

>pos

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NRVAHSTRKKLLLGI VSDKIEFIEVSWKKP

>pos

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VAVRSSATAEDMPEASFAGQQDTYLN VYGEDNVVYYVKRCWASLFTSRAVFYRVAQGI PHEK
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IVDQKIHKKT LAIVFDPKKGKNVEIRWDENKQAWVSEEGPVDIEMVKHFPDPK PALKEEEVK
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NIVKLSEAKVLRGLPASPGIGAGVAKVIFDPHSKEAQEFKEGEVLVTKMTDPDWVPLMKKA
VAIVTDEGGMTSHAAIVSRELGI PAIVGTGNATQVIKSGIEVTVDGSRGVVYEGIVEDLVKP
KEEVKAEVAGVGISPEQLLPLYPVTATKIYMN LGEPDAIEKYKDL PFDGIGLMRIEFII TDW
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RNP M I GWRGVSRYIHPKYEPAFRLEVRAIKK VREEMGLTNVWVMFPFVVRTTWELERALKIME
EEGLKRGKDFK VWAMAEVPSIVLLADKFAEYVDGFSIGSNDLTQLILGADRDSNILAEMGYF
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>pos

MAELAKYERVVIDQDICI SCGACVAACPYQALELDENGKSRLIWEKCKDDFSCVAVCPVKAI
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>pos

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PGEVVLNGAAARLGEVGDVIVAAAYECVANPASHIATIAIFEGNKLKEVRKISLSDMY

>pos

MEKQDLEKIESDI INDWTEADDLDDALDFLFMEKVSEFKIKFKDPLKVTEEEYRELLGNYS
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>pos

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>pos

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LVTPVNLYTYMQRVKPKGRIYLP TASYREMMEWVLFPEAQKELEELVEK LKTENLWDKFS PY
VKGGFWRNFLAKYDESNHMQKMLYVWKKVQDSPNEEVKEKAMEEVFQGGQANDAYWHGIFGG
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WDFKTKAFNL TNVLT RRKEAYH SKLSYVTSEAQGKSIHERWTAKEEGL ENILFYDNHRRVSF
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DKSFVDVVEIKNVSETPISLNF GWEINLNFLAPNHPDY YFLIGDQKYPLSSFGIEKVNNWK
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FWVK

>pos

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RWSTKEFVKMIDLEEKFYGNKFKRISFLENHDSNRFLWVAKDKKLLRLASIFQFSINAIPII
YNGQEMGCSQYRDILEGNRTLHEHARLPIPWSDDKQDKELIDFYRQLVKIRKSHPALYKGT
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RIDH

>pos

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TYVGLENIGNATVTNDVYGFNSAVGGTNNVFNSYFKTINGASNGSKHFALLVLSDPTNSMT
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>pos

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IYIMFFGFKAP

>pos

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NDRNLEGETPLIVASKYGRSEIVKKLLELGADISARDLTGLTAEASARIFGRQEVIKIFTEV
RRA

>pos

MDIKRAVLENLKRRSKEEIKGFIQEVVDSKNENAI PGLGVI FEAWEKMTEEEKDSMMNLIM
RGIS

>pos

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VFLPERARVPELYETDVPVRRRGAKGGGGWIFDALDRALHGYQKLSVHPFRRAAEIRALDWL
LERQAGDGSWGGIQPPWFYALIALKILDMTQHPAFIKWEGLELYGVELDYGGWMFQASISP
VWDTGLAVLALRAAGLPADHDRLVKAGEWLLDRQITVPGDWAVKRPNLKPGGFAFQFDNVYY
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CDFGEVTDPPSEDVTAHVLECFGSFGYDDAWKVIIRAVEYKREQKPDGSWFRWGVNYLYG
TGAVVSALKAVGIDTREPYIQKALDWVEQHQNPDGGWGEDCRSYEDPAYAGKGASTPSQTAW
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LGRYKQAIERR

>pos

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LIPNLDKRTLKTEAAISIQQAEMIAKQDVADAVTKERPAAEEGKPTRLVIYPDGETPRLAYE
VNVRF LTPVPGNWIYMI DAADGKVLNKWNQMDEAKPGGGQP VAGTSTVGVGRGVLGDQKYIN
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ELTHAVTDYTAGLVYQNESGAINAMSDFGTLVEFYANRNPDWEIGEDIYTPGIAGDALRS
MSDPAKYGDPDHYSKRYTGTQDNGGVHTNSGI INKAAYLLSQGGVHYGVSVTGI GRDKMGKI
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>pos

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>pos

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TTTRTHQELQGGTFVDVIIDEAHDPQASHPFKGNVDIAKFEALIDRVGADKIPIYINVALTVN
MAGGQPVSMANLREVRKVCDRHGIRMWSDATRAVENAYFIKEREEGYQDKPVREILKEMMSY
FDGCTMSGKKDCLVNIGGFLAMNEEWILQKAREQVVI FEGMPTYGGLAGRDMEAIAQGIYEM
VDDDYIAHRIHQVRYLGEQLLEAGIPIVQPIGGHAVFLDARAFLPHI PQDQFPAQALAAALY
VDSGVRAMERGI VSAGRNPQTGEHNYPKLELVLRTIPRRVYTD RHMDVVAYSVKHLWKERDT
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>pos

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RIKERMKDSNVKLLWGTANLFSHPRYMHGAATTC SADVFAYAAAQVKKALEITKELGGEGYV
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TAYAFKSHGLDEYFKFNIEANHATLAGHTFQHELMARILGKLGSIDANQGDLLL GWDTDQ
FPTNVYD TTLAMYEVIKAGGF TKGGLNFD AKVRRASYKVEDLFIGHIAGMDTFALGFKVAYK
LVKDGVLDFIEEKYRSFREGIGRDIVEGKVD FEKLEEYIIDKETIELPSGKQEYLES LINS
YIVKTILELR

>pos

MVKIVIHEERCHGCGNCVIACPVNACNSPNVWGGKGPEDGEDVVIKVVNGTVSVINEDLCEA
CMTCELACPVDAIEIKT

>pos

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IVFRAINLGKRAREETRISEGAVSIGSAAVELAERELGSLHDKTVLVV GAGEMGKTVAKSL
VDRGVRVAVLVANRTYERAVELARDLGGEAVRFDELVDHLARS DVVVSATAAPHPVIHVDDVR
EALRKRDRRSPILIIDIANPRDVEEGVENIEDVEVRTIDDLRVIARENLERRRKEIPKVEKL
IEEELSTVEEELEKLERRLVADVAKSLHEIKDRELERALRRLKTGDPENVLQDFAEAYTKR
LINVLTS AIMELPDEYRRAACRALRRASELNG

>pos

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AIHFLSPEEMEDKLDIVTTDDAEAVEDADMIISWLPKGGVQPDIFKKIIDD IPEGCIVANT
CTIPTRQFKEMFEDMGRDDLQVTSYHPATVPEHKGQVFVAEGYADEEVVEAVYELGEKARGL
AFKVPGYLLGPVCDMASAVTAIVYAGLLTFRDACTDILGAPVDFTQNMAVEALQMMAKFMEE
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>pos

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EIDYEDDADVAI LCLESSELPDEDVAEHVADECGVDPENLYLLVAPTASIVGSVQVSARVVE
TGLYKLLLEVLEYDVTRVKYATGTAPIAPVADDDGEAMGR TNDCILYGGTVYLYVEGDDELPE
VVEELPSEASEDYGKPFMKIFEEADYDFYKIDPGVFAPARVVVNDLSTGKTYTAGEINVDVL
KESFGL

>pos

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KEVTPETINEYMETLNHALPGGAVVQEHMVEIHPGLTWDCYAKIITGDLELADEIDDKFLID
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AAVSDFAFASKHAEVINMGEMLPARRARGENEPPGGV PFGVLADCVQTM RKYPDDPAKVALEV
IAAGAMLYDQIWLGSYMSGGVGFTQYATAVYTDNILDYVYYGLE YVEDKYGIAEAEPSMDV
VKDVATEVTLYGLEQYERYPAAMETHFGGSQRAAVCAAAGCSTAFATGHAQAGLNGWYLSQ
ILHKEGHGRLGFYGYALQDQCGAANSLSVRSDEGLPLELRGPNYPNYAMNVGH LGEYAGIVQ

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>pos

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VGPATAIREVKEVIYQYLEGGPVEYEGKYVKTGTADVNRASIQGS DIPFYMGAQGPIMLKTA
GEIADGVLVNASNPKDFEVAVPKIEEGAKEAGRSLDEIDVAAAYTCFSIDKDEDKAIEATKIV
VAFIVMGSPDVVLERHGIDTEKAEQIAEAIGKGFDTAIGLVDEDMIEAFSIAGDPDPTVVDK
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>pos

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LGARREFLDPVEMAIYNADLMKVLAAATGVFRVVOEAFDELIEKAKEDEI SENDLPKLVIDRN
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>pos

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AAH

>pos

MRNKEHNFNQNNNKFE GEPRAKSEYASKRADGTTNTHPQERM RASGERSDFF

>pos

MTNKNDSKDMRKNVSKGDNPGQPEPLDGSKKVKNRNHTRQKHNTSHDM

>pos

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IKDEAAAREHGYQ

>pos

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GKGEEHWEYFGKYFSQLEVIDLCRDFLKYIETSPFLKIGVEARKKRALKACDYVPNLEDLGL
TLRQLSHIVGARREQKTLVFTIKILNYAYMCSRGVNRVLPFDIPIPVDIRVARLTWCAGLID
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GGCRPPSE

>pos

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>pos

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>pos

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SQSTVVAIDAKWNGEY YEVYVKG GREATGLDAVKWAKEVEELGAGEILLTSIDRDGTGLGYD
VELIRR VADSVRIPVIASGGAGRVEHFYEA AAGADAVLAASL FHFVLSIAQVKRYLKERG
VEVRI

>pos

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KALLVSWRAGAVMGLSLASIALLLISGFYLVFRSVLPDDWAVPLVALGFGASLVTLFMRVGG
GIYTKAADLGADLVGKVEAGI PEDDPRNPGVIADNVGDVAGMAADVYESYIVTVTAAI
FLAAILGLPTQFIEAII LFAALALVATFAGVNL LKTTGVKHP LSSISLAIYATIGLSVV LFF

IGAFTLGLDSTKALALAATTSLGAVIAPLIVKITDYYSYNYGPVRKIAEQAKISPATVIIT
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IITADSYGPVSDNAGGVVEMAGLPDEVREITDVLDSVGN TTKATTKGYAIASAALALVLF I
ALIFEIVYSASKILGKGIVDMI SESLSGLQLINANVLI GAFLGVALVYFFSSRTLEAVGR TA
MEIVEEIRRQFREKPGILEWKEQPDYARVVDIATRRLALGEFLIPGLAAIVLPLITG LLLGWN
ALAGLIMGAI VAGVPRALLMANAGGAWDNAKKYIEIQGLKKTEMHKA AVIGDTVGDPMKDTV
GPSLNPLIKVLN TLSVVFYVIVSTNIALGIWPSGLLPF

>pos

MVLKWVMSTKYVEAGELKEGSYVVIDGEPCRVEIEKSKTGKHGSAKARIVAVGVFDGGKRT
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VWQILDRYKIRVK

>pos

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AVEQNDVILMLDGRRLRLKVTNTGSDWIEAVAESSGVITGGKAI VVEGKDYDISTPAEEDVEA
LKAISPIRDNIDYVAISLAKSCKDVDSVRSLLTELGFQSQVAVKIETKGAVNNLEELVQCSD
YVVVARGDLGLHYGLDALPIVQRRI VHTSLKYGKPIAVATQLLDSMQSSPIPTRAEINDVFT
TASMGVDSLWLTNETASGKYPLAAVSWLSRILMNVEYQIPQSPLLQNSRDRFAKGLVELAQD
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>pos

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QKLLKAYQELGIDPRAKIGTDDPVEVGRIK RSLVKYMTSGPIVVMVLKGNRAVEIVRKLVG
PTSPHSAPPGTIRGDYSIDSPDLAAEEGRVFNLVHASDSPSEAEREIRFWFREEEVLE

>pos

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NWEVEVIAVKDYFLKARDGLLIAVSYS GNTIETLYTVEYAKRRRI PAVAITTGGRLAQMGP
TVIVPKASAPRAALPQLLTAALHV VAKVYGIDVKIPEGLEPPNEALIHKLVEEFQKRPTIIA
AESMRGVAYRVKNEFNENAKIEPSVEILPEAHHNWIEGSERAVVALTSPHIPKEHQERVKAT
VEIVGGSYAVEMHPKGVLSFLRDVGIASVKLAEIRGVNPLATPRIDALKRRLQ

>pos

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>pos

MKILVTNDDGVHSPGLRLLYQFALS LGDVDV VAPESP KSATGLGITLHKPLRMYEVDLCGFR
AIATSGTPSDTVYLATFGLGRKYDIVLSGIN LGDNTSLQVILSSGTLGAAFQAALLGIPALA
YSAYLENWNE LLNKEAVEIMGAVVS STASYVLKNGMPQGDVIVSNFPRRLGRGVRAKLVK
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EVDMDSLNRMVEYINASL

>pos

MRELVEI IKGIGIEGAKEVEEKVDRQFYALQYLFRHQDPEMFIKLVIANSLVSYQLTGRGED
WWWEFARYFSGREVDSIWKAYGEFLPKSKNNRRLIEAKLNRI RKVEGFLSTLTLKDL EGYK
NMKMLWKALIKIMGSREDSKTIVFTVKMFGYASRIAFSRFIPYPM EIPIPEDLRIKSVTSKL
TQEKPTKFWMKIGQESGVPPLHIDSLIWPLLGNADLTPLDIELRNKLMKLT ELLGL

>pos

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WGSPOEDVMMRQFAEIVSYAHD LGYPVVQFAYPRGPYIDEKYGKKEDYRVV MYGARAAAESG
ADMIKTYWTGSKETFAKVVEAAAGVPVLLSGGAKTENPVDFLKV VWEVIEAGGAGAVVGRNI

FQRENPEPMIKALIRVIHRNEDPEEAAKAEGLI

>pos

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GVEIKELGKAIENEIRKRGFKPIVNLSGHKIERYKLGHAGISIPNIYRPHDNYVLKEGDVFAI
EPFATIGAGQVIEVPPTLIYMYVRDVPVRVAQARFLLAKIKREYGTLPFAYRWLQNDMPEGO
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>pos

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RVWQPELVKTLKESGIDYVIVDDYHFMASAGLSKEELYWPPYTEDGGEVIAVFPIDEKLRYLI
PFRPVDKVLEYLHSLIDGDESKVAVFHDDGEKFGIWPPTYEWVYEKGWLRFFDRISSDEKI
NLMLYTEYLEKYKPRGLVYLP IASYFEMSEWSLPAKQARLFVEFVNELKVKGIFEKYRVFVR
GGIWKNNFFYKYPESNYMHKRMLMVSKLVRNNPEARKYLLRAQCNDAYWHGLFGGVYLPPLRR
AIWNNLIKANSYVSLGKVIRDIDYDGFEEVLIENDNFYAVFKPSYGGSLVEFSSKNRLVNYV
DVLARRWEHYHGYVESQFDGVASIHELEKKIPDEIRKEVAYDKYRRFMLQDHVVPLGTTLED
FMFSRQQEIGEFPRVPYSYELLDGGIRLKRHLGIEVEKTVKLVNDGFEVEYIVNNKTGNPV
LFAVELNVAVQSIMESPGVLRGKEIVVDDKYAVGKFALKFEDEMEVWKYPVKTLSQSESGWD
LIQQGVSYIVPIRLEDKIRFKLKFEEASG

>pos

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AGPLTGTSAPTGGRYNVVTKSPLTGFITMANSGGYFGAELKFAGYDAIVVEGKAEKPVYIYI
KDEHIEIRDASHIWGKKVSETEATIRKEVGSEKVKIASIGPAGENLVKFAAIMNDGHRAGR
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>pos

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NAILYIMAI AEYQFGE GAGEAFRDAEVEIAKTGMPRQVKNGKRLATVRAEDGLLTLGIEGA
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>pos

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>pos

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IELRR

>pos

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>pos

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KAKIVAEVANGPVTPEADEILFEKGI LQIPDFLCNAGGVTVSYFEWVQNI TGYWYTIIEEVR
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>pos

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>pos

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>pos

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>pos

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TIEEA

>pos

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WKK

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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GGIKF
>pos

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E
>pos

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>pos

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>pos

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>pos

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TIVVPVPKKAENIEVSGDHVISYSIEEGEYAKYVIITVKFASPVTVTVTYTIYAGPRVSILT
LNFLGYSWYRLYSQKFEDELYQKALELGVNETLALALS YHEKAKKEYEKALELSEGNIIQYL
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>pos

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VDEFLEGEYEPKHAYIDPARPITQGS LAFP AHYMESRYTVWEAMERAKKVIDEAFAEFEKKFG
RKYQKIEEYKTEDADIIFVTMGS LAGTLKEWIDKKREEGYKVGAAKITVYRPFVVEEIRELA
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>pos

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>pos

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>pos

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>pos

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TVLLTSFLSYARICPNPPRRNVKIRDCIKDMRVITEEILPI I IEAGNRCS PPLFEDQPNEIK
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LEEKRRAKHADEGS DKGKGERILQ

>pos

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KAILASFPEGVGI ESMAKLFALSTRFSKAYFDGRVTVDIKRILRLPSTLH SKVGLIATYVGT
KEREVMKFNPF RHAVPKFRKKEVREAYKLWRESLEYE

>pos

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ALLAEFLKADLLVITNVDGVYTADPKKDPTAKKIKMKPEELLEIVGKGIEKAGSSSVIDP
LAAKIIARSGIKTIVIGKEDAKDLFRVIKGDHNGTTIEP

>pos

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AQKKELEKRRDTIKSTLEKLKA EKENRERVKKEIKDLEKAKDFTEELIEKVKKYKALAREAA
LSKIGELASEIFA EFTEGKYSEVVVRAEENKVRLFVVWEGKERPLTFLSGGERIALGLAFRL
AMSLYLAGEISLLILDEPTPYLDEERRRKLITIMERYLKKIPQVILVSHDEELKDAADHVIR
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>pos

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GGGIETQAI TEVFGFEGSGKTQLAHTLAVMVQLPPEEGGLNGSVIWI DTENTFRPERIREIA
QNRGLDPDEV LKHIYVARAFNSNHQMLLVQQAEDKIKELN TDRPVKLLIVDSL TSHFRSEY
IGRGALAERQQKLAKHLADLHRLANLYDIAVFVTN QVQARPD AFFGDPTRPIGGHILAH SAT
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>pos

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AEGSREYGELSKQLQVLQWIARRKNVAVIVVNQVYYDSNSGILKPIAEHTLGYKTKDILRFE
RLRVGVRIAVLERHRFRPEGGMVYFKITDKGLEDVKNE

>pos

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VKFIEENITSIPNLKHIQIFPITEIKKGEDLTGFLAEV

>pos

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NNLDLAAHFTVFLGLSEKEVEFLAGKEKAGTIWGKALALRRKLELGIREEEKPKVEIEEEE
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>pos

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QSRCAIFRFRPLRDEDI AKRLRYIAENEGLELTEEGLQAILYIAEGDMRRAINILQAAAALD
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>pos

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>pos

MRIKGVVLSYRRSKENQHNNVMIKPLDVNSREEASKLIGRLVLWKSPSGKILKGKIVRVHG
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>pos

MWRNSEEENRTSGRSQGSYQEIIIGRTWIFRGAHRGRVNKKNIVWHELIGLKVRVNSTHPG
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WRK

>pos

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>pos

MAKWVCKICGYIYDEDAGDPDNGISPGTKFEELPDDWVCPICGAPKSEFEKLED

>pos

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>pos

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>pos

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GRSYRFIARNLNLTPKKLFVKPTDYVNKFADELGLSEKVRRAIEILDEAYKRGLTSGKSPA
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>pos

