Online Supporting Information A: The accession numbers and sequences of the 3,249 membrane proteins in the training dataset classified into 8 subsets according to their experimental annotations: (1) type-I single-pass transmembrane, (2) type-II single-pass transmembrane, (3) type-III single-pass transmembrane, (4) type-IV single-pass transmembrane, (5) multipass transmembrane, (6) lipid-chain anchored membrane, (7) GPI-anchored membrane and (8) peripheral membrane. See the text of the paper for further explanation.

(1) 610 single-pass type I membrane proteins >P31996

MRLPVCLILLGPLIAQGTEEDCPHKKAVTLLPSFTMTPTATESTASPTTSHRPTTTSHGN VTVHTSSGPTTVTHNPATTTSHGNATISHATVSPTTNGTATSPRSSTVGPHPGPPPPSPS PRSKGALGNYTWANGSQPCVQLQAQIQIRILYPIQGGRKAWGISVLNPNKTKVQGGCDGT HPHLSLSFPYGQLTFGFKQDLHQSPSTVYLDYMAVEYNVSFPQAAQWTFMAQNSSLRELQ APLGQSFCCGNASIVLSPAVHLDLLSLRLQAAQLPDKGHFGPCFSCNRDQSLLLPLIIGL VLLGLLTLVLIAFCITRRQSTYQPL

>Q63259

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>Q29435

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VNDSEGWFCIQKVSGEVHTARPLQGARPGDSYTVLVEAQDADAPRLSTSAALVIHFLRAP
PAPALPLAPMPSRHLCTPRQDHGVLIPAPSEDPDMATGHGPYSFALGPNPTVQRDWRLQP
LNDSHAFLTLALHWVEPREHIVPVVVSQDARVWQLPVRVVVCRCNTEGECMRKVGRMKGM
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>P70106

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>P42701

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ΚM

>073874

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>P42703

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>Q05910

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>09NQ25

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>070394

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>009030

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>013797

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>001638

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>P49256

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>P49257

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>P49259

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>070540

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>008180

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>P18519

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>Q05928

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>P01133

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>014669

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>P19320

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>P33767

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>Q61824

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>061826

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>P49416

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>035799

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>008345

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>P09713

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>064230

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>Q9NYZ4

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>P22273

>092729

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>P08921

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>P08923

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DRGRTQAVPERLETRAAAPGSGGRGGAAGGGSGWTSRAHSPQAGRSPREGAEGGEGCAEA
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SRPHPGQLAPLTMQDLLQLAQDIAQGCHYLEENHFIHRDIAARNCLLSCSGASRVAKIGD
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DVLNSPLPMEPGPILEEEEASRLGNRSLEGLRSPKPLELSSQNLKSWGGGLLGSWLPSGL
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>005017

MALWPSVFLLGLLPLLGRGADQIQTSSGKNTLEGQLWPESLKTFPFPCDPKTLAESVPSE SVHSLRPSDIKFVAAIGNVETAPDSGADDLEEQDGTEKRPEQACMGVVTVLSDIIGRFSP SALMPLCPETRLVPRGGAEDLWMQATELVRSMRENPQLDFEHDWKLINVFFSNTSQCFPC PSAQQKGLVLGGMDKLTRTLDYLQQEVPKAFVNLVDLSELAAFSRWRQGAQLSPAAEPCR CLRETSOLTKVLTOWSYLEAWDSLLASSKYNTOESFAVVFOPFFYESSLSALLAEPPLOD PTTLALSLWNRMMEPIGRKEEPFSEKERKPLRCPTOESPYLFTYRNSGOLTRVSOPOGKL EVREGTEIRCPDKDPSDSVPTSVHRLKPADIKVIGAMGDSLTAGNGAGSOPGNILDVLTO YRGLSWSVGGDONISTVTTLANILREFNPSLOGFSVGTGRETTSOAFFNOAVAGARADGL IPOAORLVALMKNDTRINFOEDWKIITVFIGGNDLCDFCNDPVRYSPONFTDNIGTALDI LHAEIPRAFVNLVKVLEISKLRELYQETKVSCPRMILRSLCPCVLKFDDNSTEIASLIET IKEYOERTOOLIDSGRYDTRDDFTVVLOPFFEKVNMPKTODGLPDNSFFAPDCFHFSSKA HAHAASALWNNMLEPVGOKTTHNDFEGAVNITCPNOVWPFLSTYKNSVOGFGTWLPCRDR SPSASPPTSVHALRPADIOVVAALGDSLTAGIGIGSKPNDLSDGTTQYRGLSYSSGGDGS LDNVTTLPNILROFNSNLMGFAVGTGDASGTNAFFNQAVPGAKARDLMSQVQTLVQRMKD DHRVNFQEDWKVITVQIGASDLCDYCTDSNLYSAANFYDHLRDALDALHREVPRALVNLV DFMNPSVTRQVFLGNPDKCPVQQASALCNCVLSPRENSYELARLEALAQAYQSSLRELVE SGRYDTREDFSVVLQPFFHSIQLPVLQDGRLDTSFFAPDCVHPNQKFHSQLSRALWRNML EPLGGKTDALDLTAAITLTCPTONEPFLRTFRNSDYTYPSRPAVENWGSDFLCTAWNASR GVPNSVHELOPGDIKVVAALGDSLTLAMGARPSNSSDPPMFWRGLSWSIGGDGALETHTT LPNILKKFNPSILGFSTGTLEGTMGLNVAVOGARAODMPAQARDLVERMRNSPEIDLEKD WKLVTLFVGGNDLCHFCENPEGSSEGEYVQHIQQALDVLYEELPRTFVNVVEVMELAGLH QDQGGRCATLLAAQSHCTCFKYSQSSVEMQELKKVNWNLQSGLSRLSYSHQYVQREDFAV VVOPFFONTLVPLNGRGDTDLTFFSDDCFHFSERGHAEMAIALWNNMLEPVGHKTTSNNF TYSRTKLKCPSPDSPYLYTLRNSRLLPDOAEADPTVLYWAVPVAAGAGLLIGILAMVAGR GMRCRPREDPPLSLSTGL

>P09729

MILWSPSTCSFFWHWCLIAVSVLSSRSKESLRLSWSSDESSASSSSRICPLSNSKSVRLP QYPRGFGDVSGYRVSSSVSECYVQHGVLVAAWLVRGNFSDTAPRAYGTWGNERSATHFKV GAPQLENDGALRYETELPQVDARLSYVMLTVYPCSACNRSVLHCRPASRLPWLPLRVTPS DLERLFAERRYLTFLYVVLVQFVKHVALFSFGVQVACCVYLRWIRPWVRGRHRATGRTSR EEEAKDD

>095132

MALGAAPAAQLALLALLGTLLPGPGGAGISIHPSKAIIPRGDSLTVNCSNSCDQKSTFGL ETVLIKEEVGRGDNWKVFQLRDVQEDIELFCYSNCHKEQTIASMNLTVYWFPEHVELAPL PLWQPVGEELNLSCLVSGGAPRAHLSVVLLRGEEELGRQPVGKGEPAKVMFTVQSRREDH GTNFSCRWELDLRSQGLELFQNTSAPRKLQTYVLPSIDPHLEVPPIVEVGSRWPVNCTLD GLFPASDAKVYLVLGDQKLESNITYDGDSVLAKAWMEENEEGTHSLKCSVTLGEVSRRTQ ENVTVYSFPLPTLTLSPPEVSEWTTVTVECVTRDGAVVKLNGTSAVPPGPRAQLKLNASA SDHRSNFSCSAALEIAGQVVHKHQTLELHVLYGPRLDQRDCPGNWTWQEGSEQTLKCEAQ

GNPIPKLNCSRKGDGASLPIGDLRPVRREVAGTYLCRATSARGRVTREVVLNVLHGQNIL DIVIPVVAVTLILGALGTAGYVYNYQRKIQKYELQKARKAQEEAALKLNAQSTPP >P98105

MNASCFLSALTFVLLIGKSIAWYYNASSELMTYDEASAYCQRDYTHLVAIQNKEEINYLN STLRYSPSYYWIGIRKVNNVWIWVGTQKPLTEEAKNWAPGEPNNKQRNEDCVEIYIQRPK DSGMWNDERCDKKKLALCYTASCTNTSCSGHGECVETINSYTCKCHPGFLGPKCDQVVTC QEQEYPDHGSLNCTHPFGLFSYNSSCSFSCERGYVPSSMETTVRCTSSGEWSAPAPACHV VECKALTQPAHGVRKCSSNPGSYPWNTTCTFDCEEGYRRVGAQNLQCTSSGVWDNEKPSC KAVTCDAIPRPQNGSVSCSNSTAGALAFKSSCNFTCEHSFTLQGPAQVECSAQGQWTPQI PVCKASQCEALSAPQRGHMKCLPSASAPFQSGSSCKFSCDEGFELKGSRRLQCGPRGEWD SEKPTCAGVQCSSLDLPGKMNMSCSGPAVFGTVCEFTCPEGWTLNGSSILTCGATGRWSA MLPTCEAPANPPRPLVVALSVAATSLLTLSSLIYVLKRFFWKKAKKFVPASSCQSLQSFE NYOGPSYII

>P98106

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NEEFELLGSRNVECTVSGRWSAPPPTCKGVTSLPVPSVRCPALTTPGQGTMSCRHHLESF
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MIVSQYLSALTFVLLLFKESRTWSYHASTEMMTFEEARDYCQKTYTALVAIQNQEEIEYL NSTFSYSPSYYWIGIRKINGTWTWIGTNKSLTKEATNWAPGEPNNKQSDEDCVEIYIKRE KDSGKWNDEKCTKQKLALCYKAACNPTPCGSHGECVETINNYTCQCHPGFKGLKCEQVVT CPAQKHPEHGHLVCNPLGKFTYNSSCSISCAEGYLPSSTEATRCMSSGEWSTPLPKCNVV KCDALSNLDNGVVNCSPNHGSLPWNTTCTFECQEGYKLTGPQHLQCTSSGIWDNKQPTCK AVSCAAISHPQNGTVNCSHSVVGDFAFKSSCHFTCAEGFTLQGPTQVECTAQGQWTQRVP VCEVVRCSRLDVSGKLNMNCSGEPVLGTECTFACPERWTLNGSVVLTCGATGHWSGMLPT CEAPTVSQTPLAVGLSTAGVSLVTIPSFLFWLLKRLQKKAKKFSPASSCSSLKSNGCYST PSKLI

>P27512

MVSLPRLCALWGCLLTAVHLGQCVTCSDKQYLHDGQCCDLCQPGSRLTSHCTALEKTQCH PCDSGEFSAQWNREIRCHQHRHCEPNQGLRVKKEGTAESDTVCTCKEGQHCTSKDCEACA QHTPCIPGFGVMEMATETTDTVCHPCPVGFFSNQSSLFEKCYPWTSCEDKNLEVLQKGTS QTNVICGLKSRMRALLVIPVVMGILITIFGVFLYIKKVVKKPKDNEMLPPAARRQDPQEM EDYPGHNTAAPVQETLHGCQPVTQEDGKESRISVQERQVTDSIALRPLV >009163

MIATGALLRVLLLLLAFGHSTYGAECDPPCDPQYGFCEADNVCRCHVGWEGPLCDKCVTA PGCVNGVCKEPWQCICKDGWDGKFCEIDVRACTSTPCANNGTCVDLEKGQYECSCTPGFS GKDCQHKAGPCVINGSPCQHGGACVDDEGQASHASCLCPPGFSGNFCEIVAATNSCTPNP CENDGVCTDIGGDFRCRCPAGFVDKTCSRPVSNCASGPCQNGGTCLQHTQVSFECLCKPP FMGPTCAKKRGASPVQVTHLPSGYGLTYRLTPGVHELPVQQPEQHILKVSMKELNKSTPL LTEGQAICFTILGVLTSLVVLGTVAIVFLNKCETWVSNLRYNHTFRKKKNLLLQYNSGEE

LAVNIIFPEKIDMTTFNKEAGDEEI

>09DF69

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PSPGPTPDRPIPNPNPSLDLPDPGLAIQTPNLGLSNPNIPLPSPSPGPGTEPDLLPVAED
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>P43555

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AESFEIFKMQFFNGVIEDSLIPNVNAMGQPKLITKYIDQQTGKEKLIEKTAFDADKDKIT
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>09JHJ8

MQLKCPCFVSLGTRQPVWKKLHVSSGFFSGLGLFLLLLSSLCAASAETEVGAMVGSNVVL SCIDPHRRHFNLSGLYVYWQIENPEVSVTYYLPYKSPGINVDSSYKNRGHLSLDSMKQGN FSLYLKNVTPQDTQEFTCRVFMNTATELVKILEEVVRLRVAANFSTPVISTSDSSNPGQE RTYTCMSKNGYPEPNLYWINTTDNSLIDTALQNNTVYLNKLGLYDVISTLRLPWTSRGDV LCCVENVALHQNITSISQAESFTGNNTKNPQETHNNELKVLVPVLAVLAAAAFVSFIIYR RTRPHRSYTGPKTVQLELTDHA

>Q5IJ48

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>088775

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>Q8WY21

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>062656

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MIASQFLSALPLVLLLLRESGAWSYSASTETMTFDDASAYCQQRYTHLVAIQNHAEIEYL NSTFNYSASYYWIGIRKINGTWTWIGTKKALTPEATNWAPGEPNNKQSNEDCVEIYIKRD KDSGKWNDERCSKKKLALCYTAACTPTSCSGHGECIETINSSTCQCYPGFRGLQCEQVVE CDALENPVNGVVTCPQSLPWNTTCAFECKEGFELIGPEHLQCTSSGSWDGKKPTCKAVTC DTVGHPQNGDVSCNHSSIGEFAYKSTCHFTCAEGFGLQGPAQIECTAQGQWTQQAPVCKA VKCPAVSQPKNGLVKFTHSPTGEFTYKSSCAFSCEEGFELRGSAQLACTSQGQWTQEVPS CQVVQCSSLEVPREINMSCSGEPVFGAVCTFACPEGWMLNGSVALTCGATGHWSGMLPTC EAPAESKIPLAMGLAAGGVSFMTSASFLLWLLKRLRKRAKKFVPSSSSECLQPNGSYQMP SDLI

>017330

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AGVSLVCGTHAFSPKCREYTVTEFGIRNTRQFDGQGISPYDPKHNSSALYVPGTNQLFVA
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GQSEQCPEGIIVREVFDDNESEAQPEAVSRSGYPKEHSTITVVLVAAVASLISLIIGAFI
GIRVNRWAATSEPHRSASSTSGSDYDSFGRARLTRHDSLTTATKVDHGFVPQSKQSVDAT
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>P18564

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>P07204

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>09TUF8

 $\label{eq:mkwkvlviaavlkahfpvteahifglldpklcylldgilflygvivtalylrakfsrged $$ VPVSPQGHTQLYNELNIGRREEYDVLDKRRGRDPEMGGKQRRKNPQEGLYNALQKDKMAE $$ AYSEIGMKGENQRRRGKGHDGLYQGLSAATKDTYDALHMQTLPPR $$$

>09Y3P8

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>P12821

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>09EP01

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PCAWTQSLLVLNLSSNMLTGSVFRCLPPKVKVLDLHNNRIMSIPKDVTHLQALQELNVAS NSLTDLPGCGAFSSLSVLVIDHNSVSHPSEDFFQSCQNIRSLTAGNNPFQCTCELRDFVK NIGWVAREVVEGWPDSYRCDYPESSRGTALRDFHMSPLSCDTVLLTVTIGATMLVLAVTG AFLCLYFDLPWYVRMLCQWTQTRHRARHIPLEELQRNLQFHAFVSYSGHDSAWVKNELLP NLEKDDIQICLHERNFVPGKSIVENIINFIEKSYKSIFVLSPHFIQSEWCHYELYFAHHN LFHEGSDNLILILLAPIPQYSIPTNYHKLKTLMSRRTYLEWPTEKNKHGLFWANLRASIN VKLVNQAEGTCYTQQ

>010656

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>P14429

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>Q9Y3Q3

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>P40238

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>P24055

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MARGPGLAPPPLRLPLLLLVLAAVTGHTAAQDNCTCPTNKMTVCSPDGPGGRCQCRALGS GMAVDCSTLTSKCLLLKARMSAPKNARTLVRPSEHALVDNDGLYDPDCDPEGRFKARQCN QTSVCWCVNSVGVRRTDKGDLSLRCDDLVRTHHILIDLRHRPTAGAFNHSDLDAELRRLF RERYRLHPKFVAAVHYEQPTIQIELRQNTSQKAAGEVDIGDAAYYFERDIKGESLFQGRG GLDLRVRGEPLQVERTLIYYLDEIPPKFSMKRLTAGLIAVIVVVVVALVAGMAVLVITNR RKSGKYKKVEIKELGELRKEPSL

>P12830

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GQFVVTTNPVNNDGILKTAKGLDFEAKQQYILHVAVTNVVPFEVSLTTSTATVTVDVLDV
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LILILLLLFLRRRAVVKEPLLPPEDDTRDNVYYYDEEGGGEEDQDFDLSQLHRGLDARP
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>P37301

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>P98131

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>Q9BMN8

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>P00533

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LLEGEPREFVENSECIQCHPECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVM GENNTLVWKYADAGHVCHLCHPNCTYGCTGPGLEGCPTNGPKIPSIATGMVGALLLLLVV ALGIGLFMRRRHIVRKRTLRRLLQERELVEPLTPSGEAPNQALLRILKETEFKKIKVLGS GAFGTVYKGLWIPEGEKVKIPVAIKELREATSPKANKEILDEAYVMASVDNPHVCRLLGI CLTSTVQLITQLMPFGCLLDYVREHKDNIGSQYLLNWCVQIAKGMNYLEDRRLVHRDLAA RNVLVKTPQHVKITDFGLAKLLGAEEKEYHAEGGKVPIKWMALESILHRIYTHQSDVWSY GVTVWELMTFGSKPYDGIPASEISSILEKGERLPQPPICTIDVYMIMVKCWMIDADSRPK FRELIIEFSKMARDPQRYLVIQGDERMHLPSPTDSNFYRALMDEEDMDDVVDADEYLIPQ QGFFSSPSTSRTPLLSSLSATSNNSTVACIDRNGLQSCPIKEDSFLQRYSSDPTGALTED SIDDTFLPVPEYINQSVPKRPAGSVQNPVYHNQPLNPAPSRDPHYQDPHSTAVGNPEYLN TVQPTCVNSTFDSPAHWAQKGSHQISLDNPDYQQDFFPKEAKPNGIFKGSTAENAEYLRV APOSSEFIGA

>P34901

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>P34902

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>P25942

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>005052

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>Q6GTX8

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>042414

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SAVYQCNASNEHGYLLANAFVSVLDVPPRILAPRNQLIKVIQYNRTRLDCPFFGSPIPTL RWFKNGOGNMLDGGNYKAHENGSLEMSMARKEDOGIYTCVATNILGKVEAOVRLEVKDPT RIVRGPEDQVVKRGSMPRLHCRVKHDPTLKLTVTWLKDDAPLYIGNRMKKEDDGLTIYGV AEKDOGDYTCVASTELDKDSAKAYLTVLAIPANRLRDLPKERPDRPRDLELSDLAERSVK LTWIPGDDNNSPITDYIVQFEEDRFQPGTWHNHSRYPGNVNSALLSLSPYVNYQFRVIAV NDVGSSLPSMPSERYOTSGARPEINPTGVOGAGTOKNNMEITWTPLNATOAYGPNLRYIV RWRRRDPRGSWYNETVKAPRHVVWNTPIYVPYEIKVQAENDFGRAPEPETYIGYSGEDYP KAAPTDVRIRVLNSTAIALTWTRVHLDTIQGQLKEYRAYFWRDSSLLKNLWVSKKRQYVS FPGDRNRGIVSRLFPYSNYKLEMVVTNGRGDGPRSEVKEFPTPEGVPSSPRYLRIROPNL ESINLEWDHPEHPNGVLTGYNLRYOASCLSSPVNGSKTGRTLVENFSPNOTRFTVORTDP ISRYRFFLRARTQVGDGEVIVEESPALLNEATPTPASTWLPPPTTELTPAATIATTTTTA TPTTETPPTEIPTTAIPTTTTTTTTAASTVASTTTTAERAAAATTKQELATNGSSIWDI RAWANSNWANITWSHNYSAGTDFVVKYITSNKTEKSIPVKAQTPSSVQLANLTPGMVYKL WVFPIWSSPSEHSYITFTTSSAYTKNHVDIATOGWFIGLMCAIALLVLILLIVCFIKRSR GGKYPVRDNKDEHLNPEDKNVEDGSFDYRSLESDEDNKPLPNSOTSLDGTIKQQESDDSL VDYGEGGEGOFNEDGSFIGOYTVKKDKEETEGNESSEATSPVNAIYSLA

>P24063

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>P22607

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VARGMEYLASQKCIHRDLAARNVLVTEDNVMKIADFGLARDVHNLDYYKKTTNGRLPVKW
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>Q9ERM2

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>P10300

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>09XS72

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>P07228

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VGTLSSNSSNVIQLIIDAYNSLSSEVILENSKLPKEVTISYKSYCKNGVNDTQEDGRKCS
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>09XS78

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>P79701

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DSHSSEDDGFSQVPSSAQQNSDEEDFDMRIRCHSLAARYYNCVSFPGCLTGGNQIRCSSR
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>P37172

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>Q9NJ15

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>005204

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>P41990

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>P31431

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>P17790

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KVLKTDESDASSYISYTIEGKVEDHSGVYECIYNTNPVAKGNVSIEVEPQVVAYKKSEHG
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>P24071

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>P40259

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>064294

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>Q9GV77

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>P98158

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>091987

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>P15260

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PTEDSKEFS

>P15261

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>P17948

MVSYWDTGVLLCALLSCLLLTGSSSGSKLKDPELSLKGTOHIMOAGOTLHLOCRGEAAHK WSLPEMVSKESERLSITKSACGRNGKQFCSTLTLNTAQANHTGFYSCKYLAVPTSKKKET ESAIYIFISDTGRPFVEMYSEIPEIIHMTEGRELVIPCRVTSPNITVTLKKFPLDTLIPD GKRIIWDSRKGFIISNATYKEIGLLTCEATVNGHLYKTNYLTHROTNTIIDVOISTPRPV KLLRGHTLVLNCTATTPLNTRVOMTWSYPDEKNKRASVRRRIDOSNSHANIFYSVLTIDK MONKDKGLYTCRVRSGPSFKSVNTSVHIYDKAFITVKHRKOOVLETVAGKRSYRLSMKVK AFPSPEVVWLKDGLPATEKSARYLTRGYSLIIKDVTEEDAGNYTILLSIKOSNVFKNLTA TLIVNVKPQIYEKAVSSFPDPALYPLGSRQILTCTAYGIPQPTIKWFWHPCNHNHSEARC DFCSNNEESFILDADSNMGNRIESITORMAIIEGKNKMASTLVVADSRISGIYICIASNK VGTVGRNISFYITDVPNGFHVNLEKMPTEGEDLKLSCTVNKFLYRDVTWILLRTVNNRTM HYSISKOKMAITKEHSITLNLTIMNVSLODSGTYACRARNVYTGEEILOKKEITIRDOEA PYLLRNLSDHTVAISSSTTLDCHANGVPEPOITWFKNNHKIQQEPGIILGPGSSTLFIER VTEEDEGVYHCKATNOKGSVESSAYLTVOGTSDKSNLELITLTCTCVAATLFWLLLTLLI RKMKRSSSEIKTDYLSIIMDPDEVPLDEQCERLPYDASKWEFARERLKLGKSLGRGAFGK VVQASAFGIKKSPTCRTVAVKMLKEGATASEYKALMTELKILTHIGHHLNVVNLLGACTK OGGPLMVIVEYCKYGNLSNYLKSKRDLFFLNKDAALHMEPKKEKMEPGLEOGKKPRLDSV TSSESFASSGFQEDKSLSDVEEEEDSDGFYKEPITMEDLISYSFQVARGMEFLSSRKCIH RDLAARNILLSENNVVKICDFGLARDIYKNPDYVRKGDTRLPLKWMAPESIFDKIYSTKS DVWSYGVLLWEIFSLGGSPYPGVOMDEDFCSRLREGMRMRAPEYSTPEIYOIMLDCWHRD PKERPRFAELVEKLGDLLQANVQQDGKDYIPINAILTGNSGFTYSTPAFSEDFFKESISA PKFNSGSSDDVRYVNAFKFMSLERIKTFEELLPNATSMFDDYOGDSSTLLASPMLKRFTW TDSKPKASLKIDLRVTSKSKESGLSDVSRPSFCHSSCGHVSEGKRRFTYDHAELERKIAC CSPPPDYNSVVLYSTPPI

>P16065

MAHARHLFLFMVAFTITMVIARLDFNPTIINEDRGRTKIHVGLLAEWTTADGDQGTLGFP ALGALPLAISLANODSNILNGFDVOFEWVDTHCDINIGMHAVSDWWKRGFVGVIGPGCGC TYEGRLASALNIPMIDYVCDENPVSDKSIYPTFLRTIPPSIQVVEAIILTLQRYELDQVS VVVENITKYRNIFNTMKDKFDERDYEILHEEYYAGFDPWDYEMDDPFSEIIORTKETTRI YVFFGDASDLROFAMTALDEGILDSGDYVILGAVVDLEVRDSODYHSLDYILDTSEYLNO INPDYARLFKNREYTRSDNDRALEALKSVIIVTGAPVLKTRNWDRFSTFVIDNALDAPFN GELELRAEIDFASVYMFDATMOLLEALDRTHAAGGDIYDGEEVVSTLLNSTYRSKTDTFY OFDENGDGVKPYVLLHLIPIPKGDGGATKDSLGMYPIGTFNRENGOWGFEEALDEDANVL KPVWHNRDEPPLDMPPCGFHGELCTNWALYLGASIPTFLIIFGGLIGFFIYRKRAYEAAL DSLVWKVDWSEVOTKATDTNSQGFSMKNMVMSAISVISNAEKQQIFATIGTYRGTVCALH AVHKNHIDLTRAVRTELKIMRDMRHDNICPFIGACIDRPHISILMHYCAKGSLODILEND DIKLDSMFLSSLIADLVKGIVYLHSSEIKSHGHLKSSNCVVDNRWVLQITDYGLNEFKKG QKQDVDLGDHAKLARQLWTSPEHLRQEGSMPTAGSPQGDIYSFAIILTELYSRQEPFHEN EMDLADIIGRVKSGEVPPYRPILNAVNAAAPDCVLSAIRACWPEDPADRPNIMAVRTMLA PLQKGLKPNILDNMIAIMERYTNNLEELVDERTQELQKEKTKTEQLLHRMLPPSIASQLI KGIAVLPETFEMVSIFFSDIVGFTALSAASTPIQVVNLLNDLYTLFDAIISNYDVYKVET IGDAYMLVSGLPLRNGDRHAGQIASTAHHLLESVKGFIVPHKPEVFLKLRIGIHSGSCVA GVVGLTMPRYCLFGDTVNTASRMESNGLALRIHVSPWCKQVLDKLGGYELEDRGLVPMNG KGEIHTFWLLGQDPSYKITKVKPPPQKLTQEAIEIAANRVIPDDV

>P16066

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>P48831

MGLSYGIFICFLLLGGMELCCPQTIWPTETYYPLTSRPPVMVDCLESQLVVTVSKDLFGT GKLIRPADLTLGPENCEPLVSMDTDDVVRFEVGLHECGSRVQVTDNALVYSTFLIHSPRP AGNLSILRTNRAEVPIECHYPRHSNVSSQAILPTWVPFRTTMLFEEKLVFSLRLMEEDWG SEKQSPTFQLGDIAHLQAEVHTGSHMPLRLFVDHCVATLTPDRNAFLHHKIVDFHGCLVD GLYNSSSAFKAPRPRPETLQFTVDVFHFAKDSRNTIYITCHLKVTPADRVPDQLNKACSF IKSTKRWYPVEGSADICRCCNKGSCGLPGRSRRLSHLERGWRKSVSHTRNRRHVTEEAEI TVGPLIFLGKASDHGIEGSTSPHTSVMLGLGLATVVSLTLATIVLVLAKRHRTASHPVIC PASVSQ

>P04843

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LDPGAKISVIVETVYTHVLHPYPTQITQSEKQFVVFEGNHYFYSPYPTKTQTMRVKLASR
NVESYTKLGNPTRSEDLLDYGPFRDVPAYSQDTFKVHYENNSPFLTITSMTRVIEVSHWG
NIAVEENVDLKHTGAVLKGPFSRYDYQRQPDSGISSIRSFKTILPAAAQDVYYRDEIGNV
STSHLLILDDSVEMEIRPRFPLFGGWKTHYIVGYNLPSYEYLYNLGDQYALKMRFVDHVF
DEQVIDSLTVKIILPEGAKNIEIDSPYEISRAPDELHYTYLDTFGRPVIVAYKKNLVEQH
IQDIVVHYTFNKVLMLQEPLLVVAAFYILFFTVIIYVRLDFSITKDPAAEARMKVACITE
QVLTLVNKRIGLYRHFDETVNRYKQSRDISTLNSGKKSLETEHKALTSEIALLQSRLKTE
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DHILDAL

>P48832

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>P48834

MWLLQPLLLCVPLSLAVHGQQKPQVPDYPGELHCGLQSLQFAINPSPGKATPALIVWDNR GLPHKLQNNSGCGTWVRESPGGSVLLDASYSSCYVNEWVSTTQSPGTSRPPTPASRVTPQ DSHYVMIVGVEGTDAAGRRVTNTKVLRCPRNPPDQALVSSLSPSPLQNVALEAPNADLCD SVPKWDRLPCASSPITQGDCNKLGCCYKSEANSCYYGNTVTSRCTQDGHFSIAVSRNVTS PPLLLNSLRLAFGKDRECNPVKATRAFALFFFPFNSCGTTRWVTGDQAVYENELVAARDV RTWSHGSITRDSIFRLRVSCSYSVRSNAFPLSVQVFTIPPPHLKTQHGPLTLELKIAKDK HYGSYYTIGDYPVVKLLRDPIYVEVSIRHRTDPSLGLLLHNCWATPGKNSQSLSQWPILV KGCPYVGDNYQTQLIPVQKALDTPFPSYYKRFSIFTFSFVDTMAKWALRGPVYLHCNVSI CQPAGTSSCRITCPVARRRHSDLHHHSSTASISSKGPMILLQATMDSAEKLHKNSSSPI DSOALWMAGLSGTLIFGFLLVSYLAIRKRR

MEPSLLMWGFFTFTMIPGCMAGACVQQPPSLRNATFKILGYKVGTTLNCDCQRGFRRDPS SGPYMICRGNSSHSFWENKCQCMPTSSPRIPVKQVTPRPEEQKERKTTETQGQMQPPNQA NLPGHCKEPPPWEHESLKRVYHFMEGQTVRYQCLPGFRDGSAQNNSAQSVCKKQEDQEVM RWTQPKLKCKSEKENGSFPEPQMSTAAPPTTKTSLPTRTKGTTDSQNLTEVPATMQPIIF TTQYQLAVAGCVLLLLSILLLSGLTWQRRR

>Q95194

>002733

MFFLLALLTELGRLQAHVGSEGIFLHVTVPRKILSNDSEVSERKMIYIITIDGQPYTLHL RKQSFLPQNFLVYTYNEAGSLHSESPYFMMHCHYQGYAAEFPNSFVTLSICSGLRGFLQF ENVSYGIEPLESSARFEHIIYQMKNNDPNVSILAENYSHIWQKDQSYKVPLNSQKKNLSK LLPQYLEIYIIVEKALYDYMGSEMMAVTQKIVQVIGLVNTMFTQFRLTVTLSSLELWSNE NQISTSGDADDILQRFLAWKRDYLILRPHDIAYLLVYRKHPKYVGATFPGTICNESYDAG IAMYPDAIDLEGFSVIIAQLLGLNVGLTYDDITQCFCLRATCIMNHEAMSARGIKIFSNC SMHDYRYFVSKFEAKCLQKLSNLQPLHQNQPVCGNGILESNEECDCGNKKECQFKKCCDY NTCKLKGSVKCGSGPCCTSKCELSIVGTPCRKSVDPECDFTEYCNGTSSDCVPDTYALNG HLCKLGTAYCYNGQCQTTDNQCAKIFGKGAQGAPFACFKEVNSLHETSENCGFKNSQPLP CERKDVLCGKLACVQPHKNAYKSDIQYTVYSYIQDHVCVSIATGSSMRSDGTDNAYVADG TMCGPEMYCVNKTCRKVHLTGYNCNTTTKCKGKGICNNFGNCQCFPGHKPPDCKFQFGSP GGSIDDGNFQKSDEFYTEKGYNAHWNNWFILSFYIVLPFFIIFTIVIFKRNEIRKLCNRE NTELIHPLYQKAMMWNINIAQNFRSK

>P98164

MDRGPAAVACTLLLALVACLAPASGQECDSAHFRCGSGHCIPADWRCDGTKDCSDDADEI GCAVVTCOOGYFKCOSEGOCIPSSWVCDQDQDCDDGSDERQDCSQSTCSSHQITCSNGQC IPSEYRCDHVRDCPDGADENDCOYPTCEOLTCDNGACYNTSOKCDWKVDCRDSSDEINCT EICLHNEFSCGNGECIPRAYVCDHDNDCQDGSDEHACNYPTCGGYQFTCPSGRCIYQNWV CDGEDDCKDNGDEDGCESGPHDVHKCSPREWSCPESGRCISIYKVCDGILDCPGREDENN TSTGKYCSMTLCSALNCOYOCHETPYGGACFCPPGYIINHNDSRTCVEFDDCOIWGICDO KCESRPGRHLCHCEEGYILERGOYCKANDSFGEASIIFSNGRDLLIGDIHGRSFRILVES ONRGVAVGVAFHYHLORVFWTDTVONKVFSVDINGLNIOEVLNVSVETPENLAVDWVNNK IYLVETKVNRIDMVNLDGSYRVTLITENLGHPRGIAVDPTVGYLFFSDWESLSGEPKLER AFMDGSNRKDLVKTKLGWPAGVTLDMISKRVYWVDSRFDYIETVTYDGIQRKTVVHGGSL IPHPFGVSLFEGOVFFTDWTKMAVLKANKFTETNPOVYYOASLRPYGVTVYHSLROPYAT NPCKDNNGGCEQVCVLSHRTDNDGLGFRCKCTFGFQLDTDERHC1AVQNFL1FSSQVA1R GIPFTLSTOEDVMVPVSGNPSFFVGIDFDAODSTIFFSDMSKHMIFKOKIDGTGREILAA NRVENVESLAFDWISKNLYWTDSHYKSISVMRLADKTRRTVVOYLNNPRSVVVHPFAGYL FFTDWFRPAKIMRAWSDGSHLLPVINTTLGWPNGLAIDWAASRLYWVDAYFDKIEHSTFD GLDRRRLGHIEOMTHPFGLAIFGEHLFFTDWRLGAIIRVRKADGGEMTVIRSGIAYILHL KSYDVNIQTGSNACNQPTHPNGDCSHFCFPVPNFQRVCGCPYGMRLASNHLTCEGDPTNE PPTEQCGLFSFPCKNGRCVPNYYLCDGVDDCHDNSDEQLCGTLNNTCSSSAFTCGHGECI PAHWRCDKRNDCVDGSDEHNCPTHAPASCLDTQYTCDNHQCISKNWVCDTDNDCGDGSDE KNCNSTETCOPSOFNCPNHRCIDLSFVCDGDKDCVDGSDEVGCVLNCTASOFKCASGDKC IGVTNRCDGVFDCSDNSDEAGCPTRPPGMCHSDEFQCQEDGICIPNFWECDGHPDCLYGS DEHNACVPKTCPSSYFHCDNGNC1HRAWLCDRDNDCGDMSDEKDCPTQPFRCPSWQWQCL GHNICVNLSVVCDGIFDCPNGTDESPLCNGNSCSDFNGGCTHECVQEPFGAKCLCPLGFL LANDSKTCEDIDECDILGSCSQHCYNMRGSFRCSCDTGYMLESDGRTCKVTASESLLLLV ASONKIIADSVTSOVHNIYSLVENGSYIVAVDFDSISGRIFWSDATOGKTWSAFONGTDR RVVFDSSIILTETIAIDWVGRNLYWTDYALETIEVSKIDGSHRTVLISKNLTNPRGLALD PRMNEHLLFWSDWGHHPRIERASMDGSMRTVIVQDKIFWPCGLTIDYPNRLLYFMDSYLD

YMDFCDYNGHHRRQVIASDLIIRHPYALTLFEDSVYWTDRATRRVMRANKWHGGNQSVVM YNIOWPLGIVAVHPSKOPNSVNPCAFSRCSHLCLLSSOGPHFYSCVCPSGWSLSPDLLNC LRDDQPFLITVRQHIIFGISLNPEVKSNDAMVPIAGIQNGLDVEFDDAEQYIYWVENPGE IHRVKTDGTNRTVFASISMVGPSMNLALDWISRNLYSTNPRTOSIEVLTLHGDIRYRKTL IANDGTALGVGFPIGITVDPARGKLYWSDQGTDSGVPAKIASANMDGTSVKTLFTGNLEH LECVTLDIEEOKLYWAVTGRGVIERGNVDGTDRMILVHOLSHPWGIAVHDSFLYYTDEOY EVIERVDKATGANKIVLRDNVPNLRGLQVYHRRNAAESSNGCSNNMNACQQICLPVPGGL FSCACATGFKLNPDNRSCSPYNSFIVVSMLSAIRGFSLELSDHSETMVPVAGQGRNALHV DVDVSSGFIYWCDFSSSVASDNAIRRIKPDGSSLMNIVTHGIGENGVRGIAVDWVAGNLY FTNAFVSETLIEVLRINTTYRRVLLKVTVDMPRHIVVDPKNRYLFWADYGORPKIERSFL DCTNRTVLVSEGIVTPRGLAVDRSDGYVYWVDDSLDIIARIRINGENSEVIRYGSRYPTP YGITVFENSIIWVDRNLKKIFOASKEPENTEPPTVIRDNINWLRDVTIFDKOVOPRSPAE VNNNPCLENNGGCSHLCFALPGLHTPKCDCAFGTLQSDGKNCAISTENFLIFALSNSLRS LHLDPENHSPPFOTINVERTVMSLDYDSVSDRIYFTONLASGVGOISYATLSSGIHTPTV IASGIGTADGIAFDWITRRIYYSDYLNOMINSMAEDGSNRTVIARVPKPRAIVLDPCOGY LYWADWDTHAKIERATLGGNFRVPIVNSSLVMPSGLTLDYEEDLLYWVDASLQRIERSTL TGVDREVIVNAAVHAFGLTLYGQYIYWTDLYTQRIYRANKYDGSGQIAMTTNLLSQPRGI NTVVKNQKQQCNNPCEQFNGGCSHICAPGPNGAECQCPHEGNWYLANNRKHCIVDNGERC GASSFTCSNGRCISEEWKCDNDNDCGDGSDEMESVCALHTCSPTAFTCANGRCVQYSYRC DYYNDCGDGSDEAGCLFRDCNATTEFMCNNRRCIPREFICNGVDNCHDNNTSDEKNCPDR TCOSGYTKCHNSNICIPRVYLCDGDNDCGDNSDENPTYCTTHTCSSSEFOCASGRCIPOH WYCDOETDCFDASDEPASCGHSERTCLADEFKCDGGRCIPSEWICDGDNDCGDMSDEDKR HOCONONCSDSEFLCVNDRPPDRRCIPOSWVCDGDVDCTDGYDENONCTRRTCSENEFTC ${\tt GYGLCIPKIFRCDRHNDCGDYSDERGCLYQTCQQNQFTCQNGRCISKTFVCDEDNDCGDG}$ SDELMHLCHTPEPTCPPHEFKCDNGRCIEMMKLCNHLDDCLDNSDEKGCGINECHDPSIS GCDHNCTDTLTSFYCSCRPGYKLMSDKRTCVDIDECTEMPFVCSOKCENVIGSYICKCAP GYLREPDGKTCRONSNIEPYLIFSNRYYLRNLTIDGYFYSLILEGLDNVVALDFDRVEKR LYWIDTOROVIERMFLNKTNKETIINHRLPAAESLAVDWVSRKLYWLDARLDGLFVSDLN GGHRRMLAQHCVDANNTFCFDNPRGLALHPQYGYLYWADWGHRAYIGRVGMDGTNKSVII STKLEWPNGITIDYTNDLLYWADAHLGYIEYSDLEGHHRHTVYDGALPHPFAITIFEDTI YWTDWNTRTVEKGNKYDGSNRQTLVNTTHRPFDIHVYHPYRQPIVSNPCGTNNGGCSHLC LIKPGGKGFTCECPDDFRTLQLSGSTYCMPMCSSTQFLCANNEKCIPIWWKCDGQKDCSD GSDELALCPORFCRLGOFQCSDGNCTSPQTLCNAHQNCPDGSDEDRLLCENHHCDSNEWQ CANKRCIPESWOCDTFNDCEDNSDEDSSHCASRTCRPGOFRCANGRCIPOAWKCDVDNDC GDHSDEPIEECMSSAHLCDNFTEFSCKTNYRCIPKWAVCNGVDDCRDNSDEQGCEERTCH PVGDFRCKNHHCIPLRWOCDGONDCGDNSDEENCAPRECTESEFRCVNOOCIPSRWICDH YNDCGDNSDERDCEMRTCHPEYFOCTSGHCVHSELKCDGSADCLDASDEADCPTRFPDGA YCQATMFECKNHVCIPPYWKCDGDDDCGDGSDEELHLCLDVPCNSPNRFRCDNNRCIYSH EVCNGVDDCGDGTDETEEHCRKPTPKPCTEYEYKCGNGHCIPHDNVCDDADDCGDWSDEL GCNKGKERTCAENICEQNCTQLNEGGFICSCTAGFETNVFDRTSCLDINECEQFGTCPQH CRNTKGSYECVCADGFTSMSDRPGKRCAAEGSSPLLLLPDNVRIRKYNLSSERFSEYLQD EEYIQAVDYDWDPKDIGLSVVYYTVRGEGSRFGAIKRAYIPNFESGRNNLVQEVDLKLKY VMQPDGIAVDWVGRHIYWSDVKNKRIEVAKLDGRYRKWLISTDLDQPAAIAVNPKLGLMF WTDWGKEPKIESAWMNGEDRNILVFEDLGWPTGLSIDYLNNDRIYWSDFKEDVIETIKYD GTDRRVIAKEAMNPYSLDIFEDQLYWISKEKGEVWKQNKFGQGKKEKTLVVNPWLTQVRI FHQLRYNKSVPNLCKQICSHLCLLRPGGYSCACPQGSSFIEGSTTECDAAIELPINLPPP CRCMHGGNCYFDETDLPKCKCPSGYTGKYCEMAFSKGISPGTTAVAVLLTILLIVVIGAL AIAGFFHYRRTGSLLPALPKLPSLSSLVKPSENGNGVTFRSGADLNMDIGVSGFGPETAI DRSMAMSEDFVMEMGKQPIIFENPMYSARDSAVKVVQPIQVTVSENVDNKNYGSPINPSE IVPETNPTSPAADGTQVTKWNLFKRKSKQTTNFENPIYAQMENEQKESVAATPPPSPSLP AKPKPPSRRDPTPTYSATEDTFKDTANLVKEDSEV

>P98165

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ESAELCHMRTCRVNEISCGPQSTQCIPVSWKCDGEKDCDSGEDEENCGNVTCSAAEFTCS
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DCKDWSDEPLKECNINECLVNNGGCSHICRDLVIGYECDCPAGFELVDRRTCGDIDECQN
PGICSQICINLKGGYKCECSRGYQMDLATGVCKAVGKEPCLIFTNRRDIRKIGLERKEYI
QLVEQLRNTVALDADIAEQKLYWADFSQKAIFSASIDTRDKVGTHTRILDNIHSPAGIAV
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SGRNWCEENMVNGGCSYLCLPAPQINEHSPKYTCTCPAGYFLQEDGLRCGGFNISSVVSE
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>P35739

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>P09793

MACLGLRRYKAQLQLPSRTWPFVALLTLLFIPVFSEAIQVTQPSVVLASSHGVASFPCEY SPSHNTDEVRVTVLRQTNDQMTEVCATTFTEKNTVGFLDYPFCSGTFNESRVNLTIQGLR AVDTGLYLCKVELMYPPPYFVGMGNGTQIYVIDPEPCPDSDFLLWILVAVSLGLFFYSFL VSAVSLSKMLKKRSPLTTGVYVKMPPTEPECEKQFQPYFIPIN >064455

MKPAARETRTPPRSPGLRWALLPLLLLLRQGQVLCAGAAPNPIFDIEAVVSPTSVLLTWK HNDSGASECRIENKMESNLTFPVKNQTSCNITGLSPGTSYTFSIISVTTNETLNKTITTE PWPVSDLHVTSVGVTQARLTWSNANGTASYRMLIEELTTHSSVNISGLKPGTNNTFAFPE SNETQADFAVAEEVPDANGTKRIPVTNLSQLHKNSLVSVDPPSGQDPSLTEILLTDLKPD TQYNATIYSQAANGTEGQPRNKVFKTNSTQVSDVRAMNISASSMTLTWKSNYDGSRTSIV YKIHVAGGTHSVNQTVNKTEAIILGLSSSTLYNITVHPFLGQTEGTPGFLQVYTSPDQVS DFRVTNVSTRAIGLAWRSNDSKSFEIFIKQDGGEKHRNASTGNQSYMVEDLKPGTSYHFE IIPRGPDGTEGLSSTVNGSTDPSAVTDIRVVNISTTEMOLEWONTDDASGYTYHLVLESK SGSIIRTNSSOKWITVGSLTPGTLYNVTIFPEVDOIOGISNSITOYTRPSSVSHIEVNTT TTTAAIRWKNEDAASASYAYSVLILKTGDGSNVTSNFTKDPSILIPELIPGVSYTVKILT OVGDGTTSLVPGWNLFCTEPEPVTSFHCEVVPKEPALVLKWACPFGMYTGFELGVRSDSW DNMTRLENCTSDDDTECRTEVAYLNFSTSYNISIATLSCGKMALPAQNICTTGITDPPTP DGSPNITSVSHNSVKVKFSGFEASHGPIKAYAVILTTGEAAQPSADVLKYTYEDFKRGAS DTYVTYLIRIEEKGQSQGLSEVLNYEIDVGNQSTTLGYYNGRLEPLGSYRACVAGFTNIT YNLQNDGLINGDESYVSFSPYSEAVFLPQDPGVICGAVFGCIFGALAITAVGGFIFWRKK RTDAKNNEVSFSQIKPKKSKLIRVENFEAYFKKQQADSNCGFAEEYEDLKLIGISLPKYT AEIAENRGKNRYNNVLPYDISRVKLSVOTHSTDDYINANYMPGYHSKKDFIATOGPLPNT LKDFWRMVWEKNVYAIVMLTKCVEQGRTKCEEYWPSKQAQDYGDITVAMTSEVVLPEWTI RDFVVKNMQNSESHPLRQFHFTSWPDHGVPDTTDLLINFRYLVRDYMKQIPPESPILVHC SAGVGRTGTFIAIDRLIYQIENENTVDVYGIVYDLRMHRPLMVQTEDQYVFLNQCVLDII RAQKDSKVDLIYQNTTAMTIYENLEPVSMFGKTNGYIA >035082

