UniRef90_E5AU3 UniRef90_Q5NZD8 UniRef90-D9W9J7 UniRef90-LODZY8 UniRef90-UPIOOO2557354 UniRef90_C9Z4Y9 UniRef90_Q0A5Y0 UniRef90_Q2LW31
UniRef90 J3HWZ8 UniRef90-B8EKL3 UniRef90_19BRZ0
UniRef90_LOIUK6 UniRef90-V5PVW2 UniRef90-DOL9W2 UniRef90_Q1N319 UniRef90_H0QV95 UniRef90-LOA2V6 UniRef90_UP10003B47EDA UniRef90_A1WUH0 UniRef90 S9S183 UniRef90_UPI000464A978 UniRef90-U1ZIV6 UniRef90-A0ADV2 UniRef90-G2GKA4 UniRef90_UPIO00344FAEC UniRef90-Q825W5 UniRef90_-V4QTT3 UniRef90_UPI00038064B2 UniRef90-M5RJK1 UniRef90-UPIOO03622142 UniRef90-UPI0003769D2E UniRef90_UPI00037093B0 UniRef90_S6ABR6 UniRef90_M3CE94 UniRef90_A4BL35
UniRef90-N2J319 UniRef90_Q1QTJ1 UniRef90-UPI00036A4732 UniRef90-UPIO00479B78F UniRef90-F4CM51
UniRef90-BOUGU2
UniRef90_F9ZJIO
UniRef90_UPI000462EC0F UniRef90_UPIO0037B7B26 UniRef90_V2GRW6 UniRef90-Q2BNW6 UniRef90-L7LMQ9 UniRef90_C8XE06 UniRef90-UPI0003700711 UniRef90_R4WQ20 UniRef90-I4Z369
UniRef90-IOID82 UniRef90-A0A022MJ74 UniRef90_UPI0003752AAE UniRef90-J7LIM2
UniRef90-UPIO00425BB61 UniRef90_C5AF68
UniRef90_UPIO00376E8B0
UniRef90-F6EJE6
UniRef90-Q602K5
UniRef90-M2ZKU8
UniRef90-UPIO00427EEF1
UniRef90-UPIOO0468149C
UniRef90-D5W8P5
UniRef90_UPIO002E8E6D8
UniRef90_U3CP46
UniRef90_UPIO0023798C6
UniRef90-K5XDG2
UniRef90-C1DH62
UniRef90-UPIO00360CABE
UniRef90_A0A023NTY6
UniRef90_A1K4X5
UniRef90-X4ZRE0
UniRef90-D2PNV2
UniRef90-TOGBD2
UniRef90-UPIO004153220
UniRef90-B1ZWE6
UniRef90_Q086Y3
UniRef90-E1SRU6
UniRef90-F8JWF9
UniRef90_UPI0003738918
UniRef90-A0A024H9M1
UniRef90_UPIO0031A6783
UniRef90-C7PXG9
UniRef90-UPI00037F059E
UniRef90_W9GWN8
UniRef90_UPI00046E8C65

VFKKVLI 10
20
30
40
GTSEESFTAAADDATDRAEDTLDNVVWAEVVD VYKQI ELTGSSTQSIQHAlDENAI EKASRTLRNLHWFEVTD
 Y RVTEIVGSSTESVDDAI RSGI TRASKTLRNLDWFEVGA

 VYKIVELTGSSSKSMEDAVNQAVERAARTLHHMRWFEVTE
 YKLI ELVGGSSPNSSDDAI RNALAKASQSLEHMDWFEVVQ VY K HI $V$ Y K Q I E L T G S S T Q S I D D A V K C A I E R A S K T L R N L N WF E I T E

 V $V$ Y K



## V Y

VYRVTEIVGT
VYKVVEIVGS

$\mathrm{V} Y$
V
V

## $<$

V $Y$ V

## V


VY

IVY K M I $V Y R \vee I E V$ V G S
 VYKQIELTGS

$\qquad$ Y RVTELVGS

VYKHI ELTM G

| Y R | V | E | V | V | S |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Y | R | V | T | E | I |
| V | G | S |  |  |  |