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KSRSGK KKK

>pos

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GAGSVFPTKTKEDARVIGLEGLRKIVESVKIPVVAIGGINKDNAREVLKTGVDGIAVISAVM
GAEDVRKATEELRKIVEEVLG

>pos

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LGYVYFDEKTGRFEVEKSFLSTRPNAYGPLWLGLPKNEKVVGEMLELLVSGFEVANYREVLK
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VFVEVMRKN

>pos

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FTEIAREEGIKTVFLAAPNTPDERLKVIDDMTTG FVYLVSLYGTGAREEIPKTAYDLLRA
KRICRNKVAVGFGVSKREHVVSLLKEGANGVVVGSALVKIIGEKGREATEFLKKKVEELLGI

>pos

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IIQVMKEFEGEIIQRPPLRS AVKRRLRTRKVVYIEVLEIEGRDVLFRVGV EAGTYIRSLIHH
IGLALGVGAHMSELRRTRSGPFKEDETLITLHDLVDY YFWKEDGIEEYFRKAIQPM EKAVE
HLPKVVIKDSAVA AVTHGADLAVPGIAKLHAGIKRGDLVAIMTLKDELVALGKAMM TSQ EML
EKTGIAVDVEKVFMPRDWY PKLWEKRDRS

>pos

MKIVVMGSDTVVGFRLAGVHEAYEYDESLESVERARNK LRELLERDDVGIIILITERLAQRI
GSLPEVKFPIILQIPDKFGSIYGEDI LRDVVRAIGVELKR

>pos

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SEDPYLSSELAASHIKGVQSQGVGACLKHFAANNQEHRMTVDTIVDERTLREIYFASFENA
VKKARPVVVMCAYNKLNGEYCSENRYLLTEVLKNEWMHDGFVVS DWGAVNDRVSGLDAGL DL
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SVDKKDVS DNS I INVSVKVKNVGMAGKEIVQLYVKDVKSSVRRPEKELKGFVKVFLNPGEE
KTVTFTLDKRAFAYYNTQIKDWHVESGEFLILIGRSSRDIVLKESVRVNSTVKIRKRFTVNS
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EELVDKINNVE

>pos

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VYAKI GOMGEPYTEYWNWNPNLTPGQKLTVEQNFTMNYPTDDTCEFTFHLGGELAAAGTP
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>pos

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NDLVEQKTQFFDGGVNVGDTTEPATPTTPVTTPTTTDDLDVRIKVDTVNAKPGDTVRI PVR
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NLLDVAEVIRCFNATKGSANYVEELDINRNGAINMQDIMIVHKHFGATSSDYDAQ

>pos

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>pos

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PPNFVELEVTDTEPGFKGDTATGATKPAIVETGASIKVPLFVNKGDIIRIDTRTGEYMERV

>pos

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>pos

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>pos

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RYINEREHIAFELLNEVVEPDSTRWNKLMLEYIKAI REIDSTMWLYIGGNNYNsPDELKNLA
DIDDDYIVYNFHFYNPFFFTHQKAHwSESAMAYNRTVKYPGQYEGIEEFVKNNPkYSFM MEL
NNLKNKELLRKDLKPAIEFREKKKCKLYCGEFGVIAIADLESRIKWHEDIISLLEEYDIGG
AVWNYKKMDFEiYNE DRKPVsQELVNILARRKT

>pos

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EIKNKLGW

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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NSEKTLSIYPYVLAKQKGKYMVGLFGADLKYHAPLITLNEVQFIGSLVGNQSDFLGIMSLAE
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>pos

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>pos

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>pos

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VIDGTKTPKEIQIQIRK FVGELIDNSF

>pos

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KGFHEIVSDGVAVGMKIIITRFASERIAKVGLNFALRRRKKVTCVHKANVMRITDGLFAEACR
SVLKGKVEYSEMYVDAAAANLVRNPQMFDVIVTENVYGDILSDEASQIAGSLGIAPSANIGD
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>pos

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>pos

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GEKSLGGYSRVELKRKLELELEGIDVAKFIEK

>pos

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NLEFDIKATINASGLKNAIGEIAEVADTLISGNEEKVVVKGEGENKVEVEFSKDTGSLADI
EFNKESSAYDVEYLNDIISLTKLSDYVKVAFADQKPMQLEFNMEGGGKVTYLLAPKLS

>pos

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>pos

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>pos

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>pos

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KNPKAVNILLRGSNDMALDEAERSINDALHSLRNVLMKPMIVAGGGAVETELALRLREYARS
VGGKEQLAIEKFAEAELEEIPMILAE TAGMEPIQTLMDLRKHA KGLINAGVDVMNGKIADDM
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E

>pos

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RVIALGNPERYGSVTIASAVSPGGDFTEPVT SNTLRFVRFVWPLDVSLA QARHPAINW IQ
GFSAYVDLVAQWWHKNVDPNWKEMRDTMMKVLIREDEL RQIVRLVGPESLAEKDKLVLEAAK
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>pos

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>pos

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EIDVENRWELPKKIKVGEDGLIVEY GILYSGLLLPQVPMEYCWDEETFLAETCIKAGLEPDC
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>pos

MACEGAPEVRIGRKPVMNYVLAAILTTLMEQGTNQQVVVKARGRNINRAVD AVEIVRKRFAKNI
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>pos

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>pos

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LASELYIMGYSYGGYMTLCALTMKPGFLFKAGVAGASVVDWEEMYELSDAAFRNFIEQLTGGS
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>pos

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FHARLKPPEAAGYVEAVIESLDARTVAVTFRYGGAPVGPMLRLGKPAEMVKRGRRV

>pos

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KYLSTLVQNALEGAGDSV

>pos

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GIVKLAKSYGAVVKVILEAPLWDDKTLSTLLVDSSRRAGADIVKTSTGVYTKGGDPVTVFRLA
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>pos

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AARGATMLSFYRFGGTVTLPGPWRGVTPISVARRIYLNLCAGLHTTALLDVERGVQLSPGQ
GVSLLEADREYAREAGAPALLARLPSVLVEAGAGGHRVLYWSSLERLSTADVEGGVYSIV
IPARLSGVEEWLLAAASGQRRPLEYDRSVYETVEENCKKGVYMEPV

>pos

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LTVGLKIIRDATVETAEEVAREALESRIEVAAGLGGGKSIDVAKYASKRAGSVFVSIPTVAS
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AHKLRLEYGEYAASLALLSAKHVSQYAEI IALGTREGYRVLLEALVSSGVSMMCIAGSTRA
SGSEHLFAHALHIVARNKPLHGEAVGVGTIMMAYLHGKNWRRIRGLLKTVGAPTNAKELGVE
DDEVVEALTIAARIRPERYITILGEKGLTREAAEALARKTGVI

>pos

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>pos

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PPILYHGTTTEALPLIMERGIMRGRRLKVHLTSSLEDAVSTGRRHGNLVAVLLVDVECLRR
GLKVERMSKTVYTVDWVPPECIAEVRRESLGRSL

>pos

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PEIQELIVWEARKRYKTVVLATEFLSSMIEKVPVTRSEVVDIYQAVLQTADALMLTGETAIG
KYPVKSQWMAKISSRAYKKLATSPPERPRPTSTPYKLALGLVELAESLDSPLVVYSKTGRF
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ETVVEAAWSSERGIYI IRVRNLEF

>pos

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GLGLFRLVRLRLRFLRILLIISRGSKFLSAIADAADKIRFYHLFGAVMLTVLYGAFIYIVEY
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QKILVGEPEPSCSPAKLAEMVSSMSEEEFEEFVRTLKNLRRENSMK

>pos

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LVARLPGGILPRVSFPWMLAASTAMLSGALGVDLEALKRLAGGLDTQGLKGEAERLAGFI SR
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>pos

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>pos

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AGV

>pos

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VRGVFIVDARGVIRTMLYYPMELGRLVDEILRIVKALKLGD SLKRAVPADWPNEI I GEGLI
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LH

>pos

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KTHHPISRSEVERVLRGFTNLWLKVTGPILHLRVEGWQCAKSLLEAARRNGFKHSGVISIA
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CF

>pos

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>pos

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KIRRIEVLERAKVKPEVHFEALIEGKPLPEVTI IGTGGT IASRIDYETGAVYPAFTA EELA
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TYLR

>pos

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VKPSLAASILVVVLKGLRKEVPIENVTDEHIREAFQLYLEGKIAKEAFEEIFKELARNPSKS
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>pos

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VWVPLEEEWGEVYAAFEDAAKDGDVVLKGVHPDEWLPVLKEIIDNYVEVPTVTIDAEFEITV
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>pos

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ISPELLRMPRHIVEELREKGMKVVETTTLEDVIGKLDVLYVTRIQKERFPDEQEYLVKVGSI
QVNLKVLEKAKDELIRIMHPLPRVDEIHPEVDNTHAIYFRQVFNGVPVVMALLALVLGVI

>pos

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ARDHSFISNGLVSHNCNYSSKII EPIQSRCAIFRFRPLNDEDI AKRLRYIAENEGLEL TEEG
LQAILYIAEGDMRRAINILQAAAALDRKITDENVFLVASRARPEDIREMMLLALKGNFLKAR
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LAQFTLIGKKK

>pos

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YKSKGYAKYYYYDKDRMLYIEPEYILIRDGII EKKEGE

>pos

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EIEKAFKEVGELIMNYRFKDALKRVM SLASFGNRYFDHKQPWK TAKEDKVRTGTTVNISLQI
VKALGILLEPFLPDASEKIWHLLNLDEVKRWEFREL PAGHKVRKPEILFKKVTDDQIIYFIL
NYMAKGNPEGARILLDKYYKREDVIRVAKEKFGDEAEVVLRRVYKDIKLEKKEGKEMVVKF
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>pos

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ISCKGHPLAELSRTIVPEEARVEEVPEALRKEEEELVSYWYILTPEGELIEVDKFDFTGYEN
LRKFVNYEIAKNRIAEKEPPHVKLMLEHELVDYEPGSDPGNLRYPKGRLIKSLLEQYVTEK
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NEGKKPMFPLWLSPIQVRVIPVSEEYLDYALYVAGKLEGAKIRVDVDEDERLNKKIRRAEK
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PKFRG

>pos

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RGKWWKIVDIDECPVFGKTSREAIERLKEFIEEEKISVWN IKKDEGFLRYMVLREGKFTEEV
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SFFQTNSYQAVNLVRKVSELVEGEKILDMYSGVGTFGIYLAKRGFNVKGFDSNEFAIEMARR
NVEINNVDAEFEVASDREVSVKGFDTVIVDP PRAGLHPRLVKRLNREKPGVIVVSCNPETF
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>pos

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GSEAEMANLIFENPRVIEEGFKPIYREKPIRHGIVDVMGVDKDGNIVVLELKRKADLHAVS
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FTP

>pos

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VLLKYWNRYGLPLYVMENGIADDADYQRPYYLVSHIYQVHRALNEGVDVRGYLHWSLADNYE
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>pos

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>pos

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RYSPPVMRTVRKTKERVKLGDTIEEGEYVRVWIASANRDEEVFHDGKFI PDRNPNPHLSF
GSGIHLCLGAPLARLEARIAIEEFSKRFRHIEILDTEKVPNEVLNGYKRLVVRLLKSNE

>pos

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REKK

>pos

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>pos

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>pos

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>pos

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MASVFMKYSAGENTISTGNQVETMRMRSYIAKKNIPAYEVGGYVGGEHGEAAMVLWSTVTVK
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KYEDEIIHISEPVVVGRTVGPALTSALDENDKARLSQAIKEVYNVYKSNLKELEQVIS

>pos

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EAIPTFKTLTEKPLKMRCEYCETIIDENEIMSQILGANNK

>pos

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VAERLKE LGRS IPTDFSIEISNSFIKSTVNLYTQADLV MEMKNKKIGRPSTYATIIGTILRR
GYVLES LKTKKLIPTRLGVEVNKYLNENYGRFVSEDRTRKLLQLMDMVEAGQEKYEEVLKQV
YEEINEIR

>pos

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SLLGTARSIGITVEGKDPKDVIKEIDQGKYNDLLTNYEQKWNEAEG

>pos

MEYIYASLLLHAAKKEISEENIKNVLSAAGITVDEVRLKAVAAALKEVNIIDEILKTATAMPV
AAVAAPAGQQTQQA AEKKEEKKEEEKKG PSEEEIGGGLSSSLFG

>pos

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RILGPALGPRGKFP TPLPNTADISEYINRFKRSVLVKT KDQPQVQVFIGTEDMKPEDLAENA
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>pos

MSKHKSLGKKLRLGKALKRNSPIPAWVI IKTQAEIRFNPLRRNWRNNLKV

>pos

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>pos

MRSSSKKIDISNHELVPKHEILQLEEAYKLVKELGIKPEQLPWIRASDPVAKSIGAKPGDI
IKITRKS PFTGESVTYRYVITG

>pos

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FLENNMYEPEQFPGLIYRMDEPRVLLIFSSGKMVITGAKREDEVHKAVKKIFDKLVELDC

VKPVEEEEELEF

>pos

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SFPLSYIYIINMSYTSNAVYVWIGYEIIQIGQTEYGTVNYYDKITIIYQPNIIISASLMINGNN
YTPNGLYYDAELVWGGGGNGAPTSFNLSLNTLGLYYISNGSITPVPSLYTFGADTAEAAAYNV
YTTMNNGVPIAYNGIENLTILTNNFSVILI

>pos

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WIPVTALLLIFKRTRKIGITLVISFVIAIVLGEVSKYVMAQLRPFNFVNPTYLLEPKPTDYS
YPSGHALIVSTGAVTLLLTSPKMMWILGIEAVLVSYSRVYVGVHWPLDVIAGWLLGSWISF
LSVQIESTGPIKIEQMLKA

>pos

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KSIDESTFRKYLYDQELSDIDLLIRSSGEIRISNFWLWHLAYSELFFVDVYWPDFRKIDLWR
AIRSFQKRKRNFGA

>pos

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KKLKKDGLQDKFCPYSLNLSLYKADVIALTYPYFFIDRYREFIDIDLREYMIVIDEAHNLD
KVNELEERSLSEITIQMAIKQSKSEESRRILSKLLNQLREVLPDEKYIKVENVPKLSKEEL
EILADDYEDIRKDSLKQKVNKIHIHGSILRFFSLLSIGSFIPFSYSKRLVIKNPEISYYLNL
LNDNELSIIILMSGTLPPREYMEKVGWIKRNMLYLDVEREIQKRVSGSYECYIGVDVTSKYDM
RSDNMWKRYADYLLKIYFQAKANVLVVFPSYEIMDRVMSRISLPKYVESEDSSVEDLYSAIS
ANNKVLIGSVGKGLAEGIELRNDRSLISDVVIVGIPYPPDDYKILAQRVSLKMNRENE
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>pos

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>pos

MKKWSDTEVFEMLKRMYPYVYGLVQGVGFRKFVQIHAIRLGIKGYAKNLPDGSVEVVAEGYE
EALSKLLERIKQGPAAEVEKVDYSFSEYKGEFEDFETY

>pos

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PVFNINIPDYTVFALVKSNGSYEAFFTLNNYVTAYLFGDSVRLYTGFNTEIKRSYFLSIGT
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KLHIMFNAYNSLLTSHIVYDPYDMFMSYDPYAKVHLVARVFSGGPIYITDRHPERTNIELLR
MAVLPNGEVIRVDEPALITEDLLFKDPLRERVLLKLGKVKGYNAIAFFNLNSGEVEEEEYNN
NEDYYYYYKVFSGEFGVGFNVKLRRELDAAEVVITFPKSNRVIGLREYILPPFTVIVSDNVVIP

KADGTLLEYVKDTELNEVKAREGIPVTIE

>pos

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IFDVGLEEYDKVIVTIPEDSVEFYVIEGPRIEDVLEKYTELTKGKPLPPMWAFFGYMISRYSY
YPQDKVVELVDIMQKEGFRVAGVFLDIHYMDSYKLFTHWHPYRFPEPKKLIDELHKRNVKLIT
IVDHGIRVDQNYSPFLSGMGKFCIESEGELFVGKMWPGETTVYPDFREDTREWAGLISEWL
SQGVDGIWLDMNEPTDFSRRAIEIRDVLSSLPVQFRDRLVTTFPDNVVHYLRGKRVKHEKVR
NAYPLYEAMATFKGFRTSHRNEIFILSRAGYAGIQRYAFIWTGDNTPSWDDLKQLQLVLGL
SISGVPFVGCIDGGFQGRNFAEIDNSMDLLVKYYALALFFPFYRSHKATDGDIDTEPVFLPDY
YKEKVKEIVELRYKFLPYIYSLALEASEKGHPIRPLFYEFQDDDDMYRIEDEYMGKYLLY
APIVSKEESRLVTLPRGKWNYNWNGEIIINGKSVVKSTHELPIYLRGSIIPLEGDELIVYGE
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NQKIRGKINLE

>pos

MTEKLNEIVVRKTKNVEDHVLDVIVLNFQGIDEVILKGTGREISKAVDVYNSLKDRLGDGVQ
LVNVQGTGSEVRDRRRISYILLRLKRVY

>pos

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RFKLTVRVDKGLKVISNMPVVREKEENGKVVYEFDETPKMSTYLLYLGIGNFEEIRDEGKIP
TIIVATIPGKVQKGRFSMQISRNSIEFYEKYFEIPYQLPKVHLIAIPEFAYGAMENWGAI
RETALLADSSSVYQKFRVAEVVAHELHQWFGNLVTLKWWDLLWLNESFATFMSHKAISQL
FPSWNFWDYFVLNQTSRALEKDSVSTHPIEAHVDRDPNEVEQMFDDISYKKGASILRMIEAY
VGEENFRRGVVNYLKKFSYSNAQGSDLWNSISEVYGSDISPIMADWITKPGYPMVRVSVSGK
RVSLEQERFSLIGNVENLLYKIPLTMEVNGKVVTHLLDKERDTMVFEEDVKSLKVNVRNRTGF
YRVFYNNSDLVFNNSLSELDKWIINDYWAFLLAGKIGFKEYERVISKFFNDKDFLPVNEL
SNELFTLHAINPKYQGIKAKEFHRIQLKNWRNSKDELGRLTYSNILYRLAAIDDEFSLGLSE
LFRFYGSLDSDTRQGVAVAYAITYEDNSVDELLERFRKETFDEEKLRYLTLAMLFFRKPYPV
NTLSLILSGEIKKQDIPLTLSTAAYNPYAKSAVLNWIKMHNFMREAYKGTGILGRRLAEVI
PLIGIGAERETEQFFSNLNMPEAERGIGTGLELLKAYSRLK

>pos

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QMFYADRSSQ

>pos

MDLVEKLNKNDVREIEDWIIQIRRKIHEYPELSYKEYNTSKLVAETLRKLGVEVEEGVGLPTA
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NKDLISGEIRLIFQPAEEDGGLGGAKPMIEAGVMNGVDYVFGIHISSSYPSGVFATRKGPI
ATPDAFKIIVHGKGGHGSAPHETIDPIFISLQIANAIYGITARQIDPVQPFIIISITTIHSGT
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>pos

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VDLLDPRVKSSSLSEEEIIFPPYNAEELEDILTKRAQMAFKPGVLPDNVIKLAALAAREHGD
ARRALDLLRVSGEIAERMKDTKVKEEYVYMAKEEIERDRVRDIILTLPFHSLVLMVAVVSI
SEENVVSTTGAVYETYLNICKKLGVEAVTQRRVSDIINELDMVGILTAKVVNRGRYKTKEI
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>pos

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SRGLSAQEVFKMIHEYLDRRN IHLIVALDEFGHFLNTANTEEIYFLVRLYDEISAI IKRISY
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NTYGYDKGGNGNARIAIETLSLAGEIAEKEGSPVLLDHAKKANSTINPEIQEIIDSLSYLD
LHQLILLKALIRALNKTKADEITMGTLEEEYISLSREFNEEPRRHTQVVEYLRKLVIGIIN
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>pos

