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## UniRef90_Q2Y9M6

## UniRef9o-G2J455

 UniRef90-D2TRR3 UniRef90 D8FTL5 UniRef90-F9ZXE6 UniRef90_UPI00031271A6 UniRef90-D7DI65
## UniRef90_Q1IBN9

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UniRef90-F9ZD07
UniRef90_B0TT7
UniRef90_UPIO0034641AD UniRef90_UPIO0038146C0 UniRef90-Q3M455 UniRef90-UPIO002D41646 UniRef90_B2IVW8 UniRef90_Q1H0F3 UniRef90_UPIO00347AA22 UniRef90_K0C2P5
UniRef90 UPI00025 UniRef90-UPI0002556713 UniRef90_P17090 UniRef90-H0BY96 UniRef90_UPIO00310C452 UniRef90-UPI0003B6ADD8 UniRef90_YOKIU0 UniRef90-B4W289
UniRef90 W0HL33 UniRef90-C6XAM2 UniRef90-F5ST52 UniRef90-Q1YXD9 UniRef90_UPIO003813B4B UniRef90-M4XLW2 UniRef90-S2LFU0 UniRef90_UPIO0035E2802 UniRef90_UPI00035FE683 UniRef90_UPIO0046320FO UniRef90_UPI00047E99AE UniRef90-A6EXM3 UniRef90_UPIO0047CAA70 UniRet90_K9WC05
UniRef90 K8GJB7 UniRef90-K9YC94 UniRef90-D5WCY2 UniRef90_K9QFG3
UniRef90_UPI0002FAC838 UniRef90_I3CDU8 UniRef90_W6M7Y7
UniRef90_A2SDI8 UniRef90_UPIOOO2F90098 UniRef90-UPI000299E2E1 UniRef90-K7VZV1 UniRef90-Q1YUB6 UniRef90-A0A022H345 UniRef90_UPIO0039E687A UniRef90-L8JDH7 UniRef90_K9TKRO UniRef90_U4K523 UniRef90_C3K4L5 UniRef90_UPIO00370B9E5 UniRef90-Q1QCD9 UniRef90_UPIO004664E9E UniRef90_B2JF68 UniRef90_UPI000329FFF9 UniRef90-UPIO004688941 UniRef90_UPIO0030AE505
UniRef90_UPI0002F9F58 UniRef90_I3YAL7 UniRef90-C5ABY5 UniRef90-A0A014P3V4 UniRef90-K9S7W9 UniRef90_UPI0003765E2F UniRef90_UPI00036421F4
UniRef90_C9Y747

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P $\square \mathrm{DVR} \mathrm{V}$ K S R
 MI ELT E RIA PVESAEDSLTLPFELRI RGRLRATTDN GTDV $M L I L N Q R \quad T Q A P A T D S V A L A Y D E R K R S R L K V T L A S G D E A$ MLTLTTRRLPANHHASLLTVSTAEERARSRYRVVADN GEDV
 MLT FT QKKPPSPNAAVTGLSTAEERTRSRHHWQMEDGQAV



 $M L T L N T R I N S A D K V S A Q L V L P Y E S R E N S R L R T A L S S G E E V$ MLVITRRADDPSHWDAELVMSFEDRSKSRLRTTASSGEDV MLTTLTQRKPPDSNATFTLALTAEERTRSRHRFTLEDGKVV
 MLILTEKLDANPDAAVSFTLPLTERTRSRHRFEIDS GEEL $M L T L T E T T N T K E T P D D T L T L P Y D A R Q K S R Q P A T T Q G G D Q V$

 MIVFTRRITEADTVTGTLTLAVDSRDKSRLRVTLDDGREA $M L R V T Q W M D G P A R P D A T L T L P F A L R Q K R R Q R A R L D N G V E V$



 MLTTLNKKI DHADSVVA QLVLPYEMRENSRLRAT LAS GEEV MI K L T Q I L T E V P S V D A K V CL T MVQRRTK S R L R I V L E D G Q D A



 $M L T L T Q R T D S N A V V N L T L A L T A E E R A R S R H R F T L E D G K V V$
 $M \mathrm{~K}$ K F T Q Q I




 $M L N$ FERAVGHDHIDDRVALPFDRRQKSRLRVTLQS GQEA $M I Q L D E R L D S S D T A E D T L T L P Y E L R D R G R L K A E T D N G H E V$






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 $M L$
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 $M L K V L E R L A Y P Q P A S L F L S L S F D L R Q K S R L C T Q L N D G T A V$
 $M L T V T Q R Q P P N P D V V V T L A L T A E E R T R S R H R F E T E D C K T V$






