

Text_S1-1.txt

>NveCA

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>NvecB

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KENSTS PTEQ VERNKNF RVERVHF KCQND DISKIEIANHTTRPMQR PVAVILAKSELQAHAINSLISCISDFTH PYLKTRI
LSNDKINQMIN THMSLDDKEP DPLVGD MDTMQGILNGSINV LIVC RRA GSLRRRAYKCKI PCVFTNSL PDPGQSCYVYAV
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LYSLED SVTSF DDPCD PPPP ITSDFEVFRD SVTTAYAPS RL RYVADIRY DESPTSPF PSPS VAPTF GDYY KDRYGV DL
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IAE ELRQK LA VEAGIG MPVW PEGHDL PQLSI EEMVAGI PTH PAAASSDVT VQC SFS DPNT AAKT CSV VNTS VP ETR LGS
MILSDSTD ACTWETR RSHS NKG SETPEV GLNG KRVN SAGT CLT GVD ANV SKD RETQ FDPG PS STL I L RAL TTS AND II
DHER LEIYGD AFI KYA IS ELLY SD FP NV NEGR LS FL RGL RV SNQQL F YL GR S RGL APL I LT KPF EPV GS WPPG FSSSM
RN VHET LDV SPQ HG VNDV LN IDDE DLDH SEI QD ISG NE CRG NVE PM L L P PHT FT VIS DKT VAD TIE ALI GAC LM SS GTN
AALRLMRWLDMDVSSCPDSKL S NPSTESS SED KAR SIY QEP CI TNH IPSATE LSV TD I K PPL TPS FSG KMDV QL FK RAV Q
EPLSTPFIS KQT D L L R V RT AND QPPATVC STAG QGL FEN FEP S STV SK QM KE QL S V HAV DEK LF DNAY STSE HDL SI
NKQH QT TA VLSEH QL GEL AL VE ASL GY TF RD R DILL Q AL THTS YP RAY SS VN S SYE QL EFLG D ALL DYL VTR HVL QRF PR
LSPGA ITDL RSAV VNNY S LAC LTI QR DF HKH MR S MS M AL F KV V R R F V R RL S EIE EK T RPD QV YSK L L L T T V ED GR GEA
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LV VK

>HmagA

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EILF EQC QN RVL PT DEE EIEI EMMD EED E DLPV YF SHG NGY DAPR IT KDN A V SLL YR YCS RL PSDQ FCK TNPKFL YHVL KNQ
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SSFIEG KKT FV QYY LEK YNIE I SPN KPL ID V ICS SQ QIS FT NC E SNT T K K N V N M E K L V P E L K K V S L F P A D L H F Q L P C
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>HmagB

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SSINNF SKEKCFSLDYFTHEECDISLT LGTAPNNVSSNKS VYSESQSEDILKTHHFFLQSLV AANA ALD IN ND LLEFLGD
SVLKYIITAELH LA FPSV KSAQ LV F YR NK I L S N K Y L S E L G F L R H M D K I I F E I F E P A K A F S S N N S K I R T I L E K L S L N D A
NERLLANV VEA FIGACFL TLPQ D S L Y N V F R Y F G F N I M K L S L L H K N G Y Y R A N Y P L E C A S F K R V E A F K S L E L K L G Y K F Q N P T
LYFNACLHHSYADVLYLNGKKNEFDI DAAIKLG TNECLELIGDAVLDILV T K E I F S R N N I S G A N K S G N L S F I R S A I V N T Y
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>HmagC