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HGINLGEYIDKIKNGTRNIRAI IYLDEVDTLVKRRGGDIVLYQLLRSDANISVIMISNDINV
RDYMEPRVLSLGPVIFKPYDAEQLKFILSKYAEYGLIKGTYDDEILSYIAAISAKEHGDA
RKAVNLLFRAAQLASGGGIIRKEHVDKAIVDYEQERLIEAVKALPFHYKLALRSLIESEDVM
SAHKMYTDL CNKFKQKPLSYRRFSDI I SELDMFGIVKIRI INRGRAGGVKKYALVEDKEKVL
RALNETFEDSISIGDFDDVGEN

>pos

MSSGKKPVKVKTPAGKEAELVPEKVVWALAPKGRKGVKIGLFGKDPETGKYFRHKLPPDDYPI

>pos

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KKTGFYGNLLVATTTALSIFYGGLAFFSDNWLRLRIIPTLYAFFLTLIREIVKGIEDYNGDS
LNNVKT LATTLGINKSWRIAKILLVLLLI ISPLPFFIGFNLIYLILLILVFI PFTILSIIQK
ETIEGASKARTY LKISAIISGIIAFLLGSLPFFKG

>pos

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YSTLSKVALTTGEGSRDLKIRLLAGLLKKADPLEAKFLVRFVEGRLRVIGDATVLDAMAIA
FGGQSASEI IERAYNLRADLGNI AKI IVEK GIEALKTLKPQVGIPIRPMLAERLSNPEEIL
KKMGNAIVDYKYDGERAQIHKKEDKIFIFSRRENITSQYPDVVDYVSKYIEGKEFII EGE
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KRDYQSEMA DTVDLVVVGGFYGKGKRGKISSLLMAAYNPKTDSFESVCKVASGFSDEQLDE
LQKKLMEIKRDVKHPRVNSKMEPDIWVEPVYVAEII GSEITISPLHTCCQDVVEKDAGLSIR
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>pos

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WNKFKLTKIVVRDPLAVRRLRNDVPKAYEAHIKYFNMYDIGLIPGMPYVVKNGKLESVYL
SLDEKDV EEEKKAFADSDEMTRQMAVDWLP IFETEIPKIKRVAIDIEVYTPVKGRIPDSQKA
EFPIISIALAGSDGLKVLVLRNDVNEGSVKLDGISVERFNTEYELLGRFFDILLEYP IVL
TFNGDDFDLPYIYFRALKLGYFPEEIPIDVAGKDEAKYLAGLHIDLYKFFFNKAVRNYAFEG
KYNEYNLDAVAKALLGTSKVVDTLISFLDVEKLI EYNFRDAEITLQLTTFNNDLTMKLI VL
FSRISRLGIEELTRTEISTWVKNLYWEHRKRNLWLIPLKEEILAKSSNIRTSALIKGKGKYG
AVVIDPPAGIFFNITVLDFA SLYPSI IRTWNLSYETVDIQQCKKPYEVKDETGEVLHIVCMD
RPGITAVITGLLRDFRVKIYK KAKNPNNSEEQKLLYDVVQRAMKVF INATYGVFGAETFPL
YAPAVAESVTALGRYVITSTVKKAREGLTVLYGDTDSLFLLNPPKNSLENI IKVKTTFNL
DLEVDKTYKFVAFSGLKKNYFGVYQDGKVDIKGMLVKKRNTPEFVKKVFNEVKELMISINSP
NDVKEIKRKIVDVVKGSYEKLKNKGYNLDELAFKVMLSKPLDAYKKNTPQHVKAAALQLRPF
VNVLPRIIYYVKVRSKDGVPVQLAKVTEIDAEKYLEALRSTFEQILRAFVGSWDEIAATM
SIDSFFSYPSKGN

>pos

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QCAIRTWKEVCDMTYQKDPRTYDLAQRILQEEIEHEAWFLELLYGRPSGFHRRSSPGNAPYS
KK

>pos

MDIKLVYSTLDPVGVTIKKLGYRFEEINEDVTDHFYENGEAIVIFSRHESKAGIPSLTVHYP
GNPSEEIMGGEPPKGLGIAYPRLTSLREIKKIDLNIEKTMEATHHGPTYQNVPIFVEVGS
NETYWTNDTIVKALVDSTIRSIDKVDEIDCEYYISGFGGPHYSRLFTKLADESCIGHVISKH
YIDKLDKVI IQTITNSVNTINKVVIDSLNSKQKERIIASLKKLNNINIEFR

>pos

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YVIARIENFDRSIDPVLVSVKGDGRVSNVIVIDIMPVKVPRVIGKNKSMYETLTSKSGCSI
FVANNGRIWATCPSRFSEEILIEAIRKIENESHIKGLTDRIKQFIEEKLGERNASSGETKTN
S

>pos

MSSTPSNQNI IPI IKKESIVSLFEKGI RQDGRKLT DYRPLSITLDYAKKADGSALVKLGTTM
VLAGTKLEIDKPYEDTPNQGNLIVNVELLPLAYETFEPPDENAIELARVVDRSLRDSKAL
DLTKLVIEPGKSVWTVWLDVYVLDYGGNVLDACTLASVAALYNTKVYKVEQHSNGISVNKNE
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>pos

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GMSVEGQTREHI I LAKTMGLDQLIVAVNKMDLTEPPYDEKRYKEIVDQVSKFMRSYGFNTNK
VRFVPPVAPAGDNITHRSENMKWYNGPTLEEYLDQLELPPKPVDPKPLRIPIQDVYSISGVGT
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DVVGHPPNPPTVADEFTARIIVVWHPTALANGYTPVIHVHTASVACRVSELVSKLDPRTGQE
AEKNPQFLKQGDVAIVKFKPIKPLCVEKYNEFPPLGRFAMRDMGKT VGVGIIVDVKPAKVEI
K

>pos

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GGTDNLEEVVNNIQGVSHAEVVGITRLGF

>pos

MDLADLVKDVKRELSFSELKGRVSI DGYNALYQFLAAIRQPDGTPLMDSQGRVTSHLSGLF
YRTINILEEVIPIYVFDGKPEQKSEELERRRKAKEEAERKLERAKSEGKIEELRKYSQAI
LRLSNIMVEESKLLRAMGPIVQAPSEGEAEAYLNKLGLSWAAASQDYDAILFGAKRLVR
NLTITGKRKLPNKDVYVEIKPELIETEILLKKGITREQLIDIGILIGTDYNPDGIRGIGPE
RALKI IKKYGKIEKAMEYGEISKKDINFNIDEIRGLFLNPQVVKPEEALDLNEPNGEDIINI
LVYEHNFSEERVKNGIERLTKAIKEAKGASRQTGLDRWF

>pos

MSEVITVKQTNMENIYECEFNDGSFRLCTRNLVPNFNVYGERLIKYEYREWNAFRSKLA
GAILKGLKTNPIRKGTKVLYLGAASGTTISHVSDI IELNGKAYGVEFSRVVRELLLVQR
PNIFPLLADARFPQSYKSVVENVDVLYVDIAQPDQTDIAIYNAKFFLKVNGDMLLVIKARSI
DVTKDPKEIYKTEVEKLENSNFETIQIINLDPYDKDHAI VLSKYKG

>pos

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VAEVTNRLLPALQOI ISSLNKAEEYKDVIKAGRTHLRDALPVTLGQELSAYADAFQHEHEQ
VMNILEYVKELPIGGTATGTGLNSHPEFQERVINEINRITGLGFKPANRFRAMRLTDL

SGALRNIAVDLYRLGQDIRLMFSGPLTGLNEIDLPTQEEIAGSSIMPGKTNPVTVEATLLIS
AQVVGLDHANQFASMLGEFELSMGIPLVGYNIIVTQVNFISEALEKMSRLVIDGMVANVEKMK
RYAESSPLITIVSPVIGYDKATEIGKKLKNGMSIREALRELGYSDNEINKILDLSKLVKPG
FTAK

>pos

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APIIKMLQMEVIPTAYVIVGHGGTAAHIGKARVIPYDNFELATAYTLAAEYLGMSFVYLEAG
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IRGIKKNK

>pos

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LVFRNSRKMAESTALKIANYMNFVSLDEKAISEILKQLDDIEEGGSDEKELLKSLISKGVAY
HHAGLSKALRDIIEESFRKRKIKVIVATPTLAAGVNLPARTVIIIGDIYRFNRKIVGYDEIP
VMEYKQMSGRAGRPGFDQIGESIIVVRDKEDVDRVFKKYILSDVEPIESKLGSERAFYTFL
GILSAEGSLSEKQLEAFAYESLLAKSVVDVYFDRAIRWLSEHSFIREENNTFTLTNFGKRV
DLYINPFTADIIRKGLEGYKASCEIAYLHLLAFTPDGPLVSVGRNEEEELIELLEDLECELL
VEEPYEEDEYSLYLNALKVALIMKDWIDEVDEDTILGKYNIGSGDLRNIVETMDWLTY SAYH
LSKELRLDDHSDKLRIINLRVTDGVKEELLELVQIGGVGRKRARLLYNNGIKGLGDVVMNPD
RVRNLLGQKLGERVVQEAARLLNRFH

>pos

MKIDEVVEKLVKGEISFHEVDNLLLEANAMVARRLALEKIVGVGLPSIGSTVIDYSEIKNKN
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KDEMTRAPVFKFDSIEQIPNFLKFIENLEKIRNIANSTSHHGKLSITPFVLGNNVWLRFS
FETGDAMGMNMTIAVEKVCFIEENFPSADCLAVSGNMCSDKKQTNVNSLFGRGKTVVAEA
LIKDVDIRNIIHSNAQLIHDINLRKNWLGTARAGSLSQFNAHFANIVTAIFIATGQDVAQIV
ESSSGYTWTEVRGEDLYISVTLPSLEVGTVGGGTRLPTQKEALSIMGVYSGNPPGSNAKKL
AEIIASTVLSGELNLLAALSNEKLGKAHAKLGRAMKV

>pos

MIYSRSLPSEGEIILIAIVKQVFDYGSYVSLDEYGGLOAFLPWSEVSSKWKVKNIRDVLKENR
KVIVKVIKIRVDRRKGTVDVSLKKTDDERRKKNLQWKKIQRLDKILELVSQKLLKSEKDAWEQ
VAWKLEAKYGDPIAIEKAVKEGEKILIDAGVPEIWKPLLEEASKHAEERKVKMSGLITVR
TNEPLGVEKIKEVISKALENIEQDYESSLNIIKIYITIGAPRYRVDVVGTPNPKEASEALNQIIS
NLIKIGKEENVDISVVKK

>pos

MSSEKEYVEMLDRLYSKLPKGRKEGTQSLPNMIILNIGNTTIIRNFAEYCDRIRREDKICM
KYLKELAAPGNVDDKSELVIQGFSSQVINTLMERFLKAYVECTCKSLDTILKKEKKS
WYIVCLACGAQTPVKPL

>pos

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EPFPQPQTRHFVALGIIIGVKNLIIVQNKVDVVSKEEALSQYRQIKQFTKGTWAENVPIIP
VSALHKINIDSLIEGIEEYIKTPYRDLSSQKPVMLVIRSFVKNKPGTQFNELKGGVIGGS
IIQGLFKVDQEIKVLPLRVEKQGVSYEPIFTKISSIRFGDEEFKEAKPGLVAIGTYLDPS
LTKADNLLGSIITLADAEVPLWNIRIKYNLLERVVGAKEMLVDPPIRAKETLMLSVGSST
TLGIVTSVKKDEIEVELRRPVAVWSNNIRTVISRQIAGRWRMIGWGLVEI

>pos

MKIGIVTGIPGVGKTTVLSFADKILTEKGISHKIVNYGDYMLNTALKEGYVKS
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EKQRELQALAARRIVEDLSLLGDEGIGLIDTHAVIRTPAGYLPGLPRHVIEVLSPKVIFLLE
ADPKIILERQKRDSRARTDYSDTAVINEVIQFARYSAMASAVLVGASVKVVVNQEGDPSIA
ASEIINSLM

>pos

MQVENIRVRLPSGKEVGLVDALNFCYDISDTDFQVLKTLNLSGPKTEDELAEMHLHLSKASIN
RSVNKLVLGLFVDRVKDSSSKGGRPRYIYKPIDADRITTKISNDFKYCADLFSSVIPQELKE
K

>pos

MGNANIDESDLKILEILKKNARTPYTLIAKELKVSEAAIRKRIEKLIROGIIKRFTEIEYELE
NEIRAIVMVQSTPQIPTPEISKKIAKIPGVEVVYETTGDYDILVIVRGTNITSINRTIDEIR
SIQGVVGTNSTIILRTWF

>pos

MEIPSKQIDYRDVFIIEFLTTFKGNNNQNKYIERINELVAYRKKSLIIEFSDVLSFNENLAYE
IINNTKIILPILEGALYDHILQLDPTYQRDIEKVHVRIVGIPRVIELRKIRSTDIGKLITID
GILVKVTPVKERIYKATYKHIHPDCMQEFEFWPEDEEMPEVLEMP TICPKCGKPGQFRLIPEK
TKLIDWQKAVIQERPEEVPSGQLPRQLEIILEDLVD SARPGDRVKVTGILDIKQDSPVKRG
SRAVFDIYMKVSSIEVSQKVLDEVIISEEDEKIKDLAKDPWIRDRIISSIAPSIYGHWELK
EALALALFGGVPKVLLEDTRIRGDIHILIGDPGTAKSQMLQFISRVAPRAVYTTGKGSTAAG
LTAAVVREKGTGEYYLEAGALVLADGGIAVIDEIDKMRDEDRVAIHEAMEQQOTVSIKAGIV
AKLNARA AVIAAGNPKFGRYISERPVS DNINLPPTILSRFDLIFILKDQPGEQDRELANYIL
DVHSGKSTKNIIDIDTLRKYIAYARKYVTPKITSEAKNLITDFFVEMRKKSSETPDSPILIT
PRQLEALIRISEAYAKMALKA EVTREDAERAINIMRLFLESVGVDMESGKIDIDT IMTGKPK
SAREKMMKIIIEIIDLAVSSECAKVKDILKEAQQV GIEKSNIEKLLTDMRKS GIIYEAKPEC
YKKV

>pos

MNPVHILAKKGEVAERVLVVGDPGRARLLSTLLQNPCLTNENRGLVYTGKYNGETVSIATH
GIGGPSIAIVLEELAMLGANVFIRYGTGALVPYINLGEYIIVTGASYNQGGFLFYQYLRDNA
CVASTPDFELTNKLVTSF SKRNLKYVGNV FSSDAFYAEDEEFVKKWSSRGNI AVEMECATL
FTLSKVKGWKSATVLVSDNLAKGGIWITKEELEKSVMDGAKAVLDTLTS

>pos

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DVGMDLSRIYIIPMPDILMNNIWAHYVSTYTPKFEVVFARNPLVVRI FKEAGYKVEIPPAFN
REKYNSTYIRRLIILNDNWSELV PKPVYKYILEIKGDQRLREIVGTDK

>pos

MLRSLVQNPKVRARVLERVDEFRLNNSNEEVWFRELTLCLLTANSSFI SAYQALNCLGQKI
YYANEEEIRNILKSKYRFYNLKAKYIIMAREKVYGR LKEEIKPLADEDQQLARERLLNIKG
IGMKEASHFLRNVGYFDLAIIDRHIIDFMRRIGAIGETNVKQLSKSLYISFENILKSIASNL
NMSVGILDLFIWYKETNTIVK

>pos

MFKIVYPNAKDFFSFINSITNVTD SIIILNFTEDGIFSRHLTEDKVLMAIMRI PKDVLSEYSI
DSPTSVKLDVSSVKKILSKASSKKATIELTETD SGLKIIIRDEKSGAKSTIYIKA EKQVEQ
LTEPKVNLAVNFTTDESVLNVIAADVTLVG EEMRISTEEDKIKIEAGEEGKRYVAF LMKDKP
LKELSIDTSASSSYS AEMFKDAVKGLRGFSAPT MVSFGENLPMKIDVEAVSGGHMIFWIAPR
L

>pos

MKAKVIDAVSFSYILRTVGDFLSEANFIVTKEGIRVSGIDPSRVVFLDI FLPSSYFEGFEVS
QEKEIIGFKLEDVNDILKRVLKDDTLILSSNESKLT LTFDGEFTRSFELPLIQVESTQPPSV
NLEFPFKAQLLTITFADIIDELSDLGEVLNIH SKENKLYFEVIGDLSTAKVELSTDNGTLLE
ASGADVSSSYGMEYVANTTKMRRASDSMELYFGSQIPLKLRFKLPQEGY GDFYIAPRAD

>pos

MRIPLVGKDSIESKDIGFTLIEHLRVFSEAVRQQWPHLYNEDEEF RNAVNEVKRAMQFGVK

TIVDPTVMGLGRDIRFMEKVVKATGINLVAGTGIYIYIDLPHYFLNRSIDEIADLFIHDIKE
GIQGTLNKAGFVKIAADEPGITKDVVKVIRAAAIAANKETKVPIIITHSNAHNNTGLEQQRILT
EEGVDPGKILIGHLGDTDNIDYIKKIADKGSFIGLDRYGLDLFLPVDKRNETTLLRIKDGYS
DKIMISHDYCCTIDWGTAKPEYKPKLAPRWSITLIFEDTIPFLKRNGVNEEVIATIFKENPK
KFFS

>pos

MALDVKKYPFIKSLDDELKKYGGGITLTDLLLNSTTLIDQAKDRIQKTKSGDELPHYVSYNE
PVLVIFYTLLSLAILNDVKLIRRYAYAEAKQFRSLLHTENEENLLEISKLLDLKINRCDPIK
FYLEKKRRIIQKEFCVHFIDYLYTKDLKEDWKLKSGQILHKGYYVLDKNQLIGLIAESIKSK
IVEMIRPLNLKEIPEKLSLIERRGIIPPCIENILAKEKLNEEEIRTLITFYIDIGKGLSGI
VSIMKKYNVSNVEDLYRKYRGDKGTRYIVYSCAKMKQLGLCVSSCNVKNPLQLYFLSNE

>pos

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SEKCDERDNVETLEYVEMTSECIKRGLEQTRNLVEILEDDFGLKPKVYFSGNRGFHVQVDCY
NCALLDSDERKEIAEYVMGIGVPGYPGGSSENAPGWVGRKNGRINGVTIDEQVTIDVKRLIRI
PNSLHGKSGLIVKRVPLDDDFEFNETLSPFTGYTIFLPYITIEVEVLGSIKLNIRGIPKIK
SSIGIYLHLRNLGEVKAYVR

>pos

MMNIIILKISGKFFDEDNVDNLIIVLRQSIKELADNGFRVGIIVTGGGSTARRYIKLAREIGIGE
AYLDLLGIWASRLNAYLVMFSLQDLAYMHVPQSLEEFIQDWSHGKVVVTGGFQPGQSTAAVA
ALVAEASSSKTLVVATNVGVEKDPRIYADVKLIPHLLTQDLRKILEGSQSVQAGTYELLD
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>pos

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>pos

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>pos

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>pos

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AMLGQQSVRGERIKRGMTRTLPHFKPYDISPEARGFIYSSFR TGLKPTELFFHAAGGREGL
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NRIFERVVGWKA

>pos

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RLKLGDFMIEESEDSTLNINFANIDSIAALFKLRDKILNTRKIKGIKIKRAIVQKKGDEYII
LTDGSNLSGVLSVKGVDVAKVETNNIREIEEVFGIEAAREIIIREISKVLAEQGLDVIDRHI
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>pos

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IIRKIEELEKKLVEVVK

>pos

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>pos

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>pos

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TRPI

>pos

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>pos

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LLKNESQRS

>pos

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>pos

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>pos

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LGADTVLLIVKILTERELES LLEYARSYGMEPLIEINDENDLDIALRIGARFIGINSRDLET
LEINKENQRKLI SMIPSNVVKVAESG ISERNEIEELRKLGVNAFLIGSSLMRNPEKIKEFIL

>pos

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>pos

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>pos

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GIAKEFKATRYHSLVVDEVHRPLIVDAISAEADNEIMAIHHEEYPIYGVQFHPESVGTSLGYK
ILYNFLNRV