V Y
VY
VYK VI
$\begin{array}{llll}V & Y & K & Q \\ Y & K & K & M \\ V & G & G & G\end{array}$
VYRVTEVVGT
YKKIElVGS
TYKKKVELVGGS
VYK SV V VTGS

VYRVTE VG
VYR VIE: VGSSTQGVDDAI K

V

V
V

| $Y$ | $K$ | $I$ | $V$ | $E$ | $L$ | $T$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |


YKKI E L V G S
VYKTIEEVGG
YKLTELVGGS

niRef90 UPI00046E8C65



UniRef90_UPI00035F364F
$\frac{1}{V} Y A \square S K|V| \begin{aligned} & 10 \\ & T\end{aligned}$
T SIEDAIQNALK T A G K S V R GMNWFEVIS



$<$
$\qquad$
 $V$ Y K I I I L V G T S T K S W E E A A K S A $V$ V D M A S K S L R E L R I A A E I T K




DEAIRNGVARASETLHNLDWFEITGQ
 $V$ Y K V I E L V GTS P E S WE K A A A NAI E T A S R HL Q DL R V G EVV Q

 VY K V I E V I G T S K E S WA

V
V

 | $V$ | $K$ | $V$ | $I$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $V$ | $A$ | $R$ | $V$ | $T$ |  |
| $V$ | $A$ | $K$ | $V$ | $T$ |  | 380B216 DYN9 UniRef90_S0G765 UniRef90_D3SVQ1 UniRef90_A0A017HCG6 UniRef90_H7FQ81 UniRef90-A3TYW0 UniRef90_D7ADG4 UniRef90-S9QJV3

UniRef90 B3QS69 UniRef90_B9LN86 UniRef90_U2ZR88 UniRef90_A0A024H8M0 UniRef90_UPI000374103F UniRef90_A4EEU5 UniRef90_D6TUI5 UniRef90_B9M330 UniRef90_U2YV84 UniRef90_D8PEX9
UniRef90_A5GDF0 UniRef90_W8KTT7 UniRef90_A4BLG9 UniRef90_UPI0004224DA2 UniRef90-UPI0003F72F17 UniRef90_D8JAT4 UniRef90_H6R4M0 UniRef90_UPI000377E3A1 UniRef90_B3DWK4 UniRef90_A0A023X0A8 UniRef90_UPI000471383C UniRef90_G4E5Z2 UniRef90_FOS5C2 UniRef90_G2Z6W6 UniRef90_UPI0003A0C209 UniRef90-I3YTN9 UniRef90_B8IBC4 UniRef90_UPI000416A491 UniRef90_L9WNX1 UniRef90_UPIO004669DDB UniRef90_X0XXS5 UniRef90_A0A017HQN3 UniRef90_UPI00037ACF50 UniRef90_Q2CA68 UniRef90_U3AY79 UniRef90_LOJYS8 UniRef90_A3HZA6 UniRef90-M7MZU9 UniRef90_UPI000407E838 UniRef90_B3EDR1 UniRef90_X6GF92
UniRef90 ${ }^{-}$X1BG08


YK I I L VGTSDESW VKGTSDESWEKAARNA I VAKVTEI I S S S S K S F D D A VEN GI K RA
 I Y K K V E I I G V S K N G DEEAA I Q A A V Q K A G E T L $V$ Y K K I D L V GTS T E S F D D A V D D A L D R A E E T L D DVVSWA EV DE VARVTEII A AS PKSFDDAIHSGIARANKTLQHVKSAWI ED Y K K V E V I GV S K K G $\square$ E A A I Q T A V S K A H K T L D K L S WF E V G D