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NKPSI

>Tadha

Text_S1-1.txt

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>Tadhb

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>Tadhc

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>Tadhd

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>Tadhe

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Text_S1-1.txt

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MKVDLVDSALQKNTIVCLSSSEKLFIALMVIKELSTVLRKPLSEGGKRTIYVNSDDTAEFQCQILSRHTNLKIGYYTI DKDTENWAKDKWQEEFTSKHVLVFTA E VIDL VLTQNSLPLPQINMLI FDDCHLAVGDHSYVQIMHMIENEKVEPHVIGLT ASILGSRIPEPHKLKHTITSLENIFHCTAETSMLVISERFDSRPTESVLCFTQSDEVV LKNDIIDSALFFLYECNISPDTEEPFKKDP RQLGINV LSEIRNILHQLGTWC TSRIA E I LIPQIEKNEKSESCAINKRFIRFTLTQLRLIVKVFEANFNPDYVEELLMYSTPKVRELVHMLRKYKPDWDFMIIS SDDL SDELSNL SDDNEDADSLNLS DSDYDEKDDHSPKLIHVA VKRSTTDADGQIISNGDNTDAKQLCGLVFDQYVALALNKFEEVCSWDENMCFLKSQHIVGQGYRSAPNKVSIGKVR KQEEVLRKFRM QELNLLIATKVLEHGVDIPKCNL VVRFPDPRDYKSYTLSKGRARARDSDYVILLNEENEKLFSEDLKLF KEIEEILIGKEKEKDIVEEDSSDYLDIVPKYYPTNH NIDVH VSLNN SIALINRYCAKLPDAFTHLTPQCTISTIQHGDN ISYIGHIRLPINSPIKLQIEG IAMPTKLAQKAAAQKAC EMLHKTGELDEQLQPVGKEMFLQEQQEEWDEDVTSQGRPGTTKRKQYYFKV AEA FDKSHPDVNKKCYLYIINMVL TGRITEE QNTRGRSIY APEETTRCLGILSSKQIPQVPMFPVYTRSGEVTVSDLVQSDITLDNQQLKQLQDFHFLFTQVLHLDKDPMECNGSLADVGYLIVPVPDSLADLADIEWSFVEYVTSNNSDQKKNVFD SKR DIFMDK E AFLDAV VMP SYRNIDQPQNFYVAEIRYDLSPLSSFPSPELYKTFNDYYSTK YGLV ITN TDQPLLDV DHTSARLNLLTPRYMNQKGVALPTSAETK RARRENLQKQILIP ELC DIHV FPASLWRKAACLPAI LYRMN YLLA E EIRL RIARETGIGVIDLPEGFRFPQLDFGFETSPDKIKLNEKSDSSSDSGIASSDSC LVRSES DIVSSASDA SIKLEDKLVDGHTNHVEIFNDTM DVISNKLIATNINSENTDKPEASIPSDSSDKTVIDISDSSPD KDSCKQCQKNILQYQNCCESNVNDLKNLQDCVQNA DSDT F DVGWNSPDVKIIEGVADDKNFSLPEI SLD EDRD LDTFVGPSCLILQALTMSNANDFFSLERLETIGDSFLK YAITVYLYCSYPGIHEGKLSYLRSKQVSNY NL YRLGQKRGVAECMVSSK FEPYENWL PPCYIVNEDRRG RGPVPKV LIAGT KNDKASITSNFVLEESKPSKNHFP IGT FNTGE GKVNDFNQELKEAEELDELEKASEANQL LIPSYLQTQH GIPDKS VADCSEALIGCYLTT CGKA ALMFMSWLGLKVLPKKERVGDSI KEGQEVRTLDHEYEEELSCPV SPLITDENSSRKKLEMLNGYDEFEE SIEYK FQDRSYLLQAFTHASYHYNTVTD CYQRLEFLG DAILDYVITRHL YEDSQKYS PGIL TDLRSALVNNNIFAALAVKWNFH QYFKAI SPA LFQVIEKFVTRQKDR EDEIDIDDEFNDKDEE DDDDEEV VMEIPKALGDIFESVAGAIYLDGMSLDAVWTVYYRLMKPQIEKYLK CIPKSPVRELLEMEPETAKFEKPERTMDGKIRVT VN VVGKGV FSGIGRNYRIAKSAAKKALRCMKTMQQQGLI >Smed1
MPFKFPNKFLNFPSPNLHNINRNAIRILGIPDPVN KLSANRFLFRAVVPEVTTSDSSNENFNKLCL IYVNCSFTAYALS RLLDELCI WDPD LFLHPGHHADNQGVNKNN DATGSVSLQGEETINKFRKGQINCLVTTQI LDNF KFDLQKCNL VIRFDP VLNLQQYF SCKSRV G IITNAASMLRKANSSVADAISHLSRSKA KL IHMIS KEDKHSI LS LEDYRK VETGI INRINKV SHKSDDH MNQNPV NVNIDV NSLEN PIQSTGIDS QEVYHEI HRNESCIPETIMCL VEFTDTCRS NLYIYFALI INAINRQKV TLSQAI ALVNLYCARLPTDSFTKLTPEL SIECDKNSQKALYRCQLRLPINS PHRLVTKGKWMPTISTAKMSSA LQTLKQLYDLRELDNHFYPWNKEDNREVVSIAESNKLDENIGGMLMGSSKCRYCYERQFAKCISTTPISPNTPCYMSINLELSRKI

