

Fig. S2. SEM micrographs of antennae of the six tephritid species. Top. Whole antennae of the six species. Bars: 100 μm . Bottom: Details of the funiculus showing the main sensilla morphotypes for the six species. The micrographs in the bottom are presented in the same species order as in the top micrographs of the whole antennae. b: basiconic; c: clavate; co: coeloconic; and t: trichoid. Bar: 1 μm .

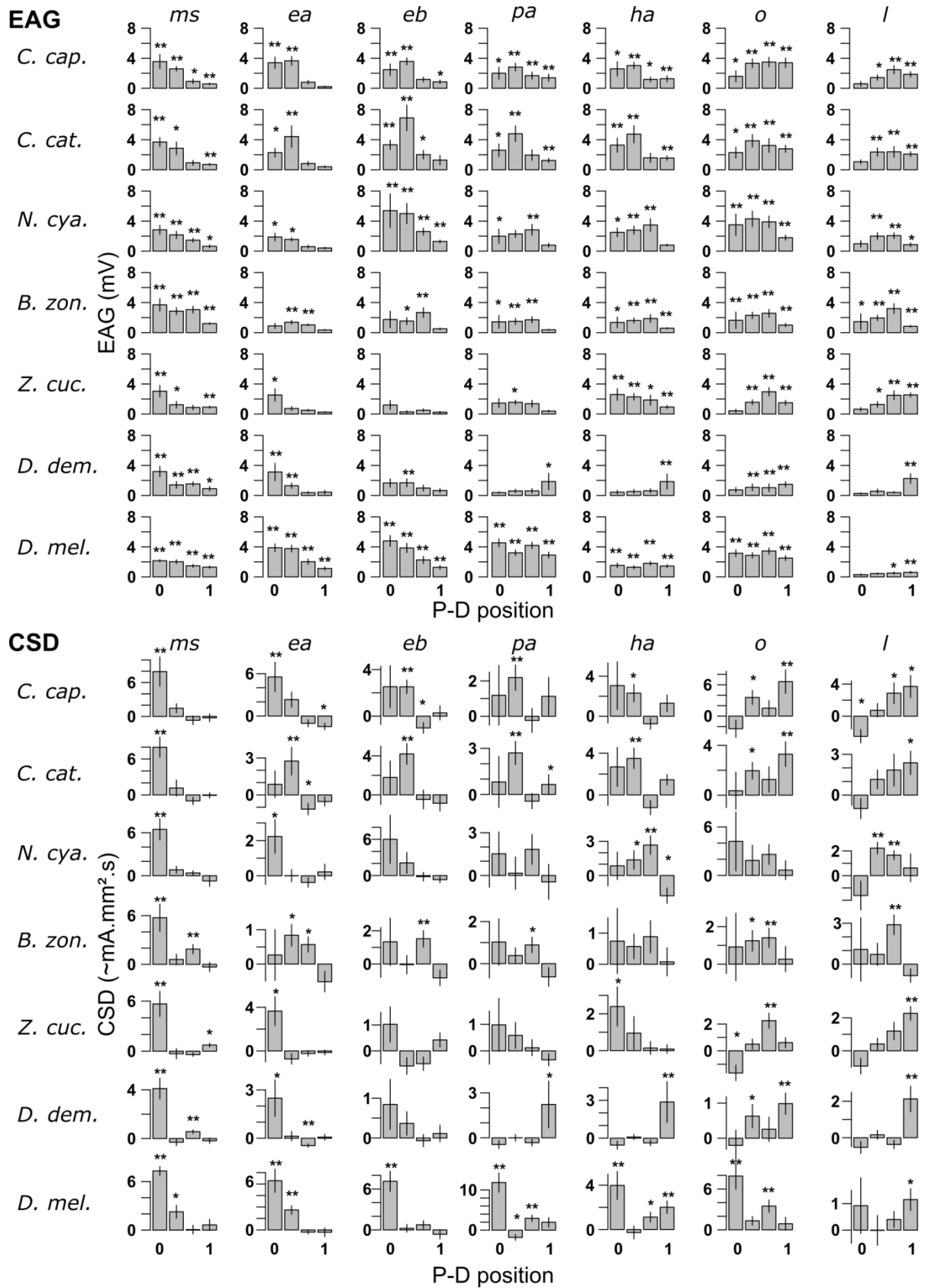


Fig. S1. EAG responses and CSD estimations.

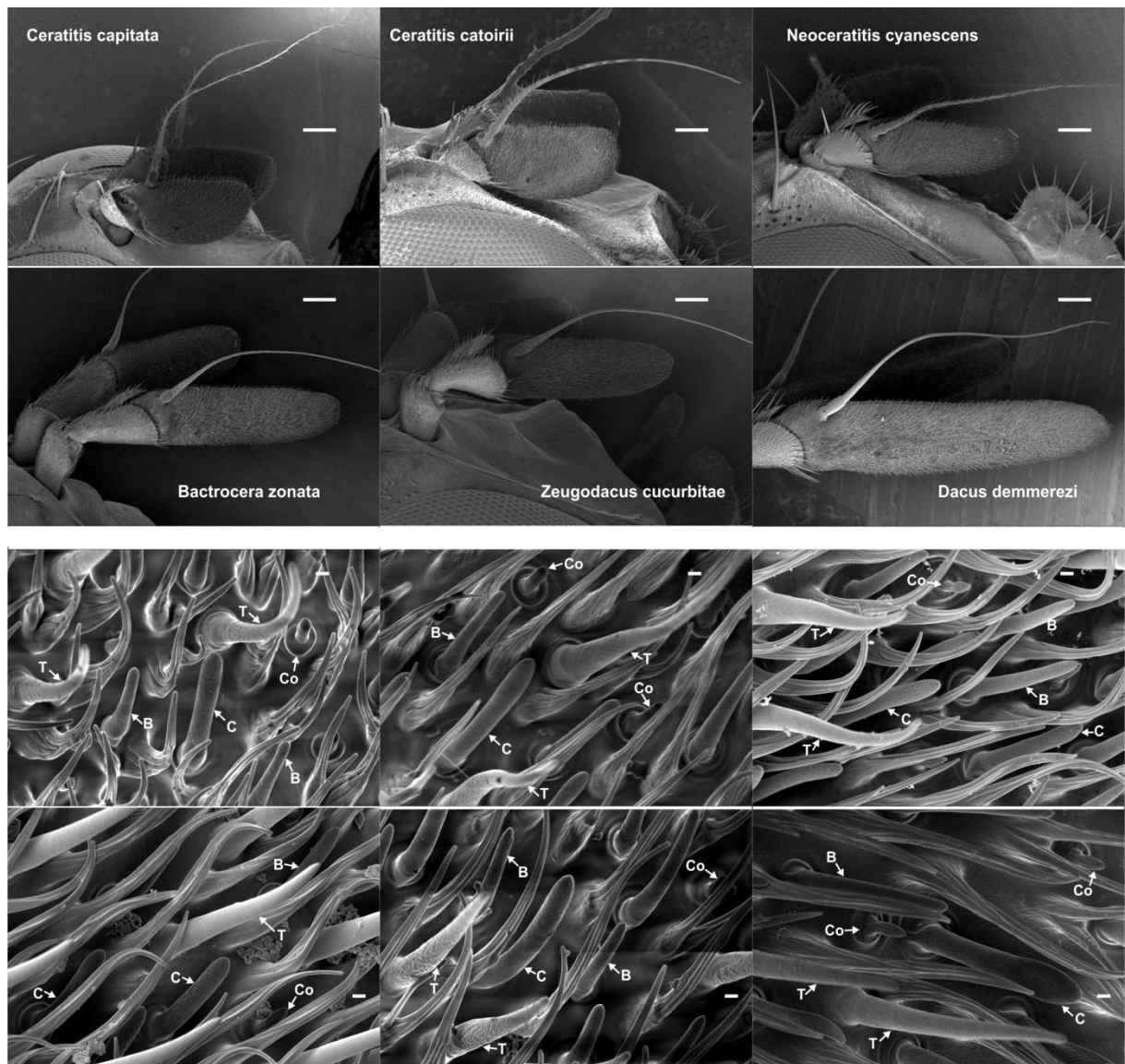


Fig. S2. SEM pictures of antenna for the six tephritid species.

S1 Data. *C. capitata*, *Z. cucurbitae*, and *D. melanogaster* OR amino acid sequence list.

