## QUERY

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30
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$M N F Q D T S L I S G Y H A H V Y F E E S T E E L A Q T C E E A G K R F G$ MNDDALPRIKGYHAHVYFDAASLEQARALCEEAARRF
 MEFQDLSL: KGYHAHVYFDESTVGQ
TGFHAHVYFDAASTET KGYAHVYFDAASRETAERVREELGARF KGYHAHVYFDASTLDQARELCERAAATF PVSNGERGGFDVHIYFDQEQTTFAAQLWER
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TAAI QGYHAHVYFDATTLEQARALCEEAARRF TAI ASWHAHVYFDQTTRDAAWTLRETDETQFHG
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KKDTVKПTGFHAHVYFDDATREAAARVHEGLSANF MPDQSTDAIESWHAHVYFSADTREPARALYDRVTASFRN M $\square K R P T N$ YOQYHAHVYFDGSADAAASSLCQKAGELTFG EITGFHAHVYFDPETQQGAARVREGLGANF TEIKDFHAHVYFNPESREAAARVRQGLRDRF
MKEDNK LKDYHAHIYYNEVTYEQASKLCDKVAEKFS PDSNGTRGGFD\HIYYNEDEVHFATELHERIRREFP RПKGYHAHI YYDASTMEQARQLCEEAARLFP
 MTEPSAPS TTGYHAHVYFDASTLAQAQALCEEAAQRF MTTRPSNNYPQYHAHVYFDKQSLALATSICEQAGELF VSP TNGERGGFDIDHIYHNPEHVKFAEELHKRVRLEFP MTSLDPAA IVNWHAHVYFDASSRDAAWALREVIAVRFGA KQDNTKTTGFHAHIYFDTTSREEAAR REALSAS MAKIDPAAIVSWHAHVYFDAASRDAAWALRAALSASF KRPDNHKAYHAHVYFDESTLALDKDLCQ LADEGA
 PLDNGRRGAFDVHIYYFQSNPAQARALWERIRREFP MPLLDPALIRDWHAHVYFDAESRDTAWALRETVARELAG EPDDSGDRGAFDVHIYHNKEQAKFARELWERTRREFP MTLLDPASIDSWHAHVYFDADSRDAAWALRQVIDEQLGA MK QDS SUQGYHAHVYFDAARQELAKNLCESAAAQF PKRP TN THNAYHAHIYFDANTLAFATALCQRTADEFS DTKEIADFHAHVYYDRQSREVAARVREELNTKF MPFDDPAGITSWHAHVYFDAACRDAAWALREAIEAHLGP
TKRPVNAHKAYHAHIYFDENTRVFAKNI CDLSAEKF VEPDDKGDRGGFDVHVYFDAQTLDQAQALCEAAAGKF
 EPLDNGIKGGFDVHVYYNPEQSEYARALRERDRREFP P DDRGKRGGFDVHIYYFEDQTKYAKELYERIRREFP DTEKRGAFDVHVYYDQTNRDYATELYERIRREFS MTETNDITSYHAHVYYHPETRDAAEQVRQELGDRF PLDTGRRGGFD MKQTNSTTGYHAHIYFDAATVDQARRLCQQAEDEFG PLTDGRRGGFDVHI YHNPEQAEFARALWERIRREFP DSTNNGFDFHIYYMQHSAAYAKELHERVRREFP PLDNGRRGGFDDHIYYFQNNKEQARELWERIRREFP LDPA VVDSWAHVYFNADSRDAAWALREQALDAFGD EPLDNGRGGFD PLDTGRQGGFDVHIYHNPEQVKHARDLWERIRREFP PKNDHQDYHAHVYFDANSNDFASELREQIRREF NGFDFH1YYDPSSKEYAKELHERURREFP FDFHIYYDPAQAQYAKELHERVRREFP
TKRPTNDHKDYHAHMYFDEATHEDAARLRQRIQQDFS TNGTSGGFDVHDYYFQAQTKFAQELWQRVRYEFP KRPVNSHRAYHAHVYFDHQTVAFASGLCREAEERFR MKQSSSULGYHAHVYFDGQSLEQARHLCETAQQEFG PLENGQRGGFD|HIYHFQSNAKYARQLWER\|RREFP RPVNKHKAYHAHVYFDEHSVTYAAALCAEGGERFG 1 KGFHAHVYYDEDSFTQAAALCQAAHQHF PIQGYHAHIYFDASTVDQARALCEDAARVLP