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>Smed2

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>Sman1

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>Sman2

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>Sjap1

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>Sjap2

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>Egra1

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Text_S1-1.txt

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Text_S1-1.txt

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Text_S1-1.txt

>TspiB

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WDFIDIIAKSVDKMP TFIPDENRTN YTFD NIQFRDAV VMPWYRNQDQPQYFYVAEICYHLS PKSSFPGLNYSTFEEYYYK
KYNIQI QNCKQPL DV DHTSARLNFL PRYVNRKGVALPT S SEETKRAKRENLEQKQILIPELCTIHPFPASLWRAAVCL
PCILYRIN ALLLADEIRKEVAHDLGLGATDISAQF EW P ILNFGWSLADVLKKSREAKLTA KAVLEEVPELTEPEETDKK
DDPVEGKADGVQKSEDPLSDEKTANDLLEEADAKLKAEGFQIGTWSNE MAESVQSEFMDDGENWGLPGNVNICS NRNTN
RYGSP TSWDV DNKEQPTDARYYSDSEGSYGSDELD SGGEENDSDQGRYGLKIEFKSDNVAE AIESEDDIMKRQKQRDII
NSTNMNEQLYQTSKKNVSSGFCTR NDELEINVKLHEEQFERSTNQFKEQIKNC GTLVKCDEKL TVENHLKQGRNAATVQS
DERDIYELFPYASKQEVDRFLFTNDRGV TYM NLEGFYDLNRPYFPEKYSIIGTG DVFDRFNDENLL EVNENNEKTITFNI
EYPLVVRNQTKDNQKRTLPSVPNVATAINGSLGEFSFDYQPDLTNHPGSPSII LQAL TMSN ANDG INLER LETIGDSFL
KYAITTYLYCTYENVHEGKLSHLR SKQVSNL NLYRLGRRKVLGESMIATK FEPHD NWLPPCYY VPKE LEQAL IDAKI PAC
HWNLA DL PDIKQLSSEEICKL V KERAQ LGL LDDSDNEE GEHMKEI QQLEIRNDEFI KNSD YFACFIPYNL VTQHSIPDK
SVADC VEA LIGAYLIECGPRG ALLLMAWL GIRV LPVCEQPF DPTAPRIPGSSAP YEVNGKQI QSIYGYWIPPRSP LLTHA
PNPEKSLEHLLDGYSAFEDSLG YQFD RSYLLQAMTH ASYCPN RL TD CYQR LEFLGDAV LDYLITRHL YEDPRQHSP GAL
TDLRSALVNNTIFASLAVRHDFHKYFRHLS PGLNDVIDRFV RIQ QDNGHSI SE EYYL ISE DECDEAEDVEVPKALGDV FE
SVAGAI FLDNSMSLDAWVRVYRGMGPEIEQFSNSVPKSPIRELLELEPETAKFGKPEK LADGR RVRT VEFGKGT FRG
IGRNYRIAKCTAAC KALRQLKKMGLINKRR