 MLLEDK RMDGNTSVVDDTLTLP YELRDRGRLKAVSDNERDV $M R K I E R R L D P L V A R A G V L T L P Y E A R C K S R Q A A T L D N G E E V$



 MRTLDKRI A P PVVARATLTLAYDARCRSRFAATLDS GEEL




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| Ref90 UPIO |  |  |
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| UniRet90-F5RGP5 G GLFLPRGTILRGGDRLAGNDG RVVAVQAA |  |  |
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| UniRef90-F9ZD07 AI FTGRGTILRNNELLRSDDGRVVQIIAA |  |  |
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| UniRef90-UP10003B6ADD8 GLFLEKGSILRGGEQL ATEDGF VVRVNAA |  |  |
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| Ref90-C6XAM2 ALLLERGTVLRGGDCLRAEDG R I EVVAA |  |  |
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| 90-UPI00047CAA70 GVFLPRGTVLRGGDVLVTEDGS LI LVLAA |  |  |
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| ALLLPRGTVLRDGDVLVADDGA LVRVVAA |  |  |
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| UniRef90-UP10002FAC838 GVFLDRGPVLRHGDGLTGEDGQT I R V QAA |  |  |
|  | LLD P R GQ L R |  |
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| UniRef90-UP10002F90098 FLRLPRGTVLQDGDILLDETSEDRVRIVA |  |  |
| UniRef90-K7VZV1 FLREARGTVLHDSDILTNETESIYMRIIA |  |  |
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| UniRef90 B2JF68 |  |  |
| ef90-UP1000329FFF9 GLMLPRGLLLRGGDILGSEDGSE |  |  |
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| GLD |  |  |
| GVVLPRGTVLADGDVLVADDGG LVVRVAA |  |  |
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| UPI0003765E2F AVFTTRGTVLRDGDLLTGEDRRVIAVVAA |  |  |
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 UniRef90_UPI000367F7E6 UniRef90_U3QMV2 UniRef90_UPI0002377A7D UniRef90_G8M6K2 UniRef90-V5PWS6
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UniRef90_D015R6 UniRef90_UPI0003B528D0 UniRef90_K9T949 UniRef90-K9XE79 UniRef90-F9UCJO UniRef90-HOJIU2 UniRef90_G0A9Q8 UniRef90_L8MLS1
UniRef90 Q31H67 UniRef90_L1LS53 UniRef90-Q8XXT2 UniRef90-W6M1U1 UniRef90_U7P6K7 UniRef90_UPI0003706A4C UniRef90_UPIO00368E7C4 UniRef90-A2S995 UniRef90-UPIO0035FCCB2 UniRef90_V5FIY4 UniRef90-A0A011QGY5 UniRef90_UPIO004256933 UniRef90_UPI0004694E8B UniRef90-N6XGH8 UniRef90-F0JE34 UniRef90_UPI0003496243 UniRef90-K9XZB7 UniRef90-W1N262 UniRef90_UPIO0038007E6 UniRef90_U2ZVR6 UniRef90_U7FTS4 UniRef90-I3BUZ3 UniRef90-H2IBY7 UniRef90_UPI0003B2FAD5 UniRef90_UPIO0036F3C22 UniRef90-E6PMP6 UniRef90-V4JPM8 UniRef90-N2J689 UniRef90-K9SXD7 UniRef90_UPI000377BE2E UniRef90_UPI00047D6EA8 UniRef90-UPI0004767FD1 UniRef90-G4M6L6 UniRef90-H2FUQ2 UniRef90-Q0VKY2 UniRef90-Q2SDQ0 UniRef90_Q9FAS4 UniRef90-I1YJC4 UniRef90-A6VD00 UniRef90_UPI0003B43395 UniRef90-R1GZ37 UniRef90_UPI0002FA6F4F UniRef90_E6VOZ9 UniRef90_UPI00035E82AF UniRef90-U7QGU6 UniRef90_UPI0003955266 UniRef90-H8GNX7 UniRef90_UPIO00362618A UniRef90-B8HW49 UniRef90_V5C1X9 UniRef90_UPIO00382A6B4 UniRef90-K1Z704 UniRef90_C4K912 UniRef90-E2CHN9 UniRef90_W7QG49
UniRef90- A9BUC3 UniRef90-F2L7X3 UniRef90-M7CRQ9 UniRef90-UPIOOO347F42F UniRef90-A1WIM2 UniRef90_N8Z3C8 UniRef90-M5DQG6 UniRef90-Q21P93
UniRef90-G6YWB9 UniRef90-G6YWB9 UniRef90_B4RSYO UniRef90_17AAY7