MLARAPPRRPPRLVLLRLLLLHLLLLALRARCLSAEPGQGAQTWARFARAPAPEAAGLLH DTFPDGFLWAVGSAAYOTEGGWROHGKGASIWDTFTHHSGAAPSDSPIVVAPSGAPSPPL SSTGDVASDSYNNVYRDTEGLRELGVTHYRFSISWARVLPNGTAGTPNREGLRYYRRLLE RLRELGVOPVVTLYHWDLPORLODTYGGWANRALADHFRDYAELCFRHFGGOVKYWITID NPYVVAWHGYATGRLAPGVRGSSRLGYLVAHNLLLAHAKVWHLYNTSFRPTQGGRVSIAL SSHWINPRRMTDYNIRECOKSLDFVLGWFAKPIFIDGDYPESMKNNLSSLLPDFTESEKR LIRGTADFFALSFGPTLSFOLLDPNMKFROLESPNLROLLSWIDLEYNHPPIFIVENGWF VSGTTKRDDAKYMYYLKKFIMETLKAIRLDGVDVIGYTAWSLMDGFEWHRGYSIRRGLFY VDFLSQDKELLPKSSALFYQKLIEDNGFPPLPENQPLEGTFPCDFAWGVVDNYVQVDTTL SOFTDPNVYLWDVHHSKRLIKVDGVVAKKRKPYCVDFSAIRPOITLLREMRVTHFRFSLD WALILPLGNQTQVNHTVLHFYRCMISELVHANITPVVALWQPAAPHQGLPHALAKHGAWE NPHTALAFADYANLCFKELGHWVNLWITMNEPNTRNMTYRAGHHLLRAHALAWHLYDDKF RAAOKGKISIALOADWIEPACPFSONDKEVAERVLEFDIGWLAEPIFGSGDYPRVMRDWL NOKNNFLLPYFTEDEKKLVRGSFDFLAVSHYTTILVDWEKEDPMKYNDYLEVQEMTDITW LNSPSQVAVVPWGLRKVLNWLRFKYGDLPMYVTANGIDDDPHAEQDSLRIYYIKNYVNEA LKAYVLDDINLCGYFAYSLSDRSAPKSGFYRYAANOFEPKPSMKHYRRIIDSNGFLGSGT LGRFCPEEYTVCTECGFFQTRKSLLVFISFLVFTFIISLALIFHYSKKGQRSYK >P23438

MRLLASVLLALFAVSHAEEGARLLASKSLLNRYAVEGRDLTLQYNIYNVGSSAALDVELS DDSFPPEDFGIVSGMLNVKWDRIAPASNVSHTVVLRPLKAGYFNFTSATVTYLAQEDGPV VIGFTSAPGQGGILAQREFDRRFSPHFLDWAAFGVMTLPSIGIPLLLWYSSKRKYDTPKS KKN

>P14617

MARPKLWPWGILLLVSLLSAGFNLDTMNVCPSLDIRSEVAELRRLENCSVVEGHLOILLM FTATGEDFRSLSFPHLTOVTDYLLLFRVYGLESLRDLFPNLAVIRGAHLFLGYALVIFEM PHLRDVGLPALGAVLHGSVRVEKNQELCHLSTIDWGLLQPTPSTNYIVGNKLGEECADVC PGTLGAAGEPCARTTFNGHTDYRCWTSSHCQRVCPCPQGLACTISGECCHTECLGGCSQP EDPRACVACRHFYYOSACHRACPLGTYEHESWRCVTAESCANLRSVPGRASTFGIHOGKC LAQCPPGFTRNGSSIFCHKCEGLCPKECKVGTKTIDSVQAAQDLVGCTHVEGSLILNLRR GYNLEPELQRSLGLVETITGFLKIKHSFALVSLSFFKNLKLIRGDTMVDGNYTLYVLDNQ NLOOLGPWVSAGLTIPVGKIYFAFNPRLCLEHIYRLEEVTGTRGRONKAEINPRTNGDRA ACOTRTLRFVSNVTEADRILLRWERYEPLEARDLLSFIVYYKESPFONATEHVGPDACGS OSWNLLDVELPLSRTOEPGVILAPLKPWTQYAVFVRAITLTTAEDSPHQGAQSPIVYLWT LPAAPTVPQDVISSSNSSSHLLVRWKPPTQRNGNITYYLVLWQRLAEDGDLYLNDYCHRG LRLPTSNHDPRFDREDGDLEAELELGCCPCQHAPPGQVLPALEAQEASFQKKFENFLHNA ITIPKPPWKVTSIHRNLQRDAGRHRRAIGSPRPGGNSSDFEIQEDKVPRERAVLGGLRHF TEYRIDIHACNHAAHIVGCSAATFVFARTMPRREADDIPGKLSWEAASKSSVLLRWFEPP DPNGLILKYEIKYRRLGEEATVLCVSRLRYAKVGGVOLALLPPGNYSARVRATSLAGNGS WTDSVAFYIPGPEEEDSGGLHILLTVTPAGLMLLIILAALGFFYSRKRNGTLYTSVNPEY LSASDMYIPDEWEVPREQISIIRELGQGSFGMVYEGVAKGLEAGEESTPVALKTVNELAS PRERIEFLKEASVMKAFOCHHVVRLLGVVSOGOPTLVIMELMTRGDLKSHLRSLRPEAEN NPGIPRPALGDMIQMAGEIADGMAYLAANKFVHRDLAARNCMVSQDFTVKIGDFGMTRDV YETDYYRKGGKGLLPVRWMAPESLKDGIFTTHSDVWSFGVVLWEIVTLAEOPYOGLSNEO VLKFVMDGGVLEELEDCPHQLQELMSSCWQQNPRLRPTFTQ1LNS1QKELRPSFRLLSFY HSPECQGGCGLQPTTDAESSSPPTSKGASDCSLQNGGPEH

>P29322

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TYNAVCRRCPWALSRCEACGSGTRFVPQQTSLVQASLLVANLLAHMNYSFWIEAVNGVSD LSPEPRRAAVVNITTNQAAPSQVVVIRQERAGQTSVSLLWQEPEQPNGIILEYEIKYYEK DKEMQSYSTLKAVTTRATVSGLKPGTRYVFQVRARTSAGCGRFSQAMEVETGKPRPRYDT RTIVWICLTLITGLVVLLLLLICKKRHCGYSKAFQDSDEEKMHYQNGQAPPPVFLPLHHP PGKLPEPQFYAEPHTYEEPGRAGRSFTREIEASRIHIEKIIGSGDSGEVCYGRLRVPGQR DVPVAIKALKAGYTERQRRDFLSEASIMGQFDHPNIIRLEGVVTRGRLAMIVTEYMENGS LDTFLRTHDGQFTIMQLVGMLRGVGAGMRYLSDLGYVHRDLAARNVLVDSNLVCKVSDFG LSRVLEDDPDAAYTTTGGKIPIRWTAPEAIAFRTFSSASDVWSFGVVMWEVLAYGERPYW NMTNRDVISSVEEGYRLPAPMGCPHALHQLMLDCWHKDRAQRPRFSQIVSVLDALIRSPE SLRATATVSRCPPPAFVRSCFDLRGGSGGGGGLTVGDWLDSIRMGRYRDHFAAGGYSSLG MVLRMNAQDVRALGITLMGHQKKILGSIQTMRAQLTSTQGPRRHL

>P52583

MELGPLRVLTVLLCLAPVFAGLFISMDQPTLSIQKSVLTITTNDTLNITCSGQRAVYWSW PNNOSSVEKRLAVTGCSEGPFCKTLTLLRVIGNDTGDYRCLYGDSQAATTIYVYVQDYRS PFVTSVGDQLGIVYITKNKTVVVPCLGTVSNLNVSLHAKYPEKVFVPDGKSISWDNKKGF TIPSHLINYAGMVFCEAKIDNESYOSVIYIVAVVGYRIYDLTMNPHYOVELAVGEKLVLN CTVRTELNVGIDFRWDYPSIKERRATIRDLKTTAGEIKTFVSTLTIESVNLSDKGRYTCA ASSGRMNMKNSSYFIIHESPFIHLEKMENVVEMKLGDTVSIPVKFKGYPPPEAKWYKNGK VINANHTVKLGYALVITEATEKDAGNYTVVLTNPTNKMQKRHTFTLLVNVPPQIGENALM APVDSYKYGSTOALTCTIYAVPPPAAVLWYWOLEEECTFSPOKVRLGANPYACRKWKVIS ERKGGNOVEIKORVVTIAGKTKTVSTLVIQAANVSALYRCMATNRAGSSERVISFHVTRG LEINLOPRSOLTEKDNTSLOCTADKFTFEKLSWYKLSTHVSOTPFGGLPMPVCKNLDALO KLNATVSNVNGENVTLELILRNISLODGGDYVCIAODKKAKTOHCLVKHLTVOEPLHPRL VGNLENOTTNIGETIEVLCTVNGVPPPNITWFKNSETLFEDSGIVLKDGNKTLTIRRVRK EDGGLYTCLACNILGCKKAEAFFSVQGAEEKTNLELIILVGTAVIAMFFWLLLVIILRTV KRANGGDMKTGYLSIIMDPDEVPIDEHCERLPYDASKWEFPRDRLKLGKPLGRGAFGQVI EADAFGIDKTATCRTVAVKMLKEGATHSEHRALMSELKILIHIGHHLNVVNLLGACTKPG GPLMVIVEYCKFGNLSAYLRSKRSEFIPYKMKSARFROGKENYTGDISTDLKORLDSITS SOSSTSSGFVEERSLSDVEEEDAGSEDLCKNPLTMEDLICYSFQVARGMEFLASRKCIHR DLAARNILLSDNNVVKICDFGLARDIYKDPDYVRKGDARLPLKWMAPETIFDRVYTIOSD VWSFGVLLWEIFSLGASPYPGVKIDEEFCRRLKEGTRMRAPDYTTPEMYQTMLDCWHGDP KQRPTFSELVEHLGNLLQANVRQDGKDYVVLPLSVSLNMEEDSGLSLPTSPASCKEEEEV CDPKFHYDNTAGISOYROGSKRKSRPVSVKTFEDIPLVTTVKVVOEENOTDSGMVLASEE LKTLEEODKOVKIPFSTLAPSKSNESVMSEASNOTSGYOSGYHSDDMDNMVCSSEDTELL CAQEASPTLPRCAWPGIYSPAPVASLPL

>P29329

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>Q95LF0

MAFIHLDVGFLYTLLVCTAFGSMLSNAEIKVNPPQDFEIVDPGYLGYLSLQWQPPLFPDN FKECTIEYELKYRNIDSENWKTIITKNLHYKDGFDLNKGIEAKINTLLPAQCTNGSEVRS SWAETTYWTSPQGNRETKIQDMDCVYYNWQYLVCSWKPGMGVHFDTNYQLFYWYEGLDHS AECTDYIKVNGKNMGCRFPYLESSDYKDFYICVNGSSESQPIRPSYFIFQLQNIVKPMPP DYLSLTVKNSEEINLKWNMPKGPIPAKCFIYEIEFTEDGTTWVTTTVENEIQITRTSNES QKLCFLVRSKVNIYCSDDGIWSEWSDEQCWKGDIWKETLVFFLIPFAFVSIFVLVITCLL LYKORALLKTIFHTKKEVFSHODTFC

>P97378

MAQTVRECSLALLFLFMWLLIKANIDVCKLGTVTVQPAPVIPLGSAANISCSLNPKQGCS
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KPPVPVCGVEISVGVAPEPPQNISCVQEGENGTVACSWNSGKVTYLKTNYTLQLSGPNNL
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RPFTEYEFQISSKLHLSGGSWSNWSESLRTRTPEEEPVGILDIWYMKQDIDYDRQQISLF
WKSLNPSEARGKILHYQVTLQEVTKKTTLQNTTRHTSWTRVIPRTGAWTASVSAANSKGA
SAPTHINIVDLCGTGLLAPHQVSAKSENMDNILVTWQPPKKADSAVREYIVEWRALQPGS
ITKFPPHWLRIPPDNMSALISENIKPYICYEIRVHALSESQGGCSSIRGDSKHKAPVSGP
HITAITEKKERLFISWTHIPFPEQRGCILHYRIYWKERDSTAQPELCEIQYRRSQNSHPI
SSLQPRVTYVLWMTAVTAAGESPQGNEREFCPQGKANWKAFVISSICIAIITVGTFSIRY
FRQKAFTLLSTLKPQWYSRTIPDPANSTWVKKYPILEEKIQLPTDNLLMAWPTPEEPEPL
IHEVLYHMIPVVRQPYYFKRGQGFQGYSTSKQDAMYIANPQATGTLTAETRQLVNLYKV
LESRDPDSKLANLTSPLTVTPVNYLPSHEGYLPSNIEDLSPHEADPTDSFDLEHQHISLS
IFASSSLRPLIFGGERLTLDRLKMGYDSLMSNEA

>Q2KI11

MPAFNRLFPLASLLLILWVGVCFPVCVEVPSETEAVQGNPMKLRCISCMKREEVEATTVV EWFYRPEGGKDFLIYEYRNGHQEVESPFQGRLQWNGSKDLQDVSITVLNVTLNDSGLYTC NVSREFEFEAHRPFVKTTRLIPLRVTEEAGEDFTSVVSEIMMYILLVFLTLWLLIEMIYC YRKVSKAEEAAQENASDYLAIPSENKENSAVPVEE

>09HB29

MWSLLLCGLSIALPLSVTADGCKDIFMKNEILSASQPFAFNCTFPPITSGEVSVTWYKNS SKIPVSKIIQSRIHQDETWILFLPMEWGDSGVYQCVIKGRDSCHRIHVNLTVFEKHWCDT SIGGLPNLSDEYKQILHLGKDDSLTCHLHFPKSCVLGPIKWYKDCNEIKGERFTVLETRL LVSNVSAEDRGNYACQAILTHSGKQYEVLNGITVSITERAGYGGSVPKIIYPKNHSIEVQ LGTTLIVDCNVTDTKDNTNLRCWRVNNTLVDDYYDESKRIREGVETHVSFREHNLYTVNI TFLEVKMEDYGLPFMCHAGVSTAYIILQLPAPDFRAYLIGGLIALVAVAVSVVYIYNIFK IDIVLWYRSAFHSTETIVDGKLYDAYVLYPKPHKESQRHAVDALVLNILPEVLERQCGYK LFIFGRDEFPGQAVANVIDENVKLCRRLIVIVVPESLGFGLLKNLSEEQIAVYSALIQDG MKVILIELEKIEDYTVMPESIQYIKQKHGAIRWHGDFTEQSQCMKTKFWKTVRYHMPPRR CRPFPPVQLLQHTPCYRTAGPELGSRRKKCTLTTG

>Q28105

MLTTLLPLLPLLLPGWALCSQEASDGPWDLHMTQVSYFRNPSQVWHRGNATLGGVLTHVL EGPGRNVSIQQLQPLQEPDSWALTKIYLNRYLEEFVGLVQVVHQERGVTFPLIIRCFLGC ELPPEGSEARVFFEVAVNGSSFVNFQPKTASWVAEPHAPSRVVTYTVDQLNKYNRTRYEL REFLQDTCVQYIQKHITTNNLKGSQTGRSYTSLVLGVLVGCFIVTGVAVGIFLCTGGRRR C

>P13688

MGHLSAPLHRVRVPWQGLLLTASLLTFWNPPTTAQLTTESMPFNVAEGKEVLLLVHNLPQ QLFGYSWYKGERVDGNRQIVGYAIGTQQATPGPANSGRETIYPNASLLIQNVTQNDTGFY TLQVIKSDLVNEEATGQFHVYPELPKPSISSNNSNPVEDKDAVAFTCEPETQDTTYLWWI NNQSLPVSPRLQLSNGNRTLTLLSVTRNDTGPYECEIQNPVSANRSDPVTLNVTYGPDTP TISPSDTYYRPGANLSLSCYAASNPPAQYSWLINGTFQQSTQELFIPNITVNNSGSYTCH ANNSVTGCNRTTVKTIIVTELSPVVAKPQIKASKTTVTGDKDSVNLTCSTNDTGISIRWF FKNQSLPSSERMKLSQGNTTLSINPVKREDAGTYWCEVFNPISKNQSDPIMLNVNYNALP

QENGLSPGAIAGIVIGVVALVALIAVALACFLHFGKTGRASDQRDLTEHKPSVSNHTQDH SNDPPNKMNEVTYSTLNFEAQQPTQPTSASPSLTATEIIYSEVKKQ >075882

MVAAAAATEARLRRRTAATAALAGRSGGPHWDWDVTRAGRPGLGAGLRLPRLLSPPLRPR LLLLLLLSPPLLLLLLPCEAEAAAAAAAVSGSAAAEAKECDRPCVNGGRCNPGTGQCVC PAGWVGEOCOHCGGRFRLTGSSGFVTDGPGNYKYKTKCTWLIEGOPNRIMRLRFNHFATE CSWDHLYVYDGDSIYAPLVAAFSGLIVPERDGNETVPEVVATSGYALLHFFSDAAYNLTG FNITYSFDMCPNNCSGRGECKISNSSDTVECECSENWKGEACDIPHCTDNCGFPHRGICN SSDVRGCSCFSDWQGPGCSVPVPANQSFWTREEYSNLKLPRASHKAVVNGNIMWVVGGYM FNHSDYNMVLAYDLASREWLPLNRSVNNVVVRYGHSLALYKDKIYMYGGKIDSTGNVTNE LRVFHIHNESWVLLTPKAKEQYAVVGHSAHIVTLKNGRVVMLVIFGHCPLYGYISNVQEY DLDKNTWSILHTOGALVOGGYGHSSVYDHRTRALYVHGGYKAFSANKYRLADDLYRYDVD TQMWTILKDSRFFRYLHTAVIVSGTMLVFGGNTHNDTSMSHGAKCFSSDFMAYDIACDRW SVLPRPDLHHDVNRFGHSAVLHNSTMYVFGGFNSLLLSDILVFTSEQCDAHRSEAACLAA GPGIRCVWNTGSSOCISWALATDEOEEKLKSECFSKRTLDHDRCDOHTDCYSCTANTNDC HWCNDHCVPRNHSCSEGQISIFRYENCPKDNPMYYCNKKTSCRSCALDONCOWEPRNOEC IALPENICGIGWHLVGNSCLKITTAKENYDNAKLFCRNHNALLASLTTOKKVEFVLKOLR IMQSSQSMSKLTLTPWVGLRKINVSYWCWEDMSPFTNSLLQWMPSEPSDAGFCGILSEPS TRGLKAATCINPLNGSVCERPANHSAKQCRTPCALRTACGDCTSGSSECMWCSNMKQCVD SNAYVASFPFGOCMEWYTMSTCPPENCSGYCTCSHCLEOPGCGWCTDPSNTGKGKCIEGS YKGPVKMPSQAPTGNFYPQPLLNSSMCLEDSRYNWSFIHCPACQCNGHSKCINQSICEKC ENLTTGKHCETCISGFYGDPTNGGKCOPCKCNGHASLCNTNTGKCFCTTKGVKGDECOLC EVENRYOGNPLRGTCYYTLLIDYOFTFSLSOEDDRYYTAINFVATPDEONRDLDMFINAS KNFNLNITWAASFSAGTQAGEEMPVVSKTNIKEYKDSFSNEKFDFRNHPNITFFVYVSNF TWPIKIQIAFSQHSNFMDLVQFFVTFFSCFLSLLLVAAVVWKIKQSCWASRRREQLLREM OOMASRPFASVNVALETDEEPPDLIGGSIKTVPKPIALEPCFGNKAAVLSVFVRLPRGLG GIPPPGQSGLAVASALVDISQQMPIVYKEKSGAVRNRKQQPPAQPGTCI

MGSLVFRRPFCHLSTYSLIWGMAAVALSTAQVEVVTQDERKALHTTASLRCSLKTSQEPL IVTWQKKKAVSPENMVTYSKTHGVVIQPAYKDRINVTELGLWNSSITFWNTTLEDEGCYM CLFNTFGSQKVSGTACLTLYVQPIVHLHYNYFEDHLNITCSATARPAPAISWKGTGTGIE NSTESHFHSNGTTSVTSILRVKDPKTQVGKEVICQVLYLGNVIDYKQSLDKGFWFSVPLL LSIVSLVILLVLISILLYWKRHRNQERGESSQGMQRMK

>Q9EPW9

MSQDRKPIVGSFHFVCALALIVGSMTPFSNELESMVDYSNRNLTHVPKDLPPRTKALSLS QNSISELRMPDISFLSELRVLRLSHNRIRSLDFHVFLFNQDLEYLDVSHNRLQNISCCPM ASLRHLDLSFNDFDVLPVCKEFGNLTKLTFLGLSAAKFRQLDLLPVAHLHLSCILLDLVS YHIKGGETESLQIPNTTVLHLVFHPNSLFSVQVNMSVNALGHLQLSNIKLNDENCQRLMT FLSELTRGPTLLNVTLQHIETTWKCSVKLFQFFWPRPVEYLNIYNLTITERIDREEFTYS ETALKSLMIEHVKNQVFLFSKEALYSVFAEMNIKMLSISDTPFIHMVCPPSPSSFTFLNF TQNVFTDSVFQGCSTLKRLQTLILQRNGLKNFFKVALMTKNMSSLETLDVSLNSLNSHAY DRTCAWAESILVLNLSSNMLTGSVFRCLPPKVKVLDLHNNRIMSIPKDVTHLQALQELNV ASNSLTDLPGCGAFSSLSVLVIDHNSVSHPSEDFFQSCQNIRSLTAGNNPFQCTCELRDF VKNIGWVAREVVEGWPDSYRCDYPESSKGTALRDFHMSPLSCDTVLLTVTIGATMLVLAV TGAFLCLYFDLPWYVRMLCQWTQTRHRARHIPLEELQRNLQFHAFVSYSEHDSAWVKNEL LPNLEKDDIRVCLHERNFVPGKSIVENIINFIEKSYKAIFVLSPHFIQSEWCHYELYFAH HNLFHEGSDNLILILLEPILQNNIPSRYHKLRALMAQRTYLEWPTEKGKRGLFWANLRAS FIMKLALVNEDDVKT

>002757

MILRLLLALNFFPSIQVTENKILVKQLPRLVVYNNEVNLSCKYTHNFFSKEFRASLYKGV DSAVEVCVVNGNYSHQPQFYSSTGFDCDGKLGNETVTFYLRNLFVNQTDIYFCKIEVMYP PPYIDNEKSNGTIIHVKEKHLCPAQLSPESSKPFWALVVVGGILGFYSLLATVALGACWM KTKRSRILQSDYMNMTPRRPGPTRRHYQPYAPARDFAAYRS

>060245

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>P63160

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>08VHS2

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>086SU0

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GRSVVI

>000220

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>001113

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>P23468

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AVKSLRLQRPHMVQTLEQYEFCYKVVQDFIDIFSDYANFK >028125

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>Q9ERS6

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>P26012

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DYXYSAL

>P35917

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>P26951

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>P35918

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>P26955

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>Q9Y624

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>P20138

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>099665

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>Q8K558

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>P53708

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>08TD07

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>007011

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>P36581

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>013291

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>P16264

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>09UOV4

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>006220

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>P42070

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>014242

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>P23491

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>060513

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>09JI59

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MAARGRGLLLLTLSVLLAAGPSAAAAKLNIPKVLLPFTRATRVNFTLEASEGCYRWLSTR PEVASIEPLGLDEQQCSQKAVVQARLTQPARLTSIIFAEDITTGQVLRCDAIVDLIHDIQ IVSTTRELYLEDSPLELKIQALDSEGNTFSTLAGLVFEWTIVKDSEADRFSDSHNALRIL TFLESTYIPPSYISEMEKAAKOGDTILVSGMKTGSSKLKARIOEAVYKNVRPAEVRLLIL ENILLNPAYDVYLMVGTSIHYKVOKIROGKITELSMPSDQYELOLONSIPGPEGDPARPV AVLAODTSMVTALOLGOSSLVLGHRSIRMOGASRLPNSTIYVVEPGYLGFTVHPGDRWVL ETGRLYEITIEVFDKFSNKVYVSDNIRIETVLPAEFFEVLSSSQNGSYHRIRALKRGQTA IDAALTSVVDQDGGVHILQVPVWNQQEVEIHIPITLYPSILTFPWQPKTGAYQYTIRAHG GSGNFSWSSSSHLVATVTVKGVMTTGSDIGFSVIQAHDVQNPLHFGEMKVYVIEPHSMEF APCOVEARVGOALELPLRISGLMPGGASEVVTLSDCSHFDLAVEVENOGVFOPLPGRLPP GSEHCSGIRVKAEAQGSTTLLVSYRHGHVHLSAKITIAAYLPLKAVDPSSVALVTLGSSK EMLFEGGPRPWILEPSKFFONVTAEDTDSIGLALFAPHSSRNYOOHWILVTCOALGEOVI ALSVGNKPSLTNPFPAVEPAVVKFVCAPPSRLTLAPVYTSPOLDMSCPLLOONKOVVPVS SHRNPRLDLAAYDQEGRRFDNFSSLSIQWESTRPVLASIEPELPMQLVSQDDESGQKKLH GLQAILVHEASGTTAITATATGYQESHLSSARTKQPHDPLVPLSASIELILVEDVRVSPE EVTIYNHPGIOAELRIREGSGYFFLNTSTADVVKVAYOEARGVAMVHPLLPGSSTIMIHD LCLVFPAPAKAVVYVSDIQELYIRVVDKVEIGKTVKAYVRVLDLHKKPFLAKYFPFMDLK LRAASPIITLVALDEALDNYTITFLIRGVAIGOTSLTASVTNKAGORINSAPOOIEVFPP FRLMPRKVTLLIGATMOVTSEGGPOPOSNILFSISNESVALVSAAGLVOGLAIGNGTVSG LVOAVDAETGKVVIISODLVOVEVLLLRAVRIRAPIMRMRTGTOMPIYVTGITNHONPFS FGNAVPGLTFHWSVTKRDVLDLRGRHHEASIRLPSQYNFAMNVLGRVKGRTGLRVVVKAV DPTSGQLYGLARELSDEIQVQVFEKLQLLNPEIEAEQILMSPNSYIKLQTNRDGAASLSY RVLDGPEKVPVVHVDEKGFLASGSMIGTSTIEVIAOEPFGANOTIIVAVKVSPVSYLRVS MSPVLHTONKEALVAVPLGMTVTFTVHFHDNSGDVFHAHSSVLNFATNRDDFVQIGKGPT NNTCVVRTVSVGLTLLRVWDAEHPGLSDFMPLPVLQAISPELSGAMVVGDVLCLATVLTS LEGLSGTWSSSANSILHIDPKTGVAVARAVGSVTVYYEVAGHLRTYKEVVVSVPQRIMAR HLHPIQTSFQEATASKVIVAVGDRSSNLRGECTPTQREVIQALHPETLISCQSQFKPAVF DFPSQDVFTVEPQFDTALGQYFCSITMHRLTDKQRKHLSMKKTALVVSASLSSSHFSTEQ VGAEVPFSPGLFADOAEILLSNHYTSSEIRVFGAPEVLENLEVKSGSPAVLAFAKEKSFG WPSFITYTVGVLDPAAGSOGPLSTTLTFSSPVTNOAIAIPVTVAFVVDRRGPGPYGASLF OHFLDSYOVMFFTLFALLAGTAVMIIAYHTVCTPRDLAVPAALTPRASPGHSPHYFAASS PTSPNALPPARKASPPSGLWSPAYASH

>008680

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>Q60519

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>P97710

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LNGTANFSNIIRVSPTLKITQQPLTPASQVNLTCQVQKFYPKALQLNWLENGNLSRTDKP
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ETIPDNNAYYNWNVFIGVGVACALLVVLLMAALYLLRIKQKKAKGSTSSTRLHEPEKNAR
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DMVHLNRAQPTPKPEPSFSEYASVQVQRK

>Q90460

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>P42081

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>P06800

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NLDFRKCNSDNISYVLHCEPENNTKCIRRNTFIPERCQLDNLRAQTNYTCVAEILYRGVK LVKNVINVOTDLGIPETPKPSCGDPAARKTLVSWPEPVSKPESASKPHGYVLCYKNNSEK CKSLPNNVTSFEVESLKPYKYYEVSLLAYVNGKIQRNGTAEKCNFHTKADRPDKVNGMKT SRPTDNSINVTCGPPYETNGPKTFYILVVRSGGSFVTNTTKTNCOFYGDNLYYSTDYEFL VSFHNGVYEGDSVIRSESTNFNAKALIIFLVFLIIVTSIALLVVLYKSYDLRKKRSSNLD EOOELVERDDEKOLMDVEPIHSDILLETYKRKIADEGRLFLAEFOSIPRVFSKFPIKDAR KPHNQNKNRYVDILPYDYNRVELSEINGDAGSTYINASYIDGFKEPRKYIAAQGPRDETV DDFWRMIWEOKATVIVMVTRCEEGNRNKCAEYWPSMEEGTRAFKDIVVTINDHKRCPDYI IOKLNVAHKKEKATGREVTHIOFTSWPDHGVPEDPHLLLKLRRRVNAFSNFFSGPIVVHC SAGVGRTGTYIGIDAMLEGLEAEGKVDVYGYVVKLRRORCLMVOVEAOYILIHOALVEYN QFGETQVNLSELHSCLHNMKKRDPPSDPSPREAEYQRLPSYRSWRTQHIGNQGENKKKKR NSNVVPYDFNRVPLKHELEMSKESEPESDESSDDDSDSEETSKYINASFVMSYWKPEMMI AAQGPLKETIGDFWQMIFQRKVKVIVMLTELVNGDQEVCAQYWGEGKQTYGDMEVEMKDT NRASAYTLRTFELRHSKRKEPRTVYQYQCTTWKGEELPAEPKDLVSMIQDLKQKLPKASP EGMKYHKHASILVHCRDGSQOTGLFCALFNLLESAETEDVVDVFQVVKSLRKARPGVVCS YEQYOFLYDIIASIYPAQNGQVKKTNSQDKIEFHNEVDGGKQDANCVRPDGPLNKAQEDS RGVGTPEPTNSAEEPEHAANGSASPAPTQSS

>P09208

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>P31809

>09JHW1

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MASGWDERPPWRLESLRLLPPPPLLLLLLLLRSSAOAAHIKKAEATTTTVGGSEAAEGOF DHYYHEAALGEALEAAAAAGPPGLARLFSIGNSVEGRPLWVLRLTAGLGPPPTPAAVGLD AAGPLLPGRPOVKLVGNMHGDETVSROVLVYLARELASGYRRGDPRLVRLLNTTDVYLLP SLNPDGFERAREGDCGLGDSGPPGTSGRDNSRGRDLNRSFPDQFSTGEPPSLDEVPEVRA LIDWIRRNKFVLSGNLHGGSVVASYPFDDSPEHKTTGIYSKTSDDEVFRYLAKAYASNHP IMRTGEPHCPGDEEETFKDGITNGAHWYDVEGGMQDYNYVWANCFEITLELSCCKYPPAS OLROEWENNRESLITLIEKVHIGIKGFVKDSVTGSGLENATISVAGINHNITTGRFGDFH RLLIPGSYNLTAVSPGYMPLTINNIVVKEGPATEIDFSLQPTVMSVVPDSTEAVTTPGTV AVPNIPPGTPSSHOPIOPKDFHHHHFPDMEIFLRRFANEYPNITRLYSLGKSVESRELYV MEISDNPGVHEPGEPEFKYIGNMHGNEVVGRELLLNLIEYLCKNFGTDPEVTDLVRSTRI HLMPSMNPDGYEKSOEGDSISVVGRNNSNNFDLNRNFPDOFVPITDPTOPETIAVMSWVK AYPFVLSANLHGGSLVVNYPYDDNEQGVATYSKSPDDAVFQQIALSYSKENSQMFQGRPC KDMYLNEYFPHGITNGASWYNVPGGMODWNYLOTNCFEVTIELGCVKYPFEKELPKYWEO NRRSLIQFMKQVHQGVKGFVLDATDGRGILNATLSVAEINHPVTTYKAGDYWRLLVPGTY KITASARGYNPVTKNVTVRSEGAIQVNFTLVRSSTDANNESKKGKGHSTSTDDTSDPTSK EFEALIKHLSAENGLEGFMLSSSSDLALYRYHSYKDLSEFLRGLVMNYPHITNLTTLGOS VEYRHIWSLEISNKPNISEPEEPKIRFVAGIHGNAPVGTELLLALAEFLCLNYKKNPVVT OLVDRTRIVIVPSLNPDGRERAQEKDCTSKTGHTNARGRDLDTDFTSNASQPETKAIIEN LIOKODFSLSIALDGGSVLVTYPYDKPVOTVENKETLKHLASLYANNHPSMHMGOPSCPN NSDENIPGGVMRGAEWHSHLGSMKDYSVTYGHCPEITVYTSCCYFPSAAQLPALWAENKK SLLSMLVEVHKGVHGLVKDKTGKPISKAVIVLNEGIRVHTKEGGYFHVLLAPGVHNINAI ADGYOOOHSOVFVHHDAASSVVIVFDTDNRIFGLPRELVVTVSGATMSALILTACIIWCI CSIKSNRHKDGFHRLROHHDEYEDEIRMMSTGSKKSLLSHEFODETDTEEETLYSSKH >P16284

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>001151

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>Q60522

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>003696

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>0810F0

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>P27930

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>P60018

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>P35953

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ASEIQCGSGECIHKKWRCDGDPDCKDGSDEVNCPSRTCRPDQFECEDGSCIHGSRQCNGI
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QKLFWADVSQKAIFSASIDDKVGRHVKMIDNVYNPAAIAVDWVYKTIYWTDAASRTISVA
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DGENEAVYGANKFTGSELATLVNNLNDAQDIIVYHELVQPSGKNWCEEDMENGGCEYLCL
PAPQINEHSPKYTCSCPNGYHLEENGRECQSTATTVTYSETKDTNTTEISPTSGLVPGEI
NVTTAVSEVSVPPKGTSAAWAILPLLLLAMAAVGGYLMWRNWQHKNMKSMNFDNPVYLKT
TEEDLSIDIGRHSASVGHTYPAISVVSTDDDLA

MDKVWWHTAWGLLCLLQLSLAQQQIDLNITCRYAGVFHVEKNGRYSISRTEAADLCEAFN TTLPTMAQMELALRKGFETCRYGFIEGHVVIPRIHPNAICAANNTGVYILLASNTSHYDT YCFNASAPLEEDCTSVTDLPNSFDGPVTITIVNRDGTRYSKKGEYRTHQEDIDASNIIDE DVSSGSTIEKSTPEGYILHTDLPTSQPTGDRDDAFFIGSTLATIATTPWVSAHTKQNQER TQWNPIHSNPEVLLQTTTRMTDIDRNSTSAHGENWTQEPQPPFNNHEYQDEEETPHATST TWADPNSTTEEAATQKEKWFENEWQGKNPPTPSEDSHVTEGTTASAHNNHPSQRMTTQSQ EDVSWTDFFDPISHPMGQGHQTESKGHSSGNQDSGVTTTSGPARRPQIPEWLIILASLLA LALILAVCIAVNSRRRCGQKKKLVINSGNGTVEDRKPSELNGEASKSQEMVHLVNKEPTE TPDQFMTADETRNLQSVDMK

>P16297

>P26051

MATIALPWSLSLYVFLLLLATPWASAAVKNCSHLECFYNSRANVSCMWSHEEALNVTTCH VHAKSNLRHWNKTCELTLVRQASWACNLILGSFPESQSLTSVDLLDINVVCWEEKGWRRV KTCDFHPFDNLRLVAPHSLQVLHIDTQRCNISWKVSQVSHYIEPYLEFEARRRLLGHSWE DASVLSLKQRQQWLFLEMLIPSTSYEVQVRVKAQRNNTGTWSPWSQPLTFRTRPADPMKE ILPMSWLRYLLLVLGCFSGFFSCVYILVKCRYLGPWLKTVLKCHIPDPSEFFSQLSSQHG GDLQKWLSSPVPLSFFSPSGPAPEISPLEVLDGDSKAVQLLLLQKDSAPLPSPSGHSQAS CFTNQGYFFFHLPNALEIESCQVYFTYDPCVEEEVEEDGSRLPEGSPHPPLLPLAGEQDD YCAFPPRDDLLLFSPSLSTPNTAYGGSRAPEERSPLSLHEGLPSLASRDLMGLQRPLERM PEGDGEGLSANSSGEQASVPEGNLHGQDQDRGQGPILTLNTDAYLSLQELQAQDSVHLI

MECFIMLGADARTLMRVTLLLLWLKALPSLIDLSQTGSTQYLSSPEVVIPLKVTSRARGA KNSEWLSYSLVFGGRRHVVHMRVKKLLVSTHIPVLTYTEEHTPLSDYPFVPSDCYYHGYV EGALESLVAFSACNGGLQGVLQMNGFSYEIEPIKHSSTFEHLVYTLNNNKTQFPPMLCSL TEKRLLYQPFGVEEAKKSAMKQNYGKLWPHMWFLELAVVVDYGFFTNAQQNLSKVRGDVV LVVNMVDSMYKPLDTYVTLVGIEIWNRGNVLPMENIHQVLEDFSHWKQISLSQVHHDAAH IFIRSSLISVLGIAYIAGICRPPLDCGVENFQGDAWSLFANTVAHELGHTFGMKHDEESC SCGKSGCVMSTFRVPAERFTNCSYSDFMKTTLNQGTCLYNHPRPGAGFLVKRCGNGMVES EEECDCGSVQECEQDPCCFLNCTLRPAAACSFGLCCKDCKFMLLGELCRPKINECDLPEW CNGTSHQCPEDGYVQDGVPCGAGAYCYQKQCNNHDQQCREIFGKGARSASHNCYKEINLQ GNRFGHCGTDGTVFLKCRMSDVFCGKVHCENVEDIHHPQAPYVLQNIYANGITCWSTGHC LGMGVPDVGEVKDGTTCGVGKICLHKKCVSLSVLSNACLPETCNRKGVCNNKHHCHCDYG WSPPFCLHRGYGGSIDSGPTSQKRRVIITVLSITVPVLSILICLLIAGLYRIYCKIPSGP KETKASSPG

>061190

MAPCVAGWLGGFLLVPALGMIPPPEKVRMNSVNFKNILQWEVPAFPKTNLTFTAQYESYR SFQDHCKRTASTQCDFSHLSKYGDYTVRVRAELADEHSEWVNVTFCPVEDTIIGPPEMQI ESLAESLHLRFSAPQIENEPETWTLKNIYDSWAYRVQYWKNGTNEKFQVVSPYDSEVLRN LEPWTTYCIQVQGFLLDQNRTGEWSEPICERTGNDEITPSWIVAIILIVSVLVVFLFLLG CFVVLWLIYKKTKHTFRSGTSLPQHLKEFLGHPHHSTFLLFSFPPPEEAEVFDKLSIISE ESEGSKQSPEDNCASEPPSDPGPRELESKDEAPSPPHDDPKLLTSTSEV >P01730

MNRGVPFRHLLLVLQLALLPAATQGKKVVLGKKGDTVELTCTASQKKSIQFHWKNSNQIK ILGNQGSFLTKGPSKLNDRADSRRSLWDQGNFPLIIKNLKIEDSDTYICEVEDQKEEVQL LVFGLTANSDTHLLQGQSLTLTLESPPGSSPSVQCRSPRGKNIQGGKTLSVSQLELQDSG TWTCTVLQNQKKVEFKIDIVVLAFQKASSIVYKKEGEQVEFSFPLAFTVEKLTGSGELWW QAERASSSKSWITFDLKNKEVSVKRVTQDPKLQMGKKLPLHLTLPQALPQYAGSGNLTLA LEAKTGKLHQEVNLVVMRATQLQKNLTCEVWGPTSPKLMLSLKLENKEAKVSKREKAVWV LNPEAGMWQCLLSDSGQVLLESNIKVLPTWSTPVQPMALIVLGGVAGLLLFIGLGIFFCV RCRHRRQAERMSQIKRLLSEKKTCQCPHRFQKTCSPI

>Q28173

MAAGAVVGAWMLVLSLGGTVTGDQNITARIGKPLVLNCKGAPKKPPQQLEWKLNTGRTEA
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MLRTSGLALLALVSAVGPSOASGFTEKGLSLLGYOLCSHRVTHTVOKVEAVOTSYTSYVS CGGWIPWRRCPKMVYRTQYLVVEVPESRNVTDCCEGYEQLGLYCVLPLNQSGQFTSRPGA CPAEGPEPSTSPCSLDIDCPGLEKCCPWSGGRYCMAPAPOAPERDPVGSWYNVTILVKMD FKELQQVDPRLLNHMRLLHSLVTSALQPMASTVHHLHSAPGNASTTVSRLLLGLPRPLPV ADVSTLLGDIAKRVYEVISVOVODVNECFYEELNACSGRELCANLEGSYWCVCHOEAPAT SPRKLNLEWEDCPPVSDYVVLNVTSDSFQVSWRLNSTQNHTFHVRVYRGMELLRSARTQS QALAVAGLEAGVLYRVKTSYQGCGADVSTTLTIKTNAQVFEVTIKIVNHNLTEKLLNRSS VEYQDFSRQLLHEVESSFPPVVSDLYRSGKLRMQIVSLQAGSVVVRLKLTVQDPGFPMGI STLAPILQPLLASTVFQIDRQGTRVQDWDECVDSAEHDCSPAAWCINLEGSYTCQCRTTR DATPSRAGRACEGDLVSPMGGGLSAATGVTVPGLGTGTAALGLENFTLSPSPGYPOGTPA AGOAWTPEPSPRRGGSNVVGYDRNNTGKGVEOELOGNSIMEPPSWPSPTEDPTGHFLWHA TRSTRETLLNPTWLRNEDSGPSGSVDLPLTSTLTALKTPACVPVSIGRIMVSNVTSTGFH LAWEADLAMDSTFOLTLTSMWSPAVVLETWNTSVTLSGLEPGVLHLVEIMAKACGKEGAR AHLKVRTAARKLIGKVRIKNVRYSESFRNASSQEYRDFLELFFRMVRGSLPATMCQHMDA GGVRMEVVSVTNGSIVVEFHLLIIADVDVQEVSAAFLTAFQTVPLLEVIRGDTFIQDYDE CERKEDDCVPGTSCRNTLGSFTCSCEGGAPDFPVEYSERPCEGDSPGNETWATSPERPLT TAGTKAAFVOGTSPTPOGLPORLNLTGAVRVLCEIEKVVVAIOKRFLOOESIPESSLYLS HPSCNVSHSNGTHVLLEAGWSECGTLMQSNMTNTVVRTTLRNDLSQEGIIHHLKILSPIY CAFONDLLTSSGFTLEWGVYTIIEDLHGAGNFVTEMOLFIGDSPIPONYSVSASDDVRIE VGLYRQKSNLKVVLTECWATPSSNARDPITFSFINNSCPVPNTYTNVIENGNSNKAQFKL RIFSFINDSIVYLHCKLRVCMESPGATCKINCNNFRLLONSETSATHOMSWGPLIRSEGE PPHAEAGLGAGYVVLIVVAIFVLVAGTATLLIVRYQRMNGRYNFKIQSNNFSYQVFYE

MEPRLLMLGFLSLTIVPSCRAELCLYDPPEVPNATFKALSYKNGTILNCECKRGFRRLKE LVYMRCLGNSWSSNCQCTSNSHDKSRKQVTAQLEHQKEQQTTTDMQKPTQSMHQENLTGH CREPPPWKHEDSKRIYHFVEGQSVHYECIPGYKALQRGPAISICKMKCGKTGWTQPQLTC VDEREHRFLASEESQGSRNSSPESETSCPITTTDFPQPTETTAMTETFVLTMEYKVAVA SCLFLLISILLLSGLTWQHRWRKSRRTI

>05DID3

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KIEVGLHRQKSSLKVVLTECWATPSSNAKDPVTFSFINNSCPVPNTYTSVIQNGHSSKAQ
FKLRIFSFINNSIVYLHCKLRVCMENPRNSCRISCNDFRSLRSSEALHQMTWGPLHRTEG
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>Q8TD46

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>P34082

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>P13102

MDIRPIIISLLISTCVQADRICVGYLSTNSTEKVDTLLENDVPVTSSIDLVETNHTGTYC SLDGISPVHLGDCSFEGWIVGNPACTSNFGIREWSYLIEDPSAPHGLCYPGELDNNGELR HLFSGIRSFSRTELIAPTSWGEVNDGATSACRDNTGTNSFYRNLVWFVKKGNSYPVISRT YNNTTGRDVLVMWGLHHPVSTDETKSLYVNSDPYTLVSTSSWSKKYKLETGVRPGYNGQR SWMKIYWVLMHPGESITFESNGGLLAPRYGYIIEEYGKGRIFQSPIRIARCNTRCQTSVG GINTNKTFQNIERNALGNCPKYIKSGQLKLATGLRNVPAISNRGLFGAIAGFIEGGWPGL INGWYGFQHQNEQGVGIAADKESTQKAIDQITTKINNIIDKMNGNYDSIRGEFSQVEQRI NMLADRIDDAVTDVWSYNAKLLVLLENDKTLDMHDANVRNLHEQVRRTLKANAIDEGNGC FELLHKCNDSCMDTIRNGTYNHAEYAEESKLKRQEIEGIKLKSEDNVYKALSIYSCIASS VVLVGLILAFIMWACSSGNCRFNVCI

>P11362

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GPDNLPYVQILKTAGVNTTDKEMEVLHLRNVSFEDAGEYTCLAGNSIGLSHHSAWLTVLE
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STLTISNIVRADFQTIYNCTAWNSFGSDTEIIRLKEQGSEMKSGAGLEAESVPMAVIIGV AVGAGVAFLVLMATIVAFCCARSQRNLKGVVSAKNDIRVEIVHKEPSSGREAEDHTTIKQ LMMDRGEFQQDSVLKQLEVLKEEEKEFQNLKDPTNGYYSVNTFKEHHSTPTISLSSCQPD LRPTGKQRVPTGMSFTNIYSTLSGQGRLYDYGQRFVLGMGSSSIELCEREFQRGSLSDSS SFLDTQCDSSVSSSGKQDGYVQFDKASKASASSSHHSQSSSQNSDPSRPLQRRMQTHV