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MQTIEETQKEDFVPRFYQS QMKDVCIAKNTIVYLPTGAGKTHIALMAIRELGRGHLEKPLS QGGKRTFFFIVNTVALAKQ
QAEMIGRNVVF KTSV YTSDRDV DTWKQDRWLEEF AKYQI VCTCQI LLDVLK HG YLAM SHINLLV FDECHHG VGDHPMHG
IMEQYLRARKEDR PRVIGL SGM LLYK ELK MKEQVAQ ELERL ENT F D STI ATV GSY DAY TEV CRF STDP KEG LLSFHV VQS
SDVMRNLQGQINDFINKVALFDL PKLLNQN KSLMRDMPKPKK VITK YF KELN YQF EDL GLFGGAI ALLGLIVQFELDKRE

Text_S1-1.txt

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MLSSGSSQEKGKPSWTSNSQCNSFIPRPYQIELLECAAKQNTIICLNGDFGKCFMYTMFLREVIIKHNGKLNNAPKFAVL
LLKEDCMVNEQSELLRSHLDVDIISCTHNMTSDFTDESLQQLC HDHQVLVCTPEVFVKLLSISLYIAQYMDLVIFDDCHL
VNIEMHPIRKIMKILDENRYTPMILGLTSSLLNNNITADELNKCIHSMETVMHCKAQTATDLIAVDRHNINPPVENIILS
SDENKDGLNSQLLSDIRKILNGALEWLNSCQKEKQEEQEDLDVCTVAIQLINESLWADVLGPWCYQLIVVVVLKQLQKNLH
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HFMEKLQEYKKIEKVLLGPDWSLNEVYDNNEDDDIEEMIPPYILNRNTQVNMKNAV RIVNRYCNRLPSDPFTLSPRCEV
VEVLNDGDSPMFMCILQLPINSHVREPVQGIVMPTLQLAQQA VAMETCKVLYEAGELDENLMPIGKETVKYAEELDPWKR
EVSSITGRPGSTKKRQTYNKDSPQILRSCLPQPDINLFYEIEMKIKNPLLDELNVRRRKLFPEETSRCFGILTTPKIP
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SLWRKAVCLPSVLYRVNQLLIAEELRKNIAFKSGITMEQPPIGNMWQNLHFGWTDNE DSDDNVDEISSENNEVLENKN
VFDENIPKVPNSVENDGECAQHDNLEETNHKQNQHDFENSTAKSDVYKTTVINHMKENHDEDDYVHVHGSNDVN VHKKN
INHDNDSDRIGTAHDYEAHFDLSDHEDENMKNNVNDLASIRGCKKIKDVENPIWISSSVIDDYNKENPVKNLPGPG
LILQALTLSNASDGFNERLEMLGDSFLKHAVTVLYCTYPESHEGKLSYMRSSKKVSNYNLYRIGKQFGLAGKMTGLIFD
PTVNWLP TGFGVVGASGQGQDSDEDISDDVEIVDPPPSLPPSTINDEEEIYEDEIRMIDGMLGGCIRTLGGSPKGDNGL
FGLGKKISKIGHALSSHQSMHFTDKAALRRSQLNKQNLED FVIDTWTPVADSGKPLNSDPLM LDHTQHSLADKSIAD
CVEALLGAYLTTCGHRSQALLLCHLGLNIFYAFKETNVCKTTFQNTKISMENINHAFTKVLPKVAQAE TSKTVD RFGYL
TPPTNMKMLECRPNQNKLDQLLVALSGFERKINYTFKNKAYLLQAFTHASYYYNTVTDCYQRLEFLGDAVLDFLITRHLF
NDRHHSPGAL TDLRSALVNNTIFASLAVHYDFHKYFKSISPELHHIIEDFVMYQKQEDA QGMDAHLMRKDEEEGENED
VEVPKALGDIFESVAGAIYMDSGMDLSSVWKVY SVMMPLIEKFSACVPRSPVRELLEMEPETAKFSCAEKRYDGKVRVT
VEIIGKGRFKGVGRSYRIAKSAAARRALRYLK
