QUERY
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UniRef90_A4J9R7
UniRef90 J9H581 UniRef90-B3EN06 UniRef90-B7ABJ3 UniRef90-UPIO0037A6DB8 UniRef90_JomTC3
UniRef90 - F9P9F UniRef90-A0A011 NAJ9 UniRef90_L8DB26 UniRef90-J7MBN2 UniRef90-D2Q553 UniRef90-A0A031MDN8 UniRef90-UPIO002FDCEBC UniRet90_R9CAU5 UniRef90-R4KLA4 UniRef90-H7DOO9 UniRef90_Q9K5N1 UniRef90-HOBVJO
UniRef90_17MZD7 UniRef90_L7VK58 UniRet90_E5XV88 UniRef90 U4TPR8
UniRet90 UPIooo38 UniRef90-R7NDC3 UniRef90-A3K2X5 UniRef90-E101M1 UniRee90-UPI0003B73B22 UniRef90_U7LXR5 UniRet90_K2EJM6 UniReffo-IOHZN3 UniRef90-A0P X82 UniRef90-M4U161 UniRef90-UP100046A09BD UniRet90-R7CA12 UniRef90-TOTH91
UniRef9O-A6W3T6 UniRef90-E8K1W7 UniRef90-K9DME4
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UniRef90-F3ZSP1 UniRef90-M7E6B5 UniRef90-G2IS22
UniRef90_U7D5A5 UniRef90-R6GV59
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UniRef90 V5WLJ8
UniRef90 E4RRL9
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1
10
20 20 F $\quad$ R $\square A K$ KGKKKGDTAKE ${ }^{40}$ ALVENIQRRDLTPDEEARSYKNLLDKYLITQEQLAKKM
 DDDQVIENIQRNDLTAREI AVHI GRKLAEGVSKSQIAKBL EADQVIENLHRNDLTAREI ADY! GRELARRLRRKDIAQRI DQAVENIQRDNLTPREVADVIGRLEAEGMKKGQUAEKM ALIENLQRRDLTPLEEARTYQKLLEDAGTQEELAKTM
DAL AIIENLQRENLNPIEEAESYQHLIDRGLTHDEAAGKM

D A ANLBRQLPL AALIENLQRENLNPLEEATAYRRLMDEFLTQDQVSQRV ALIENIQREDLNAIEDADADKSLVTTCLTQDEIAQKV ALVENLQREDLSPLEEARGYQALLSMGLTQEEVAKRV
DALLENLHRVQLNPLEEAAAYQQLLQEFGTHGELAERL AII ENLQREDLNPIEEAQSYQYLDDKGDTHKEIAQTM
ETDQVIENLQRXXXXREDADFDGRELAKGKXKGDVAREL AIVENLQRSNLNAIEEAKAYQLLVEKHMTHDELIAKYM
DALLENLHRSQLNPLEEAAAYQQMLDDFGTQEVLATRT
A M A SLENUQREDLNPVEEAMAYKRLMDEHLKQDEVADRV
AAAA ENIQREDLNAVDEANAYKKLMEKYLTQEELSVQV SLI ENI QREDLNPI EEGLAYERLDKEFLTQEELSKTM
A D ALLENLQRDLNBE A 1
DALI
$A$
ENEQRKGLSPL ALI QLIENIQRENLNPME
DALLENIHRVQLNPL AII ENVQRHDLNPIEEGKAYQKLADEFMNQEEVATKM ALVENVQRADLNPI EEATAFQTLMTEFDTQAEVAERV SLENIQRQDLNPI ALLENLGREDLNAM
 ALI ENGQREDLNPVEEALALLQRLVEDHYSHEELVKAM
HSI I ENLQREDLNPI ALVENLQRQDLDPVEEAYAYKRLMDFKKTQEAIATRL DALLENHRVQLNPLEAAAYQQLLEEFETHEELANRI DALLENLHRVELNPLEEAAAFQQMMEDFLTQAELCSESV A V VNiQRENLDPI EVAMSYQRLDDELTQEQMADRV SII ENGQRQNLTPGEEAEAYKKLIDTFYTHEDLASLIL
 SLIENIQREDLNPVEEAMAYKRLIDEHDKQDEIAERV DALKENLORVALNPLEEAAAYAQMIDDFLTQUQLSKSV ALIENIQRENLNA:EDALSYQRLLSECLRQEELGDRV DALLENIHRVQLNPLEEAAAYQQLMEEFGTQEQLAKKI
 ALI ENLQREDLNALEVALAYQHLIEEYLTQERLSERV
 ALIENTHRRNLSA: EEARSYKKLLDRKYTQDQLAKRL SLIENLQRENLNFIEEAQAYYNLIDHHLTQEQLAKVL ALLENLQREDLSPLEAAEAYSLCDHSVTQEELAKRL AVMENLQREDLNPLEEAKAYEMLMTHDDTQVEVSRRL

