## QUERY

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R ETGVYGLDEKLDLREPEALPRLEQELRNAGPERLWYI ADA EVGVNGLDSTDDTPEAKTTVREREPGAER1WYIADA EIGVSGLDPTFEWDSEESVQAMRHELANPGPRRLWCVADA
 ETGMNGFDPVVDLNDPESLARDRHELQDPGAERDWYiADA EVGATGFDP\|IDITSEDARSTVVEMKEPGAERTWYLGDA EVGVCGFDEKIEVGTEGAREKIVHEMNVPGPERIWYVADA ETGLCGFNPR SDCKNVIRRELANGPERILYVADA ETGRYGFGCDKNETDP SGSQLRASLRTPNPERIFSVYQG NVNGFDPTMKKVNED ELREPTDKRMFVLAAA NVNGFDPNIKSVN ETGVDGLDEQVDFSDPEAENMVRLELANTGPNRTFYVADA EVGSAGFESKVDLKDNDTPARLRRELNTPGAERIWYLGDA ETGHSGWGCEKVKEDEWDWDKKYNLRVPNPERMYSLYAA EVGVDGFTPKFDPNAADAEGKLRHELSNPGPDRDWY:ADA EGMNGDP ETGVYGLDRRLPGATWTDLEDENKLKKADDERLFAVAQA NVTGFDPNIK LVKDD ELREPTDKRMFVLAAA ETGVDGDDPVEDFSDESMARDKGELQAAGAERTFYIADA
 EVGADGFNPMVDLNDQGAKEKVLYELGEAGAERDWYIGDA ETGTDGFNEKVDLAAEDVVETLRYQLRVPSADRIYYLADA EVGSSGFEHQUDTDRSDARDILDSELTNPGPERIWYVADA E $\downarrow$ GRYGL TVKGMEEDSTELLKEKMASADDERLFVLAEA ETGRAGWGCDMKEKLPDSGEQIRAHLRTPNPERIFAVRHA ETGATGFNPMLDPKQPDADDIGRELVTPKADRI YYVADA ELGASGFDPIVDLEAKDARSKVRRELKEPGAERIIWYIADA EIGLTHLE MPELKELSDEEIRARISKDDDERIFVVAEA E IGVDGLDS NVNGFDPNLKLVNDE
EVGVDGLDE KTTDTDQTNK EVGASGFDPKTTDETENPEAVLNSEAVAGPDRWGDA ETGKLGFDPRLDMKKPDARQKLSELAVAGPDR WYLGDA NVNGFDPYI ENVN DARGNELREPTDKRMFVLAAA ETGVSGFDPCIDITHEDARVDITREMKQPGADRLWCIGDA ETGHSGWGCEDSKELKWDIEELKYKLRVPNPDRMYAVYAA
ETGRFGFGADGKSPSDNDKEILKEKLVKPNSQRLFYYREA ETGMDGLDERTDLAAEDVVDQLKTKLANPSPDQVLYVADA EVGATGLDPKVSLNDPEAITSIRRELKDAGGERIWYIADA ETGVDGLDE KTDNLETVSEE EVGSDGFNPQLDFAEENSKEKLAYELQSPGSDRIWYI GDA EVGATGLSPGVDLNDPEARTKGVYELEPGAERIWYI GDA ESGYSGWGCTNVKELE WEWERLKYSLRVPTPDRMHAVYAA ETGADGFDEQIDFAEDKVKAE ZKNRLTVPTPERIFYIADA NVNGFDPYIKKVK EVGSDGFDPVVADFSEANDTKTREELATPRAGRTWYVGDA EVDKTGLDEIVDLNAEDAKEDL LKEMRHPGAERLWYVADA ETGTCGFN LKTEDMEKLRHETSNPGPERLLYVADA NVNGFDPNTKHVND
E DGMNGLDPMLDLTDDEARTRDIRELKEAGAERDWY:GDA NVNGFDPNIKKVNED ELREPTDKRMFVLAAA
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E पGRVGLEPELPAEKEE
REKVLR REA
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TVNGFGDNGKKVN SLSQVRSNLRTPNPERVYSIYHA

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EVVGVVM G
ETGRFGFVDPPANADREYMERDRQKLRRPNSMRLFQI GEA
E GGVHHEELNEAKTAADDVME KRLRKAGDERLFYIAEAA
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ETGKIGDDPTLDLSSEDD DATLKRELKAPGPERLFYVADA NVNGFDPTVKQVN WNDVGENELREPTDKRMFVLAAA
EMGVVGLWH KDUADWNDVSRERGLVEADDRRLEVAEA
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 GLTADVMTVLKRRGF GIPDETLKELLKKKGF DLDKNLLFQLKRRGF DLDKSLYRLKRKGF S DADEMHDLKARGF
TVTREMLKKAKQDGF DLSADR1YYRLKRKGF SLTAEELLRELKQMGF StDAFFLRHLKRKGF TLDKQALRKLKRSGF
DMTYDVIRRLKRKG GMDEELMRGLKRKGF ELTADEFWEVKRBGF GLNAANLRKFKRKGL N SHALLLKSKQEGF
KISKDNLRRYKRGGF dLNKDEYYLKRKGF GLDRENLLYAKQUGF al daramaalkrmga T: SNDMLKKAKQMGF ELTQEKMLAIKQQGF VI DIDVLRKAKQIGF


 AI DRDVMFRLKRKGFSDARLAKLLGVTEKNLRTHRHKLEV
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GDVLGCGETAVRELRYDLGL
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GFATNTNPQKVREYRKSLGV
AKLLNETEKAVRKHRHKLGV
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SDARAASLSVTEKSMRERRYLMNV

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| $T$ | $G$ | $F$ |  |  |  |  |  |  |  |  |  |
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UniReftoo OOVST2
UniRef90 G1ERA9
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UniRef90 G2LP20 UniRef90-DOMKH0 UniRef90-F8E710

GGNGFDPYVKRADED
$\mathrm{B} \stackrel{\mathrm{H}}{\mathrm{H}}$ V N G F D P Y L K S V Q
$E \square R R Y G \square G C D G R D K D P B$
SMDH LLK
HLSSPTDKRLFHLASA
 E T GLA GLDE I A G I GE GD DK N A $\square R A A L G R P T P D R L L V V A Q A$



$N V N G F D P Y V K D L S$
E E
K E E L T E P T D K R P F V L A A A


 $E V G V D G M N E \quad K T T D R E L I V E K$

$V$ NGFDPNLKEVKDD
$E T N R Y G F G A D R R L E E M P S L E Q V K A$
V N GF DP Y L K QV D DE

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| $V$ | $H$ | $G$ | $F$ | $D$ | $P$ | $Y$ | $R$ | $S$ | $P$ | $V$ | $D$ |