## QUERY UniRef90_I6A5M7 UniRef90-EOUKH9 UniRef90_U2AYK2 UniRef90-A6UX95 UniRef90-A0A024HA03 UniRef90 K9XKE6 UniRef90_UPI000349DBC7 UniRef90_UPI00036D4C9A UniRef90-R7YU97 UniRef90 ${ }^{-}$A0A024IEA0

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 EI RI YRFWDRPVGPHPVAMFEANFSPHQTGALFSWLAVNR DVQLGRWHDLPI GPHPKAMYQVAFLPHQFDKVVPWLMLNR SVELGRFHERLVGPHPAWSYQI AF GAARFDEIVPWLVLNH KVRVGRDHEKLVGPHPKWSCQI AFSSNVFDALI PWLEKHR ELRI YKFWEKPVGPHPTAMFEVNFDPHQTGTLFSWLAVNR
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 E L R IVYE F F D R P V G P H P I A M F E V N F T P Q Q F GA FI P WL VI N R
 ELR $\square Y$ T F WD R P I GP HP VAMFEVNFTPAQFGAFVSWL AV WR S I Q M G R F H E R P V G P H P Q W S Y Q L A F A P A A L P R V L T WL A L N H E L R I Y T F F WD R P V G P H P V A M F E V N F T P P A Q F G A F I P W L A I WR

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| UniRet90-C5C |  |
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|  | DSQL KAYHAH |
|  | AEITSFHAHVYFD |
| UniRef90-W3WV74 | RGGFDVHIYYN |
| UniRef90_U1BJC9 |  |
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| C901 |  |
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| UniRef90_OOCC | G |
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|  |  |
|  | H |
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| UP1000470A | ASWHA |
|  | GSYHAHVYFDPD |
| iRef90 J JLFo | SHYHAHLYF |
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| W1N | $V \mathrm{~T}$ |
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| UniRef90-E8MDB5 | NLYQNYHAHI Y |
| UniRef90-R7RXN3 | SSNGFDFHIYYM |
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|  | P EDTSYHAHLY |
| Ref90 E1WY |  |
| UniRef90- ${ }^{\text {T0T814 }}$ | Y HFHLYYEEEQ |
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 DI RI GRFHEKPVG G H P V WS CQLSFASENF GQIIP WLMLNR E I RVVYKFWEKPI GP HPVRMWELDFDPEDFKVLVPYFQLNH