 ALLENLQRKDLSP EEARTYQKILDDSMTEELGKTM
 DALLENLHRSQLNPLEEASAYQQLLDFGDTQEELANR1 DALLENLHRQLNPL


| QUERY | AFKKRPEEVEAWLDDDTQEDTRGTVKLLREFLDE |
| :---: | :---: |
| UniRef90 R5W0W1 |  |
| UniRef90-UPI0002881CC5 | A HSKNPEEVVNWLSDDNQEDSRGSVKLLREFLEE |
| UniRef90-UPI000475F7C4 | A Y K K N P K V V G WLEDENQEVTRGEVKL L REFL D |
| UniRef90- W6AVN6 | A Y K Q P PEVQKLLEENGEDIT R S AVKVFREFLDE |
| UniRef90-UPI00037DC261 | VYK\EPETVGGWLAEPGQEVTRGTVRLLR E |
| UniRef90-E8SRY5 | LY K K E P E AVEDLL S NEDEITR S SVRNLK E F L N S |
| UniRef90_UPI00039C49B1 | D NPEAQERLAQR\\|VAE GL $\quad$ SVRA |
| UniRef90_R5TAJ1 | T D P K R Q VEL L N KVI S TRM TVREDDEEDK |
| UniRef90_D9T437 | D NAEAQEAL AERIVREGVRGAEELVHLALAE |
| UniRef90-F8B0U6 |  |
| UniRef90-F9HEE4 |  |
| UniRef90_UPI0001E2EBBD | S $\square E$ D K EMQEKVCS EI I E K NVR D T ES LVVKKL L A Q |
| UniRef90_W4V926 | E DKELQERLCDEII DKNL TVVRVEVLVK |
| UniRef90-U7K214 | QEKEQMS QLAERVVA EGLSV R G T EEAV |
| UniRef90_G5JXJ9 |  |
| UniRef90_A4J9R7 | D S K N Q DELCEELI K RQLS V R QVEELI K S |
| UniRef90-J9H581 | S D D K E I ENL A R I I A E G L I V R AVVEEIV |
| UniRef90_B3EN06 |  |
| UniRef90-B7ABJ3 | EPEDRLWWGLKEILEE K G L SVRQAEALLRERL |
| UniRef90_UPI00037A6DB8 | KVDDAAQAQDHLAERVVREGL SVRSTEEEV |
| UniRef90_J0MTC3 | PS AEEMERLADR\\|VTEGVRTTEELVR |
| UniRef90_F9P9F1 | SEKEQNQWFTK\\|LSQEL S V R Q L E Q L |
| UniRef90-A0A011NAJ9 | A HKKARXXXXXWLADDTQE |
| UniRef90_L8DB26 | DAGSD AQETLAARUVAEGL S SVRATEEAV |
| UniRef90-J7MBN2 |  |
| UniRef90_D2Q553 |  |
| UniRef90_A0A031MDN8 | P AEQQTEAARQVVARGL TVRQTEALVRQWL N |
| UniRef90_UPI0002FDCEB | S DKEKQETVAMRVFDEKLSVVRETESLVKRILN |
| UniRef90-R9CAU5 | E D P E I Q CEIA QKVI D E K L S VRELLEKL I K |
| UniRef90-R4KLA4 |  |
| UniRef90_H7D009 | ENEAQYE』AQKIIDNSLS VRETEKLVKKILND |
| UniRef90-Q9K5N1 | ANK NEISSVLNK\LEEELSVRQVEALVQQMNE |
| UniRef90-H0BVJ0 | LA GEHP Q Y VEAWTS D R S P T R DVVMALRAELA E |
| UniRef90_17MZD7 | SNEK EQLLYA TK\KNEG M SVRQUEQLV |
| UniRef90_L7VK58 | E DPERQ』KLAEEI IEKDL S V R E TEKLVNE |
| UniRef90_E5XV88 | D G NLEA Q E DLA S RlV VAE G M SVRAAEEAV |
| UniRef90-U4TPR8 | AKNQQIQSARQVVARELS VRDTERLVKKLL |
| UniRef90_UPI00038181CF | SPELQQREAGRIVVAKGL TVVRQTEALARMKLQEE |
| UniRef90-R7NDC3 | EDKDKQYM\AQK I F DEKL S S VRDVEKLM |
| UniRef90-A3K2X5 | P NPEVLAKTIVDKGLSV R D TEKLVK |
| UniRef90_E1QIM1 | Q NAARMRAVRDQIVA G G L S V R A TERLVKK |
| UniRef90-UPI0003B73B22 | D K K L Q L L A EKIF E K L SVRQAEKLVK |
| UniRef90_U7LXR5 | DKEAMDYI A D RVIS E GL S SVRATEEAV |
| UniRef90-K2EJM6 | P NPEKQRALYEMII K N NL T T VRQ $\quad$ LEEKTKE |
| UniRef90-10HZN3 | S DPEA L LCALSEI RRELSVRQTEAFVRRMNE |
| UniRef90-W6N678 |  |
| UniRef90_A0PX82 | EDKEMQYKMALDI I D K E L S V R Q T |
| UniRef90_M4U161 | CDDERQASLAFMVIDDKNLTVRETERLV |
| UniRef90-UPI00046A09BD | D S P E M M R L A DKVVNEDL SVRATEEAAKS |
| UniRef90-R7CA12 | EDNEKQLEI A EKI AKD HL S VREVEKLVK |
| UniRef90-T0TH91 | ENPEKQLNI F H K V LT E K W S VR TL EKRLQE |
| UniRef90-A6W3T6 |  |
| UniRef90-E8K1W7 |  |
| UniRef90-K9DME4 | K NKELLQKEALKLLIKE KELLTARQVEALVKQMTD |
| UniRef90_T1VXV3 | E A GADA QEVMAARIVAE GMSVRATEEAV |
| UniRef90_UPI0003B3BBAF | SST EEMES LTA NR\VSEGL SVRSTEEUV |
| UniRef90-UPI000473D9EB | QK S K M K P I VERTI R E GL |
| UniRef90-R5RY71 | LGLDD DVLLQEKL CDFVIKNSLL S VRQLEDKDKE |
| UniRef90-Q5H9Z9 | NTENAEEI A QKII I DSNVRQTELLVVKKLQKS |
| UniRef90-W9H774 | D PVEA A KLV VEK GLNV R QVEQLARE |
| UniRef90_U2CJ29 | EDKDLQYRVAQTI I D E GVRDTEKLIRNL |
| UniRef90_U5P6G4 |  |
| UniRef90_R7D8Z6 | S D P EQQY NAAMKV FDEKVRETEKLVKS L L |
| UniRef90-UPI0003B63F3E | LG V K D R D M L K R L A E KVIK E K P S VR QLEEEWV Q |
| UniRef90_14М3А9 | AST EEMEALLAKRII A EGLL SVRRSTEEDV |
| UniRef90-UPI0004053134 | E NVDLQLEVV FYK AVAEELSSVRKVEELVRNL |
| UniRef90-C8RVF2 | K S GPEEQERLLATRVVSE GL S SVRA TEEAV |
| UniRef90_R6BHLO |  |
| UniRef90_E0RW00 | NPDEQYEL A Q KVFIEKL S V RETEKLVVK |
| UniRef90_F3ZSP1 |  |
| UniRef90-M7E6B5 |  |
| UniRef90-G2IS22 | A DCSQLARDIA HKGLSV R E T EKLVR |
| UniRef90_U7D5A5 | EEQVALAKEVVEK GL S SVRAVEERV |
| UniRef90_R6GV59 |  |
| UniRef90_UPI00046FE713 | NDK DKMKALVEKTlSENL S S V R Q L EKLVQE |
| UniRef90-Q8R5P2 | P DEELQKKVLEVI VKK K L NVS Q T EKLVQEMI D |
| UniRef90_A8FJF4 | K NKNKLAPLVKKVVDEGLVRQVEKLVQQL NE |
| UniRef90-M1M1Q0 |  |
| UniRef90-G2KU08 |  |
| UniRef90_D9S1A5 |  |
| UniRef90_R6DCL4 |  |
| UniRef90-A0A024PE38 | KETEQQEKVLTEII EK Q WNVKQTEERI |
| UniRef90-R7F250 |  |
| UniRef90_R5JVN8 |  |
| UniRef90_D7B150 | E DP DLQDRLLAA RVVEE G I IV VR S L E E |
| UniRef90-UPI0003B57F8A | VGGDSEEMQRFADK\\|VNE ELSVRAAE |
| UniRef90_UPI00034B245B | DSAA QDRLLARRIVEEGL S V R ALLE E L |
| UniRef90_V5WLJ8 | VNEQHSDQLIKELYDLIVRQEGL S S VRLAE K |
| UniRef90_E4RRL9 | E S Q E LMLLKLV Q E L T R D SVRKVE ELVK |
| UniRef90-M1NRA9 | V PQQVELARRAAA Q GWSRQTERAVQALL |
| UniRef90-D7UV41 |  |