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| UniRef90-UP100037C85FC | LRRGVTVDEI |  |
| UniRef90-G8D1V7 | LKAGYTVDKIYELTK | DCWFLAKLLKNI I DL TMDLEKMSG |
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| UniRef90-UP10003B3E8C1 | FRAGYSL | DPWFLYNTQEIDDFEK DIK ${ }^{\text {P }}$ |
| UniRef90-UP100029A44D6 | FRRGYTLDEVHEL |  |
| UniRef90-S90JX0 | FREGLISVEDVHELSA | DPWFLRHLQGLVREESQQALGGLD |
| UniRef90-B4YT14 |  |  |
| DoL | MrTGLPSEKI QRVTQI | DP WFLAQVEAIVQLEGRVAAQGLD |
| UniRef90-OOVST2 | FRVGMTVDDVFNTTK | DRWYLVQLEDLI RAEQQLVDSTFS |
| UniRef90 E2ECL3 | LK SGYS1DK1 Y | DRWFLEKMHN1 K Y Qilil Esil HG |
| UniRet90-G1ERA9 | siv | DRWFLKKLKN1 D D C Kl E N G |
| Ref90_C5C | GLS SVDEVFAL |  |
|  | AGYTVDKLYEL | DPWFLDKMAELVAFEQNWQHLDLKL |
| UniRef90-F6C | gmLVDVRALTG\| | D ${ }^{\text {d }}$ |
|  | NELTK1 | D |
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| UniRet90-U4WP | G | DLFFL HKFWN |
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| UniRef90-K7YZQ9 | 佰 | DrwFLE |
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| UniRef90 L7QT | Q | WF ${ }^{\text {Q }}$ |
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|  |  | DWF |
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| UniRef90-G8D121 | KGVSID | DMFF SKMSN SMEREKS |
| UniRefs | GYs V | DRWFLYKMQN |
| UniRef90-U5DC | , | DPWFLNHMATLFEGEKFLKRTP号E |
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| UniRef90-F8E710 | FRAGFTVDQU Y HFSH\| |  |
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| UniRef90-NoBBR5 | K | DPWFITKDKNI |
| UniRef90-K7Z760 |  |  |
| UniRef90-UP |  | D |
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| UniRef90 ${ }^{\text {a }}$ 88 | LNRGITVETLHQ | d FWFLAKTQH |
| UniRef90-UP10003 | FKRGYSVEKLHDLTRI | DRFFLDKIEG |
| K7YZR4 |  |  |
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| UniRet90-C0ZG39 | LRRGWTIMELHSLTK | DLFFthe |
| UniRef90-N9WC46 | RDYRVEKVSEITG | VEK1KWT |
| UniRef90_D81P75 | Q |  |
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| UniRef90-D1L9 | LNDDYTVERLYELTK | DRWFLGKFKNI ID Y K S Sill |
| UniRef90- UniRet9 $^{\text {- } 4 \text { IM9 }}$ | GYQLQE ODL 0 V | WWF |
| UniRef90-E3T868 | SGYSVD | DRWFLEKMKK |
| niRe99-K9SP09 | LGLLSVPAIA QL | DPWFLQKMGE |
| UniRef90 V9 |  |  |
|  | E | DQWFLHKMKNIVD YTTLLESCGN |
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UniRef9O_G1WA80 UniRef90-S5ZIC2 UniRef90-Q9PW64 UniRef90-B61NY7 UniRef90-UPIOOO2ECAB31 UniRef90-W8SJP0 UniRef90-D4ZYH3 UniRef90-UPIO0036D8A32 UniRef90-S7V864 UniRef90-A5X218 UniRef90-R6HJY9
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UniRef90-Q91437 UniRef90-D3DIQ4 UniRef90-K7Z637 UniRee900 UPIOOO3819C5D UniRef90-A3SSIT
UniRef90 R5BLW1 UniRef90-C7M8Q2 UniRef90-UPIo003668C2E UniRef90-T1HLKO UniRef90-F8IAB9 UniRef90-E8TR02 UniRef90-E01316 UniRefofo-A8PXN5 UniRef90_S6A7K5 UniRef90-AOZ546
UniRef90-U2UJW3 UniRef90-W2VPE4 UniRef90-B1XXG7 UniRef90-M5AM22 UniRef90_v9xYuo

1

30
40 EIGGAGFESRLFTNGDTRRALQDKLRVPNWERLWYLGDA
 ETGRFGFGGDGKPHSQAEKDALLRALRTPSPHRYLHLAEA EVNTAGLEW PALKRLTDEALEEHLAHATDLRLAALAEA
 VGDDLFSPAHNADDNLLEKKLAYAQDDRLFYLAEAA ETGLDGFGEYLDVVDES WEAVLEERLHEPGDKRPFULAAA EVGVDGLDEVVIVSTDLDDIUQEINEPGPDRUWYLADA ETDKSGDDP\VDUSDDDSKSKDRSELDSAGAERDFYLADA EПGTHR पLKGADEDEDQT $\square$ RTRLREPDKMFVAA DUGTEELD GLRGLTFATDEDLKYRLKKADDERLFVIAEA VTGFDPYLKPVN

EQELREPTDKRMFVLAAA NVNGFGPYTKKVN

ENELTEPTDKRVFVLASA EDNVHSL RLPKLQAMSTKQTWDKLFDVDDERIFVVAEA EEDLNGLNSVIEAPYENHEDEULYELTPGPKRLFYVSDA $V T G F D P N L K S V S D \quad N E L Q E P T D K R M F V L A A A$ ENGRMGLGGDGKDDFDESRFDEFVALSPTEDRDFYLAEA ETKRNGLGADGKELQD DQEKTLYSLANPSWDRLFHVYDA EAGVYHLEQ EDVSKLENEELEKKIIKPDDERLFAIGGA E $\square G V$ FHNEMPELVEKSDDQLUEKIVKAQDDRLFYVSEA
 D $\square$ GKEGF ELGTFTDEQDVGSGNDVVDSDEELVNPSDGRLFALANA NLMGFDPTLKTDDDE ETGVFHD YMEKFEKEDRNALMDY ENAVTGFDPYDQKVNNDEKE保


 ETGRYNLEHNLGFGATKALMSLDDELQTPSDQRLFAVANA EIGKSGLDPEVDLKADDARQKIVHELRDAGSHRIWYMAEA EVGVDGLRRNGSG RAVIDEELAAPGPDRIWYLGEA E GVNHLQ DPEMANLSTEDVHKKLNDANDERIFMIAEA EEHVSGLDPYLKPVSD EISLNRL YIPEFAALSKEEVIEKLKLDNDERSFMIAEA GGLSGFDPLPKATDDLAISHELRRPNNERILFVAEA
 GGGFDNIKPLS ETGGTGLDEVTDGTGVVDHARMRALLSRPTPERLLIVAQA ETGLTGFDE IADEGAPDEAADIKALSRQTPDRIRVIAQA ETGLAGWGLNTNEKVP SGDTIRSGLRTPNPDRMITLRYG

