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 D P F NL QRFI DAQSSVYGQVTTELIRNGRKRSHWDWFVFPRV DPHELQRFVDAQDPVIDRVKRELQSGQKQSHWMWFVFPQV EPYTLERFVAAQEGVYERALAELRAGEKRSHWMWFI FPQI DSFDLQRFI DAQAPVFDQALAELRAGSKRSHWMWF D P Y RL S RFVEAQEPVYETVLRELEHGRKESHWMWF DPYDL D P H DLARFVDAQAPVYDRVVAELRR

 DKFDLRRRVVA QAP』VGQALAELRNGRKQSHWMWYVFPQF DAFDLQRFVDAQDGTYAAALAEL RAGRKRSHWMWFVFPQV
 NRFTKAQAAVYPHVVAELRDGRKRGHWMWFVFPQL D P Y DL Q R F L D A Q D PVV A QVCDELKHGRKRSHWMWFVFP QI
D Y $N$ N L
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## QUERY

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UniRef90_B4R9I4

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RLHECTG $\stackrel{80}{8}$ $\left.\begin{array}{lll}P R & R E C T\end{array}\right)$ LGLGFSPMSQRYGIRSGDEARAYLAHHPLLGARLRACFEAL EGLGRSSTAQKYAI SSREEAKAYLAHPVLGQRVRECTRIT



 DGLGHSATAKRYAI KSREEARGYLAHPILGARLMECAETV
EGLGRSRTARRYAI GSRAEAEAYLAHPILGPRLRRCTRLA QGLGTSQMAQKFAI NSLP
E

GTSAMAQRFALSSLA
K GLGHSATAQRFGI S
RGGGYSETARFYAIQNLQEA
R GLG G S A M M A DR Y G G I
K G L L G M S R M S Q Q Y A I R S L D


## K

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S GLGHSAMASRYAli
DGLLGHSRILAETYAG| K K SVD
K GLGRSAMAQRYAI S
DGLGRSSTARHYAIKNREEA
GGLGFSDMSQRFAlG
HGLGRSAMAQRYAI
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AGLGYSETARYYAI RDMD
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## A