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>Q8WWG9

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>035464

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TKIAVDNAAGPYQNHTVVFLGSEKGIILKFLARIGSSGFLNGSLFLEEMNVYNPEKCSYD GVEDKRIMGMQLDRASGSLYVAFSTCVIKVPLGRCERHGKCKKTCIASRDPYCGWVRESG SCAHLSPLSRLTFEQDIERGNTDGLGDCHNSFVALNGHASSLYPSTTTSDSASRDGYESR GGMLDWNDLLEAPGSTDPLGAVSSHNHQDKKGVIRESYLKSNDQLVPVTLLAIAVILAFV MGAVFSGIIVYCVCDHRRKDVAVVQRKEKELTHSRRGSMSSVTKLSGLFGDTQSKDPKPE AILTPLMHNGKLATPSNTAKMLIKADQHHLDLTALPTPESTPTLQQKRKPNRGSREWERN QNIINACTKDMPPMGSPVIPTDLPLRASPSHIPSVVVLPITQQGYQHEYVDQPKMSEVVA QMALEDQAATLEYKTIKEHLSSKSPNHGVNLVENLDSLPPKVPQREASLGPPGTSLSQTG LSKRLEMQHSSSYGLEYKRSYPTNSLTRSHQTTTLKRNNTNSSNSSHLSRNQSFGRGDNP PPAPQRVDSIQVHSSQPSGQAVTVSRQPSLNAYNSLTRSGLKRTPSLKPDVPPKPSFAPL STSMKPNDACT

>062151

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>P12314

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ISVTVKELFPAPVLNASVTSPLLEGNLVTLSCETKLLLQRPGLQLYFSFYMGSKTLRGRN
TSSEYQILTARREDSGLYWCEAATEDGNVLKRSPELELQVLGLQLPTPVWFHVLFYLAVG
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LOEGVHRKEPOGAT

>P20333

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>064695

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>P12319

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>P19941

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MTQQAVLALLLTLAGILPGPLDAQDVHQSPRLTIASEGDSVNITCSTRGHLEGILMKKIW PQAYNVIYFEDRQEPTVDRTFSGRINFSGSQKNLTITISSLQLADTGDYTCEAVRKVSAR GLFTTVVVKEKSSQEAYRSQEPLQTSFSFPAAIAVGFFFTGLLLGVVCSMLRKIQIKKLC ASGIKESPCVVYEDMSYSNRKTPCIPNQYQ

>Q13634

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VTATDADDPTYGNSARVVYSILQGQPYFSVDPKTGVIRTALHNMDREAREHYSVVIQAKD
MAGQVGGLSGSTTVNITLTDVNDNPPRFPQKHYQLYVPESAQVGSAVGKIKANDADTGSN
ADMTYSIINGDGMGIFSISTDKETREGILSLKKPLNYEKKKSYTLNIEGANTHLDFRFSH
LGPFKDATMLKIIVGDVDEPPLFSMPSYLMEVYENAKIGTVVGTVLAQDPDSTNSLVRYF
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VNDNPPELAREYDIIVCENSKPGQVIHTISATDKDDFANGPRFNFFLDERLPVNPNFTLK
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HAEAFLSSAGLSTGALIAILLCVLILLAIVVLFITLRRSKKEPLIISEEDVRENVVTYDD
EGGGEEDTEAFDITALRNPSAAEELKYRRDIRPEVKLTPRHQTSSTLESIDVQEFIKQRL
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YGEIESERTT

>006418

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>Q06274

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DENFLTLFFNAQNLGGGAYEAELYVTLPPEAEYSGIVRNNEHLLILPCAYEMENQTRLVI CDLGNPMKAGASLAGGLRFTVPHLRDSSHKVQFDFQIRSKNQNNSQSETVHLALNVEAHS TVSFFGASKPDSVIFPVANWKPGRNPVTGQEAGPEVKHVYELVNFGPSSISQGILELRCP MRVNKEYAMYVMSYAVQGLTNCTSNHPANALHLQHSPTDHPPTLNPKTVHHVERRDTARL ISGSSNVLKCNEPHVDCFHLHCDVGPLEKQKRAILRVNFLVWANTFMQKENQGFTLQCDA LYHIQKLPYKILPHVYPKGTHQVDTAIHWAKPESSYGVPLWIIILAILIGLLLLALLIYV LYKLGFFKRSYQYGTAMEKAELKPQAASEA

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DSTGSEKDDLYPNGSGNGSAESSHFFAYLVTAAILVAVLYIAHHNKRKIIAFVLEGKRSK
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>P05106

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>P01903

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>P11528

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>P10586

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VKTLRTQRPAMVQTEDQYQLCYRAALEYLGSFDHYAT

MLYQLSKATTRIRLKRQKAVPQHRWLWSLAFLAAFTLKDVRCADLAISIPNNPGLDDGAS YRLDYSPPFGYPEPNTTIASREIGDEIOFSRALPGTKYNFWLYYTNFTHHDWLTWTVTIT TAPDPPSNLSVOVRSGKNAIILWSPPTOGSYTAFKIKVLGLSEASSSYNRTFOVNDNTFO HSVKELTPGATYQVQAYTIYDGKESVAYTSRNFTTKPNTPGKFIVWFRNETTLLVLWQPP YPAGIYTHYKVSIEPPDANDSVLYVEKEGEPPGPAQAAFKGLVPGRAYNISVQTMSEDEI SLPTTAOYRTVPLRPLNVTFDRDFITSNSFRVLWEAPKGISEFDKYOVSVATTRROSTVP RSNEPVAFFDFRDIAEPGKTFNVIVKTVSGKVTSWPATGDVTLRPLPVRNLRSINDDKTN TMIITWEADPASTODEYRIVYHELETFNGDTSTLTTDRTRFTLESLLPGRNYSLSVQAVS KKMESNETSIFVVTRPSSPIIEDLKSIRMGLNISWKSDVNSKQEQYEVLYSRNGTSDLRT OKTKESRLVIKNLOPGAGYELKVFAVSHDLRSEPHAYFOAVYPNPPRNMTIETVRSNSVL VHWSPPESGEFTEYSIRYRTDSEQQWVRLPSVRSTEADITDMTKGEKYTIQVNTVSFGVE SPVPQEVNTTVPPNPVSNIIQLVDSRNITLEWPKPEGRVESYILKWWPSDNPGRVQTKNV SENKSADDLSTVRVLIGELMPGVOYKFDIOTTSYGILSGITSLYPRTMPLIOSDVVVANG EKEDERDTITLSYTPTPOSSSKFDIYRFSLGDAEIRDKEKLANDTDRKVTFTGLVPGRLY NITVWTVSGGVASLPIQRQDRLYPEPITQLHATNITDTEISLRWDLPKGEYNDFDIAYLT ADNLLAONMTTRNEITISDLRPHRNYTFTVVVRSGTESSVLRSSSPLSASFTTNEAVPGR VERFHPTDVQPSEINFEWSLPSSEANGVIRQFSIAYTNINNLTDAGMQDFESEEAFGVIK NLKPGETYVFKIQAKTAIGFGPEREYRQTMPILAPPRPATQVVPTEVYRSSSTIQIRFRK NYFSDONGOVRMYTIIVAEDDAKNASGLEMPSWLDVOSYSVWLPYOAIDPYYPFENRSVE DFTIGTENCDNHKIGYCNGPLKSGTTYRVKVRAFTGADKFTDTAYSFPIOTDODNTSLIV AITVPLTIILVLLVTLLFYKRRRNNCRKTTKDSRANDNMSLPDSVIEQNRPILIKNFAEH ${\tt YRLMSADSDFRFSEEFEELKHVGRDQPCTFADLPCNRPKNRFTNILPYDHSRFKLQPVDD}$ DEGSDYINANYVPGHNSPREFIVTOGPLHSTRDDFWRMCWESNSRAIVMLTRCFEKGREK CDOYWPNDTVPVFYGDIKVOILNDSHYADWVMTEFMLCRGSEQRILRHFHFTTWPDFGVP NPPQTLVRFVRAFRDRIGAEQRPIVVHCSAGVGRSGTFITLDRILQQINTSDYVDIFGIV YAMRKERVWMVQTEQQYICIHQCLLAVLEGKENIVGPAREMHDNEGYEGQQVQLDENGDV VATIEGHLSHHDLQQAEAEAIDDENAAILHDDQQPLTSSFTGHHTHMPPTTSMSSFGGGG GGHTNVDAPDR

>P27039

>P35992

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>P15813

MGCLLFLLLWALLQAWGSAEVPQRLFPLRCLQISSFANSSWTRTDGLAWLGELQTHSWSN

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>P26094

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>P16471

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>P09258

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>Q62170

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>09JJV7

 ${\tt METSNGTETWYKSLHAVLKALNTTLHSHLLCRPGPGPGSGTGPDNQTEDHRASLPGRNDN}\\ {\tt SYMYILFVMFLFAVTVGSLILGYTRSRKVDKRSDPYHVYIKNRVSMI}$

>Q01344

MIIVAHVLLILLGATEILQADLLPDEKISLLPPVNFTIKVTGLAQVLLQWKPNPDQEQRN VNLEYQVKINAPKEDDYETRITESKCVTILHKGFSASVRTILQNDHSLLASSWASAELHA PPGSPGTSIVNLTCTTNTTEDNYSRLRSYQVSLHCTWLVGTDAPEDTQYFLYYRYGSWTE ECQEYSKDTLGRNIACWFPRTFILSKGRDWLAVLVNGSSKHSAIRPFDQLFALHAIDQIN PPLNVTAEIEGTRLSIQWEKPVSAFPIHCFDYEVKIHNTRNGYLQIEKLMTNAFISIIDD LSKYDVQVRAAVSSMCREAGLWSEWSQPIYVGNDEHKPLREWFVIVIMATICFILLILSL ICKICHLWIKLFPPIPAPKSNIKDLFVTTNYEKAGSSETEIEVICYIEKPGVETLEDSVF

>094856

MAROPPPPWVHAAFLLCLLSLGGAIEIPMDPSIONELTOPPTITKOSAKDHIVDPRDNIL IECEAKGNPAPSFHWTRNSRFFNIAKDPRVSMRRRSGTLVIDFRSGGRPEEYEGEYQCFA RNKFGTALSNRIRLOVSKSPLWPKENLDPVVVOEGAPLTLOCNPPPGLPSPVIFWMSSSM EPITQDKRVSQGHNGDLYFSNVMLQDMQTDYSCNARFHFTHTIQQKNPFTLKVLTTRGVA ERTPSFMYPOGTASSOMVLRGMDLLLECIASGVPTPDIAWYKKGGDLPSDKAKFENFNKA LRITNVSEEDSGEYFCLASNKMGSIRHTISVRVKAAPYWLDEPKNLILAPGEDGRLVCRA NGNPKPTVOWMVNGEPLOSAPPNPNREVAGDTIIFRDTOISSRAVYOCNTSNEHGYLLAN AFVSVLDVPPRMLSPRNQLIRVILYNRTRLDCPFFGSPIPTLRWFKNGQGSNLDGGNYHV YENGSLEIKMIRKEDOGIYTCVATNILGKAENOVRLEVKDPTRIYRMPEDOVARRGTTVO LECRVKHDPSLKLTVSWLKDDEPLYIGNRMKKEDDSLTIFGVAERDQGSYTCVASTELDQ DLAKAYLTVLADQATPTNRLAALPKGRPDRPRDLELTDLAERSVRLTWIPGDANNSPITD YVVQFEEDQFQPGVWHDHSKYPGSVNSAVLRLSPYVNYQFRVIAINEVGSSHPSLPSERY RTSGAPPESNPGDVKGEGTRKNNMEITWTPMNATSAFGPNLRYIVKWRRRETREAWNNVT VWGSRYVVGOTPVYVPYEIRVQAENDFGKGPEPESVIGYSGEDYPRAAPTEVKVRVMNST AISLOWNRVYSDTVOGOLREYRAYYWRESSLLKNLWVSOKROOASFPGDRLRGVVSRLFP YSNYKLEMVVVNGRGDGPRSETKEFTTPEGVPSAPRRFRVROPNLETINLEWDHPEHPNG IMIGYTLKYVAFNGTKVGKQIVENFSPNQTKFTVQRTDPVSRYRFTLSARTQVGSGEAVT EESPAPPNEATPTAAPPTLPPTTVGATGAVSSTDATAIAATTEATTVPIIPTVAPTTIAT TTTVATTTTTAAATTTTESPPTTTSGTKIHESAPDEOSIWNVTVLPNSKWANITWKHNF GPGTDFVVEYIDSNHTKKTVPVKAQAQPIQLTDLYPGMTYTLRVYSRDNEGISSTVITFM TSTAYTNNOADIATOGWFIGLMCAIALLVLILLIVCFIKRSRGGKYPVREKKDVPLGPED PKEEDGSFDYSDEDNKPLQGSQTSLDGTIKQQESDDSLVDYGEGGEGQFNEDGSFIGQYT VKKDKEETEGNESSEATSPVNAIYSLA

>Q9UK23

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GYLSEEEVLDTENPFVQLLSGVVWLIRNGSIYINESQATECDETQETGSFSKFVNVISAR
TAIGHDRKGQLVLFHADGHTEQRGINLWEMAEFLLKQDVVNAINLDGGGSATFVLNGTLA
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DCGPSNCSQHGLCTETGCRCDAGWTGSNCSEECPLGWHGPGCQRRCKCEHHCPCDPKTGN
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RLHGDYAYHPLQEMNGEPLAAEKEQPGGAHNPFKD
>P22897

MRLPLLLVFASVIPGAVLLLDTROFLIYNEDHKRCVDAVSPSAVOTAACNODAESOKFRW VSESQIMSVAFKLCLGVPSKTDWVAITLYACDSKSEFQKWECKNDTLLGIKGEDLFFNYG NROEKNIMLYKGSGLWSRWKIYGTTDNLCSRGYEAMYTLLGNANGATCAFPFKFENKWYA DCTSAGRSDGWLWCGTTTDYDTDKLFGYCPLKFEGSESLWNKDPLTSVSYQINSKSALTW HQARKSCQQQNAELLSITEIHEQTYLTGLTSSLTSGLWIGLNSLSFNSGWQWSDRSPFRY LNWLPGSPSAEPGKSCVSLNPGKNAKWENLECVQKLGYICKKGNTTLNSFVIPSESDVPT HCPSQWWPYAGHCYKIHRDEKKIQRDALTTCRKEGGDLTSIHTIEELDFIISQLGYEPND ELWIGLNDIKIOMYFEWSDGTPVTFTKWLRGEPSHENNROEDCVVMKGKDGYWADRGCEW PLGYICKMKSRSQGPEIVEVEKGCRKGWKKHHFYCYMIGHTLSTFAEANQTCNNENAYLT TIEDRYEOAFLTSFVGLRPEKYFWTGLSDIOTKGTFOWTIEEEVRFTHWNSDMPGRKPGC VAMRTGIAGGLWDVLKCDEKAKFVCKHWAEGVTHPPKPTTTPEPKCPEDWGASSRTSLCF KLYAKGKHEKKTWFESRDFCRALGGDLASINNKEEQQTIWRLITASGSYHKLFWLGLTYG SPSEGFTWSDGSPVSYENWAYGEPNNYQNVEYCGELKGDPTMSWNDINCEHLNNWICQIQ KGQTPKPEPTPAPQDNPPVTEDGWVIYKDYQYYFSKEKETMDNARAFCKRNFGDLVSIQS ESEKKFLWKYVNRNDAQSAYFIGLLISLDKKFAWMDGSKVDYVSWATGEPNFANEDENCV TMYSNSGFWNDINCGYPNAFICORHNSSINATTVMPTMPSVPSGCKEGWNFYSNKCFKIF GFMEEERKNWOEARKACIGFGGNLVSIONEKEOAFLTYHMKDSTFSAWTGLNDVNSEHTF LWTDGRGVHYTNWGKGYPGGRRSSLSYEDADCVVIIGGASNEAGKWMDDTCDSKRGYICQ TRSDPSLTNPPATIQTDGFVKYGKSSYSLMRQKFQWHEAETYCKLHNSLIASILDPYSNA FAWLQMETSNERVWIALNSNLTDNQYTWTDKWRVRYTNWAADEPKLKSACVYLDLDGYWK TAHCNESFYFLCKRSDEIPATEPPQLPGRCPESDHTAWIPFHGHCYYIESSYTRNWGQAS LECLRMGSSLVSIESAAESSFLSYRVEPLKSKTNFWIGLFRNVEGTWLWINNSPVSFVNW NTGDPSGERNDCVALHASSGFWSNIHCSSYKGYICKRPKIIDAKPTHELLTTKADTRKMD PSKPSSNVAGVVIIVILLILTGAGLAAYFFYKKRRVHLPQEGAFENTLYFNSQSSPGTSD MKDLVGNIEONEHSVI

>P36941

MLLPWATSAPGLAWGPLVLGLFGLLAASQPQAVPPYASENQTCRDQEKEYYEPQHRICCS RCPPGTYVSAKCSRIRDTVCATCAENSYNEHWNYLTICQLCRPCDPVMGLEEIAPCTSKR KTQCRCQPGMFCAAWALECTHCELLSDCPPGTEAELKDEVGKGNNHCVPCKAGHFQNTSS PSARCQPHTRCENQGLVEAAPGTAQSDTTCKNPLEPLPPEMSGTMLMLAVLLPLAFFLLL ATVFSCIWKSHPSLCRKLGSLLKRRPQGEGPNPVAGSWEPPKAHPYFPDLVQPLLPISGD VSPVSTGLPAAPVLEAGVPQQQSPLDLTREPQLEPGEQSQVAHGTNGIHVTGGSMTITGN IYIYNGPVLGGPPGPGDLPATPEPPYPIPEEGDPGPPGLSTPHQEDGKAWHLAETEHCGA TPSNRGPRNOFITHD

>P27041

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>09Z0F8

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>P32803

MASFATKFVIACFLFFSASAHNVLLPAYGRRCFFEDLSKGDELSISFQFGDRNPQSSSQL TGDFIIYGPERHEVLKTVRDTSHGEITLSAPYKGHFQYCFLNENTGIETKDVTFNIHGVV YVDLDDPNTNTLDSAVRKLSKLTREVKDEQSYIVIRERTHRNTAESTNDRVKWWSIFQLG VVIANSLFQIYYLRRFFEVT

>P16621

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LTPHAIYTVRVQAYTSMGAGPMSTPVQVKAQQGVPSQPSNFRATDIGETAVTLQWTKPTH SSENIVHYELYWNDTYANOAHKRISNSEAYTLDGLYPDTLYYIWLAARSORGEGATTPP IPVRTKQYVPGAPPRNITAIATSSTTISLSWLPPPVERSNGRIIYYKVFFVEVGREDDEA TTMTLNMTSIVLDELKRWTEYKIWVLAGTSVGDGPRSHPIILRTOEDVPGDPODVKATPL NSTSIHVSWKPPLEKDRNGIIRGYHIHAQELRDEGKGFLNEPFKFDVVDTLEFNVTGLQP DTKYSIOVAALTRKGDGDRSAAIVVKTPGGVPVRPTVSLKIMEREPIVSIELEWERPAOT YGELRGYRLRWGVKDQALKEEMLSGPQMTKKRFDNLERGVEYEFRVAGSNHIGIGQETVK IFOTPEGTPGGPPSNITIRFOTPDVLCVTWDPPTREHRNGIITRYDVOFHKKIDHGLGSE RNMTLRKAVFTNLEENTEYIFRVRAYTKQGAGPFSDKLIVETERDMGRAPMSLQAEATSE OTAEIWWEPVTSRGKLLGYKIFYTMTAVEDLDDWOTKTVGLTESADLVNLEKFAOYAVAI AARFKNGLGRLSEKVTVRIKPEDVPLNLRAHDVSTHSMTLSWSPPIRLTPVNYKISFDAM KVFVDSQGFSQTQIVPKREIILKHYVKTHTINELSPFTTYNVNVSAIPSDYSYRPPTKIT VTTQMAAPQPMVKPDFYGVVNGEEILVILPQASEEYGPISHYYLVVVPEDKSNLHKIPDQ FLTDDLLPGRNKPERPNAPYIAAKFPORSIPFTFHLGSGDDYHNFTNRKLEREKRYRIFV RAVVDTPOKHLYTSSPFSEFLSLDMREAPPGERPHRPDPNWPAEPEVSVNRNKDEPEILW VVLPLMVSTFIVSTALIVLCVVKRRROPCKTPDQAAVTRPLMAADLGAGPTPSDPVDMRR LNFOTPGMISHPPIPISEFANHIERLKSNDNOKFSOEYESIEPGOOFTWDNSNLEHNKSK NRYANVTAYDHSRVQLPAVEGVVGSDYINANYCDGYRKHNAYVATQGPLQETFVDFWRMC WELKTATIVMMTRLEERTRIKCDQYWPTRGTETYGQIFVTITETQELATYSIRTFQLCRQ GFNDRREIKOLOFTAWPDHGVPDHPAPFLOFLRRCRALTPPESGPVIVHCSAGVGRTGCY IVIDSMLERMKHEKIIDIYGHVTCLRAQRNYMVQTEDQYIFIHDAILEAIICGVTEVPAR NLHTHLOKLLITEPGETISGMEVEFKKLSNVKMDSSKFVTANLPCNKHKNRLVHILPYES SRVYLTPIHGIEGSDYVNASFIDGYRYRSAYIAAQGPVQDAAEDFWRMLWEHNSTIVVML TKLKEMGREKCFQYWPHERSVRYQYYVVDPIAEYNMPQYKLREFKVTDARDGSSRTVRQF QFIDWPEQGVPKSGEGFIDFIGQVHKTKEQFGQDGPITVHCSAGVGRSGVFITLSIVLER MQYEGVLDVFQTVRILRSQRPAMVQTEDQYHFCYRAALEYLGSFDNYTN >P25446

 $\label{thm:construction} $$\operatorname{MLWIWAVLPLVLAGSQLRVHTQGTNSISESLKLRRRVHETDKNCSEGLYQGGPFCCQPCQ}$$\operatorname{PGKKKVEDCKMNGGTPTCAPCTEGKEYMDKNHYADKCRRCTLCDEEHGLEVETNCTLTQN}$$\operatorname{TKCKCKPDFYCDSPGCEHCVRCASCEHGTLEPCTATSNTNCRKQSPRNRLWLLTILVLLI}$\operatorname{PLVFIYRKYRKRKCWKRRQDDPESRTSSRETIPMNASNLSLSKYIPRIAEDMTIQEAKKF}$\operatorname{ARENNIKEGKIDEIMHDSIQDTAEQKVQLLLCWYQSHGKSDAYQDLIKGLKKAECRRTLD}$\operatorname{KFQDMVQKDLGKSTPDTGNENEGQCLE}$

>P21303

MNKIYYILFLSAQCLVHMGKCERNQKTTRLTRSANNASLEKGPIIERSIRMSNPWKAFME KYDLERAHNSGIRIDLGEDAEVGNSKYRIPAGKCPVFGKGIVIENSNVSFLTPVATGAQR LKEGGFAFPNADDHISPITIANLKERYKENADLMKLNDIALCKTHAASFVIAEDQNTSYR HPAVYDEKNKTCYMLYLSAQENMGPRYCSPDSQNKDAMFCFKPDKNENFDNLVYLSKNVS NDWENKCPRKNLGNAKFGLWVDGNCEEIPYVNEVEARSLRECNRIVFEASASDQPRQYEE ELTDYEKIQEGFRQNNRDMIKSAFLPVGAFNSDNFKSKGRGYNWANFDSVNNKCYIFNTK PTCLINDKNFFATTALSHPQEVDNEFPCSIYKDEIEREIKKQSRNMNLYSVDKERIVLPR IFISTDKESIKCPCEPEHISNSTCNFYVCNCVEKRAEIKENNEVIIKEEFKEDYENPDGK HKKKMLLIIIGVTGAVCVVAVASLFYFRKKAQDDKYDKMDQAEAYGKTANTRKDEMLDPE ASFWGEDKRASHTTPVLMEKPYY

>P79995

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>P12342

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>P02724

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>P02725

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>P02726

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>P35070

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>P59822

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>P59824

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>Q62190

>063135

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>P97797

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>Q00716

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>P10761

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>P54753

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>P54758

>P54756

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>Q9R1V4

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>P54759

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>061460

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>014627

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>Q60750

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>060751

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>P11717

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>Q64JA4

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>094898

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>Q27591

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>Q9BZZ2

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>P43407

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>Q96PD2

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>P08641

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>P05300

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>Q9JLU8

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>P11584

>09Z2E3

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>007287

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>063315

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>003145

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>P23897

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>Q923W9

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>Q9XSL6

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>063180

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>P06126

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>003157

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>P06127

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>095866

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>061727

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>09UNN8

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>060GF7

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>P09619

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>Q9P0K1

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GDSFYSDIPPGVSTNSASSSKKRSNGLSHSWSERIPDTKHISDICENGRPRSNSWQGNLG
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LWETSI

>Q63199

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>Q9UM47

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>09HBE5

>015389

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>P33681

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>Q8GXQ3

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>P13369

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>P29016

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>P29017

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>Q9NZV1

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>P26619

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>P28078

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>064151

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>P11912

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>Q03185

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>064159

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>P47741

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>P13379

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>P29020

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>086YW5

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>Q92643

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>P17801

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>Q9HBG7

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>0810U4

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>P18466

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>P15127

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>P05362

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>P48551

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>09UM73

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>P46014

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>P18614

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>P30511

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>P16871

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>P16872

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>P30516

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>P14334

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>P70225

MSSSCSGLTRVLVAVATALVSSSSPCPQAWGPPGVQYGQPGRPVMLCCPGVSAGTPVSWF RDGDSRLLQGPDSGLGHRLVLAQVDSPDEGTYVCQTLDGVSGGMVTLKLGFPPARPEVSC QAVDYENFSCTWSPGQVSGLPTRYLTSYRKKTLPGAESQRESPSTGPWPCPQDPLEASRC VVHGAEFWSEYRINVTEVNSLGASTCLLDVRLQSILRPDPPQGLRVESVPGYPRRLHASW TYPASWRRQPHFLLKFRLQYRPAQHPAWSTVEPIGLEEVITDTVAGLPHAVRVSARDFLD AGTWSAWSPEAWGTPSTGLLQDEIPDWSQGHGQQLEAVVAQEDSLAPARPSLQPDPRPLD HRDPLEQVAVLASLGIFSCLGLAVGALALGLWLRLRRSGKEGPQKPGLLAPMIPVEKLPG IPNLQRTPENFS

>014763

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>Q95207

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VKRHQPQITGNITENFNYVIDKLIPNTNYCISVYFEPKDPRKINRSPLKCILFRPRRESE
SSEPATIGGILILFLLAAVCISTVMILKRIGYICLRNDFPEALNFYKLSVWVFPELPPLE
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DCSLEDCSLEDCSDPSAEEPYLPEPKRDAETPAAPGPGPWQSEGTGGGYQTRGTLWQDPT
SEEDSDSTEGSEGRIVFNVNLNSVCVRALEDDKDSEVTLMSPSPPEETAVLEEDLSETES
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>P43626

MSLLVVSMACVGFFLLQGAWPHEGVHRKPSLLAHPGPLVKSEETVILQCWSDVMFEHFLL HREGMFNDTLRLIGEHHDGVSKANFSISRMTQDLAGTYRCYGSVTHSPYQVSAPSDPLDI VIIGLYEKPSLSAQPGPTVLAGENVTLSCSSRSSYDMYHLSREGEAHERRLPAGPKVNGT FQADFPLGPATHGGTYRCFGSFHDSPYEWSKSSDPLLVSVTGNPSNSWPSPTEPSSKTGN PRHLHILIGTSVVIILFILLFFLLHRWCSNKKNAAVMDQESAGNRTANSEDSDEQDPQEV TYTQLNHCVFTQRKITRPSQRPKTPPTDIIVYTELPNAESRSKVVSCP >007497

MDSNADISARRVSGMDWLWLVCFFHLVTSLEEILLDTTGETSEIGWTSHPPDGWEEVSVR DDKEROIRTFOVCNMDEPGONNWLRTHFIERRGAHRVHVRLHFSVRDCASMRTVASTCKE TFTLYYHQSDVDIASQELPEWHEGPWTKVDTIAADESFSQVDRTGKVVRMNVKVRSFGPL TKHGFYLAFODSGACMSLVAVOVFFYKCPAVVKGFASFPETFAGGERTSLVESLGTCVAN AEEASTTGSSGVRLHCNGEGEWMVATGRCSCKAGYQSVDNEQACQACPIGSFKASVGDDP CLLCPAHSHAPLPLPGSIECVCOSHYYRSASDNSDAPCTGIPSAPRDLSYEIVGSNVLLT WRLPKDLGGRKDVFFNVICKECPTRSAGTCVRCGDNVQFEPRQVGLTESRVQVSNLLARV OYTFEIOAVNLVTELSSEAPOYATINVSTSOSVPSAIPMMHOVSRATSSITLSWPOPDOP NGVILDYQLRYFDKAEDEDNSFTLTSETNMATILNLSPGKIYVFQVRARTAVGYGPYSGK MYFOTLMAGEHSEMAODRLPLIVGSALGGLAFLVIAAIAILAIIFKSKRRETPYTDRLOO YISTRGLGVKYYIDPSTYEDPNEAIREFAKEIDVSFIKIEEVIGSGEFGEVCFGRLKHPG KREYTVAIKTLKSGYTDEORREFLSEASIMGOFEHPNVIHLEGVVTKSRPVMIVTEFMEN GSLDSFLROKEGOFSVLOLVGMLRGIAAGMRYLSDMNYVHRDLAARNILVNSNLVCKVSD FGLSRFLEDDASNPTYTGALGCKIPIRWTAPEAVQYRKFTSSSDVWSYGIVMWEVMSYGE RPYWDMSNQDVINAIDQDYRLPPPPDCPTVLHLLMLDCWQKDRVQRPKFEQIVSALDKMI RKPSALKATGTGSSRPSQPLLSNSPPDFPSLSNAHEWLDAIKMGRYKENFDQAGLITFDV ISRMTLEDLORIGITLVGHOKKILNSIOLMKVHLNOLEPV

>060896

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>P58335

MVAERSPARSPGSWLFPGLWLLVLSGPGGLLRAQEQPSCRRAFDLYFVLDKSGSVANNWI EIYNFVQQLAERFVSPEMRLSFIVFSSQATIILPLTGDRGKISKGLEDLKRVSPVGETYI HEGLKLANEQIQKAGGLKTSSIIIALTDGKLDGLVPSYAEKEAKISRSLGASVYCVGVLD FEQAQLERIADSKEQVFPVKGGFQALKGIINSILAQSCTEILELQPSSVCVGEEFQIVLS GRGFMLGSRNGSVLCTYTVNETYTTSVKPVSVQLNSMLCPAPILNKAGETLDVSVSFNGG KSVISGSLIVTATECSNGIAAIIVILVLLLLLGIGLMWWFWPLCCKVVIKDPPPPPAPAP KEEEEEPLPTKKWPTVDASYYGGRGVGGIKRMEVRWGDKGSTEEGARLEKAKNAVVKIPE ETEEPIRPRPPRPKPTHQPPQTKWYTPIKGRLDALWALLRRQYDRVSLMRPQEGDEVCIW ECIEKELTA

>P43630

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>P19438

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>Q9Z123

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SCVWHQPSGVTSLTPRRDGLEVVVTPGAMGAYACECQEGGAARVVAAYSLVWGSQRGPSN
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>P06332

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>Q28915

MYGKIIFVLLLSAIVSISASSTTGVAMHTSTSSSVTKSYISSQINALVEKILIILCPMAG VIGMILLIYYSIRRLIKA

>035112

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>P15306

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>P16109

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>P06340

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>061003

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>P05540

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>Q9Y336

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>P08887

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>Q8QHL3

MPROLLSGTVLLGAAFLLAGSTSGSKLKVPVLSVNGROHVVOAGOTLNLTCRGEMLHSWS LPEALSKDSKRLNVTKYACGRNGTQFCSTLTLSRTQANDTGRYSCRYPTSPVKKKRESIV YVFINDTSNPFVEMHSDIPKIIHMTVGKEMIIPCRVTAPNIAVTLKKIPRETLIPDGKTI IWDNMRGFRIPEATYRFIGLLSCETTIGGHKYSTKYLTHRETNTIFDIKLSTPRLVKLLK GDSLAINCTVKAAWNTRVOMTWTYPGEAMKRGSVTORIDOKNREANVFYSILVIDKVRDI DKGQYACHVKSGPSNKLVNTTVIVYDKRFINLKRRRKTMLEAVAGRKSYRLPMKVKAFPS PEVTWLKDGLPAAEKCARYMVKNYSLIIKDVAEEDAGNYTIILSLRQWNLSKNLTVTLKV NVKPQIYENAVSSFPDPNLYLLSSKQVLTCTVYGIPPPKITWMWYPCRQNHSKTRRGFCS RTDGSFNLKTGSNIGNRIOSIIERTAIIEGKNKTASTLVVAEAKSSGIYSCVASNKVGKA ERNVSFLVTDVPSGFHISLEKVPIEGENLVLSCSANKFMYKDISWILPRTVTNQTKARKA LNKEYSITLTLTIRNVSLAHSGTYTCRARNIFTGKEVLQKKDVSIRAQEAPALLRQLMDQ TVNTSNSAMLECQVHGIPEPQITWFKNHEEIQQESGIILGPGSRMLFIERVKEEDEGLYQ CIATNLKGSVESTAYVTVQGTVERSNLELITLTCTCVAATLFWLLLTLFIRKLKRPYFSE TKTNHYLSIIMDPDEVPLDEQCECLPYDASKWEIARERLKLGKSLGHGAFGKVVQASAFG IKKSPTCRIVAVKMLKEGATASEYKALMTELKILIHIGHHLNIVNLLGACTKNGGPLMVI VEYCKYGNLSNYLKSKRNFFSPTKDPSLQGELMKDKKGIEPVEGKKQRLASVTSSESFAS SGFQEDKSLSDAEEDEEDAAELYKLPLTMEDLISYSFQVARGMEFLSSRKCIHRDLAARN ILLSENNVVKICDFGLARDIYKNPDYVRKGDARLPLKWMAPESIFDKIYNTKSDVWSYGV LLWEIFSLGASPYPGVOIDEDFCSKLKEGTRMRAPEOATEEIYOIMLDCWRSNPNERPWF SELVKRLGDLLQASVQQEGKDYIPLDTIFTAESGFPPASDPLCNEKFPVPSPNCRSTERA RYINTFKIKPPORIKTFEELPIKEKLVFNDYOADSGMVLASEELKRFTWTGSKOKWTLFG MKGVSRSKESGLSGITKPRSFCSFSCDQLSESKRRYTYGNTVLEKMKACHSPPPDYSSVV HYSOPSI

>062802

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>Q92692

MARAAALLPSRSPPTPLLWPLLLLLLETGAQDVRVQVLPEVRGQLGGTVELPCHLLPPV
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QDATLALHGLTVEDEGNYTCEFATFPKGSVRGMTWLRVIAKPKNQAEAQKVTFSQDPTTV
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GTFPTSAVAQGSQLVIHAVDSLFNTTFVCTVTNAVGMGRAEQVIFVRETPNTAGAGATGG
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PPGPPAVEDVSLDLEDEEGEEEEEYLDKINPIYDALSYSSPSDSYQGKGFVMSRAMYV
>P20934

MEHKGQYLHLVFLMTTVWASSSSGTRPNYTHLWASSVTASGSSNQNGSSRHPSDNNTNLV TPAVGHKVSATDKPASSPPVPLASTSTLKSSTPHAFRNSSPTAEIKSQGETFKKEVCEEN TSNTAMLICLIVIAALFLICTFLFLSTVVLANKVSSLKRSKQVGKRQPRSNGDFLASSGL WTAESDTWKRAKELTGSNLLLQSPGVLTAARERKHEEGTEKLN >P05555

MTLKALLVTALALCHGFNLDTEHPMTFQENAKGFGQNVVQLGGTSVVVAAPQEAKAVNQT GALYQCDYSTSRCHPIPLQVPPEAVNMSLGLSLAVSTVPQQLLACGPTVHQNCKENTYVN GLCYLFGSNLLRPPQQFPEALRECPQQESDIVFLIDGSGSINNIDFQKMKEFVSTVMEQF KKSKTLFSLMQYSDEFRIHFTFNDFKRNPSPRSHVSPIKQLNGRTKTASGIRKVVRELFH KTNGARENAAKILVVITDGEKFGDPLDYKDVIPEADRAGVIRYVIGVGNAFNKPQSRREL DTIASKPAGEHVFQVDNFEALNTIQNQLQEKIFAIEGTQTGSTSSFEHEMSQEGFSASIT SNGPLLGSVGSFDWAGGAFLYTSKDKVTFINTTRVDSDMNDAYLGYASAVILRNRVQSLV LGAPRYQHIGLVVMFRENFGTWEPHTSIKGSQIGSYFGASLCSVDMDADGNTNLILIGAP

HYYEKTRGGQVSVCPLPRGRARWQCEALLHGDQGHPWGRFGAALTVLGDVNGDKLTDVAI GAPGEQENQGAVYIFYGASIASLSASHSHRIIGAHFSPGLQYFGQSLSGGKDLTMDGLMD LAVGAQGHLLLRAQPVLRLEATMEFSPKKVARSVFACQEQVLKNKDAGEVRVCLRVRKN TKDRLREGDIQSTVTYDLALDPVRSRIRAFFDETKNNTRRRTQVFGLMQKCETLKLILPD CVDDSVSPIILRLNYTLVGEPLRSFGNLRPVLAMDAQRFFTAMFPFEKNCGNDSICQDDL SITMSAMGLDTLVVGGPQDFNMSVTLRNDGEDSYGTQVTVYYPSGLSYRKDSASQNPLTK KPWFVKPAESSSSSEGHGALKSTTWNINHPIFPANSEVTFNVTFDVDSHASFGNKLLKA IVASENNMSRTHKTKFQLELPVKYAIYMIVTSDESSIRYLNFTASEMTSKVIQHQYQFNN LGQRSLPVSVVFWIPVQINNVTVWDHPQVIFSQNLSSACHTEQKSPPHSNFRDQLERTPV LNCSVAVCKRIQCDLPSFNTQEIFNVTLKGNLSFDWYIKTSHGHLLLVSSTEILFNDSAF ALLPGQESYVRSKTETKVEPYEVHNPVPLIVGSSIGGLVLLALITAGLYKLGFFKRQYKD MMNEAAPODA

>P20938

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>P55024

MFLFAMGLLLVILQPSTGQFPRVCANTQSLLRKECCPPWDGDGTPCGERSNRGTCQRILL SQAPLGPQFPFSGVDDREDWPSVFYNRTCRCRGNFMGFNCGECKFGFSGQNCTERRLRTR RNIFQLTISEKDKFLAYLNLAKNIPSKDYVIATGTYAQMNNGSNPMFRNINVYDLFVWMH YYASRDTLLGGSNVWRDIDFAHEAPGFLPWHRAFLLLWEREIQKITGDENFTIPYWDWRD AEDCVICTDEYMGGQHPTNPNLLSPASFFSSWQVICTQSEEYNSQQALCNATSEGPILRN PGNNDKSRTPRLPSSSEVEFCLTLTQYESGSMDKMANYSFRNTLEGFADPHTAISNISQS GLHNALHIYMNGSMSQVQGSANDPIFILHHAFVDSIFERWLRRHRPMLEVYPAANAPIGH NRENYMVPFIPLYRNGEFFISSRELGYDYEYLQEPALGSFQDFLIPYLKQAHQIWPWLVG AAVIGGIITAVLSGLILACRKKRKGTSPEIQPLLTESEDYNNVSYQSHF >P55025

MKSLFLSAVLLQFFETCWSQFPRPCANSEGLRTKECCPVWSGDGSPCGALSGRGFCADVS VSDEPNGPQYPHSGIDDRERWPLAFFNRTCRCAGNYGGFNCGECRFGYWGSNCAEYRESV RRNIMSMSTTEQQKFISYLNLAKNTINPDYVITTGTRAEMGENGESPMFSDINTYDLFVW IHYYVSRDTFLGGPGNVWRDIDFAHESAAFLPWHRVYLLHWEQEIRKITGDFNFTIPYWD WRDAQSCEVCTDNLMGGRNALNPNLISPASVFSSWKVICTQQEEYNNQEALCNATAEGPL LRNPGNHDPNRVPRIPTTADVEFTISLPEYETGSMDRFANNSFRNVLEGFASPETGMAVQ GQSTMHNALHVFMNGSMSSVQGSANDPIFLLHHAFIDSIFERWLRTHQPPRSIYPRTNAP IGHNDGYYMVPFLPLYRNGDYLLSNKALGYEYAYLLDPGQRFVQEFLTPYLQQAQQIWQW LLGAGILGALIATIVAAVIVFARRKRRNQKRKRAPSFGERQPLLQSSSEEGSSSYQTTL >014944

MTAGRRMEMLCAGRVPALLLCLGFHLLQAVLSTTVIPSCIPGESSDNCTALVQTEDNPRV AQVSITKCSSDMNGYCLHGQCIYLVDMSQNYCRCEVGYTGVRCEHFFLTVHQPLSKEYVA LTVILIILFLITVVGSTYYFCRWYRNRKSKEPKKEYERVTSGDPELPQV >Q95242

MRLRWTQGGNMWLGVLLTLQLCSSLEGQENSFTINSIHMEMLPGQEVHNGENLTLQCIVD VSTTSSVKPQHQVLFYKDDVLFHNVSSTKNTESYFISEARVYNSGRYKCTVILNNKEKTT AEYKVVVEGVSNPRVTLDKKEVIEGGVVKVTCSVPEEKPPVHFIIEKFELNVRDVKQRRE KTANNQNSVTLEFTVEEQDRVILFSCQANVIFGTRVEISDSVRSDLVTVRESFSNPKFHI SPKGVIIEGDQLLIKCTIQVTHQAQSFPEIIIQKDKEIVAHSRNGSEAVYSVMATVEHNS NYTCKVEASRISKVSSIMVNITELFSRPKLKSSATRLDQGESLRLWCSIPGAPPEANFTI QKGGMMMLQDQNLTKVASERDSGTYTCVAGIGKVVKRSNEVQIAVCEMLSKPSIFHDSGS EVIKGQTIEVSCQSINGTSPISYQLLKGSDLLASQNVSSNEPAVFKDNPTKDVEYQCIAD NCHSHAGMPSKVLRVKVIAPVEEVKLSILLSEEVESGQAIVLQCSVKEGSGPITYKFYKE KENKPFHQVTLNDTQAIWHKPKASKDQEGQYYCLASNRATPSKNFLQSNILAVRVYLAPW KKGLIAVVVIAVIIAVLLLGARFYFLKKSKAKQMPVEMCRPAAPLLNSNNEKTLSDPNTE

ANRHYGYNEDVGNHAMKPLNENKEPLTLDVEYTEVEVTSPEPHRGLGTKGTETVYSEIRK ADPDLVENRYSRTEGSLDGT

>P40321

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>P08101

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>P09848

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>043157

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>P40189

MLTLOTWVVOALFIFLTTESTGELLDPCGYISPESPVVOLHSNFTAVCVLKEKCMDYFHV NANYIVWKTNHFTIPKEOYTIINRTASSVTFTDIASLNIOLTCNILTFGOLEONVYGITI ISGLPPEKPKNLSCIVNEGKKMRCEWDGGRETHLETNFTLKSEWATHKFADCKAKRDTPT SCTVDYSTVYFVNIEVWVEAENALGKVTSDHINFDPVYKVKPNPPHNLSVINSEELSSIL KLTWTNPSIKSVIILKYNIOYRTKDASTWSOIPPEDTASTRSSFTVODLKPFTEYVFRIR CMKEDGKGYWSDWSEEASGITYEDRPSKAPSFWYKIDPSHTQGYRTVQLVWKTLPPFEAN GKILDYEVTLTRWKSHLONYTVNATKLTVNLTNDRYLATLTVRNLVGKSDAAVLTIPACD FOATHPVMDLKAFPKDNMLWVEWTTPRESVKKYILEWCVLSDKAPCITDWOOEDGTVHRT YLRGNLAESKCYLITVTPVYADGPGSPESIKAYLKQAPPSKGPTVRTKKVGKNEAVLEWD OLPVDVONGFIRNYTIFYRTIIGNETAVNVDSSHTEYTLSSLTSDTLYMVRMAAYTDEGG KDGPEFTFTTPKFAQGEIEAIVVPVCLAFLLTTLLGVLFCFNKRDLIKKHIWPNVPDPSK SHIAQWSPHTPPRHNFNSKDQMYSDGNFTDVSVVEIEANDKKPFPEDLKSLDLFKKEKIN TEGHSSGIGGSSCMSSSRPSISSSDENESSQNTSSTVQYSTVVHSGYRHQVPSVQVFSRS ESTQPLLDSEERPEDLQLVDHVDGGDGILPRQQYFKQNCSQHESSPDISHFERSKQVSSV NEEDFVRLKQQISDHISQSCGSGQMKMFQEVSAADAFGPGTEGQVERFETVGMEAATDEG MPKSYLPOTVROGGYMPO

>Q62765

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>000993

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GSDREGFPEPVVILPFMKHGDLHSFLLYSRLGDQPVFLPTQMLVKFMADIASGMEYLSTK
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TSKSDVWSFGVTMWEIATRGQTPYPGVENSEIYDYLRQGNRLKQPVDFLDGLYSLMSRCW
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>P38993

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>092854

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 ${\tt HSEKTMYLKSSDNRLLMSLFLFFFVLFLCLFFYNCYKGYLPRQCLKFRSALLIGKKKPKS} \\ {\tt DFCDREQSLKETLVEPGSFSQQNGEHPKPALDTGYETEQDTITSKVPTDREDSQRIDDLS} \\ {\tt ARDKPFDVKCELKFADSDADGD} \\$

>008481

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EFPIEAQDHVLVFRCQAGILSGFKLQESEPIRSEYVTVQESFSTPKFEIKPPGMIIEGDQ
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>P51839