 ENGRYGLGGDGKDFDEDHFAEL VGRPTEDRVFYVAEA EVGMAGLG NGTGEDDLDAESLMALLKTPNSQRLFAIRDA GFDTNHSQIEME LSDLDKELVSPTDQRIFVVAKA EDGTAGBDLYMPRFIEMADDALQQAI RQATDDRLFALYAG
 EYGVHHDG LDNGEAFELDFIKQRIGEQDDERLFFIGEA GFDHTVKPVSDV ETGRAGFGADGRGEEALSDEELLEAKLVHAEDDRLFYYAEA ETGLSGFDE $\mathrm{TA}^{\mathrm{A}}$ IPGAPDRAAITLALSKATPDRLRVIAQA EDGRFGFDPYDKSVNP TDEHDKEELEKPTDKRMFVLAAS
 NVNGFDPY
 E:GLDDHIEEAKKDAHETPEQL:ERLRLVDDERMYVVAQA ESGVFHLG LDELADKEDAFUEKRIRKAGDERLFYLGEA EVGRTGLD NGGPEQAASDAEVFQKAREPNDMRMFYLAAA EVGVDGMNEKTQ DRELLEKELGEPGPERIWYVGDA
 NVTGFDPYVKSTNDE EVGSSGFESQITVTDADTRAELDDALTNPCAERTWFVADA E IGVHRLH MEKMEEWDDARVKKALSRDNDER:FAIAEAA
ETGDDGLSER STDRDEI EEIGEAGPERILYVGDA



## UniRef90 A3ZRT7 UniRef90_O39UR9 UniRef90-R9M905 UniRef90 C9DP2

 UniRef90_UPI000377971E UniRef90-F5L465 UniRef90-G8D1T9 UniRef90_U3PZJ3 UniRef90-C8PCL2 UniRef90-K7YZV6 UniRef90-AOLC16UniRef90 A4SXMO UniRef90-G8D216 UniRef90-UPI0003604A11 UniRef90 E2ECX3 UniRef90-UPIO003621AD1 UniRef90_UPIo00427DCB1 UniRef90-D3J8T1 UniRef90_E2ED80 UniRef90_UPIO003B5AB26 UniRef90-UPIOOO35F3575 UniRef90_E2ECT7 UniRet90-R7BNR6 UniRef90-D91UT4
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UniRef90 C9D9B9 UniRef90-UPI00037692A1 UniRef90-Q3K150 UniRef90_UPI00047BE39B UniRet90_V6ATT3 UniRef90-G2WQ35 UniRef90-U7VCN2 UniRef90-UPI0002555D7C UniRef90_UPIO003477BF9 UniRef90_8SHSO
UniRef90 LTMOY6 UniRef90-TOIFE2 UniRef90-JoLBF5 UniRef90_G1WA80
UniRef90 S5ZIC2 UniRef90-Q9PW64 UniRef90-B61NY7 UniRef90-UPIO002ECAB31 UniRet90_W8SJP0 UniRef90_D4ZYH3 UniRef90-UPIOOO36D8A32 UniRef90-S7V864 UniRef90-A5X218 UniRef90-R6HJY9 UniRefe90-C8WZZ7 UniRef90_C3Y1AO UniRef90-D9ZHJ3 UniRee90-UPI00047A76DF UniRef90-B9EB69 UniRef90-UPIOOO328AE49 UniRef90-E3C8T3 UniRef90_S6CD02 UniRef90_K2F8Y4 UniRef90_UPI00034A2EOF UniRef90-K7ZID3 UniRef90-Q91437 UniRef90-D3DIQ4 UniRef90-UPIo003819C5D UniRef90_A3SSII UniRef90-R5BLW1 UniRef90-UPIOOO3668C2E UniRef90-T1HLK0 UniRef90-F8IAB9 UniRef90_E8TR02 UniRef90-A8PXN5 UniRef90-S6A7K5 UniRef90-AOZ546
UniRef90_U2UJW3 UniRef90-W2VPE4 UniRef90-B1XXG7 UniRef90-M5AM22
UniRef90_v9xyuoD8A32

AlITAAQMKEAKQFGYSDRQLLATLLGSSELEVVIRKRKKGG|V AETRENLREAKQYGFSDKMLGRFWGKNDEEIRQLRLSLGV HLDEDTLRAAKEMGFSDAWIAALAGKERGEIVKALRESFG|l TDSKEAL KKAKQYGFSDYQLARYWKLNELDVRNLRKQLGI ThPNELTEAKQKNMADRYLARLFQVSERELRQRRKQLGL NLDKDVLWRAKCLGFSDDQUANCVKSTELAVRQMREELSV $N$ DTATLRE NISGPRLREVKKMG SLSAPELRAVKQKG FVENGTLLYAKQLGG SVTFEILKKAKKMG LTFETLRQAKRLGF PYSKEVLQEAKEKGF SITYDILKKAKQIGF MPDAKTLRFAKEVGF


## 

 TLPLPLMKEAKSRGY RLDINILKKVKNKGF $\begin{array}{lllllll}P & F & D & K & D & L & L \\ D & L & A & Q & K & G \\ D & K & D & L & K & A & A\end{array}$

## -

 ALDKGVLFELLK QQ GF P I T S E RMLK A K K M G F$\stackrel{T}{1} \mathrm{~L}$

| M TEDGLRR L |
| :---: |
|  |  |

 E L S P DLLLAEAKAMGF ELLSAEDMLLTAKQFGL
PHMEEVLRHAKEFGF MLDKDNLLRAKQLGY K T P ELLLHVKRYGF $K L S A E Q L M E A K R L G F$
$S E D N$

 DMDA LD A A G $Q$ Q MAKRYG KLSHAELLGAKQLGF RIS SDEMREDKQMGF NI SYTN LLKAKQLGF | $E$ | $P$ | $R$ | $H$ | $D$ | $L$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $V$ | $L$ | $K$ | $V$ | $K$ | $R$ |
| $D$ | $E$ | $E$ | $K$ | $L$ | $G$ |
|  | $R$ | $Q$ | $A$ | $K$ | $E$ |
| $L$ | $M$ | $T$ | $E$ | $E$ | $L$ |
| $G$ | $G$ | $A$ | $K$ | $Q$ | $G$ | N MT T E E L L GA K Q IGG F D $\begin{array}{lllllllll}L & H & P & A & L & R & K & A & K \\ L & R & M & F \\ T & E & D & G & M R & K & L & K & M M\end{array}$

 P F D TAVAKKAKE DGF
 WV

K GD A A LAA LADKQKGF $T L S R E T G L Y E A K R K G G$ E L $\operatorname{N}$ R $\operatorname{S}$ I L L L G A K N S L S Y A E L R V L K R K G F | $A$ | $L$ | $T$ | $K$ | $L$ | $M$ | $F$ | $A$ | $A$ | $K$ | $D$ | $V$ | $G$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $S$ | $L$ | $K$ | $E$ | $L$ | $R$ | $F$ | $A$ | $K$ | $R$ | $G$ | $F$ |  |