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EGLGFSADSRRYAITDRA

RGLGHSETAERYA:ISGAE
VGLGHSSMAQKYGIK
RGLGRSSTAHHYG1 A
KALGRSSMAKHFGI ESGG
AGLGFSAMAQRYAI
LGLGFSETAKFYSII QNVN

DGLGHSAMAERYALAGIDEARAYLAHPLLGPRLQACVTAL
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QGLGDSAMAQRFAISSLAEAEAYLRHPVLGPRLRQTTGUV
$A G L G S S A M A Q R Y A V S G R E A Q A Y L R D V I L G P R L K S C A E I V$
AGLGSSAMACRYAI RDLDEARAYLNHPLGARLRDCAEAL
AGGGHSAMAQHYEISSRDEAQAYLAHPVLGARLVELLTIV
EGLGHSATAARYALSSLGEARAYLEHPLLGPRLRECCRLV
AGLGFSAMSQRFAITSREEATAYLEHDVLGPRLLECTRLVI
KGLGMSGTSVHYA: EDDGQANRYUQNPVLGKRLVEDSNI
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DGLGHSATSKHYA: KSDEEARQYDNHPVLEQRLLECAEAVV
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| QUERY | LAKYYGGGEDRRTVAL | A VT |
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| UniRef90_A3Q0A2 | LDKFYGGEPDPATV S |  |
| UniRef90-E8N1E6 | LEKYFEGQMD | S |
| UniRef90-LONHM7 | LHSFYDGEEDPLTLARL |  |
| UniRef90-U1N4J0 | LKKYYDGQEDPKTI QFL | S |
| UniRef90-I9CE13 | LARYFDGQPDPLTLAKL | G A |
| UniRef90-U3HUY0 | LDAFYGGKPDEATLSRL |  |
| UniRef90-UPI000368262B | I DRYFDGEADQRTLD $\mathrm{I}^{\text {V }}$ | A Q S |
| UniRef90-F7QQX3 | L DKYYGGAFDAATLARL |  |
| UniRef90-I0RL84 | LDKYYGGEEDP员TLKRL |  |
| UniRef90-S4Y785 | \|LEKYCGGELDPRTLALLL |  |
| UniRef90-N6YHI6 | LARYYDGEADARTLQGL | G |
| UniRef90-K1Y9G2 | LDKFFSGRRDQKTLHFL | A T |
| UniRef90-V4J3W8 | LQRYYGGEPDPKTLETL |  |
| UniRef90-15CPL5 | LARYFGGKPDERT |  |
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| UniRef90-14BJX8 | L DAFYDGQQDGATLDL | G |
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| UniRef90-X5KXY3 | L DRDYDGHADPRT |  |
| UniRef90-Q73ZL6 | LQKYYDGRQDPVTLA | A D S |
| UniRef90-K6BMC8 | L D T F F GEPDAMTVK |  |
| UniRef90-UPI00037E4F3? | LDRFYQGEKDRQTLD |  |
| UniRef90_UPIO00361461A | LVRYYDGDRDQKTLD | D D |
| UniRef90-W8IEB5 | LSFYFAGEEDRRTLD |  |
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| UniRef90_19X1P2 | L ERYYGGGQDPRTLA | L N |
| UniRef90-K9DD68 | DKYFDGEADPETLAR |  |
| UniRef90-G4I6U5 | LDTFYGGEPDART |  |
| UniRef90-W9TEM5 | L Q AFFEGRPDP | G |
| UniRef90-A1T9L2 | LDAFYDGE DPATVD |  |
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| UniRef90_W0H895 | L DTFFDGEPDAMTI EKL | A |
| UniRef90_UPI0002558A33 | LERYYS GELDSATLKLI |  |
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| UniRef90_W6WK92 | LEQFFDGERDEKTVALL |  |
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| UniRef90_UPI0003B4B76D | DRFYGGKFDERTI E | N A A |
| UniRef90-A0QY92 | L DRLLYGGTPDPATLGLL |  |
| UniRef90-W8R9J7 | L DAFYAARPDTATLSRL |  |
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| UniRef90-H0TP69 | \|LDKYYEGEKDQATLD |  |
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| UniRef90-Q220R1 | LARFFGGAPDERTLALL |  |
| UniRef90-W7WTC4 | LRQFYGGTRCPKTLA | A |
| UniRef90_F4DUT1 | LQGFYDGEADPATLQRL |  |
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| UniRef90-D2QIR7 | LDKYYA GVPDPRTLA 1 |  |
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| UniRef90-D3RWC8 | LERYCGGQPDRLLTLERL | S A |
| UniRef90-R4WLL3 | LRRYFDSRPDDATLARL |  |
| UniRef90-G0A9V2 | LQKYFGGERDQATLS RL |  |
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| UniRef90-UPI000465CCEC | AKYYPDGADQATLA |  |
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| UniRef90-J7QU94 | \|LRKYFDGRRDPLTLAAL | S G S |
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UniRef90 O89YX3 UniRef90_I4N2X9 UniRef90-R611 J3 UniRef90- J2KIY1
UniRef90 W1KIFC UniRef90-K9Z4C0 UniRef90-J3HP44 UniRef90-K9CJX3 UniRef90-A0A017HHL4 UniRef90-J2.JO11 UniRef90-A6EGA9 UniRef90-101H16 UniRef90-R8W1T2 UniRef90-R6FF58
 NLTRYVAQMGIFDSALAELKRGKKTGHWMWF QRFVDAQQPI FRKVCREL

## D P

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DPHNLQRFVDA
 DLERFVAAQDGVYSTVLAELRAGAKRSHWlWW

 H DL N R FI S A Q E R S Y D A A L R E I K S G H K A T H WM WY I F P Q il D P N D L R R FLS A QEPVFATAALDELMSGRKRSHWMWFVVPQQQ
ESNLKRFTDAQQADYD $\square A L L E I$ RNGRKQSHWMWY
DLERFVRAQDGVYERARDELAAGRKRTHWMWF
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D P DL E R F V EA Q D GTY DTA L A E L R R GHKRSHWMWF V F P Q




 FGLQRFVDAQAHVYDTVVAELRDGRKRSHWMWY Y DL HR R I EAQSKTYDDAL REELIMNGKKQTHWMWF $N$ I D P Y D L P Y DLA R F L D A QRDTFEQACA QL RAGRKTTHWMWWV L D R F L E A Q A SVYY H A LA E I R S GA K R S HWMWFVV DT F NLSSSFVEA QRPVFSRQVMDEVLRAGR K TSHWMWFV PHNLERYI TAQKSVFQTALDTEIQNGRKSSHWMWYVF DPFNLQRFVTAQESVFATVFDELQDGRKRSHWMWFI