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>Q9P0T7

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>Q9LYN8

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>P50895

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MSALRIWLMQALLIFLTTESIGQLVEPCGYIYPEFPVVQRGSNFTATCVLKEKCLQVYSV NATYIVWKTNHVAVPKEOVTVINRTASSVTFTDVVFONVOLTCNILSFG01EONVYGITI LSGYPPDIPTNLSCIVNEGKNMLCOLDPGRETYLETNYTLKSEWATEKFPDCRTKHGTSS CMMGYTPIYFVNIEVWVEAENALGNVSSEPINFDPVDKVKPSPPHNLSVTNSEELSSILK LAWVNSGLDSILRLKSDIOYRTKDASTWIOVPLEDTVSPRTSFTVODLKPFTEYVFRIRS IKENGKGYWSDWSEEASGTTYEDRPSKAPSFWYKVNANHPQEYRSARLIWKTLPLSEANG KILDYEVVLTOSKSVSOTYTVNGTELIVNLTNNRYVASLAARNVVGKSPATVLTIPGSHF KASHPVVDLKAFPKDNLLWVEWTPPSKPVNKYILEWCVLSENSPCIPDWQQEDGTVNRTH LRGSLLESKCYLITVTPVFPGGPGSPESMKAYLKQAAPSKGPTVRTKKVGKNEAVLEWDH LPVDVQNGFIRNYSISYRTSVGKEMVVRVDSSHTEYTLSSLSSDTLYMVHMAAYTEEGGK DGPEFTFTTLKFAQGEIEAIVVPVCLAFLLTTLLGVLFCFNKRDLIKKHIWPNVPDPSKS HIAQWSPHTPPRHNFNSKDQMYSDANFTDVSVVEIEANNKKPCPDDLKSLDLFKKEKIST EGHSSGIGGSSCMSSSRPSISSSEENESAQSTASTVQYSTVVHSGYRHQVPSVQVFSRSE STOPLLDSEERPEDLOLVDSVDSGDEILPROOYFKOSCSOPGASPDVSHFGRSSOVPSGS EEDFVRLKQQQVSDHISEPYGSEQRRLFQEGSVADALGTGTDGQIERFESVGMETAMDED ISKSYLPOTVROGGYMPO

>P32319

>P40190

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>P05710

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>Q06885

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EITT

>096P00

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>P40197

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>P40198

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>090ZM4

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>P13595

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MASTRAKPTLPLLLALVTVVIPGPGDAQVSIHPREAFLPQGGSVQVNCSSSCKEDLSLGL
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LEGLFPASEARIYLELGGQMPTQESTNSSDSVSATALVEVTEEFDRTLPLRCVLELADQI
LETQRTLTVYNFSAPVLTLSQLEVSEGSQVTVKCEAHSGSKVVLLSGVEPRPPTPQVQFT
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KCQAWGNPSPKMTCRRKADGALLPIGVVKSVKQEMNGTYVCHAFSSHGNVTRNVYLTVLY
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>P51841

MFLGLGRFSRLVLWFAAFRKLLGHHGLASAKFLWCLCLLSVMSLPOOVWTLPYKIGVVGP WACDSLFSKALPEVAARLAIERINRDPSFDLSYSFEYVILNEDCQTSRALSSFISHHQMA SGFIGPTNPGYCEAASLLGNSWDKGIFSWACVNYELDNKISYPTFSRTLPSPIRVLVTVM KYFOWAHAGVISSDEDIWVHTANRVASALRSHGLPVGVVLTTGODSOSMRKALORIHOAD RIRIIIMCMHSALIGGETOMHLLECAHDLKMTDGTYVFVPYDALLYSLPYKHTPYOVLRN NPKLREAYDAVLTITVESOEKTFYOAFTEAAARGEIPEKLEFDOVSPLFGTIYNSIYFIA QAMNNAMKENGQAGAASLVQHSRNMQFHGFNQLMRTDSNGNGISEYVILDTNLKEWELHS TYTVDMEMELLRFGGTPIHFPGGRPPRADAKCWFAEGKICHGGIDPAFAMMVCLTLLIAL LSINGFAYFIRRRINKIOLIKGPNRILLTLEDVTFINPHFGSKRGSRASVSFOITSEVOS GRSPRLSFSSGSLTPATYENSNIAIYEGDWVWLKKFSLGDFGDLKSIKSRASDVFEMMKD LRHENINPLLGFFYDSGMFAIVTEFCSRGSLEDILTNODVKLDWMFKSSLLLDLIKGMKY LHHREFVHGRLKSRNCVVDGRFVLKVTDYGFNDILEMLRLSEEESSMEELLWTAPELLRA PRGSRLGSFAGDVYSFAIIMOEVMVRGTPFCMMDLPAOEIINRLKKPPPVYRPVVPPEHA PPECLOLMKOCWAEAAEORPTFDEIFNOFKTFNKGKKTNIIDSMLRMLEOYSSNLEDLIR ERTEELEIEKQKTEKLLTQMLPPSVAESLKKGCTVEPEGFDLVTLYFSDIVGFTTISAMS EPIEVVDLLNDLYTLFDAIIGSHDVYKVETIGDAYMVASGLPKRNGSRHAAEIANMSLDI LSSVGTFKMRHMPEVPVRIRIGLHSGPVVAGVVGLTMPRYCLFGDTVNTASRMESTGLPY RIHVSLSTVTILONLSEGYEVELRGRTELKGKGTEETFWLIGKKGFMKPLPVPPPVDKDG QVGHGLQPVEIAAFQRRKAERQLVRNKP

>P26842

MARPHPWWLCVLGTLVGLSATPAPKSCPERHYWAQGKLCCQMCEPGTFLVKDCDQHRKAA QCDPCIPGVSFSPDHHTRPHCESCRHCNSGLLVRNCTITANAECACRNGWQCRDKECTEC DPLPNPSLTARSSQALSPHPQPTHLPYVSEMLEARTAGHMQTLADFRQLPARTLSTHWPP QRSLCSSDFIRILVIFSGMFLVFTLAGALFLHQRRKYRSNKGESPVEPAEPCRYSCPREE EGSTIPIOEDYRKPEPACSP

>P23502

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>P18827

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>Q63722

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>P16144

MAGPRPSPWARLLLAALISVSLSGTLANRCKKAPVKSCTECVRVDKDCAYCTDEMFRDRR

CNTQAELLAAGCQRESIVVMESSFQITEETQIDTTLRRSQMSPQGLRVRLRPGEERHFEL EVFEPLESPVDLYILMDFSNSMSDDLDNLKKMGONLARVLSOLTSDYTIGFGKFVDKVSV PQTDMRPEKLKEPWPNSDPPFSFKNVISLTEDVDEFRNKLQGERISGNLDAPEGGFDAIL OTAVCTRDIGWRPDSTHLLVFSTESAFHYEADGANVLAGIMSRNDERCHLDTTGTYTOYR TQDYPSVPTLVRLLAKHNIIPIFAVTNYSYSYYEKLHTYFPVSSLGVLQEDSSNIVELLE EAFNRIRSNLDIRALDSPRGLRTEVTSKMFQKTRTGSFHIRRGEVGIYQVQLRALEHVDG THVCQLPEDQKGNIHLKPSFSDGLKMDAGIICDVCTCELQKEVRSARCSFNGDFVCGQCV CSEGWSGOTCNCSTGSLSDIOPCLREGEDKPCSGRGECOCGHCVCYGEGRYEGOFCEYDN FOCPRTSGFLCNDRGRCSMGOCVCEPGWTGPSCDCPLSNATCIDSNGGICNGRGHCECGR CHCHOOSLYTDTICEINYSAIHPGLCEDLRSCVOCOAWGTGEKKGRTCEECNFKVKMVDE LKRAEEVVVRCSFRDEDDDCTYSYTMEGDGAPGPNSTVLVHKKKDCPPGSFWWLIPLLLL LLPLLALLLLCWKYCACCKACLALLPCCNRGHMVGFKEDHYMLRENLMASDHLDTPMLR SGNLKGRDVVRWKVTNNMQRPGFATHAASINPTELVPYGLSLRLARLCTENLLKPDTREC AQLRQEVEENLNEVYRQISGVHKLQQTKFRQQPNAGKKQDHTIVDTVLMAPRSAKPALLK LTEKOVEORAFHDLKVAPGYYTLTADODARGMVEFOEGVELVDVRVPLFIRPEDDDEKOL LVEAIDVPAGTATLGRRLVNITIIKEQARDVVSFEQPEFSVSRGDQVARIPVIRRVLDGG KSOVSYRTODGTAOGNRDYIPVEGELLFOPGEAWKELOVKLLELOEVDSLLRGROVRRFH VQLSNPKFGAHLGQPHSTTIIIRDPDELDRSFTSQMLSSQPPPHGDLGAPQNPNAKAAGS RKIHFNWLPPSGKPMGYRVKYWIQGDSESEAHLLDSKVPSVELTNLYPYCDYEMKVCAYG AOGEGPYSSLVSCRTHOEVPSEPGRLAFNVVSSTVTOLSWAEPAETNGEITAYEVCYGLV NDDNRPIGPMKKVLVDNPKNRMLLIENLRESOPYRYTVKARNGAGWGPEREAIINLATOP KRPMSIPIIPDIPIVDAOSGEDYDSFLMYSDDVLRSPSGSORPSVSDDTGCGWKFEPLLG EELDLRRVTWRLPPELIPRLSASSGRSSDAEAPHGPPDDGGAGGKGGSLPRSATPGPPGE HLVNGRMDFAFPGSTNSLHRMTTTSAAAYGTHLSPHVPHRVLSTSSTLTRDYNSLTRSEH SHSTTLPRDYSTLTSVSSHDSRLTAGVPDTPTRLVFSALGPTSLRVSWQEPRCERPLQGY SVEYQLLNGGELHRLNIPNPAQTSVVVEDLLPNHSYVFRVRAQSQEGWGREREGVITIES OVHPOSPLCPLPGSAFTLSTPSAPGPLVFTALSPDSLOLSWERPRRPNGDIVGYLVTCEM AOGGGPATAFRVDGDSPESRLTVPGLSENVPYKFKVQARTTEGFGPEREGIITIESQDGG ${\tt PFPQLGSRAGLFQHPLQSEYSSITTHTSATEPFLVDGPTLGAQHLEAGGSLTRHVTQEF}$ VSRTLTTSGTLSTHMDOOFFOT

>Q8IVU1

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FQHLVSDLEPSTAYSFYIKAYTPRGASSASVPTLASTLGEAPAPPPLSVRVLGSSSLQLL
WEPWPRLAQHEGGFKLFYRPASKTSFTGPILLPGTVSSYNLSQLDPTAVYEVKLLAYNQH
GDGNATVRFVSLRGASERTALSPPCDCRKEEAANQTSTTGIVIGIHIGVTCIIFCVLFLL
FGQRGRVLLCKDVENQLSPPQGPRSQRDPGILALNGARRGQRGQLGRDEKRVDMKELEQL
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>062786

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QRAQDGEFIFSKEHTDTFSFRIQRTTEEDRGSYYCVVSAWTRQRNSSWVKSKDVFSKPVN IFWASEDSVLVVKARQPKPFFAAGNTFEMTCKVSSKNIKSPRYSVLITAEKPVGDLSSPN ETKYIISLDQDSVVKLENWTDASRVDGVVLEKVQEDEFRYRMYQTQVSDAGLYRCMVTAW SPIGGSLWREAATSLSNPIEIDFQTSGPIFNASVHSDTLSVTRGDLIKLFCIVTVDGAVL DPDDMAFDVSWFAVHSFGLDKAPILLSSLDRKGVVTTGQRDWKSTVSLERVSVLEFLLQV HSSEDQDFGNYYCSVTPWVRSPTGSWQREAEIHSRPIFITVKMDVLNAFKYPLLIGVGLS TVIGLLSCLIGYCSSHWCCKKEVRETRRERRRLMSMEMD

MMNLRVLFLALLLLASPLLQVARCQSDAEDHSSLVDDVVGENTDDAVEEDDHDLDMNLSS FPGVETVCVFPKNSAKLVPAGEETELLVGLKNEGKTRVGVMGIRASVHLPYDHKLLVQNL TMLRLNNASIPTSLQATFPYIFAVSQYLQPGAFDLVGYIIYDVEGKPYQSVFYNGTIEVV ESGGLLSGESVFLLTLGIGLLLLLGLWAYSQVQRLTKKTKKVSKVEVGTRSTEASLDEWL EGTTLAKTSSGKTKNKKN

>002671

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>013097

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>014126

MARTRDRVRLLLLLICFNVGSGLHLQVLSTRNENKLLPKHPHLVRQKRAWITAPVALREG EDLSKKNPIAKIHSDLAEERGLKITYKYTGKGITEPPFGIFVFNKDTGELNVTSILDREE TPFFLLTGYALDARGNNVEKPLELRIKVLDINDNEPVFTQDVFVGSVEELSAAHTLVMKI NATDADEPNTLNSKISYRIVSLEPAYPPVFYLNKDTGEIYTTSVTLDREEHSSYTLTVEA RDGNGEVTDKPVKQAQVQIRILDVNDNIPVVENKVLEGMVEENQVNVEVTRIKVFDADEI GSDNWLANFTFASGNEGGYFHIETDAQTNEGIVTLIKEVDYEEMKNLDFSVIVANKAAFH KSIRSKYKPTPIPIKVKVKNVKEGIHFKSSVISIYVSESMDRSSKGQIIGNFQAFDEDTG LPAHARYVKLEDRDNWISVDSVTSEIKLAKLPDFESRYVQNGTYTVKIVAISEDYPRKTI TGTVLINVEDINDNCPTLIEPVQTICHDAEYVNVTAEDLDGHPNSGPFSFSVIDKPPGMA EKWKIARQESTSVLLQQSEKKLGRSEIQFLISDNQGFSCPEKQVLTLTVCEVLHGSGCRE AQHDSYVGLGPAAIALMILAFLLLLLVPLLLLMCHCGKGAKAFTPIPGTIEMLHPWNNEG APPEDKVVPSFLPVDQGGSLVGRNGVGGMAKEATMKGSSSASIVKGQHEMSEMDGRWEEH

RSLLSGRATQFTGATGAIMTTETTKTARATGASRDMAGAQAAAVALNEEFLRNYFTDKAA SYTEEDENHTAKDCLLVYSQEETESLNASIGCCSFIEGELDDRFLDDLGLKFKTLAEVCL GQKIDINKEIEQRQKPATETSMNTASHSLCEQTMVNSENTYSSGSSFPVPKSLQEANAEK VTQEIVTERSVSSRQAQKVATPLPDPMASRNVIATETSYVTGSTMPPTTVILGPSQPQSL IVTERVYAPASTLVDQPYANEGTVVVTERVIQPHGGGSNPLEGTQHLQDVPYVMVRERES FLAPSSGVQPTLAMPNIAVGQNVTVTERVLAPASTLQSSYQIPTENSMTARNTTVSGAGV PGPLPDFGLEESGHSNSTITTSSTRVTKHSTVQHSYS

MGCLLFLVLLEFQKIWGSFEAPQTSFPFRFLQISSFANHSWTRTDGLMWLGELQPYTWRN ESSTIRFLKHWSQGTFSDQQWEQLQHTFQVYRSSFTRDIREFVKMLPGDYPFEIQISGGC ELLPRNISESFLRAALQEKDVLSFQGMSWVSAPDAPPWSQVVCKVLNEDQGTKETVHWLL HDICPELVKGLMQTGKSELEKQVKPEAWLSSGPSPGPDRLLLGCHVSGFYPKPVWVMWMR GEQEEPGTQQGDVMPNADSTWYLRVTLEVAAGEAAGLSCRVKHSSLGDQDIILYWDGKRV SRGLIVVLVILVFVLLFVGGLVFWFRKHRRYQDIS >09P0V8

MVMRPLWSLLLWEALLPITVTGAQVLSKVGGSVLLVAARPPGFQVREAIWRSLWPSEELL ATFFRGSLETLYHSRFLGRAQLHSNLSLELGPLESGDSGNFSVLMVDTRGQPWTQTLQLK VYDAVPRPVVQVFIAVERDAQPSKTCQVFLSCWAPNISEITYSWRRETTMDFGMEPHSLF TDGQVLSISLGPGDRDVAYSCIVSNPVSWDLATVTPWDSCHHEAAPGKASYKDVLLVVVP VSLLLMLVTLFSAWHWCPCSGKKKKDVHADRVGPETENPLVQDLP >P25119

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>P08138

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>094537

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MRVMRVMRPRTLLLLLSGVLVLTETLAGSHSLRYFYTGVSRPGLGEPRFIAVGYVDDTQF VRFDSDAPNPREEPRVPWMEQEGPEYWDRNTRIYKDTAQIFRVDLNTLRGYYNQSETGSH NIQAMYGCDVGPDGRLLRGFWQFGYDGRDYIALNEELRSWTAADTAAQITKRKWEAAGAA ETWRNYLEGECVEWLRRYLENGKDTLLRADPPKAHVTHHSISDREVTLRCWALGFYPEEI SLTWQREGEDQTQDMELVETRPSGDGTFQKWAALVVPSGEEQRYTCRVQHEGLQEPLTLR WEPPQTSFLIMGIIVGLVLLVVALVAGAVIWRKKRSGEKGRIYTQAASSDSAQGSDVSLT VPKV

>P55202

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>Q01965

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>Q9GKZ0

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>D47984

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MDVAAAALPAFVALWLLYPWPLLGSALGOFSAGGCTFDDGPGACDYHODLYDDFEWVHVS AQEPHYLPPEMPQGSYMVVDSSNHDPGEKARLQLPTMKENDTHC1DFSYLLYSQKGLNPG TLNILVRVNKGPLANPIWNVTGFTGRDWLRAELAVSTFWPNEYQVIFEAEVSGGRSGYIA IDDIQVLSYPCDKSPHFLRLGDVEVNAGQNATFQCIATGRDAVHNKLWLQRRNGEDIPVA OTKNINHRRFAASFRLOEVTKTDODLYRCVTOSERGSGVSNFAOLIVREPPRPIAPPOLL GVGPTYLLIQLNANSIIGDGPIILKEVEYRMTSGSWTETHAVNAPTYKLWHLDPDTEYEI RVLLTRPGEGGTGLPGPPLITRTKCAEPMRTPKTLKIAEIQARRIAVDWESLGYNITRCH TFNVTICYHYFRGHNESRADCLDMDPKAPOHVVNHLPPYTNVSLKMILTNPEGRKESEET IIQTDEDVPGPVPVKSLQGTSFENKIFLNWKEPLEPNGIITQYEVSYSSIRSFDPAVPVA GPPQTVSNLWNSTHHVFMHLHPGTTYQFFIRASTVKGFGPATAINVTTNISAPSLPDYEG VDASLNETATTITVLLRPAQAKGAPISAYQIVVEQLHPHRTKREAGAMECYQVPVTYQNA LSGGAPYYFAAELPPGNLPEPAPFTVGDNRTYKGFWNPPLAPRKGYNIYFQAMSSVEKET KTOCVRIATKAAATEEPEVIPDPAKOTDRVVKIAGISAGILVFILLLLVVIVIVKKSKLA KKRKDAMGNTRQEMTHMVNAMDRSYADQSTLHAEDPLSLTFMDQHNFSPRLPNDPLVPTA VLDENHSATAESSRLLDVPRYLCEGTESPYQTGQLHPAIRVADLLQHINLMKTSDSYGFK EEYESFFEGQSASWDVAKKDQNRAKNRYGNIIAYDHSRVILQPVEDDPSSDYINANYIDI WLYRDGYQRPSHYIATQGPVHETVYDFWRMVWQEQSACIVMVTNLVEVGRVKCYKYWPDD TEVYGDFKVTCVEMEPLAEYVVRTFTLERRGYNEIREVKQFHFTGWPDHGVPYHATGLLS FIRRVKLSNPPSAGPIVVHCSAGAGRTGCYIVIDIMLDMAEREGVVDIYNCVKALRSRRI NMVQTEEQYIFIHDAILEACLCGETAIPVCEFKAAYFDMIRIDSQTNSSHLKDEFQTLNS VTPRLQAEDCSIACLPRNHDKNRFMDMLPPDRCLPFLITIDGESSNYINAALMDSYRQPA AFIVTQYPLPNTVKDFWRLVYDYGCTSIVMLNEVDLSQGCPQYWPEEGMLRYGPIQVECM SCSMDCDVINRIFRICNLTRPQEGYLMVQQFQYLGWASHREVPGSKRSFLKLILQVEKWQ EECEEGEGRTIIHCLNGGGRSGMFCAIGIVVEMVKRQNVVDVFHAVKTLRNSKPNMVEAP EQYRFCYDVALEYLESS

>08TBQ9

 ${\tt MSAIFNFQSLLTVILLLICTCAYIRSLAPSLLDRNKTGLLGIFWKCARIGERKSPYVAVC} \\ {\tt CIVMAFSILFIQ}$

>016671

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>P51867

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>09UKF5

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>P33147

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>098910

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>P14562

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>012396

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>08JIY1

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EKMKPHTCASTGSEAWKAYFKGKTITLQPGSPCNEFKGYCDVFMRCRLVDADGPLARLKK AIFNPELYENIAEWIVAHWWAVLLMGIALIMLMAGFIKICSVHTPSSNPKLPPPKPLPGT LKRRRPPQTTQQPSRQRPRENYQMGHMRH

>P13765

MGSGWVPWVVALLVNLTRLDSSMTQGTDSPEDFVIQAKADCYFTNGTEKVQFVVRFIFNL EEYVRFDSDVGMFVALTKLGQPDAEQWNSRLDLLERSRQAVDGVCRHNYRLGAPFTVGRK VQPEVTVYPERTPLLHQHNLLHCSVTGFYPGDIKIKWFLNGQEERAGVMSTGPIRNGDWT FQTVVMLEMTPELGHVYTCLVDHSSLLSPVSVEWRAQSEYSWRKMLSGIAAFLLGLIFLL VGIVIQLRAQKGYVRTQMSGNEVSRAVLLPQSC

>060409

 ${\tt MILPNSTAVMPFLTTVWQGTVQPSSNASGLARRSPLRDDGKLEALYILMVLGFFGFFTLG} \\ {\tt IMLSYIRSKKLEHSHDPFNVYIESDTWQEKDKAFFQARVLENCRSCCVIENQLTVEQPNT} \\ {\tt YLPEL} \\$

>016820

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GSGCWSSVGNRRVGKQELSIGANCDRIATVQHEFLHALGFWHEQSRSDRDDYVRIMWDRI
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FSDSDLLKLNQLYNCSSSLSFMDSCSFELENVCGMIQSSGDNADWQRVSQVPRGPESDHS
NMGQCQGSGFFMHFDSSSVNVGATAVLESRTLYPKRGFQCLQFYLYNSGSESDQLNIYIR
EYSADNVDGNLTLVEEIKEIPTGSWQLYHVTLKVTKKFRVVFEGRKGSGASLGGLSIDDI
NLSETRCPHHIWHIRNFTQFIGSPNGTLYSPPFYSSKGYAFQIYLNLAHVTNAGIYFHLI
SGANDDQLQWPCPWQQATMTLLDQNPDIRQRMSNQRSITTDPFMTTDNGNYFWDRPSKVG
TVALFPNGTQFRRGGGYGTSAFITHERLKSRDFIKGDDVYILLTVEDISHLNSTQIQLTP
APSVQDLCSKTTCKNDGVCTVRDGKAECRCQSGEDWWYMGERCEKRGSTRDTIVIAVSST
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>P35832

MPRPOHHALLRAMLKLLLFASIAEHCATALPTNSSNSPSSPSPFTVASLPPTTASSSSSP AVISTSSFDRNLADLVNPEAETSGSGWESLETEFNLATTVDSSTQKTAKEPVLGTAATSI EOODOPPDVPATTLAFANAFPVPVAGEMGNGNGNYNDATPPYAAVDDNYVPSKPONLTIL DVSANSITMSWHPPKNQNGAIAGYHVFHIHDNQTGVEIVKNSRNSVETLIHFELQNLRPY TDYRVIVKAFTTKNEGEPSDQIAQRTDVGGPSAPAIVNLTCHSQESITIRWRRPYEFYNT IDFYIIKTRLAGODTHRDIRINASAKELETAMILONLTTNSYYEVKVAAATFSVINPKKI VLGKFSESRIIOLOPNCEKLOPLLROSHNDYNLAVLVGIIFSCFGIILIIMAFFLWSRKC FHAAYYYLDDPPHHPNAPQVDWEVPVKIGDEIRAAVPVNEFAKHVASLHADGDIGFSREY EAIONECISDDLPCEHSOHPENKRKNRYLNITAYDHSRVHLHPTPGOKKNLDYINANFID GYOKGHAFIGTOGPLPDTFDCFWRMIWEORVAIIVMITNLVERGRRKCDMYWPKDGVETY GVIQVKLIEEEVMSTYTVRTLQIKHLKLKKKKQCNTEKLVYQYHYTNWPDHGTPDHPLPV LNFVKKSSAANPAEAGPIVVHCSAGVGRTGTYIVLDAMLKQIQQKNIVNVFGFLRHIRAQ RNFLVQTEEQYIFLHDALVEAIASGETNLMAEQVEELKNCTPYLEQQYKNIIQFQPKDIH IASAMKOVNSIKNRGAIFPIEGSRVHLTPKPGEDGSDYINASWLHGFRRLRDFIVTOHPM AHTIKDFWOMVWDHNAQTVVLLSSLDDINFAQFWPDEATPIESDHYRVKFLNKTNKSDYV SRDFVIOSIODDYELTVKMLHCPSWPEMSNPNSIYDFIVDVHERCNDYRNGPIVIVDRYG GAQACTFCAISSLAIEMEYCSTANVYQYAKLYHNKRPGVWTSSEDIRVIYNILSFLPGNL NLLKRTALRTEFEDVTTATPDLYSKICSNGNVPOHVILOOOOLHMLOLOOOHLETOOOOO QQQQQQQQQQTALNETVSTPSTDTNPSLLPILSLLPPTVAPLSSSSSTTPPTPSTPTPQ PPQTIQLSSHSPSDLSHQISSTVANAASPVTPATASASAGATPTTPMTPTVPPTIPTIPS LASQNSLTLTNANFHTVTNNAADLMEHQQQQMLALMQQQTQLQQQYNTHPQQHHNNVGDL LMNNADNSPTASPTITNNNHITNNNVTSAAATDAQNLDIV

>016827

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>P33152

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>Q9JIP3

MLLVLLILAASCRSALPREPTIQCGSETGPSPEWMVQHTLTPGDLRDLQVELVKTSVAAE EFSILMNISWILRADASIRLLKATKICVSGKNNMNSYSCVRCNYTEAFQSQTRPSGGKWT FSYVGFPVELSTLYLISAHNIPNANMNEDSPSLSVNFTSPGCLNHVMKYKKQCTEAGSLW DPDITACKKNEKMVEVNFTTNPLGNRYTILIQRDTTLGFSRVLENKLMRTSVAIPVTEES EGAVVQLTPYLHTCGNDCIRREGTVVLCSETSAPIPPDDNRRMLGGWLPLFLVLLVAVWV LAAGIYLTWRQGRSTKTSFPISTMLLPLIKVLVVYPSEICFHHTVCRFTDFLQNYCRSEV ILEKWQKKKIAEMGPVQWLTTQKQAADKVVFLLPSDVPTLCDSACGHNEGSARENSQDLF PLAFNLFCSDFSSQTHLHKYLVVYLGGADLKGDYNALSVCPQYHLMKDATAFHTELLKAT OSMSVKKRSQACHDSCSPL

>Q8QFX6

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SEIVLEFESFELEPDTQPPAGVFCRYDRLEIWDGFPGVGPYIGRYCGQNTPGRIISYTGT
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>Q73372

MRVKEIRKNWQHLRGGILLLGMLMICSAAKEKTWVTIYYGVPVWREATTTLFCASDAKAY DTEVHNVWATHACVPTDPNPQEVVLGNVTENFNMWKNNMVDQMHEDIISLWDESLKPCVK LTPLCVTLNCTNLNITKNTTNPTSSSWGMMEKGEIKNCSFYITTSIRNKVKKEYALFNRL DVVPIENTNNTKYRLISCNTSVITQACPKVSFQPIPIHYCVPAGFAMLKCNNKTFNGSGP CTNVSTVQCTHGIRPVVSTQLLLNGSLAEEDIVIRSENFTDNAKTIIVQLNESVVINCTR PNNNTRRLSIGPGRAFYARRNIIGDIRQAHCNISRAKWNNTLQQIVIKLREKFRNKTIA FNQSSGGDPEIVMHSFNCGGEFFYCNTAQLFNSTWNVTGGTNGTEGNDIITLQCRIKQII NMWQKVGKAMYAPPITGQIRCSSNITGLLLTRDGGNSTETETEIFRPGGGDMRDNWRSEL YKYKVVRIEPIGVAPTRAKRRTVQREKRAVGIGAVFLGFLGAAGSTMGAASVTLTVQARL LLSGIVQQQNNLLRAIEAQQHMLQLTVWGIKQLQARVLALERYLRDQQLMGIWGCSGKLI CTTSVPWNVSWSNKSVDDIWNNMTWMEWEREIDNYTDYIYDLLEKSQTQQEKNEKELLEL DKWASLWNWFDITNWLWYIRLFIMIVGGLIGLRIVFAVLSIVNRVRQGYSPLSFQTLLPA SRGPDRPEGTEEEGGERDRDRSGPLVNGFLALFWVDLRNLCLFLYHLLRNLLLIVTRIVE LLGRRGWEALKYWWNLLQYWSQELKNSAVSLLNATAIAVAEGTDRVIKIVQRACRAIRNI PTRIROGLER

>013349

MTFGTVLLLSVLASYHGFNLDVEEPTIFOEDAGGFGOSVVOFGGSRLVVGAPLEVVAANO TGRLYDCAAATGMCQPIPLHIRPEAVNMSLGLTLAASTNGSRLLACGPTLHRVCGENSYS KGSCLLLGSRWEIIQTVPDATPECPHQEMDIVFLIDGSGSIDQNDFNQMKGFVQAVMGQF EGTDTLFALMOYSNLLKIHFTFTOFRTSPSOOSLVDPIVOLKGLTFTATGILTVVTOLFH HKNGARKSAKKILIVITDGOKYKDPLEYSDVIPOAEKAGIIRYAIGVGHAFOGPTAROEL NTISSAPPODHVFKVDNFAALGSIOKOLOEKIYAVEGTOSRASSSFOHEMSOEGFSTALT MDGLFLGAVGSFSWSGGAFLYPPNMSPTFINMSQENVDMRDSYLGYSTELALWKGVQNLV LGAPRYQHTGKAVIFTQVSRQWRKKAEVTGTQIGSYFGASLCSVDVDSDGSTDLILIGAP HYYEQTRGGQVSVCPLPRGQRVQWQCDAVLRGEQGHPWGRFGAALTVLGDVNEDKLIDVA IGAPGEQENRGAVYLFHGASESGISPSHSQRIASSQLSPRLQYFGQALSGGQDLTQDGLM DLAVGARGOVLLLRSLPVLKVGVAMRFSPVEVAKAVYRCWEEKPSALEAGDATVCLTIOK SSLDQLGDIQSSVRFDLALDPGRLTSRAIFNETKNPTLTRRKTLGLGIHCETLKLLLPDC VEDVVSPIILHLNFSLVREPIPSPONLRPVLAVGSODLFTASLPFEKNCGODGLCEGDLG VTLSFSGLOTLTVGSSLELNVIVTVWNAGEDSYGTVVSLYYPAGLSHRRVSGAOKOPHOS ALRLACETVPTEDEGLRSSRCSVNHPIFHEGSNGTFIVTFDVSYKATLGDRMLMRASASS ENNKASSSKATFOLELPVKYAVYTMISROEESTKYFNFATSDEKKMKEAEHRYRVNNLSO RDLAISINFWVPVLLNGVAVWDVVMEAPSQSLPCVSERKPPQHSDFLTQISRSPMLDCSI ADCLQFRCDVPSFSVQEELDFTLKGNLSFGWVRETLQKKVLVVSVAEITFDTSVYSQLPG QEAFMRAQMEMVLEEDEVYNAIPIIMGSSVGALLLLALITATLYKLGFFKRHYKEMLEDK PEDTATFSGDDFSCVAPNVPLS

>P68326

MAKLTGMFSAAILLSMAICSTAIIYRGEHMSMYLNASSEFAVYPTDQSLVLVGHLLFLDG QRLPTTNYSGLIELIHYNYSSVCYTVIQTISYESCPRVANNAFRSCLHKTSKHYHDYFRV NASVETNVLLNITKPQPTDSGAYILRVKLDHAPTADVFGVSAFVYDLKSKTVPDPMPTTQ TVEPTTSYVSTPTYDYTDDVTTETESTSTSTQQAMTSTQTPSATWGTQLTTELPTNETVV IGQEALLCHWFQPSTRVPTLYLHLLGRTGNLPEDVLLVEDSEFLRTTSPAHRPSASPADG DDFKQTNSTSLKARNKIVAMVVIPTACVLMLLLVVVGAIINGAVRKHLLSCASRRIYRSG QGGASAAERRRLTCGPTLAASSESLADDTTSSPPTPKPSKKTKLETDPLMEQLNRKLEAI KEES

>008721

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KSKLLVSYQEIPFYHIWNGTQQYLHCTFTLERINASTSDLACKVWVWQVEGDGQSFNINF
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>008722

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>P14719

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>Q9BWV1

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>016832

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>P32507

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SEHSPVKTPYFDAGVSCADQEMPRYHELPTLEERSGPLLLGATGLGPSLLVPPGPNVVEG
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>000168

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>P24348

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>Q6UWB1

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>077726

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>P08169

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>P14585

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>043506

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>Q9W1M8

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>09HBT6

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>008742

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>09BZ11

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>075056

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>028074

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PIOKVKKTYI

>Q8BGT0

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>015116

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>P40540

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>P77173

>015031

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MALQLWALTLLGLLGAGASLRPRKLDFFRSEKELNHLAVDEASGVVYLGAVNALYQLDAK LOLEOOVATGPALDNKKCTPPIEASOCHEAEMTDNVNOLLLLDPPRKRLVECGSLFKGIC ALRALSNISLRLFYEDGSGEKSFVASNDEGVATVGLVSSTGPGGDRVLFVGKGNGPHDNG IIVSTRLLDRTDSREAFEAYTDHATYKAGYLSTNTOOFVAAFEDGPYVFFVFNOODKHPA RNRTLLARMCREDPNYYSYLEMDLOCRDPDIHAAAFGTCLAASVAAPGSGRVLYAVFSRD SRSSGGPGAGLCLFPLDKVHAKMEANRNACYTGTREARDIFYKPFHGDIOCGGHAPGSSK SFPCGSEHLPYPLGSRDGLRGTAVLQRGGLNLTAVTVAAENNHTVAFLGTSDGRILKVYL TPDGTSSEYDSILVEINKRVKRDLVLSGDLGSLYAMTQDKVFRLPVQECLSYPTCTQCRD SQDPYCGWCVVEGRCTRKAECPRAEEASHWLWSRSKSCVAVTSAQPQNMSRRAQGEVQLT VSPLPALSEEDELLCLFGESPPHPARVEGEAVICNSPSSIPVTPPGODHVAVTIOLLLRR GNIFLTSYQYPFYDCRQAMSLEENLPCISCVSNRWTCQWDLRYHECREASPNPEDGIVRA HMEDSCPOFLGPSPLVIPMNHETDVNFQGKNLDTVKGSSLHVGSDLLKFMEPVTMQESGT FAFRTPKLSHDANETLPLHLYVKSYGKNIDSKLHVTLYNCSFGRSDCSLCRAANPDYRCA WCGGOSRCVYEALCNTTSECPPPVITRIOPETGPLGGGIRITILGSNLGVOAGDIORISV AGRNCSFQPERYSVSTRIVCVIEAAETPFTGGVEVDVFGKLGRSPPNVQFTFQQPKPLSV EPQQGPQAGGTTLTIHGTHLDTGSQEDVRVTLNGVPCKVTKFGAQLQCVTGPQATRGQML LEVSYGGSPVPNPGIFFTYRENPVLRAFEPLRSFASGGRSINVTGOGFSLIORFAMVVIA EPLQSWQPPREAESLQPMTVVGTDYVFHNDTKVVFLSPAVPEEPEAYNLTVLIEMDGHRA LLRTEAGAFEYVPDPTFENFTGGVKKOVNKLIHARGTNLNKAMTLQEAEAFVGAERCTMK TLTETDLYCEPPEVOPPPKRROKRDTTHNLPEFIVKFGSREWVLGRVEYDTRVSDVPLSL ILPLVIVPMVVVIAVSVYCYWRKSQQAEREYEKIKSQLEGLEESVRDRCKKEFTDLMIEM EDQTNDVHEAGIPVLDYKTYTDRVFFLPSKDGDKDVMITGKLDIPEPRRPVVEQALYQFS NLLNSKSFLINFIHTLENOREFSARAKVYFASLLTVALHGKLEYYTDIMHTLFLELLEOY VVAKNPKLMLRRSETVVERMLSNWMSICLYOYLKDSAGEPLYKLFKAIKHOVEKGPVDAV OKKAKYTLNDTGLLGDDVEYAPLTVSVIVQDEGVDAIPVKVLNCDTISQVKEKIIDQVYR GOPCSCWPRPDSVVLEWRPGSTAQILSDLDLTSQOEGRWKRVNTLMHYNVRDGATLILSK VGVSQQPEDSQQDLPGERHALLEEENRVWHLVRPTDEVDEGKSKRGSVKEKERTKAITEI YLTRLLSVKGTLOOFVDNFFOSVLAPGHAVPPAVKYFFDFLDEOAEKHNIODEDTIHIWK TNSLPLRFWVNILKNPHFIFDVHVHEVVDASLSVIAOTFMDACTRTEHKLSRDSPSNKLL YAKEISTYKKMVEDYYKGIROMVOVSDODMNTHLAEISRAHTDSLNTLVALHOLYOYTOK YYDEIINALEEDPAAQKMQLAFRLQQIAAALENKVTDL

>08CII9

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MSVFVILILFNAILNFKTVGPAAVSSKTVDCASAPCMNGGTCADGFNNFTCFCEEGFTGS MCETEYGCFRPWFYGPAFGYCYLWERVDYNWTQARESCIDQGRGAELASIHSAEENAFVY AQIRRYAWIGLSDQVTEGVFDYADGTPVDYLSFPDKNKQSETRDCVYVKHLRVDNWSLLD CRANKTSICKSTTTFSATDGCATGWVHNPATGYCYFYEERGGMWSKGREFCLDAGADLAS IHSAEENAFIFDMLTEFVWLGLNDLETEGVYTNFSDGTPADFDNFPADNYQNEDHDCVSI

RHLEKTDRYWFFLGCDDTVTSICKRPHEVVATQAPPYLFTTTDVPATTTTIPTTTTISA TTRTIDAMILIELLLFPNNVSSIDNIFRVNNTILVTASVLGSFOALSSOILWSITNHLSG DSVQYTVYSEDAVLVRFTTVSIFTIKATAVGNSHNLTATANATVKHVCISSLTTSVKEHC DAPHPAVYLRAFDIHISTHMELNGKCIDPMTPDFKWRIFTSTEADDVVTAFEKITHTROV MIPRGTLPYGIYSLNLNAKTRLKTSGEVTGEKEIISWLEIQPPPLVAVIKGGASRSHGVS SNLIVDGSNSYDPDVPPGSSSNVTFLWYCVVVDPDVMYSSLDEAIONTDNACFEDEGIMM NSTSSMIEVIANKLNANVTMNFWLNISKEGQISGLTQQRIHLTLGLLPEIEISCISNCNM YIFTAERLVLHASCTNCDSENEDVSFRWSLESNHTSVIGDLSSOTTTGLDOPYLVLKPLT FDSISEMGSIILRVTGSQSDSDGYAEFSVDLPHNAPPALGSCVVTPDEGYALQTDFTVTC SNFTDVDEPLTYOIILFSHVDVVDWMFVGRGEGFOLYEGSAPIKDGLYLPVGVGTDDHDI LLQVNVRDCNMASTSVYISATVHPPTLDAVGMNLVQELLDMALLVETNVNALLAVGDPGQ AAOLISALGSILNSIGDEDDSEEGRETRSEIRSFLVDCVAAIPVESMTSLKOSSAALAVV THNKQEISTHVQMLAASTLSEMTSFVKSKSGSYTQAQENIESAGTILVEGLSNILSAAKE TERLLSDDTSQEREDHKNLIEVAVSTINDIQDAIVAGKIPSEAATIITSPALSIAVGSIS RDELAEATFGGPEDLGSFRMPSQDVLNQAMEHALGTTVSMKMSAMKWNPFSWPGAGGESI KSSIVGIOLEADOMLEFHDLTADIDVYLPMRETLSADPVSVHITKTSSDSVLIDHSSLPV DGALHLTVIAENEPMVALSICTARISITESSCVGTDTPLGVSNEDPDTDANFTWTVPLVD LKAADGIMIRLYDSEDOPGYENDNITLSVFMHTLOCNFWNEDOOEWDSTGCKVGPLSKPS TTHCLCNHLTGFFGSSILVPPNHAQPVIGGHKLTGVDFLICVLIGYGIYCVALVIRVVGC SFAIRVHKVL

>09JMH2

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>054885

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MEVSSRSSEPLDPVWLLVAFGRGGVKLEVLLLFLLPFTLGELRGGLGKHGHTVHREPAVN RLCADSKRWSGLPVSAQRPFPMGHCPAPSQLPSAKPINLTDESMFPIGTYLLYECLPGYI KRQFSITCKQDSTWTSAEDKCIRKQCKTPSDPENGLVHVHTGIQFGSRINYTCNQGYRLI GSSSAVCVITDQSVDWDTEAPICEWIPCEIPPGIPNGDFFSSTREDFHYGMVVTYRCNTD ARGKALFNLVGEPSLYCTSNDGEIGVWSGPPPQCIELNKCTPPPYVENAVMLSENRSLFS LRDIVEFRCHPGFIMKGASSVHCQSLNKWEPELPSCFKGVICRLPQEMSGFQKGLGMKKE YYYGENVTLECEDGYTLEGSSQSQCQSDGSWNPLLAKCVSRSISGLIVGIFIGIIVFILV IIVFIWMILKYKKRNTTDEKYKEVGIHLNYKEDSCVRLQSLLTSQENSSTTSPARNSLTQ EVS

>P14753

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>088174

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>001083

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>Q9NPG4

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>P11279

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>P15702

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>P27869

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>006175

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>042596

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>P12080

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>092154

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>Q04721

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>P22934

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>P24394

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>P06756

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>P22794

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>P55287

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>P28826

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>P59711

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>P16382

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>004592

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>077780

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>P55291

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>091513

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>015303

>P55292

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>P26151

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>P08514

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>P20411

 ${\tt MIPAVILFLLLVEEAAALGEPQLCYILDAILFLYGIVLTLLYCRLKIQVRKADIASREK} \\ {\tt SDAVYTGLNTRNQETYETLKHEKPPQ}$

>P16391

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>P03435

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>028270

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>P01833

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>P11456

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>076997

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>P41543

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>012913

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>P17342

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>P07722

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>P31783

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>P48231

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>P46630

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>P11609

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>P03446

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>P27113

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>Q9R158

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>Q9R159

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>P78324

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VTENKDGTYNWMSWLLVNVSAHRDDVKLTCQVEHDGQPAVSKSHDLKVSAHPKEQGSNTA
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>Q8BJ48

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>Q63994

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>P81265

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MAIIYLILLFTAVRGDQICIGYHANNSTEKVDTNLERNVTVTHAKDILEKTHNGKLCKLN GIPPLELGDCSIAGWLLGNPECDRLLSVPEWSYIMEKENPRDGLCYPGSFNDYEELKHLL SSVKHFEKVKILPKDRWTQHTTTGGSRACAVSGNPSFFRNMVWLTKEGSDYPVAKGSYNN TSGEQMLIIWGVHHPIDETEQRTLYQNVGTYVSVGTSTLNKRSTPEIATRPKVNGQGGRM EFSWTLLDMWDTINFESTGNLIAPEYGFKISKRGSSGIMKTEGTLENCETKCQTPLGAIN TTLPFHNVHPLTIGECPKYVKSEKLVLATGLRNVPQIESRGLFGAIAGFIEGGWQGMVDG WYGYHHSNDQGSGYAADKESTQKAFDGITNKVNSVIEKMNTQFEAVGKEFGNLERRLENL NKRMEDGFLDVWTYNAELLVLMENERTLDFHDSNVKNLYDKVRMQLRDNVKELGNGCFEF YHKCDDECMNSVKNGTYDYPKYEEESKLNRNEIKGVKLSSMGVYQILAIYATVAGSLSLA IMMAGISFWMCSNGSLQCRICI

>P03452

>P03451

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>P03456

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AINSSKPFQNASRHYMGECPKYVKKASLRLAVGLRNTPSVEPRGLFGAIAGFIEGGWSGM IDGWYGFHHSNSEGTGMAADQKSTQEAIDKITNKVNNIVDKMNREFEVVNHEFSEVEKRI NMINDKIDDQIEDLWAYNAELLVLLENQKTLDEHDSNVKNLFDEVKRRLSANAIDAGNGC FDILHKCDNECMETIKNGTYDHKEYEEEAKLERSKINGVKLEENTTYKILSIYSTVAASL CLAILIAGGLILGMQNGSCRCMFCI

>P03457

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FAAFLFWAMSNGSCRCNICI

>09BQ51

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>P38484

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>014392

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>P36888

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ELKMMTQLGSHENIVNLLGACTLSGPIYLIFEYCCYGDLLNYLRSKREKFHRTWTEIFKE HNFSFYPTFQSHPNSSMPGSREVQIHPDSDQISGLHGNSFHSEDEIEYENQKRLEEEEDL NVLTFEDLLCFAYQVAKGMEFLEFKSCVHRDLAARNVLVTHGKVVKICDFGLARDIMSDS NYVVRGNARLPVKWMAPESLFEGIYTIKSDVWSYGILLWEIFSLGVNPYPGIPVDANFYK LIQNGFKMDQPFYATEEIYIIMQSCWAFDSRKRPSFPNLTSFLGCQLADAEEAMYQNVDG RVSECPHTYQNRRPFSREMDLGLLSPQAQVEDS

MNTQILILTLVAAIHTNADKICLGHHAVSNGTKVNTLTERGVEVVNATETVERRTIPRIC TKGKKAIDLGQCGLLGIITGPPQCDQFLEFTADLIIERREGNDVCYPGKFVNEEALRQIL RESGGINKETTGFTYSGIRTNGVTSACRRLGSSFYAEMKWLLSNTDNAAFPQMTKSYKNT RNEPALIVWGIHHSGSATEQTKLYGSGNKLITVGSSNYQQSFVPSPGARPQVNGQSGRID FHWLILNPNDTVTFSFNGAFVAPDRVSFFKGKSMGIQSEVPVDTNCEGECYHNGGTITSN LPFQNVNSRAVGKCPRYVKQKSLLLATGMKNVPEIPKKREKRGLFGAIAGFIENGWEGLV DGWYGFRHQNAQGEGTAADYKSTQSAIDQITGKLNRLIEKTNQQFELIDNEFTEVEKQIG NVINWTRDSITEVWSYNADLLVAMENQHTIDLADSEMNKLYERVRRQLRENAEEDCTGCF EIFHKCDDDCMASIRNNTYDHSTYREEAMQNRVKIDPVKLSSGYKDVILWFSLGASCFLL LAIAMGLVFMCVKNGNMRCTICI