 L K L GR LIH QRLV GP H T M WS Y Q L LF G S K DF D QFII P WL D Q QR




 E L EVRVGRFHRQPVGP

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UniRef90_UPIO002F479BD UniRef90_J4ULJ7 UniRef90- M3JBJ5 UniRef90 - $88 \times 5 \mathrm{C} 8$ UniRef90-W3WTI2 UniRef90-U9V049 UniRef90 G6E9N3 UniRef90-TOSLU8 UniReffo-G3AMZ9 UniRef90-20LI2 UniRef90-ToSZU8 UniRef90-V9EWW6 UniRef90_W4LE85 UniRef90- A7N8D5 UniRef90-YOKE90 UniRef90-H8X0Q6 UniRef90 E1V8C3 UniRef90-UPIo002E9AE74 UniRef90-U4LK08 UniRet90_D8R144 UniRef90_C5MB62 UniRef90-Q2G516 UniRef90_UPIO00455EE43 UniRef90 A5E2Q2 UniRef90 D8Q1E3 UniRef90-UPI00046A7B4B UniRef90-UPI0002E8D2B8 UniRef90-C4XWA5 UniRef90-A3URJ1 UniRef90-A3UM19 UniRef90_UPIO002F17FAF UniRef90-A3LRX5 UniRef90-Q4JMV2 UniRef90-UPI0003087D4B UniRef90_U2ZGE6 UniRef90-G4YHD8 UniRef90-F8GHB4 UniRef90_G8YR56 UniRef90 G1XNJ2 UniRef90-UPIO00237644E UniRef90-A3GHN9 UniRef90 A5F3D2 UniRef90_U4K599 UniRef90-KOKWD5 UniRef90 UPI0002F360DA UniRef90-Q1GVI7 UniRef90-G3JEV9 UniRef90-UPIO002482E01 UniRef90-A1D811 UniReffo-GBYDKO UniRef90-A5DGF2 UniRef90_K3WY22 UniRef90-W4FJ69 UniRef90-C9P6A5 UniRef90-ToS7N5 UniRef90-UP1000366FBBC UniRef90-F4P1M8 UniRef90_UPIO002487615 UniRef90_M4G4T0 UniRef90_14VWD9
UniRef90-E9E5F2
UniRef90-K0KJP8 UniRef90-UPIO002630FC8 UniRef90-E9C463 UniRef90-UPIO00374409E UniRef90-X8JSP5 UniRef90-E3BL47 UniReffo-1028M5 UniRef90-G4TMY5 UniRef90-J3NHT1 UniRef90-F2U6D2 UniRef90 J9H638 UniRet90_C3XPB3 UniRef90-L8GY49 UniRet90_J9J3Q2 UniRef90_J4GG58 UniRef90-U4TD84 UniReffo-L8X3U4 UniRef90_FOXYW9

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FHAHIYFDPAELEQAQALAEQAHALFG DYHVHLYYDENSUEFAKDLAHRCKEKFP STESKFYGGIVSYDIHTYWNDAERKFAYELREKVLKDFAD MTKPEYGNIVSYDVHTYYNQNEKEFAYQLREKVKEEFKD

YGGIKSYDIHTYYDEAEREFASSLRDRVLEEFSQ
 MTERTEKSUNGYHAHIYYDPSTRAVAEGVCAALGEHFQ MQKTTTYADNTFHAHVYFDDQQTALAAQVREQIQDDPQ

TYPVKYYDFHVYYFANSLEESDALREKLLVDFPE PARD $\mathrm{D}_{\mathrm{N}} \mathrm{PI}$ RYYHAHLYYDAAGLAAARQLAEAAAARF PLTDPTRIRYYHAHLYY RDAAEARRDAEAAAARF NKVKEWHFHIYFHTNSRTAALKKRDAVLALRRS THPVKYYDFHVYYYAETVKEAKDLDNKLDANFPE DYHAHVYFDPEEAEEAGALCKAMKDSLG

FDFHIYYVPSSPEYAKELYERTRREFP
TSPVKYYDFHVYYNKSSGKESDNLRQKLDDDFPN RПGGFDFQLYYMENQKQFARELHERIRREFPE TEPVQYHA HVYFGLLQKSKATELKKKIEQQRSD RLKGWHAHIYFNDATEQTAQRVDNDIALEDTD

FHAHVYFPLKNHAQAEELKNRINAERRD TYPVQYYDFHVYYNAKSLTESDNLRAKLLEDFPE MTDRTPP SWHSHIYFDAESHPRAEALVEGMRQAFGA
$R \square K$ GYHAHVYFDASTHEQARTLCEEAAHRFG KVDESTDKEWHFHTCFNEASKKEAQALRDQVTADPKN

TSPDEYYDFHI YYNDESQEESDLLRRKLLKEFFE RTREWHFH YFLLLQSRDAVLRLR RLIRDGAFT
$Y G G \| L S$ YDDHTYWNENERKLAYDLREKVLKEFAD FHAHVYFDPDQAIVAERFRQQI ARERRD MTFFE PTKSYDFHUYYNQESKQEADNGKNSUFKDFEQ MQNTGAliRGFHAHTYYDADEVETARAFAERARAQF TDPDAPYHAHVYYDPAERSAAAALRDDFGRN SA QSRAREWHFHIYFSPTEKAAALALRDAVLRLRAF
FHAHVYFDGAEAKAQRVQQKUAQQRHD