>pos

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KIPDIRAKVDNVI IADPMIATASTMLKVLEEVVKANPKRIYIVSIISSSEYGVNKILSKYPFI
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>pos

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VLPLLGNVNNAEYWDVIDLRVYPGKNYFELYDDDGITYEYEKGYIIPITWDEDKQEL
TIGKKRGELEMSKKI IKI IWVEKKGIEHTKPDVEIEYNGKETITVCRG

>pos

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NG

>pos

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WLAPKTAHGVPLWDNPVPPDV

>pos

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>pos

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VAAGSGGTLAGLSLGLSILNEDIRPVGIAVGRFGEVMTSKLDNLIKEAAELLGVKVEVRPEL
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>pos

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>pos

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VNLKGVFTADLPPDALAIREYMEKYKVENVVIIGGGYIGIEMAEFAAQKNTMIVRGERV
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AGSNIAGKELHFPVLTAVTKFMDVEIGKTGLTEMEALKEGYDVRTAFIKASTRPHYYPGG
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>pos

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EELKERIKELHPYDVP AIIRIDVDDVNEDYLKWLIEETKK

>pos

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LHIYKFGKSATVAYPEGNWFPTSYYDVIKENAERGLHTLLFLDIKAEKRMVMTANEAMELLL
KVEDMKGKGVFTDDTLVVVLARAGSLNPTIRAGYVKDLIREDFGDPHILIVPGKLHIVEAE
YLVEIAGAPREILRVNV

>pos

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SELNDLGWTVCYEATHHGPTLEVP SFFIEIGSSEEWINDRAGEIIAETIIYVLDNYEKGR
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>pos

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IIRTAKERKKRFKVI LTESPDYEGHLHARELEFSGIEFEVITDAQMGLFCREASIAIVGAD
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>pos

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IKRWEKRGEIPI DVEFYQFLRELDIPTIVAVNKLDKIKNVQEVINFLAEKFEVPLSEIDKVF
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>pos

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RGQRKKAVTVTPPFYDPKKYGLFRET

>pos

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LAERIIISKDPADPIAVIEGLLKLKETGVKRIHFHTYGYLALTREKGEHVRDALLFSALAA
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>pos

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GEL

>pos

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FVRSGEWKKRGVAWHPKWFLGYDVYKGTIGIIGLGRIGQAIKRAKGFNMRIIYYSRTRKEE
VERELNAEFKPLEDLLRESDFVVLAVPLTRETYHLNEERLKLMMKKTAILINIARGKVVDTN
ALVKALKEGWIAAGLDVFEFEEPYNEELFKLDNVVLTPHIGSASFGAREGMAELVAKNLIA
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>pos

MGELPIAPVDRLIRKAGAERVSEQAQKVLAEYLEEYAIEIAKKAVEFARHAGRKTVKVEDIK
LAIKS

>pos

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DGLPVVEDEKVVGIIITKKDIAAREGKLVKELMTKEVITVPESIEVEEALKIMIENRIDRLPV
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INGRKYKQYRGMGSLGAMMKGAERYYQGGYMKTRKFVPEGVEGVVYRGTVSEVLYQLVGG
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>pos

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VRKGDIEILMFEPLEDFLLEIVREGGILEYIRRRGDL CIR

>pos

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TSVVPIGKLEVYRRKGDIP EGWAINREGNITTKVEEVFNNGALLPLGGFGE LLGGHKGYGL
SLMVDILSGILSGGTWSKYVKNTSEKGSNVCHFFMVIDIEHFIPLEEFKEKISQMIEEIKSS
RKHPEFERIWIHGEGKFLTMETRLKLGIPYRQVLEELNEIAKRVGVEGL

>pos

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>pos

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KFTGMPELVPLAMEREYSETIFEWSRDGWEEVLVEGGFKVTMGSRFYTVHGNSDKGKA
LLDFYKRLGQIESYAVGDSYNDFPMFEVVDKAFIVGSLKHKKAQNVSSIIDVLEVIK

>pos

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GENEEP PKPLVMRPIKE IPIKEWMDIVEGNSETLLRFEL

>pos

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IVLGTSNRSEFLTGYFTKWGDGASDYAPIINLYKTEVWEIAKRIGVPERIVKKKPSAGLWEG
QTDEDELGISYNLLDEILWRMIDLKIGKEEIAKDLGIPLSLVERVEELIKKSEHKRRLPIGP
SFEDLIVGP

>pos

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SKESAEREISLFFKPEELFEYPRAADWFYKKG I

>pos

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HGKLVMTSTGKELV

>pos

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RIKSEKEIKIEKACEIADKAVMAAIEEITEGKKEREVAKVEYLMKMNGAEKPAFDTIIA
SGYRSALPHGVASDKRIERGDLVVIDLGALYQHYNSDITRTIVVGS PNEKQKEIYEIVLEAQ
KKAVESAKPGITAKELDSIARNIIAEYGYGEYFNHSLGHGVGLEVHEWPRVSQYDET
VLRREG MVITIEPGIYIPKIGGVRIEDTILITKNGSKRLTKTERELI

>pos

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IGEVARKAQEVQKQSMTSFKVKK

>pos

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>pos

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KGLLDYVKHAEIILDEFYPYIRTPVDFAVDYKGERVEIDLLENRGLLHQYQIMDIGKRTAE
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>pos

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VREIINELNLLNLVAVDSGFIAHVKKPWINKGSGIEKASEFLGIKPKEVAHVGDGENDLDAFK
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>pos

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>pos

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>pos

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>pos

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TKARGSAEKIIVEEHIDFDVEVTELA VRHFDENGEIVTTFPKPVGHYQIDGDYHASWQPAEI
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>pos

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>pos

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>pos

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GSIPGVEGHTMIVLKTHKETTELPIK

>pos

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>pos

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EATVIAEHKADAKYEIVSAASIIAKVTRDREIEK LKQKYGEFGSGYPSDPRTKEWLEEYKQ

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>pos

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>pos

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>pos

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>pos

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EAREIKSRR

>pos

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>pos

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>pos

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SNNTHEEYPQORIFEVGLATLIDESRETCTVSEPKLAVAGTGYTFTNAKEILDALMRHLGF
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>pos

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TGKEI I KEVYGKEAPLSLMYEFVGIKQKGMKSGKGNVILLSDLYEVLEPGLVRFIYARHR
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FLAVLVQLPHLTEEDIINVLIKQGHIPRDLKEDVERVKLRLINLARNWVKKYAPEDVKFSIL
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>pos

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EEEFIRSVME DIKEIEVAKIENAKRAYIYTAEDWKWKVAE
VVSEKRD FKSMEELMKDSEIRKHGKEVAKIVQKLIKERTFDV
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>pos

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ETL FKNADFTKLSERERELVIMLSKFPRIVEQAGK
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>pos

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STAIATSRAIVAILENHQEEDGTVRI PKVL
WKYTGFKIIVPVEKKERCCAT

>pos

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PEEIRQKLRKAFCPAREVRYNPVLDWVEY
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ITR

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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KW LAPRTKDGVP IE

>pos

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>pos

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LESKINALNR

>pos

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>pos

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ERQ

>pos

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>pos

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AKG

>pos

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>pos

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RDINAKRVVDSVTTLYINKPAMARSIILQLKRVLAGTGCTSI FVSQVSVGERGFGGPGVEH
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>pos

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>pos

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KE

>pos

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>pos

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PMKEFIR

>pos

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>pos

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GVNEASEDFLSKLQEICKEKDVLLIIDEVQTGIGRTGEFYAYQHFNLPDVIALAKGLGGGV
PIGAILAREEVAQSFTPGSHGSTFGGNPLACRAGTVVVDEVEKLLPHVREVGNYFKEKLEL
GKGKVKGRGLMLGLELERECKDYVLKALEKGLLINCTAGKVLRFPLPLIQKEHIDRAISVL
REIL

>pos

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>pos

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WIIREVLREGYRGGIPKIAVKANSYEDVARLLCISRQVEGEKILISMGDYGKISRLAGYVF
GSVITYCSLEKAFAPGQIPLLEEMVELRKKFYRL

>pos

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EIKNLFEEERRKIYSKADIKVKGEKPPEEVVKEILLSLEGNALGG

>pos

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KVEELTRDP

>pos

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>pos

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I I KEKLKEFNLELRKEVIDYLLENTKNVREIEGKIKLIKLGFEGLERKERKERDKLMQIVE
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>pos

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FGAMMDVFIENWGPVTIIIDSREI

>pos

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DLPLRLLAAEIVREKAMMLTREEVPTSIAVKINEIKPGDANPNMLVIKGEIIVDRENLP I I
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>pos

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>pos

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ELLHADNCGYIRMKGRELFKVAVRSMEEVCREVLEKAGVKPEEVSLVI PHQANVRIINALAE
KLNI PKKVFVNIQKYGNTSAASIPIALHEAIKEGKVKRGDLILMTAMGGGLTWGAVLLRY

>pos

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ALTRELLPLMEGRNGAIVTLSYYGAEKVVPHYNVMGIAKAALESTVRYLAYDI AKHGHRINA
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NGYHIMGVFGREEEIKKEVYGD

>pos

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TLWRVGAVDEDQRLTCQLVIEKEDCDEIVIESED

>pos

MAEFKHVFCVQDRPPGHPQGSQAQRGSREVFQAFMEKIQTDPQLFMTT VITPTGCMNACMM
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>pos

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>pos

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>pos

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>pos

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VHKISIIIPRGMALGVTQQLPIEDKHIYDKKDLYNKILVLLGGRAAEVFFGKDGITGAEND
LQRATDLAYRMVSMWGMSSDKVGPIAIRRVANPFLGGMTTAVDTSPELLREIDEEVKRIITEQ
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NKELKSEEVKEEVV

>pos

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VAVATLPRFEGPRKMEKALKGLEKLKESSDAYIVIHNKIKELSNRTLTIKDAFKEVDSVL
SKAVRGITSIVVTPAVINVDFAVTRTLEEGGLSIIIGMGEGRGDEKADIAVEKAVTSPLEEG
NTIEGARRLLVTIWTSEDIPTYDIVDEVMERIHSKVHPEAEIIFGAVLEPQEQDFIRVAIVAT
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>pos

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NPDITVVLGVNEEKYNPKEHNIISNASCTTNCLAPCVKVLNEAFGVEKGYMVTVHAYTNDQR
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DNLVHIAAWYDNEWGYSCRLRDLVIYLAERGL

>pos

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TYGRVSRYGLVAFASSLDQIGVFGRRTEDVALVLEVISGWDEKDESTSAKVPVPEWSEEVKKE
VKGLKIGLPKEFFEYELQPQVKEAFENFIKELEKEGFEIKEVSLPHVKYSIPTYYIIAPSEA
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KVRRLITNDFLKAFEEVDVIASPTTPTLPFKFGERLENPIEMYLSDILTPANLAGLPAISI

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>pos

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GLSEYEAGILVNHKEVGDFEFEEAVRHFKEPKGIWNWLINDLLGLLRDKGISIEESPVKPEHL
AELVKLIKEKVISTKIGKEVIKEMVETGKTSPQIVEEKGLKQITDENQIKELVKKIFEKHPK
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>pos

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>pos

MKKIEAIIKPFKLDEVKDALVEIGIGGMTVTEVKGFGQKQGHTEIYRGTEYVIDFLPKVKIE
VVVRDEDVEKVVETIVKTAQTGRVGDGKIFIIIPVEDVIRIRRTGERGEQAI

>pos

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DLIVGGDTFGEKKPSPTPVLKTLLEILGEEPEKALIVGDTDADIEAGKRAGTKTALALWGYVK
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>pos

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GSISADAPFFLLGKSAIGRGKGEVLEPVETEISGKITLVIPQVSSSTGRVYSSLREEHFVTP
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SEELKKAAMRGWKVVELEL

>pos

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PEVIGTLGYLRACNGKGI VVETLEDIGEALKHERVGIVAQTTONEEFFKEVGEIALWVKEV
KVINTICNATSLRQESVKKLAPEVDVMIIGGKNSGNTRRLYYISKELNPNTYHIETAEELQ
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>pos

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REMVENLKSIGDERLEVINEDASKFPFCSLGKELKVGNL PYNVASLIIENTVYNKDCVPLA
VFMVQKEVAEKLQGKKTGWLSV FVRTFYDVNYVMTVPPRFFVPPPKVQSAVIKLVKNEKFP
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>pos

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DLV IIPVINKIDLPSADVDRVKKQIEEVLGLDPEEAILASAKEGIGIEEILEAIVNRI PPPK
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IYRVKKKFTDEVIEVRNPMDFPDNAGLIEYVEEPFVLVTIITPKEYVGP I IQLCQEKRGIQK
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VDALSFI VHADRAQKFARRVAEKLRETI PRQLFEVHIQVAKGGKVIASERIKPLRANVTAKC
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>pos

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VVEEPIIVEDEGRLIKAEPSDTLEVTYEGEFKNFLGRQKFTFVEGNEEEIVLARTFCFDWEI
EHIKKVGGLGKGGSLKNTLVLGKDKVYNPEGLRYENEPVRHKVFDLIGDLYLLGSPVKGKFYS
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>pos

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GGDTRSYSVATLMTMNYTLDDVKEKFGYEVQHPYVKEEVEIQLYEPIERERKLNKLEK
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>pos

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RVPIWKKEIFKEGKGEWVLGEKKNASGQTK

>pos

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PVSVAKTEKLHTLVGVYSKLLLEKIEERIKKGDYRIWALLKDVGYNEVEIPEELRYTLLNMN
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>pos

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LIHTEALEFIFECELKLLSFHS

>pos

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DMQAQFMALLSVAKGKSRIKENIFEHRFHHAQELNRLGANITVRGNTAYVEGVERLYGSEVY
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>pos

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KQGRVEEASKIPDCYEEEEEEQEE SKEFEFLSGT

>pos

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>pos

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GVL SAIYKAYITSSKEEKPSLKSE

>pos

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>pos

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VREAPYNEIHLENMLKITRMGGVVVPASPAFYHKPQSIDDMINFFVVGKLLDVLRIEHNLYKR
WRG

>pos

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>pos

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KEMVNDSVISFIQQDTLLAKKVIKDDTVDELYHQLERELMTYVLEDPRNIKRAMHLSFVAR
HYERIAHAENVAEAAIYLSEGEIVKHQHIKEKGE

>pos

MSSDIDELRREIDIVDVISEYLNLEKVGSNYRTNCPFHDDTPSFYVSPSKQIFKCFGCGVG
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NT

>pos

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FYEGKDVHIKEDERYALDVVLASRGYPEKPEVTKI IHGLDYLSMEDVVVFHAGTKKEGNFT
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>pos

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>pos

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QHPSOGLIDFFTIKEHFGEVKDLRVLYVVDIKHSRVFRSGAPLLNMFCAKIGVCGPKTLIPR
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>pos

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TFEKELVEFAMPGIIIGLQALPSALELYRKGIIISLKKLIEMFTINPARIIGVDLGTLLKLGSP
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>pos

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>pos

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>pos

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TRTAAITGAFVAVADAI IKLHKEGIEETPIKDFVAAVSVGIVNDRILLDLNFEEDSAAQVD
MNVVGTGSGRLSEVHTMGEEYSFTKDELIKMLDLAQKGINELIELQKKLYVIQDGKWERSEL
KEVSSTT

>pos

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VELSHRAKAILWNHGILKEVVPEGYEMKRVGDYVVFEEKRESKSKSGGEEA

>pos

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>pos

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EEEKKELERMDSIYRDAGYDVLKVS AKTGE GIDELVDYLEGFICILAGPSGVGKSSILSRLT
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>pos

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RIVIEAMKQSRPIMEIKKPVRLSDLIPESSENIILDNFYEGVKPKDVNLEAKTYSVVVGP
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>pos

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FCVWLTGLPCAGKSTIAEILATMLQARGRKVTLTDGDVVRTHLSRGLGFSKEDRITNILRVG
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>pos

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>pos

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TVQSLGIAFWIRGQVSPKGI PVVENPGISFILITVTLVAGTMFLVWIADRITEKGIGNGAS
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>pos

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>pos

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AEKLR SILLQV

>pos

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>pos

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KLYWGAKGLGAYVNGKRIKVKDNESLKHAGVYGFPSRSRRDISIYLNIFKDVFYEVGSMRR
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>pos

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FSAFGRENIMFEEIAKVCVDIVKKVLNEGIPEDTYLNVNIPNLRYEEIKGIKVTRQGKRAYK
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DSP

>pos

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DERYLEIWNLVFMQYNRDENGVLTPLPHPNIDTGMGLERIASVLQGKNSNFEIDIIFPLIQF
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VGAGVRRIVAQTGRWSVETAFKEHQTLKKASSALGVGEEVVIQKIEELKEEIKDREREIQRL
KQELLKLQIREVVKEENVGDFTLHYGVFEEVEPEELRNADMLRQRTKKDVVFIASRKGDKI
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>pos

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DFVKEKIEEDKK
>pos

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TKKGYKEICPPHLVKPEILIGTGQLPKFEEDLYKCERDNLYLIPAEVPLTNLYREEILKEE
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>pos

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>pos

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GFDCIATAHHLNDLLETSLFFTRGTGLDGLIGFLPKKEEVIRRPLYVVKRSEIEEYAKFKGL
RWVEDETNYEVSIPRNRIRHRVIPKLRINENLEDTFLKMKVVLRAEREFLEEEAOKLYKEV
KKGNCILDVKKLKEKPLALQRRVIRKFIGEKDYKVELVRSLLLEKGGEVNLGKGVKLRKERW
LCFSPEV
>pos

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ALKGILARAVFIIDKEGKVAYVQLVPEITTEEPNYDEVVNKVKELI
>pos

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LSEKGYLQKFFIQIKRKEDGYVIDVSPYSEVLRTRNLQRSIQTVLQLLS
>pos

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WLKEHKHLL

>pos

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>pos

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>pos

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>pos

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VLKD

>pos

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GASGCVSYL FERKGYIEVPAKEVSEELLEKAIEVGAEDVQPGEEVHIIYTVPEELYEVKEN
LEKLGVP IEKAQITWKPISTVQINDEETAQKVIKLLNALEELDDVQQVIANFEIPEEILQKV
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>pos

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KC

>pos

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DGLNLASLIVK

>pos

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>pos

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>pos

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>pos

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GKVS GG VADPGEWIFMEV

>pos

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>pos

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DVMIFRSIDQHVMPTITLRFNIYTDPRTPVQVEPGLRAINDPGPDDPVFITTNFALTYTV
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>pos

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DAREIISRLG

>pos

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>pos

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>pos

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GRDGKGE

>pos

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SAVDRTPFHKKWLEGRIGKENEVRLKGF LKANGIYGA EYKVRGFSGYLCELLIVFYGSFL
ETVKNARRWTRRTVIDVAKGEVRKGEFFVVDPVDEKRVAANLSLDNLARFVHLCREFMEA
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VKD

>pos

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>pos

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L

>pos

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>pos

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EVLPHKEAEKVKEVQQKYVTAMVGDGVNDAPALAQADVGLAIGAGTDVAVETADIVLVRNDP
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AINARLLR

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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PCVQVCLTKASFKRPDGIVEIDMHRCIGCRYCMIACPYGARCFNFIDPREGLKEVNPVQMR
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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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GEVDWEAVENDVRFVAAEVIKRGATIFGPAVAIYRMVKAVVEDTGEI I PTSMILQGEYGIE
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>pos

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>pos

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>pos

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>pos

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>pos

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G

>pos

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VMVDVVITGWGALEYIRDLAEDYDLAIHGHRAMHAAFTRNAKHGISMFVLAKLYRIIGIDQL
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WGRVTPI

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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TYSIEDFEAEL

>pos

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>pos

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>pos

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>pos

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ELIK

>pos

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>pos

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>pos

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>pos

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EGYVELIE

>pos

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>pos

MENPDSAFLLFRNAPRLPLATMHTPLCGD SHQPDEFAFRK PARDALLRPWNGRNHRCGLQDGR
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CRCTSQALFISHGIRRDVEVYLLLLGPPSPPKSILIKGDEVRRMSPDERNVAGHIKKALAVE
CGKSWKKVHSGVYVSRKGLEELIEELSEKYSIIYLKEDGVDISNAQLPPNPLFVIGDHEGLT