 E Y DLQRFVDAQDPVWKAVTQELKAGRKQTHWMWFV

LSRFLKAQEGVYAQAQAEL

DTYNLQRFVEAQRPVFDQALHEL
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UniRef90 W8EXX3 UniRef90_A0A010SPM6 UniRef90 ${ }^{-13 Z M S 6}$ UniRef90_UPI00047BE479 UniRef90_U4QFA6 UniRef90-I2GIB4 UniRef90_G8RTH3 UniRef90_D5VN20 UniRef90_UPI000380C382 UniRef90-KOUUL9 UniRef90-W1JJL5
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UniRef90 A819C0
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K G|L|GHSDMAQRYA|I QS|L|AEARAY|L|AHP|VL|AGR|L|RECCQ|l| KGLGSSATSEYFGI HGREEAEDYLSDPLLGKRLDECANTL AGLGASAMARRYAI GSLAEARAYLAHPLLGERLRVCTQAA EGLGSSAMALKYAI ASREEAAAYLACPLLCGRLEECTALV QGLGHSDMARHFGIASLDQARAYLRHPVLGPRLVDCTKAV

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Q G L A L S E T S R Y Y A I $\operatorname{L}$ K D L L D E

 A G L G M S Y T A Q L Y A I K D DIE E A R Q Y I A H P V L G A R L I E DS Q A L




 | $K$ | $G$ | $L$ | $K$ | $S$ | $E$ | $M$ | $S$ | $K$ | $L$ | $Y$ | $A$ | $I$ | $E$ | $N$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $Q$ | $L$ | $K$ | $E$ |  |  |  |  |  |  |  |  |  |  |  |
| $G$ | $S$ | $T$ | $E$ | $T$ | $S$ | $K$ | $H$ | $Y$ | $A$ | $I$ | $A$ | $N$ | $L$ | $E$ |