1 MLVIHRRTTPQASWSAELHLTYEARSKSRLRCFSVEGEDV MLKLTTKJPNPPKTTATLTLPYEKRIITRQR|VMLDQGLEA $M L K \amalg D K L L S A P H G \square A T K L V L P F S E R S K S R Q R A V L D N G E E A$
 MLTFTKRCDDHGKPDHSLSLPFETRQKSRFRAQFEDGTPV MI EFTQVINVPADAESTVHLGIDARIKSRIKDMLDDGHEA $M I R L T R K S D Q A V D T G V S L T L T Y D Q R I R S R L R V L L D D G R E A$
 MLLRLLTEQANTTEPVVGGLLLPMETRVKSRFRATLDTGTEVV
 MLKLTERLGPIEQAIDDTLTPDELRDRGRDKAQSDGGREL
 $M L K V S G F A S P G S V P G D T I T L S Y Q M R Q K S R L L V R T E G G F E A$

 MLVVQS RCAPRDTWDAELHLTYDARSKSRLRATTSAGEDV
 MLVI HERTEAQASWDEELLLTFEARSKSRLRCFTVKGEDV

 MLKLTKRLGPADRADDTLTLPFERRMLGRLRATSDAGRDL MLKKLIERLD NESKATDELLLDFDERKRGRLKAVTVNGQDA $\begin{array}{lllllllllllllllll}M & E & A & F & V & V & Q & G Q A P & V & D & S & V & E & L & T & F & E\end{array}$





 $M L V L T Q L V R P E$ GA $\quad$ DA P T L S L T A E ERRTR




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 MI RFT QVINSEGRDNFTVCLTMDERTKSRLKVCLNNGDEA

 M I E F T E I I K A S DVVREA T I H L G DID S R D
 $M L A N K L M P Q G L K R A A T I E L E W D V R$
 $M L Q V S K C L Q A M G Q K R A S E V E L D W D V R Q K S R Q K \| E L S S S S Q T V$ $M \operatorname{L}$ K L L














## UniRef90 D4TQH6 UniRef90－K6W2B0 UniRef90 DosQP2 UniRef90－G4T1M7 UniRet90 N8YEL5

 UniRef90－J2ZPQ5UniRef90－A0A031GSG5 UniRef90－UPI000464FA1D UniRef90－A0A031LPT5 UniRef90－A0A011PDV6 UniRef90－K9RDS7 UniRef90－R9PU09 UniRef90－BoJR63 UniRef90－A0A024IADO UniRef90－UP100039D2BC3 UniRef90－UPIOOO3487BB6 UniRef90－A4WEJ6 UniRef90－181429 UniRef90－UPIO0041ECC10 UniRet90 D7E422 UniRef90－C5BUN8 UniRef90－A0A009YUY6 UniRef90＿A4SY43 UniRef90－B1XHX4 UniRef90－UPI00035D7840 UniRef90 W8ZWL7 UniRef90－UPIOOO3A49D56 UniRef90＿UPIOO0464A12E UniRef90－UPIO00412C50A UniRef90－UPIO0047AA962 UniRef90－Q2JK35 UniRef90－R4YRR4 UniRef90－K9YJ02 UniRef90－R4VKJ1 UniRef90－UPIO003FD1E98 UniRef90－UPIo003A6A37A UniRef90－V4YN96 UniRef90－U5DFC0
UniRef90 UniRet90－K9SEA3 UniRef90－UP1000377DCB2 UniRef90－K7A3F9 UniRef90－UP100035C1AB6 UniRef90－E7RY00 UniRet90＿L8N5T2 UniRef90－C8PXEO UniRef90－B0BYN2 UniRef90－UP100034CF7DF UniRef90＿B8KGH2 UniRef90－A6VTV9 UniRef90－E1JTD5 UniRef90＿ABYCE2
UniRef9O＿K9RPP9 UniRef90－X0QZ20 UniRef90－G7LUR9 UniRef90－V4RHP5 UniRef90－K8NY38 UniRef90＿UPI0003778407 UniRef90＿Q8DJ62 UniRef90－UPIOOO4764B4C UniRef90－U9VU87 UniRef90＿K9GQN6 UniRef90－Q5E729 UniRef90－UPI00045E66B0 UniRef90－F5SNTO UniRet90 E6QCR8 UniRef90－KgUAZ4 UniRef90－A814S6 UniRef90＿UPI00026272C2 UniRef90－Q161S6
UniRef90D D4ZV96 UniRef90－H5WP47 UniRef90－Q1MZ28 UniRef90－UPIOOO25577C0 UniRef90－XORGC9 UniRef90－W0ABS5 UniRef90＿O06708
UniRef90 $19 \mathrm{LOW7}$ UniRef90－UPIO00373A201 UniRef90－UP10003B64E94 UniRef90－I2JF47 UniRef90－D8K8X2 UniRef90－D4YZJo UniRef90－UPIOOO3B44188 UniRef90－A6FSJ3