| UniRef90 L1PC05 | $\text { EDTDKQAEVVYER\\|TAEGVRDTEELVRK }{ }^{100}$ |
| :---: | :---: |
| UniRef90-G6XKD1 | DPTAAARIVLERGLNV |
| UniRef90-JOR5M6 | TVEDPQALAELII R DGL |
| UniRefofo-E8N4R1 | HEAAQNALLKVILEQGLTV |
| UniRef90-UPIO00349A UniRef90 F7NQN7 |  |
| UniRef90-UPIOOO400EB4E | Sİ EPEEQLQUAEEDKKLNV |
| UniRef90-C4Gc | QQQL |
| UniRef90-F4K |  |
| UniRef90-Q1GP60 | DDPEAIARRVVRDG LSVR |
| UniRef90-UPI00028 | ENNDL |
| UniRef90-8ELC7 | D P |
| K2FE |  |
| UniRet90-R9KR | SIEDEEQQKQUAERIUFDEKL SVRDVEK\\|VK |
| UniRef90 UPIOOO3639825 | DVQGELHSRILENGLITVRQSEAQ |
| UniRef90 UPIO0047985A2 | KSKDQVVARTVVEKVLS VRQTEQLI RDLLN |
| UniRef90 W8KL33 |  |
| UniRef90-R5 | DKERALKMAKRVI DEKL SVRDV |
| UniRef90-B8K | QIIQLARRVVAKGL |
| UniRei90-UPIOO0478E9A9 | TDAKRQ1ELAR |
| UniRet90-Q1JZG2 | ESDEDMV |
| iRef90-C2 |  |
| $\begin{aligned} & \text { UniRef90_Q2BQH0 } \\ & \text { UniRef90-R5KIM6 } \end{aligned}$ |  |
| UniRef90- A0A017RXJ7 |  |
| UniRef90-UPI000377B99D | - ARDVEILAEQVVARGVRETEKLAR |
| UniRef90-UP1000470F7D0 | KDPELQKQVFQEA ENGL NVKQLEAR■KE |
|  | ${ }_{8}$ |
| UniRef90_D4IP26 | GAPADQQLRVLKRCVKKGLRAS |
| UniRef90-F812Z9 | DGPRRVE LAERCGQEG WT |
|  | TDQAEMEKLAQRIVSEGL S |
| UniRef90-R5K033 | EDAALQTEAANFIFDNKL |
| UniRef90 UPIO0047EE65F | P |
| UniRet90-M1P2 |  |
| UniRet90_H5SEN9 |  |
| UniRet90_N9U225 | Q ${ }_{\text {Q }}$ |
| UniRef90-UPIO00380D5A9 | TQElVEVII ${ }^{\text {a }}$, KN |
| UniRef90 K2B0P1 | , |
| UniRet90-A3SKT5 UniRef90 F8NB29 | AEKLAKV SKGL S |
| iRef90 ${ }^{-}$A6DAR6 | SNEKTKEDAEKLGKENL |
| PI | PLEQQSSAAAM |
|  | PVVDQLELLAQKAVKNG |
| UniRef90_A1B181 |  |
| UniRet90-D81AB22 | EN |
|  |  |
| UniRef90-V2Z8V9 | DKNK |
| UniRet90-12JAFs | N |
| UniRef90-D5CQJ3 | A |
| UniRef90-054SO |  |
| UniRef90-R5SL99 | RQREAAET AAQGLS VRQTEALVKRLTTE |
| UniRef90_F5V | - |
| UniRef90- 5 | CPENQMEALALCRAVDD EMSVRKVEKLVQE |
|  |  |
| UniRef90-F4A | TSDQLDUYEK\\|LQEKL SVRQTEALVK |
| $\begin{aligned} & \text { UniRef90_UPIOOO4 } \\ & \text { UniRef90_COZA59 } \end{aligned}$ |  |
| UniRef90-16XW43 |  |
| UniRef90-R71ZK0 | KRQYEMAIRMIERGESVRQA |
| Ref90-G9RT | QQQaA |
| UP10 | R |
| UniRef90-UPI0003824FF7 | 兂 |
| UniRef90-R61CP1 | - |
| ef90 B4SEV0 | PGEMQEQLDAWKKIITQQL SVRQTEELVN |
| UniRef90- 17 KQ 14 | DRTDEVAKRVAK EGTPVRKVEALVASTN |
| B5ZC | GHPDPVAALKIVLEQGLNVRQTEALL |
| UniRet90_R6NR | EDKESQYAAAVKVFDE KLNVRETEKLVKEFLLN |
|  | DNEEMQL |
| UniRef90-R5JB14 |  |
| UniRef90 V6Z5E6 | P KEKQDHWFQKIIQH QWSVHQLEKELLK |
| UniRef90-C6E | RD |
| UniRef90-10G | QLIEAADYI QSRDLISA RQSEQLVKKLLE |
| UniRef9-ANQA | s |
| UniRef90-U4WPL6 | ELEDAELQIKLLEEDRELNVKQTETRVKQLLE |
|  |  |
| ef90 R6H027 |  |
| A0AO23VSR1 M7NED5 | EEEQDKYLNYUISQNVRQTESLIR RMNE |
|  |  |



## UniRef90_M1GD67

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UniRef90 C6E9F7 UniRef90-UPIO002DE91B3 UniRef90 UPIO003F70303 UniRef90-G7VKB1 UniRef90-HOUR58 UniRef90_UPI000381FA12 UniRef90_-JGGY6
UniRef90 W7ZTG6 UniRef90-A6CH34 UniRef90-F2JNP4
UniRef90_S6HU25 UniRef90-Q0FV99 UniRef90 H5TDY5 UniRef90-G9EQ62 UniRef90-X4ZTD9 UniRef90-EONJQ3
UniRef90-R5ZXH9 UniRef90-UP10003FBD75D UniRe990_14BBH1 UniRef90-D1B7E7
UniRef90
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UniRef90-R5B4N8 UniRef90-F8ETX3 UniRef90_GOL1R0 UniRef90-Q47U41
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UniRef90-UP100036AD622 UniRef90-K6DBK8 UniRef90-UPIOOO362C719 UniRef90-r8FKT3
UniRef90 GOAEL4 UniRef90-UP10003B3B83E UniRef90 UPIOOO366D5DE UniRef90-UP1000361AD3E UniRef90-X1DCG4 UniRef90 HOJBO2 UniRef90-F5Y2G5
UniRef90 C7NH73 UniRef90-D4MG03 UniRef90-R5YBF6 UniRef90-A0AO23D1W8 UniRef90-A8TXW9 UniRef90-UPIO0031B325C UniRef90-X8K2P1
UniRef90_A0A014P5P6


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GRSRSAIIANTLIRLLH|LTPE|VQEG|LCNHTI GKSRSYIANSLRLSLPEVAL GRSRPAASNLLRLLNLAKPVQELLMAGDLDMGHARALLPL GKARATVANAIRLLKLPEDIQHALVNGQITSGHARALL GKSRSHI ANFLRLLSLPDEVKEHVSRGTLSMGHARAIVGL GKSRTAVTNLLRLLSLLTDEVRTFLERGD:ETGHAKALLGL


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GK S R T A V T N S MR L L K L L D D
GKSQSTIANKIRLLKLPPQVMKD

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

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| S E R R H A R A | L I |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| T | M G H A A R P | L |



| K |
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| S A |
| D |


| S | $A$ |
| :--- | :--- |
| $D$ | $M$ |
| $S$ | $L$ |
| $T$ | $E$ |
| $T$ | $E$ |


| T |
| :--- |
| S |
| S |
| S |


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

SMGHGRA

## E GQARP LLAV

S E GHARALLRLL

T A GHAR TLL L
S M GHAR CLI
$\begin{array}{lllll}D & \text { M G H A R A } \\ \text { T A G H A R A } & L & L & A \\ S & L \\ V\end{array}$
S LG H A K

TMGHARAL I T

S M G H GRALVN

| M G H A R A | $L$ | $L$ | $A$ | $L$ |
| :--- | :--- | :--- | :--- | :--- |
| $M$ | GH G R A | l | I | $N$ |

S A
S
$\begin{array}{lllllll}\text { M G H A R A } & L & I & G \\ \text { A G H A R A A } & L & L & A \\ M & G & G & R & A & L & G\end{array}$
S M G H A R A
M GHA K A $\ A$ G G L
M GHAR A L
L
SAGHARALLTA
SAGHARALL