UniRefigo A4J558 UniRef90_B5TVN4 UniRef90-G8D244 UniRef90-J7KZE4 UniRef90-R5BC76 UniRef90-R6WBQ0 UniRef90_K0NPV9 UniRef90-A5X2J5 UniRef90-UPI000311723D UniRef90-R2RYH1 UniRef90_Q11GI8 UniRef90-J7QE76
UniRef90 K7Z5M9 UniRef90-H6BLN4 UniRef90-D5GAZ1 UniRef90-D4KHQ1 UniRef90-E3F2S4 UniRef90_U2BFZ6 UniRef90_UPI00036D65C4 UniRef90-F3YAT0 UniRef90_R7CAJ5 UniRef90-K6DTJ5
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UniRef90-F0R898 UniRef90-R7YGN7 UniRef90_UPIO0035F08ED UniRef90-R7PT32 UniRef90_U4TH73 UniRef90_I6XU48 UniRef90-S1RNU5
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UniRef90 D1AME0 UniRef90-FOTCQ2 UniRef90-EOTIC4
UniRef90-I1BYV7 UniRef90-S7ZDW9 UniRef90-K7ZF02 UniRef90-A5X2J6 UniRef90_V2XLF0 UniRef90-JOROV2 UniRef90-E2ZA05 UniRef90_R7B1N5 UniRef90-V6Z3J8 UniRef90-D4W6W6 UniRef90_F4KYS1 UniRef90_A8P2H2 UniRef90_C4XSL0 UniRef90_B2GD06 UniRef90_A0A031FYW7 UniRef90_F1BPL4 UniRef90-F6DMB4 UniRef90_G0L061 UniRef90_UPI0003B51BAB
 VGVXGFDPXVQMVNNE ELTEPTDKXPFVLAAA
 ETGRWGWGFDAKAPQAPSAEETTRKLADPTAERDFWIQTA


NVNGFDPYTK P VK ETGHYHDD LKHAEDHDDNWIEKKRIKKAGDERLFFIAEA E $\square$ GTYHLE ETGLTGLDPGLGDNGPDDKNAI RAALGTPTPDRLRMVAQA
 VDGF LMSVDDELQTPSDQRMFALANA
 ETGLLTGFDE $\quad \square A \square P G A P A K S A M V A A L A K A T P D R L R T V A Q A$ EVGLDGLAGTGAGABDELAE E IGCY NELKEDQ D $\operatorname{l}$ G R Y S D R S K E E
EMNVYGLC
RDANRPLSEGVLFEQLEMANDQRLFI A AEA
PKFDGLQGD
HF
ENGLEGLDPRVPPGGAGDERVDQEVRQPGPERLLWVADG E I GVN YI DE PALTQVDDDTLSDKLIHAQDDRLFYLAEA
 EQGNMGLVADGEDFASMDEDAFQDRVSRPTPERVFYVAEA EIGAVGFDDVT F DNLSDEALMQALMPARDDRLFMI AELL ELGGRFGFGADDGK P F E N A S S D E E

 ESEQELETPTDKRIFVLAAA



 DENVLGFDHTSQKVCEKELRDPT DKRMETLREA D D QL P GF G DHAAK E D L D Y E

YK GK Y A T WT DEEL R DLL VNP T D DR L F A I Y E A
DPRFDGFQGGDKFENLLDEVL A EPTDRRRWLAAVGQA
 H NLGFNKTESSLDS LD E L Q T P S D Q R L F A I A N A
 ETGLT GLDD Y L G L G K G D DKNVI REALGTPSPDRLLKVVAQA $E \| G K Y S L V H \quad A P S E Q R S L E E L K A R V V V P D D E R L F D I A E M$ E I G K F S F K K H K K L E E C T L D E L K E E K V I TVA D D E R I F A L A E M GMHGFVENKELV
 E T GLT GLDP VEAPGDGSPDAYRAALSEPRPERILMVAQA $E \boxtimes G A \square H L G Y R E K Y T H D S E$ $E T G G T G F W L D Q A D G N$
$E \square G C \square H V E$
$\square$ LE T L S D HLDT PT DER L F Y L A E A
 EDGDTGFEAYVQQ
 ERIQKPDDERI F DLA E M ETGLS GLDPDEGLGEGNDIDAFRRALAAPTPRERLBRLYAA


 E T GLTTGLDEDAD E T G LT G L D E DT DP E H A E G DEAA R S A I G T P T P D R L R Y V A Q A
 V N G F D P NLLK S V R D E
 $E N G R K G L G S D I K$
 K E A A A A S D R QLED KL VHA Q D DRRLFY I A EA