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MLI LITKLKSAHGHTAFDLVLIPAEERRRSRYRLILENGQE\｜


 MLTVHEVIPHSGGAADHITLDHDARHRRRWYYTADHGTAF
 $M K D Y T Q R D E A E D Q A F E T V Q L N F D R Q K S R F R A T L V S G C D I$
$M H F A E S F A A A D A S A G D R L S$ MHFAESFAAADAPAGDRLLLPYEARRKSRQRVRLESGDEL MLTFTHRLNSTSVVNLKLSLTAEERARSRHHFQASDKQMV MLKVYQTLHHHGPVHHQVVLSYELRKKARDKAQTETKQDI

 MK TYTGRLDPAAQAQHFLY DFDTRQRSRFKAQTQQQQAV MLTLMQKLDVDVAVHLILELTAEERTRSRHRFTLPDGTVV ME UYTQRLEVVTENFDVIELTFDTRQKSRFRATLKNGVD LILTQKYQPQAARAQELKLPFEDRNKSRFSETLSDGREA MLVCTQRMTLSNDVSVHLTLPAEERSRSRYRFEKPHCPVV MUELVAKVNS $\square G K P H A Y L S L P D D R D K S R L V T L D D G R S G$

 MIRATSVLPAGTPADTVLLDFEARRRRRVAMSAKGGMSF MHTVTKRLSHEAKKLVTATLPIAEDRTRSRARLALDGGGEA MKIYNQRLTHQQQTDLFLQDFDTRQRSRFRATLQNGEAV MLVFITRKLSKAEKADLTLACLTAEERTRSRHKFQTPEGQTV MLTLTERLDRHVQVNLTLPLTAEERRRSRKQFTTAEGVTV MVTYVRVLPPREAVGATLRLDHEARRKTRQRVAGESGLLA $M L E I Y Q R L G T H Q D I H T Q I E L N H E Q R S K G R L K L L G K N G E E V$ LLVAHTRLNAPAPSLELSLTATERTKSRHWFVTTTGERV MKI FNTRLSTQYQADDYLLLDFDTRQHSRFRAITVSGEAV MKLLTQRLDQAETATATATLDLATRLKSRAR\｜TLDDGREA MLRATRVLPSGEPPDDTVTLDHDGRHRRRMVLTGDHGTEF MI RATQVHPPGTEAADTVVLGFDDRHRR MLVLRQHASGGQPADELVLDFDRRCKTRLLTRSAAGEEV MFTLTQLCPTPDENALHLSLTAEERCRRRLHCHSDEGESL MYVFTQKASSADEPTAVLLALTADERTRS MDRATRVAPAHESATGSVT PMAERHRRRYRYSISSGEEI MTRATTVVRRPEKVADEI CGTMQERTKSRLKVMDSDGSEA MKIYTQRLLSTSDLTAEQLCLDAHARHRRRFAFTADGGLSF MKTUTARLDDHSQSADRLPLAAEERERARHRFLDPGGEPCV MIRSTKVRHPDRVVDTVTLDHARHRRRVAMTADGGLEF
 MLKVTKVIPQGLKRAATVELAWDQRQQA MKIFTQLVEPQGKSSETISLSFDDRKRGRПKПKTDSGDD MFEVHERLGTHEPVVAKVTLTHDQRDRGRLKLTSDTGEEV MLVAQQVIGTESSAFDHVYLDFDTRQRSRFKAETQHHADI MRRПHADEPHAHDPDDVTRTLAERRRSRQRПDLDEGREL MREAGLVLDWDTRSRSRFGARDSRGREL MLVLRQFCQEGVPVA EELVLPFELRTKRRLLTQTADGEEV
 R R GVDGPWADSVRLDHDLRNRRRMVYTTQGGRGA MFD【HRRDDGPRAADDEIYLDHLQREKSRLRTQTLKGSEA RKGHWSGPAETCTHDYDGRFKRRKRLDSTDDGREA VLGQRLQSSSKATEQLPLTAEERTVLRGRATTSCGRPF