>P18168

>P09343

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>018735

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>Q00495

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>073683

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>P36894

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>P84903

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>002242

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>P12439

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>0764M8

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>P33705

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>035598

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KKMAPSTCASTGSLQWSKQFSGRTITLQPGSPCNDFRGYCDVFMRCRLVDADGPLARLKK
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>Q9UJ90

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>Q764N2

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>P53896

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>P50555

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>015363

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>002401

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>P18337

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>060837

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>P11654

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>043914

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>P31041

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>029423

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>075460

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>P35331

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EDGLHEPGVWHYQTEVPGSHTTVQLKLSPYVNYSFRVIAVNEIGRSQPSEPSEQYLTKSA
NPDENPSNVQGIGSEPDNLVITWESLKGFQSNGPGLQYKVSWRQKDVDDEWTSVVVANVS
KYIVSGTPTFVPYEIKVQALNDLGYAPEPSEVIGHSGEDLPMVAPGNVQVHVINSTLAKV
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YILKFQPINNTHELGPLVEIRIPANESSLILKNLNYSTRYKFYFNAQTSVGSGSQITEEA
VTIMDEAGILRPAVGAGKVQPLYPRIRNVTTAAAETYANISWEYEGPDHANFYVEYGVAG
SKEDWKKEIVNGSRSFFVLKGLTPGTAYKVRVGAEGLSGFRSSEDLFETGPAMASRQVDI
ATQGWFIGLMCAVALLILILLIVCFIRRNKGGKYPVKEKEDAHADPEIQPMKEDDGTFGE
YRSLESDAEDHKPLKKGSRTPSDRTVKKEDSDDSLVDYGEGVNGQFNEDGSFIGQYSGKK
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>P33730

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>091735

MLPAVFVILALSAVOGLEETLMDTKWTTSELAWVAYPDSGWEEVSGYDEASNPIRTYOVC NVRDSNONNWLRTOFIPRODVORVYVELKFTVRDCNSLPNLRGSCKETFNFFYYESDSDS ASADSPFWMENPYIKVDTIAPDESFSRRDSGRVNTKIRSFGPISRAGFYLAFODLGACVS LISVRVFFKKCPRTTAGFASFPETITGAEPTSLVIAPGTCVPNALEVSVPLKLYCNGDGD WMVPVGACTCAAGFEPAGKDTQCQACKRGTYKSKQGEGSCMPCPANSRAISSAATICSCQ NGYYRADGESAETACTSVPSAPROVISNVNETSVVLEWAEPGHLGGRDDVLYNVICKKCL ERLCSRCDDNVOFWPROLGVTORLVSVSHLOAHTKYSFEIOAVNGVSGKSPHIPNYFTVN ITTNQAAPSSVPMVQSHGSLANSLTLSWAPPESPNGIILDYEIKYYAKGHIGAGNTVTSQ RTTVRMEGMTPDTVYVVQVRARTVAGYGAYSEPREFQTIAEDGDRSSLQEQVPMVVGSVT AGLIFIIAVVIIVIVCFSRKQRNDSESEYTEKLQQYMVPGMKLYIDPFTYEDPNEAVRDF AKEIDISCVKIEEVIGAGEFGEVCRGKLKQAGRREQFVAIKTLKAGYTEQQRRDFLGEAS IMGOFDHPNIIRLEGVVTRSRPVMILTEFMENGALDSFLRMNDGOFTVIOLVGILRGIAS GMKYLSEMNYVHRDLAARNILVNSNLVCKVSDFGLSRFLENSRSDPTYTSALGGKIPIRW TAPEAISYRKFTSASDVWSYGIVMWEVMSYGERPYWDMSNODVINAIEODYRLPPPMDCP SALHOLMLDCWLRDRNLRPKFSQIVSSLDKLIRNAASLKVTSPGQAGVSQQLLDRTVPDY TTFPTVSDWLEAIKMGQYQENFLSAGFTSFHLVAQMTAEDLLRIGVTLAGHQKKLLNSVQ DMRLOMSOTLPVOV

>P36137

MSRDVRAEKLAISLLILSLFLIFQLVAEIYLNNGDQYHTETSPFTRGRSHVTRVPNHDAS LSIPFLDKINQFWHVGGATQIRNIQSIKLTQDRDQDKHGLVLSNGIGDNTINDFEIVFTF RISHDPTTQLTGDGMCFAITPENGFLTQNLQSSYAKKQYMMNSQGVIADNTDLMGFPKNL PGLFIVLDTYRNQGHDHKEVPFMDVFINVAPESDWYDINSDGELSTSLRLNSRGHIKLKK NALWNRVTKLRIIYLESISFLKIDVQYAKEGNYWIELFQTTENLYLPKNMHTGQRYIGCS ALNGQLTETVELLDVSTSEFHWNDMDASIEDTYDYAKEAELFLEQEFGEVLDREPDEFTK WKMIKAQPNIKTGSQSAEQKTSNNPHSRLFKVVLTIWHYSEILLLIMGIYLFSACIRVFQ RRFKKIRSRRKRAGSHSVGLLPM

>P25574

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REDPLALVLNVNDTQYMGFSANGTELIPVWQRDEWLTNVVDYAVLDVFDSRDVELNKDMK
AELDSNSLWNAYWLRLTTNWNRLINLLKENQFSPGRVFTKLLALDAKDTTVSDLKFGFAK
ILIVLTHDGFIGGLDMVNKGQLIWKLDLEIDQGVKMFWTDKNHDELVVFSHDGHYLTIEV
TKDQPIIKSRSPLSERKTVDSVIRLNEHDHQYLIKFEDKDHLLFKLNPGKNTDVPIVANN
HSSSHIFVTEHDTNGIYGYIIENDTVKQTWKKAVNSKEKMVAYSKRETTNLNTLGITLGD
KSVLYKYLYPNLAAYLIANEEHHTITFNLIDTITGEILITQEHKDSPDFRFPMDIVFGEY
WVVYSYFSSEPVPEQKLVVVELYESLTPDERLSNSSDNFSYDPLTGHINKPQFQTKQFIF
PEIIKTMSISKTTDDITTKAIVMELENGQITYIPKLLLNARGKPAEEMAKDKKKEFMATP
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MSPTFEKGKLLITIFVLLVITYFIRPSVSNKKLKSQWLIK
>P31995

MGILSFLPVLATESDWADCKSPQPWGHMLLWTAVLFLAPVAGTPAAPPKAVLKLEPQWIN VLQEDSVTLTCRGTHSPESDSIQWFHNGNLIPTHTQPSYRFKANNNDSGEYTCQTGQTSL SDPVHLTVLSEWLVLQTPHLEFQEGETIVLRCHSWKDKPLVKVTFFQNGKSKKFSRSDPN FSIPQANHSHSGDYHCTGNIGYTLYSSKPVTITVQAPSSSPMGIIVAVVTGIAVAAIVAA VVALIYCRKKRISANSTDPVKAAQFEPPGRQMIAIRKRQPEETNNDYETADGGYMTLNPR APTDDDKNIYLTLPPNDHVNSNN

(2) 312 single-pass type II proteins >002773

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AAALEDNLARIRENHERALMEAKETLQKLPEEIQRDILMEKEKVAQDQMSNRMGFRLPPV
YLVPLIGAIDREPADAAVREKRAKIKEMMKHAWNNYKLYAWGKNELKPVSKGGHSSSLFG
NIKGATIVDALDTLFIMKMKNEFEEAKAWVEEHLNFNVNAEVSVFEVNIRFIGGLISAYY
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LEFIHLSYLSGNPFFAEKVMNIRKVLNNLEKPQGLYPNYLNPNSGQWGQYHVSVGGLGDS
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TCFAGGMFALGADDAPDGLTQHYLQLGAEIARTCHESYSRTFVKLGPEAFRFDGGVEAIA
TRQNEKYYILRPEVVETYLYMWRLTHDPKYRKWAWEAVEALEKHCRVNGGYSGLRDVYVS
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>P03655

MAVYFVTGKLGSGKTLVSVGKIQDKIVAGCKIATNLDLRLQNLPQVGRFAKTPRVLRIPD KPSISDLLAIGRGNDSYDENKNGLLVLDECGTWFNTRSWNDKERQPIIDWFLHARKLGWD IIFLVQDLSIVDKQARSALAEHVVYCRRLDRITLPFVGTLYSLVTGSKMPLPKLHVGVVK YGDSQLSPTVERWLYTGKNLYNAYDTKQAFSSNYDSGVYSYLTPYLSHGRYFKPLNLGQK MKLTKIYLKKFSRVLCLAIGFASAFTYSYITQPKPEVKKVVSQTYDFDKFTIDSSQRLNL SYRYVFKDSKGKLINSDDLQKQGYSITYIDLCTVSIKKGNSNEIVKCN >Q04609

MWNLLHETDSAVATARRPRWLCAGALVLAGGFFLLGFLFGWFIKSSNEATNITPKHNMKA FLDELKAENIKKFLYNFTQIPHLAGTEQNFQLAKQIQSQWKEFGLDSVELAHYDVLLSYP NKTHPNYISIINEDGNEIFNTSLFEPPPPGYENVSDIVPPFSAFSPQGMPEGDLVYVNYA RTEDFFKLERDMKINCSGKIVIARYGKVFRGNKVKNAQLAGAKGVILYSDPADYFAPGVK SYPDGWNLPGGGVQRGNILNLNGAGDPLTPGYPANEYAYRRGIAEAVGLPSIPVHPIGYY DAQKLLEKMGGSAPPDSSWRGSLKVPYNVGPGFTGNFSTQKVKMHIHSTNEVTRIYNVIG TLRGAVEPDRYVILGGHRDSWVFGGIDPQSGAAVVHEIVRSFGTLKKEGWRPRRTILFAS WDAEEFGLLGSTEWAEENSRLLQERGVAYINADSSIEGNYTLRVDCTPLMYSLVHNLTKE LKSPDEGFEGKSLYESWTKKSPSPEFSGMPRISKLGSGNDFEVFFQRLGIASGRARYTKN WETNKFSGYPLYHSVYETYELVEKFYDPMFKYHLTVAQVRGGMVFELANSIVLPFDCRDY AVVLRKYADKIYSISMKHPQEMKTYSVSFDSLFSAVKNFTEIASKFSERLQDFDKSNPIV LRMMNDQLMFLERAFIDPLGLPDRPFYRHVIYAPSSHNKYAGESFPGIYDALFDIESKVD PSKAWGEVKRQIYVAAFTVQAAAETLSEVA

>P02786

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AHLGTGDPYTPGFPSFNHTQFPPSRSSGLPNIPVQTISRAAAEKLFGNMEGDCPSDWKTD
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VGTALLLKLAQMFSDMVLKDGFQPSRSIIFASWSAGDFGSVGATEWLEGYLSSLHLKAFT
YINLDKAVLGTSNFKVSASPLLYTLIEKTMQNVKHPVTGQFLYQDSNWASKVEKLTLDNA
AFPFLAYSGIPAVSFCFCEDTDYPYLGTTMDTYKELIERIPELNKVARAAAEVAGQFVIK
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QNNGAFNETLFRNQLALATWTIQGAANALSGDVWDIDNEF
>007444

MNKQRGTFSEVSLAQDPKPQQRKPKGNKSSISGTEQEIFQVELNLQNASLNHQGIDKIYD CQGLLPPPEKLTAEVLGIICIVLMATVLKTIVLIPFLEQNNSSPNTRTQKARPCGHCPEE WITYSNSCYYIGKERRTWEESLQACASKNSSSLLSIDNEEEMKFLASILPSSWIGVFRNS SHHPWVTINGLAFKHEIKDSDHAERNCAMLHVRGLISDQCGSSRIIRRGFIMLTRLVLNS >060LL4

AFLKKYLLTILMVFLAYYYYSANEKFRPEMLQGKKVIVTGASKGIGREIAYHLAKMGAHV VVTARSKEALQKVVARCLELGAASAHYIAGSMEDMTFAEEFVAEAGNLMGGLDMLILNHV LYNRLTFFHGEIDNVRKSMEVNFHSFVVLSVAAMPMLMQSQGSIAVVSSVAGKITYPLIA PYSASKFALDGFFSTLRSEFLVNKVNVSITLCILGLIDTETAIKATSGIYLGPASPKEEC ALEIIKGTALRQDEMYYVGSRWVPYLLGNPGRKIMEFLSAAEYNWDNVLSNEKLYGRWA >008590

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>Q9P7E9

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LSIDDSKVPVHVLPFEQLDSKVEDQNRVNNFFHYSTPKDPIPFVKLFVNCFTDSGESIEV
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EKLSGHFHHA

>P54360

MYDIKRLEAGQQKLQQAQQPLGLDLSGQQQQLTCSVITAPEHRANPNPSSISQSNPSEAT HMTLLTLRRRRSLQRRACLLSILAAFVFGMALGVVVPMFGLPRHQDSPPDLPEEQIQMVA VEPLSSYRVEFIKETDELSAEQVFRNAFHLEQDKDAPDSMVVKKLDTNDGSIKEFHVQRT ASGRYRKGPERRLSKKMPERVQPQETSRSPTTSPTNPTSEHQAGFIEEDVYWGPTVEQAL PKGFAAKDQVSWERFVGEQGRVVRLEQGCGRMQNRMVVFADGTRACARYRQNTDQIQGEI FSYYLGQLLNISNLAPSAATVVDTSTPNWAAALGDITQAQWKERRPVVLTRWLSDLEPAG IPQPFQPLERHLNKHDVWNLTRHMQSERQAQSQPHGLLKRLGAASSPGSAHQSNAIEETG TGTETANGALVQRLIELAQWSDLIVFDYLIANLDRVVNNLYNFQWNADIMAAPAHNLARQ SASQLLVFLDNESGLLHGYRLLKKYEAYHSLLLDNLCVFRRPTIDALRRLRAAGAGRRLR DLFERTTSAGVRDVLPSLPDKSVKILVERIDRVLGQVQKCQGS

>08N608

MNQTASVSHHIKCQPSKTIKELGSNSPPQRNWKGIAIALLVILVVCSLITMSVILLTPDE
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LKSDEKLFKCGSVVAPITDLKLYASAFSERYLGMPSKEESTYQAASVLHNVHGLKEENIL
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>P43002

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>P06136

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>Q6Q4G3

GPPSSSGFYVSRAVALLLAGLVAALLLALAVLAALYGHCERVPPSELPGLRDSEAESSPP LROKPTPTPKPSSARELAVTTTPSNWRPPGPWDOLRLPPWLVPLHYDLELWPOLRPDELP AGSLPFTGRVNITVRCTVATSRLLLHSLFQDCERAEVRGPLSPGTGNATVGRVPVDDVWF ALDTEYMVLELSEPLKPGSSYELOLSFSGLVKEDLREGLFLNVYTDOGERRALLASOLEP TFARYVFPCFDEPALKATFNITMIHHPSYVALSNMPKLGQSEKEDVNGSKWTVTTFSTTP HMPTYLVAFVICDYDHVNRTERGKEIRIWARKDAIANGSADFALNITGPIFSFLEDLFNI SYSLPKTDIIALPSFDNHAMENWGLMIFDESGLLLEPKDQLTEKKTLISYVVSHEIGHQW FGNLVTMNWWNNIWLNEGFASYFEFEVINYFNPKLPRNEIFFSNILHNILREDHALVTRA VAMKVENFKTSEIQELFDIFTYSKGASMARMLSCFLNEHLFVSALKSYLKTFSYSNAEQD DLWRHFOMAIDDOSTVILPATIKNIMDSWTHOSGFPVITLNVSTGVMKOEPFYLENIKNR TLLTSNDTWIVPILWIKNGTTQPLVWLDQSSKVFPEMQVSDSDHDWVILNLNMTGYYRVN YDKLGWKKLNQQLEKDPKAIPVIHRLQFIDDAFSLSKNNYIEIETALELTKYLAEEDEII VWHTVLVNLVTRDLVSEVNIYDIYSLLKRYLLKRLNLIWNIYSTIIRENVLALQDDYLAL ISLEKLFVTACWLGLEDCLOLSKELFAKWVDHPENEIPYPIKDVVLCYGIALGSDKEWDI LLNTYTNTTNKEEKIQLAYAMSCSKDPWILNRYMEYAISTSPFTSNETNIIEVVASSEVG RYVAKDFLVNNWOAVSKRYGTOSLINLIYTIGRTVTTDLOIVELOOFFSNMLEEHORIRV HANLOTIKNENLKNKKLSARIAAWLRRNT

>P43009

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>088587

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>P82348

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>P97629

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>P31710

MKLKSGIVTGVALVLAYGLFLASYAPARLLTAVPLPAGMVVAEAAGTLWQGSLQRFSWRT

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>P82349

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>P12555

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SATPLGCDMLCSKVTETEEEDYNSAIPTSMVHGRLGFDGQYHEKDLDVTTLFEDWVANYP
GVGGGSFIDNRVWFPVYGGLKPNSPSDTAQEGKYVIYKRYNDTCPDEQDYQIRMAKSSYK
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OTEYRRELESYAASWP

>P50085

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>043505

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>POACG4

MKQHKAMIVALIVICITAVVAALVTRKDLCEVHIRTGQTEVAVFTAYESE >043508

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>P15535

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>Q8NCG5

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>Q8NBJ4

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>09C1W8

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LYEFRDIIVGQLYGHMNINHFVFLEFDKLPVDTESYGIKSAQPKYVKSLIDAQYAELPTF
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WETLEEQSQSDYEIDKKKKKKKKNNKKKKKNKRKNIKPGPLGPAYVPSLFTPISFKQYFL
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>P33754

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>07M3I4

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>012133

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>Q2RQ23

 ${\tt MAEVKQESLSGITEGEAKEFHKIFTSSILVFFGVAAFAHLLVWIWRPWVPGPNGYSALETLTOTLTYLS}$

>004119

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>P21526

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>Q9V730

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>P52848

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>Q8JFG3

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>P51975

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>010469

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>P41273

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>P41274

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>015393

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>P15541

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>P02947

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>P14740

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>P02948

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 ${\tt TDIRTGLTDEECQEIHEMNMLGMHAYWSIGLIANALAYAWRPFHQGRAGNRLEDHAPDYV} \\ {\tt RSALT}$

>P40548

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>P53146

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>P25169

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>P21964

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>010979

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>P80259

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>Q02527

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>09SA77

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>P50172

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>P33336

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>P23642

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>P06802

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>Q9UBV7

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>P06804

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>P06734

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>010981

 $\label{thm:converse} $\operatorname{MLVVQMPFSFPMAHFILFVFTVSTIFHVQQRLAKIQAMWELPVQIPVLASTSKALGPSQL$$ RGMWTINAIGRLGNQMGEYATLYALAKMNGRPAFIPAQMHSTLAPIFRITLPVLHSATAS $$\operatorname{RIPWQNYHLNDWMEEEYRHIPGEYVRFTGYPCSWTFYHHLRQEILQEFTLHDHVREEAQK$$ FLRGLQVNGSRPGTFVGVHVRRGDYVHVMPKVWKGVVADRRYLQQALDWFRARYSSLIFV$$$\operatorname{VTSNGMAWCRENIDTSHGDVVFAGDGIEGSPAKDFALLTQCNHTIMTIGTFGIWAAYLTGGDTIYLANYTLPDSPFLKIFKPEAAFLPEWTGIAADLSPLLKH$$$

>024451

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>010983

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>P80260

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>P04123

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>P29965

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>P04124

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>088178

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>P28081

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>P06739

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>P42667

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>P87023

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>060513

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>P25180

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>P42167

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>P23654

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RYARVD

>P47759

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>0756F2

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>016796

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>051575

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>028820

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>063377

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>P29040

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>035453

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>P32629

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>P31755

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MKELQLPEKRKSNTGLSWFPSPRILQVFLVLLGAIVAFLSFSATSSIISSSPKHHSCHDN VEEAAVKYHYSTISSDELPISNERLASLGLTPNQPVKITDIGGKEKSIKGRFLHITDMHP DLYYKENTSIDDTCHRGKPKNDGDRAARFGNAMKGCDGPPDLMYYTLDWIHKNLSDEIDF IIWTGDNVRHDNDRRIPRTEQQIFDMNRQVSELFLKTFKDHESDDPRDLKVKIIPSLGNN DVFPHNLFSPGPTLQTRELYDIWSQFIPPAQQNTFDRYASFFVEAIPGKLAVISLNTLYM FKGNPLVDNCSNKKQPGYKMLLWVGFTLQELRDRGMKVWLSGHVPPIPKNFDSSCSDKLA LWLHEYSDIIIGGFYGHMNMDHFIPVDGEKAWDDIANSMAISEYSGFFEQDFLEDAIAAR EIRAEGAKPVKKVNYMNGVRDAYYSRISEDVKKLSEKDPLYERYSIVHIGTSIIPTFNPG FRIWEYNITELQTEEEVLHSHQPWDSFFEHLDVEIQKIIEEAEEAEEVEAFEDDEQIDSE IPDVLISKKKKKKGKKGKKNKNSKNWWKTDKTFPKKKPKNLPPGPAYENQLFSPLRFVQY YADLKEIDKQYLKLLKEGKSEDEAASIAFKYQIEYASDDKPYPMKTTLVKDYIELASELS GNDKLWDTFLERAFCSSGYED

>Q6FMQ0

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>09UBX8

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>P23739

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ESKDSIEKKMYILYTFSVSNNELVLNCTHSSYAEGTSLAFKTIKVLGLREDVRSITVGEN DOOMATHTNFTFDSANKILSITALNFNLAGSFIVRWCRTFSDNEKFTCYPDVGTATEGTC TQRGCLWQPVSGLSNVPPYYFPPENNPYTLTSIQPLPTGITAELQLNPPNARIKLPSNPI STLRVGVKYHPNDMLOFKIYDAOHKRYEVPVPLNIPDTPTSSNERLYDVEIKENPFGIOV RRRSSGKLIWDSRLPGFGFNDQFIQISTRLPSNYLYGFGEVEHTAFKRDLNWHTWGMFTR DOPPGYKLNSYGFHPYYMALENEGNAHGVLLLNSNGMDVTFOPTPALTYRTIGGILDFYM FLGPTPEIATRQYHEVIGFPVMPPYWALGFQLCRYGYRNTSEIEQLYNDMVAANIPYDVQ YTDINYMEROLDFTIGERFKTLPEFVDRIRKDGMKYIVILAPAISGNETOPYPAFERGIO KDVFVKWPNTNDICWPKVWPDLPNVTIDETITEDEAVNASRAHVAFPDFFRNSTLEWWAR EIYDFYNEKMKFDGLWIDMNEPSSFGIOMGGKVLNECRRMMTLNYPPVFSPELRVKEGEG ASISEAMCMETEHILIDGSSVLQYDVHNLYGWSQVKPTLDALQNTTGLRGIVISRSTYPT TGRWGGHWLGDNYTTWDNLEKSLIGMLELNLFGIPYIGADICGVFHDSGYPSLYFVGIOV GAFYPYPRESPTINFTRSQDPVSWMKLLLQMSKKVLEIRYTLLPYFYTQMHEAHAHGGTV IRPLMHEFFDDKETWEIYKOFLWGPAFMVTPVVEPFRTSVTGYVPKARWFDYHTGADIKL KGILHTFSAPFDTINLHVRGGYILPCQEPARNTHLSRQNYMKLIVAADDNQMAQGTLFGD DGESIDTYERGOYTSIOFNLNOTTLTSTVLANGYKNKOEMRLGSIHIWGKGTLRISNANL VYGGRKHOPPFTOEEAKETLIFDLKNMNVTLDEPIOITWS

>09UKM7

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>P0C0Y0

>P26715

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>P35102

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>P35103

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>P35104

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MVDDSKKVWPTGLTIAESEEIHKHVIDGARIFVAIAIVAHFLAYVYSPWL

>P19934

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>P0A221

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>P20693

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>P28687

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>P37217

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>043557

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>094766

 $\label{thm:label} $\operatorname{MKLKLKNVFLAYFLVSIAGLLYALVQLGQPCDCLPPLRAAAEQLRQKDLRISQLQAELRR$ $\operatorname{PPPAPAQPPEPEALPTIYVVTPTYARLVQKAELVRLSQTLSLVPRLHWLLVEDAEGPTPL$ $\operatorname{VSGLLAASGLLFTHLVVLTPKAQRLREGEPGWVHPRGVEQRNKALDWLRGRGGAVGGEKD$ $\operatorname{PPPPGTQGVVYFADDDNTYSRELFEEMRWTRGVSVWPVGLVGGLRFEGPQVQDGRVVGFH$ $\operatorname{TAWEPSRPFPVDMAGFAVALPLLLDKPNAQFDSTAPRGHLESSLLSHLVDPKDLEPRAAN$ $\operatorname{CTRVLVWHTRTEKPKMKQEEQLQRQGRGSDPAIEV$ }$

>P26725

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>P05029

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>P10716

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>P79391

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>09GNK5

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>P28907

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>05Z9P8

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>Q10659

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>075752

>010589

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>P29131

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>060476

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>009323

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>P39694

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>P97253

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>P46985

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>062653

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>P72281

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>06AZY7

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>P02706

 $\label{thm:continuous} TKDYQDFQHLDNENDHHQLQRGPPPAPRLLQRLCSGFRLFLLSLGLSILLLVVVCVITSQ\\ NSQLREDLRVLRQNFSNFTVSTEDQVKALTTQGERVGRKMKLVESQLEKHQEDLREDHSR\\ LLLHVKQLVSDVRSLSCQMAALRGNGSERICCPINWVEYEGSCYWFSSSVKPWTEADKYC\\ QLENAHLVVVTSWEEQRFVQQHMGPLNTWIGLTDQNGPWKWVDGTDYETGFKNWRPGQPD\\ DWYGHGLGGGEDCAHFTTDGHWNDDVCRRPYRWVCETELGKAN$

>P02707

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>Q810Y4

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>P28845

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>P51165

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>Q9FNC9

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>P97402

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>P25365

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>09NR71

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>P19526

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>Q91XT9

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>015162

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>P27548

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>P41047

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>096024

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>P33894

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>P43221

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>P23336

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>P27115

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>Q9WU72

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>09EPS3

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>Q3TFD2

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>Q8R3H7

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>P70194

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>060651

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>P51756

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>060652

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>060654

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>Q9Z2P3

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>P07306

 $\label{thm:constraint} TKEYQDLQHLDNEESDHHQLRKGPPPPQPLLQRLCSGPRLLLLSLGLSLLLLVVVCVIGS\\ QNSQLQEELRGLRETFSNFTASTEAQVKGLSTQGGNVGRKMKSLESQLEKQQKDLSEDHS\\ SLLLHVKQFVSDLRSLSCQMAALQGNGSERTCCPVNWVEHERSCYWFSRSGKAWADADNY\\ CRLEDAHLVVVTSWEEQKFVQHHIGPVNTWMGLHDQNGPWKWVDGTDYETGFKNWRPEQPDDWYGHGLGGGEDCAHFTDDGRWNDDVCQRPYRWVCETELDKASQEPPLL$

>P13721

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>P07307

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>P08037

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>Q8IU80

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>003101

>Q9M1S8

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>P15907

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>011126

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>P39793

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>011128

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>Q7Z410

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>012797

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>07Z412

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>Q9UJ71

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>P30716

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>010836

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>07XJ98

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>Q9VYB7

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>P33550

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>P57727

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>P21758

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>011200

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>P42519

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>011203

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>011130

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>011131

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>011204

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>P25465

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>011206

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NNPDTLLVLVAFKAMDFHWIETILSDKKRVRKGFWKQPPLIWDVNPKQIRILNPFFMEIA
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>005585

MAQWDSFTDQQEDTDSCSESVKFDARSNTALLPPNPKNGPPLQEKLKSFKAALIALYLLV FAVLIPIIAIMAAQLLKWEMKNCTVGSINANSVSSSLLGRGNDSEHEVRFREVVMEHISK MEKRIQYISDTEENLVDSEHFQNFSVTTDQRFADVLLQLSTLVPTVQGHGNAVDEITRSL ISLNTTLLDLHLYVETLNVKFQENTLKGQEEISKLKERVHNASAEIMSMKEEQVHLEQEI KREVKVLNNITNDLRLKDWEHSQTLRNITLIQGPPGPPGEKGDRGPTGESGPPGVPGPVG PPGLKGDRGSIGFPGSRGYPGQSGKTGRTGYPGPKGQKGEKGSGSILTPSATVRLVGGRG PHEGRVEILHNGQWGTVCDDHWELRAGQVVCRSLGYRGVKSVHKKAYFGQGTGPIWLNEV PCLGMESSIEECKIROWGVRVCSHGEDAGV

>P50108

MSSVPYNSQLPISNHLEYDEDEKKSRGSKLGLKYKMIYWRKTLCSSLARWRKLILLISLA LFLFIWISDSTISRNPSTTSFQGQNSNDNKLSNTGSSINSKRYVPPYSKRSRWSFWNQDP RIVIILAANEGGGVLRWKNEQEWAIEGISIENKKAYAKRHGYALTIKDLTTSKRYSHEYR EGWQKVDILRQTFREFPNAEWFWWLDLDTMIMEPSKSLEEHIFDRLETLADRELKSFNPL NLRDDIPYVDYSEEMEFLITQDCGGFNLGSFLIKNSEWSKLLLDMWWDPVLYEQKHMVWE HREQDALEALYENEPWIRSRIGFLPLRTINAFPPGACSEYSGDSRYFYSEKDHDFVVNMA GCNFGRDCWGEMQYYTTLMEKLNRKWYTRFFFP

>013241

MAVFKTTLWRLISGTLGIICLSLMATLGILLKNSFTKLSIEPAFTPGPNIELQKDSDCCS CQEKWVGYRCNCYFISSEQKTWNESRHLCASQKSSLLQLQNTDELDFMSSSQQFYWIGLS YSEEHTAWLWENGSALSQYLFPSFETFNTKNCIAYNPNGNALDESCEDKNRYICKQQLI >P03470

MNPNQKIITIGSICMVVGIISLILQIGNIISIWISHSIQTGNQNHTGICNQGIITYNVVA GQDSTSVILTGNSSLCPIRGWAIHSKDNGIRIGSKGDVFVIREPFISCSHLECRTFFLTQ GALLNDKHSNGTVKDRSPYRALMSCPVGEAPSPYNSRFESVAWSASACHDGMGWLTIGIS GPDNGAVAVLKYNGIITETIKSWRKKILRTQESECTCVNGSCFTIMTDGPSNGLASYKIF KIEKGKVTKSIELNAPNSHYEECSCYPDTGKVMCVCRDNWHGSNRPWVSFDQNLDYQIGY ICSGVFGDNPRPKDGPGSCGPVSADGANGVKGFSYRYGNGVWIGRTKSDSSRHGFEMIWD PNGWTETDSRFSVRQDVVAMTDRSGYSGSFVQHPELTGLDCMRPCFWVELIRGRPEEETI WTSGSIISFCGVNSDTVDWSWPDGAELPFT

>P56427

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>P21188

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QAKNEFCPPGLYFDQDEEVEKKTCQFNRTSLGICSGIEDPMFGYGEGKPCVIVKINRIIG LKPEGNPKINCTSKTEDVNLQYFPDNGKIDLMYFPYYGKKTHVNYVQPVVAVKISPSNFT SEEIAVECKIHGSRNLKNEDERDKFLGRVTFKVKITE >P54751

MRRKTLKYLTFFLLFIFLTSFVLNYSNTGVPSAWFPKQMLLELSENFRRFIKSQPCTCRH CISQDKVSYWFDQRFNKTMQPLLTVHNALMEEDTYRWWLRLQRERKPNNLSDTVKELFRL VPGNVDPMLNKRLVGCRRCAVVGNSGNLKDSSYGPEIDSHDFVLRMNKAPTVGFEADVGS RTTHHLVYPESFRELGENVNMVLVPFKTTDLQWVISATTTGTITHTYVPVPPKIKVKQEK ILIYHPAFIKYVFDNWLQGHGRYPSTGILSIIFSIHICDEVDLYGFGADSKGNWHHYWEN NPSAGAFRKTGVHDGDFEYNITTTLAAINKIRIFKGR

>P53950

MTEEDRKLTVETETVEAPVANNLLLSNNSNVVAPNPSIPSASTSTSPLHREIVDDSVATA NTTSNVVQHNLPTIDNNLMDSDATSHNQDHWHSDINRAGTSMSTSDIPTDLHLEHIGSVS STNNNSNNALINHNPLSSHLSNPSSSLRNKKSSLLVASNPAFASDVELSKKKPAVISNNM PTSNIALYOTARSANIHGPSSTSASKAFRKASAFSNNTAPSTSNNIGSNTPPAPLLPLPS LSOONKPKIIERPTMHVTNSREILLGENLLDDTKAKNAPANSTTHDNGPVANDGLRIPNH SNADDNENNNKMKKNKNINSGKNERNDDTSKICTTSTKTAPSTAPLGSTDNTQALTASVS SSNADNHNNNKKKTSSNNNGNNSNSASNKTNADIKNSNADLSASTSNNNAINDDSHESNS EKPTKADFFAARLATAVGENEISDSEETFVYESAANSTKNLIFPDSSSQQQQQQQQPPKQ OOOOONHGITSKISAPLLNNNKKLLSRLKNSRHISTGAILNNTIATISTNPNLNSNVMON NNNLMSGHNHLDELSSIKQEPPHQLQQQQPPMDVQSVDSYTSDNPDSNVIAKSPDKRSSL VSLSKVSPHLLSSTSSNGNTISCPNVATNSQELEPNNDISTKKSLSNSTLRHSSANRNSN YGDNKRPLRTTVSKIFDSNPNGAPLRRYSGVPDHVNLEDYIEQPHNYPTMQNSVKKDEFY NSRNNKFPHGLNFYGDNNVIEEENNGDSSNVNRPOHTNLOHEFIPEDNESDENDIHSMFY YNHKNDLETKPLISDYGEDEDVDDYDRPNATFNSYYGSASNTHELPLHGRMPSRSNNDYY DFMVGNNTGNNNQLNEYTPLRMKRGQRHLSRTNNSIMNGSIHMNGNDDVTHSNINNNDIV GYSPHNFYSRKSPFVKVKNFLYLAFVISSLLMTGFILGFLLATNKELODVDVVVMDNVIS SSDELIFDITVSAFNPGFFSISVSQVDLDIFAKSSYLKCDSNGDCTVMEQERKILQITTN LSLVEESANNDISGGNIETVLLGTAKKLETPLKFQGGAFNRNYDVSVSSVKLLSPGSREA KHENDDDDDDDDDDDDDDDDDDDDTNTNERQYKSKPNARDDKEDDTKKWKLLIKHDYELIVRGSMK YEVPFFNTQKSTAIQKDSMVHPGKK

>P16071

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>Q6BKG0

MSVLIDEKSHRSSGSTRLRIVVTVVGVLLMVSGLAVMLGHQSGSANEALGMEYEKPSVEV LDLEATEVEQLTKLGLSPKPKLKIVKGGDEQVLHGRFLHITDMHPDKYYKTGADVGSLCH SGKGSAGKYGDAVLGCDSPMVLMEDTLKWVKENLKDKIDFVVWTGDNVRHDNDRRYPRTE SNIFDMNQRVSELMYETFKEENPRGGRPRQLKIPLVPSLGNNDVFPHNLFSPGPTLQTRE LFKIWHDFVPAAQLHIFNRGAYFFKEIIPNELAVLSINTLYLFQSNPLVDNCDRKKDPGH KLFEWLGYTLKEMRARNMKVWLSGHVPPNEKNYDISCLRKYIVWMHEYRDVIIGGLYGHM NIDHFIPLDSKEAYKSIKNKFGKLGFDYELSFENDLYVLDDDDNSDSDSDDDDDEDTSLEE SYSNFNSPILKDGFEDSVNFKNMDDIRIQGGVPNGKVGYMENVRKEYYANVKGKKKSGYV SERYSIAHVTASVVPTFNSGLRVWEYNITGLQNLLTSDNQPRFAPWNEFFEGLEKLMETQ VEADYDDEFITFGQQVEIFKNDNTFPPKMPKSKSLGPAYIPQAFTPERYVQYYADLANIN RGEKEFSYEFEYATDDKVYDMDSLTVDDWISLARRLGKPVKEKKNKSNKKSKKKKKNKDK

RLLENSEPLKQDGSKDSRLEQDRVQQSARLENLWQHYLKYSFVSSEYENMGMG>P53954

MGSAWTNYNFEEVKSHFGFKKYVVSSLVLVYGLIKVLTWIFRQWVYSSLNPFSKKSSLLN RAVASCGEKNVKVFGFFHPYCNAGGGGEKVLWKAVDITLRKDAKNVIVIYSGDFVNGENV TPENILNNVKAKFDYDLDSDRIFFISLKLRYLVDSSTWKHFTLIGQAIGSMILAFESIIQ CPPDIWIDTMGYPFSYPIIARFLRRIPIVTYTHYPIMSKDMLNKLFKMPKKGIKVYGKIL YWKVFMLIYQSIGSKIDIVITNSTWTNNHIKQIWQSNTCKIIYPPCSTEKLVDWKQKFGT AKGERLNQAIVLAQFRPEKRHKLIIESFATFLKNLPDSVSPIKLIMAGSTRSKQDENYVK SLQDWSENVLKIPKHLISFEKNLPFDKIEILLNKSTFGVNAMWNEHFGIAVVEYMASGLI PIVHASAGPLLDIVTPWDANGNIGKAPPQWELQKKYFAKLEDDGETTGFFFKEPSDPDYN TTKDPLRYPNLSDLFLQITKLDYDCLRVMGARNQQYSLYKFSDLKFDKDWENFVLNPICK LLEEERG

>Q9UQQ1

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>09Z319

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>P35160

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>P28882

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>094385

MVTRVASSERPRPLVPESIVDAPTORLYAIGVFVALQAYKIYDLLKLETSSISDVPKSGF LVKWIIIDAIYLRLLPKFRIPWLSFQPAATLLQIAIFAAINLLLSSLSSLKWISIGSILL PYFKKKELSISEHKINPNNVIHNSSRILGOYTLOVLPEGTAKINPLHENYCLNSLRKDOY VDLAIQFNSTIPKYIQYSHVDLETKEETLVEVSGRSLRKLLSSSSKNPKEPRLQTIYLKT NKRGLYTLKHVVDKSKLDVRIFRSEAVVVSCPTATFASRQSGGRLRERCVGDTDNAELKV TGVAPLQVTYRNWDGKHFNTHIIDSTIPDDFHPPAVVLSSNPKDIVFYKGIDIQWARSSE IFVPINTLLKAPGOWIYAVTOVTDALGNSOOFPSNDOFLLRFAHGYTEADGESHSLPENV YSVFVHORPDIOFRGCSIESPANLFPNKETSLSLYSSFSEYNSLEVGVDRYELGLDPONI TVPPLSHKTYQISPRSSANINVKKPGIYVLSSVSSQYCSGEVLEPNTCLVVTPPEAKVSV SFEEISDOCAGSIGARADLELEGTPPFTIAYRMTKDNEASRIOYVTTDRTRYOLNFTPKK AGKYRYIILGIQDANYGYRELSGSSFYKDQTVFPLADASFEERRNGDLSTVVKTSCIGDT MSLPVLLTGSAPWTLEYEIFRNNKREESHVVESKDPRYILEVPMLVHGSQYTITLVSVKD SNGCKRSLNTADTVIKVRRORPTATFYSSDNTYTLKSVEGALMKIPLRLAGEKPWYVEYS HTSGLNKVSHHKEVLNDPNSYLTVRKSGTYTLLSVSDSSCPGTIONVEOKYOVEWLPRPF LSIPSLESSVKGKTRYYEONAVCAGDSSAFEVOLSGSGPFLLKHDKILVDEKSKTYPKOK SELSTVONTVLVKADTAVPGVYHYEFTKLSDSLYSDSDAVTIVNNOSYQAVVLORVNSLP KASFMNVEKLYTFCINTDVTQSNAQLIAIQLQGASPFSLVIGIKNELTGSVSKYTLNDIH ESVYKFAFPOEOLTLGKHVVRLLOVRDANGCAASITKTOPAAKVSVVEMASLAPLGSROY YCVGDRLSFALOGLPPFDVEYEFNGVTOHATSDSHILTRLIELPGVVAMKSISDHGSHCK SYINPPIEQIVHDIPTVRISNGKDVIENIHEGDQAEISFHFTGTPPFSFSYARRALGKKR PGKVLETHTVTGINEYEYKVLSSVEGVYTVLSVQDKYCRYPQDSTSSSNI

>Q5PQX0

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 ${\tt MVQLTEVEDEHFQQPQVGPEEDDEDFTDTDSEISVDSDYESQETFTDRLYALRDMVSPTT} \\ {\tt RGWFYHKYSTTTNFVKSTLSFAGRAAWAVSVSGLLIGVPFAIAFAEDQNYAAMEQEARMR} \\ {\tt ELGSDVLTAGGEGQAGTAEKTLAAIGGEGA} \\$

>P32906

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FFVKPLDRHNLQRPETVESIMFMYHLSHDHKYREWGAEIATSFFENTCVDCNDPKLRRFT
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QSLTTGWSL

>P13679

VRAGAVGTHLPASGLDIFGDLRKMNKRQLYYQVLNFAMIVSSALMIWKGLIVLTGSESPI VVVLSGSMEPAFHRGDLLFLTNFREDPIRAGEIVVFKVEGRDIPIVHRVIKVHEKDNGDI KFLTKGDNNEVDDRGLYKEGQNWLEKKDVVGRARGFLPYVGMVTIIMNDYPKFKYALLAV MGAYVLLKRES

>09WV78

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>P35098

AEDRSSLSGVSDAEAKEFHALFVSSFMGFMVVAVLAHVLAWAWRPWIPGP > 080wL1

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>P01375

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>Q5RJR8

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>P07768

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>P23510

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>P97449

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DVEKNQSAKFQTSSNEWILLNINVTGYYLVNYDENNWKKLQNQLQTDLSVIPVINRAQII HDSFNLASAKMIPITLALDNTLFLVKEAEYMPWQAALSSLNYFTLMFDRSEVYGPMKRYL KKQVTPLFFYFQNRTNNWVNRPPTLMEQYNEINAISTACSSGLKECRDLVVELYSQWMKN PNNNTIHPNLRSTVYCNAIAFGGEEEWNFAWEQFRNATLVNEADKLRSALACSKDVWILN RYLSYTLNPDYIRKQDTTSTIISIASNVAGHPLVWDFVRSNWKKLFENYGGGSFSFANLI QGVTRRFSSEFELQQLEQFKADNSATGFGTGTRALEQALEKTRANIDWVKENKDAVFKWF TENSS

>P40350

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>060682

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>P26789

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>043909

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>Q6CEE7

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>P79098

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>P52591

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>06R0J2

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MALFLSKRLLRFTVIAGAVIVLLLTLNSNSRTQQYIPSSISAAFDFTSGSISPEQQVISE ENDAKKLEQSALNSEASEDSEAMDEESKALKAAAEKADAPIDTKTTMDYITPSFANKAGK PKACYVTLVRNKELKGLLSSIKYVENKINKKFPYPWVFLNDEPFTEEFKEAVTKAVSSEV KFGILPKEHWSYPEWINQTKAAEIRADAATKYIYGGSESYRHMCRYQSGFFWRHELLEEY DWYWRVEPDIKLYCDINYDVFKWMQENEKVYGFTVSIHEYEVTIPTLWQTSMDFIKKNPE YLDENNLMSFLSNDNGKTYNLCHFWSNFEIANLNLWRSPAYREYFDTLDHQGGFFYERWG DAPVHSIAAALFLPKDKIHYFSDIGYHHPPYDNCPLDKEVYNSNNCECDQGNDFTFQGYS CGKEYYDAQGLVKPKNWKKFRE

>P50127

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>Q64610

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>P0ABV2

 ${\tt MAMHLNENLDDNGEMHDINVTPFIDVMLVLLIIFMVAAPLATVDVKVNLPASTSTPQPRP} \\ {\tt EKPVYLSVKADNSMFIGNDPVTDETMITALNALTEGKKDTTIFFRADKTVDYETLMKVMD} \\ {\tt TLHQAGYLKIGLVGEETAKAK} \\$

>P11655

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>005319

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>Q86BJ3

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>P21854

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>P15367

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GVKTVLLLIVGVLGAYYVYTPLPDNIEEPWRLLWVNAHMKTLTNLALFAEYLGSNIFMNT VKFLTSFQEVPPTSDENVTVTETTFNNVPVRVYVPKRKSKTLRRGLFYIHGGGWCVGSAA LSGYDLLSRRTADRLDVVVVSTNYRLAPEYHFPIQFEDVYDALKWFLRQDVLEKYGVDPE RVGVSGDSAGGNLAAAVAQQLIKDPDVKIKLKTQSLIYPALQTLDMDLPSYRENAQFPIL SKSFMVRLWSEYFTSDRSLEKAMLLNQHVPVESSHLFKFTNWSSLLPEKFKKGHVYNTPT YGSSELARKYPGFLDVRAAPLLADDAQLRGFPLTYVITCQYDVLRDDGVMYVTRLRNAGV QVTHNHIEDGFHGALSYNGFKTGYRVEKQYFEWLRENV

MADAITYADLRFVKVPLKNSASNHLGQDCEAYEDGELTYENVQVSPVPGGPPGLASPALA
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ERCFYISHTLRSLEESQKYCTSLSSKLAAFDEPSKYYYEVSLPSGLEELLDRSKSYWIQM
SKKWRHDYDSQSRYCDKIKKYYQKWKRTFSECAELHPCICESEAFRFPDG

MKTVRFNKQALAILAACFIFLLCVVCYFSASSESHNAVVVGERARGHIAVRDVENRHLAE EKHAVIHAKTVGKIERVVSQEKVEILRPARVESKPPGEKTSTEPEETGVGKAPIQTSEGL EKLIGKIHYENKDEENDLRRQKVKEMMIHAWEGYKNYSWGANELRPMSKKPNSQNIFGGS QMPATIVDAADTLFIMDLKDKYKEARDYIENNFSMAKSTSTLSVFETTIRFLGGLLSLYA LTQESFYIEKAREVGEALLPAFNTPSGIPKSNLDVASKHASNYGWANGGQSILSEIGSLH LEFLYLSRISNAPIFEKKVKKVRDALEKAEKPNGLYSNYINPDTGKFTGSHMSLGALGDS FYEYLIKSYVQSNYTDTQAKNMYWDVSDAIQKHMIKVSKQSNLTYTVELNNGQAQHKMGH LACFVPGMFALQAINEDTEEEKLRIMTLAEELAKTCHESYIRSETHIGPEMFYFNERDEA TSKHSENGYIQRPEVIEGWFYLWRLTGKTMYRDWVWDAVQAIEKYCRVDSGFTGLQNVYN PKAGREDVMQSFFLAEFLKYAYLTFADESLISLDKWVFNTEAHPVPVLTN >P47124