| UniRef90 FonY30 |  |
| :---: | :---: |
| UniRef90－B4GXJ3 | PFVKQidotva |
| UniRef90－G8R834 | RVWKIVDTCAA |
| UniRef90－UPIIOOO36A9354 | RPVYKTVDTCAGEFPADTPYHYSSYDLETEDQ |
| UniRe | EDDYNEVD |
| UniRef90＿B2ALX5 | RPWVKKIDT |
| UniRef90 UPI0004752229 |  |
| UniRef90 UPI00038181ED | LPAYKMVDTCAAEFESDTPYFYSTYGEFNESEP |
| UniRef90 R5RCE2 | NAVYKVVDTCAAEFDATTPYYYSVYGGVNEVNP |
| iRef90－A5CR | RPVYKTVDTCAGEFPALTPYHYSSYDSETEIVP |
| UniRef90－UP1 | RPVFKTVDTCAGEFPAL |
| UniRef90＿Q1GJ01 | KAVFKRI DTCAAEFEAQTPYMYSTYESECEARP |
| UniRef90－16ZZZ7 |  |
| UniRef90－W1TY | TASYRMVD |
| UP10003755 | VPVVKQ |
| F6B468 | VYKMVDTCAAEFEAVTPYYYSCYE |
| UniRef90－G5GKP9 UniRef90 N1JJD9 | HAAYKMVDTCAGEFESQT |
| UniRef90－N1JED9 UniRef90 E4N7N7 | RPVFKTVDTCAAEFAAKTPYFYSSYDEESEVAP |
| UniRe990－A7IIZ7 | YKRIDTCAAEFASPTAYMYSTYETPDEARP |
| UniRef90－C4XWV | VPFVKK |
| UniRef90－A3CN15 | VPVYKMVDTCAAEFESA |
| UniRef90－H1L | RAVYKM |
| P10 | HPVFKR |
| UniRef90 B6B0 | NAVFKR1 DTCAAEFEAQTPYMYSTYEAECEARP |
| UniRef90－A5X2 | FVK ${ }^{\text {ali }}$ |
| UniRef90－B7CDN | MPVYKMVD |
| P10003C2 |  |
| S9PU |  |
| Pl00 | K |
| UniRef90－V8C3 | P |
| UniRef90－TOC |  |
| UniRef90－UPI0004416896 | KRIDTLAAEYPAHTNYLYTTYNAEHDVE |
| UniRet90＿C6XEW0 |  |
| OJM77 | P |
| UniRef90＿UPI000378 |  |
| UniRef90 R9MSC5 | 俍 |
| 6W5 |  |
| UP000314876F | V Y K M V |
| UniRef90 G2T8N7 | HPVYKRIDTCAAEFASRTPYMYSCYEGECEAE |
| UniRef90－R7CZ07 |  |
| 5 | TAAFKMVDTCAAEFASETPYYYSCFDGVNEVE |
|  | RPVYKTVDTCAAEFAANTPYLYSSYEASTEVAP |
| UniRet90－F3YTL | TYY |
| F2NPG6 |  |
| VSFC |  |
| 俍ef90＿U4WKK8 | PVYMVDICAGEFDAKAYYYSTWQGKNEV |
|  | PVVYMVDTCAAEFDSQTPYFYSTYAQENESKP |
|  | K mV |
| UniRef90－V2YAL | VAGFKMVDTCAAEFEAVTPYYYSCF |
| UniRet90＿UPIOOO370 |  |
| UniRef90－EOMJ50 | A SPAYMYST |
| Ref90－F7FKP7 | KQ DTAAAEYPSVINYLYVTYNG |
| Ref90－W2RMZ8 | RPWVKKIDTLAAEFPADTNYL |
| UniRef90 R5 |  |
| 仡 | TPVVRQid ${ }^{\text {d }}$ LAEYPAKTNYLYLTYDG |
| UniRef90－A6TVs | HPVYKMVDTCGGEFEAVSPYYYSTYDQEDEV |
| UniRef90＿G8JW19 | R |
| R7GFP8 | RPSYKMI DTCASEFSAYVPYFYSTYEPYNES |
| Ref90－D50H58 | NPVYKRIDTCAGEFASPTPYMYSTYEGECESDP |
| UniRef90－Q74 | K TVD |
| UniRei90－15A | AYKMVDTCAAEFAAE |
| ee90－NOE5S2 | RPVFKTVDTCAAEFAARTPYHYSSYDEETEVAP |
| UniRef90－UPI0003B4E9E9 | RPVYKTVDTCAGEFAAQTPYHYSSYDEETEVRP |
| UniRef90－I2JYS6 | $V \mathrm{VKRIDTLAAEFPANTNYLYMTYNAENDIA}$ |
| UniRet90＿KOIJA6 | K |
| UniRef90 W7E572 | K |
|  |  |
| UniRefe | F VKR1 |
| UniRet90 | KPVYKMVDTCAAEFASE |
| UniRef90＿UPIO004756D00 | RPVYKRVDTCAAEFKAKTPYMYSTYETDDESRP |
| UniRet90＿UP10003 | P |
| UniRef90＿R7 | KP WVKQI DTMAAEYPAVT NYLYCSYNGEHDVN |
| UniRef90 V9KAT1 | LPQVK QID TLAAEYPAITNYLYSTYHG |
|  | KMVDTCAAEFEASTPYYYSVFGSENEVE |
| UniRef900－B1C | NPVYKMVDTCAGEFEAYTPYYYSTYDTEDEV |
| UniRet90－X11 | RPVYKMDI |
| UniRee90－W7Z003885FDC5 | KPVEKMVDTCAAEFASPTPYFYSSYEQE |
| UniRef90－R5ID28 | MQIDTLAAEFPAQTNYロYLTYNG |
| UniRee90 ${ }^{-1}$ | YEAPCEANP |
|  | WT |
| Q9 | P |
|  | $\mathrm{P}$ |
|  |  |

## UniRef90 A2U495

 UniRef90-A9G1Y2 UniRef90-G5K3N8 UniRef90-J7RK41 UniRef90-G3JDTO UniRef90-R5JMG6 UniRef90-L1MCT7 UniRef90-Q0AMQ7 UniRef90-F8MJD6 UniRef90-UPIo0036950AB UniRef90-R5Y4J3 UniRef90-UPIoo036901B5 UniRef90-R7EVS6 UniRef90-Q4FPQ7 UniRef90-GOW989 UniRef90-D9R8D3 UniRef90-A1UTF1 1 AUniRef90 A7SF31 UniRef90-J7R3H1 UniRef90-F3WUZ0 UniRef90-EONQK6 UniRef90-R5Q417
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UniRef90 UniRef90-UPIOOO348B53F UniRef90-UPIO004096A28 UniRef90-D4LP15 UniRef90-UPI00036DBC11 UniRef90_V6F3Y6 UniRef90-M6R9V3 UniRef90_UPIO0047B51F7 UniRef90_E8JF13 UniRef90_R7WKUO UniRef90-B8H8U5 UniRef90_UPIOO04788F96 UniRef90-FIZ8Y8 UniRef90-GOSV14 UniRef90-UPI00047CD202 UniRef90-UPIO0047C76ED UniRef90-UPI00035CAEAE UniRef90-Q7VFII UniRef90-G1WKF9 UniRef90-C7MSJ6 UniRef90-K5XTV7 UniRef90-M4RFV1 UniRef90-K2J3S8 UniRef90-UPIO00473DD55 UniRef90-G2IIG2 UniRef90-UPI000366F40F UniRef90_-F5BES2 UniRef90-H6NOR7 UniRef90-UPIO0047687F8 UniRef90 UPIO003B77286 UniRef90 UPIOOO378EB6A UniRef90 E8WXL3 UniRef90-D1BH07 UniRef90-J9VY44 UniRef90-UPIO00376C22B UniRef90-G8PBN5 UniRef90-UPIO0035E66B7 UniRef90_W9DP29
UniRef90 P46056 UniRef90-C7SCV3 UniRef90_A9V282 UniRef90_UPIooo382D96B UniRef90-D5V5X1 UniRef90-A0A024GBK7 UniRef90-R5NB19 UniRef90_X5M6Q6 UniRef90 14EZC1 UniRet90-UPIo0021915AC UniRef90-F4H060 UniRef90-DoYSV2 UniRef90_H3AH65
UniRef90_K2LTS7