UniRef90 F1Z7X0 UniRef90-F2IZB6 UniRef90-HZL4U5 UniRef90_J5PVOS UniRef90-L6IF16 UniRef90-D3NWP3 UniRef90-UPIO0047850A9 UniRef90-W0PH80 UniRef90-UPIOOO25562F8 UniRef90-W4HNI1 UniRef90-UPI00037E8676 UniRef90-UPIO0035F0277 UniRef90-K2JSB6 UniRef90-A2CDZ7 UniRef90-D7A8Z6 UniRef90-UPIO00200152B UniRef90-K9EJP4 UniRef90-Q7U317 UniRef90-B7RND7 UniRef90_UPlooo35D343A UniRef90-F2Z603 UniRef90-UPI000301E441 UniRef90-UPIOOO469D242 UniRef90-G8PTQ9 UniRef90-K9Z1W3 UniRef90-A0A037ZIP7 UniRef90-B5IIQ1 UniRef90-V8QS10 UniRet90_C6XQA3 UniRef90-X7EH30 UniRef90-K2JH55 UniRef90-M3IYD0 UniRef90_MOL052 UniRef90-B6B305 UniRef90_UPIo00469432B UniRef90 A4EHT4 UniRef90-B9QWW0 UniRef90-UPI00046AF7C3 UniRef90-UPI00046A408C UniRef90-K2PPM2 UniRef90-UPIO00415E43C UniRef90_UPIO00462EBFE UniRef90-WOJZE5 UniRef90-V6F4L1
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UniRef90 A3K5Z9
UniRef90-Q9AQT2 UniRef90-UPI00036DB31A UniRef90-A3V5C6 UniRef90_UPI0001D2EF71 UniRef90 Q0G3L0 UniRef90-UPIO00225F178 UniRef90-J4IQ29
UniRef90-UPIO003799ACD UniRef90_K2MRB0 UniRef90-G4RA39 UniRef90-UPI00046A3B3D UniRef90_B9J8M0 UniRef90-AOAO58ZNW5 UniRef90-B9JR76 UniRef90-UPI00046EF109 UniRef90-UPI000372D25B UniRef90-Q0FQX3 UniRef90-O3AVR5 UniRef90-H4FB65 UniRef90-Q5LSQ1 UniRef90-X6KY20 UniRef90-UPIO0040D7D43 UniRet90_B1ZHN8 UniRef90-A0A059IR67 UniRef90 UPIOOO2379932 UniRef90-Q98CZ2 UniRef90_14YW12 UniRef90-W8RUE4 UniRet90_V9VX83 UniRet90-UPIOOO37F9CE7 UniRef90-UP1000237D97E UniRef90-B21D54 UniRef90-A5GWV2 UniRef90-UPIO00362C78A UniRef90-W1LBY8 UniRef90_A8TMF5 niRef90_HOHKJ5

T A REVLPADSLAADF\|VLDYEARHRRRFRY\|ARGGTDF $M I R A T E V L P A G S A P A D V V T L D R E D R H R R R A S L T G E N G L A F$

 PALVT DRITLLDHEARGRRRLAMTTDGGLDF
M T R T VQK $R H S G L$ S HGHD A A
$\begin{array}{cccc}H & D & A & P \\ T & T \\ \text { G A A } & \text { S } \\ \text { G }\end{array}$ $\begin{array}{lll}L & H & M \\ V & V & L \\ V & S & L\end{array}$ TFEQR
 D Y E
 GATDTVS DTVAL TYDQRLVRRKKLMTAA GEAB I
 ILLVVERLPD QAPWPA QLPLAA DERTSSLRGHRRSSAC GS D L LVLDDQRLA A A D Q A D L L L $\square K R S$ GHWDNAHDCCVLTYDERGLVRRKRVLDTAHNEGF
 MLVADTYLGHEASAHA TVVGB HRK GHWSGPADPCELDYTERFDRRKKLTTTSSGQSF



QA A PKARM
S D T ITTLDE T




IR K T GHWSKAYDRVSLNY D DRFLRRRKRLTTAAAAAF $\square$ V $\quad$ RKAGDWSGPAEVRALDYAARFLRRKRLETAGGKPF $M \square R V A S \square K P A G E Q S A D T I T L D R E D R H R R R A A M T A A A N G L P G$ H A A H A D T I T T P Y D D R F L R R K R L D T D G G L S F

 HRSGHWSGAA D V VTLDYDSRFLRRKRDVTDGGLAF MLVADSYLGHRDDPIVRVVLSETERRRSRVRTETADGRED

PRSTEAGTVTLAAADRHRRRVMLTGDDGAP F
 $M \square T A T R D L P A G T A P A D T L T L E R D D R H R R R L V M R C D G K T V V$
 SGEIVDRIVLDHGERHRRRVALRGLGGLAF $M L R A T T R K P A P D A V A D T I T L D H A A R L R R E G A F T A E K G L A F$ KRGQGA GASETVVL DYD GRFLRRRKRLVAES GLLAF MHRASRVLPAGSGAADHIALDDYARFLRRKRLVAAS GAEF $M K Q I I N I L P A G S D A A D Q F I A D Y E G R H R R R I V L T L E S G E R V$ LQTHAHAHGPVAD HVSLTYDAR LLRRKRLVTDHGEPF GA WQEAA DTATTLLD WDERHRRRRSSLTS DQGEP F