AKTTKRASSFRRLMIFAIIALISLAFGVRYLFHNSNATDLQKILQNLPKEISQSINSANN IQSSDSDLVQHFESLAQEIRHQQEVQAKQFDKQRKILEKKIQDLKQTPPEATLRERIAMT FPYDSHVKFPAFIWQTWSNDEGPERVQDIKGMWESKNPGFAHEVLNHDVINALVHHYFYS IPEILETYEALPSIILKIDFFKYLILLVHGGVYADIDTFPVQPIPNWIPEELSPSDIGLI VGVEEDAQRADWRTKYIRRLQFGTWIIQAKPGHPVLREIISRIIETTLQRKRDDQLNVNL RNDLNIMSWTGSGLWTDTIFTYFNDFMRSGVREKVTWKLFHNLNQPKLLSDVLVFPKFSF NCPNQIDNDDPHKKFYFITHLASOFWKNTPKVEQK

>P39107

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>Q8TC12

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>P55073

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WVTTDSPYIIPQHRSLEDRVSAARVLQQGAPGCALVLDTMANSSSSAYGAYFERLYVIQS GTIMYQGGRGPDGYQVSELRTWLERYDEQLHGARPRRV >P28612

MARKKKKHEDEHVDESWLVPYADILTLLLALFIVLYASSSIDAAKFQMLSKSFNEVFTG GTGVLDYSSVTPPENESDGIDEVKKEKEEKEKNKKEKEKAADQEELENVKSQVEKFIKDK KLEHQLETKMTSEGLLITIKDSIFFDSGKATIRKEDVPLAKEISNLLVINPPRNIIISGH TDNMPIKNSEFQSNWHLSVMRAVNFMGLLIENPKLDAKVFSAKGYGEYKPVASNKTAEGR SKNRRVEVLILPRGAAETNEK

>P27810

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>P27811

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MDSTTLVYADLNLARIQEPKHDSPPSLSPDTCRCPRWHRLALKFGCAGLILLVLVVIGLC VLVLSVQKSSVQKICADVQENRTHTTDCSVNLECPQDWLSHRDKCFRVFQVSNTWEEGQA DCGRKGATLLLIQDQEELRFLLDSIKEKYNSFWIGLRFTLPDMNWKWINGTTFNSDVLKI TGDTENGSCASISGDKVTSESCSTDNRWICQKELNHETPSNDS

>P49301

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>POAEN4

 ${\tt MISRVTEALSKVKGSMGSHERHALPGVIGDDLLRFGKLPLCLFICIILTAVTVVTTAHHT} \\ {\tt RLLTAQREQLVLERDALDIEWRNLILEENALGDHSRVERIATEKLQMQHVDPSQENIVVQ} \\ {\tt K} \\$

>P22083

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>P18850

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>002765

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>P33226

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>P56528

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SENCPNNPITVFWKVISQKFAEDACGVVQVMLNGSLREPFYKNSTFGSVEVFSLDPNKVH
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>P80586

 ${\tt MTNGKIWLVVKPTVGLPIGMLFAALLAVLIHGLLFVDGRLKSWWSEFPVAKPAVVSVQAAPAPVAAEVK}$

>P80587

ADANKVWPTGLTVAEAEELHTYVTNGFRVFVGIAVVAHVLVFAAHPWGRGGALVA > P02919

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ATIVNMENNRQFGFFRLDPRLITMISSPNGEQRLFVPRSGFPDLLVDTLLATEDRHFYEH
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YSKDRILELYMNEVYLGQSGDNEIRGFPLASLYYFGRPVEELSLDQQALLVGMVKGASIY
NPWRNPKLALERRNLVLRLLQQQQIIDQELYDMLSARPLGVQPRGGVISPQPAFMQLVRQ
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SGEVRAMVGGSEPQFAGYNRAMQARRSIGSLAKPATYLTALSQPKIYRLNTWIADAPIAL
RQPNGQVWSPQNDDRRYSESGRVMLVDALTRSMNVPTVNLGMALGLPAVTETWIKLGVPK
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FGSN

>P80588

 ${\tt SAPAQWKLWLVMDPRTVMIGTAAWLGVLALLIHFLLLGTERFNWIDTGLKEQKATAAAQA} \\ {\tt AITPAPVTAAAK} \\$

>014638

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>024342

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MLLCNRKVPKTLNTCFILHIFTLLTLGVLVSGMPSKMVSFASQETLQRINNLLRGSANRD VDIIAEYLKKDDDDDGGDKDHHNIDIDPLPRRPSLTPDRQLLKVGLHGAISSDLEVCSNL TINEVLLKFPGSNAADAAVTQALCKGMVNFFNSGIGGGGGYVVFSGKDDEDHLSIDFREKA PMDSHKFMFENCSLCSKIGGLAVGVPGELMGLYRLFKERGSGQVDWRDLIEPVAKLGSVG WQIGEALGATLELYEDVFLTLKEDWSFVLNSTHDGVLKEGDWIKRPALSNMLMELAKNGS VAPFYDPDHWIAKSMIDTVAKYNGIMNLQDVSSYDVHVTKPLSMKIRKGANFIPDNDMTV LTSSGSSSGAALLAALRIMDNFQNQEGGDYEKETTYHLLESMKWMASARSRLGDFEGEAL PKHIEEVLDPEWALKAVKSIKRNSQDGNFKTLENWTLYDPAYDINNPHGTAHFSIVDSHG NAVSLTTTINLLFGSLVHDPKTGVIFNNEMDDFAQFNKSNSFELAPSIYNFPEPGKRPLS STAPTIVLSELGIPDLVVGASGGSRITTSVLQTIVRTYWYNMPILETIAYPRIHHQLLPD RIELESFPMIGKAVLSTLKEMGYTMKEVFPKSVVNAIRNVRGEWHAVSDYWRKRGISSVY >086UP2

MEFYESAYFIVLIPSIVITVIFLFFWLFMKETLYDEVLAKOKREOKLIPTKTDKKKAEKK KNKKKEIONGNLHESDSESVPRDFKLSDALAVEDDOVAPVPLNVVETSSSVRERKKKEKK QKPVLEEQVIKESDASKIPGKKVEPVPVTKQPTPPSEAAASKKKPGQKKSKNGSDDQDKK VETLMVPSKRQEALPLHQETKQESGSGKKKASSKKQKTENVFVDEPLIHATTYIPLMDNA DSSPVVDKREVIDLLKPDQVEGIQKSGTKKLKTETDKENAEVKFKDFLLSLKTMMFSEDE ALCVVDLLKEKSGVIQDALKKSSKGELTTLIHQLQEKDKLLAAVKEDAAATKDRCKQLTQ EMMTEKERSNVVITRMKDRIGTLEKEHNVFONKIHVSYOETOOMOMKFOOVREOMEAEIA HLKQENGILRDAVSNTTNQLESKQSAELNKLRQDYARLVNELTEKTGKLQQEEVQKKNAE QAATOLKVOLQEAERRWEEVOSYIRKRTAEHEAAQQDLQSKFVAKENEVQSLHSKLTDTL VSKQQLEQRLMQLMESEQKRVNKEESLQMQVQDILEQNEALKAQIQQFHSQIAAQTSASV LAEELHKVIAEKDKQIKQTEDSLASERDRLTSKEEELKDIQNMNFLLKAEVQKLQALANE QAAAAHELEKMQQSVYVKDDKIRLLEEQLQHEISNKMEEFKILNDQNKALKSEVQKLQTL VSEQPNKDVVEQMEKCIQEKDEKLKTVEELLETGLIQVATKEEELNAIRTENSSLTKEVQ DLKAKONDOVSFASLVEELKKVIHEKDGKIKSVEELLEAELLKVANKEKTVODLKOEIKA LKEEIGNVOLEKAOOLSITSKVOELONLLKGKEEOMNTMKAVLEEKEKDLANTGKWLODL QEENESLKAHVQEVAQHNLKEASSASQFEELEIVLKEKENELKRLEAMLKERESDLSSKT QLLQDVQDENKLFKSQIEQLKQQNYQQASSFPPHEELLKVISEREKEISGLWNELDSLKD AVEHQRKKNNDLREKNWEAMEALASTEKMLQDKVNKTSKERQQQVEAVELEAKEVLKKLF

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MLHKSPSRKRFASPLHLGCILTLTVLCLIAYYFALPDYLSVGKSSSRGAMDQKSDGTFRL KSIYRHGVGANHRLHQRLEVTPEVISAAGMLYQETTTQGQDFEDQEPLWTTNAEYATTNP FDFEFELRRMPLLMKRMKERDPEFIESYIYGETYMTEEEEHAMWIDDDIVAPNITDRGTV VSLALMSSNAYVRIPQTGDWRNVTEPWNETEPEDFGWDGDGIRGHVFYNEVENIVVLSIK GTSAQGLPGSGEDETTGNDKINDNLLFSCCCARVSYLWTTVCDCYVKSYICDESCLEKEL RRKDRFYSAVVDIYKGVLKEYPDAAIWVTGHSLGGALASLLGRTFGLPAVAFESPGELLP SKRLHLPFPPGLPSYMEGIWHFGHNADPIFMGTCNGASSSCSLVGYAMETACHTGRVCVY DVVNDKGWSVNMFNHRIHKVIDEVLLGYEQAAKCVEPEPCVDCYNWKFIPSRDWESSSRL ITKTKSHAAPTTTTRTTATTTSSSTCVGRNWLGFCTKYEL

>P78380

MTFDDLKIQTVKDQPDEKSNGKKAKGLQFLYSPWWCLAAATLGVLCLGLVVTIMVLGMQL SQVSDLLTQEQANLTHQKKKLEGQISARQQAEEASQESENELKEMIETLARKLNEKSKEQ MELHHQNLNLQETLKRVANCSAPCPQDWIWHGENCYLFSSGSFNWEKSQEKCLSLDAKLL KINSTADLDFIQQAISYSSFPFWMGLSRRNPSYPWLWEDGSPLMPHLFRVRGAVSQTYPS GTCAYIQRGAVYAENCILAAFSICQKKANLRAQ

>P09460

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>060909

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>P30323

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>P53624

MYRISPIGRKSNFHSREKCLIGLVLVTLCFLCFGGIFLLPDNFGSDRVLRVYKHFRKAGP EIFIPAPPLAAHAPHRSEDPHFIGDRQRLEQKIRAELGDMLDEPPAAGGGEPGQFQVLAQ QAQAPAPVAALADQPLDQDEGHAAIPVLAAPVQGDNAASQASSHPQSSAQQHNQQQPQLP LGGGGNDQAPDTLDATLEERRQKVKEMMEHAWHNYKLYAWGKNELRPLSQRPHSASIFGS YDLGATIVDGLDTLYIMGLEKEYREGRDWIERKFSLDNISAELSVFETNIRFVGGMLTLY AFTGDPLYKEKAQHVADKLLPAFQTPTGIPYALVNTKTGVAKNYGWASGGSSILSEFGTL HLEFAYLSDITGNPLYRERVQTIRQVLKEIEKPKGLYPNFLNPKTGKWGQLHMSLGALGD

SYYEYLLKAWLQSGQTDEEAREMFDEAMLAILDKMVRTSPGGLTYVSDLKFDRLEHKMDH LACFSGGLFALGAATRQNDYTDKYMEVGKGITNTCHESYIRAPTQLGPEAFRFSEAVEAR ALRSQEKYYILRPETFESYFVLWRLTHDQKYRDWGWEAVLALEKHCRTAHGYCGLRNVYQ QEPQKDDVQQSFFLAETLKYLYLLFSDDSVLPLDEWVFNTEAHPLPIKGANAYYRQAPVT LPVSNAS

>P07861

GRSESQMDITDINAPKPKKKQRWTPLEISLSVLVLLLTIIAVTMIALYATYDDGICKSSD CIKSAARLIQNMDASAEPCTDFFKYACGGWLKRNVIPETSSRYSNFDILRDELEVILKDV LQEPKTEDIVAVQKAKTLYRSCINESAIDSRGGQPLLTLLPDIYGWPVASQNWEQTYGTS WTAEKSIAQLNSKYGKKVLINFFVGTDDKNSTQHIIHFDQPRLGLPSRDYYECTGIYKEA CTAYVDFMISVARLIRQEQRLPIDENQLSLEMNKVMELEKEIANATTKPEDRNDPMLLYN KMTLAKLQNNFSLEINGKPFSWSNFTNEIMSTVNINIQNEEEVVVYAPEYLTKLKPILTK YSPRDLQNLMSWRFIMDLVSSLSRNYKESRNAFRKALYGTTSETATWRRCANYVNGNMEN AVGRLYVEAAFAGESKHVVEDLIAQIREVFIQTLDDLTWMDAETKKKAEEKALAIKERIG YPDDIISNENKLNNEYLELNYKEEEYFENIIQNLKFSQSKQLKKLREKVDKDEWISGAAV VNAFYSSGRNQIVFPAGILQPPFFSARQSNSLNYGGIGMVIGHEITHGFDDNGRNFNKDG DLVDWWTQQSANNFKDQSQCMVYQYGNFTWDLAGGQHLNGINTLGENIADNGGIGQAYRA YQNYVKKNGEEKLLPGLDLNHKQLFFLNFAQVWCGTYRPEYAVNSIKTDVHSPGNFRIIG TLQNSAEFADAFHCRKNSYMNPERKCRVW

>P0A3G5

MFDKKLLESSELYDKRYRNFSTLIILPLFILLVGGVIFTFFAHKELTVISTGSIEPTKIV
AKIQSTNANPIIENNLKEGEAVKENSLLLKYNGTPEQTQLSELLTQKKQALDKKVQLDLL
QRSLTNEKNEFPTADSFGYEKSFENYEAQVKSLEATIQKSNQAVEDQNKSTESQKQAIQN
QVATLQQAIQNYSEIENAVSSGGGVSQDNPYLSQYNSYQAQQATLEADLKNQKNPDETAK
QAAKSQEESLKSQFLSGLASSKDSLKSQIQSFNVQESSLTGSNAYDNSQSSQILTLKSQA
LSASNKEMTDLNSTLTDLETKISLQKQDDQYSQVFAEQAGVLHVLPDILGMKKIPIGTPI
AEIYPLLKSETQVNLTSYIPSTQISGMKVGQKVRFTVQQNLPQPEILTGIINQIDSAPTA
FKEGNAYKVSATTTINAKDLPNIRYGLQGKTVTIIGKKTYFNYFLDKIMGRGNQ
>P47069

MNNSNEHRREEAGAANEQMPYNKAVKSAYADVLKDKMNREQEISLRAIKKGIYTDGGETD NYDMDKENDSAYEMFKKNLDFPLDQHNDDDDDPYIEDNGQETDGYSDEDYTDEADKSFI EDSDSDSYDLESNSDFEENLESSGEAKKLKWRTYIFYGGLFFVFYFFGSFLMTTVKNNDL ESHSSGATSSPGKSFSNLQKQVNHLYSELSKRDEKHSSELDKTVKIIVSQFEKNIKRLLP SNLVNFENDINSLTKQVETISTSMSELQRRNHKFTVENVTQWQDQLVKQLDTHLPQEIPV VINNSSSLLIIPELHNYLSALISDVIESPGIGTAGSAESRWEYDLNRYVKEILSNELQYI DKDYFIQEMNRRLQSNKQEIWEEITNRLETQQQQQQQQVQQDYSNVPQQYSSILMKRLIH QIYNSNQHQWEDDLDFATYVQGTKLLNHLTSPTWRQGSGVQPIELLTDSKQSSSTYWQCE NEPGCSWAIRFKTPLYLTKISYMHGRFTNNLHIMNSAPRLISLYVKLSQTKEIKALQTLA NQYGFGQHHKRDRNYIKIAKFEYRLTDSRIRQQMYLPPWFIQLKPLVRSIVFQVDENYGN KKFISLRKFIINGVTPQDLQIIENNEFPVLLGDTPEYGVTQNTDEGKRKVLLSKPPYASS STSTKFHPASNVPSFGQDELDQ

(3) 24 single-pass type III proteins >P03493

MLEPLQILSICSFILSALHFMAWTIGHLNQIKRGVNLKIQIRNPNKEAINREVSILRHNY QKEIQAKETMKKILSDNMEVLGDHIVVEGLSTDEIIKMGETVLEVEELQ >Q12284

MKQIVKRSHAIRIVAALGIIGLWMFFSSNELSIATPGLIKAKSGIDEVQGAAAEKNDARL KEIEKQTIMPLMGDDKVKKEVGRASWKYFHTLLARFPDEPTPEEREKLHTFIGLYAELYP CGECSYHFVKLIEKYPVQTSSRTAAAMWGCHIHNKVNEYLKKDIYDCATILEDYDCGCSD SDGKRVSLEKEAKOHG

>Q8C6N3

MAEQLAFLIGGIIGGLLLLIGVSCCLWRRFCATFTYEELPETSDPATISYFSRKEDRLYQ YSGTPPGRLPSVPFVVPPSHQGRDWVPLHGGDWAVAPQDPCPVPEHMACTSSAKPGDACE MGSINPELYKSPEDTSETGFPDGCLGRLWFSVEYQQESERLLVGLIKAQQLQVPSETCST LVKLHLLPDERRFLQSKTKHKICNPQFDENFIFQVSSKSVTQRVLKFSVYHVNKKRKHQL LGQVLFPLKNETLAGDHHRIIWRDLEAKNLEPPSEFGDIQFCLSYNDYLSRLTVVVLRAK GLQLQEDRSVVSVFVKVSLMNHNKFVKCKRTSAVLGSVNPVYNETFSFKVDTNELDTASL SLVVLQTTEGNKSSPLGRVVVGPYMYTRGKELEHWGEMLRKPKELVKRWHALCRPTEP >09NW08

MGPAGSLLGSGQMQITLWGSLAAVAIFFVITFLIFLCSSCDREKKPRQHSGDHENLMNVP SDKEMFSRSVTSLATDAPASSEQNGALTNGDILSEDSTLTCMQHYEEVQTSASDLLDSQD STGKPKCHQSRELPRIPPESAVDTMLTARSVDGDQGLGMEGPYEVLKDSSSQENMVEDCL YETVKEIKEVAAAAHLEKGHSGKAKSTSASKELPGPQTEGKAEFAEYASVDRNKKCRQSV NVESILGNSCDPEEEAPPPVPVKLLDENENLQEKEGGEAEESATDTTSETNKRFSSLSYK SREEDPTLTEEEISAMYSSVNKPGQLVNKSGQSLTVPESTYTSIQGDPQRSPSSCNDLYA TVKDFEKTPNSTLPPAGRPSEEPEPDYEAIQTLNREEEKATLGTNGHHGLVPKENDYESI SDLQQGRDITRL

>054957

MEADALSPVGLGLLLLPFLVTLLAALCVRCRELPVSYDSTSTESLYPRSILIKPPQITVP RTPAVSYPLVTSFPPLRQPDLLPIPRSPQPLGGSHRMPSSQQNSDDANSVASYENQEPAC KNVDADEDEDDYPNGYLVVLPDSSPAAVPVVSSAPVPSNPDLGDSAFSVESCEDYVNVPE SEESAEASLDGSREYVNVSPEQQPVTRAELASVNSQEVEDEGEEEGVDGEEAPDYENLQE LN

>P04921

MWSTRSPNSTAWPLSLEPDPGMASASTTMHTTTIAEPDPGMSGWPDGRMETSTPTIMDIV VIAGVIAAVAIVLVSLLFVMLRYMYRHKGTYHTNEAKGTEFAESADAALQGDPALQDAGD SSRKEYFI

>P34163

MYFPFLGRLSITDYIIVVLVYIESIISSVLKLIPQPMINLFEWLINFSTSSDDNTIEEKL RSAPTIHEMCAIFDISVEDHLVRTEDNYILTLHRIPPISKNRFNNKVVYLHHGLLMCSDV WCCNIERHKNLPFVLHDLGYDVWMGNNRGNKYSTAHLNKPPKSNKFWDFSIDEFAFFDIP NSIEFILDITKVDKVICIGFSQGSAQMFAAFSLSEKLNRKVSHFIAIAPAMTPKGLHNRI VDTLAKSSPGFMYLFFGRKIVLPSAVIWQRTLHPTLFNLCIDIANKILFNWKSFNILPRQ KIASYAKLYSTTSVKSIVHWFQILRSQKFQMFEESDNMLNSLTRPYQIANFPTRTNIKIP ILLIYGGIDSLVDIDVMKKNLPFNSVFDVKVDNYEHLDLIWGKDADTLVIAKVLRFIEFF NPGNVSVKTNQLLPSASLVEELPSTTWKTTHPTHGLSYRTHSADRSPLSVQADEADEVHN ADNSRFLRRVFSTSAIDEDNENEHQDDTEDQIHKEQQRRLSAYLESSKDLRQLDANSSTT ALDALNKE

>014836

MSGLGRSRRGGRSRVDQEERFPQGLWTGVAMRSCPEEQYWDPLLGTCMSCKTICNHQSQR TCAAFCRSLSCRKEQGKFYDHLLRDCISCASICGQHPKQCAYFCENKLRSPVNLPPELRR QRSGEVENNSDNSGRYQGLEHRGSEASPALPGLKLSADQVALVYSTLGLCLCAVLCCFLV AVACFLKKRGDPCSCQPRSRPRQSPAKSSQDHAMEAGSPVSTSPEPVETCSFCFPECRAP TQESAVTPGTPDPTCAGRWGCHTRTTVLQPCPHIPDSGLGIVCVPAQEGGPGA >P31680

MQYWGKIIGVAVALLMGGGFWGVVLGLLIGHMFDKARSRKMAWFANQRERQALFFATTFE VMGHLTKSKGRVTEADIHIASQLMDRMNLHGASRTAAQNAFRVGKSDNYPLREKMRQFRS VCFGRFDLIRMFLEIQIQAAFADGSLHPNERAVLYVIAEELGISRAQFDQFLRMMQGGAQ FGGGYQQQTGGGNWQQAQRGPTLEDACNVLGVKPTDDATTIKRAYRKLMSEHHPDKLVAK GLPPEMMEMAKOKAOEIOOAYELIKOOKGFK

>095470

MPSTDLLMLKAFEPYLEILEVYSTKAKNYVNGHCTKYEPWQLIAWSVVWTLLIVWGYEFV FQPESLWSRFKKKCFKLTRKMPIIGRKIQDKLNKTKDDISKNMSFLKVDKEYVKALPSQG LSSSAVLEKLKEYSSMDAFWQEGRASGTVYSGEEKLTELLVKAYGDFAWSNPLHPDIFPG LRKIEAEIVRIACSLFNGGPDSCGCVTSGGTESILMACKAYRDLAFEKGIKTPEIVAPQS AHAAFNKAASYFGMKIVRVPLTKMMEVDVRAMRRAISRNTAMLVCSTPQFPHGVIDPVPE VAKLAVKYKIPLHVDACLGGFLIVFMEKAGYPLEHPFDFRVKGVTSISADTHKYGYAPKG SSLVLYSDKKYRNYQFFVDTDWQGGIYASPTIAGSRPGGISAACWAALMHFGENGYVEAT

KQIIKTARFLKSELENIKGIFVFGNPQLSVIALGSRDFDIYRLSNLMTAKGWNLNQLQFP PSIHFCITLLHARKRVAIQFLKDIRESVTQIMKNPKAKTTGMGAIYGMAQTTVDRNMVAE LSSVFLDSLYSTDTVTQGSQMNGSPKPH

>043561

MEEAILVPCVLGLLLLPILAMLMALCVHCHRLPGSYDSTSSDSLYPRGIQFKRPHTVAPW PPAYPPVTSYPPLSQPDLLPIPRSPQPLGGSHRTPSSRRDSDGANSVASYENEGASGIRG AQAGWGVWGPSWTRLTPVSLPPEPACEDADEDEDDYHNPGYLVVLPDSTPATSTAAPSAP ALSTPGIRDSAFSMESIDDYVNVPESGESAEASLDGSREYVNVSQELHPGAAKTEPAALS SQEAEEVEEGAPDYENLQELN

>09EOR5

MRPPVPSAPLALWVLGCFSLLLWLWALCTACHRKRAQRQQTGLQDSLVPVEMPLLRQTHL CSLSKSDTRLHELHRGPRSSIAPRPASMDLLHPRWLEMSRGSTRSQVPNSAFPPRQLPRA PPAAPATAPSTSSEATYSNVGLAAIPRASLAASPVVWAGTQLTISCARLGPGAEYACIQK HKGTEQGCQELQQKAKVIPATQMDVLYSRVCKPKRRDPRPVTDQLNLQDGRTSLPLGSDV EYEAINLRGQDMKQGPLENVYESIKEMGL

>Q8IWV1

MDGVTPTLSTIRGRTLESSTLHVTPRSLDRNKDQITNIFSGFAGLLAILLVVAVFCILWN WNKRKKRQVPYLRVTVMPLLTLPQTRQRAKNIYDILPWRQEDLGRHESRSMRIFSTESLL SRNSESPEHVPSQAGNAFQEHTAHIHATEYAVGIYDNAMVPQMCGNLTPSAHCINVRASR DCASISSEDSHDYVNVPTAEEIAETLASTKSPSRNLFVLPSTQKLEFTEERDEGCGDAGD CTSLYSPGAEDSDSLSNGEGSSQISNDYVNMTGLDLSAIQERQLWVAFQCCRDYENVPAA DPSGSQQQAEKDVPSSNIGHVEDKTDDPGTHVQCVKRTFLASGDYADFQPFTQSEDSQMK HREEMSNEDSSDYENVLTAKLGGRDSEQGPGTQLLPDE

>P05780

MSLLTEVETPIRNEWGCRCNDSSDPLVIAANIIGILHLILWILDRLFFKCIYRRFKYGLK RGPSTEGVPESMREEYRKEQQNAVDVDDGHFVNIELE

>06PE84

MDSPEKLEKNNLVGTNKSRLGVCGWILFFLSFLLMLVTFPISVWMCLKIIKEYERAVVFR LGRIQADKAKGPGLILVLPCIDVFVKVDLRTVTCNIPPQEILTRDSVTTQVDGVVYYRIY SAVSAVANVNDVHQATFLLAQTTLRNVLGTQTLSQILSGREEIAHSIQTLLDDATELWGI RVARVEIKDVRIPVQLQRSMAAEAEATREARAKVLAAEGEMNASKSLKSASMVLAESPVA LQLRYLQTLTTVATEKNSTIVFPLPMNILEGIGGISYGNNKKVTAKA

>08C8C1

MRIFRPWRLRCPALHLPSFPTFSIKCSLPPLPTDEDMCKSVTTGEWKKVFYEKMEEVKPA DSWDFIIDPNLKHNVLAPGWKQYLELHASGRFHCSWCWHTWQSPHVVILFHMYLDKAQRA GSVRMRVFKQLCYECGTARLDESSMLEENIESLVDNLITSLREQCYGERGGHYRIHVASR QDNRRHRGEFCEACQEGIVHWKPSEKLLEEEATTYTFSRAPSPTKPQAETGSGCNFCSIP WCLFWATVLMLIIYLQFSFRTSV

>09JHL0

MSAELELLWPVSGLLLLLLGATAWLCVHCSRPGVKRNEKIYEQRNRQENAQSSAAAQTYS LARQVWPGPQMDTAPNKSFERKNKMLFSHLEGPESPRYQNFYKGSNQEPDAAYVDPIPTN YYNWGCFQKPSEDDDSNSYENVLVCKPSTPESGVEDFEDYQNSVSIHQWRESKRTMGAPM SLSGSPDEEPDYVNGDVAAA

>P25580

MVTRHRVTVLYNAPEDIGNHMRQNDTHLTVRGGSGVVLQQRWLLERTGSLDKSFTRITWR PRADLARSLSVIENELSAGFSVYSNSSDVPERFITNPVYNSFHSEKFDIEQYLPPEVDLN LSWNPEDFTYDISVEPTQIQIVEYRLLKQGEEFTIARVKDEKLEVGVFFVDASDESDVDI GGIRCNWRMDDGKMERCQKTSLLYKQGHIAYNHSTTTTSLYLNEPIGLHPKIMIDLTDFE ERPKCMYLMHLQLPLELFIDKFQSSPLLLFGEDDLELPEYSLRDKAWGSESIFELKAGTM NEVTLHTRYIEPSNNKGDKLEVSFDPEVILACDTGDNKVSRNPFYKKGLGYESLFTDDTT FRHLNSTTLLVPIPRPDTKDYSKIKNGTLLCLLISIIYIFSKVFGNNKKKRSVKRE >P44607

MEFIGKIIGVFLGWKVGGFFGAIAGLILGSIADKKLYELGSVSSSFFKKKTTRQDLFMQT SFAVLGHLSKSKGRVTEEDIQLANQLMIQLKLDDAGRKLAQDAFRRGKESDFPIRQVIRE FRIGCGQRADLLRMFLQVQVQAAFADSELHENEKEVLYVIAEELGLSRMQFEQMIAMEMA ARAFTQGGFYQKYQQGAYQGGYQYQQQNSGGYQHASGPTLNDAYKVLGVTESDEQSTVKR AYRRLMNEHHPDKLVAKGLPPEMMEMAKEKTQQIQAAYDLICKAKGWK >P14220

MTESTAAVTTSGHSLTTTFHIPSSQHYQEEHSPSLSGSDSLLQITTPVVASTVGNPNQHS ATMSTPAIHVSTYHTAPTEVSAAFEEQPVSPHIGGMPSPIQHDFPALVMILIILGVMAGI IGTILLISYCISRMTKKSSVDIQSPEGGDNSVPLSSIEQTPNEESSNV

MQADRSMKMGHALNPFSTSAPLDATAGPSLIPDLITRIPWPRWTLFIAILAAGVLLVSCL LCVICCYCHRHRHRKQPKDKETVGLGSARNSTTTHLVQPDVDCLEPCSGGDQQWGRLLLS LEYDFGSQEIRVGLRQAGNLKAEGTADPYAWVSVSTQSGRRHETKVHRGTLSPMFEETCC FLVPPAELPKATLKVQLWDFKRFSEHEPLGELQLPLGTVDLQHVLESWYQLGPPGTTEPE QMGELCFSLRYVPSSGSLTVVVLEARGLNPGLAEAYVKIQLMLNQRKWKKSKTSSKKGTT TPYFNEAFVFLVPVSQLQSVDLVLAVWARGLQLRTEPVGKVLLGSRASGQPLQHWADMLA HARRPIAQWHHLRSPREVDRVLALQPRLPLLRPRS

>09H400

MGLPVSWAPPALWVLGCCALLLSLWALCTACRRPEDAVAPRKRARRQRARLQGSATAAEA SLLRRTHLCSLSKSDTRLHELHRGPRSSRALRPASMDLLRPHWLEVSRDITGPQAAPSAF PHQELPRALPAAAATAGCAGLEATYSNVGLAALPGVSLAASPVVAEYARVQKRKGTHRSP QEPQQGKTEVTPAAQVDVLYSRVCKPKRRDPGPTTDPLDPKGQGAILALAGDLAYQTLPL RALDVDSGPLENVYESIRELGDPAGRSSTCGAGTPPASSCPSLGRGWRPLPASLP >080ZI2

MSTSLTTCEWKKVFYEKMEVAKPADSWELIIDPTLKPNELGPGWKQYLEQHASGRFHCSW CWHTWQSANVVILFHMHLDRAQRVGSVRMRVFKQLCYQCGTSRLDESSMLEENIEGLVDN LITSLREQCYDEDGGQYRIHVASRPDSGLHRSEFCEACQEGIVHWKPSEKLLEEDAAYTD ASKKKGQAGFISSFFSFRWCLFWGTLCLVIVYLQFFRGRSGFL >O3U1F9

MGPAGSVLSSGQMQMQMVLWGSLAAVAMFFLITFLVLLCSTCDREKKPRQHSGDHENLMN VPSDKDMFSHSATSLTTDALASSEQNGVLTNGDILSEDSTLTCMQHYEEVQTSASDLLDS QDSTGKAKCHQSRELPRIPPENAVDEILTARAADTELGPGVEGPYEVLKDSSSQENMVED CLYETVKEIKEVADKGQGGKSKSTSALKELQGAPMEGKADFAEYASVDRNKKCRHSANAE SILGTCSDLDEESPPPVPVKLLDENANLPQEGGGQAEEQAAEGTGGHSKRFSSLSYKSRE EDPTLTEEEISAMYSSVNKPGQSAHKPGPCMKGPESACHSMKGLPQRSSSSCNDLYATVK DFEKTPNSISTLPPARRPSEEPEPDYEAIQTLNREDEKVPLETNGHHVPKESDYESIGDL OOCRDVTRL

(4) 44 single-pass type IV proteins

>P13701

MSAPPSGPAPDAQGGAPGQPTGPPGAPPNTTSNRRLQQTQAQVEEVVDIIRVNVDKVLER DQKLSELDDRADALQAGASQFESSAAKLKRKYWWKNCKMMIMLGGIGAIIVIVIIIYFFT >Q39233

MSFQDLEAGTRSPAPNRFTGGRQQRPSSRGDPSQEVAAGIFRISTAVNSFFRLVNSIGTP KDTLELRDKLQKTRLQISELVKNTSAKLKEASEADLHGSASQIKKIADAKLAKDFQSVLK EFQKAQRLAAEREITYTPVVTKEIPTSYNAPELDTESLRISQQQALLLQSRRQEVVFLDN EITFNEAIIEEREQGIREIEDQIRDVNGMFKDLALMVNHQGNIVDDISSNLDNSHAATTQ ATVQLRKAAKTQRSNSSLTCLLILIFGIVLLIVIIVVLV

>Q99MI6

METLQNVVTGGKKGGCTSGSRPLRILLVGKSGCGKSATGNSLLRRPAFESRLRGQSVTRT SQAETGTWEGRSILVVDTPPIFESKAQNQDMDKDIGDCYLLCAPGPHVLLLVTQLGRFTA EDVMAVRMVKEVFGVGVMRHMIVLFTRKEDLAEKSLEEFVTHTDNRSLRSLVQECGRRYC AFNNRASGEEQQGQLAELMALVRRLEQECEGSFHSNDLFLHAETLLREGYSVHQEAYRCY LAKVRQEVEKQRWELEEQEGSWVLKVLPIGKKLEVLHSDFCWYLVLAILIFFVFFFLLFY >P47194

MSGPQNPQAGPGGPPSGPPQPGGPPQGPPQPVQQSKRLQQTQAQVEEVVDIMRVNVD KVLERDSKISELDDRADALQAGASQFEASAGKLKRKFWWKNCKMMIILGGIVAVIVTVII

VWAAT

>004378

MSFQDLEAGRGRSLASSRNINGGGSRQDTTQDVASGIFQINTSVSTFHRLVNTLGTPKDT PELREKLHKTRLYIGQLVKDTSAKLKEASETDHQRGVNQKKKIVDAKLAKDFQAVLKEFQ KAQRLAAERETVYAPLVHKPSLPSSYTSSEIDVNGDKHPEQRALLVESKRQELVLLDNEI AFNEAVIEEREQGIQEIQQQIGEVHEIFKDLAVLVHDQGNMIDDIGTHIDNSYAATAQGK SHLVRHQRHKDQILL

>Q8WWP7

MGGRKMATDEENVYGLEENAQSRQESTRRLILVGRTGAGKSATGNSILGQRRFFSRLGAT SVTRACTTGSRRWDKCHVEVVDTPDIFSSQVSKTDPGCEERGHCYLLSAPGPHALLLVTQ LGRFTAQDQQAVRQVRDMFGEDVLKWMVIVFTRKEDLAGGSLHDYVSNTENRALRELVAE CGGRVCAFDNRATGREQEAQVEQLLGMVEGLVLEHKGAHYSNEVYELAQVLRWAGPEERL RRVAERVAARVQRRPWGAWLSARLWKWLKSPRSWRLGLALLLGGALLFWVLLHRRWSEAV AEVGPD

>008851

MIPRKRYGSKNTDQGVYLGLSKTQVLSPATAINSSSDIAPLPTPVALVPSPPDTMSCRDR TQEFLSACKSLQSRQNGIQTNKPALHATRQCSEFTLMARRIGKDLSNTFAKLEKLTILAK RKSLFDDKAVEIEELTYIIKQDINSLNKQIAQLQDFVRAKGSQSGRHLQTHSNTIVVSLQ SKLASMSNDFKSVLEVRTENLKQQRNRREQFSRAPVSALPLAPNNLGGGPIVLGGESRAS RDVAIDMMDPRTSQQLQLIDEQDSYIQSRADTMQNIESTIVELGSIFQQLAHMVKEQEET IQRIDENVLGAQLDVEAAHSEILKYFQSVTSNRWLMVKIFLILIVFFIIFVVFLA >035152

MADWTRAQSSGAVEEIVDRENKRMADSLASKVTRLKSLALDIDRDTEDQNRYLDGMDSDF TSVTGLLTGSVKRFSTVARSGRDTRKLLCGMAVVLIVAFFILSYLFSRTRT >Q04338

SSLLISYESDFKTTLEQAKASLAEAPSQPLSQRNTTLKHVEQQQDELFDLLDQMDVEVNN SIGDASERATYKAKLREWKKTIQSDIKRPLQSLVDSGDRDRLFGDLNASNIDDDQRQQLL SNHAILQKSGDRLKDASRIANETEGIGSQIMMDLRSQRETLENARQTLFQADSYVDKSIK TLKTMTRRLVANKFISYAIIAVLILLILLVLFSKFK

>09P0L0

MAKHEQILVLDPPTDLKFKGPFTDVVTTNLKLRNPSDRKVCFKVKTTAPRRYCVRPNSGI IDPGSTVTVSVMLQPFDYDPNEKSKHKFMVQTIFAPPNTSDMEAVWKEAKPDELMDSKLR CVFEMPNENDKLNDMEPSKAVPLNASKQDGPMPKPHSVSLNDTETRKLMEECKRLQGEMM KLSEENRHLRDEGLRLRKVAHSDKPGSTSTASFRDNVTSPLPSLLVVIAAIFIGFFLGKF TI.

>014662

MATRRLTDAFLLLRNNSIQNRQLLAEQVSSHITSSPLHSRSIAAELDELADDRMALVSGI SLDPEAAIGVTKRPPPKWVDGVDEIQYDVGRIKQKMKELASLHDKHLNRPTLDDSSEEEH AIEITTQEITQLFHRCQRAVQALPSRARACSEQEGRLLGNVVASLAQALQELSTSFRHAQ SGYLKRMKNREERSQHFFDTSVPLMDDGDDNTLYHRGFTEDQLVLVEQNTLMVEEREREI RQIVQSISDLNEIFRDLGAMIVEQGTVLDRIDYNVEQSCIKTEDGLKQLHKAEQYQKKNR KMLVILILFVIIIVLIVVLVGVKSR

>P38736

MSSQPSFVTIRGKAISLETQTESLLSKYSTFAQTTSSEQTGQEKKIDKQLEGILGQRQDV IDSLTQICDSNPAISASKLSQLHRHKEILQDHWKSFRNIRSSIQQERNRLNLLFSVKNDI ANSTTDAPAPIGDADEYIQNETRRIDQSNNVVDRLISQAWETRSQFHSQSNVLNTANNKV LQTLQRIPGVNQLIMKINTRRKKNAFVLATITTLCILFLFFTW

>Q9Z158

MSEDEEKVKLRRLEPAIQKFTKIVIPTDLERLKKHQINIEKYQRCRIWDKLHEEHINAGR TVQQLRSNIREMEKLCLKVHKDDLILLKRMIDPMKEAAAAATAEFLQLHLESVEELKKQV KNEEALLQPSLTRSTTIDGVHTGEAEAASQSLTQIYALPEIPRDQNAAESWETLEADLIE LSHLVTDMSLLVNSQQEKIDSIADHVNSAAVNVEEGTKNLQKAAKYKLAALPVAGAVIGG VVGGPIGLLAGFKVAGIAAALGGGVLGFTGGKLIQRRKQKMMEKLTSSCPDLPSQSDKKC >P28791 MVVTFLQDLEVLQDALLNNLQKLSAISRRKESGESKHDNKDSFAAIANEHNDEEEEIEFE DLVNIIESKVSDFESVLKCSIVEMTYKYPELKLQWEKSPRYDQCDKLHIVKLDKQMNEDI YAQLVEELDFVLQFVDWFYCYRLKVKEILRQHHKRDLAWNDEKRDRAIKFHAVDYDKLHQ GTSSSSSLTSTSMEKASTREKLLSKTKQLTNNLVRGNQILQSGILQSDLNLDELRAQTNS LTQIDDKYTQFETVFKKTADLVKVLENASHQEKRDVYLSLGFLLCCVSWVLWRRIFKLPV KLGLWLLFKFFKGILVTLGLVKSYAGSSSSLQAPSLVLNAPILATTTTSSATSVEPFASV SAVSSIQRAVDEAVDRIVSHDEL

>P34237

MDTSVYSHALDIWAKADLTNLQRELDADVIEIKDKETLSLNSRKSLATETKKFKKLEPEE KLNNVNKIIKQYQREIDNLTQRSKFSEKVLFDVYEKLSEAPDPQPLLQSSLEKLGKIDDS KELKEKISYLEDKLAKYADYETLKSRLLDLEQSSAKTLAKRLTAKTQEINSTWEEKGRNW KEREADLLKQLTNVQEQNKALEAKISKNIDIEGNGNEDGDQENNQKEVSTRIAEYNLVTQ ELETTQARIYQLEKRNEELSGALAKATSEAEKETELHAKELKLNQLESENALLSASYEQE RKSTSHAINELKEQLNSVVAESESYKSELETVRRKLNNYSDYNKIKEELSALKKIEFGVN EDDSDNDIRSEDKNDNTFESSLLSANKKLQATLAEYRSKSTAQEEERNELKKSVDQLKQQ IATLKEANEKLETDLEKVENVSPHFNETASMMSGVTRQMNNRTSHKMSPTSSIIGIPEDG ELSGNQSTILPIVTKQRDRFRSRNMDLEKQLRQGNSEKGKLKLEISKLKGDNTKLYERIR YLQSYNNNNAPVNQSTERIDVESQYSRVYDESLHPMANFRQNELNHYKNKKLSALEKLFS SFAKVILQNKMTRMVFLFYCIGLHGLVFMMSMYVINISGYMTPEVGIVQSAKSSSNLNGG LGGAEKVAAGVGSVHGINR

>P50279

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>Q9LS42

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>P41834

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MRRAGLGDGAPPGGYGNYGYANSGYNACEEENDRLTESLRSKVTAIKSLSIEIGHEVKNQ NKLLAEMDSQFDSTTGFLGKTMGRLKILSRGSQTKLLCYMMLFSLFVFFVIYWIIKLR >042374

MNDLMTKSFMSYVDLKKAAMKDMEAGPDFDLEMASTKADKMDENLSSFLEEAEYVKAEMG LISETLARIEQYHEESKGVHKAESVKSLRNKISNEIVSGLRKAKSIKSKLEEMDKANKEI KRLSGTPVYRSRTAVTNGLRKKLKEVMMEFQGLRQKMMSEYKETVERRYFTVTGEHANDE MIEKIITDNAGGEEFLTRAIQEHGKGKVLETVVEIQDRYDAAKEIEKSLLELHQVFLDMA VMVESQGEQMDEIEHHVINASHYVADGANELKTAKSHQRNSRKWMCIGIIVLLLIILIVV IPIITSFSSS

>08TBA6

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ELLFDFLNSSQKEPTGRVEIRKEKGKTPVFQSSQTSSVSSVNPSVTTIKTIEENSFGSQT
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>060664

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DVKARDAPEPQGEEAVERTRKPSLSERRSSTLAWDRGTICSSVASWVTHLQASFRRANRA
LWLTGLIILIAALMSFLTGQLFQTAVEAAPTQEGDSWLSLEHILWPFTRLGHDGPPPV
>065359

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>Q9USH7

MNKANDYTLGVEMIPLSMGEFFEEIDHIRDAIRQIEDNVGRIEMLHQQSLQEIDEANIAA TTRHLEGYTSDTRRLQTSVQLAIRSLESQNMQLPPDNDTATRKTQTEAVKKKFMDQIRHF LQIEKTYRAQYEQRMRRQLEIANPRATEDDFQTAINEENGGQVFAQALLRSNRSGEARTA LREVQERHADIKRIERTIAELAQLFQDMATMVQEQEPMVDKIVTDAVNVRTNMGEGTQHM DRAIKSARAARKKKWICFGICVVIICVIVAVLCGVLIPVLGNRH

MSAGPGGPQGGMQPPREQSKRLQQTQAQVDEVVDIMRVNVEKVLDRDQKISQLDDRAEAL QAGASQFEASAGKLKRKYWWKNCKMMLILGAIIGVIVIIIIVWVVTSQDSGGDDSGSKTP ATAGTSPKPVESGVQGGGGRQQRPHSQLVERRNVLRRTEDHIGCRPHIHSFIHIFMICLV > 09 Z 2 0 7

MAPDPWFSTYDSTCQIAQEIAEKIQERNQCERRGEKTPKLTLTIRTLLKNLKVKIDLLKD LLLRAVSTRQITQLEGDRRQNLLDDLVTRERLLLASFKNEGSEPDLIRSSLMSEEAKRGT PNPWLCEEPEETRGLGFDEIRQQQQKIIQEQDAGLDALSSIISRQKQMGQEIGNELDEQN EIIDDLANLVENTDEKLRTEARRVTLVDRKSASCGMIMVILLLLVAIVVVAVWPTN >P39722

MTKETIRVVICGDEGVGKSSLIVSLTKAEFIPTIQDVLPPISIPRDFSSSPTYSPKNTVL IDTSDSDLIALDHELKSADVIWLVYCDHESYDHVSLFWLPHFRSLGLNIPVILCKNKCDS ISNVNANAMVVSENSDDDIDTKVEDEEFIPILMEFKEIDTCIKTSAKTQFDLNQAFYLCQ RAITHPISPLFDAMVGELKPLAVMALKRIFLLSDLNQDSYLDDNEILGLQKKCFNKSIDV NELNFIKDLLLDISKHDOEYINRKLYVPGKGITKDGFLVLNKIYAERGRHETTWAILRTF