MGHARALL GL
MGHARALLAL
A GHARA L L L
TGHARALL
A GHARALL
A GHARALLGQ


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|  | 100110 |
| :---: | :---: |
| UniRef90_B1C5A0 | DEQKQQEVVLKEVLK |
| UniRef90-19DJ53 | D D S R L Q L EVLEMI S EK K L NVRETEELIEEFLE D |
| UniRef90_UPI0003B62AFC |  |
| UniRef90_R5VF16 |  |
| UniRef90_W5S911 | K D NQD |
| UniRef90_Q6MGM0 | Q D P K Q IE FA K K V VNE K I A VRKLL |
| UniRef90-F8F2A2 | V D NPADQRVLF GKI I A DA I S VREAEKFAQE |
| UniRef90-UPI000255838D | DNLSSKQLEVYEKILK D G L S VRQ TEALVVS QLK |
| UniRef90_V2TR52 | K A K Q EKI A Q VVVDKSLS VRQTEQLVREF |
| UniRef90-UPI00046E9B92 | KEPAL Q I RVL N D I I D K NL N N K Q TED LI |
| UniRef90-UPI000362F929 | A EADLQIEAA D FI I A E NLSARAVEDLVKKL |
| UniRef90-H7EMT7 | K NSNDRRLLFEKIVGG G GMNVRRAEEMA |
| UniRef90-A0A011QH65 | $A G A Q Q V Q L A Q R V A Q K G L S V R E T E R L V Q C V L N$ |
| UniRef90_D5W708 |  |
| UniRef90_E6PV59 | AKRLLSVRETERLLCARAAQDGS |
| UniRef90_Q49UL4 | K L K K M Q I AKQASREA WSVRELEHYV |
| UniRef90_UPI00030E2B24 | S $\square$ K D G Q Q Y LVA EKVVRKEGL NVRQTEELI |
| UniRef90_UPI00031C6D7F | S G P P Q R A AHEVVNKDLTVRATEALVKRLAE |
| UniRef90_B2KEZ3 | P DLK K R E L L $\quad$ LKLKS GKFSVRQAEQAARE |
| UniRef90-UPI0003B4A2EC | DPEKLAAEVIKRGLSV R D TERLAR |
| UniRef90_A0P500 | D LD Q Q VmL CQK I H HKL TVR DVEKlV |
| UniRef90_B5YIE9 | D DS QKQKEVA Q VIM K SLSV RQTEELVK RLA K |
| UniRef90_R6QFK6 | T D P D K Q A A Al R I I EKG E T VR Dide K K V D |
| UniRef90-R6PUC3 | PTPELQEQAAQ\IADN Q L |
| UniRef90-K0U1J1 | K DK S A M K I A Q A Y E E S WSVRYLEDC!N S |
| UniRef90-I1EP62 | K G K A Q A T A K EVVRRGLLS TGETERLVR |
| UniRef90_A3JM28 |  |
| UniRef90_E1NVG2 | S A S D Q R A VS E V VK K D |
| UniRef90-Q0AKF2 | A NAPDPEA A CEQ IIA R GVRDAEKLARD |
| UniRef90_UPI0002F4015D | DPGKRLELAERAVKE EWTLLRQLE |
| UniRef90_F0GW49 | K D D K RKEALD |
| UniRef90_R4YS89 | Q A LKQSEAARHVVAK DMTVRQTEAYVRNVQEE |
| UniRef90_C4GCA6 | GNKDLQDLAQKAFDQ K M V V R DVEREVRRLQK |
| UniRef90_UPI0003684CE2 | KDNEQMIKLGKVVAA KK L S V R D E R L CK |
| UniRef90_UPI00041F07DA |  |
| UniRef90_U2YS88 |  |
| UniRef90_UPI0003B49E48 | T A S RQAELAKQVVER ELTVRQTEA |
| UniRef90_UPI00047BD96F |  |
| UniRef90_E8LE81 | PKPEQMCEVAEAIDANGWS SRMTEEVVRK L L E |
| UniRef90_V7PWF2 | TDR PEEQMVLFKE GV FKKMTVRDAEK |
| UniRef90_F4FS88 | LSVNNKQELIMKA R K SVNES L TVRRQLEQ |
| UniRef90-R5NZU1 | NIEEDPDTQFMIFEQULK Y |
| UniRef90_A0Y960 | PVEHQSHAAATVVTK G M S VRQTEVLVRSLLS Q |
| UniRef90_E8RGL6 | $V \mathrm{~K}$ D Q P E Q L R Q I R D R V V E E L S VRAAERL |
| UniRef90-D1W605 | $E S P S M Q D K L F K E V Q K N G Y P R K V E E L A A Q L K$ |
| UniRef90_E8LLN5 | DSELLQEKAAKIVV S K G L NVRQTEAFIK ELLK D |
| UniRef90_C2D107 | N N K Q ELL KLA R K SVT D S TVR QLE Q |
| UniRef90-UPI00037F1623 | SKEEEQVQVGRRII K D A L SVRRQTEV |
| UniRef90-K0Q4I5 | S DPTALARAIVSKGMSV R D A ERLA Q N D DK |
| UniRef90-R5EZA5 | E DKGLQLKAAKMILDESLSV RETERLVKRLAKKE |
| UniRef90_V9HH61 | P NEELQLKVVEKVI K N S L NV K A T E E AV NKEL |
| UniRef90-R6UDS5 | GEEKRLAALSKK】AEDSLL NVAKSEKLVNEMLGD |
| UniRef90_J9DG45 |  |
| UniRef90-X1R5C1 |  |
| UniRef90-Q1IVQ5 | ES P E A I RLA QRVAS MSVRQTEGAVVNLLN |
| UniRef90 UPI0004785C2A |  |
| UniRef90-V8A6B6 |  |
| UniRef90-UPI000381673A | SS A A CEAFVQQAVEE Q WSVRQLEQAIK Q |
| UniRef90-W0GKH7 | QA DVSEVKK\A Q Q I I K D M M A ARQVEELVK |
| UniRef90_J9GYV6 | D A Q M M R Q I A K QVSRE S WSVRYLE Q Y V N E |
| UniRef90_K4LC50 |  |
| UniRef90-R7FAR0 | D P A LQ M D TAKRAADGKL TVRD\EK |
| UniRef90-K2BBR3 | DEEKQHDAANIIVSRHLS V R S T EVLI R K |
| UniRef90_R5CWC0 | $\square P$ VEDA A L Q L S TAK NVIE NSVRKTE QLVSKTLK |
| UniRef90-UPI00046888A0 | S EKD Q GRVVDEVLK |
| UniRef90-UPI00047A17CB | T NLLEAQLSLA NKVVE |
| UniRef90_G8QYU3 | VNPAD REDLYRTVLEKDLSV R A T E Q L |
| UniRef90_UPI000470B935 | NSTVA Q I SVLRRTILEEKDLTV R L T E L V R K |
| UniRef90-D9SPD2 | P T L E A Q I K V L D TVVI K K NLNV K E T E L L I E K E L N |
| UniRef90-F4LV82 | Q DKKCRYDLAKKISS DALSVVRQTEQMAKKISDE |
| UniRef90-F2RD53 | EEPEAQDK LA Y R \VAEGL S VRAVEE!V |
| UniRef90 B6BRL9 |  |
| UniRef90_B2S8V5 | ENP T A L A ERVVKEGL S S VRQVEALVQ |
| UniRef90-UPI000405EB3E | P D PV ALLAKRIVDE GL |
| UniRef90_A3S9N7 | VPSKNPEKLAK Q I I A G GL |
| UniRef90_D4IXR1 | A DPDKQYEFAERAQKMSVRDVEREVKKLIND |
| UniRef90_E7GAN8 |  |
| UniRef90-R7RUB8 | $\square \mathrm{D}$ D K D K Q Y E $\square \mathrm{A} \square \mathrm{K} \mathrm{V}$ V NEG L NVR Q T EK L I |
| UniRef90_UPI000469C393 | K EPELLQKSFLLEI I E K NL NVKQTEDR\EQ |
| UniRef90_D5DNK9 | K NHEKQLQVLAAEI I E K NVK Q T ED RVVK L L E |
| UniRef90_B8G0K9 |  |
| UniRef90_D3L5C2 | S S GDD Q TL LARKCVV VHY WSVRRLENEI |
| UniRef90_S2Y0M0 |  |
| UniRef90_U7FPX9 | EDPSALLADLIVEKGLSV R E T E K |
| UniRef90-C1D5H0 | $P \mathrm{~V}$ L $\mathrm{Q} \square \mathrm{DMARDI}$ ADRGLSS VREAERRAQARDSE |
| UniRef90_K1ZXJ5 | L SVVEHQYRLATTLCVQKNWSV R K VEKEAKKLL N |
| UniRef90-T0RJ26 | AVKEREKCI RVAHEAALKNL S S CVRETEKLLK |
| UniRef90-D6SP81 | K D E E |
| UniRef90_Q097E1 | PRLP $\quad$ ELQALLATRVVEEKVRDTEKLVQQK |
| UniRef90_H4GJN7 | LGLLKKRSQ T R V A K K V V Q E G L T VRQLEEQLV |
| UniRef90_R5B6M4 | S DPEMQLAAAKTVIEKGLSVRRA EALLAA QLLKD |
| UniRef90 A0LLI2 |  |