| UniRef90_N0B459 | $\text { L QAKCGG P } \quad 130 \text { RE EKLLUS T }{ }^{140}$ |
| :---: | :---: |
| UniRef90-A0A059L3T1 | L DQYFH G |
| UniRef90_U5VBU1 | L LQ F Y A GEA D P A T L D L |
| UniRef90-UPI00035F9B83 | L DK F Y N G L G D P VT LEMLS VA |
| UniRef90-F8JCL7 | \|LFTFCNGPDPKTMEFLSKS |
| UniRef90_C6Y136 | LKKFFNGLK D H DT L K L L L |
| UniRef90-C6X5B2 | L E LTWF N G N S DVNTL ELL |
| UniRef90-IOHAI3 | LARFYDGPDERTLQLLG |
| UniRef90_UPI000371EBB8 | LAAFYDGRPDGETLRLLG |
| UniRef90_UPI00037FA810 | LAVFYDGEPDRETLRLMA |
| UniRef90-R5V0C8 | L D K Y F G G K M D R T L K L L G M |
| UniRef90-A5EJK8 | \|L D R HCDGARDPATLAFL |
| UniRef90-C0CZQ6 | LEQYF G GEEDQY TVQAI S |
| UniRef90_F3WYW5 | L D RFFDGQGDPATLRLI G |
| UniRef90-D0DA47 | L D R L Y S G S R CPETL R Q I G |
| UniRef90-UPI0003B3437F | LEKFFGGEKDLK TI DAI S |
| UniRef90-G1Y2S7 | L DKYF D GQP D DRTLQLAGAA |
| UniRef90-F0F6E8 | L D T F Y K G NKDELT I ERM |
| UniRef90_D2ET16 | L K K Y Y G G K A D EL T L K I L |
| UniRef90-G1VFM5 |  |
| UniRef90-D5RSY5 | LARFHGKGPDPATLALL |
| UniRef90_UPI000379CC7B | LHAFYEGHEDEQTL R L L A |
| UniRef90_A9H9M0 | L D RWF K GHKDEATL R L L A |
| UniRef90_S9S876 | L D R L Y G GERCPVTRDRL |
| UniRef90_UPI0001D2EEDA | L R RLCH GAADPAT LARLALL |
| UniRef90_UPI00040A3D88 | LERYFD GKEDERTLKLLS |
| UniRef90_A3PLR5 | L GRWF G GRPDEGTARLLLGL |
| UniRef90_A3TPQ7 | L D K Y F D GAEDPAT ILELL G |
| UniRef90-R6F1L2 | L D T F Y D GKRCEFTLSAIA |
| UniRef90-K2GQF9 | LD T F F D G P D P R T L D L L |
| UniRef90-S0N7W5 | L DKFFA GVY DEKTLKLL |
| UniRef90_JOKPS0 | LAKYFAGEKDARTLELLLDA |
| UniRef90_A0A017HL22 | LETFYGGGEADPLTTEAELS |
| UniRef90-UPI0004103576 | L D Q Y F G GEPDSAT DR |
| UniRef90-E6WUF2 | LDAFFNGESDPKTLALLA |
| UniRef90-H4EZW8 | L D Q Y CGGRLD HRTLEILS L |
| UniRef90-R7G2W1 | L D K F F D GKL D A Q TV DiL D M |
| UniRef90-V4NTC1 | L DKWCGGEADQRTLKILLA |
| UniRef90-F5XQH0 | LDAFFDGEEDPGTLERL |
| UniRef90-E8X7B3 | L A $\dagger \mathrm{HFA}$ GQRD T A T MK QL |
| UniRef90_UPI000376E3A5 | LKTFYESKLDDK T L Q |
| UniRef90-A0A03111R9 | LLSRFYRGQRDQATLALLA |
| UniRef90-17KH28 | L DKFYA GEKDTATLL N L L |
| UniRef90-M4ZVS7 | L DRHFDG】RDEATLDLLG |
| UniRef90-UPI0004254972 | L D T F Y S G HLDD P $\square$ T L T |
| UniRef90_UPI00029AB305 | I A A Y F N GA DDEKTI RI CNA |
| UniRef90_UPI00034C8882 | L D RWY D GHEDPATL RLL G |
| UniRef90_R5KM97 | 1 DKYFDGKRDGLTTLKML |
| UniRef90_A5FII2 | L D A F F S GE $\square$ D P |
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| UniRef90-UPI0004776604 | L D R WF D GAEDPATI ERL |
| UniRef90-V4QJQ1 | LRKRCSSQRDDRTLQILS |
| UniRef90-J2ZZC6 | L D NFCQGRRDERTLQL MPAT |
| UniRef90-T0J1N4 | DGFFEGRRDENTLRIVGLT |
| UniRef90-R5FL44 | L D K Y Y G GER D S LT L K L |
| UniRef90-E3I7T4 | II ENLCEGEPDAATLRLLDKA |
| UniRef90-Q2CK74 | LDAFFAGARCPRTEAALA |
| UniRef90_UPI0003B4B83F | L DRYFAGSHDGRTDEML |
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| UniRef90-M2T9C3 | L ERWF G GVR D P A T L E R L |
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| UniRef90_F0QZ12 | LQTRFNGQKDNRTLEML |
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| UniRef90-A6U5M0 | L D F Y F N GVRD P K T LE I L G R S |
| UniRef90-R5JBX3 | L N K Y Y N GEDDEKT |
| UniRef90_R6A970 | L D T F Y A G C R CELLT L EML |
| UniRef90_R6X6X4 | L D TFFDGKRDGRTL G M L |
| UniRef90_G2TBA5 | L ERWNKGRPDEATL RFLG |
| UniRef90_R5TY10 | L CKHFGGEQDALLTL R L L |
| UniRef90-D3E4N5 | LEKYFDGNRDERTLDL |
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| UniRef90-A0A013WHR3 | L D RWF S GV V D DAT RKLL A |
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| UniRef90_R9KUC9 | L NRHYA GERDPLTLE |
| UniRef90_V9VXE4 | L DAFYGGQPCPLTKAALTRT |
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| UniRef90_A5VFF0 | II ERWF DGRRDEATLRLL GRS |
| UniRef90-X0RXB1 | L Y Q F Y E G S Y D $\square$ S TII E ML |
| UniRef90-U2M5Z0 | L Y K F Y R G VEDKRTLEQL H |
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| UniRef90_G6E9L6 |  |

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UniRef90_UPIO0035ED8BF
UniRef90_UPI0002557871
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UniRef90_UPI0003783734
UniRef90-IORCH1
UniRef90_J9CJZ7
UniRef90_V4PLL5
UniRef90_G8UUF7