EEQEKVVERYAALKLSLSPLSLLAEQCVVIAHHHLDRLOF

>pos

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DDASVAKMLS AKVLLVGKYVNDVVDVLAAKSAFGTMLEKVVFNQVSGYKMSYIEGIARKV
LNEAGLDIVGAI PRNPVLAGLSVEE IREAVSGEYLI EPREEKMVEQVVI GAMSPQSALRYLR
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>pos

MEDERIKLLFKEKALEILMTIYYESLGGNDVYIQYIASKVNSPHSYVWLI IKKFEEAKMVEC
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>pos

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ERVKMRKRSDDVSSIEELKERDRREESWGLKEAMEMADFTVENTGSYEDFVEKIRQILLKLA
KNVEIEIRTKIHPTESDKVLKAI RNIFPDAEIEI SEEGEVYGRAYSLDRFRELLRKQRILD
TARSEILKGRNGKEVTIYLNKQTATVSRINFCDENAVLSPIKVTFRLNNIPFSRFLDYIAPE
TKDGRPVKEIDKL

>pos

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VVGEEIEAEAVKAVSRLHRAEVLVLAGGIMGGKITEEVKLRKSGIRVISLSMFGSVPDVAD
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>pos

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GEIHRIGDIYIQTAGLTPSEAEKLVKASLIKGNMPEPVRI SHLVASAI IHGESRGKA

>pos

MEIMDEIKVNLQKEVSLEEAERYAKNIASKYGDGILLSVHDSKTGYRAPEVYCCGEKPWEVY
ACNRGANLKI SVNQFEFYFRIEVEGQAKY

>pos

MEVLFEAKVGDITLKLAAQGDITQYPAKAI VNAANKRLEHGGVAYAI AKACAGDAGLYTEIS
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VFERSL

>pos

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FLDVEKHGFTQPWIF TNTKFSEEAKKYAGCVGIKLTGWSYPEKEGIEVLLSKGLYPITILR
IDKEVLDELVRAGLVFCRDVVSAGEEKLREIGLSAKKAREVIAEAKKVI G

>pos

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SLPTIGRDYWKSLDESERKRISAILREKGIDG

>pos

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>pos

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GVISLSNYVVEIASLERIELPVAEKGLMLVDDAYLSYVVRWAN EKLLKGKEKLGRLQEALES

LQRENAYCSD

>pos

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EGRYMRKYTKDGRNYYAFFSTIDDTFEDVDIHLRMVDEVDGDYVVIVPTENELNPF LKFFKQ
YSEDAKRAGLKIWVVPDEKTIDPFIGYPKDFRLLKGFKNPKAAALVSAYWRVTVTDLD

>pos

MDLICMYVFKGEESFGESIDVYGDYLIVKVGTEFLAVPKKSIKSVEDGRIVIGEFDEEEARE
LGRKWLEEKSKPVTLEELKSYGFGE EGE

>pos

MPKII EAVYENG VFKPLQKVDLKEGERVKIKLELKV EPIDLGE PVSVEEIKKIRDGTW MSS

>pos

MPAYVFSKESFLKFLEGHLEDDVVVVVSSDVTDFCKKLS ESMVGEKEYCFAEFAFPADIFDA
DEDEIDEMMKYAI V FVEKEKLSEAGR NAIR

>pos

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SPEIDCVNQLEGGQP

>pos

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R

>pos

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LRVLPMHFKFKADKIAGSANWTFYAKEDFEQWKEALDVLWEEFLEVLKEYYTLSGTEISLPE
KPDWLIGYK

>pos

MLYINSFLDRMGEIIRGEKSV E EADKLLDQKNIFEMFRSDCEEILNLYKSGKAEKEEVQRNF
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>pos

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QFDLAILGMGPDGHVASIFDLETGNKDNLVTF TDPSGDPKVPRVTLTFRALNTSLYVLF LIR
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>pos

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ANLMGIKAAMKLLPGV PNVAVFDTA FHQTI PQKAYLYAIPYEY YEKYKIRRYGFHGTSHRYV
SKRAAEILGKKLEELKIITCHIGNGASVA AVKYGKCVDTSMGFTPLEGLVMGTRSGDLDP AI
PFFIMEKEGISPQEMYDILNKKSGVYGLSKGFSSDMRDIEEAALKGDEWCKLVLEIYDYRIA
KYIGAYAAAMNGVDAIVFTAGVGENSPITRE DVCSYLEFLGVKLDKQKNEETIRGKEGIIST
PDSRVKVLVPTNEELMIARDTKEIVEKIGR

>pos

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NYNQLKYFVDIARKIEKLS PKAWYLQAANPIFEGTTLVTRTVPIKAVGFCHGHYGVMEIVEK
LGL EEEKVDWQVAGVNHGIWLNRF RYNGGNAYPLLDKWIEEKSKDWK PENPFNDQLSPA AID
MYRFYGVMPIGD TVRNSSWR YHRDLET KKKWYGE PWGGADSEIGWKWYQDTL GKVTEITKKV
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VNIPNKGIIHGIDDDVVVEVPALVDKNGIHPEKIEPPLPDRVVKY YLRPRIMMEMALEAFL

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>pos

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GEDIKMNVLAKPKAKFRMLNHWDLNLDGTIERGYAGNSIFFKDNRIIINQRTKDYARLLASI
GINGVVINNVNVKKREVYLIDSIYLKCLKKLADI FREYGIKIYLSINFASPVYLGGLDTADP
LDERVARWWREKARGIYDYIPDFGGFLVKADSEFNPGPHMFRTHAEGANMLARALAPFGGV
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GMEKTNQILELQITQEYTGQQIHLCLFLGTLWKEILEFDTFAKGEYSYVKRIVDGTFLDRENN
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WEELKDRVSPDIFERVKERLHMQLLEHAKWRDVINTYFYRRTGIPDEKGRKIYP

>pos

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QDDRICAYTALRALLSANPEKSIGVIFFDKKEEIGSDGNTGAKARFYLKALRQILKMQGAKDS
EFVLDEVLENTSVISGDVCAAVNPPYKDVHDLHNA PKLGYGVALVKYTGARGKYSTNDAHAE
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ADLFETYVAYRSLMEKL

>pos

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GLPELHREEIKNAQVVG NPGCYPTSVILALAPALKHNLVDPETIILVDAKSGVSGAGRKEKVD
YLFSEVNESLRPYNVAKHRHVP EMEQELGKISGKKVNVVFTPHLVPMTRGILSTIYVKTDKS
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GASGQAVQNMNIMFGLDETKGLEFTPIYP

>pos

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LRGGAYKPR TSPYSFQGLGEKGLEYLREAADKYGMV VTEALGEDDLPKVAEYADIIQIGAR
NAQNFRLLSKAGSYNKPVLLKRGFMNTIEEFLLSAEYIANS GNTKIILCERGIRTFEKATR
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KQSLDFELFKELVQEMKKLADALGVKVN

>pos

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NVRIETIKPPKSLGLDLKGT VVFEGSVEEASKLFPRNIN VASTIGLIVGFVKVKTIVADP
AMDHNIHIVRISSAIGNYEFKIENIPSPENPKTSMLTVYSILRTLRLNLESKIIIFG

>pos

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RFELTYAALNPNLKVISPWKDPEFLAKFKGR TDLINYAMEKGIPIKVS KRPYSEDENLMHI
SHEAGKLEDP AHIPDEDVFTWTVSPKDAPDEETLLEIHFENGI PVKVVNLKDGTEKTDPLEL
FEYLNVEGAKNGVGR LDMVENRFIGIKSRGVYETPGATILWIAHRDLEGITMDKEVMHLRDM
LAPKFAELIYNGFWFSP EMEFLLA AFRKAQENV TGKVTVSIYKGNVMPVARYSPYSLYNPEL
SSMDVEGGFDATDSKGF INIHALRLKVHQLVKKGYQR

>pos

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DRVVVIGWLQSWLRTGLYPTKREGWNGVMSLPRELYVENNELKVKPVDELLALRKRKVFETA
KSGTFLLDVKENSYEIVCEFSGEIELRMGNESEEVVITKSRDELIVDTTRSGVSGGEVRKST
VEDEATNRIRAFLDSCSVEFFFNDSIAFSFRIHPENVYNILSVKSNQVKLEVFELNIWL

>pos

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PFALQLKGGWANREIADWFAEYSRVLFENFGDRVKNWITLNEPWVVAIVGHLYGVHAPGMRD
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SFVERDLPKTAMGWEIVPEGIYWILKKVKEEYNPPEVYITENGAAFDDVSEDGRVHDQNRI
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YSNVVKNNGLED

>pos

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DTRKTSNATIVNFTNPSGHI TEFVRNYLEYEKFIGLCNVPINFIREIAEMFSARLEDVFLK
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>pos

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YVVDPVVDEMEDVARVSGHPNYQRKSI FHALNQKTVAKEVARMMNKRYEEMNLVVAHMGGG
ISIAAHRKGRVIDVNNALDGDGPFTPERSGTLPLTQLVDLCFSGKFTYEEMKKRIVNGGLV
AYLGTSDAREVVRRIKQGDEWAKRVYRAMAYQIAKWIGKMAAVLKGEVDFIVLTGGLAHEKE
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ILR

>pos

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>pos

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LADFLGFKIDTLPPQLVIDMISAI FAEASIEELEDNSEDQIVFVETLLKVEEEEEPLTSYMM
MIPKPGYLVKIFERMGIQE

>pos

MKKVIGIGEYAVMKNPGVIVTLGLGSCVAVCMRDPVAKVGAMAHVMLPDSGGKTDKPGKYAD
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GGNRARSVEYNIETGKLLVRKVGGEQLEIKEI

>pos

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LVKTDGRLIIYLDIDKIIIEEITVKEGV

>pos

MDARIVNALIGSVYETIRDVLGIEPKTGKPTVSHIEIPHSLVTVIGITGGIEGSLIYSFSS
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KIKSFGVILKLPISVFSEEDFDLHLSVKSGG

>pos

MGRVLIIVDDAAFMRMMLKDIITKAGYEVAGEATNGREAVEKEYKELKPDIVTMDITMPEMNG
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>pos

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ISSSLVKEVALYGGDVTEWVPEVARALNEKLKEGKR

>pos

MVIGVTGKIGTGKSTVCEILKNKYGAHVNVDRIGHEVLEEVKEKLVLEFGGSVLEDGKVN
KLAGIVFESRENKLELLVHPLMKRVRQEIINKTSGLIVIEAALLKRMGLDQLCDHVITV
VASRETILKRNREADRRLKFQEDIVPQGIIVANNSTLEDLEKKVEVMKLVWEKRE

>pos

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DMGTATTVDLVVNGSYEGGAILPGFFMMVHSLFRGTAKLPLVEVKPADFVVGKDTEENIRLG
VVNGSVYALEGIIGRIKEVYGDLPVVLTTGGQSKIIVKDMIKHEIFDEDLTIKGVYHFCFGD

>pos

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KSKEDILLVCAGTNGRFSLEDFLLAGAIVKRLKRNLDLGDGAHAAERYFESVENTREEIKKHS
SHAKRLISLGFENDIEFCTTEDLFKTPALVNGVVFILKEFP

>pos

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KIDDEIDVLEEEVLERPEKETVQORTHQLKRNLEVELRKTIWPLREVLSSLYRDVPLIEKETV
PYFRDVEDHTIQIADTVETFRDIVSGLLDVYLSSVSNKTNEVMKVLTIIATIIFMPLTFIAGI
YGMNFEYMPPELRWKWGYPVVLAVMGVIAVIMVVYFKKKKWL

>pos

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ETHHRFKKDAPSGTAILLESALGKSVPIHSLRVGGVPGDHVVVFGNIGETIEIKHRAISRTV
FAIGALKAAEFLVGKDPGMYSFEEVIFGGE

>pos

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VEPFVEAFSKVVRASERYGFEEINIGGGWGINYSGEELDLSSYREKVVPDLKRFKRVIVEIG
RYIVAPSGYLLLRVVLVKKRRHNKAFVVVDGGMNVLIRPALYSAYHRI FVLGKQGKEMRADVV
GPLCESGDVIAVDRELPEVEPGDIIAVENAGAYGYTMSNNYNSTTRPAEVLVRENGRISLIR
RRETEMDFIKDVVM

>pos

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LKAKEW EYVYEDIRSVVESVKGKVVKVI IETCYLDTEEKIAACVISKLAGAHFVK TSTGFGT
GGATAEDVHLMKWIVGDEM GVKASGGIRT FEDAVKMIMYGADRI GTSSGVKIVQGGEERYGG

>pos

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AVSRRRNIIISLYYK NYKYVVNQVD FLISKVTQAI STLEKYKDNFNKLLSELEVLELENRVTL
ADVVRTLAKGFELLRIVEEIRPYIVELGEEGR LARMQLRELTEDVDDLLVLLIMDYSSEEVE
EETAQNILQDFITRREPSPI SISRVLGYDVQQAQLDDVLVSARGYRL LKTVARIPLSIGYN
VVRMFKTL DQISKASVEDLKKVEGIGEKRRARAI SESSSLKHRKTSE

>pos

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VLGNDA TFEITYEAFEPHSSYSEPLVKKRAVLLT PLNPDYTFENFVVGPGNSFAYHAALEVA
KHPGRYNPLFIYGGVGLGKTHLLQSIGNYVVQNEPDLRVMYITSEKFLNDLVDSMKEGK LNE
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RRALSG

>pos

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IQYPANDRNAGVFTTHFAYETIHDDL VKIDALGHDDPTFIKMLKDLT GIDPMTIPMDDPDTL
AIFSSVKPLGVD PVELES DVGTYGIP EFGTEFVRGMLVETR PKSF AELVRI SGLSHGTDVWL
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KVPEWFIESCKRIKYLFPKAHAVAYV SMAFRIAYFKVHYPLQFYAAYFTIKGDQFDPVLVLR
GKEAIKRRLRELKAMPAKDAQKNEVSVLEVALEMILRGFSFLPPDI FKSDAKKFLIEGNSL
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TLF

>pos

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VLTRRPKTSNNPSLVFFNGSPADVVKFLEGKGYERVAVIGGKT VFTFEFLREKLVDEL FVTVE
PYVFGKGI PFFDEFEGYFPLK LLEMRR LNERGTLFLKYSVEKSHR

>pos

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VEKYSNYRVVDSIEKADVIVVL DATQGITRQDQRIAGLVERRGRASVVVFNKWDLVEHREK
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FKRSR

>pos

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FVSRFTFSKVGIDTAAEIMNNLDRTEKKIMDKLVQENPELADEIRRRMFVFEEDILKLDDRS
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>pos

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IDPKTTLNFVVISKSGSTAEVMATYSIARGILEAYGLDPREHMLITTDPEKGFRLKLVKEEGF
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YLYLNKGKISVMMAYSNRMIYLVWDWYRQLWAESLGKRYNLKGEEVFTGQTPVKALGATDQH
SQIQLYNEGPNDKVITFLRVENFDREIVIIPETGRAELSYLARKKLESELLLAEQTGTEEALRE
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TYEIKERSKKVIE

>pos

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KEKNFSFKIGVRTPVHTLCPCKEISDYGAHNQRAFVEITVKTRKFIWFEDLVEIAEKNA
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CVEKGDVFLEG

>pos

MKRTPLFEKHVELGAKMVDFAWEMPLYYTSIFEEVMAVRKSVGMFDVSHMGEFLVKGP
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VRREV

>pos

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FEAESCKQKYAPNMTGRLGSMTAYALARLCYETLLEYGVLAKRSVEEKSVTPALEKIV
EANTLLSGLGFESGGLAAAHAIHNGLTVLENTHKYLHGEKVAIGVLASLFLTDKPRK
MIEEVYSFC EEVGLPTTLAEI GLDGVSD E DLMKVAEKACDKNETIHNEPQPVTSK
DVFFALKAADRYGRMRKNLT

>pos

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RYCESKGWHCRIIPLKGSVELAPIAGLSDLIVDITETGRTLKENNLEILDEIFVIR
THVVVNPVSYRTKREEVVSFLEKLQEVIEHDSNEQSRG

>pos

MLVVPAILDFRKGVARMIKGRKENTIFYEKDPVELVEKLIIEGFTLIHVVDLSNAI
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SLREIDVEPVFSLDTRGGRVAFKGLWLAEEEIDPVSLKRLKEYGLEEIVHTEIEKDG
TLQEHDFSLTKKIAIE

AEVKVLAAGGISSENSLKTAQKVHTE TNGLLKGVI VGRAFL EGILTVEVMKRYAR

>pos

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ENDLIDFVRKHVEDERYVVG VCLGMQLLFE ESEEA PGVKGLSLIEGNVVKLR SRRLPHMGWN
EVIFKDTFPNGY YFVHTYRAVCEEEHVLGTTEYDGEIFPSAVRKGRILGFQFHPEKSSKIG
RKLLEKVI EC SLRR

>pos

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LTKDLRIPEVNVGEGDVVFI PNPNNPTGHVFEREEIERILKTGAFVALDEAYYEFHGESYVD
FLKKYENLAVIRTF SKAFSLAAQRVGYVVASEKFI DAYNRVRLPFNVSYVSQMF AKVALDHR
EIFEERTKFIVEERERMKSALREMGYRITDSRGNFV FVFMEEKEEKERLLEHLR TNVAVRSF
REGVRITIGKREENDMILRELEVFK

>pos

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VIVEIGHTGVYEDLLKEI PKDLHEKVLNLI DTKNLAEIEFLSHMKKIDLSRVEKI IEDSIYR
RSPEHLKTMDLPLSVREDLLSASSFLQEKFP TVSVEIDLTLARTIEEYCGLI FTIYDTSSSR
LVAAGGEYTVNGEKGVGGSIFLEGKTC

>pos

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VGAIVSSII LASYMFPIYVQKIGENLVHQVPKETIQALISYPIFFALVGLGCSMLGILYVIV
KKPSDNPQRELNISLWTSALLTVVLTAF LTYFYLYKDLQGLDVVGF RFGAISPWFSAIIGIFS
GILIGFWAEYYTSYRYKPTQFLSKSSIEGTGMVISNGLSLGMKSVFPPTLTLVLGILFADYF
AGLYGVAIAALGMLS FVATS SVSDSYGPIADNAGGI SEMCELDPEVRKI TDHLDAVGN TTA
IGKGFAIGSAIFAALS LFASYMFSQISPSDIGKPPSLVLLNMLDARVIAGALLGAAITYYF
SGYLI SAVTKAAMKMVDEIRRQAREI PGLLEGKAKPDY NRCIEITSDNALKQMGYPAFIAIL
TPLVTGFLLGAEFVGGVLI GTVLSGAMLAILTANSGGAWDNAKKYLEAGNLEGYGKGSEPHK
ALVIGDTVGDPLKDTVGPSLDILIKIMSVSVIAVSIFKHVHLF

>pos

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NLLARLTEGYVLIERP NTRDLKILRVMLIPVSE DYLI FSI LTFEFGVSKVTPIKTQERLNWEE
IERQLNFLLRGRTVGEVLMGKIESLKGSGFLRLIESLIGETVERYLDAGLENLLKDETTLLE
DIRNLL EEVKDQKFLES LVGEGITVRIGREIGRKKLEKFAVFS GKYFKGESPIG SVYLFTSK
VTKYDRNHRVFEYILNRLSEYFTSTSR

>pos

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DIEGNP IRRVVAQSTSEFTVRGYVANPKVELPLNEKGKFDVAGAI GQGVLRVVRDLGLKTP
FVSQVPLVSGEIAEDL AYYFAVSEQIPSAFSIGVLVDS DGVKIAGGF AVQI I DR TLEQEKVE
MIEKNIKNLPSISKLFQEA EPLDVLERIFGEKVG FVETAEIKYK CDCNREKAKNALLVLDKK
ELEDMRKEGKGEV VCKWCNTRYV FSEEELEELLKFKVDDSGS

