 UniRef90-F6B9C0 UniRef90 X1DR08 UniRef90-UPIO0046421BB UniRef90-TONF85 UniRef90-D5U700 UniRef90 ${ }^{-}$K7RKE8 UniRef90-KOXEQ4 UniRef90-UPI00047C28C8 UniRef90 R1CSR3 UniRef90_UPI0002C3D14A UniRef90-X1GGY5 UniRef90_UPIOO04010096 UniRef90 E6VVA4 UniRef90-S6AB41 UniRef90 UPI00037CC6D9 UniRef90 R5BXU2 UniRef90-UPI00037BEEAE UniRef90_UPIOOO3
UniRef90_QOFOY6

PQHPDTVKWGPEKWDKNYR ${ }^{60}$
70
N N Q $\square$ N C Y D
HVIDEANRCLN
A D HNAD
FEPGFSKEEALAEASRCLQ LST QEAITEAKRCLN
PKHPDNLSWGPDKWDEDYRD FAHGRMSDRDRDASACNCYE
FRSEYEAHDYEKHCSAGVCAELQ
KYTPRNKEWGPADWNVDYR EEKTK $\square$ FKPPEA $\square$ FEASRC
PQVPDM $\square K W G P D H W N P D F R D T A K V$
EGFNYRDAMEEAS
PDEFNESLMDRKAAFKRYAQAIPGAYAITK K S IVEEAERCLN
PKQPDDNHWGPHMWDEDYK
$\qquad$ Y E KVPDMD
 QRTP DPEVDPKE RATEFHEELLPY DRDQAVEEANRCXLN

DK G F RED
PRQPSEHKWGKEMWNENYRD
EEHIVRGRCSCNL
FRDDYEEH L LHRCLAGLDQ ACVG


K QEPDAVKWGKEKWSPDYRD
K KN R $\quad$ NCYD
PNPVLSTIVKYFRKEYEEHVVEKRCSAGVCGESG
KTEK LVEEAKTSPYHVKAVKP $\square P S R K \square N K Q V P G Y Q$ ERRKKHLQD $\quad$ LS QP


AEHNGD
YKAVT TCRDDFEEH TRNGRCNCQ
EKTAK $\square$ AENA $\square$ T DKHHVKD $\square$ KP $\square P S R K I D G N V P L V D$ AKTP $\square P K A E E P$ TARDHVWKNWNMDYRENRQDVAEE

DKYHVKAVKPLPRRK\YEKVPLLD CR PTMEQLNAEERKDNFTEVVFGY DEEQAVEEAHRCLE VQGFREDYV
 $\square$ N GENRYHSVFGGMD ERVEMTKEPPETRVRSF $\square E \square V K G Y$ SREQAMQEAARCVE

FRDD Y $\square E H \square M Y N R C \square M S \square K L P V$
QELPDEVKWGPEKWSPDYRN
KNRIETYD
$\square R H \square R P \prod Y Q$ $\square Y K \square F P Q A V P N T Y V I D K$
$E E H \square L X N C T H G L$

## EDKIF QA GWSYK

 PTVTLPDEWGRKNWNYNYRE $D N Q \square Q C Y D$

RKQALDNSDHFAD
P $\square$ PERH MDKK DP LI D
RRFKEGDHQPKDWQEQMFQAGWSHK

PNEFNGN DDKRKATYKGYAQATPNAFA DK
FRNEYEEHDADKKCAAFVCKNL
ERVK TSHEDPAARVKSFTLEPVREYSTEE RYAEASRCMG

$\nabla Y K G \square I G Y R D D Y \square E H \square A H G R$
MAAKH1I EEANRCLQ
AEERDHDWKEVVLG FSKEETVEEASRCLG