D|I T R F V $\frac{10}{10} G Q E P V F Q V^{20}$
D P F

```


D R F DLRRF A A K S W
\(A Q A P V I\)
\(A Q N G T Y E\)
\(M Q T L T Y A\) E A \(\begin{array}{lllll}\text { R A M A } & \text { L } \\ \text { P } & \text { A } & \text { L } & \text { S } & E \\ \text { I }\end{array}\)
 \begin{tabular}{ll}
\(A\) & \(A\) \\
\(R\) & \(R\) \\
\(K\) & \(R\) \\
A \\
R \\
T & \\
\hline
\end{tabular}
\begin{tabular}{l|llllll}
\(F\) & \(I\) & \(Q A Q N\) & \(T\) & \(V\) & \(P\) & \(S\) \\
\(R F\) & \(L\) & \(K\) & \(K\) & \(L\) & \(T\) \\
\hline
\end{tabular}

A \(L\) A \(E \quad L Q\) \(L Q\)

> Y
 LARF A A Q A PLYD TALL REL
\(E \operatorname{L}\) L E F \(V\) Q A Q DR H WP Q I L A A L
Y N NLERFVTAQDAIFGEVRAEL DLLQRF L D A Q N G D Y E A A R D E L L A A G Q K Q TH H WM WF V L
D S P
DLQRF
D P H D
D S
DEDS


NEYNLLR
\(N \begin{array}{lll}L & A & R \\ L & Q & R \\ L & Q & R\end{array}\)
FDRSR
F D A QETEYATAL

E L R R F
D P F D


FNDQRFDA

LSRFVVA - D L

E L L Q R F F
L NRFL QA NGSYEDAVI
DL E D F V A A Q D R T WP E VVIA E L A A A G R K T




 \begin{tabular}{l|l} 
WM WF & F \\
WI & W \\
\hline
\end{tabular}

F LK A Q D R A Y E R A L E E IA A GEK S S H W \(\square W W V V\)
\(L A R F\) L A A Q E R D W W R A L E EL R S GRKQ


D P F NL L R F
DLIK F K T A Q D T C LTT Q VLE E \(\square \mathrm{KN} \mathrm{G} \mathrm{K} \mathrm{K} \mathrm{M} \mathrm{S}\) H
H
H
H
H
H
H
H
S
H
H

W
W
W
W
W W
H W
WM WF
WM WY
WM WY
L

00000

AQEDMYPVALEMKKGAKRSHWDWY PFNLERFVTAQNKDYNAALSElRSGRKATHWUWYIVPQQQ

D L

DEYNTHRGVRAQAPVYEATJDGLRRGTMNTSH DKFNLKRFNDAQSFVYDEILMEVHSGKKQTNW

\section*{MAELRSGRKTSHWVWFV}

EYNVSRYVVPHKQTYAQALQEVKNGKKKTHWMWWI
 M WF I
DE Y QLQ R F V \(V\) N A Q N N NY R S A PFGLSRFI EAQR GSYDQALAELLRAGEKRSHWMWFIVP QL


\footnotetext{
\(H P \square Q R F \| D A Q Q P S Y Q S A Y A E \prod K A G K K Q S H W \prod W Y \prod F P Q L\) \(N L D R F I N A Q H G T Y N Q A Y K E L Q N G A K T S H W U W Y I F P Q L\)
}

YCFDRF LLAAQQYSYDKA LQEDRSGCKRTHWDWF IFP QL


\section*{UniRef90 G8PTK2 UniRef90-X6L5N3
UniRef90 \(\mathrm{S9QR4}\)} UniRef90-UPI0004637E5C UniRef90_UP1000302503B UniRef90-UP100039B3521 UniRef90-UPIOOO4OBDDOCC
UniRefo-UPIOOO26CAC1D UniRef90-W4HK72

\section*{UniRef9- XORFZs} UniRei90 - UPIOOO36ED619 UniRef90-G7VJ54 UniRef90-R6BC36 UniRet90_UPIO003B397DA UniRef90_UPI00020D9FF2 UniRef90-Q0FV85 UniRef90-R7M512 UniRef90-A0A031JT41 UniRef90_UPIO0020D982B UniRef90-B1MWYO UniRef90_UPI000376D644 UniRef90-C8S540 UniRef90-KODBS8
UniRet90
W1S54 UniRef90-W15541
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UniRef90 C9LEF7 UniRef90-D8MDR3 UniRef90-F9YV72 UniRef90 - X7FC18 UniRef90-UPIOOO37FCODO UniRef90-X7EIP8 UniRef90-M5FE20