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TFI

>CcapOr13

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DREKYEELLRDLENFYDLKKSKDFYIQDLLNEVNSTGKYMARGNFLGLLTCFGFAFYPLFATERVLPFGSMIPGVDE
YKSPFYEFWYIYQMIVTPMGCCMYIPYTSLIVAFIMFGIVMCKALQFRLKTLHRCRHVDGLIHKNVKECIRYQLSIIDYI
ARVNGFTTYIFLLEFLAFGTLLCALLFLLIIVDSSAQAIIVCAYIAMIFAQILSLYWYANELREQNLAIAAAAYDTEWFTFP
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>CcapOr14

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TCLVIKNRDKFEALIQELVTMYDDIEATGNDYAKRELAATAKARKISIFNLSASFCDIIATLPLFQENRIHPFGVALP
GIDVTRSPLYEIVYISQLPCPFTLTSMYMPYVSLFASFAMFGKVALKVLQDNLRNLCDNMQHKSEMELFNLLRSNISY
HARISKYVNDSELVTYMLVIEFMLFSCVICSLFCINITNSTAEKISIVMYIGTMLYVLFTYYWQANGILEQSLLVSDA
AYEMQWYKCSQRFKRTLIFIGRTQKPLQIRVGQMSPMTMEVFQSLLNSSYSYFTLLHNLND

>CcapOr15

MKKLNFVTKLFGWNIKLWQRERFLDEHKRWIAYIALFVPAIMIPPIFCNLYLGHDDLGEAIYDFFTAMIDITGLIRSIVI
LRKQRKFLNLFVGVESWYEDLKQPNEHKALETNLQIVAKVQLYSKCLLYSLLMVDVTYAFEPITHYGLVVELQLPSI
DLHQSPVYEMVYLIQALWLVPLTSVNYVSYSNLLIFTIFGVFATRHLQQKLMEISQMEDDEALANLKQCVVYHSKII
KFGENLEELYSLSLLDISLYCISVCLMLVYLTMDFTWPLLFKGVIVILFTTLIFLTYHVADVLTHESMNIAELAYNTN
WMDRDKEFRSCIQVIIVRSQRPLMLTAGGFQPMNMKTFLAIMRASYSFFSVLRSTV

>CcapOr16

MATERKSMPNVERLFNWNLEAWTRLGYLDRKRLLACTIISAPIVVSFVMPFTFFMGVNTFEQHIYNFYMIIVTSS
SVARAILIIKQRKILDLLNDMENWFVEVQEQNDNNALETNLKLTQKVRYSKYTLWWVIFGAFLSFQPICTGYGKF
VYDTQIPGIDLHQSPLYEIMYGFQSLWVPMACVSSISYADTLLIFISFGIFATKQLQRKLKDISQMDEQQGLENIKKC
VQYHWWKIKFGEDLENAYSLMCLLDFSLYCVTLCLLFFYSVMDFTWALMFQAVVVELILTLLIFLTFLADIFTQESLN
VAQTAYDMNWLQRDKAFRAVLLIILRSQRPLILTAGGIQPLNLETFLAIMRSSYSFFSVLRGVM

>CcapOr17

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KLYDFFDYISQLYRELQAEGETTLKRMHEFARKTKRYTKGLFILMIACTFYISLIQVMSTFGIGLKKFLIEMELPFISVN
ENPYWDIFSTLQAVWLAPSILLSYISYLCIIFTTISFGILLMKDLQFKLGNMNEKNDLEAYEYIKNCVKQHVMIIKYHRQ
MEVLFSLGSCAEVCNFCIIPCVIIVYSTMDYDLAFLMTDIQLAVIAVSSTFFNFWLANNFCVESLNIAYAAYNSNWIDR
NKEFRKYIVLIMTMSQKPLQLTAAGLKPINMEFFLAILRAAYSLFTVLQ

>CcapOr18

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LAIMTNSILKHFTITRKDEYFQRFLQSMQQWCNAMELYEDQRIPGLILDITRRSQKLSRITFYGSVVGTVCGVAYPFT
FEHRKFIDVQYPLFDIKRTPFYEINFLQAFVLVPSFLCVYMTFTNLLFTFLMFGEVTLDDLRLKLQNISKDDQTKMLK
DFKDCIAYHNQIIDFRDDLENLVSMALFFEVALFGLMFCMLLFFISLVHDYQLIFTAVTFIAVTLYMIASVSYFASKFTS
ESLEIANAAYDTPWYDGNLEMRKCVLTMIARSQRPLITAGGIYPMTMENFQAILRVSYSYFSMLQGLN

>CcapOr19

MITPRKASSIPIKYTRITMEEPKIVNCFYERQKFFKFLGLFGLPPNYSRFCQILFKLYFWHVTVVWMLLFDISMWV
KVIGNITDLNEIVNVFYICSMIAIVMAKFVHIRKKNSRYVAFFARMHNDLLPANPSELKKFIKSVHLSCAVRNCYM
GLSLTSLALVFVPKLISDPGELPLSIYIPLNVEHTLCFLVAYIFQFVGLSLCCFLNIAFDSLSASFFIYKQGQDILSNRLENI
GKFQKITQDVITLQLKECIRYYAKLRYITDIMEDLLCIPMSVQVISSVLVLVANFYAMFTLTDPSDYGTFMKFLVYQLC
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YYALLKNMKD

>CcapOr20

MNNSRLLITMLFILGLWSTTRIPDSWFKPYYRCYKSFVNSTLVYSFILLQFLEFILNENMENADEDLKLLITEICYLAKSL
NLFYHLELAVELLHEWEISDSFNLRRSAEREMWLQGERAFRKVIYIYIFFCLLTVFLAIGSTTLSGTPTLLYQFWLPAKW
REYNIWPAFFYESLSLNFNCMCNVVLDSEFQCYLLYHLSLYTRLIGMRMERLGYEKTNVETTSSLENIIDMHQRLKAM
TRCCEKILSVPLLTQITLSAFTICFSIYSLRSLSFIEHPMSLLSAVMYLLCMSIQIFMPCYFANNLTAESQNLSSHLYNCN
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>CcapOr21

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LPFPYWTPNHWLEDYYWLMYFYELLTMPFTCLCNIEIDVFQCYLLHLALCLRVVGMRLERLANAGDENAITREFLK
TIKMHRRIINDMARNCEQIISLPVTIQIMLSALIICFIIYRMQSVHFSNPTeyLAMFQYVVAMSMQIFLPCYYANELT
VQSQNLKSLYNADWTGMSAYNRRRLMLLYMQYLKPLVLYAGSFFQIGLPIFSKTMNNAYSLALLLNVSDDKDKK

>CcapOr22

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GMVAKLFNVWFYAKLLVDFETLSGDKYFELREKDERLKWQHAQRTYARIVLFYVFIGLGAMFTGFVGVLFSAKYEL
PFPYAPPFNWHTPHGYWCAYLYELLAMLITFFANYGFDMIQCYMLLQLSLCFKLICGRLECMGELRSGTAVSRGFSE
QQLYRQFVDIVKLHARIKNLSRLCQTYISFPFLIQIMCSSFVLCSAYRLQKLSILSDPMQFLTQVQVNLIMILEIFLPCYY
GNEVIAQSSALNNATYNSEWFRCSPLRKYLVYIMAMLQRPLRVRAADFFDISLEIFTNTMKNTYSLMALLNMN

>CcapOr23

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LTKVANVWRYSKLFVNFFHTLADDDVFRLRNAVERTLWQTVHRYYGWIALMYFTMSITLVTSFVGVLFSAEYELP
FPYAPPFWRNERGYWYAYFYELIAMPVTCFSNCALDMIQCYMLLHLSLCYKMIGLRLEAMGKWQEQLRCSSEDF
SELKFLDEFVDIAKLHGRTKKLTEDCETFSFPFLIQIMCSSFVLCFSAYRLQKVSIFENPSQFCTLILAVIVMILQIFVPCY
CGNEILSSGALNNAIYHAEWLQCSPKVRKYLIYMEMLQVSIKVRAGSFFEIGLPVFVKTMNNTYSLMALLLNMNK

>CcapOr24

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ADHILYISITEVGMALTNLNFWRMERRAWQFMQEISHDSGLTLCNEVERIWWRKQQRFTFLIVICYIGGGAGVLFT
AFGATLLMSGYELPYDYWLFPFEWHNARNYWYAYGYELVAMSLTCIANVTMDMMMCMYLFHVALLYKLIGMRILIA
LQYLSEPAVQKLRNIIELHKKVKRLTVQCESLVSLPILVQILLSAFILCLSAYRLQNMQINENPGQFLAMLQFASVLT
QIFLPCYFANEITINSDALMTCVYSSNWEGFSPATRKQMYLYMELLKKPICIKAGNFFMVGLPVFTKTMNNAYSLLA
LLNMSK