>pos

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DRFEAKLREWGGNLT KA AVELAKDWRTDRVLRRL EALLLVADKENIFIISGNGEVIQPD DDA
AAIGSGGPYALAAAKALLRNTDLSAREIVEKAMTIAGEIC IYTNQNI VIEEV

>pos

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DLSTPPALKITGRTDIVLARREIVDCYDVILLGLNGQVCEGSFSNVFLVKEGKLI TPSLD SG
ILDGITRENVIKLAKSLEIPVEERVVWVWELFEADEMFLTHTSAGVVPVRRLNEHSFFEEEP
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>pos

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AATLALKNSDALVRVENDRIEYIPRKGVYRILTPQAFSYEILKKAHENGGEWADDTEPVQKL
GVKIALVEGDPLCFKVTFKEDLELARI IAREWERIP

>pos

MSGKLTVITGPMYSGKTTELLSFVEIYKLGKKKVAVFKPKIDSRYHSTMIVSHSGNGVEAHV
IERPEEMRKYIEEDTRGVFIDEVQFFNPSLFEVVKDLLDRGIDVFCAGLDLTHKQNPFFETTA
LLLSLADTVIKKKA VCHRCGEYNATLTLKVAGGEEEIDVGGQEKYIAVCRDCYNTLKKRV

>pos

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DGEIVLEVIETTDTEVKT VVKVGGKITHRRGVNVP TADLSVESITDRDREFIKLGTLDHDFE
FALS FVRKPEDVLKAKEEIRKHGKEIPVISKIETKKALERLEEIKVSDGIMVARGDLGVEI
PIEEVPIVQKEIKLSKYYSKPVIVATQILESMIENPFPTRAEVTDIANAI FDGADALLTA
ETAVGKHPLEAIKVL SKVAKEAEKKLEFFRTIEYDTS DI SEAI SHACWQLSESLNAKLIITP
TISGSTAVRVSKYNVSQPIVALTPEEKTYRSLSLVRKVI PVLAEKCSQELEFIEKGLKKVEE
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>pos

MFITFEGIDGSGKSTQIQLLAQYLEKRGKKVILKREPGGTETGEKIRKILLEEEVTPKAELF
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TFYIDVDVETALKRKGELNRF EKREFLERVREGYLV LAREHPERIVVLDGKRSIEEIH RDV
REVKRRWKL DV

>pos

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YFFLKESGMDPRKVFVSGT VLD TARLRTLIAQHCGFS PRSVHVYVIGE HGDSEVPVW SGAMIG
GIPLQNM CQICQKCD SKILENFAEKT KRAAYEII ERKGATHYAI ALAVADIVESIFFDEKRV
LTL SVYLEDYLGVKDLCISVPVTLGKHGVERILELNLNEEELEAFRKSASILKNAIN EITAE
ENKHQNTSG

>pos

MKIAVLPDGDGIGPEVVREALKVLEVVEKKTGKTFEKVFGHIGGDAIDRFGEPLPEETKKICL
EADAI FLGSVGGPKWDDL PPEKRPEIGLLALRKMNLNLIANIRPIKVYRSLVHVSPLKEKVI
GSGVDLVTVRELSYGVYYGQPRGLDEEKGFDTMIYDRKTVERIARTAFEIAKNRRKKVTSVD
KANVLYSSMLWRKVVNEVAREYPDVELTHIYVDNAAMQLILKPSQFDVILTTNMFGDILSDE
SAALPGSLGLLPSASFGDKNLYEPAGGSAPDIAGKNIANPIAQILSLAMMLEHSFGMVVEEAR
KIERAVELVIEEGYRTRDIAEDPEKAVSTSQMGDLICKKLEEIW

>pos

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KSGVKGLLSFEERKIECGSTPKDLLEAIVRALSIFSKD GIEGPYTLVINTDRWINFLKEEAG
HYPLEKRVEECLRGGKIITTPRIEDALVVSERGGDFKLILGQDLSIGYEDREKDAVRLFITE
TFTFQVVNPEALILLKF

>pos

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ASKSGYGLLVTS DGKVL I HKDMGNFMKDVKELGGFEKAFEEAKSGGEEKYVEY EYNGEKKYTV
WEKVPGYDFYIFSTGYLEELLAEGRKATLGTIVTYVVF GGVI FAVL FVSMMPVVKRMRQQVE
KVKRFEGEDLTFEFEAKGRDEL TQIEESLKEAALS LKEMIVS I IEAAKELSGASEEIKVLSE
ESHKMS ENLHEEAKKILDEANNMSSALTEVTSGVEEVAASAQNI SKITQDLTERSEAVTKAA
REGTERVEAVGGVINKLK GSAERQRDYLREL VDSAKTIGEIVDTISSIAEQTNLLALNAAIE
AARAGEAGRGFAVVADEIRKLAEESQRATEDIAKMLSSLRTTIEHVENGSKEMFEGVDEIAV
MGEEVTKRFREILGRIEEINSMIENTAATAQEQQGAAAEEMASAMDNVTKIVEGVVESLNRME
SLIEDQTTSAAKVSQAERLSELSEQLSTLVQKFKV

>pos

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DIMANLDR TRENLDKEISYSSSELIRNVLFIVLPIVAVASGVFLFVMI SRSLRLLKPVMEASR
SLRNNDLTINIQAEGKDEISTLLNEFKASIEYLRNNLKD VQTETFSVAESIEEISKANEEI
TNQLLGISKEMDNISTRIESISASVQETTAGSEEISSATKNIADSAQQAASFADQSTQLAKE
AGDALKKVIEVTRMISNSAKDVERVVESFQKGAE EITSFVETINAI AEQTNLLALNAAIEAA
RAGEAGRGFAVVADEIRKLAEESQQASENVRRVVNEIR SIAEDAGKVSSEITARVEEGTKLA
DEADEKLNSIVGAVERINEMLQNIAAAIEEQTA AVDEITTAMTENAKNAEEITNSVKEVNAR
LQEISASTE EVTSRVQTI RENVQMLKEIVARYKI

>pos

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YDRFVELQAEIRNPLRKL VQNLGVENVSMTKNIKRNI IFFLVVCAAMFIAIFTTRNLTP
LKKLAVLVENLSHGVLNVEIEKIRSKDEIGKAAMAVEKLR EILLDIITGINKASSEVSSSSE
ELSATSEELSANVNSISEALVSLNKEADENSATLEEF TASI EELSSTADSNSKSAQAMLEST
QRVHEQVEKSTERIREITEKAHSTREMSENTKQALN RLLSMAENINSIVDTINSIAEQTNLL
ALNAAIEAARAGEAGRGFAVVADEIRKLAEESKAATQQIG EILGKLRDEINSSKIVESTAS
AIEETASLVESIKDVFESIRIAMEDVQSRVESVAAS TQEQSASLEELSAGVTRLTELLNKTR
ENTSSANSALQEANAAL EELSASASQSLAELAQELQRRIEFFKI

>pos

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KGELTREQAQELAKSLIGKIRYDDNNYFWINDTHPRMV FHPKPEMNGQDLSNYKDPNGVYL
FNEMVKVAKEKGEFVSYSWPKAGSDKPEPKISYVKLF EPWGWIVGTGIYVDDVKVTVGNLI
FRNVLT VSVIGIAVIIMIFFYGRVLSRKTKAVLSALEKISSGDLSVSVDIKSKDEFGLIAQK
LNETVGNLRKMVQEIDKSQDEVERVSEELFALSQQ LRSAL EEARASDTISKEVQNASASIE
EVTSGSEEVSANSQNI SKLIQEISENADNIADFARNGQRVLEEAVKKVEDVSENSRETADV
SNVTESARNIEEIVRTIQSIAEQTNLLALNAAIEAARAGEAGRGFAVVADEIRKLAEESQKA
TEEISQILENIREGVERTNEMSKKNVEITKDARRLVEES YESFNQIVTRIEDLAARIEGIAA
SAQELSAASEEMSSALDAVAKTTTTVADEVVEE VSENITEQEKA AKRIADIGTELKKLSDDELK
EDVERFKI

>pos

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LQVNVTLTYTETHKPKHTPIEHILKFYTTFSAVKDRKFDGFIITGAPVELLPFEEVDYWEEL
TEIMEWSRHN VYSTMFICWAAQAGLYFYFGIPKYELPQKLSGVYKHRVAKDSVLF RGHDDFF
WAPHSRYTEVKKEDIDKVPELEILAESDEAGVYV VANKSERQIFVTGHPEYDRYTLRDEYYR
DIGRNLKVPI PANYFPNDPTKTPILTWW SHAHLFFSNWLN YCIYQKTPYRLEDIH

>pos

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LENKPLEDYLFFKSKGIETAPWVIGPFTFLYLSKRNGEWIRRPNQMEKLL ESLSVYKEVFE
KLVENGCKEILVNEPAFVCDLEKAHWDLILNVYRELSEFPLTVFTYYDSVSDYEACVSLPVK
RLHFDFVSNEENLKNLEKHGFPEDK KLVAGVINGRQPWKVDLRKVASLVEKLGASAI NSSCP

LFHLPVTLELENNLPGGLKEKLAFKLEELKMLKDFLEGKTFDLPNVSFEDFAVDLQAVE
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PPIIYGTVTRPEPMTLKEITYAQLTEKPVKGMTGPVTIMSWSYREDIPEREIAYQIALA
INEEVKDLEEAGIKIVQIDEPAFREKAPIKKS KWPEYFEWAINAFNLAANARPETQIHAHMC
YSDFNEIIEYIHQLEFDVISIEASRSKGEIISAFENFKGWIKQIGVGVWDIHSPAVPSINEM
REIVERVLRVLPKELIWINPDCGLKTRNWDEVIPSLRNMVALAKEMREKFES

>pos

MDKKKRIALIAHRRKRDLLEWVSFNLGTLKHELATGTTGALLQEKLGLKVHRLKSGPLG
GDQQIGAMIAEGKIDVLIFFWDPLEPQAHDVDVKALIRIATVYNI PVAITRSTADFLISSPL
MNDVYEKIQIDYEEELERRIRKVVEGEEEEET

>pos

MIGYQIYVRSFRDGNLDGVGDFRGLKNAVSYLKELGIDFVWLMVPVFSSISFHGYDVVDFYSF
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LDERREWGEKIWHPLEDGRFYRGLFGPFS PDLNYDNPQVFDKRLVLLHLLDMGVDGFRFD
AAKHMRTIEQNVRFWKYFLSDLKGI FLAEIWAARMVDEHGRIFGYMLNFDTSHCIKEAVW
KENTRVLIESIERAVIGKDYLPVNFTSNHDSRLASFEGGFSKEKIKLSISILFTLPGVPLV
FYGDELGMKGVYQKPNTEVVLDPFPWNE SMCVEGQTFWKWPAYNGPFSGISVEYQKRDPDSI
LSHTLWTRFRKENQWIDRAKLEFLCKEDKFLVYRLYDDQHSLKV FHNLSGEEVVFEGVKMK
PYKTEVV

>pos

MRFYIKTFGCQMNENDSEAMAGLLVKEGFTPASSPEEADVVIINTCAVRRKSEEKAYSELGQ
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LDEYTHELPRIRTSRHHAWVTIIHGCDRFACTYCVPYTRGRERSRPMADILEEVKKLAEQGY
REVTFLGQNVDAWGKDLKDGSSSLAKLLEEASKIEGIERIWFLLTSYPTDFSDIEVIAKNPK
VAKSVHLPVQSGSNRILKLMNRRYTKEEYLALLEKIRSKVPEVAISSDIIVGFPTETEEDFM
ETVDLVEKAQFERLNLAIYSPREGTVAWKYKDDVPYEEKVRRMQFLMNLQKRINRKLNERY
RGKTVRIIVEAQAKNGLFYGRDIRNKIIAFEGEDWMIGRFADVKEKITAGPLYGKVVWVEK
TPSPVSSSE

>pos

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VSHLRNLGLEVSQILVGSTVEGKENDLKVQSRTTVESTGKVIKRNIRSGQTVVHSGDVIVFG
NVNKGAEILAGGSVVVFGKAQGNIRAGLNEGGQAVVAALDLQTSLIQIAGFITHSKGEENVP
SIAHVKGNRIVIEPFDKVSFERSE

>pos

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AVRDLIEAKSETSLKLSLRNLKGGRLDFVDSLRLRELIEVLAEIRVELDYDPEIETNTGEVVT
RLERIKEKLTEELKKADAGILLNRGLRMVIVGKPNVGKSTLLNRLNEDRAIVTDIPGTTRD
VISEEIVIRGILFRIVDTAGVRSETNDLVERLGIERTLQEIEKADIVLFLVDASSPLDEEDR
KILERIKNKRYLVVINKVDVVEKINEEIEKNKLGTDHRMVKISALKGEGLEKLEESIYRETQ
EIFERGSDSLITNLRQKQLLENVKGHLEDAIKSLKEGMPVDMASIDLERALNLLDEVTRGSF
REDLLDTIFSNEFCVGK

>pos

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PLDMRMDLESEVTAQKVLNELPEEELARIIFEYGEKRFARRIARKIVENRPLNTTLDLVA
VREALPSYEIRRRKRHFATKTFQAIRIYVNRELENLKEFLKKAEDLLNPGGRIVVISFHSLE
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>pos

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VRDFGMRALLTRGLVDSNGDDGGRLEENLKLKLYNEWNGFEGRIFVGFVGFPHSPYLCSEEYLKRV
FD TAKSLNAPVTIHL YETSKEEYDLEDILNIGLKEVKTIAAHCVHLPERYFGVLKDI PFFVS
HNPASNLKLGNGIAPVQRMIEHGMKVT LGTDGAASNNSLNLF FEMRLASLLQKAQNPRNLDV
NTCLKMVTYDGAQAMGFKSGKIEEGWNADLVVIDLDLPEMFPVQNIKNHLVHAFSGEVFATM
VAGKWIYFDGEYPTIDSEEVKRELARIEKELYSS

>pos

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MAYEDIEVNKAIGKNGAQLIKDGSTILTHCNAGALATVDYGTALGVIRAAVESGKRIRVFAD
ETRPYLQGARLTAWELMKDGI EYVITDNMAGWLMKRGLIDAVVVGADRIALNGDTANKIGT
YSLAVLAKRNNIPFYVAAPVSTIDPTIRSGEEIPIEERRPEEVTHCGGNRIAPEGVKVLNPA
FDVTENTLITAIITEKGVIRPPFEENIKKILEV

>pos

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KHLRKSPTVFLGGIMDSLEHGNYEKGNP VVYELDESEEFFSEFSPNYLIITNARGDHLENY
GNSLTRYSAFEKISRNTDLVVTFAEDELTSHLGDVTFGVKKGTYTLEMRSASRAEQKAMVE
KNGKRYLELKLKVPGFHNVLNALAVIALFDSLGYDLAPVLEALEEFRGVHRRFSIAFHDPET
NIYVIDDYAHTPDEIRNLLQTAKEVFENEKIVVIFQPHRYSRLEREDGNFAKALQLADEVVV
TEVYDAFEEKKNGISGKMIWDSLKSLGKEAYFVEKLEPELEKVISVSENTVFLFVGAGDIIYS
SRRFVERYQSSKSSPSRVLGSNK

>pos

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LTSLGERGSLTAVKRILGNSYDDITTPDAITILSAMKENREGGKFFALEVSSHALVQQ
RVEGVRFVDFGIFTNISRDHLDFHGTFENYLKAKLHLFDLLKDDGVAVLNE SLADAFNRKSRK
ITFGTSKNADYRLGNIEVSWEGTQFVLETPDGLLKVFTRAIGDFNAYNAAAAIAALHQLGYD
PKDLASSLETFTGVEGRFEVVRGAKKIGLNVVDFAHSPDALEKLLKNVRKISQGRVIVVFG
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>pos

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HMGLFIEIPTIGVAKSRLYGTFKMPEDKRCSWSYLYDGEEIIGCVIRTKEGSAPIFVSPGHL
MDVESSKRLIKAFTLPGRRIPEPTRLAHIYTQRLKKGLF

>pos

MKKLTVYLATTNPHKVVEIKMIAPEWMEILPSPEKIEVVEDGETFLENSVKKAVVYGKCLKH
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NTLISVEDRVEGRIANEIRGTGGFGYDPFFIPDGYDKTFGEI PHLKEKISHRSKA FRKLF SV
LEKILESEN R

>pos

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DLISRYLEKWSLNRLSVDRNVLRLATYELLFEKDIPIEVTIDEAIEIAKRYGTENSGKFVN
GILDRIAKEHAPKEKFE L

>pos

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LTETERELLEKIDAVKEEIEMEFDKEISLNREVVNNIGLKLGNLSRDYERYKENVDAKISEV
NEKLAALEKDLGNKIADLEGIVNLHEKDIINIYNKISSVNEELNNKIAATEEKLSRKDEEIS
AMVELHEKDIINLYNKVAALNEDLNKKILDTKAELSAKIESQEKTLNMVYTKLLD TESK LND

EISALKEKDAEIQKTVDLHEQDIVNLYGKTS SLEEDLNMKYNETNEKIDQVKAELEDKIESV
KAYNRNLSILTGAFFGILGLILIAISGK

>pos

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KYFDVMVFGDQVKNGKPDPEIYLLVLERLNVVPEKVVVFEDSKSGVEAAKSAGIERIYGVVH
SLNDGKALLEAGAVALKPEEILNVLKEVL

>pos

MRIIETIEEMKKFSEEMREKKKTIGFVPTMGYLHEGHLSLVRRARAENDVVVVSIFVNPTQF
GPNEDYERYPRDFERDRKLLKENVDCIFHPSVEEMYPPDFSTYVEETKLSKHLCSRPGH
FRGVCTVVTKLFNIVKPHRAYFGQKDAQQFRVLRRMVRDLNMDVEMIECPIVREPDGLAMSS
RNVYLSPEERQQALSLYQSLKIAENLYLNGERDAEKIKEEMIKHLSRFDKVKIDYVEIVDEE
TLEPVEKIDRKVIVAVAAWVGNARLIDNTILG

>pos

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KNDPELAKFWASLADIHVNDAFGTAHRAHASNVGIAQFIPSVAGFLMEKEIKFLSKVTYNPE
KPYVVVLGGAKVSDKIGVITNLMEKADRILIGGAMMFTFLKALGKEVGS SRVEEDKIDLAK
LLEKAKEKGV EIVLPVDAVIAQKIEPGVEKKVVRIDDGIPEGWMGLDIGPETIELFKQKLS
AKTVVWNGPMGVFEIDDFAEGTKQVALAIAALTEKGAITVVGGSAAAVNKFGLEDKFSHV
STGGGASLEFLEGKELPGIASIADKKKITRKLILAGNWKMHKTISEAKKFVSLLVNELHDVK
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ERRRIFKEDDEFINRKVKAVLEKGMTPILCVGETLEEREKGLTFCVVEKQVREGFYGLDKEE
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GLIVQKIDIGGLVGGASLKESFIELARIMRGVIS

>pos

MNRLLEKVEEFKKGVLKAGWFIEKMFNRN SSSLVERNESLAREVIADEEVVDQMEVEIQEK
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QTSEMLKFALRMFADVNVEKSFEVCRMDSKVVDDLYEKVREELLLYMMESPKYVKRALLLLEI
AGNIEIIADYATNIVEVSVYMVQGEAYKCYHDELLLFKKSGGVLFESSD

>pos

MREKLFWILKKYGVSDHIAKAFLEIPREEFLTKSYPLSYVYEDIVLVSYDDGEEYSTSSQPS
LMALFMEWVGLDKGMRVLEIGGGTGYNAAVMSRVVGEKGLVVSVEYSRKICEIAKRNVRLG
IENVI FVCGDGYGVPEFSPYDVI FVTVGVDVPEWFTWFTQLKEGGRVIVPINLKLRRQPAF
LFKKKDPYLVGNKLETRFITAGGNLGNLLERNRKLLEFPFNREILLVRSHIFVELVDLLT
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SHISCSI