HYTDSLCINDKILHPRLVVPDTSSVELSPKGYRFLVDIFLKFDIDNDGGLNNQELHRLFK CTPGLPKLWTSTNFPFSTVVNNKGCITLQGWLAQWSMTTFLNYSTTTAYLVYFGFQEDAR LALQVTKPRKMRRRSGKLYRSNINDRKVFNCFVIGKPCCGKSSLLEAFLGRSFSEEYSPT IKPRIAVNSLELKGGKQYYLILQELGEQEYAILENKDKLKECDVICLTYDSSDPESFSYL VSLLDKFTHLQDLPLVFVASKADLDKQQQRCQIQPDELADELFVNHPLHISSRWLSSLNE LFIKITEAALDPGKNTPGLPEETAAKDVDYRQTALIFGSTVGFVALCSFTLMKLFKSSKF SK

>P32339

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>008522

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>0946Y7

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>P31377

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>09UEU0

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SATAATAPPAAPAGEGGPPAPPPNLTSNRRLQQTQAQVDEVVDIMRVNVDKVLERDQKLS ELDDRADALQAGASQFETSAAKLKRKYWWKNLKMMIILGVICAIILIIIIVYFSS >008144

MFRDRTNLFLSYRRTFPHNITFSSGKAPLGDDQDIEMGTYPMMNMSHDISARLTDERKNK HENHSDALPPIFIDIAQDVDDYLLEVRRLSEQLAKVYRKNSLPGFEDKSHDEALIEDLSF KVIQMLQKCYAVMKRLKTIYNSQFVDGKQLSREELIILDNLQKIYAEKIQTESNKFRVLQ NNYLKFLNKDDLKPIRNKASAENTLLLDDEEEEAAREKREGLDIEDYSKRTLQRQQQLHD TSAEAYLRERDEEITQLARGVLEVSTIFREMQDLVVDQGTIVDRIDYNLENTVVELKSAD KELNKATHYQKRTQKCKVILLLTLCVIALFFFVMLKPHGGGSGGRNNGSNKYNNDDNKTV NNSHDDGSNTHINDEESNLPSIVEVTESENDALDDLL

>035526

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>Q6P073

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>Q9Y385

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>Q24509

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>P93654

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>Q9SEL5

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>Q9SEL6

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>012981

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>013948

MAANVGSMFQYWKRFDLQQLQRELDATATVLANRQDESEQSRKRLIEQSREFKKNTPEDL RKQVAPLLKSFQGEIDALSKRSKEAEAAFLNVYKRLIDVPDPVPALDLGQQLQLKVQRLH DIETENQKLRETLEEYNKEFAEVKNQEVTIKALKEKIREYEQTLKNQAETIALEKEQKLQ NDFAEKERKLQETQMSTTSKLEEAEHKVQSLQTALEKTRTELFDLKTKYDEETTAKADEI EMIMTDLERANQRAEVAQREAETLREQLSSANHSLQLASQIQKAPDVEQAIEVLTRSSLE VELAAKEREIAQLVEDVQRLQASLTKLRENSASQISQLEQQLSAKNSTLKQLEEKLKGQA DYEEVKKELNILKSMEFAPSEGAGTQDAAKPLEVLLLEKNRSLQSENAALRISNSDLSGR CAELQVRITEAVATATEQRELIARLEQDLSIIQSIQRPDAEGAAEHRLEKIPEPIKEATA LFYGPAAPASGALPEGQVDSLLSIISSQRERFRARNQELEAENRLAQHTLQALQSELDSL RADNIKLFEKIKFLQSYPGRGSGSDDTELRYSSQYEERLDPFSSFSKRERQRKYLSLSPW

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>012241

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(5) 1316 multi-pass membrane proteins

>P46840

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>08TCB6

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>P29871

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>P29875

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>P30411

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>060928

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MGACVIVTNTNISSGLESNTTGITAFSMPTWQLALWATAYLALVLVAVTGNATVTWIILA HQRMRTVTNYFIVNLALADLCMAAFNAAFNFVYASHNIWYFGRAFCYFQNLFPITAMFVS IYSMTAIAIDRYMAIVHPFQPRLSAPSTKAVIGGIWLVALALAFPQCFYSTITEDEGATK CVVAWPEDSRDKSLLLYHLVVIVLIYLLPLTVMFVAYSIIGLTLWRRAVPRHQAHGANLR HLQAKKKFVKTMVLVVVTFAICWLPYHLYFILGSFQEDIYCHKFIQQVYLALFWLAMSST MYNPIIYCCLNRRFRSGFRLAFRCCPWVTPTEEDKLELTHTPSFSLRVNRCHTKEILFMA GDTVPSEATNGQAGGPQDRESVELSSLPGCRAGPSILAKA

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MPPATGGGLAESELRPRRGRCGPQAARAAGRDVAAEAVARSPKRPAWGSRRFEAVGWWAL LALVTLLSFATRFHRLDEPPHICWDETHFGKMGSYYINRTFFFDVHPPLGKMLIGLAGYL SGYDGTFLFQKPGDKYEHHSYMGMRGFCAFLGSWLVPFAYLTVLDLSKSLSAALLTAALL TFDTGCLTLSQYILLDPILMFFIMAAMLSMVKYNSCADRPFSAPWWFWLSLTGVSLAGAL GVKFVGLFIILQVGLNTIADLWYLFGDLSLSLVTVGKHLTARVLCLIVLPLALYTATFAV HFMVLSKSGPGDGFFSSAFQARLSGNNLHNASIPEHLAYGSVITVKNLRMAIGYLHSHRH LYPEGIGARQQQVTTYLHKDYNNLWIIKKHNTNSDPLDPSFPVEFVRHGDIIRLEHKETS RNLHSHYHEAPMTRKHYQVTGYGINGTGDSNDFWRIEVVNRKFGNRIKVLRSRIRFIHLV TGCVLGSSGKVLPKWGWEQLEVTCTPYLKETLNSIWNVEDHINPKLPNISLDVLQPSFPE ILLESHMVMIRGNSGLKPKDNEFTSKPWHWPINYQGLRFSGVNDTDFRVYLLGNPVVWWL NLLSIALYLLSGSIIAVAMQRGARLPAEVAGLSQVLLRGGGQVLLGWTLHYFPFFLMGRV LYFHHYFPAMLFSSMLTGILWDTLLRLCAWGLASWPLARGIHVAGILSLLLGTAYSFYLF HPLAYGMVGPLAQDPQSPMAGLRWLDSWDF

>060879

MRLKNHSSVSEFLLLGFPIRPEQGGIFFSLFLAMYLITVLGNLLIILLIRLDSHLHTPMY FFLSHLAFTDISFSSVTVPKMLTKVQNQPIPITYEECVSQTYFFIFFADLDSFLITSMAY DRYMAICHPLHYITIMSQSRCAMLVAVSWVIASACALLHSLLLDQLSFCADHTVPHFFCD LGALLKLSCSDTSLNQLVIFTAGLAAIMLPFLCILISYGRIGFTILQVPTTKGICKALST CGSHLSVVALYYGSIIGLYFLPPSNSKINNNIVASVMYTVVTPMLNPFIYSLRNKDMKGA LKKLLSKKTEFSK

>P10897

MEGPASPARAPGALPYYVAFSQLLGLIVVAMTGAWLGMYRGGIAWESALQFNVHPLCMII GLVFLQGDALLVYRVFRNEAKRTTKVLHGLLHVFAFVIALVGLVAVFEHHRKKGYADLYS LHSWCGILVFALFFAQWLVGFSFFLFPGASFSLRSRYRPQHVFFGAAIFLLSVATALLGL KEALLFELGTKYSMFEPEGVLANVLGLLLATFATVILYILTRADWKRPLQAEEQALSMDF KTLTEGDSPS

>P43524

MGDFCRRVDCKAMKFFALRSSIRTQIMASTTLLILALIGAIVTVWAKSESTLYHQEKLND AKILSKVLSSTYANEVSEENWSQIRLNIDLLLRENEDFLYALVSDSNQKNQIAASSPDEF QNNYIPDIVSLSVTNAAINSSEKTHVVETFILRDIYFADKLRAKRGEKVMEVSSDIQTLS GRKLGKLRIGISLRKVNLAVTNAVNQALVVGFAGLNIGWICAYFLAQHLSDPVRRLQISV AKIAGGDLQHRADIHSRADEIGALATSVNEMSAALQISFNKLKKTLDSFERFVPNKFISV IAPQGIENIEVGAASTRRMTILFCDIRGYTSMSEAMEPIEIFRFLNDYLACMGKAIDEAG GFIDKYIGDAIMALFDDGNTDCALHAAILMQQALDKFNDERSMQTGKTGLPRISVGIGIH RGTVVMGTVGFTSRIDSTVIGDAVNVASRIEGLTKQYGCNILITESVVRNLSCPESFSLR LIDKSVKVKGKDEAISIYEV

>P33766

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>Q59548

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FMAFVTLLFATTFITQETRKIPIQQSGQGLVTESSALPYLPIKVNSAGVIPVIFASSIMS
IPVTIAQFQPQTESRWFVEDYLSLSKPTGIVLYGILVILFSFFYSYIQINPERLAKNFEK
SGRFIPGIRPGKDTEKHIARVLVRINFIGAPFLTVIAIIPYIVSALIHLPNSLSLGGTGI
IIIVTAVVEFMSALRSAATATNYQQLRRNLAIEVQKTAQQDKEEQLRAETPGIGNLW

MVNLGNAVRSLLMHLIGLLVWQFDISISPVAAIVTDTFNSSDGGRLFQFPDGVQNWPALS IVVIIIMTIGGNILVIMAVSMEKKLHNATNYFLMSLAIADMLVGLLVMPLSLLAILYDYV WPLPRYLCPVWISLDVLFSTASIMHLCAISLDRYVAIRNPIEHSRFNSRTKAIMKIAIVW AISIGVSVPIPVIGLRDESKVFVNNTTCVLNDPNFVLIGSFVAFFIPLTIMVITYFLTIY VLRRQTLMLLRGHTEEELANMSLNFLNCCCKKNGGEEENAPNPNPDQKPRRKKKEKRPRG TMQAINNEKKASKVLGIVFFVFLIMWCPFFITNILSVLCGKACNQKLMEKLLNVFVWIGY VCSGINPLVYTLFNKIYRRAFSKYLRCDYKPDKKPPVRQIPRVAATALSGRELNVNIYRH TNERVARKANDPEPGIEMQVENLELPVNPSNVVSERISSV

>P40988

MGKIAEFLGNPGARPDVHHRAPTVDCKQYEEFGDSNDYKNDDVVRVVSHSDESTDDELCN VNLTETGAIFTSKGFTGLSKGFTDKTLDFLVRVAGSQAVFFIVWIILIIWVVIGIVYNAP FNWQVVMQDGQSIQSYVWDTLLMRQQLMSTHEQILICGRLKSRLASFKNYLTRSTPEEEK ADCTVEANEVSSVENHIDPSAINGELPVENWYDRLSNVASRYMGSIAAMVIFWIGIFVWI GCGAIPKDAGNTPPYTGETTGSNPRLKKFSDAWQMYINTAVAVSLLICTTFLQNIRARHD YFTGRFLVDIFDMDEKIDYRIRKHFNDFETPHPVVTIESKKRSTGRKMIDWYADIIGTGI GVLIGVAVFATWIGIGSPMKWDDNWWLIIGTYTGLIGFLDGFVLREVYFRIVQHEEKNYS DVAKEDLELFQELGIECPEEFSGKAPEINTIGYRTSQYINRICSTPWSVLVSVIIIIGLI CIASGLRWSTTGQLIANTPTMIIEEFFLLVLLQAHNWADRQRRVEVTALYARRRILLSYV EKRFPEVMML

>08K9Y1

MNSLGINIYEILFQILHITLIIIFIIFFAATLSILERKFLAFFQNRHGPNRVGWFGSLQL CADMIKILFKEDWVPQFSKKSIFILSPIIAFVSLLLVIPTIPFTPNFLIINLNIGILFFL MMASLSVYAVLFAGWSSNNKYSLLGAIRASAQTLSYEVFLGLSLMGVIARSGSFNIVDIV NSQKEVWNVIPQFFGFLCFFIAGIALCHRHPFDQPESEQELADGYHIEYSGMKFGLFFIG EYISIITVSALISTVFFGGYFGFWGSSFFWLFLKTVFFILIFILIRASLPRPKYDQIMSF GWKICLPLTLLNLIITAFFILI

>P63852

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>Q60884

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>P63856

MTSAVGTSGTAITSRVHSLNRPNMVSVGTIVWLSSELMFFAGLFAFYFSARAQAGGNWPP PPTELNLYQAVPVTLVLIASSFTCQMGVFAAERGDIFGLRRWYVITFLMGLFFVLGQAYE YRNLMSHGTSIPSSAYGSVFYLATGFHGLHVTGGLIAFIFLLVRTGMSKFTPAQATASIV VSYYWHFVDIVWIALFTVIY

>050326

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MISMLAGNGSSVTEFVLAGLTDRPELQLPLFYLFLIIYIITVVGNLGLIILIGLNPHLHT PMYYFLFNLSFIDLCYSSVFSPKMLINFVSEKNSISYAGCMTQLFLFLFFVISECYMLTS MAYDRYVAICNPLLYKVTMSPQICSVISFAAYGMGFAGSSAHTGCMLRLTFCNVNVINHY LCDILPLLQLSCTSTYVNEVVVLIVVGINITVPSFTILISYVFILANILNIKSTQGRAKA FSTCSSHIMAISLFFGSAAFMYLKYSSGSMEQGKISSVFYTNVGPMLNPLIYSLRNKDVK VALRKSLIKFREKTDFN

>Q60888

MKNLSVVTQFILLGIPHTEGVETMLFVLFFSFYIFTLVGNLLILLAIVSSSRLHTPMYFF LCQLSVCDIFFPSVSSPKMLFYLSGNTPAISYAGCVSQLFFYHFLGGTECFLYTVMAYDR FVAICYPLRYSVIMSHRICAFLAMGTAVFGCIHSTFLTTLTFQLPYCGPKDVNYYFCDIP VVMKLACADTSTLEMVGFISVGLMPLSCFFFILTSYSCIVRSILQIRSTEGRHRAFSTCS AHFTAILLFYMPVIFIYLRPTPSPWLDATVQILNNLVTPMLNPLIYSLRNKEVKSSLWTV LHLLCFLPKHL

>06IF42

MEGNQTWITDITLLGFQVGPALAILLCGLFSVFYTLTLLGNGVIFGIICLDSKLHTPMYF FLSHLAIIDMSYASNNVPKMLANLMNQKRTISFVPCIMQTFLYLAFAVTECLILVVMSYD RYVAICHPFQYTVIMSWRVCTILVLTSWSCGFALSLVHEILLLRLPFCGPRDVNHLFCEI LSVLKLACADTWVNQVVIFATCVFVLVGPLSLILVSYMHILGAILKIQTKEGRIKAFSTC SSHLCVVGLFFGIAMVVYMVPDSNQREEQEKMLSLFHSVFNPMLNPLIYSLRNAQLKGAL HRALQRKRSMRTVYGLCL

>P43531

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MATLGTGMRCLKSCVFVLNIICLLCSLVLIGAGAYVEVKFSQYGDNLHKVWQAAPIAIIV VGVIILIVSFLGCCGAIKENVCMLYMYAFFLVVLLIAELAAAIVAVVYKDRIDSEIDALM TGALDKPTKEITEFMNLIQSSFHCCGAKGPDDYRGNVPASCKEENLTYTEGCVSVFGAFL KRNLVIVACVAFGVCFFQLLSIVIACCLGRQIKEYENV

>09FYL3

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>Q56217

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>033407

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TAQLSQAGANVIPLNIPLLKEGMANPASFGLAADQNLIGTCFSGNGCTMNPTYGINGST
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EKGDTNGHLWAFSARLGYDIAQQADSPWHLSPFVSADYARVEVDGYSEKGASATALDYDD
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>Q60891

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>093QY7

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VFTIIKPVQKTHRLLGVYCTIVSGVEWFVAALVLYMSMAIVGVQIPFATFMGIFILAALS
GLISFIPGGFGTFDLVVLLGLKALNVNEEAIVLGLSLYRFAYYLFPVLIALILSTFEFRS
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LYDPNHYIYYIIVSIHTCACLLLLLNVIGVYKLSKRAILFSIISVLFIFIATAYTYASFI
LLSWLTVIFILLLVFYRRARVIKRPFRYSKLLLSVITGAIILYINHLVIKSTFYSLEIYH
IEMLTSILRYYFWITILLVAIIVGVIVWWFEYRYRSSNSRDNIATCESIIDKYNGNYLSH
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>P46889

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>023593

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>Q8IWK6

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>056227

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>06IF63

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>013898

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>Q9HCF6

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>Q9Y5I7

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>P23230

>08WMU5

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>P53322

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>086WB7

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>016452

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>P39690

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>P25931

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>Q76JU8

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>P23267

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>P23269

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>039287

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>092911

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>Q80XF7

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>P46139

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>P22610

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>P76224

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LAILADQSTINSEALINSLTMGLVATFIALLLLLLWLEWGPQRRQLWLWLPILLPALPLV
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>P23272

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>P0A406

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>P35720

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MSTDNSOKDEGVPLLSPYSSSPOLRKKKRNOKRRKDKFVGHLKSDSRRPTOLLHDNLOHN HGOITDFDOIDSWGMLHESDSTSNDIIKSEDPSLKGAFIDHRPSMSOPREGPOSVSSTVO POPIMKFSTPSYKKPAGLRPSDONRSLVSDLSPSELESWLKRRKSVHKSFVDENSPTDRR QSNANNDVVIDVDALMNHVNNNASTGVNDNSKRRKKKRGSDDSSNKNSKSTSSDSNDEED EYNSRPSSSLSSNNSSLDDVCLVLDDEGSEVPKAWPDCTVLEEFSKEETERLRSQAIQDA EAFHFOYDEDEEDGTSNEDGILFSKPIVTNIDVPELGNRRVNETENLKNGRLRPKRIAPW HLIORPMVLGSNSTKDSKSRIOSGLODNLLVGRNIOYPPHIISNNPEHFRFTYFRVDLDS TVHSPTISGLLOPGOKFODLFVASIYSODNSAGHIKTHPNSPTPGIKAETVSOLOGLTAK NPSTLSSMSVANIEDVPPFWLDVSNPTEEEMKILSKAFGIHPLTTEDIFLGEVREKVELF RDYYLICFRSFDIVAEKHVRRRRKEKQESATLDHESISRRKSQAYGATMSNESNANNNNS TSNASRSKWLPSILRARRRSSANRTTNTSSSSYKRRVKSEKKKMEENEKFKRKSGDRHKP REGELEPLNVYIIVFRTGVLTFHFAPTPHPINVRRRARLLKDYLNVTSDWIAYALIDDIT DAFAPMIELIEDEVYEIEDAILKMHOSDDSSDSDSDSDSGASDEDAFPFDVYSKKTS YSSAKSSVSSRSMSTSEASFNANLIGWKRKGDMLRRIGECRKRVMSILRLLGSKADVIKG FAKRYNEOWEASPOSEIAMYLGDIODHIVTMVSSLNHYEKLLSRSHSNYLAQINIDMTKV NNDMNDVLGKITILGTIVLPMNVITGLWGMNVIVPGQYRDSLTWFIGIVLFMCMLACSAY MYTKRRFGF

>P36381

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MLSPNASTGLLSCNDSEFKEHFDLEDLNLTHEDLRLKYLGPQQVKQFLPICVTYLLIFVV GTLGNGLTCTVILRQKAMHTPTNFYLFSLAVSDLLVLLVGLPLELYEMQHNYPFQLGAGG CYFRILLLETVCLASVLNVTALSVERYVAVVHPLQAKSVMTRTHVRRMLGAIWVFAILFS LPNTSLHGLSPLYVPCRGPVPDSVTCTLVRPQFFYKLVIQTTILLFFCLPMVTISVLYLL IGLRLRRERMLLQEEVKGRISAAARQASHRSIQLRDRERRQVTKMLIALVIVFGTCWVPF HADRLMWSMVSHWTDGLRLAFQSVHLASGVFLYLGSAANPELYNLMSTRFRESFRETLGL GTRCCHRHQPRHDSHSHLRLTTVSTLCDRNSRDVPLAENRDPGCEQETDPPE

>Q9JJI6

>09JJI5

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>P25960

MTMLLPLFILVGFIADYFVNAIAYHLSPLEDKTALTFRQVLVHFRQKKYAWHDTVPLILC VAAAIACALAPFTPIVTGALFLYFCFVLTLSVIDFRTQLLPDKLTLPLLWLGLVFNAQYG LIDLHDAVYGAVAGYGVLWCVYWGVWLVCHKEGLGYGDFKLLAAAGAWCGWQTLPMILLI ASLGGIGYAIVSQLLQRRTITTIAFGPWLALGSMINLGYLAWISY

>P25962

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>P25964

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>P76236

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>09NXF1

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>03T181

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>POABE5

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>09BZJ8

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>Q60175

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>P28527

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IPLKMLATEPIVFLVSLYCSFVYAIIYLLLEAYPVIFQEGRHFPLGVSALPYIGILVGVF
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GVGWAGSLLGFIATALIPMPFAFFFFGKKIRAKSKMTAQF
>09LXS1

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YIKREHNISHVTIQIERQ

>Q3SYC2

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>Q3E7B6

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>P15422

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>09JJL3

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>P28539

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>P0ABG1

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>09DDD1

MSVMPSNLSLNGTSFFAENHSIMDKPNEQRTLNVFLFCSTFIIAFTVLLGSIYSLVSLLK LQNKSTISMIVTSLSIDDLISIVPVIIFMLTQWSSDALPQPLCTTSALIYLFQGISSNLK GSLIVSYNFYSINKTETMNCSASKRRVSMVWAILSIWIVSLLICILPLCGWGKYIPTTWG CFTDHASSYILFLFIVYSLCFCLLTVLSVPLTYQLLCSDEQQLLHVNYQEISRGYITPGT PAGCSTATPCLSPVDPVDKTLKHFQNACLSSKAVFRKGVAESSGLEPRCMNNAKSRSFTV GFAQKRFSLILALTKVILWLPMMIQMVVQHITGYQSFSFETLSFLLTLLAATVTPVFVLS EHWIHLPCGCIINCRRNSYAVSSEELKTKHRGFEFNLSFQHGYGIYRISPESHHHDGDGK STSCHNLLVCEKPYEPPRGGGGGAALAELSTTDSARPGPAGLSATDSARPGPAGFSTTDS ARPSAAGVRGEAASGLGRTVEGPERRLSHEEGHKPELTDWEWCRSKSERTPRQRSGGALA IPLCAFQGTVSLQAPTGKTLSLSTYEVSTEGQKITPTSKKIEVYRSKSVGHDPNPEECPN TFADTSVKIHLEVLEICDNEEALDTVSIISNISQSSTQVRSPSLRYSRKENRFVSCDLGE TASYSLFIPSNNPDSDINITIPDTVEAHRQNSKKQHMERGGYQEEIQMLNKAYRKREEDG NSN

>042603

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>Q42556

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FQKVLTAIGNFCICSIAIGMLIEIVVMYPIQKRAYRDGIDNLLVLLIGGIPIAMPTVLSV
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>Q7V6U4

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>P08220

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>Q5XID0

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>P76278

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>09NX.T0

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>P62517

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>P63183

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>POABJ1

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>POABJ3

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>043292

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 $\label{thm:condition} THRVVSTQAPDRGWMALKLVALIYLALQLGCIALTNFSLGFLLATTMVPTAALAKPHGPR\\ TLYAALLVLTSPAATLLGSLFLWRELQEAPLSLAEGWQLFLAALAQGVLEHHTYGALLFP\\ LLSLGLYPCWLLFWNVLFWK$

>P08247

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>P0ABJ6

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>P22686

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>099J94

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ENDGELKTKL

>P76299

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>Q9BDS6

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>Q9LY77

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>Q48473

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>Q9NQC3

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>035433

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ILLAYVILTYILLINMLIALMGETVNKIAQESKNIWKLQRAITILDTEKSFLKCMRKAF
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>P82872

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>0810F1

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>P42237

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>P25253

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MWKTLHQLAIPPRLYQICGWFIPWLAIASVVVLTVGWIWGFGFAPADYQQGNSYRIIYLH VPAAIWSMGIYASMAVAAFIGLVWQMKMANLAVAAMAPIGAVFTFIALVTGSAWGKPMWG TWWVWDARLTSELVLLFLYVGVIALWHAFDDRRLAGRAAGILVLIGVVNLPIIHYSVEWW NTLHOGSTRMOOSIDPAMRSPLRWSIFGFLLLSATLTLMRMRNLILLMEKRRPWVSELIL KRGRK

>015127

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>P52002

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>D38360

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>Q5U820

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GRMIMKYRDQRAGKINERLVITSEVIENIQSVKAYCWEEAMEKIIENIRQTELKLTRKAA HVRYFNSSAFFFSGFFVVSLSVLPYALIKTIILRKIFTTISFCIVLRMAVTROFPWAVOT WYDSLGAINKIQDFLQKQEYKTLEYNLTTTEVMMENVTAFWEEGFGELLEKAKENSNDRK ISNGDNSLFFSNFSLLGTPVLKDINFKIERGOLLAVAGSTGAGKTSLLMMIMGELEPSEG KIKHSGRISFCSQFSWIMPGTIKENIIFGVSYDEYRYRSVIKACQLEEDISKFAEKDNIV LGEGGVTLSGGORARISLARAVYKDADLYLLDSPFGYLDVLTEKEIFESCVCKLMANKTR ILVTSKMEHLKKADKVLILHEGSCYFYGTFSELQSLRPDFSSKLMGYDSFDQFSPERRNS IITETLRRFSLEGDAAVPWNETKKOSFKOTGEFGEKRKNSILNPINSIRKFSIVOKTPLP MNGIEGESEVPVERRLSLFPDCEOGEAILPRSNMINTGPTLRRORROSVLNLMTRSSVNO GOSIHRRTTASTRKMSLAPOANLTEMDIYSRRLSODSGLEISEEINEEDLKECFFDDVES IPPVTTWNTYLRYITVHKNLIFVLIWCLVIFLAEVAVSLVVLWILRNLSSQDKGNSTQSV NSSYAVIFTSTSAYYIFYIYVGVADTLLALGLFRGLPLVHTLITASKILHHKMLHSVLOA PMSTLNTLKAGGILNRFPKDIAILDDLLPLTIFDFIQLLLIVIGAVAVVSVLQPYIFLAT VPVIAAFIILRAYFLHTSOOLKOLESEGRSPIFTHLLTSLKGLWTLRAFGROPYFETLFH KALNLHTANWFLYLSTLRWFOMRMEIIFVIFFIAVTFISILTTGEGEGTVGIILTLAMNI MGTLQWAVNPSIEVDSLMRSVSRVFKFIDMPTEESKPPTKSFKPSKDAQLSKVTITENRH VREDDIWPSGGOMTVKDLTAKYIDGGNAILENISFSISPGORVGLLGRTGSGKSTLLSAL LRLVNTEGEIQIDGVSWDSIPLQEWRRAFGVIPQKVFIFSGTFRKNLDPYGQWNDQEIWK VADEVGLRSVIEQFPGKLDFVLVDGGYVLSHGHKQLMCLARSVLRKAKILLLDEPSAHLD PITYOIIRTLKOAFADCTVILSEHRIEAMLECQRFLVIEDSRLRQFESIQRLLSERSAF ROAIGPPERPGLLPHRLSSRORSPSRIAALKEETEDEVODTRL

>004651

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VPTLFKKLGAEVDTNQYSVNDYRYLYKDVAAKGDKMPGIFFKYNFEPLSIVVSDVRLSFI
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>035454

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>09JJS7

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>P32487

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>09DDK4

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SS

>09B6C8

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SYTLHSLDSLIINTLDLNLILIALSLGLLFKIGIAPLHKWLISIYENTPILITIYISLIP
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LLNNNEFSYLYYITQYSISHLAIFMIIIFSIYYINYINNQYNPIIYVNQLKGLIHDNAYL
VLSMAIVVFSFIGIPPLLGFFGKLNILMSILNNGYYFISIVLIVASLISALYYLYLLNVS
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MRSPATGVPLPTPPPPLLLLLLLLPPPLLGDQVGPCRSLGSRGRGSSGACAPMGWLCPS SASNLWLYTSRCRDAGTELTGHLVPHHDGLRVWCPESEAHIPLPPAPEGCPWSCRLLGIG GHLSPQGKLTLPEEHPCLKAPRLRCQSCKLAQAPGLRAGERSPEESLGGRRKRNVNTAPQ FQPPSYQATVPENQPAGTPVASLRAIDPDEGEAGRLEYTMDALFDSRSNQFFSLDPVTGA VTTAEELDRETKSTHVFRVTAODHGMPRRSALATLTILVTDTNDHDPVFEOOEYKESLRE NLEVGYEVLTVRATDGDAPPNANILYRLLEGSGGSPSEVFEIDPRSGVIRTRGPVDREEV ESYQLTVEASDQGRDPGPRSTTAAVFLSVEDDNDNAPQFSEKRYVVQVREDVTPGAPVLR VTASDRDKGSNAVVHYSIMSGNARGQFYLDAQTGALDVVSPLDYETTKEYTLRVRAQDGG RPPLSNVSGLVTVOVLDINDNAPIFVSTPFOATVLESVPLGYLVLHVOAIDADAGDNARL EYRLAGVGHDFPFTINNGTGWISVAAELDREEVDFYSFGVEARDHGTPALTASASVSVTV LDVNDNNPTFTOPEYTVRLNEDAAVGTSVVTVSAVDRDAHSVITYOITSGNTRNRFSITS QSGGGLVSLALPLDYKLERQYVLAVTASDGTRQDTAQIVVNVTDANTHRPVFQSSHYTVN VNEDRPAGTTVVLISATDEDTGENARITYFMEDSIPQFRIDADTGAVTTQAELDYEDQVS YTLAITARDNGIPOKSDTTYLEILVNDVNDNAPOFLRDSYOGSVYEDVPPFTSVLOISAT DRDSGLNGRVFYTFOGGDDGDGDFIVESTSGIVRTLRRLDRENVAQYVLRAYAVDKGMPP ARTPMEVTVTVLDVNDNPPVFEQDEFDVFVEENSPIGLAVARVTATDPDEGTNAQIMYQI VEGNIPEVFOLDIFSGELTALVDLDYEDRPEYVLVIOATSAPLVSRATVHVRLLDRNDNP PVLGNFEILFNNYVTNRSSSFPGGAIGRVPAHDPDISDSLTYSFERGNELSLVLLNASTG ELKLSRALDNNRPLEAIMSVLVSDGVHSVTAQCALRVTIITDEMLTHSITLRLEDMSPER FLSPLLGLFIQAVAATLATPPDHVVVFNVQRDTDAPGGHILNVSLSVGQPPGPGGGPPFL PSEDLQERLYLNRSLLTAISAQRVLPFDDNICLREPCENYMRCVSVLRFDSSAPFIASSS VLFRPIHPVGGLRCRCPPGFTGDYCETEVDLCYSRPCGPHGRCRSREGGYTCLCRDGYTG EHCEVSARSGRCTPGVCKNGGTCVNLLVGGFKCDCPSGDFEKPYCOVTTRSFPAHSFITF RGLRORFHFTLALSFATKERDGLLLYNGRFNEKHDFVALEVIOEOVOLTFSAGESTTTVS PFVPGGVSDGQWHTVQLKYYNKPLLGQTGLPQGPSEQKVAVVTVDGCDTGVALRFGSVLG NYSCAAQGTQGGSKKSLDLTGPLLLGGVPDLPESFPVRMRQFVGCMRNLQVDSRHIDMAD

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>POABN9

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>096G91

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>Q28181

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>Q96FZ5

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>P38377

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>P75685

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>08WUM9

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>027533

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>P37726

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>P42263

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>P14862

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>Q6IFG1

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>09Y691

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>POABP3

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>POABP6

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>0947792

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>POAC05

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>Q9DDN6

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>Q9USW4

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>P48167

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>P37748

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>Q9NY26

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>092266

>078680

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>Q9Z2A7

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>P54738

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>099JA4

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>P42291

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>09B6H6

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>P0AC26

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>P54745

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>P27200

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>P77610

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>Q9JJZ1

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>091ZC7

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>074713

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>09TX43

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>Q2TQ12

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>P0AC44

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>POABU9

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>P04372

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>P37002

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>P29922

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>P94633

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>Q00757

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>037385

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>0941R4

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>P0AC78

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>P41698

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PADKQGRALAVLLSGTTVATVAGVPGGSLLGTWLGWRATFWAVAVCCLPAAFGVLKAIPA
GRATAAATGGPPLRVELAALKTPRLLLAMLLGALVNAATFASFTFLAPVVTDTAGLGDLW
ISVALVLFGAGSFAGVTVAGRLSDRRPAQVLAVAGPLLLVGWPALAMLADRPVALLTLVF
VQGALSFALGSTLITRVLYEAAGAPTMAGSYATAALNVGAAAGPLVAATTLGHTTGNLGP
LWASGLLVAVALLVAFPFRTVITTAAPADATR
>P00402

MIIDLNTNNVLGKKFSTSTKKENIKQIESSSFLTFKQPTEWQERWYLSSNAKDIGTLYLM FALFSGLLGTAFSVLIRLELSGPGVQYIADNQLYNSIITAHAIMMIFFMVMPALIGGFGN FLLPLLVGGPDMAFPRLNNISFWLLVPSLLLFVFSATIENGAGTGWTLYPPLSGIQSHSG PSVDLAIFGLHLSGISSMLGAMNFITTILNMRSPGIRLHKLALFGWAVIITAVLLLLSLP VLAGGITMVLTDRNFNTSFFEVAGGGDPILFQHLFWFFGHPEVYILIIPGFGIISTVIAA GSGKNVFGYLGMVYAMMSIGVLGFLVWSHHMYTVGLDVDTRAYFTAATLIIAVPTGIKIF SWLATCYGGSLHLTPPMLFALGFVVLFTIGGLSGVVLANASLDVAFHDTYYVVAHFHYVL SMGAVFALFSGWYLWIPKLLGLSYDQFAAKVHFWILFIGVNLTFFPQHFLGLQLMPRRIS DYPDAFYGWNLLSSIGSIISVVATWYFLTIIYKQLTEGKAVSRYPWLTPQLFSDTFQVLF TRNNSSLEWCLTSPPKPHAFASLPLQS

>08VYR7

MEETFVPFEGIKNDLKGRLMCYKQDWTGGFKAGFRILAPTTYIFFASAIPVISFGEQLER STDGVLTAVQTLASTAICGMIHSIIGGQPLLILGVAEPTVIMYTFMFNFAKARPELGRDL FLAWSGWVCVWTALMLFVLAICGACSIINRFTRVAGELFGLLIAMLFMQQAIKGLVDEFR IPERENQKLKEFLPSWRFANGMFALVLSFGLLLTGLRSRKARSWRYGTGWLRSLIADYGV PLMVLVWTGVSYIPAGDVPKGIPRRLFSPNPWSPGAYGNWTVVKEMLDVPIVYIIGAFIP ASMIAVLYYFDHSVASQLAQQKEFNLRKPSSYHYDLLLLGFLTLMCGLLGVPPSNGVIPQ SPMHTKSLATLKYQLLRNRLVATARRSIKTNASLGQLYDNMQEAYHHMQTPLVYQQPQGL KELKESTIQATTFTGNLNAPVDETLFDIEKEIDDLLPVEVKEQRVSNLLQSTMVGGCVAA MPILKMIPTSVLWGYFAFMAIESLPGNQFWERILLLFTAPSRRFKVLEDYHATFVETVPF KTIAMFTLFQTTYLLICFGLTWIPIAGVMFPLMIMFLIPVRQYLLPRFFKGAHLQDLDAA EYEEAPALPFNLAAETEIGSTTSYPGDLEILDEVMTRSRGEFRHTSSPKVTSSSSTPVNN RSLSQVFSPRVSGIRLGQMSPRVVGNSPKPASCGRSPLNQ

>P51473

MLEEEDFYLFKNVSNVSPFDGPQYHIAPKWAFTLQAIFMGMVFLIGTPLNFIVLLVTIKY KKLRQPLNYILVNITVGGFLMCIFSIFPVFVSSSQGYFFFGRIACSIDAFVGTLTGLVTG WSLAFLAFERYIVICKPMGNFNFSSSHALAVVICTWIIGIVVSVPPFLGWSRYMPEGLQC SCGPDWYTVGTKYRSEYYTWFIFIFCFVIPLSLICFSYGRLLGALRAVAAQQQESASTQK AEREVSRMVIFMVGSFCLCYVPYAAMAMYMVTNRNHGLDLRLVTIPAFFSKSSCVYNPII YSFMNKQFRGCIMETVCGRPMSDDSSVSSTSQRTEVSTVSSSQVSPA

>P69801

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LGWMNIGAAVAPDAALASIISTILVIAGHQSIGAGIALAIPLAAAGQVLTIIVRTITVAF QHAADKAADNGNLTAISWIHVSSLFLQAMRVAIPAVIVALSVGTSEVQNMLNAIPEVVTN GLNIAGGMIVVVGYAMVINMMRAGYLMPFFYLGFVTAAFTNFNLVALGVIGTVMAVLYIQ LSPKYNRVAGAPAQAAGNNDLDNELD

>P51475

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MLFAWITDPNAWLALGTLTLLEIVLGIDNIIFLSLVVAKLPTAQRAHARRLGLAGAMVMR LALLASIAWVTRLTNPLFTIFSQEISARDLILLLGGLFLIWKASKEIHESIEGEEEGLKT RVSSFLGAIVQIMLLDIIFSLDSVITAVGLSDHLFIMMAAVVIAVGVMMFAARSIGDFVE RHPSVKMLALSFLILVGFTLILESFDIHVPKGYIYFAMFFSIAVESLNLIRNKKNPL >P00411

MGLLFNNLIMNFDAPSPWGIYFQDSATPQMEGLVELHDNIMYYLVVILFVVGWILLSIIR NYISTKSPISHKYLNHGTLIELIWTITPAVILILIAFPSFKLLYLMDEVSDPSMSVLAEG HQWYWSYQYPDFLDSNDEFIEFDSYIVPESDLEEGALRMLEVDNRVILPELTHVRFIITA GDVIHDFAVPSLGVKCDAYPRRLNQVSVFINREGVFYGQCSEICGILHSSMPIVIESVSL EKFLTWLEEO

>007380

MRAILLFYMYYAVTKGGLGMSQTTAASIMSIYGSLVYLSTLVGGWLSDRVWGSRKTVFYG
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VFGINLGSIIAPWLVPWAAQGFGVHIFGSQLNFHAGFSLAAVGMFFGLVQYVLGGKKYLS
TESLTPNDPIDKGDLLNVIKWVVIIIIAIVAILAAMAGVGQLSVDNVITLLTILAIALPI
YYFVMMFRSSKVTKIELGIHLLPVSLKNRLFFKKGYKRLKQIIQLELAIKRQSFIILIAL
IIMASILIPNKVIIAKHLLKLVLLVFYWIGLNLIPFSTFVLSFLFLDYIKHMFKKEGEQA
KKTKEKSRIHHGIEIPLFLRQLIINIFTLIILEGETLFDENGVEVNIAEHPVQGYTELNI
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>03SZ72

MRCRRLCAFDAARGPRRLMRVGLALILVGHVNLLLGAVLHGTVLRHVANPRGAVTPEYTT ANVISVGSGLLSVSLGLVALLASRNLFRPRLHWALLALALVNLLLSAACSLGLLLAVSLT VANGGRRLIADCHPGLLDPLVPLDQGSGHADCPFDPTKIYDTALALWIPSVFMSAAEAAL SGYCCVAALTLRGVGPCRKDGLQEQLEELTELEFPKRKWQENVQLLDQTREIRTSQKSWV >P64585

MADTHHAQGPGKSVLGIGQRIVSIMVEMVETRLRLAVVELEEEKANLFQLLLMLGLTMLF AAFGLMSLMVLIIWAVDPQYRLNAMIATTVVLLLLALIGGIWTLRKSRKSTLLRHTRHEL ANDROLLEEESREO

>P00415

MTHQTHAYHMVNPSPWPLTGALSALLMTSGLTMWFHFNSMTLLMIGLTTNMLTMYQWWRD VIRESTFQGHHTPAVQKGLRYGMILFIISEVLFFTGFFWAFYHSSLAPTPELGGCWPPTG IHPLNPLEVPLLNTSVLLASGVSITWAHHSLMEGDRKHMLQALFITITLGVYFTLLQASE YYEAPFTISDGVYGSTFFVATGFHGLHVIIGSTFLIVCFFRQLKFHFTSNHHFGFEAAAW YWHFVDVVWLFLYVSIYWWGS

>P97215

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>Q8TDB8

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>09ZHG0

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>P69826

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>05B0M8

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>024381

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>P56726

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ADGTMRFGEPTSSETLSCVIIFVIVYYALMAGVVWFVVLTYAWHTSFKALGTTYQPLSGK
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DGPVAGLAFDLNEPSADVSSAWAQHVTKMVARRGAILPQDVSVTPVATPVPPEEQANMWL
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>013961

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>P37067

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>Q8TDD9

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>P39755

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>P29995

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>P36423

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>097681

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>P30546

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>021070

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>P60632

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>015822

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>O56331

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>Q9JKE8

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>090308

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>090309

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>Q7TN49

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>P0A4N3

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>094VJ5

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>Q2G2M2

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>076735

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>P48906

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>P35803

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>P97292

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>P18825

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MDQNQHLNKTAEAQPSENKKTRYCNGLKMFLAALSLSFIAKTLGAIIMKSSIIHIERRFE ISSSLVGFIDGSFEIGNLLVIVFVSYFGSKLHRPKLIGIGCFIMGIGGVLTALPHFFMGY YRYSKETNINSSENSTSTLSTCLINQILSLNRASPEIVGKGCLKESGSYMWIYVFMGNML RGIGETPIVPLGLSYIDDFAKEGHSSLYLGILNAIAMIGPIIGFTLGSLFSKMYVDIGYV DLSTIRITPTDSRWVGAWWLNFLVSGLFSIISSIPFFFLPQTPNKPQKERKASLSLHVLE TNDEKDQTANLTNQGKNITKNVTGFFQSFKSILTNPLYVMFVLLTLLQVSSYIGAFTYVF KYVEQQYGQPSSKANILLGVITIPIFASGMFLGGYIIKKFKLNTVGIAKFSCFTAVMSLS FYLLYFFILCENKSVAGLTMTYDGNNPVTSHRDVPLSYCNSDCNCDESQWEPVCGNNGIT YISPCLAGCKSSSGNKKPIVFYNCSCLEVTGLQNRNYSAHLGECPRDDACTRKFYFFVAI QVLNLFFSALGGTSHVMLIVKIVQPELKSLALGFHSMVIRALGGILAPIYFGALIDTTCI KWSTNNCGTRGSCRTYNSTSFSRVYLGLSSMLRVSSLVLYIILIYAMKKKYQEKDINASE NGSVMDEANLESLNKNKHFVPSAGADSETHC

>P22708

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VICLITFFVVSWILGRQGKQQSENEVTGGRQLTDNPKDVARMLKKDGKDSDIRIGDLPII
RDSEIQNFCLHGTVGAGKSEVIRRLANYARQRGDMVVIYDRSGEFVKSYYDPSIDKILNP
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GDPFTIRDWMRGVREDQKNGWLFISSNADTHASLKPVISMWLSIAIRGLLAMGENRNRRV
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FFRSPSHKIAEFAAGEIGEKEHLKASEQYSYGADPVRDGVSTGKDMERQTLVSYSDIQSL
PDLTCYVTLPGPYPAVKLSLKYQARPKVAPEFIPRDINPEMENRLSAVLAAREAEGRQMA
SLFEPEVASGEDVTQAEQPQQPQQPQQPQQPQQPQQPQQPQQPVSSVINDKKSDAGV
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>P39012

MALLEKLHRRIVDMGLVPRIIALLPVISMLCALFGFISIAILPMDGQYRRTYISENALMP SQAYSYFRESEWNILRGYRSQIKEMVNMTSMERNNLMGSWLQEFGTKTAIYENEQYGETL YGVMHAPRGDGTEAMVLAVPWFNSDDEFNIGGAALGVSLARFFSRWPVWSKNIIVVFSEN PRAALRSWVEAYHTSLDLTGGSIEAAVVLDYSSTEDFFEYVEISYDGLNGELPNLDLVNI AISITEHEGMKVSLHGLPSDQLTNNNFWSRLKILCLGIRDWALSGVKKPHGNEAFSGWRI QSVTLKAHGNSGHDITTFGRIPEAMFRSINNLLEKFHQSFFFYLLLAPRQFVSISSYLPS AVALSIAFAISSLNAFINNAYANISLFSEYNLVALLVWFVSLVISFVVSQAFLLIPSSGL LMTISMASCFLPLILSRKIHISEPLSYRLKNVAFLYFSLVSTSLLMINFAMALLIGTLAF PMTFVKTIVESSSEHEVTTQSSNPIKTEPKDEIELVENHMDTTPATPQQQKQKLKNLVLL ILTNPFISITLFGLFFDDEFHGFDIINKLVSAWLDLKCWSWFVLCIGWLPCWLLILASSF ESKSVVVRSKEKOS

>P49578

MLTHYQLCFQKRSSQNYTVPDPTSCFDVPPWTILCQRATMIMHNNSSALPLFSNVSSFWK RDSHGPGLLDEGASLIGSYDSPETTESFPFSTVETTNSSLNATIKDPLGGHAVWQVVLIA FLTGIIALVTIIGNILVIVSFKVNKQLKTVNNYFLLSLACADLIIGVISMNLFTTYIIMG HWALGNLACDLWLSIDYVASNASVMNLLVISFDRYFSITRPLTYRAKRTTKRAGVMIGLA WIISFVLWAPAILFWQYFVGKRTVPLDECFIQFLSEPIITFGTAIAAFYLPVTIMSILYW RIYKETEKRTKELAGLQASGSEAETARFVHQTGSSRSLSSYELQRQSTKRSSRRKYRRCH FWLTMKSWEPNTDQGDQEHSSSDSWNNNDAAASLENSASSDEEDITAETRAIYSIVLKLP GHSAILNSTKLPSSEDLNESADELQKSDTDSQEKKPKKLQPPKSIQDGGSFQKSFSKLPI QPGSAETATASDGISSVTKTSAALPLSFKEATLAKKFALKTRSQITKRKRMSLIKEKKAA QTLSAILFAFIITWTPYNIMVLVNTFCDCVPKTVWNLGYWLCYINSTVNPVCYALCNKMF RNTFKMLLLCQCDKRKRRKQQYQQRQSVIFHKRIPREAS