>CcapOr25

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LEETSGVLYMLLTELALVVKILNIWRQGSSAWLYMDELAHEVLYSLRQESERLQWQSELRSFDIIAYSITLSIGVVVF
ACVGVLLTATDIYVLPFDYYPFEWRHPRNYWYAWSYCSVSMMMTCISNVMLDMIFCYFMFHLSLLYKLIGWRLA
ALRRSRADNGVGGRGDEGDGVHREMREIFQLHMNVKRLTTQCESLVSLPVLQAIIILSAFILCFSGYRLQRMHIMENIG
IFLSTIQFVSVMTLQIFLPCYGNVAVTANSNALTNDIFNSDWTGFDMRSRKFMIFYMELLKRPATLKAGGFFQVGLPI
FAKTMNNAYSFFALLNMNN

>CcapOr26

MSVKVNSWEAFKYHWRVWELSGFLGPQKGSFWHVPYKLYTIVITLLFPIYYPICFTVESILTDNLNDFCEVIYIAMA
VTLNIKFFTLFVVRNQLQLQPILKRLDGQAQTDEEIHVLLEGSKSAKKCFLTILKLFYSAFVTSQLMVIFSSETRLMYP
AWYFPDYKASRINFWIAWYGYQSVGLVQCTQACSVDTYPQAYMRILIAHMQALSRIERIGLNANDNTSTSLKYLT
EEMKRNYELVSCIKDHKTIELFSTIQKPISGTSMACQFVCTGVAQCTIGVYMLYVGFNLSIMLNMAVFFISVTMETLI
LCYYGDLFCQCEKLSKAIYNCNWTIQSSEFKRALCIFLLRSQRVNVLMAGNWIPVKLPFTVMVVKSSYSIFTLLSNFK

>CcapOr27

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RQVEQIFNALHERVQLAEDRDFYAGIQRRANLIMKTLRAVSFFFFLITVMSFVSSIEERSLAFIVELPFNWRASKAYM
CAVLELLLLTCDLLQSLVNDSPPTALCVLSNYTRRLGERLARIGYGGSKDVHGSIAELRRCIVDHQHLVSSSLNAIIEDII
SVPVVFVRYAVTAFQDCFTLVTFIFYTDTSDKVLYFTYLLALQLQIFPTCGSDCAQSSADLLQRVYASNWMEQTRAYH
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>CcapOr28

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YPLHLALMLFRSPNSSANIQNLAVCVTCMACSVKFVIYTMKMWIRELESIVAALDARACSPRERGYFLKLRKDMRR
ITIGFLSIYAFVGVTAELMFICNEHNLLYPAWFDFWRASKLFYAAHFYQIVGISYLLQNFNDCFPTMALALLSA
HIKLLGIRVSQIGHEAKSLDANELELLRCIKDQEHFMLNTIQNIISLPMFLQFTVTAINICLAMAALFFVDAPFDRLYYL
AYFLSMPLIFPTCYGTDFQLLFETLHIEMYASNWVEQTQKFRKHMILFNERSLKKEVAMAGGMIRIHLDTFVSTC
KGAYSLAVIMKMNE

>CcapOr29

MQQPIDSSVFFKIHVLGFRICGGDSSVRKYRLLDYIYFAISTLV TICYPHLALALFRNNSLASDIKNLAVCVTCVACS
LK FVIYTRKLRVLVHKIEQTFAELDARVCSEVERKHFD RMRSSVKNIFYLFVCAYTAVGVTAELAF LMSEERGLLYPAWF
PFDWRTSARNYSVANVYQIVGISYQIFQNFIDDSFPITCCLLSGHIKLLGIRVSRIGYECADVLENERELVRCIKDQKN
LYRLFDLLQAVMSLPM LIQFTVTA FNICVAMV VLLFYVDTPFERAYYFIYFISMPLEIFPICYYGSSLQLLFGQLQYEVFR
CNWMDQTPRFKKHMILFTERALKVIIALAGGMIKIHLD TFFATVKGAYSLFAVIMKVR

>CcapOr30

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NLAINITDVACSTKH YLFRYKLPKIRELQRLKQLDERVLAPNEREYFDKKIRLGVRNIMLLFCASYAADALAS AIDVLSK
NERELMYPAWFPFDWSANRFTYYGAVFYQIFGVSLQIVQNL AHDTFAPVGLCVISGQVRLLAMRVSKVGYDESKSL
AQNEQELNECIEDHKKLLRIFDLMQDVFWYTQLVQFSSVGLNICTLVVFLLLFVDNLF GYVYYTVYFISMAIELLPACY
YGSNMQEEFQNL PYAIFKCNWIPQRRGFQQNLRIFTELSHKQLTPTAGGIINIHLTSFVATCKMAYSLYTM LMNI

>CcapOr31

MFQRQIETRAIFRRLFMTWRVLGIILWPFNKYLRIIYDILMNIFITFAFPVHLTLGVIFSSNQE QFFTNIIGIASVSCTFK
HLLWRSRLAEMQQINEILAQLDDRVRVREDYEYYKRSIERLCNFMINFFTRCYFSVGV TALFIALITGELLYPAFMPLQ
WRTSFWNYVAAILFQFVGVM LQIVQNIANDVYGPVVLCMISGHVHLLANRVSRVGH DTEENTQSNYEELSKCIED
HKLLMSTSKTVERIASLSYLQFVAVGINLCIGLVYLLFFADNYFAYVYYTIHITAIMIELFPCCYFGSMLECEFHDSL YAI
FSSNWPTQPRPFRRNVVSFTEMTLREVTMYAGGMIRINLDSFFATCKMGYSFFT VIQTMK

>CcapOr32

MSKSKVDASIFVRLIFFWRVLGFTTNYNKHLVRIYDVFTIIVTLAFPMHMLGLVIFAKDKETIFINLAIGISSI ACTAK
HFMLRPSIDKILYVNNILRQLDERVQNVADTDYVVKQMREKAIFMINFFIVVYFSVAIMALLSALWTGKILYPAYVLL
DWQSGTWRYLAVMTFQTFGLNMQIVQNLNDAYGPMVLCMLSGHVHLLSNRVIHIGHDHETD VDDNYAELVRS
IEDYKLLMSTTKLVERIISSY MVQFTAVGVNVVVGLIYLLFFADNLFAYCYLFHIVAIMIEIFPCCYGS MVQAEFHA
LSYAIFRSNWLTQPRKFRRTAITFTELSLKDVTMTAGGMMRIHLD SFFKTCKMGYSIFTVLQSLK

>CcapOr33

MAFEENPESVGS LFRTHWIVWKCLGQVPDPRYPKLFKVYAVLLNVGFG LGYPLHLLLGQLGLQTLEE VLLNLTISVPV
AVCALKFFNIWRNL RKVRHLEKMFNTLNTRINQRDEWIYRKVTIPNALKVLH LFYFICVGTALASEL TLLIMGFAYE
WRLMYPAYFPFDPYATTGGYVVAHTFQIIGLLVQLAENLVSDTYGGMCLALLAGHAHLLGKRVAIIGYDNQKTEMD
TGRELANCIVDHNMLFDCHSILGEIIGIGMFAQIISASLIMGIVVIYMVFYVGNAFEYVYYSIY LFGCAMEVFPTCYAT
NFEFEFDKLT FMLFSCNWMDQNQSFKKSLMISIEQSLKTRSF RVGGMFRINLQIFFATCKGAYSVLALALKFK

>CcapOr34

MIQSDKISTIMSATLEETFVTGLSVFHFHDVTWLYLGQMPPSTPLYRYLYLYSLLLNIITIGYP THLMIGLIRSEKQSD
VFKNMSINFTCLACSIKTFAFWWRLAEVQKIYAIISKLEKHISELDDFRLYKTIALGRAKSILYFVLFIGLGA AITSEVATII
AGILGDWHLMYPAYFPFD TDRSIFYTTAHFYQCFGVTAQIFQNLINDTFPPMALAMLAGHVRL LNLRVARVGHA
SSGGSTKQTHNAQFIECVEDYKD LLEFRIAIQRICSLGTFVQILVTAFNMGGV VIFYLIFYVNDIFS YVYVVVFL LAMPLEV
FPLCYFGTSAQMEFEQLSYAIFSCNWVAQNTAFKKNLLIFTEQSLRKQIVIAGGMFAVNMDTFFATLKFAYSLFAVV
VQMK

>CcapOr35

MCSARLLQINDNGTPLNSAHAFRYLWLNWRLIGMHATRRHRLAYHIYSGFINLTFGILLPATMIAKLFFIENLSQLIGL
LYLGVTLTMATAKQYSLWLHRPQLLAVNSYLAKLDARCDRHAVDRQHILTAIRICHLFYFAYMFTYELSSSGFAYMG
FSLRQLVYEAWFPQFFADPAKNLTLLYQNFVMTFFVLQNVNNDMYPQCYLAIMIGHLRALAAARISRIGKDDGR
LSDEENIVELINCIEDHKNLLGYFACIGPVISRTIFMQFGITAFVLCLTAVNYVAFERDTAQMLIAATYIFAVLIEALPCC
WYVNSLMEECAQLTTAMYECRWYEQNRKFRKMLIIFMQRSQTLALMAGNLVPITLQTFVNIIFSFMYTILKG