UniRef90_UPI00047A1808 UniRef90-E8TGV6 UniRef90-B1Y6Z5 UniRef90-B1IHR4 UniRef90-W812X0 UniReffo-LOAOL9 UniRet90_C7DEW1 UniRef90-R7DFP8
UniRef90_UP1000469521C UniRef90-D1PRV2 UniRef90-F1Z5R1 UniRef90_-05HS33 UniRef90-J4UY24 UniRef90-UPI000463997F UniRef90-HOTJW4 UniRef90-R1AQM4 UniRef90-Q0BW96 UniRef90_LODB49 UniRef90-M1E990 UniRef90-E4KR48 UniRef90-TOMHQ7 UniRef90-E9S8RO UniRef90-T1C6D8
UniRef90
W4LLS4 UniRef90-EONGX8 UniRef90-A1AXY0 UniRet90_FOKCZ6 UniRef90-N1ZMP5 UniRef90_C8PEW7
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UniRef90 M5U4S7 UniRef90_C8WPW4 UniRet90-R5HEA8 UniRef90-UPI00037F8189 UniRef90-R6Z6N4 UniRef90-C3ATW6
UniRef90 O9PHE9 UniRef90-U5NDK5 UniRef90-UPIO003684818 UniRet90_K1ML94 UniRef90_UPIO00288FB53 UniRef90_WOBIB0 UniRef90-V4TJ16 UniRef90-UPI0003B50693 UniRet90_R5L193 UniRet90-G8R8K9 UniRef90-W7D1M1 UniRef90-S5VMY2 UniRef90-U4TMH1 UniRef90-UPI0003B4D6A8 UniRef90_UPIO00362001F UniRef90-UPI0002EF54D9 UniRef90-A0A024Q6L0 UniRef90-R4VMY9 UniRef90 UPIOOO3B52970 UniRef90_UPIOOO2B44060
UniRet90 UPIOOO28A3376 UniRef90-M1SS75 UniRef90 H4T1K4 UniRef90-R6YG51 UniRef90-UP100026C58CF UniRet90_R6G1NO UniRef90-A81272 UniRef90-B1C6F4 UniRef90-B4CYR2 UniRef90 EOUQT8 UniRef90-E8V5E2 UniRef90-UP1000287ECBE UniRef90-C6Q092 UniRef90-UP100047DCB61 UniRef90-U2QHR7 UniRef90_UPIOOO47625C1 UniRet90_E6PGJ5 UniRef90-UP10002F43E1B UniRef90-UP100016C46AD UniRef90-UPIO0047E1EF9 UniRef90_UP100036A94CA UniRef90_A0A024PD15 AMALI ENIQREDLNPLEEAQGVQRLISEFLTHEEAAQAI AMALIENI QREDLNPIETALGLKRLMQEFLTQQAVADAV SLIENIQRQDLNCIEEAQAYKNLIQEFITQDVLSDRI

 ALIENIQREDLNSIEDADTFQKLIEQYDTQERLSDRV AMVENLQREDLNALEKAVAFRDLNNYGGTQEELASRL ALVENLQRENLSAIDEARAYVELQDKFMTHEEIANSV ALVENOQRANSPYEEGMAYHRLIDDEYTQDQVAQKV
 ALI ENIQRQDLSPVEKAMAYKSLMDYDMTQQQLLAQAV ALIENLQRADLGPLEEAQALRQLIDQFMTHEAVAEQV ALLENLQREDLNPVEEARAYQRLQAEFLTQDEVAQRV A VENLQREDLSPLEEAEAYQAMIQEGLTQAQVSQRL AIVENIQRADLNAIEEAASYRQLMDRFHTQEKLGEAL ALLENIQRENLSYMEEAEAYYNLIDEQYTQDKLAQSV ALIENLQRKDLNPMEEAESFYRLQTEFLTQEELSNKV ALIENIQREDLNPDELAKSYKELIEYRITQEELADII AI ENVQREDLSFFE ALI ENIQRQDLNAI AILENLQREDLTVI
 A LLENLQRENLSVLEEANAYQLLIEKQLTQSEI AKKL A IALIENIQREDLNPIEEARAYQHLIADEEMSQAEI AELV
$A \square V$
REDLNAV
AMA VENTQRRDLNPLEAEAYLRLVDYGLTQEEVARRV IVENLQREQLSPVEEAQAYENMLQQTLTQAQLAKAV ALIENIQREDLNPDDEAVSTSNITKRGYTQDEFANKF AI I ENLQRKDLNPIEKAMSFKRYIDEHKKQDDLARRL ALVENIQRSDLNPI EEAYGYRRMMERNLTQSEVAQAM ALLENLQRENLSAI EEAMAYKNMLEKNLTQEQLSKKV ALIENVQRADLNALEEARGYERUKEFGYSQSDLAKMI
 AMALIENI QREDLNPLEEAQGLQRLVQEFMTHEAAAGAV ALIENLNRQDLNPIEEADGYARLKDFRLTQEKDSQRM AVLENLQREDLSPLEEAEAYQVLMDKALTQVEVAERM A TaLLENLQREDLNFMEESEAYYNLDDHGYTQEQLALST AMALVENLQREDLNAMDQARAMHRLTTEFLTH AI IENVQRTNLNPVEEAEGFQRLVDEFYTQTELAQSLI ALI ENLQRQDLSPLEEAEGYNRLMSEFHTQEALGQAL ALLENLQRENLNAT EESTAYKKLLELSLTQEELAKRL ALVENIQREELDSI EDADSYQRLIDECLTQEAMSDRV AMGA ENLQRENLSALEEATAYQLLVDKQLI AVLENLQREDLNPLEEAEAYEMLMNLKLTAEALAHAV ALVENLQREQLSPIEQARAYAALMKLNLQEGLASRL ALVENLQREQLSPIEQARAYAALMKLNLTQEGLAEQM
 ALIENLQREELSAVEEAQAYQQLMALNDTQTQLAKGV ALI ENLQREELTVIEEATAYAKLLDUHDTQEALAQRL AVALI ENIQREDLNPLEEATALHRLIEEFMTHQALADAV AVVENLQRTDLNPMEQARAYQRLSNEFLTQEQMAQKT ALI ENLQREELTATEEAHAYESLLKMHDTQGALLERRL LVENMQREDLNPLEESQGLARLIEEFFTHEQAAKAVV GQLI ENLQQSGLKPLATARSFYELKHHFMTGEQAKTM AL ENNQREDLNP DKARGFRQLLDEYLTQQELADGV SVI ENGQREQMTP:EEAQAFYEYVQRGYTHDQUAKKV AA ENVQRSDLNALEEAQGYEALMAQFYTQGDLAKVI ALI ENIQRENLNFYEEALSYKKIMEYGMSQEELASRII ALI ENLQREDLNPDEEANAFARLAKEFLRQEDIAQKV
 A $\mathrm{A}_{\mathrm{A}} \mathrm{LLENLQREDLNFFEEAVAYYNLDQEHYT}$ AIALLENLQRDNLNFLEEAEAYYNLIDBSYTQEKLAEAII SII DNLQRQDINSI EEAFAFKQLIDAFYTQDQVANGV ALI EN: QREELTP:CEAYAYQKLLNNRDTQEELAKSL A a Datlentqredtna ALVENIQRTDLNPLEKAQGFKEYMDKFMTQDQLAGRL ALIENVQREDLNAIEVA DAYQA TMNQF DTQEELSLKV ALVENIQRENLNAVDEAMAYQRFVDEFYTHEKISGIV