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UniRef90_UP10002F479BD UniRef90_J4ULJ7
UniRef90_G3B5C2 UniRef90-M3JBJ5 UniRef90-H8X5C8 UniRef90-W3WTI2
UniRef90 U9V049 UniRef90-G6E9N3 UniRef90-TOSLU8
UniRef90-G3AMZ9 UniRef90- F 2 OLL 2 UniRef90-W6MRT0 UniRef90-ToSZU8 UniRef90-V9EWW6 UniRef90-W4LE85 UniRet90-A7N8D5 UniRef90_YOKE90
UniRef90 H8X0Q6 UniRef90 E1V8C3 UniRef90-UPIO002E9AE74 UniR Ref90_ULLK08 UniRef90-D8R144 UniRef90-C5MB62 UniRef90-O2G516 UniRef90-UPIO00455EE43 UniRef90-A5E2Q2 UniRef90-D8Q1E3 UniRef90-UPIO0046A7B4B UniRef90-UPIo002E8D2B8 UniRef90-C4XWA5 UniRef90_A3URJ1
UniRef90 A3UM19 UniRet90-UPIO002F17FAF UniRef90-A3LRX5 UniRef90-Q4JMV2 UniRef90-UPI0003087D4B UniRef90_U2ZGE6 UniRef90-G4YHD8 UniRef90-F8GHB4 UniRef90-G8YR56 UniRef90-G1XNJ2 UniRef90-UPI000237644E UniRef90-A3GHN9 UniRef90_A5F3D2 UniRef90-U4K599 UniRef90-KOKWD5 UniRef90-C4YC93 UniRef90-UPIO002F360DA UniRef90-Q1GV17
UniRef90-G3J.JV9 UniRef90-UPIOO02482E01 UniRef90-A1D811 UniRef90-G8YDK0 UniRef90-A5DGF2 UniRef90-K3WY22 UniRef90 W4FJ69
UniRet90 C9P6A UniRef90-TOS7N5 UniRef90-UP1000366FBBC UniRef90-F4P1M8 UniRef90-UPIO002487615 UniRef90_M4G4T0 UniRef90 14 VWD9
UniRef90
E9F5F2 UniRef90-E9E5F2
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UniRef90
UZZMM5 UniRef90-Q754K2 UniRef90-G4TMY5
UniRef90- J3NHT1 UniRef90- F2U6D2 UniRef90-J9H638 UniRef90-C3XPB3 UniRef90-L8GY49 UniRet90_J9J302 UniRef90-J4GG58
UniRef90-U4TD84 UniRef90-L8×3U4 UniRef90_C1DQJ66
UniRef90_FOXYW9 UniRef90_FOXYW9