>CcapOr36

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SVAMPLYYTAVKQLVMFYIQTDLPHATKHLQALDRRVEERPEDYVYLRQTVRYGAWSSFAIFLGFWALISYGLIGL
LRHRLPFEGWLPFDWKNSMGAYVGAGLIQLFAVGMLLTNAVCCDSYPLVYLSLLVAHLRILNKRIARLGTSRKATAV
EHYQQLAACVEDYRECMSYYQCIRASIGGTIFVQLVSTALSSTPAVTFISGDFNFSQMLKFLFSSAVIVEAAPCCWL
MDVVLEMRSLTHSIFSCHWHVQNAFRRLIIFMQISQKVDPLLAGHIVPVSLDTFTNIIKFAFSLFTLLNQIKSK

>CcapOr37

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MVPLIYNTAKQLVIFYHIRRTLPAALHLHALDRRAEQEPAAREQLKRLVQLSHRIFLTALTGIGICLTLYAMGGILRH
RLPFDGWLPLDWEHSVGAYVAACAYQLFCLIVQCIAALCNDTYTVIYLLLLATHLRILNARIASLGHGECTEVENYRQL
AACVRDHWACMNFYNSIRPAIAATLFIQFFSTAITLCTSAVAFVNAEDSVAQLFKFLPHLLVVVCEILPCCWLMDKA
ALEMQDLTKSLFACRWYEQNQKFRRLIIFMQRSQKVEKILAGDLVPVSLETFTVNIIFTSFTLLNQFK

>CcapOr38

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VNLQAALNGIALPLKAITIAVNVKRLRSIDNIFKELDNSYTDVPVHELKKSVMRCTRLFVFLTVYWLYGITSCTAALF
SHKYPHSMQIPFIDWLPDSDVKYWLHYILEASYFFLLLVNLTNDVFPAYIKAIRTHLYLLTERVSTIGKKSETTAEQNY
DTLVECIISHQKLLRISDTVGDVISKISFFQLAVYSTILCICMLNMLIFADTTYILVTLVYLIPVLSQTIPSCYQASMLEAES
TKLSVAIFHTNWWNLDKRCHKLLIYFIQRSQQEMVFTAVKLFQISLKTNLTIAKFSFTLYTFINKMGIGETWKN

>CcapOr39

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LHSQPLNSWLPFTDWIPMQTLRFWLHFCYEQFTVYLLLNQVSNDAYACVYIHALRTHINLLAERVSRLGTNSEFDD
EQNFKELIDCIAAHQELLEIVKTVANVFSLTVFMQFTVAAAILCVCMLNIFADTFHQVVTVIYYMCVSLQTLPTCYE
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NLKDKK

>CcapOr40

MPQLSASIVISSTGFNNWLVGKIICKINKKFFRNQAKMDKLRVIFDRVGLSTKDSFDLLYNWWLNGNTSWKPH
RLGHILHMTICWCLKFFAPVTYFKGFLIALSTSTITALYNLQATLDVMVAPFKAVVIAKMHRLRTLTEVFNRLDDR
YHNPRERAQIDEGVIICRQIICFYCAVYSGYAVMTWL GALIAGKMPHYLWFPYFDSIPNETLRYWLQFTFEALFIHFM
LNVSYTNDVFPVIYMRALRTHVKLLAERVS RVGSNPELSAEEHRELVD CIVAHREILYIVDVVGAITSLTIFLQFAMA
AATLCACMLNLVIFAERIGQIITIIYMGVLLQTGGSCYQASMLEAESSLATAIFHCNWLNLDKRSRTLLVYFMQRA
QEDIAFTALKLFQINLKTNLSLAKFSFTLYTFMNEMGLGNDLAKSQS

>CcapOr41

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AGELIYSLWLFPFELIPHQGWQYWARFSVEAFYLYFLILVCLICDVYPAVYIRAIRTHVHLLAGRISRLGSPDLSEEN
HQELVDCILSHQELMRVVEVVSATVSLTLFLQFTVAAMILCVCMLNALIFADRAGQIMTVGYMGMVLLQTGGACF
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GGDTNEKIS

>CcapOr42

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AIQNAIQVSGIPIKIIIAWYMKRLQSVCEILDKLDENYKRAEDLNSIRRCVRSCCKIIAAFCVPYYGFELSTIAFGVYQN
RAPLTIWLPYFDATRTTWEYWTHVGVWDVFIMLFLLAHQLGSDTYPPVFISVIRLHMQLLVERVKRLGTNKAALCREK
RYAELLVCINTYQGILSIANIVAPVISITLFTQFATTATVNLWFGNMKFPDNIIPMAFFSCQIMQILPCCYASQLIAD
CEQLPYAIFHSDWLEEDRRYRKTLFFLQHTQTPIRFSLKLFVTLATSIKFAFSLYTFIQGKNH

>CcapOr43

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LAAIQNAVQVTGIPIKIFFITWNMRRQLQSVIPILDELDENYKSAKDLLKIRKCVRGCKMIGFFCLPYYSYEITTIALGVW
QNRAPLAAWVPYLDGQRAAWWEYWTIVVWDIFVMFFLLSHQLGSDTYPPYIINIIRTHVQLLVERVELLGSDKTKSAE
EHYAELLCIRTHGQIKRIVNLIAPVISVTLFTQFATSATLLNWFGDVEFPENIISFAYFTCLTLQILPCCSSASYLSDCE
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>CcapOr44

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GIQAGTNVLGIPPKCLTLAFSLKMRMSEPLLDVMDARYTDPEDVALIRQAAIMGNRLVFGFGMTYLTYMMLLTITPPL
ISGNVPLSIWIPFLDENQSTLHHLMQVVMDFLMFFLLFHQVVNDSTYGTVYIYVIRTHLRLLIRRVRLCVNGEKSVE
DNMAELVDCVTTHQQILSLLTIIPIISVTMFTQFLIIAILCVTMVNMFIADLSTQIASTFYFMCVLMQTSPPCYFATE
LKADSERLPLAIFHCRWMDQDQRFKRVIIYFMHRAQSPIELMAMKLPINLATNISLAKFSFTLFTFIKEMGVGQDA
RE

>CcapOr45

MFDLLKGRGYRELNSRDALIYLFNMLSFVGLNPHTAHCRLLYYFYGSIITLFVVVLSPLIFNIGWIRDRNVLSIMEILNCV
QAALNVIGVPIKSIALMLCLDRIHSVEPLLLKLDHYSKWDDMLRIRQCAIMGNRLVFSYIVPYMMYETLTVVSAVLG
GHAPLTLWLPHYVDWHRSSREYWLQVCFDAITLFYLLCHQIINDSYPAVYIYVIRTHVQLLERRVSRLGYVPQKSEHEN
CQELQECIVTHQEILRLVHTIQPIISITMFVQFIIAAAIMSITMINIFADLATRLASFVYLICVVLQTAPSCHQASYLQG
DCEKLSSSIFHCNWIAQDKQFKLLIYFLQRSQADMPLIALKMLPINLATNVSIKFSFSLYTFIQKMGLGAHLND

>CcapOr46

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QASLNVMAVPLKCITLAMAQNRRLRSIEPMANELDDYRQPADKVKIKKCAVTGNRLVFGFAVSYLMYETLTVVSAVL
VGGHAPLSLWIPHVDWHRSTWEYWLQVSFDAAVLFFLLYHQVLNDSYPAVYIYIIRTQVQLLAHRVENLGDETKS
DDENYKDLLECIVLHQKILKIVSIVEPVVSVTVFTQFLVAAAILGVTMINIFADLTTKIASVTYFFCVLLQTSPTCYHAS
YLLADCELRSLIFNCNWIAQNKRFNNLLIYFLHRSQDSIPFFALKLPINLATNLSIAKFSFTLFTFIQEMGLGENLKG

>CcapOr47

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AALNVIGVPIKSITLALSGLRLRSAEPLLMKLDARYTDPEDVARIRGCAITGNRIVFGYIISYMMYETLTVVSALMGGH
APLTLWIPYVDWHRSAREYWLQVSFDAAMLFFLLFHQILNDSYPAVYIIRTQVQLLTNRVRLGTGGSSRDDAYH
ELQDCIITHQEILNLVGVEPIISATMFVQFFIAAAILGTTMINIFADFATRIASVTYLCVLLQTSPTCYATHLQSDC
ERLSMSIFHSNWLAQGKRFNQMLIYFLHRSQADIPFFALKLVPINLATSVSIAKFSFTLYTFIQKMGVGKNLKQ