 $V$ AKVI EVVSASSTTTSFEDA $\square$ S Q GI A RACDTIANVVRGAWI KE

 $M \vee G I S E$ E S I Q Q A V RNA I

 \begin{tabular}{l|ll|lll|llllllllllllllll|l}
$V$ \& $A$ \& $R$ \& $V$ \& $T$ \& $E$ \& $I$ \& $S$ \& $A$ \& $T$ \& $S$ \& $S$ \& $T$ \& $S$ \& $F$ \& $E$ \& $D$ \& $A$ \& $\square$ \& $K$ \& $E$ \& $G$ \& $V$ <br>
$I$ \& $V$ \& $K$ \& $V$ \& 1 \& $E$ \& 1 \& $I$ \& $A$ \& $S$ \& $S$ \& $E$ \& $K$ \& $G$ \& $W$ \& $E$ \& $D$ \& $A$ \& $T$ \& $K$ \& $N$ \& $G$ \& $I$ <br>
$V$ \& $Y$ \& $K$ \& $V$ \& 1 \& $E$ \& $L$ \& $I$ \& $G$ \& $T$ \& $S$ \& $P$ \& $N$ \& $S$ \& $W$ \& $E$ \& $E$ \& $A$ \& $A$ \& $K$ \& $S$ \& $A$ \& $V$

 

$V$ \& $Y$ \& $K$ \& $V$ \& $I$ \& $E$ \& $L$ \& $G$ \& $T$ \& $S$ \& $P$ <br>
$V$ \& $N$ \& $S$ \& $W$ \& $E$ \& $E$ \& $A$ \& $A$ \& $K$ \& $S$ \& $A$ <br>
$V$ \& $V$ \& $D$ \& $K$ \& $A$ <br>
$V$ \& $I$ \& $E$ \& $V$ \& $A$ \& $A$ \& $S$ \& $S$ \& $E$ \& $K$ \& $S$ <br>
$F$ \& $D$ \& $D$ \& $A$ \& $V$ \& $Q$ \& $Q$ \& $A$ \& $V$ \& $N$ \& $E$ <br>
$V$
\end{tabular}



## 

$V$ VKV I EV $\square$ A T S A $\square$ G $\square E D$ A I Q N A V

I L K K I I E V L A S S K E G WE D A T K N A V
 $V$ V K V V E L V G T S K E S WQ D A A E E A I
 $V$ A K V TEEII A E S N S S F D D A V K Q Gll A R A S K T L K N V K G A WV N D


,


UniRef90_UPI0003B682E8 UniRef90-I3C547 UniRef90-UPIOOO47EDCB5 UniRef90_UPIO00464703F UniRef90-F6FPR8 UniRef90-UPIO003B3D98D UniRef90-IOW148 UniRef90-UPI000471F225 UniRef90-UPIOOO3755B82 UniRef90-E6SKP4 UniRef90-G2MM38 UniRef90-D1BV41 UniRef90-UPIOOOO408704E UniRef90-Q1AVE8 UniRef90-G2PRQ5 UniRef90_U1PZD6 UniRefto - XOZ5Q2 UniRef90-MODJ19 UniRet90-MOM182 UniRef90-F4BUX6
UniRef90 F4C429 UniRef90-UPIOOO3751CE6 UniRef90-A7H727 UniRef90-V6S9V7 UniRef90-U1P6U1 Unii effo-F4COMO UniRef90_UPI0003F7A381 UniRet90-E1QDS3 UniRef90-14BZV4 UniRef90-A4CG68 UniRef90-UPIOOO379AEOE UniRef90-L9VPFO
UniRef90 H2BTZ6 UniRef90-H2BTZ6
UniRef90 LTW92 UniRef90-K2Q6L7
UniRet90
U3P612 UniRef90-U3P612 UniRef90-UPI000478A890 UniRef90-UPIO0047BBA29 UniRef90_UPIo0038150AF UniRef90-UP100047A5F1C UniRef90-V5PUC5 UniRef90-UPIOOO479DOCF UniRef90-WOSFD1 UniRef90_NoDT99 UniRef90-F5YTI7
UniRef90 UPIOOO UniRef90-UPIO0041967E9 UniRef90-UPIO0047C216B UniRef90 A4G7L3 UniRef90_W4LTK1 UniRee90-UPIO0047D799B UniRef90-C7NR10 UniRef90-B2A4Z2 UniRef90-AOAO23BXN4
UniRef90 UPIOOO36014E1 UniRef90-14BL50 UniRef90-W6K2U6 UniRef90_UP1000421783B UniRef90-C5C3H8 UniRef90-W6M551 UniRef90-UPIOOO35F1E92 UniRe990-F4AVX6 UniRefofo-LBJZZ7 UniRef90- 81 JS34 UniRef90-C7R5Z8 UniRef90_UPIO0040E28F8 UniRef90-A0JSN7 UniRef90-UPIOOO29A7DDO UniRef90-UP100047CA528 UniRef90-D6Z5X1 UniRef90-D4GVN8 UniRef90-TOZP29
UniRef90_U5WUZ8 UniRef90-TOJT54 UniRef90-Xoz2U0 UniRef90-UPIo00426CEF1 UniRef90-N1MMR2 UniRet90-R4W923 UniRef90-J3JD37 UniRef90-UPIO00378EDDO UniRef90-W8VRQ1 UniRef90-A1VWY6 UniRef90-B4DC56 UniRef90-UP100037C916B UniRef90-H2BYJO UniRef90_AOM208 UniRef90_UPI00035CA0D9 V L K V V V