>Skow
MEEYDNMMETEAERPQDMIDIQIETSEDLQLFHQKTIHNFTPRAYQVELLERALDKNTVVC LQTGSGKTFIAVMLIKE LAH
QIRT SYDNGDGKMTFFLVNSVPLVSQQANVIRTHDLTVGEYV DAMDVLWKKDKWNQEFSKHQVLV MTCQIFLDLLLH
GMISLSSVNLMI FDECHHAIGNHPYREIMKIYDVC PKTSYPRILGLTSSILNGKCDPTRLEKKLGELEMTRGTAETATD
STLVGQY GARPKEV VILCQAFQDENKLAEEINTILQ NARMFLECSFTLEDNERDPRVIPKS VLL ECQSTLSV LGPWCTN
LACQM VIRELEKVEFHSTLGLSKLFIRFAM TTLRFI YMRC TEVFGSTQRVN LKYVTPKVLK LLEILKQF K P QPEENPPVE
KQDCVEKNGILGND STADTPSDTNMELPPNNV LVDNKLAS CNAVSNT EVAEDN SSVAPAVN NSRITTQENNTPSGRK
QQHKHKHL NHYGDQHIGTGLSSLCGIVFVQQR YTAVVLNQ LLKDL SKQDPD LAYLSTS YITGRS I KSTL SVNPDM EYKKQ
EEV LRR FRR HETNLL VATS VVEGVDV PKCNL VIRFD SMREYRSYV QSKGRARAP ESSFFIMMVY DEEKEAFIKDLKQYKF
IDRILERICHGKESPAEEDIDAHMVD SLLPQYTPN KQEGG ARVTMSS SIPLIN RYCAK LPSD AFTH LTPK CKTV QLPNTD
PHMYQSI LYLPINSPLRQPVQGPPMKGKKFAEM AVAL KTC EL LH KAGE DELN LPVGKEV VPYEDR DMFEEEMDADG PRP
GTTKRRQYYCKQVADSLQNGLPGINKPCYLYVI KMKL ALPLPD ILNTRGRKLYCPED SEQFGF ILISK KIPG I P SFPVYT
RSGKVT VSMELASSGLRIPKDKV I QIRK FHK C IFSE VR LEKPSM K FDPAK SLSK YYIVP LLS D IDLYG AEI QEID WSFL
ELISQCSG LDN DPKPV K YTNNAPYTF DPAK YED AVVTPYRN FDQ P Q RY VA EISEL SPISK FPST LYPT FAE YYF QRYA
LEVTT ASQHLL DV DYMSS RL NLLTPR YLN HKG K ALP VT SAQTK KEK QENLQ NKQFLVPEL CYI YPIPG S LWRKA VCLPSM
LYRLNG LLLIAVEVRDLV A QEA KVGIE KLSDDFKFDDLSFGWDEF EINKQAVG DIRD AAGD SDEI ESTG TS DDD DED FYDF
SDAIEFQVG D ETLQ ALNQ LKMLPDG EPIKTF NNIDH DSIE ND SGW DSV VDQVHL ISFGT S SRV A PVT I PAPA IDAKD
DELDIDIF A QMDT FDFKA ATGDFSKSLK HKAATEK I SSERL GTI YEND TYE PLIP DK DSTD NDEL TT MP GP NP ALI L
QALTMSN ASDG FN LERLE M LGSFLK QAV TTY LYCA PG MHEG KLSY MR SKQ VSN LNL YRLG KKH G LPSR M VV S LFD P P
NW LPPG YV LP PKE KRQ PV VES GFEI GYWG NC DTV ENFKA E PDV PYD LHS EQ SLS D K S VAD C VES I L GYLV CG FR GL
LF M SWLG IKV LPSL K D EKNAT SNS V GIV ENGI QST GNNT EK MS R E VT E N D QP NS V GY GH LK P P N S L F I NV A HAE ER LK
HLLSGFES FEERI HYAFND KAY LLQ AFTH ASYYH NT V TDCY QR LEFLG DAI LDY LITK HLYD HHQH HSPG AL TDL R S AL V