UniRef90_UPI00047A1808 UniRef90-E8TGV6 UniRef90-B1Y6Z5 UniRef90-B11HR4 UniRef90-W812X0 UniReffo-LOAOL9 UniRef90_C7DEW1
UniRef90 R7DFP8 UniRet90_UPIOO0469521C UniRef90-D1PRV2 UniRef90-F1Z5R1 UniRef90_-05HS33 UniRef90-J4UY24 UniRef90-UPI000463997F UniRef90-HOTJW4 UniRef90-R1AQM4 UniRef90-Q0BW96 UniRef90-LODB49 UniRef90_M1E990
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UniRef90 A1AXYO UniRef90 FOKCZ6 UniRef90-N1ZMP5 UniRef90-C8PEW7 UniRef90-E6MIL7 UniRef90-UPI00026250D9 UniRef90-A1ALJ5 UniRef90-X2GYD9 UniRef90-FOP243 UniRet90_W7CB95 UniRef90-UPIO001DD0873 UniReffo-WOF313 UniRef90-Q1NTF8 UniRef90-X0QLS3
UniRef90 $13 Z M V 6$ UniRef90-R7P5Q5 UniRef90-M5U4S7 UniRef90_C8WPW4 UniRef90-R5HEA8 UniRef90-UPI00037F8189 UniRef90-R6Z6N4 UniRef90-C3ATW6 UniRef90-U5NDK5 UniRef90-UPIOOO3684818 UniRef90-K1ML94 UniRef90_UPI000288FB53 UniRef90-WOBIB0 UniRef90-V4TJI6 UniRef90_UPIOOO3B50693 UniRef90_R5L193 UniRet90-G8R8K9 UniRef90-W7D1M1 UniRef90-UPIo0036B9379 UniRet90_S5VMY2 UniRef90_U4TMH1
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  a

GKDRATA 50 ${ }^{50}$ R1 60

60
EKIVENGQL
70
80
GKSRATVANTLRLLRPPEVQEKVENGQLSFGHARAL




SAGHARALLVL
SPAHGRVLL SL
S LGGAK
NEGHARTLESV
GKSRSAVANSLRLLELDESVRDMVDKGELSFGHAKKLSG

NKSRSHIANLLRLLNLPEQVQAWLKEGKLTAGHARALITA
GKKQSTIANKLRLLKLDNNVRKALLENNLTERHARALLKL

KKSRTQITNTMRLLNLCSEVQDAISADKISQGHAK

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## c

 GK S R S HV A GRSRSATSNLLRLLNAADPVQQLLMAGAL GKSRAAIANCMRLLALDKRVQQYLD GVTEGHGRALLAL GKSRSHVANSLRLLKLPEPVRDMLSEGSLSAGHARALIA GKKRTTVANYMRLLKLPAEVQMGLKNKLLDMGHARALLS



GKSRPYIANYLRLLKLP

## \section*{}



## 

 $\begin{array}{llllllllllllllll}G & A & R & S & H & L & A & N & Y & L & R & L & L & Q & L & N\end{array} H^{\prime}$ GKSRSHVTNMLGLLTMLPE

## a

## a <br> 

 S

$\begin{array}{ll}S & 1 \\ S & 1 \\ S & 1 \\ S & 1\end{array}$
SMGQAR S L $\quad$ A V

S E R H GR A L L K

| $S$ | F G H A R A L L A |
| :--- | :--- | :--- | :--- |
| S M S H A R | $V$ |

$\begin{array}{lllll}S & A & G & A & R \\ S & A & L & L & R \\ I & R & L & S\end{array}$
T M G H A R A
$\begin{array}{llll}\text { A G H A R A L L A } \\ \text { E G H C K A } & & V \\ \text { E R H A R A L I P } \\ \text { L } \\ L\end{array}$

D M GHARA L L A L
T M G H GR A L L G L

L A GHARR TMGHAR

| $S$ | $M$ | $G$ | $H$ | $A$ | $R$ |
| :--- | :--- | :--- | :--- | :--- | :--- |$A$

E M G H A R V L V A L
S M G Q A R T L L G L
$\begin{array}{lllllll}T & E & R & H & G R A & L & Q \\ T & E & G H & A & R & L & L \\ V & P & L\end{array}$
T V G H G K A L A A
$\begin{array}{llllll}\text { S } & E & R & H & G & R \\ A & L & L & P \\ T & E & R & H & A & R \\ A & L & L & K \\ L & L\end{array}$
E M GHARA L L S L
S F GHA K A L L A L
$\begin{array}{llllll}\text { S A } & \text { G H A R A } & L & \text { N T } \\ \text { S E R H A R A } \\ \text { L } & \text { P } & L \\ P\end{array}$

| D M G H A R A $L$ | $L$ | $P$ | $L$ |  |
| :--- | :--- | :--- | :--- | :--- |
| $S$ | $D$ | $D$ | $L A A$ | $T$ |
|  | $I$ | $Q$ |  |  |

S D GHAK Q LL S
S S GH G R
S A GHA R A L L A
$\begin{array}{llllllllllll}T & Q & R & H & A & R & C & L & L & S \\ S & V & G & H & A & K & V & L & L & S \\ S & A & G & H & A & & & & \end{array}$
S A GHA
S
E R HARA A L L $\begin{aligned} & A \\ & K\end{aligned} L^{L}$
T E R H A R A L L KL
S A GHARAALI
$\begin{array}{lllllll}T & E & R & H & G & R & A \\ M & V & K \\ E & M & G & H & A & R & A \\ L & L & G\end{array}$ GK S R P A I A A N A L R L L L A L E E C E
 GK S R S S H I A N F L R L L T L P P E E I K


UniRef90 UPI00047A1808
UniRef90-E8TGV6
UniRef90-B1Y6Z5
UniRef90 B1IHR4 UniRef90-W812X0 UniRef90-LOAOL9 UniRef90_C7DEW1
UniRef90 R7DFP8 UniRef90_UPIO00469521C UniRef90_D1PRV2 UniRef90 F1Z5R1 UniRef90-Q5HS33 UniRef90-J4UY24 UniRef90-UPI000463997F UniRef90-H0TJW4 UniRef90-R1AQM4 UniRef90-Q0BW96 UniRef90_LODB49 UniRef90_M1E990 UniRef90-I4DCL9 UniRef90-E4KR48 UniRef90-TOMHQ7 UniRef90-E9S8R0 UniRef90-T1C6D8 UniRef90-W4LLS4 UniRef90_EONGX8 UniRef90_A1AXY0 UniRef90-N1ZMP5 UniRef90-C8PEW7 UniRef90-E6MIL7
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P EPDRVWA LEQ $\square R T R S \square S V R E A E A L Q R$ D DPA $\square Q \square K$ VYELIQENGY SVRKVEEVVKS DDETKQLELLAQ TTENG WSVKETEEAIK PSE ELIATAA QE I I DKGVRQTEA L PD DVVAAREVVAKGLSVRETEKLAKRVN $P D E T Q E E L I E Q Q V S Q K$
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## PD