 $\checkmark V$ K Vi

 $V \operatorname{V}$




V
$\qquad$ K $V$ V

## V V V V V V V v v v V V v




| UniRef90_D2S5H8 |  |
| :---: | :---: |
| UniRef90_UPI0003B2F3FA |  |
| UniRef9 |  |
|  |  |
| UniRef90_A9DPJ8 |  |
| UniRef90-M0M061 |  |
| UniRef90_F7NK04 |  |
| UniRef9 | W2UM20 |
| UniRef90_UPI00029A8A34 |  |
| UniRef90_UPI00047BD662 |  |
| UniRef90_UPI00047EA807 |  |
| UniRef9 | F2ND56 |
| UniRef90_A3U4Y9 |  |
| UniRef90_D9S3P4 |  |
| UniRef90_A3XHX8 |  |
| UniRef9 | 14C16 |
| UniRef90_UPI00036F8EEE |  |
| UniRef90_A5D2Y6 |  |
| UniRef90_C0BJM8 |  |
| UniRef90_M3BRS9 |  |
| UniRef90_S7U3S9 |  |
| UniRef90-M0NHM5 |  |
| UniRef90-H0HVW4 |  |
| UniRef90_A0A059G3C9 |  |
| UniRef90_F6CJ54 |  |
| UniRef90_Q2RID7 |  |
| UniRef90-W0JZD1 |  |
| UniRef90_C8VYY6 |  |
| UniRef90_A0A059FQ12 |  |
| UniRef90-K4LFN5 |  |
| UniRef90_K0IM25 |  |
| UniRef90-C9R7T1 |  |
| UniRef90_UPI000464C01E |  |
| UniRef90-W8TP49 |  |
| UniRef90-M1ZDA1 |  |
| UniRef90-B1I3U9 |  |
| UniRef90-R7LQ30 |  |
| UniRef90_R0EJM7 |  |
| UniRef90_K0IJU9 |  |
| UniRef90-L9XVU9 |  |
| UniRef90_14VSC5 |  |
| UniRef90_F3Z466 |  |
| UniRef90_E6WZT2 |  |
| UniRef90_UPI00036AE31B |  |
| UniRef90_UPI0003617EBC |  |
| UniRef90_X1SGX7 |  |
| UniRef90_Q0AZA0 |  |
| UniRef90_R6Q6H7 |  |
| UniRef90_R5PT85 |  |
| UniRef90_W4LQE5 |  |
| UniRef90-X1AEE5 |  |
| UniRef90_UPI0004676B53 |  |
| UniRef90_UPI00034D4C29 |  |
| UniRef90_R0FWA7 |  |
| UniRef90_A0A023Y0F0 |  |
| UniRef90_A0A059E484 |  |
| UniRef90_UPI00047E2C37 |  |
| UniRef90_UPI00041882CF |  |
| UniRef90_A0A021W2P9 |  |
| UniRef90_Q3IR65 |  |
| UniRef90_R6YFP3 |  |
| UniRef90_R7FAY9 |  |
| UniRef90_UPI000478B0C7 |  |
| UniRef90_D8IVF4 |  |
| UniRef90_D5X7D4 |  |
| UniRef90-C8XID8 |  |
| UniRef90_R5Z2G0 |  |
| UniRef90_M7TD86 |  |
| UniRef90 UPI00036B43BC |  |
| UniRef90-Q1Q8G8 |  |
| UniRef90_R6Y0V9 |  |
| UniRef90_UPI00047D3692 |  |
| UniRef90_O07265 |  |
| UniRef90_F8KYZ6 |  |
| UniRef90-M0C5S5 |  |
| UniRef90-R5N5H5 |  |
| UniRef90_F7XQD0 |  |
| UniRef90-UPI00047A3835 |  |
| UniRef90_V4Y4Z6 |  |
| UniRef90-I7A1U6 |  |
| UniRef90-O06125 |  |
| UniRef90_A4G817 |  |
| UniRef90_Q5X8U9UniRef90 UPI0001FFED7C |  |
|  |  |
| UniRef90_K1Z4X8UniRef90_UPI0002D74C39UniRef90_UPI00036663F6 |  |
|  |  |
|  |  |