>CcapOr48

MNRFRKQSARAAETENNKLALALSKEKLSGLKNGEEQRIARKPAKPASAVREKQGEFVASPASSKEATNYFFKAAF
MGIMLPTRHRILYILYSFAVNSMATLYFPIGFTLIFFTLPEDDLVSNLLTSLQVTFDVYAGSIKLIIMAFLLGKLRTSEIV
FQQLDNRCRTPDEMNELRKMQQFGRKVIIFYMTIFLIYSSSTFLGSVTFGYPPYSLYFPFLKWRRSRIEFIASLLEFLIM
DLACLQQTVDNGCPVVYVNI LRTHMKILRSRVEKLCTNAALTKEQNLELKLCKIDHQLLLELYEIIASIVSITLFLQFTV
SAICVGTTLINVFIFANGFSTRVACFCFILAVLIEIPICYSQCLITESEGLSDVIFHSNWIEQNKYRQLLIFFIQNAQRP
MSLTAGKLYPVTLSNFISIAKFSFSLYTFIEKMNLKERLGIE

>CcapOr49

MADTAINSQRLQTDTLNNGLKKKGDQLAVRTEHATNYLFNGFRVLGIYMPARRKWLYSLYSLIPNSLVTLWLPLSFV
FSYFTMSAEDLVPSSLLTSIQVAINVIGCSVKIVVMAFLLPKLRKANAYMDRLDARCKDEDEIAELRKIVKQGNRFVVL
FAMSYSWYASSTFIGSVTFGRPPYDLYNPFDWRKSKLEFVAASLIEFALMDVACFQQVVDSDYAVIYVCILRTHMNI
LLKRLGKLATCTEMSLEQNLEELKLCIRDHKNLLGLYNIVAPIISITIFIQFMITASILSATLINIFANQFSTQVASC FYLA
VVVEVFPLCYAQCLMDDSDRLSQQIFHANWIEQDVRFRKMLIFFMQRTQRMELNAGKIFPITLGSFLSIKFSFS
LYTLIEKM GIRERLGL E

>CcapOr50

MSNLLQRLNQLLPSRTTQKSIDVVKQVSPSLSNAELIRIQFERAT RTPKERSAPVGRPYQAVHDIHSRDGLIYLYRSFS
ALGVLMPDKHKILYCLYALLPLGLITFYLPISFALSYFYLDYSTVKIGNLLTSVQVFIASIVGGVKLIVMAFKLPKLRASEAI
MHQLDARCKDEDEIEVLRKVVRQGNRVFVLVLICNLIYSTSTFLAAASKGRPPYNLYNPVVDWRKSKGAFLWAALW
EFILMDGLCTEEAITDSYAPIFVCIMRAHMKTLMRIQKLGSNPRTL DENYEDLKMCIKDHKLLLELFDVVHPIISTTY
FLQFMTTSLMVGCTLLNIMIFAVDNLARVGHLAYVMALLMEVYPLCYGQSLLDDSNRLANTIFHANWIKQNEKFR
KMLVVFTQHTQKPMELLAGKLIPINLTTFVSIKFSFTLYSFINNMGVKERLEGL

>CcapOr51-CTE

MSTDKPEPQANA EHMGSPLDVQRRDMFTFIRWSLWFTAMCRLPLEYYLPTSLRFLASTLNWIYEVFLYFTIIHIDILF
MCTIYLYKDKGDLALLVNSLIQAIIFMWTLIIKVYFKRIKRKKIEELMQFLNNEYRTQSAAGFTYVTMKESVDLSNTWT
KVFLISCYVGGAFWLFPFLRRDRSLPLPCWYPFDYKSPIVYESIYLLQCLAQM QMAAAFASTSAFYLLVAVVFSGQL
DVLNCSLKNVIATTYLNLRKPKSELIKLREEHNIEINQYYCAEEHKTDLDCLPHLLDGENPEPQNFYAAFKQAFKH
CVTHHQYILCGLQMLEDIYSYLWYLKTMKATVLACLFA

>CcapOr52

MALADRKTPTDTEHIGCPVYSTQRRDMFRFMRWNLWFTAMCRLPLEYYFPTCLRCLANTLDWTYEVFLYFTLLHI
DILFMCTIYLNKDKGDLALIVSCMIQTVIYT WALIIVKVKRVPKRVAKLMQYLNNECRTHSAAGFTYVTVKDSVELS
KNWISIFLICCYAGVTFWLFVPIFNADRSPLACWYPIDYKANVPVIYESIYLLQTIGQLQIAGAFGCTSAFYLLACVLS
GQFDVLNCSLKNILATAYINLGKSKSELCKLRDKQYIADKELNQYYCSKEYKSDLCLPHLMNVATPKPKTLYAAFKQ

AFIPCITHHRYILYGLQMLEDIYSLLWLLKTMEVTVLVCLVAFWVKSTTAKSFLSILSLSQYLLALWEMFMICYSGEII
FLNSQRCDEALQRSPWYLHANEIKQDTLFFILNAQRPFRLTGGKMFDLNVEKFRSILTTSFSILTILQKMDVRPTQPK

>CcapOr53

MILTDAPTAHAAAQLCASPNGCLSNVKRRDLFRYVRWLMWGAAIRPIPFENHLPRLGNYSAINVILEIFLLLTVIHI
FVLFILTLYLNYGSGDLEFFIGCSIQSMLYFWAIIKIIFRRVRPELVRDIMDYVNEKYIVHSAVGFTYVTMNECLEQAER
GIKYFVLSSLVAVIFWLFQPVVYEERTLPLPCWYPFDYKAPFIYPLAYFLQVIAQLQLALTFTVNSIYFTVLCFLLCGQFD
VLNCSLKNILATTYILMGASRKDLIELREHQCNADEINQYFVAEELHINLDCIPHVLTATTAGTMNFRDAFHCA LG
QCVDHHIFILNALRKTEKLFMSMVWFFKTLEVTFAICTIAFDVVKSTDDKSFLQVLSLGQYMILVLWEMFMICYGGEIV
YINSQRCDLALLRSPWYLSREMRAEILFLLHAQRAFALTGGKFYPLKLEKFQAILTTSFSFYTLQNMDQRN

>CcapOr54-PSE

MQNTAGACSIILYSEKDKPRVCDLFMAQVLA FKATGQIPFNWRWRLGYIYCFIVIAQTFLLA VLFLKSSYIMLLSGKLE
EITDALTMTIIFWFSVYAACYWLLRWRLMAFLELINQQYWHHSLPGLSFVSWQRTYLLAKRMTIVWTVACVLGT
VLYGLAPLVMGVRALPLKAWYPFDPLQPYVYELVYVMQLSAQIIMGATFGNGSALYVSLVILMCGQFDVLYCSLKN
LSHSARLRCCSGVEILRKEQAALPKSPDDELNQMYCREHLTNLSILQHLYTQQPALTPEALHLGVVQCVQLHRFIL
DACKEELELFNPYCLVKSIVTLQLCLLVFVG VAGERSMVRIVNLAQYVTLTLVELLMFTYFGELLRGHSVRCGEAFW
RZQWWHTIPIRQDILILLANSKRAVRLTAGKFYAMDIERLSVVTQAFSFLTLLQKLAANKQK

>CcapOr55

MLHECSDKSTISNTIFNHQSYRRRSRKYSSSKLETILAPIRTLKEMLLSGDAAHPSHTCLYYVRAYIRLLGLWPSQRGVE
QPMYYAYNVLIMTVFSFFVATIIADLYVASSDFVLLGEDLVVALGLYLILFKMILFRMSTADVDVIVDEFDALHMKFA
RDTSDSPHIRRIRQLQRSFFLGEASFFCGFFFLSLFLFAAMSLQPLLTHQALPFRCVFPFGLHDPDKHHITFVCVYAFQ
CFCTLYMLVSIVVMDSLGGNSFNQTTLNLQILCESIRHIGYAGGRSTTITEAVLWRELRENVEFHVKIIELV DGINHTFY
WNYVSQMGASTFMICLTAFEALLAKDQPMVAMKFQTYMFSAFMQLFYWCFMGNRTTYDSMEVATAAYEVYA
WYEHSPRLQRNLLFMIKRAQKPLEFRSKPFFGFTFASFNSILSTS SYSYFALLRTMND