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UniRet90 F7YAZ3 UniRef90-G8RRR8 UniRef90-A9G3Z2
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UniRef90-M4S6D0
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UniRef90-UPIOOO16AA182
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UniRef90 J3P1F8 UniRef90_UPIOOO3693710 UniRef90-E9SFTO UniRef90-UPIOOO35C797C UniRef90-C5B6R2 UniRef90-L77873 UniRef90-UPIO0035ED8BF UniRef90-UPIOOO2557871 UniRef90-D3HKE8 UniRef90-G9EKBO UniRef90-UPIOOO3783734 UniRef90-IORCH1 UniRef90--99CJZ7
UniRef90_VPLLE
UniRef90_G8UUUF7

,

RK|L|GRSSTAHFYG|I ENLLDEARRY|L|AYP|LL|ASR|L|RGCCQLL RALGRSPRALHFGLAGLDEATAYLSHPLLGPRLLDCTALL AALGRSPTAKAFGLTGLEEAREYLAHPLLGPRLVEARAM EGLGSSPMAMRYAIRSAAEARAFLAHEILGERLRACTRLV AGLGKSATAQRFAVSSLAEAQEFLAHPVLGPRLMAAAELL SGLGQSSTSRQFALQSLDEAQAYFNHPVLGPRYIECVTALI
 ETLGRSPRARHFGLAGVEEARAYLAHPVLGPRLVEAAELL KGLGRSTMARRFAI ESLEQAKEYLQHDVLGARLRECAELL RGLGRSPMAQHYGLSGLDEARNYLAHPLLRARLEQAAQLL RGLGTSERATYYG1 KNAKEAREYGADDELRTRLEKALKLV
A
A GLGQSATA
RALCKSERARHYA!R
 GS SPMARRRYAVE TLLDEARRRYLSHPDVLRQRRLDETTRRLM
 R G G G R S E T
RGLGQSPMA

\section*{a}

\section*{R}

A GLGTSSAMSQRYALADLTEAKAYGQHPLLGARLREASAAM
ASLGQSHMSQLYGLEDVNEARAYLDHPVLRQRLIEVCDGM
K GLGRSEFAKSFAI DDLDHARAYLAHPVLGPRLIETCAAL


\section*{}



 R GLGGVS E N A TYY Y G L C G D D E A R D Y L Q H P L L G P R L ERRAT R A V





A



\section*{}

\section*{}

\section*{R}

\section*{A}

A GL GA S A L LN R Y F A L L A S V


 A G L G M S A M A Q H Y A I N GLLGS S A M T I K Y S I S S L A E E E T E Y L N H P P L G P R L L E C S Q L V
 K ELGGFSSTAKYYGIVDFKEACDYLQ NAQLFENYQKDTSLV
 A EVVGNSANAQYYGLS GUAEARAYGLEHPQL GARLREAT QAL Q GLGRSAMAQRYAI S GRAEAEAYLQHPLL G

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\] \\
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\hline UniRef90-UPI000302503B & L ERYF N G D P D P V S DRMI A \\
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\hline UniRef90_UPI00040BD00C & I D T F F F G C \(\square\) D A K T A S L I H T \\
\hline UniRef90_UPI00026CAC1D & L D R WF D GAADAQT L A L L \\
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\hline UniRef90-X0RFZ5 &  \\
\hline UniRef90-TOIOU8 & L D RWF F GERDPATRRLL \\
\hline UniRef90_UPI00036ED619 & \(L\) DRLLYSSERCPHTRKALG \\
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\hline UniRef90_Q0FV85 & L NLLY A GQRCPVTREAL \\
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\hline UniRef90_B1MWY0 & L D K Y F N GQ HVA TLLEL \\
\hline UniRef90_UPI000376D644 & L EHFFDGRRDDAT TGILLGA \\
\hline UniRef90_C8S540 & L Q R WG G GVP D A G T A R L L G L \\