>pos

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YIRVRSAVENPDVVVIDETLLSPAIVEGLSEDGILLVNTVKDFEFVRKKTGFNGKICVVDA
TDIALQEIKRGI PNTPLGALVRVTGIVPLEAIEKRIEKMF GKFPQEVIDANKRALRRGYE
EVKCSE

>pos

MSLKSWEIPIGGVIDKPGTAREYKTGAWRVMRPI LHKEKCIDCMFCWLYCPDQAI IQEGGI
MKGFNVDYCKGCGLCANVCPKQAIEMRPETEFLSEEG

>pos

MKIAILYREEREKEGEFLKEKISKEHEVIEFGEANAPGRVTADLIVVVG DGTVLKAAKAA
DGTMPVGFKAGRLGFLTSYTLDEIDRFLEDLRNWNFREETRWF IQIESELGNHLALNDVTLE
RDLSGKMVEIEVEVEHHSSMWFADGVVISTPTGSTAYSLSIGGPIIFPECEVLEISPIAPQ
FFLTRSVVIPS NFVVVESQORDINMLVDGVLTGKTKRIEVKKSRRYVRILRPPEYDYVTVIR
DKLGYGRRIE

>pos

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PNVTVETLILALKSGNTILLRGGSDALNSNKAIVSAIREALKETEIPESSVEFIENTDRSLV
LEMIRLREYLSLVI PRGGYGLISFVRDNATVPVLETGVGNCHIFVDESADLKKAVPVI INAK
TQRPGTCNAAEKLLVHEKIAKEFLPVIVEELRKHGVEVRGCEKTREIVPDVVPATEDDWPTE
YLDLIIAIVVKNVDEAIEHIKKYSTGHSESILTENYSNAKKFVSEIDAAAVVYNASTRFTD
GGQFGFGAEIGISTQRFHARGPVGLRELT TYKFVVLGEYHVRE

>pos

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KNPQIIDCPPEEAGRLAVEAVSKGECDFLMKGKIKTGDLMKIYLDERYGLRTGKTMAMVSVM
EIPDFPRPLIISDPGMLISPTLEQKVDMIIEHCVRVANVMGLETPKVAVVGAIEVNVNPKMPIT
MEAAILSKMNQRGQIKGCIVDGPFDLNVVSEEAAKKGIQSPVAGKADILILPDIEAANIL
YKALVFLAKAKSASTILGGKVPVVLTSRADSEETKFYSIALSAVFA

>pos

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RIFFAQARSNKVIEAFLTNPVDTKKKELFKVTVDGKEIPVSRVEKADPTDIDVTNYVRIVLS
ESLKEEDLRKDVELIEGYKPARVIMMEILDDYYYDDELGAVYSPEKTI FRVWSPVSKWVKV
LLFKNGEDTEPYQVVNMEYKGNVWEAVEGDLGDFYLYQLENYGKIRTTVDPYSKAVYAN
SKKSAVVNLARTNPEGWENDRGPKIEGYEDAIIEIHIADITGLENSGVKNKGLYLGLTEEN
TKGPGGVTTGLSHLVELGVTHVHILPFFDFYTGDELDKDFEKYYNWGYDPYLFMVPEGRYST
DPKNPHTRIREVKEMVKALHKGIGVIMDMVFPHTYGI GELSAFDQTPVYFYRDKTGAYL
NESGCGNVIASERPMRKFIVDTVTYVWKEYHIDGFRFDQMGLIDKKTMLEVERALHKIDPT
IILYGEPPWGGWAPIRFGKSDVAGTHVAAFNDEFDAIRGSVFNPSVKGFVMGGYKGTKIK
RGVVGSIYNDGKLIKSFALDPEETINYAACHDNHTLWDKNYLAADKKEWTEELKNAQK
LAGAILLTSQGV PFLHGGQDFCRTKNFNDNSYNAPISINGFDYERKLQFIDVFNHKGLIK
RKEHPAFRLKNAEEIKKHLEFLPGGRRIVAFMLKDHAGGDPWKDIVVIYNGNLEKTTYKLPE
GKWNVVVNSQKAGTEVIETVEGTIELDPLSAYVLYRE

>pos

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AASILGIKYPEIARKVKEYKERMKREVLEKAQRLEQIGYKEYLNQKE

>pos

MVERYSLSPMKDLWTEEAKYRRWLEVELAVTRAYEELGMI PKGVTERIRNNAKIDVELFKKI
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WEVANRYKHTPTIGRTHGVHAEPTSFGLKVLGWYSEMKNVQRLERAIEEVSYGKISGAVGN
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LEVEEPFRKGQRGSSAMPHKKNPITCERLTGLSRMMRAYVDPLENIALWHERDISHSSVER
YVFPDATQTLYYMIVTATNVVRNMKVNEERMKNIDLTKGLVFSQRVLLKLIKGLTRKEAY
DIVQRNALKTWNSEKHFLEYLLEDEEVKKLVTKEELEELFDISYYLKHVDHIFERFEKE

>pos

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FEILHEGKTI SFNNILDAENAWFMAKNLPRMGAVVVKHQSPCGAAIGEDKVEIVKKAIEADD
ESSFGGILAVNFEMDEEVAKS LKKYLEVIVAPSFTQEAIEVLSKKKVRLLKPGDYASWAGKM
AFGSLVLSERKYPEGNFELVVGEPLESEKELEDLEFAYRVVEGAKSNAVLI AKDGVTVGIGSG
QPSRKRAAWIATVMAGEKAKGAVAASDAFFFPDSLEILAQAGVKAVVAPLGSIRDEEVIEK
ARELGITFYKAPSRVFRH

>pos

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YGNSIGVPTVGGELRISSLYAHNPLVNVLAAGVVRNDMLVDSKASRPGQVIVIFGGATGRDG
IHGASFASEDLTGDKATKLSIQVGDPFAEKMLIEAFLEMVEEGLVEGAQDLGAGGVLSATSE
LVAKGNLGAIVHLDRVPLREPDMEPWEILISESQERMAVVTSPQKASRIEIAARKHLLFGDV
VAEVIIEPVYRVMYRNDLVMEVPVQLLANAPEEDIVEYTPGKIPEFKRVEFEEVNAREVFEQ
YDHMVGTDTVVPPGFGAAVMRIKRDGGYSLVTHSRADLALQDTYWGTLIAVLESVRKTLVSG
AEPLAITNCVNYGDPDVPVGLSAMMTALKNACEFSGVPVASGNASLYNTYQGKPIPTLVV
GMLGKVNPKVAKPKPSKVFAVGWVDFELEREKELWRAIRKLSEEGAFILSSSQLLTRTHVE
TFREYGLKIEVKLPEVRPAHQMVLFVFSERTPVVDVPVKEIGTLR

>pos

MKPRACVVVYPGSNCDRDAYHALEINGFEPYSVGLDDKLDYELIILPGGFSYGDYLRPGAV
AAREKIAFEIAKAAERKGLIMGICNGFQILIEMLLKGALLQNSSGKFICKWVDLIVENNDT
PFTNAFEKGEKIRIPIAHGFGRYVKIDVNVVLRVYKVDVNGSDERAGVLENSGNVFLMPH
PERAVEELIGGEDGKKVFSILNYLKR

>pos

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LGCDFVLPGPWAKALREKIKGKILVPGIRMEVKADDQKDVVTLEEMKGIANFAVLGREIYLS
ENPREKIKRIKEMRL

>pos

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RFLASQSAAVKVKQIVTVDDVKGKRMGIEQIVEILRDGWNLFVPLTVSPRFEHRTYKIKEKK
FYKHTVPLFTQASIVEEMKKRGI GRPSTYAKIVEVLFRRGYVYEDKYKVRPTRFGVMVYS
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>pos

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VYRYRKRIDLEERPAYVKISDGC DRGCTFC SIPSFKGSLRSRSIEDITREVEDLLKEGKKE
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KYFDVPVQHGS DKILKLMGRTKSSEELKMLSSIRERFPDAVLR TSIIVGFPGETEEDFEEL
KQFVEEIQFDKLGAFVYSDEEGTVAFNLKEKVDPEMAKRRQEELLLLQAEISNSRLDRFVKG
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>pos

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NLALKNAEYEGYEEFLKGPTAVLYVTEGDPVEAVKIYNYFYKDKKADLSRLKGGFLEGKFT
AEEVENIAKLPSKEELYAMLVGRVKAPITGLVFALS GILRNLVYVLNAIKEKKSE

>pos
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YVGQVSEV

>pos
MAQVDLLNVKGEKVGTLLEISDFVFNIDPNYDVMWRYVDMQLSNRRAGTASTKTRGEVSGGGR
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VLDDLKLERPKTKSLKEILQNLQLSDKKTILVLPWKEEGYMNVKLSGRNLPDVKVI IADPNP
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>pos
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VELK

>pos
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THGMTVLIVLEQIFRAFKI IHGENYHY

>pos
MNESERKIVEEFQKETGINFKNEELLFRALCHSSYANEQNQAGRKDVESNEKLEFLGDAVLE
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LADAFEALLAAIYLDQGYEKIKELFEQEFEFYIEKIMKGEMLFDYKTALQEI VQSEHKVPPE
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>pos
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QKSKLIGAASIVAKVFRDRLMSEFHRMYPQFSFHKKHGYATKEHLNEIRKNGVLP IHRLSFE
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>pos
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>pos
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MYLKEIGKIPLLTPAQERELARRAQMGDKKAKEKLITSNLRLVVSIAKRYMGRGLSFQDLIQ
EGNIGLLKAVEKFDWRKGYKFSYATWWIRQAITRAIADQARTIRIPVHMETINKLNRLRR
EYYQKHGEEPSIEELAKMMGKPPEKIKEILEAAKETISLESPIGEDEDSSIEDFVADDSIAS
PKKEAMRMLMREELEKVLKTLSPREAMVLRMRYGLLDGKPKTLEEYVQYFNVTRERIRQIEV
KALRKLRRHPSRSKYLKSLLSLMDENEG

>pos
MAYVKERIYESMFI IAPNVPEEERENLVERVKKIIEERVKGKIDKVERMGMRFAYEIKKFN
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GSED

>pos
MSEFLTPERTVYDSGVQFLRPKSLDEFIQENVKKKLSLALAAKMRGEVLDHVLLAGPPGL
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AIEDFQIDIMIGKGPSAKSIRIDIQPF TLVGATTRSGLLSSPLRSRFGI ILELDFYTVKELK
EIIKRAASLMDVEIEDAAAEMI AKRSRGTPRIAIRLTKRVRDMLTVVKADRINTDIVLKTME
VLNIDDEGLDEFDRKILKTIIEIYRGGPVGLNALAASLGVEADTLSEVYEPYLLQAGFLART
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>pos
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VKR

>pos

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GIG

>pos

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>pos

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>pos

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PHKAAV

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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QIVSSYESEEKFREELKERILDDIKRDRVIEVLAQEKGISVNDEELEKEAEELAPFWGISPD
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>pos

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>pos

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ADAILIARILTAEQIKEIYEAEEELGMDSLVEVHSREDLEKVFVIRPKIIGINTRDLDTF
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AWSE

>pos

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>pos

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>pos

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>pos

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>pos

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GDI STNFLRIAEGRLYFLNEFDGKLVLYVLDPTHLPTIST IARAFPNVYVGAPWWFNDSP
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>pos

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DPVLNKDNSNPWEQDSVEIFIDENNHKTGYE DDDAQFRVNYMNEQTFGTGGSPARFKTAVK
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LRLIK

>pos

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>pos

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>pos

MIVRVCMGSSCHLKGSEYVRRFQELQKKYNFKLYGSLCFGNCSQGVCEIDGRLFSRVTP
NAEEILKKVLQNG

>pos

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>pos

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LKIRVCLHIENGELIPYRKVRGDKKAI EALIEKLREDTPEGSKLRVIGVHADNEAGVV ELLN
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>pos

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T FPLMEEDVYGEIYVCPLIVEENAREFNNTFEKELLEVV IHGILHLAGYDHEFEDKNSKEMFE
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>pos

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NYARRD

>pos

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GLDFDSFKDRVPFFLSGGEKRRVAIASVIVHEPDILILDEPLVGLDREGKTDLLRIVEKWK
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G EDPFMSDDELLERVCNS

>pos

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>pos

MAKYQVTKTLDVRGEVCPVPDVETKRALQNMKPGEILEVWIDYPMskerIPETVKKLGHEVL
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>pos

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IVLSPY WVSYP MVRFAGGVVVEVETLPEEGFVPDPERVRAITPRTKALVVNSPNNPTG
AVYPKEVL EALARLAVEHDFYLVSDEIYEHLLYEGEHFS PGRVAP EHTLTVNGAAKAF
AMTGWRIGYACG PKEVIKAMASVSSQSTTSPDTIAQWATLEALTNQEASRAFVEMARE
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>pos

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NPARIREA

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IATSEVRISV I I PAEYAEAALRAVHQAFELDKA

>pos

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AWEAHNRAHEKVAYLNARRFHALHFKGPGTDLVVGLAEGHLWQGGATATKGGRLCNPPLPT
EEVFTAPHRERVEGVVRASRPLALGGTLVEGIFARFERGF AVEVRAEKGEEVLRLLDDEG
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>pos

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SPASHHPERAGSIRVYKPTGHRHTAEVVENLPGRPEVHLTAIATDRVRGILMTAQCFVQDGW
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>pos

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EDAKERL NESPLGAAALAGTGFPIDRHFTARELGFKAPMRNSLDAVASRDFALEVLSALNIG
MLHLSRMAEELI LYSTEEFGFVEVPDAFATGSSIMPQKKNPDI LELIRAKAGRVLGAFVGLS
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LADYLAEKGLPFREAHHVGR LVRRLVEEGRALKDLTLEELQAHHPLFAEDALPLLRLETAI
HRRRSYGGTAPEAVRERLEEAKKEVGLD

>pos

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GGAGRAVAFALREAGLEVWVWNRT PQRALALAE E FGLRAVPLEKAREARLLVNATRVGLEDP
SASPLPAELFP EEGAAVDLVYRPLWTRFLREAKAKGLKVQTGLPMLAWQ GALAFRLWTGLLP
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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos
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>pos
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>pos
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>pos

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>pos

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>pos

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YIQAAALNEGKPPQIAEKIAEGRLLKYLEEVVLEQPFVKDDKVKVKELIQQAIAKIGENIVV
RRFCRFELGA

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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ALAF

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

MGKGD RRTRRGKIWRGTYGKYRPRKKK

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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PGGVMGMQAGMILLTHHRVHPVVHRTVREAFRYVRSYKNHIGFFLNFGFLLASDAFDPAAF
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PYKG

>pos

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>pos

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>pos

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>pos

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NLDLDRPERALLFEVGRVFREREETHLAGLLFGEGVGLPWAKERLSGYFLLKGYLEALFARL
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>pos

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>pos

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REALSEDSKERLELNPMRILDSKSERDQALLKELGVRPMLDFLGEEARAHKKEVERHLERLS
VPYELEPALVRGLDYVVRTAFEVHHEEIGAQSALGGGGRYDGLSELLGGPRVPGVGFAGFVE
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>pos

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>pos

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>pos

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>pos

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RMRP

>pos

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>pos

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>pos

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>pos

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>pos

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RVYLEGETAPVEENLEVFRFLSRADLLPERPAKALVKAMPRTARMPLEGLLDVEEWRRRQE
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>pos

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>pos

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>pos

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>pos

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EARPHHLAQAERNVRAFVQVENVRFHLGKLEEAEEAAYDGVALDLMPEWKVLEKAALALK
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LRRWKAS

>pos

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>pos

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>pos

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>pos

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EKLSP

>pos

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>pos

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LPRAQVEEEVVC

>pos

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>pos

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>pos

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L

>pos

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>pos

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QNLFISAPTISQYAALKAFEKETEREINSMIKEFDRRRRLVLKYVKDFGWEVNNPIGAYYVF
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>pos

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DEDWEAYRDLGMIAETCEYWGMPLIAMMYPRGKHIQNERDPELVHAARLGAELGADIVKTS
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>pos

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LDVIGGELKAGDDAKEAEFFDLNNLPKLAFDHEKIIKDYMRWKN

>pos

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IPKLSYIEAMELAYFGAKVLHPTIEPAMEKGIPIILVKNTFEPESEGTLLITNDMEMSDSIVK
AISTIKNVALINIFGAGMVGVS GTAARIFKALGEEEVNVLISQGSSETNISLVVSEEDVDK
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>pos

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KWGMNAVILAESSLFKGLAKFLGMDFIKIESFEEGIDLIPELDYDFIHLHTKETDEAAHTKN
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>pos

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NALLYVCRELAKMIVKDGEKATKFMVVVKGAKTEEDAVKASKAIVNSLLVKTAVFGGDPNW
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>pos

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NIVIYGAGGAARAVAFELAKDNNIIIANRTVEKAEALAKEIAEKLKFKGEEVKFSGLDVDL
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GMLIYQGAFAFKIWTGVEPNIEVMKNAIIDKITK

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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GIAKAVIPMTDDRVTKILAKVDGKVDLLKFHDFWV KRKGDVEVLDVIYENSLYAKPCEKAV
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L

>pos

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>pos

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>pos

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VGGTLIEESISRSAGAEHGVYMSVEEIRDMIKRVGLIPKERTTLYKILE

>pos

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DNGFMVLTEVGKKMPDKDKQLTIDDRIKLINFLLDAGADYVIEGREGSGKIGLFDKEGKVK
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GKV

>pos

MITLCNRFTEYKCGNVAIVVDVLRAS TTITL LSFIDEVYITTSTSKKENAIYIGERKGRKI
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VEDFEDVSLVPCHRENNFAIDDFIGCGVIAKYLNGEFDEFIKA ALELTKHDWMSLILNSSSA
ENLKNLGYEKDVTFAILENSIDAVGIYKKDKSKVVRFK

>pos

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IPTYKPKTPEEAYKLIK YASSYMYKISYPVALLFDALYWEYDLEK

>pos

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KGCGLDTITTESLEEFKEFEFKNALNEEKCKVII AKTIPYNEKCSNIEIPPVVLKYRFMEAIK
RS

>pos

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FRRS GWI

>pos

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DNGTMKLEDDLNDNNVDKVVGIALRYDGDKLDLDSGDEV DILDYVKFKLDD EDSNDKLVY
FSMDKDVDATLNIGEKVKALNAEVKLDIKANAVEPVSLTAPIAKLDTEVSLDTADKNLVLV
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>pos

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YQKSVMP SLIHLDNHKKD

>pos

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PHLL

>pos

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SGAGYNGVPSMAILDNLI PFIKNEEEKMQTESL KLLGTLKDGKVELANFKI SASCNRVAVID
GHTESI FVKTKEGAEPEEIKEVMDKFDPLKDLNLPT YAKPIVIREEIDRPQPRLD RNEGNM
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>pos

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>pos

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ALLVLEVEGLLKAPKILRHVDKLGIEGWDWLKDLMSKKEEKEEKEDEKVDDEEIDEEEEEIS
GYWRDVKIEANKKFI SEVIAGRPFVFAHPSKVGGFRLRYGRSRNTGFATQGFHPALMYLVDEF
MAVGTQLKTERPGKATCVVPVDSIEPPIVKLKNGDVIRVDTIEKAMDVRNRVEEILFLGDVL
VNYGDFLENNHPLL PSCWCEEWYEKILIANIEYDKDFIKNPKPEEAVKFALETKTPLHPRF
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FCGTVKVELDNFGRIKAPLKDYWYAALKRLGINKPGDVKCIKGMTSKQKIVEPLEKAILRAIN
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IIPESCAEYFVKVANFIDDLLEKFKYKVERFYNVKKKEDLIGHLVIGMAPHTSAGMVGRIIGY
TKANVGYAHYPYFHAAKRRNCDGDEDSFFLLLD AFLNFSKKFLPDKRGGQMDAPLVLTITLDP
KEVDGEVHNMDTMWSYPLEFYEKTLEMPSPKEVKEFMETVEDRLGKPEQYEGIGYTHETSRI
DLGPKVCAYKTLGSMLEKTTSQLSVAKKIRATDERDVAEKVIQSHFIPDLIGNLRAF SRQAV
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GINSIFENEKSRQVKLSDFFKIG