PEEMNKNPARTFRRFKDGKTEWRSWQDK MCRPVMDQLEAEERKDNFTEVVFGY DEEQAVNEASRCDE NHRGD


UniRef90 R7A565 UniRef90_G5IN25
UniRef90_E6UTL6 UniRef90-B8FRF9 UniRef90_WOEBF0 UniRef90-UPIO003810F70 UniRef90-R6WC52 UniRef90-XOVES9 UniRet90_R5FEF3
UniRef90_R9LP72 UniRef90-G8QTX4 UniRef90-X1ET46 UniRef90-R7GMK1
UniRef90 J5GX94 UniRef90-J5GX94
UniRef90-B8FJ29 UniRef90_UPIO002DA68F5 UniRef90-R5CTW6 UniRef90-R6TU57
UniRef90 R5EJJ8 UniRef90-U5MXV1 UniRef90-TOYPC5 UniRef90-A8MEG3 UniRef90_UPIO0037EC3A3 UniRef90-C4GBM1
UniRef90 W6EE11 UniRef90-R6DT33 UniRef90-F9UA00 UniRef90-UPI0003B58226 UniRef90-FOJJH2 UniRef90-R6UCV8 UniRef90-R5HN49 UniRef90-R6PYW4 UniRet90_C0QAZ8
UniRef90_C5BRC1 UniRef90-D4M6P8 UniRef90-H6LDK0 UniRef90_UPIO003940A72 UniRef90-D4M2A4 UniRef90-GOHIW4
UniRef90-J9GQN9 UniRefgo-R6PJ41
UniRef90_S7TLU7
UniRef90-F6B506
UniRef90-V2Z845 UniRef90-F7V575
UniRef90-G5IIH5 UniRef90_UPIOO036F0909 UniRef90-K4LH97 UniRef90_G4KVQ9 UniRef90-R8W116 UniRef90-TOMWJ7 UniRef90_C5EGP1 UniRef90-B9K997
UniRef90_A1UMT6 UniRef90-R6QXU1 UniRef90_G1WIF7 UniRef90-B8KVKO UniRef90-C4L7H8
UniRef90_TOMHH0 UniRef90-M1ZHZ4 UniRef90-C7RRX7 UniRef90-W6K9J8 UniRet90_12F6A6
UniRef90_R5PY42 UniRef90-R6IEQ1 UniRef90_KON5M9 UniRef90_A1RGE9
UniRef90-F7V8A6 UniRef90_Q0A830 UniRef90_UP10003B52D0A UniRef90-D8EYX2 UniRef90-F6B9C0 UniRef90_UPIO0046421BB UniRef90-TONF85 UniRef90-D5U700 UniRef90_K7RKE8 UniRef9O-KOXEQ4 UniRef90_UPIO0047C28C8 UniRef90-R1CSR3 UniRef90-UPI0002C3D14A UniRef90-X1GGY5 UniRef90_UPIO004010096 UniRef90_E6VVA4 UniRef90-S6AB41 UniRef90_UPI00037CC6D9 UniRef90_R5BXU2 UniRef90_UPI00037BEEAE UniRef90_Q0F0Y6