\hline UniRef90-K0DBS8 & L DKYFDGQQHQAT L ELL \\
\hline UniRef90_W1S541 & L D RWFS GERDARTLSLLG \\
\hline UniRef90_J1ACD3 & L D T F F Y G H L D Q L L \\
\hline UniRef90_N1ZY65 & L DKFFH GKYDQKTLELL \\
\hline UniRef90_M1SHG8 & L E Q LF A GEVDK K S V Qil A \\
\hline UniRef90_R5MJ50 & L D F F S \\
\hline UniRef90_Q1GCK2 & I K VF F E G T P C P LT LGEDG \\
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\hline UniRef90_T1AAZ3 & \\
\hline UniRef90_H1X974 & LD F Y F NGERHSATLAEL \\
\hline UniRef90-F2KFR0 & LE GGKVDARTLDLL \\
\hline UniRef90-M7SV43 & LEKY Y G G DV D T A T D D KL A \\
\hline UniRef90_F7YAZ3 & FDVWF D GQ I DE G T M R KL \\
\hline UniRef90_G8RRR8 & LREYFPGGRDQETLKKKLKP T \\
\hline UniRef90_A9G3Z2 & L DKFCGGEPDPRTLALLL \\
\hline UniRef90-A5PAI9 & I EAFFDGERCPLTRE \\
\hline UniRef90_U3A7B4 & L D K L A R GERDRQTLAVLA A \\
\hline UniRef90-M4S6D0 & L DAFYDGQRDARTLERL \\
\hline UniRef90-J2YC76 & LE GRADSRTLGIL \\
\hline UniRef90_UPI00037AEE1C & LQ NF Y Y NSPHQQTLQQVLS \\
\hline UniRef90-U6RBG7 & L E K H C \\
\hline UniRef90-B0EK38 & \(V\) D R Y Y K G NFHQETLT L L \\
\hline UniRef90_UPI0004034161 & LDQYYNGEKDEKTLAI I SAN \\
\hline UniRef90_UPI0004272921 & |I NKYY D GK L D K V T L R I L \\
\hline UniRef90-UPI0003803533 & L D R Y F D GLPDPATDQLL \\
\hline UniRef90-X7YUD2 & I T R Y Y G G Q Q D P A T L A RLK \(\square\) ¢ \\
\hline UniRef90_UPI00016AA182 & LEKYFGGEADHNTLERL \\
\hline UniRef90_Q98LL7 & FDA WF D G M LDEETTMSQIA M \\
\hline UniRef90_UPI00037B58B0 & LKHFY A D QV DKK T LT I L \\
\hline UniRef90_A0A023XEU5 & LARYFA GERDGATLEILA \\
\hline UniRef90-A5FBN7 & LEKYY N GEQDEK T L Q L I \\
\hline UniRef90-G2XAV6 & L R ERF G G E A C L A T L E M \\
\hline UniRef90-R6A1J8 & L S R \\
\hline UniRef90-J3P1F8 & LD DMFD GMS D S T L L V V A \\
\hline UniRef90-UPI0003693710 & L N A Y D GQK P K T L R M D \\
\hline UniRef90_E9SFT0 & LNKYYNGKPRRSTLKL \\
\hline UniRef90_UPI00035C797C & \(L E \square W F G C R A E E V T I T Q L T\) \\
\hline UniRef90-C5B6R2 & \\
\hline UniRef90-L71873 & \\
\hline UniRef90_UPI00035ED8BF & \\
\hline UniRef90_UPI0002557871 & LD K Y Y E G E R D P LT LA C L \\
\hline UniRef90_D3HKE8 & \\
\hline UniRef90-G9EKB0 & KNQGY VPCQK T L L I \\
\hline UniRef90_UPI0003783734 & LARFFNGEQDEKTLYLL \\
\hline UniRef90-IORCH1 & \\
\hline
\end{tabular}

\begin{tabular}{|c|c|}
\hline & \\
\hline UniRef90_G4MQC9 & T G|V|ASSPTCVRYAVVRSLAEAVEY|L|RHP|VLGVR\RE\|V|E|VV| \\
\hline UniRef90-H0G1Y8 & RALGRSPTANFYGI GSIEEARACLRHPVLADRLARSVNAI \\
\hline UniRef90-UPI00026C7C0F & HQLGFSATAQFFGI T DFKEACDYLQNEKLFQNYYAMV \\
\hline UniRef90-X8BF74 & A GLGS SPMAARYAI S SLEEARAYLAHHILGPRLHECAG \\