>pos

MIIGANTSKNFFDNLEEEQIQQCIGIDLRVWKIFKIEGEGVIDFSNEKRKLPNYIEIFNSEKD
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PITIYKYARIAQIVFVECRDVKGVYEGIYKGR

>pos

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HSVYLKVPFDPEDSSFLLELTGFVVRVAHSVRKLLIAIVDADGDIVYYNMTYVKP

>pos

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AINRALNEYPSKEKVKKEKYRALHPLVGFDRVRLEYPPYLQIALDVPTMENLEFLLQTI PNS
DHIILEAGTPLIKKFGLEVIEIMREYFDGFIVADLKTLDTGRVEVRLAFEATANAVAISGVA
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KENCLLAIAGGVGVENVEELLKEYQILIVGRAITKSKDPGRVIRMFINKMGYDIDTYRLYFD
EDEDIGEEL

>pos

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YKTIHLLENDITPIWVFDGEPKLEKTRKVRREMKEKAELKMKEAIKKEDFEEAAYAKRV
SYLTPKMVENCKYLLSLMGI PYVEAPSEGEAQASYMAKKGDVWAVVSQDYDALLYGAPRVVR
NLTTTKEMPELIELNEVLEDLRI SLDDLIDIAIFMGTDYNPGGVKGI GFKRAYELVRSVAK
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LIANKTKQKTLDAWFK

>pos

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GIEIDVDKLEKILGVKVVPLSAAKKMGIEDLKKASIAVKDKKTAEIKYPNFEPYIKKITSI
LQKDEDLKKYNLRYLAIKLLENDKYVEEIVKNSKVWVNELKPVLDSEINELSKKYGEAELGIV

EERYKVIDKIVKEVMKKTSGKLTTEMLDDVLTDEKIGTLLIIPFLWMLFKFTFDVSKPFSAMIEYFFGFLSEVVKSSISNKFIASLLADGIISGVGAVLVFFPILAFLLFFAISFLEDSGYMARIPFITDRIMNKFGLPGKAVISMVMGFGCNVPAIMATRITIEDEKDRILTILINPLLSCSARLPYALFAGALFSKYQGVVILSMYALGVVLALITAFLLFRKLIKFTSPSYLIVELPPYHIPHLNVVLKNTWERYVDFLRKAGTIIIVFGVILVWVLSVYGPSGYLGEEVFENPQLIANSWVAVIGKTLAPLFSMPMGWDWRACSAVFGIIAKEVVVGLAMLYGTGEENLSSVIAHAHFSPVSAYAFMAFSLIYLPCIATLAVIKQEIGWKWALFAVTYEMILAYVVALVISVIGNLLF

>pos

MKFLKNVLEEGSKLEEFNELELSPEDKELLEYLQQTAKKITVVGCGGAGNNTITRLKMEGIEGAKTVAINTDAQQLIRTKADKKILIGKKLTRGLGAGGNPKIGEEAAKESAEIKAAIQDSDMVFITCGLGGGTGTGSAPVVAEISKKIGALTVAVVTLPFVMEGKVRMKNNAMEGLERLKQHTDTLVVIPNEKLF EIVPNMPLKLAFKVADEVLINAVKGLVELITKDGLINVDFAVVKAVMNNGLAMIGIGESDSEKRAKEAVSMALNSPLLDVLDIGATGALIHVMGPEDLTLEEAREVVATVSSRLDPNATI IWGATIDENLENTVRVLLVITGVQSRIEFTDTGLKRKKLELTGIPKI

>pos

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>pos

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>pos

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>pos

MICLGLEGTAECTGVGIVTSDGEVLFNKTIMYKPPKQGINPREAADHHAETFPKLIKEAFEVVDKNEIDLIAFSQGPGLGPSLRVTATVARTLSLTLKKPIIGVNHCHIAHIEIGKLTTEAEDPLTLYVSGGNTQVIAYVSKKYRVFGETLDIAVGNCLDQFARYVNLPHPGGPYIEELARKGKLV DLPYTVKGMEDIAFSGLLTAAMRAYDAGERLEDICYSLQEYAFSMLTEITERALAHTNKGEVMLVGGVAANNRLREMLKAMCEGQNVDFYVPPKEFCGDNGAMIAWLGLLMHKNGRWMSLDETKIIPNYRTDMVEVNWIKI KGGKRKIPEHLIGKGAEADIKRDSYLDVDFVIIKERVKKGYRDERLDENIRKSRTAREARYLALVKDFGIPAPYIFDVLDNKRIMMSYINGKLAKDVIEDNLDIAYKIGEIVGKLHKNDVIHNDLTTSNFIFDKDLYIIDDFGLKISNLDEDKAVDLIVFKKAVLSTHHEKFDEIWERFLEGYKSVYDRWEIILELMKDVERRARYVE

>pos

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>pos

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NPENFGVVVLDDENNIELQEKPENPKSNLINAGIYKFDKIKFELIEKTKISERGERELTDA
IKHLIKEEKVKGIKLNGYWNDVGRPWDILEANKYLLDKINTDIKKGIEENVVIKGEVIEEG
AIVKANSVIEGPAAIKKGAVVGPLAYIRPYTVLMENTFVGNSSSEVKASIMKNTKIPHLSYV
GDSIIGENCNFGCNTITANLRFDDKPVKVNISKRVESVRKLGVMGDNVKTGIQVSFMPGV
KVGSNCWIGASCLIDRDIESNTFVYKRDELIFRKLK

>pos

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NIVVGTTPGRILDHINRGTNLNKNVKYFILDEADEMLNMGFIKDVEKILNACNKDKRILLFSA
TMPREILNLAKKYMGDYSFIKAKINANIEQSYVEVNERFEALCRLLNKEFYGLVFCKTK
RDTKELASMLRDIGFKAGAIHGDLSSQSQREKVIIRLFKQKKIRILIATDVMSRGIDVNDLNCV
INYHLPQNPESYMHRI GRTGRAGKKGKAI SI INRREYKLLRYIERAMKLLIKKLLKFG

>pos

MI IKGRAHKFGDDVDTDAAIIPGPYLRTTDPYELASHCMAGIDENFPKVKVEGDVIVAGENFG
CGSSREQAVIAIKYCGIKAVIAKSFARIFYRNAINVGLIPIIANTDEIKDGDIVEIDLKKEE
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>pos

MLPKATVKRIMKQHTDFNISAEAVDEL CNMLEEIIKITTEVAEQNARKEGRKTIKARDIKQC
DDERLKRKIMELSERTDKMPILIKEMLNVTSEL

>pos

MFGRDPFDLSEFERMFKEFFATPMTGTTMIQSSTGIQISGKGFMPISII EGDQHIKVIAWLPG
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ENGLSVILPKAESSIKKGINIE

>pos

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LICPADFDLGHKRIVVISTTEGDDTIEKHGIMKTADLIVINKIDLADAVGADIKKMENDA
KRINPDAEVVLLSLKTMEGFDKVLEFIEKSVKEVK

>pos

MAEQQQEQQIRVRI PRKEENEILGIEQMLGASRVVRCLDGKTRLGRIPGRLKNRIWVREG
DVVIVKPWEVQGDQKCDIIWRYTKTQVEWLKRKGYLDELL

>pos

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EEFFAKYLLKETGSAGNLEGGRLILQRRISPPELLKSRINDFLREYVICRECGKPDTKIIEG
RVHLLKCMACGAIRPIRMI

>pos

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KDFKKDIEDSLNVEVEIGTIAELPTVGSNAVVTNKGCLTHPLVEDDELEFLKSLFKVEYIGK
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>pos

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VVKLIKK

>pos

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GYDELSNNILKDSFIEDVIEGAKILLDKFKNLEVVQVHTIYYILFVCRADNPLSKEELEECL
EFSTILASTKAKLGNIRAIDDLHEGLKIPHNKYGDLLKEIAEKFNDDNNYKIALSPSRYVEKP
KSTVGLGDTISSGAFVYYVSLLNKKRMS

>pos

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GELASSGAKHADNVAPAIFFGGFTMVNTNYPEVLHIPIDFKLDILIAIPNISINTKEAREIL
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VYGITISGSGPSIIAFPKEEFIDEVENILRDYYENTIRTEVGKGEVV

>pos

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KFLIVYAEKRKKKTAELVNEVAKIENKDEIFKEIDKVIDEALKIKNKEDFGKLMTKNHELLK
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MN

>pos

MIVVSGSQSQNLAFKVAKLLNTKLTRVEYKRFDPNEIYVRIVDEINDDEAVIINTQKNQND
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HETHIKDFFTIPFIYGDVAVPKLAEYVKDKLNDPIVLAPDKGALEFAKTASKILNAEYDYLEK
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ALNKLYSAGVEEVVGTDTYLSEVSKVSVAEVIVDLL

>pos

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MYQYEFAKRMVAKEGTDYGRLSVAVQSRADVEIVAKVPPSAFYPKPKVYSIAIVKIKPNKKG
YHIENENFFDDFLRAIFQHRNKSVRKALIDSSKELNKNKDEMKKIILEDLNTNSEIKNLINE
KVFKLSVKDIVNLSNEFYRFLQNRGRL

>pos

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TRREPVGIVGAI TPFNFPLNLSAHKIAPA IATGNVIVHHPSSKAPLVCIELAKI IENALKKY
NVPLGVYNLLTGAGEVVGDEIVVNEKVNMI SFTGSSKVGELITKKAGFKKIALELGGVNPNI
VLKDADLNKAVNALIKGSFIYAGQVCISVGMILVDESIADKFIEMFVNKAKVLNVGNPLDEK
TDVGPLISVEHAEWVEKVVEKAIDEGGKLLGGKRDKALFYPTILEVDRDNILCKTETFAPV
IPIIRTNEEEMIDIANSTEYGLHSAIFTNDINKSLKFAENLEFGGVVINDSSLFRQDNMPFG
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>pos

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LFDHQVPADS IKAENHILMRKFVKEQGIKYFYDIREGVCHQVLPEKGHVAPGEVVVGADSH
TCTHGAFGAFATGIGSTDMAHV FATGKLWFKVPETIYFNITGDLQPYVTSKDVILSIIGE
VDGATYKACQFGGETVKKMSIASRMTMTNMAIEMGGKTGIEPDEKTIQYVKEAMKKHGT
PFEVIKGEDAEFAEVYIEI EADKIEPVFACPHNVDNVKQAREVAGKPIDQVFIGSCTNGRLE
DLRMAIKIIEKHGGIADDVRVVVTPASREEYLKALKEGIEKFLKYGCVVTPNPSCSACMGSL
YGVLPGEVVCVSTSNRNFRRGRQSLEAEIYLASPI TAAACAVKGEVLDPRDL

>pos

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RVYFENKDITNKEPAELYHYGIVRTFQTPQPLKEMTVLENLLIGEINPGESPLNSLFYKWI
PKEEMVEKAFKILEFLKLSHLYDRKAGELSGGQMKLVEIGRALMTNPKMIVMDEPIAGVAP

GLAHDIFNHVLELKAKGITFLIIEHRLDIVLNYIDHLYVMFNGQIIAEGRGEEEIKNVLSDP
KVVEIYIGE

>pos

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ILSDFGEFTPYVIAKPNLKNMERPIVEVIDGEYKEDSKDMPKLDKAPSSSTLLIMIGAI
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LLANI IKMANDVAMGKDVEELLGNFDDKGEYHPETQKDKSNKVYITA EHRKVFDTGIYSME
KQVALNYIKNFKRYKHIVPNDEPKVGVIIYGLAVLGAGGIGDVTKIIVQIILESKNPGTHLLNI
SGDIAKHSITLASALS KKLVAEKKLPLPKKDIDLNNKEIYIQFSQSYSKIDGDSATAAVCLA
IISALLDIPKQDFAITGSLDLSGNVLAIGGVNEKIEAAKRYGFKRVIIPEANMIDVIETEG
IEIIPVKTLDEIVPLVFDLDRGGAERFN

>pos

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RGMIGFITLREIRKYMTSHPYLNVGEVMLKNPPYTADEDIITAF EKMIESNKKLDQLPVI
NTKYPEKILGKLEGIIFMEDI IKLLYENI IKELKTLVSFYHNHTEIKIKY

>pos

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VDVMTYKALVDSKFERNQVFG LGTHLDSLRFKVAIAKFFGVHIDEVRTRIIGEHGDSMVPLL
SATSIGGIPIQKFERFKELPIDEIIEDVKTKEQIIRLKGSEFGPAAAILNVVRCIVNNEK
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KNL

>pos

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LRNVVDVKDVIIDCRIGQGSMDLVDVFERQKNEVPLANDTSFGVGYAPLSTTERLVLETERF
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KKIADGYEVEIHINTADDYERESVYLTVTGTSAEMGDDG SVGRGNRVNGLITPFRPMSMEA
SGKNPNVNHVGKIYNILANLIANDIAKLEGVKECYVRILSQIGKP INEPKALDIEIITEDSYD
IKDIEPKAKEIANKWLDNIMEVQKMIVEGKVTTF

>pos

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FKGTKLLEEKAVALLGSLLNKDAYGHIVSGGTEANLMALRCIKNIWREKRRKGLSKNEHPK
IIVPITAHFSFEKGREMM DLEYIYAPIKEDYTI DEKFVKDAVEDYDVDGIIGIAGTTELGTI
DNIEELS KIAKENNIYIHVDAAFGLVIPPFLDDKYKKKGVNYKFD FSLGVDSITIDPHKMGH
CPIPSGGILFKDIGYKRYLDVDAPYL TETRQATILGTRVGF GACTYAVLRYLGREGQRKIV
NECMENTLYLYKCLKENNFKPVIEPILNIVAIEDEDEYKEVCKKLRDRGIYVSVCNCVKALRI
VVMPHIKREHIDNFIEILNSIKRD

>pos

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SQEIHKIMGGAKGIKKDDEIELTKIVGAEVVGITACPCAQN LIKEICIKNLKEKGFSDDEDID
KILDSVIFATHNQRGIGRIILEVPTGYDIEIMDIIEI IKKSMSAEIHGILKRADEAYVVEQS
HKNPKFVEDCVREMAKRVEKFKHLPDETKVLIRQINMESIHRHDAFAEKVATLGELRRELL
SYE

>pos

MKLGII TIERDAVVNDLIKSCKEYEVDYKVITPSNIVAGFNLD FKLKYYYKSFLDELDCCFVR
NLGWDSFFRFDVLKYL NHYIPVINPPDGIDRASNKFLTSVFLELNNLPQPKTVVTESINEAI

VWIDKFEEAVLKPIFGCGGEGIVRVKKELPISTKILNEFKEYNTFYIQEFIKPVRNEHR
DIRAFVVDDEVVAAMYRIGGENWKNNSVQGRVEKCEITEEIEKLALKAKNALGLFYAGVDL
IESEDGLKVLEVNSTPSWIGLSKVSEVNIADKLLLEKIIQYVKS

>pos

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DPLRYASAYTKEERDRWFSQIWEIVGDKQTHPKIERRTASFPEEIPRRLIRMFSIIGDVTLD
PFLGTGTTVKAIEELKRN SIGYEIDKSLKPIIEEKIGIKQKRIGMDFNVEFINRG

>pos

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KKLKEYCKNDDEFDDIFKDKPFLYKWYSPRIRAE LN FYLNLIKDCRDETIKKVAMIILSRT
ARSVRGTHFDL ATLKEPVFDPYYCYKHKKICRPVQTILRHLEEYTN DVISRIEFSKIRKD
AYYLIINGDSRTVDIEEELKHPNFYELYKNKKIDGIFTSPPYLGQIDYHEQHAYAYELFDI
PRLELEIGPKFKGSSKKAQKEYIEGISDVLINMKRFLNEDAKIFIVVNDKKNLYKEIFEKS
GLILVREFKRPVLNRTERDRNPYYESIFELK MEE

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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AYNG

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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LLAYVY

>pos

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>pos

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>pos

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NK

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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LDLL

>pos

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>pos

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YVLAPAQCEPFYQFFEGEVIDVDKPI MFFDRSGWYRWEWGGARGLDVNEFLRVECWWIGS
PEFVEETRDKTLKYAEKLAEKLDLEYWVEVGDDPFYLEGRKKEDRGIEFPDVPKYEMRLWLP
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>pos

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IIEKSINKLERIKKGLMHKLLTKGIGHRSRFFKSEIGEIPEDWEVFEIKDIFEVKTGTTPSTK
KSEYWENGEINWITPLDLSRLNEKIYIGSSERKVTKIALEKCNLNLI PKGSI IISTRAPVGY
VAULTVESTFNQGCKGLFQKNNSVNTFEFYAYLKFKNLLENLSGGSTFKELSKSMLENFK
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>pos

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LIKTYEGLMLQDAILKKVAEELGGNYRPSSTIEEESKIDGVI IIDDKEIPVSIKSKTYVNQE
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>pos

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EKENKELREATSKNSEYVNGLEFTADVYFEDKDKVVMIELKTVRPNAGEMRGEKQKILYGKA
YMMETKPNKKVYFIFGFPYDPTENPENPCGYDKDRFMSSLIEFSKYFDKREVLIAEELWSFL
SGEENTMKKILDIINSIAKPDFKEKFDINTFPFINQDRLYTKDAIDEQKFKKYMDILQEW
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>pos

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>pos

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>pos

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WYKGGKERDGRVVYIEIKTFNEKNINSSHRTFYASPSKDEEGVKIRYDAPHLCLSFKIEKLG
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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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TKHKHLCHFVCLSSDSLFIERYNEAMLKERVDYILVDDFDKETALKFIDFLSEEILNKKLS
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IKRVL

>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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PFSEALEVTAVRPVKASLEDYELSDKLMERLKERAEIGIFVSGPPGSGKSTFVAALAEFYRS
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MVEEDLARPVIEVKDFETGRVEYEIYTYGEQVVMPIKEEGGKKAPIYGYAEKLEEILKKL
LPRKAKPMVKVTGDNSIDLIVPEKYIGAIIGKGGKEISKLEDMLGLKISVKEKEKEEEEKME
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TKVGKEILEAIDEGRDIYVDLQ

>pos

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>pos

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>pos

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>pos

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>pos

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CKKLLANPVIHDYEIKVEKIE

>pos

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CII SYGTENVLGLDVGDVKVVALIGGLTPIAPFVENNYCVEICPMSSIVRLES LHKLKNP
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KGLGISDRFGIVEENDRIKIQTICAVTLDGIFLRNSVPLIPKYGGILEITEDKERFIDIIGYD
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>pos

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>pos

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>pos

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>pos

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>pos

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>pos

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L

>pos

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>pos

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>pos

MNYSIRLFKIMGIPIELHITFILFLVVIIGLSIMNNSIFWAVLFILLFVSVVLHELGHSYVA
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>pos

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>pos

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>pos

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>pos

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S

>pos

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>pos

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>pos

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THDHPVYISK TGEVLEINAEMVKVGDYIYIPKNNTINLDEVIKVETVDYNGHIYDLTVEDNH
TYIAGKNEGFVSNCSGTLHANSAD EAILRLTSPPMNVPKIMLTALNFI INQQRIRRAGKTI
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>pos

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GI IKGKGYCISLDDFERNKLPACDILLIYTGFSKYWGRDEYFEKI PEIPFLDDI IKSNIKCV
GIDACTIGGFEEHKRLLSNNILI IENLNENLNKLVGKSFYFLGLPLKIFDI DASPIRCIAIL

>pos

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ALECLKMAELEERFANH KPNQLSGGQQQ RVAIARALANNPPI ILADEPTGALDSKTGEKIMQ
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>pos

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GGYRVLKSKKL

>pos

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MLIGEIMDLNLKNFLEDREEIIRDAKRKDEKSFKDFKKIVEEIKERENKDKIVCDFTEYNPL
HKGHKYALEKGKEHGIFISVLPGPL