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K I K
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LS $\square \mathrm{DDGDMQYQ} \mathrm{\square AEK} \mathrm{\square LDEN} \mathrm{\square}$ S V REAEK VVK HDDPERLVRAVVE KRDSVRDVEALTK PDSNMRLKAAKEIAK KDLDVKNSELLVERLKQ $M$ VGLDEKEQQLI L N S S V PTLELQNEAQMAAAAKKVLALSMSVRQTETYLK PTEKLQKSVLNVVIKKSDNVKSTEVLVEKQL


 $P T V E L Q K E V L E K V D E R S L N V K N T E D L I E K E L$



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en Qred Nple

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G D S A L R R K I SER CA R E E L S V R R
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EDES S L R Q L S E KI I S S K L A A R E $K G S T Q A L A A R Q V V A R G L S R E R T E K L V R R L$
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$\square T$ LAN K $I V R E N L T V R D \square E D I S R E E E \square P K R K Q \square K H$
PDDE
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K DEEDRKK

| D DPEGLA K DKQKFS |  |
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LK K D D E K
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E DEGK R R E V L S KVV A A L N L N N T Q Q T D N LVVGE VLLN D
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P N E
$K G \square S S Q K R Q V E L C K E V V M K G L \quad S V K A D E L T \square K Q$ RPSDE E RRAALIA R\|RQGLT R D A V R Q
P T R A QLD R A LSS I I S D K R LDNVAESEKLIDDQ
A SVQQ VK $\quad$ A NVI VQK QL SVRETEKIVNQ

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A ARKHPDEVRDFV
E D A D T Q AVMLDLI LR RE LSVRRDSER

VGRKDPAEQEEHL
LDEESEQLRR LWEE IK S GRLATVRAAR


LP Q D A Q S A A Y E Q CWRK DSE $\square$ QDN I L NE I IS QK L S S R A VE DK V
D D Q K
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L DEK Q Q QLI

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73EAF0

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-
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\begin{aligned}
& \text { S S S } \\
& \text { G W S }
\end{aligned}
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## GWS

F V T P A


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Q
S

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 A L VE

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 ENHQR
\(\qquad\) EN L
\(\qquad\) \(S L A E N\) I AR RQCRP L E L L A G \(\square R Q L Q D Q G Y S P K T\) I A E K T SLIE NLAR LDDPDEVTQWETFTRLVKEGREVDDIAATF ENLGRQDLSDLAEADLYARYSEMGLSQRAIAERJL E NLQRQQDLTPEEEARGVQRLLARGMTQVAASALL

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\(N\) LQRR
\(\qquad\)

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 HE \(\square\) S LDE N N V T R E A M H P A D Q F E A F R T L

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\(\square E N R A R D D L T D L E R A R D Y L R A A L D A Y Y D Q R T M A E R L\)
 ESDALIENSSQREAMHPADQLHAFDELQKTGKNAAEMGDLL

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 ALVENLQRREDLNPVEETEGQLDLVADRDTQDEVTAAV \(L C E N T V R Q D L D F V S Q D Q A S K R L S F F N G D R E S A A K R L\)

E NEARTADTPLGRAEKMRRHMALGRGEDQDAVIY

\section*{EA DQ LTENV}

A AQI SEN
QR
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V & M & P & A \\
D & L & \(\mathrm{N} P \mathrm{P}\) \\
N & V & L & P & T \\
\hline
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S LT E N TA R R

 I E NRSRKDI S DWERAKEYMRALNEFYSQSEMAEH L


 V ENRSRKDIS DWERAKEYSVALAEFYSQS QMAEHLL \(S L A E N F F Q L A M N P A D A C T A F R T V I D D E K K T V A D D A K A R F\)

MTENGERCD
\(L S P\)
\(M H P\)
MTENGE MHPAE LEE N L \begin{tabular}{l|l|l}
D & L & A \\
L & E \\
\hline
\end{tabular} Q IA GF R A M A \(\stackrel{+}{T}\)
 \(\begin{array}{ll}E & D \\ E & D \\ K & R\end{array}\) LDEN

 S LVENIARRRHSN A L A E N I
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 AL A E N DD R Q DLTTDYE DGKA L R QVENLFPS K T K L A E S L L
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\(N E G A C K\)
\(N\)

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\hline UniRef90＿K0B7F2 &  \\
\hline UniRef90＿UPI0003803C15 & VS D D HER QVAVW \\
\hline UniRef90＿UPI00036812FA & D \(\square\) A A QE ALLH Q K E GE QLVNWRAR D \(\square\) R R A L \\
\hline UniRef90＿A6X7Y4 & A SVEEQKQV WKA NK P K K G ERA S \\
\hline UniRef90－X1BWJ2 & SNDEEKFEAVKK \(\square\) K N A R \\
\hline UniRef90＿V4NR00 & \\
\hline UniRef90＿J2H5G8 & A A R V I G Q E Q R L A A A G D R M I P P A S V \\
\hline UniRef90＿L8TNY7 & GDEDATEELES【 DMDEA D Q L \\
\hline UniRef90＿J8VQ28 & \\
\hline UniRef90＿I9WAI2 & KA LLKPA DRKERAFREAARLDATAQE \\
\hline UniRef90＿UPI00036AF169 & \(\square \mathrm{Y}\) E K A G V R K A L A VA \(\square \mathrm{K}\) \\
\hline UniRef90＿Q8KW84 & \\
\hline UniRef90＿K8WRN7 & LT GTNDHERQVMVWN N A F G WK K E P R Y L R E AVVEE \\
\hline UniRef90＿C5A7R9 & SPAEQREKVRALI A A G S GVKG R A K A A A Q R AVID \\
\hline UniRef90＿R9MQ22 & LVE E A Q Q WV Q EV I E E K G CNVS MVQ S A K \(\square\) K E Y \\
\hline UniRef90＿V4QG11 & \(L\) QP E Q L SKL A T R \\
\hline UniRef90＿W9C0T4 & AYASHPDHQVQLA \\
\hline UniRef90＿UPI00037F458B & VATT DPA QF GHAAQRARDEKARATTKA \\
\hline UniRef90＿UPI0002FDAAB0 & \\
\hline UniRef90＿B9MGX7 & A GTDDK SVQA A L Q E A Y ESGK LR G S \\
\hline UniRef90＿L2EC30 & ATKDGREAVKLLAEKKDDQ Q Q Q AVRMTKAE \\
\hline UniRef90＿V4H960 & CKANGEDTVVHMQEQLAKAQRNGSAK \\
\hline UniRef90＿UPI0002E05BC3 &  \\
\hline UniRef90＿UPI00040DB91B &  \\
\hline UniRef90＿A0A038IUQ1 & LA KLE P D Q Q R A KVa ELVVA A GKD A \\
\hline UniRef90＿UPI0003AAC76C & A \(\square\) T D D H A Q ESAFY DA P T WQRQPSALLRERLTE \\
\hline UniRef90＿L8N100 & \(R \mathrm{DEGQRQELLLEES} \mathrm{\square S} \mathrm{Q} \mathrm{D} \mathrm{L} \mathrm{S} \mathrm{L} \mathrm{Q} \square \mathrm{L}\) A \\
\hline UniRef90＿UPI00030560E6 & T F CKD A \\
\hline UniRef90＿S6B2V9 & \\
\hline UniRef90＿A2SF15 & AGD D N K A VQ T A LQ D A Y E A G L R GRRL \\
\hline UniRef90＿UPI00026CAC30 & ATE D H A LQ I D A F \\
\hline UniRef90＿A0A016QK55 & LNEPYRTQAVEALQAKVAGG \\
\hline UniRef90＿A6YFS6 & \(V L R D K P D Q L V H V A Q Q \| R D D R A R E A E A A L I D G L K\) \\
\hline UniRef90＿J2PSG2 & \(L\) S G D \\
\hline UniRef90＿X1M0K7 & \\
\hline UniRef90＿D4CRD6 & LS Y L K P DEQ K E F LEA \\
\hline UniRef90＿UPI0002E166F6 & P P D Q Q RVVKVQAVIA A A E GKEGHAKSRA QKA ELL \\
\hline UniRef90＿V5YTD4 & KHGEQA EELEK A Q A Q GKAKVTA GTMK \\
\hline UniRef90＿K5C1F7 & \\
\hline UniRef90＿UPI0002484E82 & S K VK D P K Q R K M L L D R S \(\square\) S E \\
\hline UniRef90＿A5VH05 &  \\
\hline UniRef90＿W1S4Y4 & A Y AKTSDPVRQAA \\
\hline UniRef90＿S5ENT0 & E HGEAA GKVLA \\
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UniRef90 R9NLD9