DIGVKGLDP

 HNLGFNETKALMAI DDELQTPSDQRLFAI ANA ETGK FSLVHKASEGKTLSQLKASIVVPDDERIFDLAEM GMHGFVEN RELTLEDVEAALKAPTDKRIFVIEKA ETGLTGFDE!DPGVEDAAKQAVRAALALDTPDRLRVIAQA ETGLTGFNEVVNSDGQVDKDAVRSFLAKPTKDRMLTIAQA GMHGFVGNTDL TFDNLDDELANPTDMRIFAVAEA GTHGFVENREPKMP ${ }^{\text {P }}$ $E \square G F S G L D R \square F P \square N$ K KQ $\mathrm{L}_{\mathrm{L}}^{\mathrm{D}}$
FSGLT EKELKKNTPNRILLAAEA ELLDEALSVMPTRRVLAIGQA ETGLTGDDEDSLPEHAEGDEKURSACAUPSPDRLRYIAQA ETGLSGFN DVEHLVGAPRAEIVAEALAKATPDRLLVAACA GMHGFVEN KELEDNDI DAALREPTDKRVFI DSKA ETGRYGLG YAKNFNDLSKDEL LKLLDNPTSERQFI MYEA FHWDAETKPSKELARALLQQAM TPTDGRUVLVQQA ETGLSGFNEVDRLVGAP RAEIEAALAVATPDRLLVAAQA HNLGFNETSADMS, KGELQTPSDQRLFAIANA SKEELLAEAAVPTDGR1VTVQQA SDEFGDKLDDVLANPTDRRWLAI GQA ETGUVTLNS
$\mathrm{E} \square \mathrm{G} \square \mathrm{EA} \square \mathrm{Q}$
E $\square \mathrm{KCDH}$ C E LPETAAWP EDGRTGLLS NLGF NETEAGMDID GGEDLSALDDEALAE EL

NGFDEYFAGERATDDEELMDELNVVDDRRIWWKVAEA ETGLTGMNEDPGASAADRKDAMKKALATPRHDRLLVIAQA E पDRYGFGSDGSLNNDQRKEWIDSHLKRPNDKRIFYVKLA ETKRAGFHDGPDPSPEQTRALVERAGTATEERLVQVQQA ETGHGFVGNQPLKDKD VRTELTEPTDQRIFAIAEA ETGMDGFN RVDELEGA

TGFEAYWKPLEGADLHAL
$P G D V D A L V E K V R P Y D G R L V D V Q A A$ ETGRYGLGH AKDFDSKSKEDLLQMLDTPSSERYFVMYEA ETGDFGFNH■ KESAPTLKTSLLESMKLPTEYRLQQVQLA ETKAGGFWTR PDPEGATDEEQGAATPTEHRIFYVAEA ETGLSGLDEMAAPGDGGMDAFRAALSTPRPDRLLVAAQA GFNWDGDKPDQQEVEQLLSEAKDPTEQRYLQIMRA ETGLSGFDE DDLPDMPTPAQIIEELARATPDRLRVIAQA EVGVFGWECDSQDEFKNENQUKNSLRNPTPERILLIKKA E IGVHH NELPELRQVSDDEIVTRLSKAQDDRLFYLSEA ENKAAGFEPNRPDPSTVDGEALDDELRTPKGRLYGMMAA GMHGFVGNVLKTKD IVELVNTDARIFAIAGA OKQGF WTAPDNALTDSELIEQLIHPRDNRIFVLMEA EQKQAGF WTAPDPEFASVEEVLEDLRRPTEGRMYDAELA
TGAT FHWDGEVPTGADLDALLVEIARPTEARLVQTQQA NFTGFDAYWKP ETGLDNGDDEVEVENAGDDKNAVRAALGRPTPDRLLTVAQA EQKQAGFDEYFAGERATDLDAVLADLKTPTDGRMYDVE LA

पDDNMDGTEEWSENEVKMLLKTPTSERLFVMYHA DPNFAGFEAWKPEDMITALTNNNDRRLFAIAHA GFDPYGEQVT EQDLSEPTDKRMFVVAAA DLGFMGFEAGKVE ПNQEELVHGSEQRPFMLATA FDFAGPPPGPGEKAALDAKAAVPTDGRLNTVMAA ETGLCGFDPПKAE MEKIKAETRRPNCDRLLYLMQG VDGFMPRLPLNKPWAQQDLHQELADPSSTRVFSLAKA GVGGLDADVVDNETNPALLDEHLRSPTDERLFYVMAA ETDFDGLTEDPGLGEGDDKNALRAELGGPTPNRVLTVAQA ETTAAGFW TTPEDGASAEELLEQLRTPVDGRLYTAQRA
 FHWEGQPATGETDDALLGSIGRPTEGRLVDVQQV


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UniRef90_F3WUZ0
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UniRef90_B8N8V0

TTERDLLDEAKQKGYGDRQ10 ALEFATLREAKQLGFSDRMIGTMLELEREVYSKREELKI ALEEATLREAKQLGFSDRMI GTLTGAPRGSI REARKRHGV

 D F AKA

 S DRQSFLGLKKMGFADVRLAELTGQEEAVVSAHRRSAGNV D IP QEVLSEAKRLGFSDFQI ARFVETES I RVVRLLRKKMGI

 $T \begin{array}{llll}\text { D A A GMR R L K A M G } \\ \mathrm{T} & \text { P R P L I R QAK Q L }\end{array}$
UniRef90_UPI0003B7BBF5 UniRef90_UPI00042128E4 UniRef90 ${ }^{-}$C5DH54 UniRef90_C2GHV0 UniRef90_R6NB40 UniRef90_UPIO0047C3693 UniRef90_A4XLM1 UniRef90_UPIO00413EBE9 UniRef90_K8DX99 UniRef90_Q6CN46 UniRef90_R5LU03
UniRef90 W6MHP9 UniRef90_UPI000348B53F UniRef90_UPIO004096A28 UniRef90_D4LP15 UniRef90_UPI00036DBC11 UniRef90_V6F3Y6 UniRef90_M6R9V3 UniRef90_UPI00047B51F7 UniRef90_E8JF13 UniRef90_R7WKU0 UniRef90_B8H8U5 UniRef90_UPIO004788F96 UniRef90_F1Z8Y8 UniRef90_G0SVI4 UniRef90-U1MYG7 UniRef90_UPI00047CD202 UniRef90_UPIO0047C76ED UniRef90-UPI00035CAEAE UniRef90_Q7VFI8 UniRef90_G1WKF9 UniRef90_C7MSJ6 UniRef90_K5XTV7 UniRef90_M4RFV1 UniRef90_K2J3S8 UniRef90_UPI000473DD55 UniRef90_G2llG2 UniRef90_UPI000366F40F UniRef90_F5BES2
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UniRef90_K2LTS7


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UniRef90-F9Z4N8 UniRef90-E2S9HO UniRef90-D0RRQ6 UniRef90-V6MA32
UniRef90 ${ }^{\text {C4RHP9 }}$
UniRef90-C4RHP9
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 GMHGF AGNK $\square$ E $\square$ PDIDEELVNPTDKRVFAIAEA ETGLNGLNE VRNVSPDTVRAALATPRPDRLLVIAQA EVGLSGLDGD DCDDNTIKDQLKKNDPDRILYVAEG ETKSAGF WT $\square$ PDPADATRENTLAALREAMDGRLYMVERA
 FHPPMQLV GRPRAE IEAALARPTPDRLLYAAQA
GMHGFVANKAFYADD VDTALNQPTDKRVFYLAQA E DGTEY L NWPAHAEWDAVAI EQALVQATDERIF IVEA ESDRAGFWTQPDPEEDSADDALQQRLRVPTEGRLYDI EDA
 ETGLTGGLDQEDPGVNADTDNEI
 ETGRYGLGHAKDYDSMSKEAMLACSO AKKRLLVIAQS
 ETKVAGFW TGEVETRSAEELLEALRTPVDGRLYLAEQAA