A
2

FPAlVIC GAlI C ${ }^{130}$ MSVI CS LVCNHENQ FP IV C G RV CPM T FPIVCGRVCPHS


RK $C{ }^{140}$ T $G T \|$
 QCEGHCVLGRK
CESQCRRNMV
CEAQCRRNLI QCEAGCILARK



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$K$



## 

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| UniRef90_R7A565 | QELHEEARYUPETVNHEGK |
| :---: | :---: |
| UniRef90-G5IN25 |  |
| UniRef90-E6UTL6 | WDMARPEPWT |
| UniRef90-B8FRF9 | WD $\square$ A HEQPWAPRKKAAT GKK |
| UniRef90-W0EBF0 | QGK DVEFT K |
| UniRef90-UPI0003810F70 | FAENNNDSP |
| UniRef90-R6WC52 | QDLHAETRFVPEV |
| UniRef90_XOVES9 | QANRNGWSKLRILPQQETGKNV |
| UniRef90-R5FEF3 | Y A R E ENVPLVEPRPA |
| UniRef90-R9LP72 | LERVQVE KAEPTGK |
| UniRef90-G8QTX4 | QDLDVNRRF\PAKRHDYGK |
| UniRef90-X1ET46 | Y E E HD |
| UniRef90-R7GMK1 | ELIEEERY IPLCENEEGG |
| UniRef90_J5GX94 | EQA IS AKFVSAGEK $\square$ GKKV |
| UniRef90-B8FJ29 | HDFELKDRYVPQVEEARD |
| UniRef90_UPI0002DA68F5 |  |
| UniRef90-R5CTW6 | QELNEKTRYIPPRR |
| UniRef90_R6TU57 | K GYD T Y MAKI K T PAADTN |
| UniRef90-R5EJJ8 | QDLDAETRYIPKKVVPS |
| UniRef90-U5MXV1 | Y Y L |
| UniRef90-TOYPC5 | HGRAD LLYVPGAP |
| UniRef90-A8MEG3 | Y N $\square \mathrm{E}$ |
| UniRef90_UPI00037EC3A3 | HA GEVPVPKAAPATGKK |
| UniRef90_C4GBM1 | LDLLK E ETRY |
| UniRef90-W6EE11 | M NDLQFEKP I K NGKKV |
| UniRef90_R6DT33 | GDVPQP P CAPPTGKKV |
| UniRef90_F9UA00 | A VD HERVKRIAAEGK |
| UniRef90-UPI0003B58226 | Y EMNS GTK |
| UniRef90_FOJJH2 | RELLR S GVVHLP VP |
| UniRef90-R6QP04 | K DLD SKTRYIPK |
| UniRef90-R6UCV8 | A GYVPPEPCAKSTG |
| UniRef90-R5HN49 | WA Y A Q GFPEEFKPVAQ |
| UniRef90_R6PYW4 | NA GVV |
| UniRef90-C0QAZ8 | MNLGKR |
| UniRef90-C5BRC1 | MA $\square \mathrm{EQGWMPT}$ T T T RKTGKRV |
| UniRef90-D4M6P8 | NGYEALDM |
| UniRef90-H6LDK0 | Y ILENSDLLYFKTPTTPTGKSV |
| UniRef90_UPI0003940A72 | HDLAAFQSYLPERKAEKHKKV |
| UniRef90-D4M2A4 | S Y L D MEVPK】EK |
| UniRef90_G0HIW4 | Y DLEHGPWMPE $\mathrm{C}^{\text {P P P T }}$ |
| UniRef90-J9GQN9 |  |
| UniRef90-R6PJ41 | FA GEVVEPPACAPSTGKRI |
| UniRef90_S7TLU7 |  |
| UniRef90_W0EMC6 | STKDIVFPKNGK |
| UniRef90-F6B506 | F GNVDGRPYVPPVKKDTGK |
| UniRef90-V2Z845 | MA GKVPPPPCAPS |
| UniRef90-F7V575 |  |
| UniRef90-G5IIH5 | G G Y A |
| UniRef90_UPI00036F0909 | KELDD DVRFVPKK |
| UniRef90_K4LH97 | LDLKSGEPYRPE |
| UniRef90-G4KVQ9 | K G Y N A L M |
| UniRef90_R5WWE5 |  |
| UniRef90-R8W116 | HA GVVPAPACAPSTGKR |
| niRef90_T0MWJ7 | G EV |
| UniRef90-C5EGP1 | Y I LEHAEEYYTAPEKESG |
| UniRef90-B9K997 | SV P L E E Y S R |
| UniRef90-A1UMT6 | ATQNRWEFAPPAARSG |
| UniRef90-R6QXU1 | GKVPPPPCGEETG |
| UniRef90-G1WIF7 |  |
| UniRef90-B8KVK0 |  |
| UniRef90-C4L7H8 | QALLHGW KPKFDAPPSG |
| UniRef90-TOMHH0 | WA RQRNDELVPPK! |
| UniRef90-M1ZHZ4 | GEVLAEEKA |
| UniRef90-C7RRX7 | EALK Q W W KLT P P A |
| UniRef90-W6K9J8 | WAIENKMSFP K |
| UniRef90-I2F6A6 | QEKTEDVIRYAK |
| UniRef90-R5PY42 |  |
| UniRef90_R6IEQ1 | RELNAEHR |
| UniRef90-K0N5M9 | YEMNQNKRILIPYKAPATDKQV |
| UniRef90-A1RGE9 | LDLDAEGMS YVPERQAE |
| UniRef90_F7V8A6 | QAYSKVLPKLKAAS |
| UniRef90-Q0A830 | WARENDLKFD APGEPTG |
| UniRef90_UPI0003B52D0A | Y A L N N GLPVSK G T I S K N A K K |
| UniRef90-D8EYX2 | HEMTGSHEPEPESV |
| UniRef90-F6B9C0 | VA Y Q D Q $\quad$ P LP E K E A D |
| UniRef90-X1DR08 |  |
| UniRef90-UPIO0046421BB | Y $\square$ MEHREQFYSAP |
| UniRef90-TONF85 | QFPDYGK\LDLPRKKFVGKRV |
| UniRef90-D5U700 | AGYKNVISTLKPAA |
| UniRef90-K7RKE8 | LA $\square$ EK GW T F K K P EQRSGHRV |
| UniRef90-K0XEQ4 | GEVDPPKCAPSTGKK |
| UniRef90_UPI00047C28C8 | YYLD KVDLKPNDDK |
| UniRef90_R1CSR3 | YYIN |
| UniRef90-UPI0002C3D14A | YCNEEDVP $\square$ T C $\square$ P N T GKKV |
| UniRef90-X1GGY5 | WYFDH 1 GKAKEPFAVTKDQKV |
| UniRef90_UPIO004010096 | SVIAADKVPTP EPGAATGKT |
| UniRef90-E6VVA4 | WEMNSGQRLPDIS CAADTGRKV |
| UniRef90-S6AB41 | Y A DT N NLK FVPEGVQK G K |
| UniRef90_UPI00037CC6D9 | RGFDTVVPSLEKPLAES G |
| UniRef90-R5BXU2 | DLFGEDPFMPEDAPETGKNV |
| UniRef90-UPI00037BEEAE | QAIK LGGW KFTPPASSS |
|  | G W Q P Q F D |