\hline UniRef90-D4Z8V7 & RSQKVRFYGI RSVDEARTYLDHPVLGTRYRDCVTAL \\
\hline UniRef90-G213T9 & AELGHSSMAQRYAI RLMAEAGAFMAHLLSGPQLVACMAMV \\
\hline UniRef90_C9SWA7 & GLGVSALINRYFALASVDEARRYAAHAVLGPRLREAVDAV \\
\hline UniRef90-F7XCJ7 & ALGRSPTANFYGIGSIEEARAYLPWTQVQSNL \\
\hline UniRef90-M4GAR0 & GCGRRRTSVVY \\
\hline UniRef90-UPIO002193DFC & SDLLGKSERAMYYGDHGQQEAQAYDNDVTLKDRLEKL \\
\hline UniRef90-R1FKF5 & RTTGKPE YSLHDAGAADAWLHHPTLGPRLLELTRAA \\
\hline UniRef90-X5R1P9 & ATRRSGAAPEPYAI TSLDEASAYLSEAVI GNALAPCNG \\
\hline UniRef90_UPI000263132F & LIA EARAYLAHPLLGARLREAMAASL \\
\hline UniRef90-X8AXS3 & V \\
\hline UniRef90-T0GVN4 & G P R Y Lecve Tli \\
\hline UniRef90-UPI000379D624 & L G S N \\
\hline UniRef90-R1C9A8 & YFRDGQLRSNYLAVLDA \\
\hline UniRef90-L15X6 & TLAESASRKEYCVPTAEEGIALILDEVFHKDLVELMQ \\
\hline UniRef90_B4DA02 & MDEACAYLRDPSLRSHYEEITNAV \\
\hline
\end{tabular}

\begin{tabular}{|c|c|}
\hline & \(90 \sim 100{ }^{100} 110\) \\
\hline UniRef90_G & A A S A T S T A A S LM G AVD A LKLLK S CMTLIF R R A E E R E D R Y L A V \\
\hline UniRef90-H0G1Y8 & R Y \\
\hline UniRef90_UPI00026C7C0F & E Q QLK K K \(\square\) P V V T G QVID A R K L V S S LT LIF K A V A \\
\hline UniRef90_X8BF74 & \\
\hline UniRef90-D4Z8V7 & \(Q D \square P \square S D P V A V F G A \square D A M K \square R S S \backslash T D F E A V Q P S A L L A S A\) \\
\hline UniRef90_G213T9 & NALTGRSAHALFGMPDDRKFHSSKTLFHRAALREAAFCTA \\
\hline UniRef90_C9SWA7 & LR S ERR \\
\hline UniRef90_F7XCJ7 & \\
\hline UniRef90-M4GAR0 & G S G A K K L Q S S M T LF A VA A Q P P P \(\square\) WQ QV \\
\hline UniRef90_UPIO002193DFC & \\
\hline UniRef90-X5R1P9 & \\
\hline UniRef90-UPIO00263132F &  \\
\hline UniRef90-X8AXS3 & NADQGRSDHDIFGSPDDLKVRSSMTLFGRATDDNRDFVALL \\
\hline UniRef90-TOGVN4 & QGLPDSDPVTVLGEDDAMKLRSSLTL FESA NPHPDFSAA \\
\hline UniRef90_UPI000379D624 & EVESNDATEVTGWQDNLKPKSSMTLFALAKLGCEVFQKVV \\
\hline UniRef90-R1C9A8 & SGSEGVEPRRLLG 1 DVPRAVASVRYFSHLA \\
\hline UniRef90_L1I5X6 & LQHHGNPQRVFTSSIDRTMFRMS \\
\hline UniRef90_B4DA02 & A EH \(\square\) GRGAHLMGGSTDAFKL A S SLTLI R A A A K D A D F Q R \\
\hline
\end{tabular}

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LKKYY GEECQRTVQMLG

# LDRWFGGERDAETLQLLGA 

``` LACFFNDAEDTPTLRR
\(\square\) NVFFEGERDDFTVR \(\square L S\)
UniRef90_UPIO002193DFC
UniRef90-R1FKF5
UniRef90 \({ }^{-}\)X5R1P9
UniRef90-UPI000263132F
LDAFYSGRRDRETLRRI
UniRef90-X8AXS3
LDKYYGGEEDPLTLKRL
UniRef90-TOGVN4 |I D R WF E GARDPLTLRLLA
UniRef90-UPI000379D624
UniRef90-R1C9A8
UniRef90_L1I5X6
UniRef90-B4DA02
```

$\square \mathrm{A}$ QTCDA $\square$ PCEFT $\square \mathrm{ER} \square \mathrm{A}$