A D DTVVALDYEGRF LRRRKRMTSRSGLLSF
L P D A T P A A M E L P P L S A D Q R TVVLR GRRR T V C GR DV $M \square R A T R Q L R R D S D V V D R V D G H G D R H R R R M A M R G V G G L A F$


TAQDRCVLNYDERFLRRRVVTTAQGQDI $M Q R \nabla T S Y L P P S S N P D D R V E L P H D L R H L R R K L L H L E N G E M V$

 $K \vee 1 R R D A L S G E V D R E R D H G D R H R R R M A M R G G G L S F$
 $M Q R A T S$ I MP A A A QPEGTVVLAHDERHLRRKLLHLDDGEMV $\square R$ RTGHWSEAD DRVTLSYDDRFLRRKRLI TVQDKA F
 $M \square R A T R V I R G S G E\|V D R\| V L D S N D R H R R R M A M R G V G G T A F$ RHAAADSALDDVVTLDYDGRLLRRKRJQTAGGQDF T A R Q Y S D H T H D P T D C L S S M T Y D D R F

 $P \vee D Q \vee \vee L$ $M T R \square A E I L P A G S S A A D V F A A D Y E G R$ MLKVTAVLGRE GDQRDELYLPSSDLAR R RMMLHLRS GTKV MLRASSVLPRHEPAADVVVLDYDARHRRRIRRMR KSGVEV $V L T Q Q L D G B A S A T P R R L P L D A A E R R V V R G R R Y G V E D G R A V V$ $\square I E R G A F T G D A D D T I T G D E A Q R H R R R M A M V S D N G D A F$ $M L R V T S Y H P A G T P A D E Y V T L A H D Q R H L R R K L L H L Q N D E M V$