$D \square E D V A G D E P T E K$
E V C P A G A VK $\quad \square G Q K \square C$
—D K VR G F V K Y
TEKTFEDR
$K \square G Q K \square C T S E P \square V P P$
$R \square G Q K \square C D K H G N T E Y$

E Q $\square \mathrm{L}$ Q $\square \mathrm{T}$ E E $\square \mathrm{AEGAGSH} \mathrm{G}$ A $\square \mathrm{DS} \mathrm{LVKEYF}$

UniRef90 A4YZZO
UniRef90_M9VYT3
UniRef90-X0T8E7
UniRef90 A4U1I6
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UniRef90 R5C4X7
UniRef90_F3Z441
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UniRef90 E8RJ91
UniRef90 ${ }^{-}$C7N2M8
UniRef90-XOPLI5
UniRef90 I4D5E4
UniRef90 R5TR74
UniRef90-D8K3G2
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UniRef90_U5RV69
UniRef90 ${ }^{-}$R1GUQ1
UniRef90-X1PIK4
UniRef90 F7V1R7
UniRef90 UPI000360F77D
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UniRef90_S0G5K7
UniRef90 F7V957
UniRef90 M5DYB4 UniRef90_E4RKX5 UniRef90_R2Q6N5 UniRef90 X0QL98 UniRef90 K1YFA5 UniRef90-D1AKX6
UniRef90_B6WSK4
UniRef90 Q07JU6
UniRef90_G1V0P3
UniRef90_C6HY63

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R R Y K D GDHKPGPWQKQ $\square$ F NADHSHK

F GDEYHRHVIDKKCDAF VCKE L K E LVIEAN R N C Y M

PNEYDETLSERKAVYK QYAQVAAK GTTEYHK $F D G R L S L P G R P V$ I $L$ K
$E \mathrm{~V} C P \mathrm{~T}$ GT!R D K V I N S E V K K E D


EKMKE V V NCMG
 RATDDSAPDYF $R A T D 』 S A P D Y$ F

 RDEEWPEEKWT P EYRTSRENVVD

K K T PRDHRWGPEDWNPDYR
$T N R Q V V V K$
RYNARTSLPGRPWIDK
F A E E Y R S HVQNKMCAE GVGQ LPET S K DE E KLLP L L D
E D A N H $\square$ K E S R D M L L S R K T S L K
$P R Y Q$
Y D A A QRVVD GCMG
$K A \square Y R P F P$ QA VP NV F T $\square$ D R
FADEYECH $C$ SKATCDAGTRQ
H Y A D
$K A \square Y K K Y V Q A \square P G A F A \square Q K$
P Q T D
$K A \square Y K M Y P Q A M P A G F S$
$R R \square I D R E Y T$
$I$
LS E K L VKE $\square$ NE I I D D

E VLLRDVI AFRPDFENHLEKGY
HRCPDYA
VT E A K R C $\square$ A
D V LH NFRDQ DEAELAPGKP HAQHGMA
V Q D A S H A R Q



| UniRef90-B2A227 | Q D |
| :--- | :--- |
| Un A K G D N |  |



UniRef90 E6QST5
UniRef90_C6PTJ9 UniRef90-UPI000379C628 UniRef90-UPI0004789F11 UniRef90-X0U9A3
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UniRef90-X1CFV2
UniRef90-J6J0T3
UniRef90_R6REY1
UniRef90-I9MAU0