S NAD|V|EN GN|L|S L L Y K|V|HCK|I A F F V V|E







## Q S LTTVK D G R V D E Y R L N V K I T F

 QSVELARAE REYQVE DEVAFEL D IVAK V D G G K I S E Y R V D MK I T F VLDD

 \begin{tabular}{llll|llll|llllll|l|lll}
$L$ \& $T$ \& $A$ \& $N$ \& $V$ \& $Q$ \& $N$ \& $G$ \& $R$ \& $V$ \& $T$ \& $E$ \& $Y$ \& $K$ \& $A$ \& $N$ \& $V$ \& $K$ <br>
$L$ \& $T$ \& $A$ \& $N$ \& $V$ \& A \& H \& $R$ <br>
\hline

 WTA DV E G G TVV T Y K A TVVEI A F FTANV SHGKLTGYKADCKI CYK MSTTVKNGKI ATYRVNLQMTFE $\square E$ 

\hline$L$ \& $T$ \& $A$ \& $G$ \& $V$ \& $R$ \& $E$ \& $G$ \& $D$ \& $L$ \& $Y$ \& $E$ \& $Y$ \& $K$ \& $A$ \& $N$ \& $V$ \& $K$ \& $V$ \& $A$ <br>
$M$ \& $T$ \& <br>
$M$ \& $T$ \& $A$ \& $D$ \& $I$ \& $D$ \& $N$ \& $G$ \& $N$ \& $V$ \& $V$ \& $R$ \& $Y$ \& $K$ \& $T$ \& $T$ \& $V$ \& $K$ \& $I$ \& $S$ <br>
\hline

 Q S A V V 

$M$ \& $Q$ \& $A$ \& $V$ \& $K$ \& $D$ \& $S$ \& $K$ \& $I$ \& $V$ \& $K$ \& $Y$ \& $R$ \& $V$ \& $N$ \& $A$
\end{tabular}

 MTADVQD GRLIE YK ANLK K


WT A DV E D GE I DE Y K V T TE I A F


FTAHVENGRVVKYKANLKI AHK
LD A K I E K G S V I S Y R R D K L L D M K V E N G R V V A Y R A R V N L S F K V E
WT A N CA DNKI V E Y K A N I R I A Y

SWA KVVE E GK I I E Y R V V K V Q I S F D V



$\square E A S A N Q N K \square V K Y R S H A K N S F$
TLGSQDRQSDRRYQVTLK
VRSTVL GSAERFQVDLRLGVR
LDMKMENDRPAVFRSRVKLSFKV
TRG $\square H G G E D K R H Y Q V T L$
lupas_21
lupas_14