NNTI FASL AV KYD YH KYF KAIAPEL FH VIDNF VKF QHATE ET TQGIDS QLNS N FS DDE EEE GEER EDIE VP K AL GDV F E
SVAGAIYLD SNSM LDAV W RVY YTM MKPHID K YSAK VPIS PV RELLE ME PETAR FGLPEK TMDG KTR VTV T VAG KGT YRG I
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MKSPALQPLSMAGLQLMTPASSPMGPFGLPWQQAHDNIYTPRKYQVLEAALDHNTIVCLNTGSGKTFIAVLLTKE
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NGYLSLS DINLLV FDECHL AILDHPYREIMKLCENC PSCP RILGLTASILNGKCDPEELEEKI QKLE KILK SNAETATDL
VVLD RYTSQPCEIVVDCGPFTDRSGLYERLLMELEEALNFINDCNISVHSK E RDSTLISKQILSDCRAVLVVLGPWCADK
VAGMMVR E LQK YIKHEQ EELHRK FLLFTDTFLRKIHALCEE HFSPASLDLK FVTPKVI KLL EILRK YKPYERQQFESV E W
YNNR NQD NYV SWS D E D D E E E E K E K P E TN FSPSFTN LCG II F VERRY TAVVLNRLIKEAGKQDPEL AYISSN FIT
GHGIGK NQPRN KQMEA EFRK QEEV LRK FRAHET NLLIAT SIVEEGV DIPKCNL VVRFDL PTEYRSYV QSKGRARAPISNY
IMLADTD KIKS FEED LKTY KAI EK I RL NKCSK S VDT GET DIDP VMDD DV FPP YV LRP DGG P RVT INTAIGHIN RY CAR
LPSDPFTLAPK CTR TREL PDGT FYST L YLPINSPLRASIVGPPMSCVRLAERVVALICCEKLHKIGE LDDH LMPVG KETV
KYEEEL DLH DEE ETSV P G RGP G STK RR Q CYP KAI PECL RDS Y PRD Q PCY LY VIGM VLTTPLPDE LN FRR RKL Y P P E D T T R
CFGILTAKPIQIPHFPVYTRSGEV TISIELKKG FMLS LQM LE LITRLH QYI FSHI LR LK PALE FK PTDAD SAYCVLP
LNVV NDS STLDIDFKF MEDIEKSEARIGIPSTK YT KETPFV KLED YQDAV IIPR YRN F DQPHRF YVAD VY TD LPLSKF
PSPEYETFAEYYKTKY NLD LTNL NQPL DV DHTS RL NL LTPRHLNQ KGK ALPLSSAEKRAKAWESLQNKQILVPELCAI
HPI PASLWRKA VCLPSI LYRLHCLLTA EELRA QTAS DAGV GVRSL PADF RY PNLDFG WKKSIDS KSFISI SNS SAEND N
YCKHSTIVPENAAHQGANRTSSLENHDQMSVNCRTL LSES PGKLH VEVASDLTA INGLSYNQNL ANG SYDLAN R DFC QGN
QLNYYKQ EIPVQ P Q TTSYI QNLYSYEN QP QPS D ECT LLSNK YLDG NANK STSD GSPV MA VMPGTTD TIQVLK GRMD SEQS
PSIGYSSRTLGPNGPGLI LQAL TL SNASDGF NLERLE M LGSFLK HA ITTY LFCT YPD AHEG RLSYMR SKV SNC NL YRLG
KKKGLPSRMVVSIFDPPV NWLPPG YV V NQDKSNTDKWEKDEM T KDCM LANGKL D E D YEE E D E E E SLM WRAP KEEAD YED

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LIEKFSANVPRSPVRELLEMEPETAKFSPAERTYDGKVR