50
60
T RYKADDKVWHKWQDK ${ }^{70}$ F DADHSHK ER $\square$ A QMAEKVEKK $\square K G A F S E \square D T D M \square S E S R K L S M E D P \square Y D$

Y L M Y P Q S VP Q VY S $\square \mathrm{DK}$

K LDREWEYKCDQ
YEQAIPWAFSITK
$N \square P P Y$ VRPAAERSRDFDLVSQGYLGYMGVWLEVLRDRQ GSGMDQVKUMKENRSMA K E S R PY

NCMG
PVVERVKNYQ\|IFS LSEADVRVQRARCMD NCMG $D R E L G R G G L D G D L Q E T Q R G T \square P L D A K G D L R R Y D P V W E Q G R$ Y I A F PQAVPKKAVIER PPYVRGADARSQDFELVNQGYLGYMSVWLEALRDKQ PDEFDMGMSDRKA $\square Y$ Y $\square \mathrm{P} \square \mathrm{D}$ S $V \mathrm{~V} N \square A T \square D M$ LPRVQTRMRPSQERDNDFKEVNLG FTEEMARREAERCDQ

NNFKEVGVQMEQDELKRQEDKCTQ KRDKHMVKPVKPDPNRKSEKKVPLVD MDQKELRQVEKQCIQQ RPEPMPMGAFRAKEWFSDVCRDDFAARGLYRQRVPSWD DKELGKGGLIGDLQETEKGTIPLITRGDLRRYDPVWEQGK $M D$ DDKL ETG
 MNLKELNEWEDRCTQ

 MD S Q QVK LDWESRCll Q MDQSELRQWESRCTQ

A ERCMQ

K WVEGGDFGDLEDWKADFVERGDLR LKYPEWRNAKYS MDGDK पKAWEALCDE KRQPE VIDVEKLDRLAEEAPRENYYGDKDWIDREALCLE $\begin{array}{ll}M D A A Q V K A W E A R C T E \\ F & G Q E E L\end{array}$
EKKEHHFHYDMKQAFGQEELHEREAVCTR


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| :---: | :---: |
| UniRef90_C6PTJ9 |  |
| UniRet90-UPIOOO3790 | KMSPCRKACPLNTNCGYVQLTARGEPQKAMEL |
| UniRef90-UPIO004789F11 | , |
| UniRef90-X0U9 | KDRPPCDSACPA ${ }^{\text {d }}$ |
| UniRef90_D8F- | GIDVSRYVRL |
| Q1PYR5 |  |
| UniRef90_C0QKT2 | KDRSPCTNACPNSVNAHAYVA |
| UniRef90-UPIO0040 | CEDRPCELGGCPVKIHDPQALN |
| iRe |  |
| RRef90-UP100 | CAAAPCDTKCAAGQNIPKY E |
| iRef90-G1V1A9 | CYVAPCSAACP |
| UniRef90 - O5PON2 | PCKSACPAGIDVPRYVQLAAEGKYGEALAVV |
| UniRef90-AOLHH2 | $\square \mathrm{CQATCPANLDLRSYVGLTADGDYAAS}$ |
| UniRef90-U7VBG7 | ASEAACKSSCPMNTDAKTYV |
| UniRef90-M5D | CGTPFCNSGGPVNHDVPDNDPVY |
| UR Ref9- | E ETAACFATCPMHTDVKEYVRLLIKEEK |
| $\begin{aligned} & \text { UniRef90-UPIOOO3B7 } \\ & \text { UniRefo-M16N1 } \end{aligned}$ | FGUSPCTEAVCPVGVKAGGLVSMSRSGK |
| UniRef90-UPIO0045E |  |
|  |  |
| X0TMV7 |  |
|  |  |
|  | CFKAPCKDGCPIEQQIPEYLKLVADKDYDKAIEVI ANDNT |
| 15802 | C ${ }^{\text {P }}$ |
|  | PMPCRDRCP |
| Uni | APACQSTCP |
| UniRef90-G1V937 |  |
|  |  |
|  |  |
| H6L | P ${ }^{\text {V }}$ |
|  |  |
|  | CPA A A GY KMASQGRYKEALAA |
| OWE83 | ACPAGVDVGYORAMAAGDFTGAAA |
|  |  |
| UniRef90-G4 | DEPPACAAACPDHVDVSALLNAVGAGDFQRAYRTLEKKMP |
| UniRef90 UPIO0041BA39F | C |
|  | CYLI P CVNSCPANVDLPGT ALMQMGKFGDALLALGR |
|  | CEAPRCTAACPGGKVARDLLMELTAKGNWNDAWAKLMATLMP |
| JPIC |  |
| UniRet90_A1V9L0 |  |
|  | c |
| UP6 | CP ${ }^{\text {P }}$ |
| UniRef90-W6 | P |
| UniF |  |
|  |  |
| UniRet90_UPI00035CD94D | G |
|  | E |
|  | E |
|  |  |
| UniRef90-E5Y617 | C |
| UniRef90-R7AKB2 | CPFRLDUKGLEEKWKKGR |
|  | A |
|  | EQPPACAAACPLRVDARAMAEKMAAGDFVAAMAVYARAVP |
|  | C |
| J66 | E |
| Ref90_19MAU0 |  |