 ETSRAGFWTATDPLAEGGLDDVLT $E N Y V F G D D S S V V P Y T T E$
$E T Y A G F W$
T A APDPDT $\qquad$
 ETTRAGFW TAPDPDTTVEQLLTNLRTAQDGRIYDMEDA V GFVPRMPMGKPYPDN LESEIKVASSTRIHSDCKA
 EAGYSGLNEYFDQNDE TDQLYNSLVK $\square$ SPDRDFIIADA ETGLPGFNSSNYTFTEEELPIL LRNPNSLRIVAIHQA GMHGF VGNNGVRFDDLEKELSCPTDLRIVALAQA E TGGYGLGH AKNFDTLSKEELLNMLDTPSSERHFIMYEA EIGGYGMGFAKDFNSRSLEELMAMLSEATSERQFIIYEA FDFTKPAVEPNTVARLVVETKETTTERMRNVQQA
D T G $\square$ S H F

GMHGFVGN

VDGFDPYHEEVNEEE LI GFDEPEGRF

FSWARPRPTTSTEELLAVLMPAQEDRLFVLTEL ETDLDGFN RVTELEGVHKDVITAALSKRTPDRLLKVAQA L E A E L R R P S P N RII WA LA LAA DEALA GERARDLNAVLDDL GRPTEGRI Y DAELAA E $\square$ G R D G LDDP F T G G Y K G Y D P S V L H D L L

 E N N WLG F E S L S K $\quad$ K D PRFLGFEPEAFEDVDDVLRNPTDQRLLALGQA

E


 FHWK GLDP P S REEAVALLLR DASTP TEGRLLVTVLQQA ETGRYGLGH AK DF DGKTKEELLLKSLRYATSERYFVI YEA
 ETGRYGLG FAKDFNKLSKKE LLAHMLHVPTSERQFIMMYA ETGIFGFNPI SNDLSEI QREVRRPNAHRLLYIAEA



GMHGF VAN
 EQGRYGLG FAKDFHRRSDAELLAMMLHEPTSERQFIMYEAA E $\square$ G R H GLLG F FAK D F H S S L P L E Q I M E K L


 NVS GLDPN $\quad$ DK QVN






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UniRef90- $88 C 875$ UniRef90-E7A9Q2
UniRef90-G7H5D1
UniRef90-F5JON3 UniRef90-F8UEB5
UniRef90-U5KMV4 UniRef90-V8CL67 UniRef90-F0XY21 UniRef90-M5J8Z9 UniRef90-R9N1E5 UniRef90-NOARNO UniRef90-R5HCM6
UniRefololionoulc1E7C UniRef90-H1LIH5 UniRef90-Q970U7 UniRef90-UPIOOO255F614 UniRef90-D1PMZ4 UniRef90 F6LGG8 UniRef90-HOZWF3 UniRef90_UPIO00219190D UniRef90-10IDD0 UniRef90_R4TWW9 UniRef90-R6QRN3 UniRef90-A0A022KRX6 UniRef90_D4JVB0 UniRef90 - $1432 D 6$
UniRef90 B6GOR2 UniRef90-B6GOR2
UniRef90 $\mathrm{R6G6C} 3$ UniRef90-E1RG39 UniRefofo-L7EKK8 UniRef90-R5EI74 UniRef90-B4CTO9 UniRef90-HGLFRO UniRef90-V8CEM2 UniRef90-B3V6W8 UniRef90-UPIOOO37F5478 UniRef90-B2GBN2 UniRef90-Q2QAL8 8 UniRef90-G8PDD8 UniR Refo-DOJ9C5 UniRef90-F1YG99 UniRef90-F8F1H6
UniRef90 J1APR9 UniRef90-UPIO003642695 UniRef90 R5GZ09 UniRef90_Q4J8E8 UniRef90-C7XUH5 UniRef90-F4FZ95 UniRef90_17L292 UniRef90-Q2FLD9 UniRef90-E2EDA8 UniRef90-T1CWZ4
UniRef90 COR503 UniRef90-COR503
UniRef90-UP100020D9FC1 UniRef90-F4HK11 UniRef90 $\mathbf{~ X 8 K 4 3 0 ~}$ UniRef90_UPIO003620CA6 UniRef90-U5L9M1 UniRef90-C6VQC2 UniRef90-X8IRF7 UniRef90-A6UU81 UniRet90-H9UKA6 UniRef90_S0AQA1 UniRef90-X7MUZ3 UniRefto - $\times 2 \mathrm{KVG3} 3$ UniRef90-B2G7G1 UniRef90_C4L129 UniRef90-R5SP60
UniRet90 K4DK07 UniRef90-D6XTP8 UniRef90-S5VDH3 UniReffo-J9V732 UniRef90-D5D8N1 UniRef90-UPIOOO47230A9 UniRef90-B2KDJo UniRef90-F4FV63 UniRef90-E2ECQ2
UniRef90_O42185
$\frac{1}{E}$ TGKKG $\quad 10$

S G D T|I D P R R\|L\|R Q R\| VT 30 30 E R|L|A Y|L|RYA P HLIDDQLENEI EYATDRRI FALYRY







 E T K A G GF WT E A D R P D P A DVV D A L L D K GMHGFVGNRELE NVNGFDPNIKNVN

ECGYY GFEVPKRFEDQEDWDY
ECGYY GLLN S S LTDDPSLA ENELMEPTDKRMFFLAAA GFEPVAPLDTADABRGKRSRRPNAERVLYVADC
 A LDDEALTAKI LAA QDDERIFAVYEA ETGRYGLG FAKNFNEGD LDDALMMLL NHASSERQF IMYEA D $\square$ GE P GVVVGGPEY T K GMS L G D L L E E K I K T P T D Y R L F E L L F A A D $\operatorname{GEP}$ GVVGGK $\square Y F S K M T K E D A L K N L K M R R P Y W F L Y A A K A$

 I GRNA FQKA L R MVVDENCVGFDHTEELETPTMDKRDSCWQRR

$N$ VD G F D P Y V S K $L R$ $E \square G L D D T L N$ N $\quad$ L DFRGEAPTPAEVAELDEQVRTPTDTRLVRISRV ELGMD TMRKKAFKKLTDEEVRAKLHDVDVDRSFCVFEA ETGRYGWGADGNGDEATQRRHILEKINVPS DTRILVYREA
$\mathrm{E} \square \mathrm{GQFG} \mathrm{L} \mathrm{G}$

 EISSVS SCRLDLFTRESNEQIVRRVGECT DQRLIFAI YEA E I K R F G L I G D G K D A V V D D D T L ENGLCGFDS $\square$ TS S D DE LAKRETRRPNANR LYVA DC Y GF Q G LQ E E L P G Y S P E E E L L EPLSEEVLATWLKVPTDRRMGALVEA
 ENKSAGFWTEADRPDPS DVDALLDAVAVARDGRMYKLMML