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| :---: | :---: |
| UniRef90-F1Z7x0 UniRe90 F21ZB6 | LLDLARAVHLRHGDGLKLSDG R R MVEVRA |
| UniRef90-H8L4U5 |  |
| UniRef90-J5PV09 | G |
| UniRef90-F6IF 16 | LLDMARPVHLRDGDML RLDDDS MV |
| UniRef90-L8LMB | YLRLNRGEIIEDGD\LLSETGEDA!A! AA |
| UniRef90-D3N | LLDLPRAVALDDGDGLELGDGS FLRVVAA |
| UniRef90 UPIOOO47 UniRef9- Wophe | LLL ${ }_{\text {L }}$ |
| UniRef90 W0PH80 | VLV TRGGFTLRDGDALVADDGG |
| UniRef90 W4HNI1 |  |
| UniRet90-UPI00037E8676 | LLLDLPEAVALRHGDGLLLEDG RIVRVEA |
| UniRef90-UP100035F0277 | LLSLKEAI LLQTGDALLA DGDQLIEVVAA |
| UniR | FLDLPQTISLQAGDG |
| UniRef90-A2C | LLQLPRQGPLQPGES |
| UniRef90-D7A8Z6 | 矿 |
| UniRef90 K9EJP4 |  |
| UniRef90-Q7U317 | LLQLPRDGALQPGDQLSDAAGTARVEVTAA |
| UniRef90-B7RND | LVDLPHTESLNHGDAFQLQDG KLIEVIAA |
| UniP | A |
| UniRef90-Y2Z603 |  |
| UniRef90 UPIOOO301 | LLDLDKATVLDDGDALKLEDG RLVAVRAA |
| UniRef90_UPIO00469D242 |  |
| UniRef90-K9Z1 W3 | KLNLERGNVLMEGDILTNDDESFFVE |
| UniRef90-A0A0372 | LLDLAETTSLDDGDALELPNGGRIGIRAA |
| UniRef90-B5IIQ1 |  |
|  | HMHIERGQVLIPGDVLVADDGG LI QVEA |
| UniRef90-C6X | D |
| UniRef90 - X7EH |  |
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|  | RSGDALVLEDGA LVVVVEAA |
| UniRefor- B6B305 | GVDLSKTTSLADGDALEMEDGS FVEVRAA |
| Uni | 11 DLVQTTSLDHGDALELED |
| UniRef90 A4EF | LVDLA TTSSLDHGDALELSDGS LVEVKAA |
| UniRef90-BgQWW0 | VVDEANAVHLHHGDGLVEDGR EVLA |
| UniRei90 UPIOO046A408C | TVDLEQTTSLNGDA |
| UniRef90-K2PPM2 | LVDFPSAVALADGDALVLDDG RLVATRAA |
| UniRef90-UP100 | LVDLQQTVSLEDGDA |
|  | V |
| UniRef90 WoJZ |  |
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| 31LD2 | A ${ }^{\text {a }}$ |
| UniRef90-UPIO003F75BD7 | KDGDALELEDG RLILVQA |
| UniRef90-F7UN |  |
|  |  |
| UniRef90-B0UE | A |
| B0Uk83 | VDA |
| UniRef90 Q9AQT |  |
| UniRef90-UPIO0036DB31A | LLDLKQARLLAHGDGLVLDD DR |
| UniRef90-A3) | VVDLPQTTSVDAGHVFVLDDG RQI AVI AA |
|  | ADGDG |
| UniRei90_UPIOOO225F178 | DPGDALQLEDG RLI GVAAA |
| UniRef9- 411229 | L L P PRERPLTPGDRLTDAHHQVHVLVTAA |
| UniRef90-UP1000379 UniRef90-K2MRB0 |  |
|  | KLV |
| UniRef90-UPIO0046A3B3D | A |
| UniRef90 B9J8 | MVD |
| UniRef90-B9JR76 | MLDLKEAVLFADGDRLVLDNGDQ I AVKAA |
| UniRef90-UPI00046EF 109 | LLNLAKVQTLRDGDILLLPDGAGIEVKAA |
| UniRef90-UP1000372D25B | LLDLPEPTVLDDGDALVLLODG RLVWVEAA |
| Uni |  |
| UniRee990 ${ }^{\text {Q3 }}$ | A |
| UniRef90-H4F | A |
| niRef90-Q5L | A |
| UniRei90 - UPIO0040D7D43 | ditle |
| UniRef90-B1ZHN8 | LLDLGEATVLDDGDALALEDGRLI WVEAA |
| UniRef90-A0A05 |  |
| UniRef90 UP10002379932 | QTTSLNHGGALILDDGREVElQaA |
| UniRet90 UPI000319398B | A |
| UniRef90-O98CZ2 | LVD |
| UniRef90-W8RUE4 | LVdipatVSLDHGGVLLTADGGEIAVEAA |
| UniRef90-V9VX8: | A |
| ef90-UP10003 |  |
|  | LLDLDHARLLHDGDGLRLEDG RII RVEA |
| 90 UPI00041384E7 | A |
| Ref90 ${ }^{\text {- }}$ | A |
| UniRei90 UPI000362C78A | ${ }^{\text {A }}$ |
| UniRef90-W1LBY8 | MLDLKEAVLFAHGDLLVVENGD LI EVVAA |
|  | LLDLPKAVAMAEGDG |
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## UniRef90 C8S0Q9

 UniRef90_UPIOO035D7226 UniRef90-UP1000464FBFC UniRet90_B8EPU8UniRet90_W6W0Q UniRef90-C7JF66
UniRef90
U7V1B2 UniRef90- UPIO00478B636 UniRef90 E8S4M9 UniRef90_UPIO00378ED7F UniRef90-UPIO0047517AB UniRef90-UPI00030EC961 UniRef90-B3T4E3
UniRef90-UPIO004782B1A UniRef90 - I1ATL9 UniRef90_UPI0004735AC4 UniRef90-A2C4R8 UniRef90-T1VIH3
UniRef90-K2QXR9 UniRef90-AoNX64 UniRef90-UPI0003801F74 UniRef90 DOCNS2 UniRet90-A1R1C6 UniRef90-G2FWQ5 UniRef90-17DUJo UniRef90-A9W193
UniRef90-Q1GJQ1
UniRef90 A
A UniRef90 UPI000366FE63 UniRef90-UPI0003B7B9B4 UniRef90-V7EJG0 UniRef90- A8LRR8 UniRef90-UPIO0034AEF16 UniRef90-X7GIV9 UniRet90_POC145 UniRet90_O11EW3 UniRef90 X6G1B6 UniRef90-UPI0003600D47 UniRef90-E0хтм9 UniRef90-U4V2Q7 UniReffo-TOCA10 UniRef90-A4WR77 UniRef90 LLME11 UniRef90-Q05V32 UniRef90 UPIO00469AC79 UniRef90-UPI0003701CBB UniRef90-HOQJ38 UniRef90-O87398 UniRef90 Q8FQX1 UniRef90-LONJ04
UniRef90
D4BVD5 UniRef90-UPI0003FE5394 UniRef90_W5XY48 UniRef90-A9DDB7 UniRet90-Q6UR75 UniRef90-F5R8N3 UniRef90-F4FG53 UniRef90-UPIO00372F6F9 UniRef90_C5AX29 UniRef90_K9P8A8 UniRef90_SOUCJ3
UniRef90 C4UA49 UniRef90- UPIO004715A4B UniRef90-L9X908 UniRef90-UPIO002260393 UniRef90_N9Y5G7
 T D P P VDIV T L P H D L R H L R R KL L H L S N GEMV MQR पIEILPPEAAATEIFAADYEGRHRRRLVIDLQSGEKV