| lupas_21 lupas_14 |
| :---: |
| lupas_28 |
| jnet |
| conf |
|  |
| sols |
| jhmr |
| jipssn |



lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm

UniRef90_E6QST5
UniRef90_C6PTJ9
UniRef90_UPIO00379C628 UniRef90-UPI0004789F11
UniRef90-X0U9A3
UniRef90-D8F4S4
UniRef90-Q1PYR5
UniRef90 A5GB33
UniRef90_A5GB33
UniRef90-COQKT2
UniRef90_UPIO00404128D
UniRef90-R5EXX0
UniRef90_UPI0003B5AD56
UniRef90_G1V1A9
UniRef90-G1V1A9
UniRef90_AOAO14NBR4
UniRef90_Q5PON2
UniRef90_AOLHH2
UniRef90-U7VBG7
UniRef90_M5DTB4
UniRef90-Q0SR75
UniRef90_UPI0003B7853C
UniRef90-M1E6N1
UniRef90-UPI00045E7AD4
UniRef90-U5SOM7
UniRef90 X0TMV7
UniRef90-D3KZR5
UniRef90-G9XD13
UniRef90-15B029
UniRef90-G2FVS5
UniRef90_G9WP19
UniRef90_C0QJ31
UniRef90 G1V937
UniRef90-K0NAY7
UniRef90-D8GLB1
UniRef90_H6LFI4
UniRef90 K6V7G2
UniRef90 K1SZM0
UniRef90-XOWE83
UniRef90-12PWN8
UniRef90_G1V594
UniRef90- G4L0Z3
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UniRef90_A1HS10
UniRef90_U5RSL9
UniRef90_UPIO003B48E8A
UniRef90-A1V9L0
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UniRef90-UPI0004686451
UniRef90-C6BWC1
UniRef90-W6NFF9
UniRef90-E6VQY2
UniRef90-C3XEA2
UniRef90_UPI00035CD94D
UniRef90_UPIO003716C14
UniRef90_A1VDS6
UniRef90-V2Y0U6
UniRef90-X1JZ41
UniRef90 E5Y617
UniRef90-R7AKB2
UniRef90-D3PA43
UniRef90-UPI000409D7E1
UniRef90 X1CFV2
UniRef90-J6J0T3
UniRef90-R6REY1
UniRef90_19MAU0

 KHFENS PTPQK $\square E \square G S D K R V$

HD EG L WRDKVTFKPKTNKK FMRDQAEDTPTN $\square P E K R K E K V$

NA QDKF $\square \mathrm{SQ}$ QK K S E $\square \mathrm{K}$ T A NKV IK PPKPA QETHKKV QSVK $\quad$ AK K $V$ MKVPPKS QT



RARLHNRRE
AGDDALLNQAAKLAE SGKKV
MARPAGPPRPMP
WDARRDVEPV PVTRAGR
YGYA RKMKKSLSVPKTLGKV
 ES LKVEEV

LRPLPSKNKNV
KARELDNMVEFTPPFS LINKK $\square$
LGYDAPKKAMLLPKTK
NAKRSPMDRALDPKGKN
LGFVSKRKGFS $\square P \mathrm{P}$ KNDKRV
EGYK SAAPKLPPS GKRV
】E F N K
HNRSRQKKYFTPPAKDS
ASCMEPPPLRRGRADEKKRV

$\square$
$\square$
lupas_21
lupas_14
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm


[^0]:    

[^1]:    