UniRef90＿K8XA92
UniRef90－×1RK19
UniRef90＿ROD218
UniRef90 M6T7K3 UniRef90－X8GWLO
UniRef90－BgCVT2 2
UniRef90－Q2T2L2
UniRef90－A0A023WZP1
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UniRef90 A4JWD7
UniRef90 Q46Q95
UniRef90－UPI0004654383
UniRef90 A0A059E709
UniRef90 UPIO0016C4AF6
UniRef90－UPIo003F8F47E
UniRef90－I6ZIM6
UniRef90 E3XWI8
UniRef90－TOI3E1
UniRef90＿A0A059KGA5

D HE VQQMMLYEYMCENE \(\square\)
CKTFQ】FA LRDY LKE SDDKDVQK QLAELYDDG L L
A GDDDAE IQAALQEAYESGKLRG
A GESHPDLLVLQALDQK DE EEGIISQEAA LIEKT DKD LN K N Y Q Q WL YE YI HENGM LKLLKQVMELRKYRDD HGDKAGAKLAARIESEG

 VE E S A Q A S LL A L
GDAEA DTKLET TAAHNPQSF DHTAQRLRD
VLSANA
PK D K Q D T A LLET IL
LHEACGEAAALELA

\author{
UniRef90_X8MM59 UniRet90 UPI00026CB9AA UniRef90-UPI00037A5091 \\ UniRef90_R6XLX4 UniRef90_UPI00037DF127 UniRef90 D1AS03 UniRef90-B9BFG7 UniRef90_10XRDC \\ UniRef90 N2IPQ \\ UniRef90 \({ }^{-}\)W0EDQ3 \\ UniRef90-UPI0003498F8B \\ UniRef90-W1TPH2 \\ UniRef90 S5W9E2 UniRef90-M4TP03 \\ UniRef90-U2L4E9 \\ UniRef90_R5TRS3 \\ UniRef90_M4XMN3 \\ UniRef90-UPI00039441AE \\ UniRef90_A1VWS9 \\ UniRef90 H0FA04 \\ UniRef90- X1AQT2 \\ UniRef90_UPI000469ACD9 \\ UniRef90 S6KYY8 \\ UniRef90 UPI0003B7A2A9 \\ UniRef90-F1TH31 \\ UniRef90-K1TKH5 UniRef90_R5ECL6 \\ UniRef90-B1F9D0 \\ UniRef90-R9M914 \\ UniRef90-X1TGA1 \\ UniRef90 UPI0002F6D352 \\ UniRef90-H1RZZ9 \\ UniRef90-K9X3K6 \\ UniRef90_W3AL24
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\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|l|}{\multirow[t]{34}{*}{}} \\
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\footnotetext{
lupas_21
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\hline UniRef90 X8MM59 & \[
\text { P DHDRQVM|V|WNNA } \quad 9 \mathrm{G} \quad 100 \text { WKKEPRYDRDAVEE }
\] \\
\hline UniRef90-UPI00026CB9AA & DDHKRQERVLRRA RSAHEVRSLLTE \\
\hline UniRef90-UPI00037A5091 & AGSDT EVQAALQDAYESGK \\
\hline UniRef90-R6XLX4 & S T DEQKEEV \\
\hline UniRef90-UPI00037DF127 & EFEDDAEAVKRLVVAA QRGGFDHEAQKपRD \\
\hline UniRef90-D1AS03 & \\
\hline UniRef90-B9BFG7 &  \\
\hline UniRef90_I0XRD0 & MFATDA \\
\hline UniRef90-N2IPQ2 &  \\
\hline UniRef90-W0EDQ3 & LAEKEQQDLLKTMQSEDCTPSLA QAQRMKKLSQD \\
\hline UniRef90_UPI0003498F8B & KNEQQRQTLLKLLA V S Q DLSLSEIKQKILEELNS \\
\hline UniRef90-W1TPH2 & RFGLEEAVVAPADNEVRKALGEAGARMVEKVIKD \\
\hline UniRef90_S5W9E2 & M NAKDANDAFKWYAENRSKYGSRGASVLQNYLKE \\
\hline UniRef90-M4TP03 & EHGESQEDVKRAKAQGKKKVT R S VT R NV \\
\hline UniRef90-U2L4E9 & V S D D MKELRQRLE \\
\hline UniRef90_R5TRS3 & \\
\hline UniRef90 \({ }^{-}\)M4XMN3 & \S RS D D E VQK QL \\
\hline UniRef90_UPI00039441AB & WFVEAEGAVKAYLWDNNEEVVA WLER Q L A E E \\
\hline UniRef90-A1VWS9 &  \\
\hline UniRef90 H0FA04 & \\
\hline UniRef90-X1AQT2 & AVLRQPEFLK I L ERK \\
\hline UniRef90-UPI000469ACD9 & LLGNKPNALETII K S D SF \\
\hline UniRef90-S6KYY8 & LNEDLAKAI FESLKVPGAPSNRTLIRQARVLAED \\
\hline UniRef90_UPI0003B7A2A9 & FNHTYQQWLYEYI TENGM DKQEQLIEDRPYRED \\
\hline UniRef90-F1TH31 & LNKVEQELLAASFLNDND\NIMKMS Q A A \\
\hline UniRef90-K1TKH5 & LKK DEQNDLLVTMESEDATPS LS QAQRMKR \\
\hline UniRef90_R5ECL6 & \\
\hline UniRef90_B1F9D0 & \(L A L S D N H Q Q Q E R I W F D A K Q P W Q Q R A N E \square R R V I T Q\) \\
\hline UniRef90_R9M914 & KPEEQELLVETIESE \\
\hline UniRef90_UPI0002F6D352 & KDD L K R S V VK Q A \\
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\hline UniRef90-K9X3K6 & KQESD \\
\hline UniRef90_W3AL24 &  \\
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\end{tabular}

\footnotetext{
lupas 21
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