 EKSRYGLVGHVKDFDQKSKKELLTMLATPSSERYFIMYEA N S K M T K $\square D$ SL R ML K E R R P Y WF LY A S K A


 - RAMEKKESDLEEVMKRI RNYEPYMPMHIIAKA $E \square G \square D H F \quad R M N K F Q E M S N E D M L E Y I K T$ FRDDA $\square F A V C E L$

SEGELI QRLIHPQAGRMLILLEA



## D F H LAA A K QLT D D Q L IA K I VH P E A GRLFVLIEA Y P K WMREAAVDVL MGEVEAPTDRRLHACLAL H L K K LDD G Q S L Y D I R C L L <br> TGFDP ETDTNHL

$N \mathrm{~V}$ N G F B P N $\square K S V N$
ENELRXTTXKRMFVLXXA E TR M I L T S P T DERFGCL F DA
 K $\square$ S Y K N K D E L I Y NL R HA N H K R I L Y T V Q A FA GTSDKE $N \bigvee N G F D P N I K E V N$

G F D H T I $\mid$ K P V $\operatorname{SDE}$




| UniRef90_J9VB07 |
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| UniRef90-B2XRQ4 |
| UniRef90-E1R7C0 |
| UniRef90-U1NKJ5 |
| UniRef90-S5ZQH1 |
| UniRef90-UPI00036293A6 |
| UniRef90-M0DFB2 |
| UniRef90 W0FJD6 |
| UniRef90-U5G6P2 |
| UniRef90-E6PDV7 |
| UniRef90-I3R744 |
| UniRef90-A8JIR0 |
| UniRef90-D2KBF1 |
| UniRef90-B9LPL5 |
| UniRef90-A8ACC3 |
| UniRef90-M3EZP8 |
| UniRef90-G0LF10 |
| UniRef90-V4Y8Z4 |
| UniRef90-E0XRN9 |
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| UniRef90-UPI0003B48C |
| UniRef90-G2KTN9 |
| UniRef90-J9V5C3 |
| UniRef90-W4HY16 |
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| UniRef90-E7QNL1 |
| UniRef90-TOY2M0 |
| UniRef90-B4UCI0 |
| UniRef90 UPI00041700B5 |
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| UniRef90-D5MNT3 |
| UniRef90_D5GXR9 |
| UniRef90_F1KPW2 |
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| UniRef90-S9ECB5 |
| UniRef90-J3Z209 |
| UniRef90-A0A010ZJP2 |
| UniRef90-J9V5A5 |
| UniRef90-T1BNQ7 |


$\square D S P V R \square G E N E T A A D L V D R L R E P R T E R Y D V L L E A$ $L P S Y S D L T E D E L I N E L D H P T D \square Q \| L I L E E A$ PTDXRMFVXAA
GWEAFVKECH KSNEE पLDDLKHPNELHLIKLLAA
YEPDVDWADLDDAALEAEYLERPTPDRLVHVLEA
YEPDVDWADLDDAALEAEYLERPTPDRPYAMFEA
 ENGRPGLGGFAKDFHALPLLEELLERLREPTSERQFLLYEA $E V G V D G \square N Q \quad P K L K T T D R E K L Q D E L G E P G P E R \square W Y V G D A$

Y D P SVD WATVSDDELAADYLQRPSPDRPYAVFEA TNLDGWNAFVEESRKTNEEI DADLKHPDEDHLIKLLAA ETGLSGFDEII DGVADVEDASAARALGVPTPDRIRVIAQA

GWHAF $\square K$ EKEKSTAD $\square \mathrm{L}$ ND $\square$ AHPDE $\square H \square V K L L A A$ GAVGFHPSAFPRVPEA EDFTRPTDKRIFAIARG LIK K I L IPNSKRIFF I LDA

HFPF $\square S D \square S E E D L M F A L I Q K K E N R \square A Y L L E A$ KNKLDKKI I NPNSTRI FYI LDD YGFDPX

[^1]



UniRef90 J9VB07 UniRef90-B2XRQ4 UniRef90_E1R7C0 UniRef90_U1NKJ5 UniRef90 S5ZQH UniRef90-UPIO0036293A6 UniRef90-MODFB2 UniRef90 ${ }^{-}$W0FJD6 UniRef90 U5G6P2 UniRef90_E6PDV7 UniRef90-I3R744 UniRef90 A8JIR0 UniRef90-D2KBF1 UniRef90-B9LPL5 UniRef90_A8ACC3 UniRef90 ${ }^{-}$M3EZP8 UniRef90_G0LF10 UniRef90_V4Y8Z4 UniRef90 EOXRN9 UniRef90-E2EDA5 UniRef90_UPI0003B48C92 UniRef90_G2KTN9 UniRef90 J9V5C3 UniRef90-W4HY16 UniRef90-C2EK30 UniRef90-T1CV42 UniRef90-M0LTG6 UniRef90-E7QNL1 UniRef90-TOY2M0 UniRef90 B4UCIO UniRef90_UPI00041700B5 UniRef90-A0A058WHT2 UniRef90-E2ED20 UniRef90-Q9HP43 UniRef90_A8YVI5 UniRef90-H1QDT3 UniRef90 F6CAU6 UniRef90-D5MNT3 UniRef90-D5GXR9 UniRef90 F1KPW2
UniRef90-J3YQ15 UniRef90-X1EAE6 UniRef90 S9ECB5
UniRef90 J3Z209 UniRef90-A0A010ZJP2 UniRef90-J9V5A5 UniRef90-T1BNQ7

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PLNPSVLLNGSKFGFGTGMFCHYWNVTNSKINRIA\|ENNI IIPFDILKNAKKDGFSDKQDAAAVK STEVAVRKLREEYK

 NQEVAALAAGDEGALTRADGAGGITTDEAPIDDEVENSVS P AKGTEAYHRDCRMGFCERQLG IKQDTY LPPDDLLVRAKKDGFADRYLARLLDRVEAEVRERRTADGV LDPEAPFAGE
DLDYATPVGAEAARF
NIGFDVLKKAKQ\XFSDKQDAAADKSTELAVRK LREEHKD
 LL NHAI
ISAELMEEAK $\quad$ YGFFNPLLARVLNDPLNQVRKIIDRFDL


D $\square P$ HEK $\square A K A K E W G F S D K Y \square A V L F N D R E R E V R Q R R Q T G K N$ V D YYKEAKRYGFSDDYGANSWQUSLIDMLEYRKKHSV H ${ }^{-1}$ N NK



[^2]


[^0]:[^1]:    lupas 21
    lupas_14
    lupas_28
    jnet
    conf
    sol25
    sol5
    sol0
    jhmm
    jpssm

[^2]:    lupas 21
    lupas_14
    lupas_28
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    sol0
    jhmm
    jpssm