TADLSP HEGNF
A EVA
T E RLL
REAKVDD
MPRATTMPAPAGARDS TT
 $M I$ IL K EK DHAEK Q GEQQ FL S RTEMEKSHQRKNTEDGMEI

 MQRATSFKPATDAPDGVVVLPHDGRHLRRKLLHLDNGEMV
 $\square R R N G D W D E T H G T V T L N Y E D R F L R R R M L R T A Q N E E F$ A S H HKEKVVLPSTGLVKR QQRVTTMHGKEEL
RKGQWQDAA
E Q L L H H L
 PH D E S P R D C V V VL D Y D A R R F LAR R K VL

PFDSVVL
$\square$ T R LGKA H GA T D T L SL

IR A HEVVIDA VPASHIVLSERWEAQKSRCRKTTR DGQDDL $M \| R A T S V T A K F D R A F D T I T L D E T A R H R R R M M M R S D N G D E F$



D E L R L E S D D L A R R V F R K R T A A GR E L


 HRKGQWS GPATLCALDYS DRFLVRKRLETVEGEAF
$\qquad$



D Y L D L D QWQA QKNRFRAETAQG $\square \mathrm{L}$ L K AKD HI SLSYDERF LRRRKKLVSDNGFEF
P T DK T P L H T A A A H DQRHLLRRKLL HLD NDDVV
E TVV VL D DT ERRRSSRLRVVTTDA GT DL

A DEGT L E RVVI EADRRQRSRFRTTT DAGTDV
ERVVI DAENRRRSRFRATTD GGT DL PENKK $\square E D T$ I TTLTYDQRF $\quad$ TRRKK LVS DNN F GF
 H H T D A RVVL T Y DERF LIRRRVL T T E T GERE K R VD A L WL D DVEA Q K R I L R K N TE G GR D A APASGTI ALA HDERHLRRKVLALTNGDKV


Y E S DHLVKRVQRVVTDHGKELL
ERVVVDA

$V \vee D P \square D \square T S E$
 N E K I K K D T I T L TYY Y D R F D R R K K L V S D N K V E F A P DRVSDTVVL DYDAR LMRRKRLVGRDGLAF E E K V A L P S S E LV K RVQRRV T T D H GR D I



IAVDETERRRSRFRTTAE DGTDL
L V L D
D ML AL D QWEA QK N RLR KK TVA GVE I


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UniRef90_C9KIW8 UniRef90 S4XT46 UniRef90-Q28RJ1 UniRef90-A6WVR3 UniRef90_Q18EB5
UniRef90-IORI13
UniRef90_C7DA53 UniRef90-UPI000467D37C UniRef90 K8W0W1 UniRef90-R7ZFB7
UniRef90 W7D517 UniRef90-W7D517
UniRef90 UPI00029AD192 UniRef90-A4GJP4
UniRef90_UPIO0037A2D1A UniRef90 M0E3D2 UniRef90 F7VS65 UniRef90-WOJKX2 UniRef90-M0B767 UniRef90_UPIO003636BA7
UniRef90 B2SZD1
UniRef90-A3VEP4
UniRef90-UPI0003760093 UniRef90 UPI000463BA23 UniRef90-UPI0003606471
UniRef90-K5YZ94
UniRef90-D5DHZ0
UniRef90 UPI0002F5E305
UniRef90-MOLHZ4
UniRef90 KOIM50
UniRef90 UPI00035FA75D
UniRef90_UPI000369BA41
UniRef90_UPI0003B4A4A8
UniRef90_A6DVR2
UniRef90 N1UTW0
UniRef90_UPIO003B2E2B9
UniRef90-F7ZG60
UniRef90 DOLX06
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UniRef90-M0D2A5
UniRef90 A4QA24
UniRef90 C1D601
UniRef90_UPI00037DC312 UniRef90_UPI00037850C3 UniRef90_Q75TC2

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lupas 21
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sol5
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jpssm



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