>CcapOr56

MIRAQQLNGHKVPSDVVTMILEEVEDVYKRNYSIKVLIRVSFGLGVNLTAPTRFKDSLRFNVILVTT SILSLYAHWC
YLIRHFDNIPLLAETVCTALQTLISAVKMVYFLFTQRTFYRLIDQALTHEVIRKIEIFKYDFPINRQLKQEIDDIMSGVWR
HARRQILFYCCCIGIVFNYYFFGAFFVNLYHQLKQTPNYNFILPFPALYPFWEAKGMTFPYYHLQMYMTGSAVYIAGI
CAVSFDGVFIVLCQHAVGLVKVHNLLVLRATSPLIPPERRVDYLRVYIFTYQVRVYVQQVQVTIYKHVSLSQFVLSLIVF
GFVLFEMSFGLESSITIFIRMIMYISAGGTQIIICYNGQQLT SVSEEMPLAFYSCGWYEESSKKFKQLLRMMIMRTNR
HFYLEVSWFTLMNLATLIALFRMSGSYFLLLRNLQES

>CcapOr57

INVLLIIASCIALYPHWLMIEHAEGNLSLIAETSTTALQTTTALVKMAFILFKQHRHLLYKA EYHELLQGIQIFMTDM
PIRISLKNEAIRIMDTTWQEARGQLLFSLISCICIQANYFFYAFFKNLYHHLQGTPNYVYILRMYSFTGYPMFHHKGM
SSFYYIMDMFFGACSLHCAAMCAICVQCTFMVLCKHCCGLVQVQCLMLLRSTSPLVPKVRREYLRVCYIQHQQIL
RFMEGINQLFRHICLSHFLSLAIYGFVLFEMSFGLESNKVIFVRMMMYLCAALTCDCMFYVNGQFLSTELEKIPLAC
YSCEWFHESREFKMILKMIIMRSNKPFFYQISWFTVMSLATLMGIFKASGSYFVLLRDIDEA

>CcapOr58

MATKTIRPTQKFAKMIKIVRFISLVGADVADENYRINIVTVLVILCIIIFIFTGTTVASVFAENWKYLLEASCMVGSVL
QGITKLISGVGCTKMISSICKELENLYQHYETKGEAYCKVLNEGCEVWYSIKMVGHIYAAAIYGILLTGFLITTTNEK
VYVMHFFIPGVDVETTYGYLFTLAVHTVVFLAGAFGLFAGDLFFLI FLGQTQLFRDILVLKV KALNEAAAENAKNTESL
LIDII EWHQYYTDYNKRCNDVFYIITMQIVTSGISIICTMYILLMGDWP GAYLYIFVAF CGLYLYCIIGTSTQTCNAEFF
DEIYNINWYELDVKCQKMMVFIIKKSQSPAEIKIGGVLP LSVQTALQITKSIYGLFTMIIGVIEENN

>CcapOr59

MAAEKVSPSEFAKIVKIFRLICSLVGADVCDVNYRINIVTAIVIFCIIIFIFTATTVASVFAENWEYMLEASCMVGSVL
QGITKLTSGLIAFAKEICAMRFELEDLYRLYETRGEETAVLHLSCKRVWQVIKMGQIYLAAGVGILFMTAIFIVATDE
KVYIMHFFIPGLDVHTQMGYLLTMAVHTVVFLAGAFGLFAGDLFFLLFLGQPMFLDLLTLKVQALNVAADRC SNE
AERLLIDII EWHQYYTDYNRRCNHLFYIITMQIVTSGISIICTLYILLG DWP GAYLYIFVAFSGLYLYCIMGT KIQICND
AFCEELYNIDWYKLN VKSQKMLVFILKKSQKPAEIKVGGFLPSVQTALSITKTIYGIFTMMLRFLDEEN

>CcapOr60

MKSQVKRTLEPSEFSKIVSVVRFC SRLIGVDVFDKDFKINPKTYFVMVAF AAYYLCALHTLSKYIATDWTVLLDIFSPV
SCTTQGLVKFISALLYPSLYHRLSVEIGDIYEKYQWMGKKYEDKLM EWNKSMKKILLSCA ILYFLTALIVICTPVVLYVL
KGERHLLTLLCEVP GFDVTTTQGYLV TNGFNTVCILIAAFGLYAGDLFLFIFLTHSIFFYDILALKISDLHEIIEENDRDERL
GKMVDDIV EWHQFYLGFN DTCNLLFFWTISAHIVCTTLGILSTLLIIMLKDWP GAYAYILVCFLWLYMYCLL GTRVEI
CNDQFCTGIYDINWYALNVRNQKIVRLMLMQSQAPRNITIAGVEPLSVSTALKITRTIYSLVMMVLR FQSK

>CcapOr61

MQQPTTKRPSDKYNKLLSIIRFSSTLIGVDVIAENYKFNWVVG FVFAAIGWNFFCSSYTIWKDVTTDWTVLLDVFSPI
SCAAQGTIKLFSLVCPKLYRKLALDLGEIYEKYQLLGQKYEKLLTWNKDMKRLLIIGGLIYFASAWIALITPLGLYILKG
EKHLIIMCQMPYIDGSTNQGYFILIGYNLICVFAVAFGLYAFDLYVFLFTHSIFFYDIFALKVDDLHEVLRQNDKDKRLL
SLVNDIAEWHQYYLEFNDQCNLIFFWPITSHILCTTLGILSTLLIIMLKYWPGAYPYIFVCFVWLYMYSLGTRVEICND
QFCDGIYDIKWYDLDLRNQKTVCLMLTESQVPRITIAGVEPLSMNTALKITRSIYSLAMMVVQFNE

>CcapOr62-PSE

MFSPKQPSENHAQLIKVLRFCARQIGCDVLEENFKFNRTMGAVLIAIIWYYLCSVYQIAKDFATDWTILLDVCSPVSC
TTQGLVKLISVLLYPKLYYQLAGEIKETYEKYKMGTKYKDILHRWNKAMKKIIVFLAMVYLLTAVLMLSTPLALYIFKG
ERHLILLQMPFTDVTTRGYLSATIFNVMCIFIGSFGLFAADSFLFLYLSHSLFFYDIFAQKIEDLHELLEHN RQDERKT
ALMNDIVQWHQFYLRFTDNCNLIFFWTISAHVICSTTGILSTLLIIMLKDWP GAYVYILVCFIWLYMYCVMGTWVEI
V

>CcapOr63

MNAIKRNTNFLRFTAGPVKYFKVIGICLQPPETLSIKFARFLT VLTLLLFVHQIAFLVTPGRTFVELSAAVGLLNYTTVG
AGKILFLILNRHLLLSY TQLQAIYPSE AVERHYKLD RYLLIYKR VETLLYNFFKYILIVYLVSPIVQS FYDLWSNGAYS YR
MPTIIWYPVPLEESLLEYVVYLIFESYTSFSLGTIILSADLCLFSSVSQ LMLHLDLLAQRILELQPAEQGSMNDLKAII EYH
QRILTLAQDVNSIFAPSIVFSLASSFILCF SAYQLLEDV SFIFALKVLLLLGYEMKQVVITCY YGDKLMDSSANLFNVVY
AHDWTDGTPAYKRLVLI MLIRTYRPIALNVAGIADVSLITLKQVLSTSYQIFAVLKTA

>CcapOr64

MALQAGRGGEPKLRSIDDLCAILHPIQRYLSINFLDFTRINGRFAIPSSMLLNVGIVLSVLDCMGNITKVCMAINDRDL
TKAQETFAVLGMAFVMTMRGMMMLARSVRVRLSELYNSIDRIFPNSSSELQTHMEVAKTHDYIKRRFFLLHQGLSFALV
LFCTMPAVKLVFFYDFAEQEPVADEFHVNPSWVPFQVKETISSYGYIYVYEVILALVAVNMIITWDEVFVVLISQLCM
YYQYLAKLLTALDVREANDPKKAVAFFKRLHLYIYHQYLNSLADELNDLFNLSILVSDMGTA MSICFNFLVTGAKDY
LQIPSYLTPCFVETWLIYDVSKWGTMLETVTARINEVLYEQKWYDSSVRFGKYTTMWLQGTNEPIRLTAYHIFDVN
MKHFQDMMMLAYQMLTFMKSKS

>CcapOr65

MHFRIYNIKDYLYPEFAFKLGCPEFIWSGNRHRHQQTVSYHLKSVICIFDASTVICQIFALVISLFPRTTAEAELYED
SESRVFEAVALICYFACGFYKFWNIFWRRNDIGLVLEELKNLFPSVSKQKMQAEAKANSGEKNDAIACYRLAYYEDK
SRIMMQRLTRYFMFAYFYNNIPIQLFAEVISHQEVITFKSQSNAWYPWHNNHHSTFVG FVFSFLIQASAEFAAIS
FIMSGEFLFCFLNTQLQLHFDYLTGALSALDARSPNALLHLKTLINYHNQLLRSLKLINSIFNFTFALDLITTTFAISLMGL
TMVMVRFQGQAVMFSAGFSFFLLGLFCNNGDELINATKNLGAAIFYSNWYEGSSEYRRMIIFIMRTKTPCEYRAF
GYMSLSMETYMRILKLSYQLFTSFRAIE