LEIVGNLINTRLVGPHPQWSFAATFSHDDFAAFVIPWVIKANR ELHVKRFWEVPI GPHPTPMFEVNFNAAQLGA FNYLVENR EGKDGSVNDQIIGPHPTQFWEVDVRPERGIRVGSWFQLNH DIRVYKFHDKPIGPHTLNMWELDFRPELFVKLVPYFQLNH AVPLFRVNEYPMGPHPAGSYE1 WVPDTSFSDVFFYESTNR PVPLDTYNDSPRGPHSDGSYEVWCPKEHFSRVYSWFALHH I EI WHFHEKFVGPHPMWSVQLSVQTADFGRVEEWDTLNH EI RVHQFWEKPI GPHPVNMWELDFSPETFKVIVPYFQLNH EI RVHKFWETPI GPHPICMWEIDFKPELEAGIVSFYQVNH EVRVHKFWTQPI GPHPTAMWECDFNDTVFNKUVPWFQLNH
 VEDDGFRDTPVGPHPIANALVIFKP VLRVSPLVCKLVGPHKMPMFELHIE S LTYRGQLIPMSI GPHPKPMFELHIDADCINYAMASLDTLR DTTNGSIDDKVIGPHPTQFWEADVRPEVFVKVLSWFQLNH ELRVGRFHEKPVGPHPKWSCQLSFAPEHFGKlVPWLALNR ELVRVGRFHERPVGPHPLWSCQLSFAPETFGAFIPWLALNR FKD KVWDKPI GPHGDGNFEVNLKHEDFVEFVTWDPLNR DSANGSIVDKVIGPHSSQFWEADVRPEVFIKVLSWFQLNH PAMGRVHSRPVGPHPRGSCQMTIPADRIGEALEWMMLNR ELPVYQFWDRPVGPHTTAMFEVDLSPHQTGALFSGLYTGD
$D T K D G S T N D F I I G P H P T Q F W E A D V R P E V F I K V E S W F Q L H H$ PLQDFSTVQPLPGPHPVAMFEVDFTPHTTGVLFSWLAVHR TLRVGRFHEKPVGPHPLWSCQLSFAAEDFADUVPWLALNR IITQFPLVERLVGPHLLMPMFEIHFKDNS QNFI EWLDENR YAKEGAI IEKAI GPHYDLFWEADTARDVFAKVLSWFVQHH LRQGQLHRKLVGPHPCWSCQLYFKPHLLSDVVTWLTFNR VLETFPLIQRLVGPHKMPMFEIHFTNKESG IVEWLEQER VLTVFPLNMGLVGPHKMPMFEVHFANDDKG FTQWLNQAR DSANGSIIDKII GPHPTQFWEADVRPEVFIKVLSWFQLYH A TYGGRWHHKPVGPHPDFSIQLEFPHHLFAAVMAHLALRR I SMGRVHERLVGPHPDWSCQLAFGPELLGDVLPWLAISR KI RTYPLVERLVGPHKMPMFEIHVANNGFAD, WLDAQR FVAVCPFNLGSVGPHDSGSFETWVPAESFAQVLSWFTDHR LSYVGKLIPKPI GPHTKPMFETHIPAASETNEGLTRTGDEMR AVPLRRVNKYPI GPHPAGSYEIWVPDSSFSEVFFYLASNR VLRVFPLVNRLVGPHKMPMFELHMESSVSDEFVSWLDAHR
V VIALFGLVPRRVGPHVKPMFEMHFRD VTA IFPLVERLVGPHKMPMFELHFEDNSKG GIGWLDENR
 VVPLHQVAEYP VQAMFGLVPRLVGPHLKPMFEVHLADNSHG FIEWLDEHR ELRTYAFFDRPVGPHPVAMFEVNFTPAQFGAFVPWLVINR EI RVYKPWETPI GPHPLSMWELDFSPATFSRIVPFFQMHH EIIVKK LNDNVI GPHVTHFWEVDVRPKIFVRLLSWFQLYH FIVVGPMNRTPVGPHPSGSFEVWVPKESFVKVLSFFMFHR
 GCWLGQLIAREVGPHTRPMFEDDFAEPLLPAVTALLEQYR AKPLKTVNRQPRGPHPDGSYEVWVPCESFAKAYSWFTLNR PVVIGRLLDKSVGPLPKPMFQLDFEQSELQQVKQVLTQVC ELLRYNMFKGPDGPHPVAMFEVNFTPAQFGA VAWLADWR AVPLHRVNEYPDGPHPAGSYEIHDAAR ELRIFKTFNQSIGPHPNGMFESDTSPETFDKALPSNSKNA PVELGNWNLTPRGPHVTPSFYFGFTNDLLPVVVPWLQLNS VAKVSLLHDKPPYPHPQPMFEDAFPKDLLPKLTQWFKTHR AVPLYRVNTTPVGPHPAGSYEVWVPRESFVSVYSYMGQHR D A LRSGAAHMGSIGPHVEAMFEFDVDADVFTRMLHFFQLNH
 KVPUGKKENCPDGPFPTAQYSFFVPRSFYGETVQWIMQRR R CVFDVNTGPTDPFVSANWAVFVPGEWYAKTVPWVMQNR EVEVHTLYPRAVGPHPTGNFEVLFTRRAFASFMP

GPFPTAQWSIFVLPHHLGEMTSWLMQHR AVPLFRVNSDPDGPHP VAKVSLLEDKPPYPHPQPMFE AFPKDLLPKLTQWFKAHR R RYIAAHDRARRAHTMPMFEIDIESASVDAAVAWLDANR ELGPFTDPATGGYPNWSFLINFAPGLRDRTVAWFERRR

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