>CcapOr66

MSGVFSMNHFLKYPNFTLDLAWSNPFAWSGARQYGYHMLWIRRLFTFGAANLVYQNF GMMIYLCMPHEVSN
ESTIGQITETGGIMGLTMVGASNMFVMYWHADRIALLLEKFQRLFPTKQLQWRK HANGRLRGVKFPHSVEYFAL
KSNKLMKIATTAYLFAFSYNSLPIVEYLYESLTPGVELKYHYQSNTWYPWQNAHNRKS FIAFLAAYICQVQSSLTGV
AFIMAAEFMLCFFITQLQM HFDYLANALETIDAAGENANEELKFLIH HGRLLSYSKEINAIFNISFLVNIFTSSIAICLM
GFSMVMISVIHACKYICIGLLSFIVFTFFICYTGKELTDASDKLLYAAFYGNWYEGDLAYRK MILFLIMRCRIPTVL RAYK
FTTVSMPTFTAILRSSYSLFTFFQAMGK

>CcapOr67

MDFEKIFWLPNTLYLVVG YDFRQVSKSYLKKILMTAFLILTNITGICIRIYMLIQLRELVLSGDMLNSFRLGVYISYAFDSI
VKFFGFLHNAHRLRKIYESLATEFPQT FSEQQFYQVHKYSFNRSRILIFAYLSVTNSILLGP IVQSIIMYIIDAFLYGLSGA
KFQCLHPTPITYNFNFCSPRYIPIYIVEYLN GHFLTTS LGTDLYVCTFAAQVCMHLKYL GNSLEGYEPSADNSKADC
AYLKEWIKKHQLMLRLCADINDVFGTTLLFKLISNCTVFCIIVVQLKLEGFGWGFLNFC FFFVTVAQFFMVCHFGQK
LINTSEDVSLCAYKNRWYNGSKAYKTLLFTIARSQKSKLTAKGFQPISLQTFQIVMTMTYRAFAVLQRALD

>CcapOr68

MAPYFHTREPAATIPDFVGIPFFLISLNGMQLFKWTPNEEASRRKLLLITAFSVIVTYDCVSMLS VFAFVKLERLDYTTF
ALYWGYALNSLMKGGTLWFGRRQLEFILKSMVEKHPKTIAERQEYHLVAYFTKIKSFNKYLTIFHLCTTSLFNIQPMV
SSIVEYMGRQDKEEFKYKLPFIMYYYYNERQPVL YLFSYFLQCMGGFYMSYFLGGDLLMTLVHLVNMHFEYLIR
RIESLQPTEDSEKDLNLLGPLVTYHLEILDLSILLNYIASCLCLLGLQIVMGSDLVT VVKFFAFLVSTMVHVYYISHFG
NNLIDLSTGISDAFYNHPWTNAKYKYSRMLVLP IARAQRYAHLTAFQFFEISMHSFKSLCTTSYQFFTLIRTSLEEDFH

>CcapOr69

MPFAFQQLCFELQLSLKYSVPAMPLKLANNEPAATI QDFVGIPFLLLTFMGVKLFKWTPEEASSKRQLIMLG VFCVF
ATYNFATMILYIMYEPLNSSLDITEILFWGFSLNGMMKLAIMILYRNELKSILRGLGARHPQTAEERSIYRLVPYYNKIL
IYNKYLAAWHLSITTLFSFHPLVASILGYIFRRDSSDGYDFTLPFMMWYYYDTTKPILYIFSYVVQTFGAFWMSLLFLS
GDLLISLVHLVNMHFDYLIRHIESFQPNGTDEDMKVLGPLLAYHQEILDYAERIDSTFSLGTL LNYAGSCLVLC LIGLQ

IVLGSEFLKVVKFIAFLVSTIVQVFFVSYFGNNLMDLSIGMSDAFYNHPWYDGNRYSRMLVLPPIARAQRYAHLTAFK
FFEISMDSFKSLCTTSYQFYTLRLTSLEEEAG

>CcapOr70

MPFAFQQLCFELQLSLKYSVPAMPLKLANNEPAATIQDFVGIPFLFTFMGVKLFKWTPEEASSKRQLIMLGVFCVF
ATYNFATMILYIMYEPLNSSLDITEILFWGFSNLGMMKLAIMILYRNELKSILRGLGARHPQTAEERSIYRLVPYYNKIL
IYNKYLAAWHLSITTLFSFHPLVASILGYIFRRDSSDGYDFTLPFMMWYYYDTTKPILYIFSYYVQTFGAFWMSLLFLS
GDLLISLVHLVNMHFDYLIRHIESFQPNGTDEDMKVLGPLLAYHQEILDYAERIDSTFSLGTLLNYAGSCLVLCIGLQ
IVLGSEFLKVVKFIAFLVSTIVQVFFVSYFGNNLMDLSIGMSDAFYNHPWYDGNRYSRMLVLPPIARAQRYAHLTAFK
FFEISMDSFKSLCTTSYQFYTLRLTSLEEEAG

>CcapOr71

MLPAARTFGEFIRIPIRFYQTIGEDLYEHRSPHRIRRLILKALLYIGFLNFNVVLVGEIIFVKALNSFATVLEATGVAPCIG
FSFVADFKQIALTVHRQTLREHLDQMEELFPKTVRQQAQYKLPQRERVMMRRVMGVFTLLCLAYTTTTFSVYPALKAT
VQYWLLGAPTFRNFGFAIWYPYNATGKTWVYWLTYMGQVHGAYLAGVAFLSADLILVASVTQLCMHFDYISRCL
EDFAGASKKCAEEDIKYLQALVVRHAKCLELSEHVNSIFSLSLLNFLTASLTICFIGFQVTASSTEDIVKYIIFLTASLVQV
FVVCYYGDELMTASLRVGDAAYNQNWFECDTRYKRLLIILRSQKPASIRAPTFPPISFNTYMKVISMSYQFFALLRT
TYSKGN

>CcapOr72

MSKPPHFESFCYQANIFYTSIGLDVYDKPGERSTSKAIQLURQQLGIFFAITIINMNIVLLSEFMYIFMAFVNNNHV
EAILVSAFMGVFVVGDFKIYSIWRRRTHITVMMRDLYALYPQTPEEQSNYEVKMELQRYRYAFAFIMLYELSFWSY
NLFPLLNYLITDFLGVRVDRTPYNCWTPFEWHTVNWRYYSMYLSQIAAGQAQCLSAQLANDLLLSAVAVQLIMH
YRQLAKKIESHKAGSTTGKQWKETPFERNVDLQFLCDVIAYHQILCLSQUALNDVFGISLIFASTSMIICFVLFQITIG
ASIDLMITLAFFLFCSLVQIFLICFYAQKLLKASEYISYAIYNHNWFDADLRYKKMLVFIMKRAQKPAIMQASSFVMVS
MSTMTVLLQLSYKGLAVIRTIYAREPKGVSNK

>CcapOr73

MSTKIVTLDAFVEKASFWFSLYGVEAFDDFHDRSAEHHNWKWKNYLRKLFYYISFINVNWVLLHEAAFVVVNFLN
GDFLQAARNLSFMGFVSVADIKILITMQRTQLSKLMRKLVELYPKDVGDQRHYDLQRHLQHYSICISFLFSHTFT
VWAYNSLPMINYLIHGHLQKKTVERTLPYSCWVPFEWRDNWLYLLYTSQAFAAHSCLAAYLATDLLFCAATVQL
IMHFRKLAGDIKQYQPDYASGRQVGINTDLGKDLRFLSAVACYHHTVLEINQLINDIFGLPILINFISTSFVMCFLAFQF
TVGVPLDALITLT CYMICS LVQIYMICS YGQELITTSEDIGHAVYNHNWLVSDIRYKKLLIMIIRRSQKPAVLRATSFLN
VSMGTITDILQLSYKFFALIRTMYSR

>CcapOr74

MSIIIRFEEFLRLPSFFSRNIGIILWGQRGKLFDRFMFYSSINFLTLAELWYIISTISTDFITAIMGLSYVSFVLAEVKF
YYLIKYDMKVSTVLKRLNALFPHTKEEQENIQLIKYLMKSFYTLFYTVTFMLVIWTYNLYTVSQRFIYTKILQVREIERE
LPYPAIYFWNWQDNWSYFMYISQSLAGWHATCAQILTDLLICILISHLIMHYDHIARSLLNYQSKFAELYGKESTMK
CMPKLARVMMEEERAVRADMKFLADIAYHTELLTESLNDVFGVPLFMKFMSSSAIICFLGFQMTVNRGFDLLTKL
ALFFILSVLQVYLICHFGQLLIDASTNVSTALYSQDWTNADVRYQKMLVLIKRAQRSATLKATNFIIISRATMTEIMQ
MSYKFFALIRTMYND

>CcapOr75

MCENIESFEAFLRIPSSFFYRSVGVLDWNTNGGSIQRFIFYGFLNVNLWLLSELIFAITVSENFQATMTLSYAGFVLV
GSIKMYFMWRKKTEMTQFLKLMDEIFPRTAEQQKMMNLRRHLRQSTIVMSGFALIFMILIWTYNLYPFMQRQIYD
CWLDTRSINKTLPYESYIPWNWHNHWSFYLYYVLQSIAGYHSAAGQIASDLVLCAMATQMIMHYEYVSHKIRSRYR
GERKCVDSKSVSCLNALNHWTEEQVATHKDMRWLCETIAYHSNLLSLSDVMNDVLGVPLLVNFMNTSSFVICFVGF
QMTMDAEPDYMVKLFLFLFSSLAQIYLICHYQGILLIDASINVAAVYDQDWFDLNVRYQHMLVLVVARAQKPAML
KATNFVRISRGTLTDIMQISYKFFTLIRTMYSD

>DmOr1a

MSKLIEVFLGNLWTQRFTFARMGLDLQPDKKGNVLRSPLLYICMCLTTSFELCTVCAFMVQNRNQIVLCSEALMHG
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LKHYSTGEFAPVSSFRVLLPYDVTQPHVYAMDCLMVFLVSFFCCSTTGVDTLYGWCALGVSLQYRRLGQQLKRIPS
CFNPSRSDFGLSGIFVEHARLLKIVQHFNYSFMEIAFVEVVIICGLYCSVICQYIMPHTNQNF AFLGFFSLVTTQLCIYL
FGAEQVRLEAERFSRLLYEIPWQNLPKHKRKLFLPIERAQRETVLGAYFFELGRPLLWIFRTAGSFTTLMNALYAK
YETH

>DmOr2a

MEKQEDFKLNTHSAVYYHWRVWELTGLMRPPGVSSLLYVVYSITVNLVVTVLFLPLSLLARLLFTTNMAGLCENLTITI
TDIVANLKFANVYMVRKQLHEIRSLRLMDARARLVGDPEEISALRKEVNIAQGTFRTFASIFVFGTTLSCVRVVVRP
DRELLYPAWFGVDWMHSTRNYVLINIYQLFGLIVQAIQNCASDSYPPAFLCLLTGHMRALELRVRRIGCRTEKSNKG
QTYEAWREEVYQELIECIRDLARVHRLREIQRVLSVPCMAQFVCSAAVQCTVAMHFLYVADDHDHTAMIISIVFFS
AVTLEVFVICYFGDRMRTQSEALCDAFYDCNWIEQLPKFKRELLFTLARTQRPSLIYAGNYIALSLETFEQVMRFTYSV
FTLLLRKAK

>DmOr7a

MAVSTRVATKQEVPESTRRAFRNLNFCFYALGMQAPDGSRPPTSSTWQRIYACFSVVMYVWQLLLVPFTFFVISYRY
MGGMEITQVLTSQAQVAIDAVILPAKIVALAWNPLLRRAEHHLAALDARCREQEEFQLILDAVRFCNYLVWIFYQICY
AIYSSSTFVCAFLGQPPYALYLPGLDWQRSQMCFQIAWIEFLIMNWTCLHQASDDVYAVIYLYVVRIQVQLLARR
VEKLGTDSDSGQVEIYPDERRQEEHCAELQRCIVDHQTMQLLDCISPVISRTIFVQFLITAAIMGTTMINIFIFANTNT
KIASIYLLAVTLQTAPCCYQATSLMLDNERLALAIQFCQWLGQSARFRKMLLYLHRAQQPITLTAMKLPINLATYF
SIAKFSFSLYTLIKGMNLGERFNRTN

>DmOr9a

MSDKVKGKKQEEKDQSLRVQILVYRCMGIDLWSPTMANDRPWLTFVTMGPLFLFMVPMFLAAHEYITQVSLLSD
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GIILSSIRGDEIHLELPHNGVYPYDLQVVMFYVPTYLWNVMASYSAVTMALCVDLSLLFFFTYNVCAIFKIAKHRMIHL
PAVGGKEELEGLVQVLLHQQGLQIADHIADKYRPLIFLQFFLSALQICFIGFQVADLFPNPQSLYFIAFVGSLLIALFIYS
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A

>DmOr10a

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QAEIESMFRPYTDHLELSPVQLYLEQKMRSVIIRHNAIIDLTRFFRDRTYITLAHFVSAAMVIGFSMVNLLTLGNNGL
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>DmOr13a

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GPAFDAQNKPFPYKMIFPYDAQSSWIRYVMYIYFTSYAGICVVTTLFAEDTILGFFITYTCGQFHLLHQRIAGLFAGSN
AELAESIQLERLKRIVEKHNNIISFAKRLIEDFFNPILLANLMISSVLICMVGFQIVTGKNMFIGDYVKFIYISSALSQLYVL
CENGDALIKQSTLTAQILYECQWEGSDRIEQSFTPTTKRIRNQIWFILCSQQPVRITAFKFSTLSLQSFTAILSTSISYF
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>DmOr19a

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>DmOr19b

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>DmOr22a

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AERFQ

>DmOr22b

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NLAEFQ

>DmOr22c

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FADLHGDSVDVFTEEMNAEVRHRLAQVVERHNAIIDFCTDLTRQFTVIVLMHFLSAAFVLCSTILDIMLNTSSLSGLT
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>DmOr23a

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RDQNALYRLLDVTKSLVSYPMMVQFMVIGINIAITLFLIFYVETLYDRIYYLCFLLGITVQTYPLCYGTMVQESFAEL
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>DmOr24a

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KMMFPDLLRLPLYPITYILVHHWGITYVVCVFGADGFFLGFCLYFTVLLCLQDDVCDLLEVENIEKSPSEAEERIVR
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>DmOr30a

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FVDSMNALNTHLHLVEFLCFGAMLCVLLFSLIIAQTIAQTVIVIAYMVMIFANSVVLYYVANELYFQSFDIAIAAYESN
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>DmOr33a

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>DmOr33b

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>DmOr33c

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>DmOr35a

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>DmOr42a

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>DmOr42b

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>DmOr43a

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>DmOr43b

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GLLHHRVPYNTYYPFINWRVDRTQMYIQSFLEYFTVGyAIYVATATDSYPVIYVAALRTHILLKDRIIYLGDPsNEGSS
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>DmOr45a

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>DmOr45b

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>DmOr46aA

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>DmOr46aB

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ECAAYNRIVRFKDLVELFIKPGPSVQLMCSVLVLVSNLYDMSTMSIANGDAIFMLKTCIYQLVMLWQIFIICYASNE
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>DmOr47a

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VFALYQTSLDMCNDLNQCYQPIICAQFFISSLQLCMLGYLFSITFAQTEGVYASFIATIIIIQAYIYCYCGENLKTESASF
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>DmOr47b

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YINCFCLVNFFSAAIFLQPLLGEGLPFHVSYPFQWHRDLHPYTFWFLYIWQSLTSQHNLMSILMVDMMVGISTFLQ

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>DmOr49a

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RQTVEK

>DmOr49b

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>DmOr56a

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DCIYRSLFLPKSVFNPAVRRGEEHPILLFQLFPFGELCDNFVVGYLGPWYALGLGITAIPLWHTFITCLMKYVNLKLQI
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>DmOr59a

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>DmOr59b

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NLAEQFQ

>DmOr59c

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>DmOr63a

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HSVGLMRSNLQMV EQATSELVPPDRRVEYLRCCYQYQRVANFATEVNCFRHITFTQFLLSLFNWGLALFQMSV
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>DmOr65a

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>DmOr65b

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>DmOr65c

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>DmOr67a

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>DmOr67b

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>DmOr67c

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>DmOr67d

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>DmOr69aA

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>DmOr69aB

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>DmOr71a

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>DmOr74a

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>DmOr82a

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>DmOr83a

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>DmOr83b

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>DmOr83c

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>DmOr85a

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>DmOr85b

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>DmOr85c

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>DmOr85d

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>DmOr85e

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>DmOr85f

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>DmOr88a

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>DmOr92a

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>DmOr94a

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>DmOr94b

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>DmOr98a

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>DmOr98b

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