>P30594

MYPYNNSNNNSPMPSARLPSRPRYGGGEEYPMQQVSFNNNSPPPPPFPSSPNDTGFYDGN DVQRPLLVNNGSTASSVTLNNGNGGNVRFTNAKSNMIGGGPDNVGIAPRKQTRRYKTIRR VKLTGGNLVLDNPVPSKYLQRVKRKDKEEFTHMRYTAATCDPADFERENYKLRQNLLGRE TELFIVLTMYNEDEVLFCRTMNGVMKNVSHLCSRNRSSTWGPEGWKKVVVCIVSDGRTKI HPRTLSVLAAMGVYQEGMAKNIVEGKPVTAHIYEHTTQLSIDADMNFRGDEKGVVPVQIL FCLKEKNQKKINSHRWFFQAFGPLLKPNVCVLIDVGTKPGGRSIYHLWKCFDINSNVAGA CGEIKAMLGPGGVHLLNPLVASQNFEYKMSNILDKPLESVFGHISVLPGAFSAYRYEALQ NDVNGHGPLEKYFLGEKMHGSDADIFTANMYLAEDRILCYELVAKKGAAWVLHYCSNAYG ETDVPDTVAEFISQRRRWLNGSFFAGIYSMVHWSKVWSSNHNILRCIMFMFEDLYQLYNL IFSWFAIGNFYLVFYIMTTSINSVPNPPFAKNAGSVIHTVLNYLYVLLLIIQIIIAMGNR PQGYKWAYFMIIVFFAILMGYVLFCTAWITIEGVKTAVETAQHNQDAQFIALIKQNSFRD VIVSVCSTYIMYFVSSLLFLDPWHIFTSLIPYIFMSPSYINVLNIYAFCNTHDVSWGTKG DNGVSTDLGVVKSTKGKDGVHEVEVDLPTEQKDLNEQYEEACMALKVAPIPEVTKRDAKT KQEDYYKSFRTTLVTCWIISNLILVTIIINGQEVWQWFGDYEKRATVYLSFILWSVAGLS AIRFVGSILYLFMKIFTG

>P0A504

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>P49581

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>002824

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SIDRYIGVSYPLRYPTIVTQRRGLRALLCVWAFSLVISVGPLFGWRQPAPDDETICQINE
EPGYVLFSALGSFYVPLTIILAMYCRVYVVAKRESRGLKSGLKTDKSDSEQVTLRIHRKN
APAGGSGVASAKNKTHFSVRLLKFSREKKAAKTLGIVVGCFVLCWLPFFLVMPIGSFFPD
FKPPETVFKIVFWLGYLNSCINPIIYPCSSQEFKKAFQNVLKIQCLRRKQSSKHALGYTL
HAPSQALEGQHKDMVRIPVGSGETFYKISKTDGVCEWKFFSSMPRGSARITVPKDQSACT
TARVRSKSFLQVCCCVGPSTPNPGENHQVPTIKIHTISLSENGEEV

>P46249

MRPENNLRLFQTMKFIALERLGLFVPIPGIDQKLFSSDYSNNAISNLLNVFDNNQAPK LSVFALGIIPYINATITIQILSSAFPALKKLQSEEGEIGKKKLNKITKYLSFCFAFIESL AIVLRLQKYAFDWNLYFIVQTTLILISGAMLVMWLADNISYKGIGTGASVIIFVNIASAF AKFLLNQLFVHSIKFLDFASYFALIVFSIACIVFVQEAIRKVPIISAKQLDSTSFYSNDY FLPLRINQGGVMPIILASSLLALVDYVIRYGLSTLQAVYFINDILPFKILFLLLYSAFII FFNYLYCSLVLNCFELSNNLKKASVVIPSIRPGKMTEKFFKDTLDNLTLFGSGFLAFIVL APNFLEFVFHIRVFKGLAVSSLLIVVGVAIDLIKQSKTYVIAKNYENMVH >O9MUW2

MTISIDKSVKKAEPSIFDLCDDWLKRDRFVFIGWSGLLLLPCAYFALGGFFTGNTFVTSW
YTHGLASSYLEGCNVLTAAVSTPSNAMGHSLLLLWGPEAQGDFTRWCQLGGLWTFTALHG
AFGLIGFMLRQFEIARAVKIRPYNAIAFSGPIAVFVSVFLIYPLGQQSWFFAPSFGVAAI
FRFILFFQGFHNWTLNPFHMMGVAGVLGAALLCAIHGATVENTLFEDGDAANTFRAFNPT
QSEETYSMVTANRFWSQIFGVAFANKRWLHFFMLFVPVTGLWMSAIGVVGLALNLRAYDF
VSQEIRAAEDPEFETFYTKNLLLNEGIRAWMAAQDQPHENLVFPEEVLPR

MNSASRITLFFLLTVLITQECLSSKGEDRLFRRLFRRYNQFIRPVENVSDPVTVEFEVSI SQLVKVDEVNQIMETNLWLRHIWNDYKLKWLPAEFDGIEFIRVPSNKIWRPDIVLYNNAV GDFLVEDKTKALLKYDGTITWVPPAIFKSSCPMDITYFPFDYQNCSMKFGSWTYDKAKID LVLIGSKVNLKDFWESGEWEIIDAPGYKHDIKYNCCEEIYPDITYSFYIRRLPLFYTINL IIPCLLISFLTILVFYLPSDCGEKVTLCISVLLSLTVFLLVITETIPSTSLVIPLIGEYL LFTMIFVTLSIVITVFVLNVHYRTPMTHTMPSWVRTVFLRALPRVMLMRRPIDLSESSGK GGGEIAGSSGTGGGRGAEGKKMKSSASQQGAMNSLEFGEGKAALEGKKGGCPCHPIKEAI EGDCGKVSRQLTPQAINTVVTFSVVSPEIKQAIESVKYIAENMRSRNKAKEVEDDWKYVA MVIDRIFLWVFVLVCVLGTLGLFLQPLIGFFS

>093743

MTGAVTSAYWLAAVAFLIGVGITAALYAKLEGSRARTRLAALAVIPGFAGLSYVGMALGI GTVTVNGAELVGLRYVDWVVTTPLLVGFIGYNAGASRRAIAGVMIADALMIVFGAAAVVS GGTLKWALFGVSALFHVSLFAYLYVIFPGGIPDDPMQRGLFSLLKNHVGLLWLAYPFVWL MGPAGIGFTGAVGAALTYAFLDVLAKVPYVYFFYARRQAFIDVTDSRAAAKGDGPAVGGE APVATGDDAP

>P22729

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>099572

MPACCSCSDVFQYETNKVTRIQSMNYGTIKWFFHVIIFSYVCFALVSDKLYQRKEPVISS
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EYPTRRTLCSSDRGCKKGWMDPQSKGIQTGRCVVHEGNQKTCEVSAWCPIEAVEEAPRPA
LLNSAENFTVLIKNNIDFPGHNYTTRNILPGLNITCTFHKTQNPQCPIFRLGDIFRETGD
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ENNVEKRTLIKVFGIRFDILVFGTGGKFDIIQLVVYIGSTLSYFGLAAVFIDFLIDTYSS
NCCRSHIYPWCKCCQPCVVNEYYYRKKCESIVEPKPTLKYVSFVDESHIRMVNQQLLGRS
LQDVKGQEVPRPAMDFTDLSRLPLALHDTPPIPGQPEEIQLLRKEATPRSRDSPVWCQCG
SCLPSQLPESHRCLEELCCRKKPGACITTSELFRKLVLSRHVLQFLLLYQEPLLALDVDS
TNSRLRHCAYRCYATWRFGSQDMADFAILPSCCRWRIRKEFPKSEGQYSGFKSPY
>P28611

MDKTSLIGIILAFVALSVGMVLKGVSFSALANPAAILIIIAGTISAVVIAFPTKEIKKVP TLFRVLFKENKQLTIEELIPMFSEWAQLARREGLLALEASIEDVDDAFLKNGLSMAVDGQ SAEFIRDIMTEEVEAMEDRHQAGAAIFTQAGTYAPTLGVLGAVIGLIAALSHMDNTDELG HAISAAFVATLLGIFTGYVLWHPFANKLKRKSKQEVKLREVMIEGVLSVLEGQAPKVIEQ KLLMYLPAKDRLKFAEQGEAQNGEKKEEEA

>Q90352

MGRIANQTTASNDTDPFGRNEEVAKMEITVLSVTFFVAVIGNLSVLLAMHNTKKKSSRMH LFIKHLSLADMVVAFFQVLPQLCWEITFRFYGPDFLCRIVKHLQVLGMFASTYMMVMMTL DRYIAICHPLKTLQQPTQRAYIMIGSTWLCSLLLSTPQYFIFSLSEIQNGSYVYDCWGHF IEPWGIRAYITWITVGIFLIPVIILMICYGFICHSIWKNIKCKTMRGTRNTKDGMIGKVS VSSVTIISRAKLRTVKMTLVIVLAYIVCWAPFFIVQMWSVWDENFSWDDSENAAVTLSAL LASLNSCCNPWIYMLFSGHLLYDFLRCFPCCKKPRNMLQKEDSDSSIRRNTLLTKLAAGR MTNDGFGSWRDPCNSRKSSQSIGLDCFCKSSQCLEHDCSRKSSQCIPLDCSRKSSQCIPL DCSRKSSQCMSKES

>P76345

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MSNNNDKQYTTQELNAMSNEDLARLGTELDDVTIAYRKERFPIANDPAEKRAARAVTFWL VLGIIGGLGFLATYIFWPWEYKAHGDEGLLAYTLYTPMLGITSGLCILSLGFAVVLYVKK FIPEEIAVQRRHDGPSEEVDRRTIVALLNDSWQTSTLGRRKLIMGLAGGGAVLAGLTIIA PMGGMIKNPWNPKEGPMDVQGDGTLWTSGWTLVENDVKVYLGRDTAAIAESHTDATGEHW STTGVSRLVRMRPEDLAAASMETVFPLPAEMVNDGAEYDPAKDVYEHQMHSVHGPRNAVM LIRLRTADAEKVIEREGQESFHYGDYYAYSKICTHIGCPTSLYEAQTNRILCPCHQSQFD ALHYGKPVFGPAARALPQLPITVDEEGYLIAAGNFIEPLGPAFWERKS >002783

MRAFPRVLPFRHQRSYNNILLRTVRLFGSSLSSFDFSRQMPKVDPDNTAAMLLQKNLIQR
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LLVRENSILISLLTVKALIKPDMVIIFDSAGSGITLNSEAHKDFINDMKLRLKNQETSEL
NSDPLPYEFRALETIFISALSNLTSEMKVLLTICKGVLQDLEFSITRDKLRFLLGQNKKL
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>Q02789

MEPPSPODEGLRKKOPKKPVPEILPRPPRALFCLTLONPLRKACISIVEWKPFETIILLT IFANCVALAVYLPMPEDDNNTLNLGLEKLEYFFLIVFSIEAAMKIIAYGFLFHQDAYLRS GWNVLDF1IVFLGVFTV1LEQVN11QTNTAPMSSKGAGLDVKALRAFRVLRPLRLVSGVP SLOVVLNSIFKAMLPLFHIALLVLFMVIIYAIIGLELFKGKMHKTCYFIGTDIVATVENE KPSPCARTGSGRPCTINGSECRGGWPGPNHGITHFDNFGFSMLTVYOCISMEGWTDVLYW VNDAIGNEWPWIYFVTLILLGSFFILNLVLGVLSGEFTKEREKAKSRGTFOKLREKOOLE EDLRGYMSWITOGEVMDVDDLREGKLSLDEGGSDTESLYEIEGLNKIIOFIRHWROWNRV FRWKCHDLVKSKVFYWLVILIVALNTLSIASEHHNOPLWLTHLODVANRVLLTLFTIEML MKMYGLGLROYFMSIFNRFDCFVVCSGILEILLVESGAMSPLGISVLRCIRLLRLFKITK YWTSLSNLVASLLNSIRSIASLLLLLFLFIIIFALLGMOLFGGRYDFEDTEVRRSNFDNF PQALISVFQVLTGEDWNSVMYNGIMAYGGPTYPGVLVCIYFIILFVCGNYILLNVFLAIA VDNLAEAESLTSAQKAKAEERKRRKMSKGLPDKSEEERATVTKKLEQKSKGEGIPTTAKL KIDEFESNVNEVKDPYPSADFPGDDEEDEPEIPVSPRPRPLAELQLKEKAVPIPEASSFF IFSPTNKIRVLCHRIVNATWFTNFILLFILLSSAALAAEDPIRADSMRNQILEYFDYVFT AVFTVEIVLKMTTYGAFLHKGSFCRNYFNILDLLVVAVSLISMGLESSAISVVKILRVLR VLRPLRAINRAKGLKHVVOCVFVAIRTIGNIVLVTTLLOFMFACIGVOLFKGKFYSCNDL SKMTEEECRGYYYIYKDGDPTQIELRPRQWIHNDFHFDNVLSAMMSLFTVSTFEGWPQLL YKAIDSNEEDTGPVYNNRVEMAIFFIIYIILIAFFMMNIFVGFVIVTFQEQGETEYKNCE LDKNQRQCVQYALKARPLRCYIPKNPYQYQVWYVVTSSYFEYLMFALIMLNTICLGMQHY NQSEQMNHISDILNVAFTIIFTLEMVLKLIAFKPRAYFGDPWNVFDFLIVIGSIIDVILS EIDTFLASSGGLYCLGGGCGNVDPDESARISSAFFRLFRVMRLVKLLNRAEGVRTLLWTF IKSFOALPYVALLIVMLFFIYAVIGMOMFGKIAMVDGTOINRNNNFOTFPOAVLLLFRCA TGEAWQEILLACSYGKLCDPESDYAPGEEHTCGTNFAYYYFISFYMLCAFLIINLFVAVI MDNFDYLTRDWSILGPHHLDEFKAIWAEYDPEAKGRIKHLDVVTLLRRIQPPLGFGKFCP HRVACKRLVGMNMPLNSDGTVTFNATLFALVRTALKIKTEGNFEQANEELRAIIKKIWKR TSMKLLDQVIPPIGDDEVTVGKFYATFLIQEHFRKFMKRQEEYYGYRPKKDTVQIQAGLR TIEEEAAPEIHRAISGDPTAEEELERAMVEAAMEEGIFRRTGGLFGQVDNFLERTNSLPP VMANQRPLQFAEIEMEELESPVFLEDFPQNPGTHPLARANTNNANANVAYGNSSHRNNPV FSSICYEREFLGEADMPVTREGPLSQPCSGSGPHSRSHVDKLKRPMTQRGMPEGQVPPSP CQLSQAEHPVQKEGKGPTSRFLETPNSRNFEEHVPRNSAHRCTAPATAMLIQEALVRGGL DSLAADANFVMATGQALADACQMEPEEVEVAATELLKQESPEAGPCLGALSLRSSPGPPE SDDWGSQTTLITPRCEAYTE

>P28627

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>Q91ZU9

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>09M8S6

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KEEVRYLLLIRLYRVHRVILFFHKMEKDIRINYLFTRIVKLIFVELYCTHTAACIFYYLA
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LKRLLSNGIDPNSKDYDHRTPLHVAASEGFYVLAIQLVEASANVLAKDRWGNTPLDEALG
CGNKMLIKLLEDAKNSQISSFPSGSKEPKDKVYKKKCTVYFSHPGDSKEKRRRGIVLWVP
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>062962

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TCDTMPNHSETISHTVNVPLQTALGTLEEIAC > 08TDN1

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>012564

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>P48960

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>P28646

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>P75712

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>P48974

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>070129

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>Q05360

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>P22771

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>09M8W7

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>P14906

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>P38435

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>09XIA7

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>P68526

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>Q8NET8

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>P15577

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>P15578

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>Q8TE23

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>08TDS7

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>P28682

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>005394

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>P08369

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>P62651

 ${\tt MRPRDQGFLVLGFTYSVLLISLATFYWLRNNDSFLHYWCVLLLCPATLWLWALIAWCDSE} \\ {\tt MFASSKDE}$

>Q8TDT2

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MTNSSSTSTTTTGGSLLLLCEEEESWAGRRIPVSLLYSGLAIGGTLANGMVIYLVSSFR KLQTTSNAFIVNGCAADLSVCALWMPQEAVLGLLPSGSAEPPGDWDGGGGSYRLLRGGLL GLGLTVSLLSHCLVALNRYLLITRAPATYQVLYQRRHTVGMLALSWALALGLVLLLPPWA PKPGAEPPQVHYPALLAAGALLAQTALLLHCYLGIVRRVRVSVKRVSVLNFHLLHQLPGC AAAAAAFPAAPHAPGPGGAAHPAQPQPLPAALQPRRAQRRLSGLSVLLLCCVFLLATQPL VWVSLASGFSLPVPWGVQAASWLLCCALSALNPLLYTWRNEEFRRSVRSVLPGVGDAAAA AAAATAVPAMSQAQLGTRAAGOHW

>P25358

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FVLDIGFIYFAVYQKAVHLYFPILPHCGDCVGSTTATFAGCAIISSYLVLFISFYINVYK
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>Q8TDU9

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>Q969F8

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>032220

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LGEAIIAGVKDKGLEIPKLTRFEAKVGAGILAEAGGKSILVGTRKLMESEQVEHGALLAQ MEELEAEGKTVMLVSIDGEAAGLVAVADTIKDTSRKAVARLKELGLDVIMMTGDNRRTAE AIAKEAGIANIIAEVLPEQKAAEIARLQKEGRQTAMVGDGINDAPALATADIGMAIGTGT DIAMETADITLIRGDLNSIADAIRMSRLTMKNIKQNLFWALGYNSLGIPIAALGFLAPWI AGAAMAFSSVSVVLNALRLQ

>P25376

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GAFNGKHAIDRFKGVAATLVTAAFAFGGSEFIAITTAEQSNPRKAIPGAAKQMIYRILFL
FLATIILLGFLVPYNSDQLLGSTGGGTKASPYVIAVASHGVRVVPHFINAVILLSVLSMA
NSSFYSSARLFLTLSEQGYAPKVFSYIDRAGRPLIAMGVSALFAVIAFCAASPKEEQVFT
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>035566

MGEFNEKKATCGTVCLKYLLFTYNCCFWLAGLAVMAVGIWTLALKSDYISLLASSTYLAT AYILVVAGVVVMVTGVLGCCATFKERRNLLRLYFILLLIIFLLEIIAGILAYVYYQQLNT ELKENLKDTMVKRYHQSGHEGVSSAVDKLQQEFHCCGSNNSQDWQDSEWIRSGEADSRVV PDSCCKTMVAGCGKRDHASNIYKVEGGCITKLETFIQEHLRVIGAVGIGIACVQVFGMIF TCCLYRSLKL

>P22036

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>P11617

MSTMGSWVYITVELAIAVLAILGNVLVCWAVWLNSNLQNVTNYFVVSLAAADIAVGVLAI PFAITISTGFCAACHNCLFFACFVLVLTQSSIFSLLAIAIDRYIAIRIPLRYNGLVTGTR AKGIIAVCWVLSFAIGLTPMLGWNNCSQPKEGRNYSQGCGEGQVACLFEDVVPMNYMVYY NFFAFVLVPLLLMLGVYLRIFLAARRQLKQMESQPLPGERARSTLQKEVHAAKSLAIIVG LFALCWLPLHIINCFTFFCPECSHAPLWLMYLTIVLSHTNSVVNPFIYAYRIREFRQTFR KIIRSHVLRRREPFKAGGTSARALAAHGSDGEQISLRLNGHPPGVWANGSAPHPERRPNG YTLGLVSGGIAPESHGDMGLPDVELLSHELKGACPESPGLEGPLAQDGAGVS

>Q14534

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VEKIYPQIPDHLKEPFLEATDNSHLRSMLASFLPPSSVKKRGVLLLGDAYNMRHPLTGGG MTVAFKDIKLWRKLLKGIPDLYDDAAIFEANKSFYWARKTSHSFVVNILAQALYELFSAT DDSLHQLRKACFLYFKLGGECVAGPVGLLSVLSPNPLALIGHFFAVAIYAVYFCFKSEPW ITKPRALLSSSAVLYKACSVIFPLIYSEMKYMVH

>015258

MSEGDSVGESVHGKPSVVYRFFTRLGQIYQSWLDKSTPYTAVRWVVTLGLSFVYMIRVYL LQGWYIVTYALGIYHLNLFIAFLSPKVDPSLMEDSDDGPSLPTKQNEEFRPFIRRLPEFK FWHAATKGILVAMVCTFFDAFNVPVFWPILVMYFIMLFCITMKRQIKHMIKYRYIPFTHG KRRYRGKEDAGKAFAS

>028377

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>086Y34

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>P41732

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>Q9EPH0

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ILLVILATGFLFESLPQAVLSAIVIVNLKGMFMQFSDLPFFWRTSKIELTIWLTTFVSSL
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>P18195

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FYGPTGPEASQAQAFTFLVRDQRLGANVGSAQGPTGLGKYLMRSPTGEVIFGGETMRFWD
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>P75028

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>001467

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MLVLLAGIFVVHIATVIMLFVSTIANVWLVSNTVDASVGLWKNCTNISCSDSLSYASEDA LKTVQAFMILSIIFCVIALLVFVFQLFTMEKGNRFFLSGATTLVCWLCILVGVSIYTSHY ANRDGTQYHHGYSYILGWICFCFSFIIGVLYLVLRKK

>09WTN3

MDELAFGEAALEQTLAEMCELDTAVLNDIEDMLQLINNQDSDFPGLFDAPYAGGETGDTG PSSPGANSPESFSSASLASSLEAFLGGPKVTPAPLSPPPSAPAALKMYPSVSPFSPGPGI KEEPVPLTILOPAAPOPSPGTLLPPSFPAPPVOLSPAPVLGYSSLPSGFSGTLPGNTOOP PSSLPLAPAPGVLPTPALHTOVOSLASOOPLPASAAPRTNTVTSOVOOVPVVLOPHFIKA DSLLLTAVKTDAGATVKTAGISTLAPGTAVQAGPLQTLVSGGTILATVPLVVDTDKLPIH RLAAGSKALGSAOSRGEKRTAHNAIEKRYRSSINDKIVELKDLVVGTEAKLNKSAVLRKA IDYIRFLOHSNOKLKOENLTLRSAHKSKSLKDLVSACGSGGGTDVSMEGMKPEVVETLTP PPSDAGSPSOSSPLSFGSRASSSGGSDSEPDSPAFEDSOVKAORLPSHSRGMLDRSRLAL CVLAFLCLTCNPLASLFGWGILTPSDATGSHRSSGRSMLEAESRDGSNWTOWLLPPLVWL ANGLLVLACLALLFVYGEPVTRPHSGPAVHFWRHRKOADLDLARGDFPOAAOOLWLALOA LGRPLPTSNLDLPCSLLWNLLRHLSORLWVGRCLAGOAGGLLRDRGLRKDARASARDAAV VYHKLHOLHAMGKYTGGHLAASNLALSALNLAECAGDAISMATLAEIYVAAALRVKTSLP RALHFLTRFFLSSAROACLAOSGSVPLAMOWLCHPVGHRFFVDGDWAVHGAPPESLYSVA GNPVDPLAQVTRLFREHLLERALNCIAQPSPGAADGDREFSDALGYLQLLNSCSDAAGAP ACSFSVSSSMAATTGPDPVAKWWASLTAVVIHWLRRDEEAAERLYPLVEHIPQVLQDTER PLPRAHLYSFKAARALLDHRKVESSPASLAICEKASGYLRDSLASTPTGSSIDKAMOLLL CDLLLVARTSLWQRQQSPASVQVAHGTSNGPQASALELRGFQHDLSSLRRLAQSFRPAMR RVFLHEATARLMAGASPARTHQLLDRSLRRRAGSSGKGGTTAELEPRPTWREHTEALLLA SCYLPPAFLSAPGQRMSMLAEAARTVEKLGDHRLLLDCQQMLLRLGGGTTVTSS >P21420

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>0864F4

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>P54851

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>P78381

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>P77726

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>Q9NRM0

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>095013

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>P54883

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>P09703

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>Q07396

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>04GZT4

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>P77757

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>POACXO

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>Q41364

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>P33915

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>P17590

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>P09718

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>054471

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>085273

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>036835

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>090WY4

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>P33927

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>003411

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>P13607

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>P51574

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>P33934

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>P14273

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>0969S0

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>P39823

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MSAACPERQQMPWLQKAGDQAGRWPRMLLEALFPPCHKRALHPRRVEEEVKQVHVGPDAC VQTTAPALAPLFLQGHGLDHGRGVMVVGTGTSLALSSLLSLLLFAGMQIYSRQLASTEWL TIQGGLLGSGLFVFSLTAFNNLENLVFGKGFQAKIFPEILLCLLLALFASGLIHRVCVTT CFIFSMVGLYYINKISSTLYQATAPVLTPAKITGKGKKRN >09Y7D2

MDPVVRKPDPGGVOHRVTKALRAIVGHACRHPIHTLLVTALTAATTHLHVLEGTYOATHR EASAWKWOIDDRPKVPEDGOSDFHWALVTLDLPGASVDASIPFLSNTLSGFLGAEOTTPT PDSSPSPDHSALTFRVPYSQLDGFLQAVEIIPSEKEDDSWRLRSPREEGSPRSLGHWLGS SWLSFLHRVHHAETVDLVIIGLSYLAMNMTVVSLFRVMRHLGSRFWLAASVLLSGAFAFV LGLGITTTCDVPVDMLLLFEGIPYLVLTVGFEKPIOLTRAVLCVSEELWGGGOROVPNGA SSDDSRONOLIPNIIOLAVDREGWYIVRSYLLEIGALALGAVLRPKDSLGHFCFLAAWTL LIDAVLLFTFYATILCVKLEITRIRSPGGLGOVNAKHPSGIFGHKVKSTNITWWKLLTVG GFVLCHFLQLSPFFYRVMGEYMANGTLPPTAVSPFKEAANGLNEIYLTARVEGFETRVTV LPPLQYVLESAGFNISATKRSTFDGVLDGLESPLGRLCLMGALVVSLVLNNHLIHAARWH AWPQARESAVPDGSYLSVPCSATAPEVCTRPPEETEALLKSNQAESLTDDELVELCLRGK IAGYSLEKTLERIAAGSSRSVTRLEAFTRAVRIRRAAVSKTPSTONLCSGLAESLLPYRD YNYELVHGACCENVVGYLPLGVAGPMVIDGQALFIPMATTEGVLVASASRGCKAINAG GGATTMLKGDGMTRGPCLRFPSAQRAAEAQRWVESPLGHEVLAAAFNATSRFARLQTLTV AQAGIYLYIRFRTTTGDAMGMNMISKGVEKALEAMAAEGGFPDMHTVTLSGNFCSDKKSA AINWIGGRGKSVIAEATIPAETVRQVLKTDVDALVELNTAKNLVGSAMAGSLGGFNAHAS NLVQAVFLATGQDPAQNVESSSCITTMKNIDGNLHIAVSMPSMEVGTIGGGTILEAQGAM LDLLGVRGAHSTEPGANARRLARIVAAAVLAGELSTCAALAAGHLVNAHMQHNRTSKDAI SGTEYGAIRTPVYVVILEHAGDIHFVQIEYKNTYLRRKVPTLSCNLGR

>P30606

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>P39832

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>Q9UN76

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>Q64H34

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>P54146

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>Q9NS40 MPVRRGH

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MVTNNGDGEHLGIRRNGNLRHPSNNMKIPRRAQSTVLNSNPFYSRKYSMSTLTPRDICRS VDSRVFVDMSSPNFQTLEDPHRDEIINSVRLNYLNSSKRSSVSHGNEAIPRVNPTKNSSA STIAAANVDSDDDETNLSSAGGDITHDIYKLVKAEDPKRLRRPRSMENVTPKIEHHTKLS SASGLNVPGGFRREFIVNKKRQEHQLNDSASSDFTSHESDSINQSSPSSNQDIDKVPFLT RNFLEFLYVFGHFAGESFEDDFIPDSSNMMIRGEDERSALLSRPDHMKVLPSAKGTTSTK KVFLILLKSFIGTGVLFLPNAFHNGGLFFSVSMLAFFGIYSYWCYYILVQAKSSCGVSSF GDIGLKLYGPWMRIIILFSLVITQVGFSGAYMIFTAKNLQAFLDNVFHVGVLPLSYLMVF QTIIFIPLSFIRNISKLSLPSLLANFFIMAGLVIVIIFTAKRLFFDLMGTPAMGVVYGLN ADRWTLFIGTAIFAFEGIGLIIPVQDSMRNPEKFPLVLALVILTATILFISIATLGYLAY GSNVQTVILLNLPQSNIFVNLIQLFYSIAIMLSTPLQLFPAIKIIENKFFPKFTKIYVKH DDLTTRVELRPNSGKLNWKIKWLKNFIRSIIVIIVVSIAYFGSDNLDKFVSVIGSLACIP LVYIYPSMLHLRGNSLPETKGEFWRFKPMLDTILIFFGIASMLYTSYQSIFGV >044017

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>P20866

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>P23414

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>034260

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>P24077

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>09WTY0

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>Q80ZA5

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>Q16572

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>P24082

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>016581

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>Q9IAL7

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>094457

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>08BHL4

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>P49653

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>P46312

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>P49659

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>P60752

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>08MJD7

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>P36554

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>033641

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>Q96P67

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>P39109

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>000222

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>083207

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>091081

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>P40445

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>P30680

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>092ID5

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>P56895

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>059868

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>P33231

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>P60778

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>P26016

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>P76425

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>006067

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>013286

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>Q8K4V2

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>P60782

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>P26021

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>P16260

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>09COE7

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>Q99678

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>074189

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>P22831

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>012649

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>P20150

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MAENKDVSOVLNTTPDOVVINRAPPTGLAPLRHSOLSDSGAESCYEGDEOARLIRSSSSR AHKFIIIPATPGTPPGSGAVAGPLPFRQTSSTTSLAAMAAALHKQSPLRHTSVRTRPSSE VLOPGOVLANOPTAAVSTSTVTFTIDDCNEEGDAIPAAASVPAPVTMPAISPTPATLTCT TTTTMAGDSVAVSPLSMELKSRLGSHHSSMRSVVSGYLPGLSDSSGNLVGGVSMATSGLQ APNPLYMOPOASLSGSSYHFHELAGNQIYSDVTSVRSLASIGIGSTDGRKLVIRRVPTTA NELFDMVNPOTPPPLGVDDDDSYLDMSDETAOLKPROOHWANKMOFVLACIGYSVGLGNV WRFPYMCYKSGGGVFLVPYCIILFICSIPLLFMELSVGOYTGRGPIGALGOLCPLFKGAG LASVVVSFLMSTYYSVIIGYSIYYFFTSFKTEMPWIDCNNRWNTPDCWVPQRKGINASAP DTSRTPSEEFFENKVLOISGGLEYPGMMRWELFACLICAWLMVYFATWKSIKSSAKVRYF TATFPFVLIIILMVRAVTLDGAAEGLRFFFRPKWSELKNANVWINAASONFNSLGITFGS MISFASYNKYNNNILRDTVAVSAVNMITSLLVGIFAFSTLGNLALEONTNVRDVIGDGPG MIFVVYPOAMAKMPYAOLWAVMFFFMLLCLGLNSOFAIVEVVVTSIODGFPRWIKRHLGY HEIVVLFVCVISCLFGMPNIIQGGIYYFQLMDHYAASVTIMFLAFCQMIAIAWFYGTGRL SKNVKQMTGKAPSFYLRSCWLVLGPCLLFAIWVLSLINYHEPTYHNGRYTYPDWAYGIGW MFASFSLICIPGYAVINFLRSSGDTFWERIRNTLRPNIYECKICGEHHCEHDYPEQEQFM LAOEMATVYKPTNPHLLNLGOKCGYNAMOASPSHAEAGGPCGO

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>P53584

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>P08400

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>P08401

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>079428

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>08VEC3

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>08N130

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>P75806

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>053174

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>P70585

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>012674

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>Q7M725

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>P43059

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>P62723

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>P18200

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>P75835

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>012697

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>P39196

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>Q9ZBM2

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>P28785

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>POADI.6

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>028362

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>POA5Z2

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>P18239

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>P0ADM0

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MADSAQVPTLVYLVTGGCGFLGEHIVRMLLEREPRLRELRVFDLHLSSWLEELKAGPVQV TAIQGDVTQAHEVAAAMSGSHVVIHTAGLVDVFGKASPKTIHKVNVQGTQNVIDACVQTG TQYLVYTSSMEVVGPNIKGHPFYRGNEDTPYEAVHSHPYPCSKALAEQLVLEANGRKVNG GLPLVTCALRPTGIYGEGHQVMRDFYYQGLRFGGRLFRAVPASVEHGRVYVGNVAWMHIL VARELEQRAALMGGQVYFCYDKSPYKSYEDFNMEFLSPCGLRLIGAHPLLPYWLLVLLAT LNALLQWLLRPLVLYTPLLNPYTLAMANTTFTVSTNKAQRHFGYKPLFSWEESRTRTIQW VOAMEGSAR

>Q93086

MGQAGCKGLCLSLFDYKTEKYVIAKNKKVGLLYRLLQASILAYLVVWVFLIKKGYQDVDT SLQSAVITKVKGVAFTNTSDLGQRIWDVADYVIPAQGENVFFVVTNLIVTPNQRQNVCAE NEGIPDGACSKDSDCHAGEAVTAGNGVKTGRCLRRENLARGTCEIFAWCPLETSSRPEEP FLKEAEDFTIFIKNHIRFPKFNFSNNVMDVKDRSFLKSCHFGPKNHYCPIFRLGSVIRWA GSDFQDIALEGGVIGINIEWNCDLDKAASECHPHYSFSRLDNKLSKSVSSGYNFRFARYY RDAAGVEFRTLMKAYGIRFDVMVNGKGAFFCDLVLIYLIKKREFYRDKKYEEVRGLEDSS QEAEDEASGLGLSEQLTSGPGLLGMPEQQELQEPPEAKRGSSSQKGNGSVCPQLLEPHRS T

>035659

MASTPSLLRLALLLLGAVGRAGPRPQGTTVSLSETVQKWREYRRQCQHFLTEAPLLATGL FCNRTFDDYACWPDGPPGSFVNVSCPWYLPWASSVLQGHVYRFCTAEGLWLHKDNSSLPW RDLSECEESKRGERNFPEEQLLSLYIIYTVGYALSFSALVIASAILVGFRHLHCTRNYIH LNLFASFILRALSVFIKDAALKWMYSTAAQQHQWDGLLSYQDSLGCRLVFLLMQYCVAAN YYWLLVEGVYLYTLLAFSVFSEQRIFKLYLSIGWGVPLLFVIPWGIVKYLYEDEGCWTRN SNMNYWLIIRLPILFAIGVNFLIFIRVICIVVSKLKANLMCKTDIKCRLAKSTLTLIPLL GTHEVIFAFVMDEHARGTLRFIKLFTELSFTSFQGLMVAILYCFVNNEVQMEFRKCWERW RLEHLNIQRDCSMKPLKCPTSSVSSGATVAAACMQPPARVPTAEPAVPVLPVGPSFWLGG HPRWERSWG

>075508

MVATCLQVVGFVTSFVGWIGVIVTTSTNDWVVTCGYTIPTCRKLDELGSKGLWADCVMAT GLYHCKPLVDILILPGYVQACRALMIAASVLGLPAILLLLTVLPCIRMGQEPGVAKYRRA QLAGVLLILLALCALVATIWFPVCAHRETTIVSFGYSLYAGWIGAVLCLVGGCVILCCAG DAOAFGENRFYYTAGSSSPTHAKSAHV

>034946

MMPDIFSSFDPYMFNTLFPLNSLFLVTNTAIILMIQSSFWVLNARTSAFKSPVNDTIFTQ LSRTSTTHLKGLSTPLSTIFFMLVMINLMGLIPYMFSTSSHLVFTLSLGFPIWLSLMIST FAHSPKKSTAHFLPDGAPDWLNPFLVLIETTSVFVRPLTLSFRLAANMSAGHIVLSLMGI YCAAAWFSSVSSTALLILTAIGYILFEVAICLIQAYIFCLLLSLYSDDHAH >034951 MKYIKSPTMALAMSTLIMSTLMAVSSANWMFLWGAMELNLLSFIPIMMQSNNNQETEGAV KYFLAQALGSALLLMSSTSMWMTFSMISNFMPLTLMAAIMLKLGSVPCHFWYPSVMASIS WVSCLILSSWQKLAPLSILAFLLPQKNMNFMLSMAAMNALLGGVIGMNQTQLRTIMAYSS IGHIGWMMSLAAVYKPSSCIMYFVVYCILITPLFMTMGYLNMFSTKHMSKLSSYSSTVHM ALLMVLLSLGGLPPFTGFMPKLMTIMLLMQSMKIILLILIAGSIMNLFFYLNIIISSMPL PPHLKNVDSTDIKCSLKFVIPICTLSLGLSPFIML

>P41806

MAVDVPRAVINKLMLFTAAMVVLPVLTFFIIQQFTPNTLISGGLAAAMANVVLIVYIVVA FREDTEDHKVDGNKKED

>08NG80

MENYNQTSTDFILLGLFPPSKIGLFLFILFVLIFLMALIGNLSMILLIFLDTHLHTPMYF LLSQLSLIDLNYISTIVPKMASDFLYGNKSISFIGCGIQSFFFMTFAGAEALLLTSMAYD RYVAICFPLHYPIRMSKRMYVLMITGSWMIGSINSCAHTVYAFRIPYCKSRAINHFFCDV PAMLTLACTDTWVYEYTVFLSSTIFLVFPFTGIACSYGWVLLAVYRMHSAEGRKKAYSTC STHLTVVTFYYAPFAYTYLCPRSLRSLTEDKVLAVFYTILTPMLNPIIYSLRNKEVMGAL TRVIONIFSVKM

>P22140

MGYFVPDSHIENLKSYKYQSEDRSLVSKYFLKPFWQRFCHIFPTWMAPNIITLSGFAFIV INVLTVFYYDPNLNTDTPRWTYFSYALGVFLYQTFDGCDGVHARRINQSGPLGELFDHSI DAINSTLSIFIFASETGMGFSYNLMLSQFAMLTNFYLSTWEEYHTHTLYLSEFSGPVEGI LIVCVSLILTGIYGKQVIWHTYLFTITVGDKVIDVDTLDIVFSLAVFGLVMNALSAKRNV DKYYRNSTSSANNITQIEQDSAIKGLLPFFAYYASIALLVWMQPSFITLSFILSVGFTGA FTVGRIIVCHLTKQSFPMFNAPMLIPLCQIVLYKICLSLWGIESNKIVFALSWLGFGLSL GVHIMFMNDIIHEFTEYLDVYALSIKRSKLT

>095847

MSVPEEERLLPLTQRWPRASKFLLSGCAATVAELATFPLDLTKTRLQMQGEAALARLGD GARESAPYRGMVRTALGIIEEEGFLKLWQGVTPAIYRHVVYSGGRMVTYEHLREVVFGKS EDEHYPLWKSVIGGMMAGVIGQFLANPTDLVKVQMQMEGKRKLEGKPLRFRGVHHAFAKI LAEGGIRGLWAGWVPNIQRAALVNMGDLTTYDTVKHYLVLNTPLEDNIMTHGLSSLCSGL VASILGTPADVIKSRIMNQPRDKQGRGLLYKSSTDCLIQAVQGEGFMSLYKGFLPSWLRM TPWSMVFWLTYEKIREMSGVSPF

>P25489

MGVGDGRDOYELAAMSEOSGKKKSKNKKEKKEKDMDELKKEVDLDDHKLSLEELHHKYGT DLSKGLSNSRAEEILARDGPNALTPPPTTPEWVKFCKOMFGGFSMLLWTGAVLCFLAYGI LAAMEDEPANDNLYLGVVLSAVVIITGCFSYYODAKSSKIMDSFKNLVPOOALVVRDGEK KQINAEEVVIGDLVEVKGGDRIPADLRIISSHGCKVDNSSLTGESEPOTRSPDFSNDNPL ETKNIAFFSTNCVEGTARGIVISTGDRTVMGRIATLASGLEVGRTPISIEIEHFIHIITG VAVFLGVSFLLLSLVLGYSWLEAVIFLIGIIVANVPEGLLATVTVCLTLTAKRMAKKNCL VKNLEAVETLGSTSTICSDKTGTLTONRMTVAHMWFDNOIHEADTTENOSGTSFDRSSDT WASLARIAGLCNRAVFLAEQIDVPILKRDVAGDASESALLKCIELCCGSVKEMREKFTKV AEIPFNSTNKYOLSVHKIPSGGKESOHLLVMKGAPERILDRCATIMIOGKEOLLDDEIKE SFONAYLELGGLGERVLGFCHFYLPDEOFPEGFOFDADDVNFPTENLCFVGLMSMIDPPR AAVPDAVGKCRSAGIKVIMVTGDHPITAKAIAKGVGIISEGNETVEDIAARLNIPVNEVN PRDAKACVVHGGDLKDLSCEQLDDILKYHTEIVFARTSPQQKLIIVEGCQRTGAIVAVTG DGVNDSPALKKADIGVAMGIAGSDVSKQAADMILLDDNFASIVTGVEEGRLIFDNLKKSI AYTLTSNIPEITPFLFFIIANIPLPLGTVTILCIDLGTDMLPAISLAYEAAESDIMKROP RNPKTDKLVNERLISIAYGQIGMIQALAGFFTYFVILAENGFLPPRLLGIRMNWDDKYIN DLEDSYGQQWTYEQRKIVEFTCHTAFFTSIVIVQWADLIICKTRRNSVFQQGMKNKILIF GLFEETALAAFLSYCPGMDVALRMYPLKPNWWFCAFPYSLLIFIYDEIRKLILRRNPGGW MERETYY

>015354

MRAPGALLARMSRLLLLLLLKVSASSALGVAPASRNETCLGESCAPTVIQRRGRDAWGPG NSARDVLRARAPREEQGAAFLAGPSWDLPAAPGRDPAAGRGAEASAAGPPGPPTRPPGPW RWKGARGQEPSETLGRGNPTALQLFLQISEEEEKGPRGAGISGRSQEQSVKTVPGASDLF YWPRRAGKLQGSHHKPLSKTANGLAGHEGWTIALPGRALAQNGSLGEGIHEPGGPRRGNS TNRRVRLKNPFYPLTQESYGAYAVMCLSVVIFGTGIIGNLAVMCIVCHNYYMRSISNSLL ANLAFWDFLIIFFCLPLVIFHELTKKWLLEDFSCKIVPYIEVASLGVTTFTLCALCIDRF RAATNVQMYYEMIENCSSTTAKLAVIWVGALLLALPEVVLRQLSKEDLGFSGRAPAERCI IKISPDLPDTIYVLALTYDSARLWWYFGCYFCLPTLFTITCSLVTARKIRKAEKACTRGN KRQIQLESQMNCTVVALTILYGFCIIPENICNIVTAYMATGVSQQTMDLLNIISQFLLFF KSCVTPVLLFCLCKPFSRAFMECCCCCCEECIQKSSTVTSDDNDNEYTTELELSPFSTIR REMSTFASVGTHC

>Q8NG92

MAMDNVTAVFQFLLIGISNYPQWRDTFFTLVLIIYLSTLLGNGFMIFLIHFDPNLHTPIY FFLSNLSFLDLCYGTASMPQALVHCFSTHPYLSYPRCLAQTSVSLALATAECLLLAAMAY DRVVAISNPLRYSVVMNGPVCVCLVATSWGTSLVLTAMLILSLRLHFCGANVINHFACEI LSLIKLTCSDTSLNEFMILITSIFTLLLPFGFVLLSYIRIAMAIIRIRSLQGRLKAFTTC GSHLTVVTIFYGSAISMYMKTQSKSYPDQDKFISVFYGALTPMLNPLIYSLRKKDVKRAI RKVMLKRT

>061712

MWVPGFGSARLPQRRRSGLESSSVRPLWLLLLFLLAAVRPVRAWESGDLELFDLVEEVQL NFYEFLGVQQDASSADIRKAYRKLSLTLHPDKNKDENAETQFRQLVAIYEVLKDDERRQR YDDVLINGLPDWRQPVFYYRRVRKMSNAELALLLFIILTVGHYAVVWSIYLEKQLDELLG RKKRERKKKTGSKSVDAAKLGASEKNERLLIKPQWHDLLPCKLGIWFCLTLKALPHLIQD AGQFYAKYKETKLKEKEDALARIEIETLQKQKKVKVKVKKPKPEFPVYMPLENTYIQSYDHG TSIEEIEEQMDDWLENRKRTQKRQAPEWTEEDLSQLTRSMVKFPGGTPGRWDKIAHELGR SVTDVTTKAKELKDSVTSSPGMTRLSELKSNGQNSRPIKIATALPDDIITQREDSAGAME DEEHEAAEGEQESATTEARPRRRKSARAAEAVTRVEPEEKLRGKRQKDFDISEQNDSSDE EKQRKERTRAAEEAWTQSQQKLLELALQQYPKGASDRWDKIAKCVPSKSKEDCIARYKLL VELVQKKKQA

>08NFZ6

MTHTLYPTPFALYPINISAAWHLGPLPVSCFVSNKYQRSLAFGATTGLRVLVVVVPQTQL SFLSSLCLVSLFLHSLVSAHGEKPTKPVGLDPTLFQVVVGILGNFSLLYYYMFLYFRGYK PRSTDLILRHLTVADSLVILSKRIPETMATFGLKHFDNYFGCKFLLYAHRVGRGVSIGST CLLSVFQVITINPRNSRWAEMKVKAPTYIGLSNILCWAFHMLVNAIFPIYTTGKWSNNNI TKKGDLGYCSAPLSDEVTKSVYAALTSFHDVLCLGLMLWASSSIVLVLYRHKQQVQHICR NNLYPNSSPGNRAIQSILALVSTFALCYALSFITYVYLALFDNSSWWLVNTAALIIACFP TISPFVLMCRDPSRSRLCSICCRRNRRFFHDFRKM

>Q8NG97

MGDVNQSVASDFILVGLFSHSGSRQLLFSLVAVMFVIGLLGNTVLLFLIRVDSRLHTPMY FLLSQLSLFDIGCPMVTIPKMASDFLRGEGATSYGGGAAQIFFLTLMGVAEGVLLVLMSY DRYVAVCQPLQYPVLMRRQVCLLMMGSSWVVGVLNASIQTSITLHFPYCASRIVDHFFCE VPALLKLSCADTCAYEMALSTSGVLILMLPLSLIATSYGHVLQAVLSMRSEEARHKAVTT CSSHITVVGLFYGAAVFMYMVPCAYHSPQQDNVVSLFYSLVTPTLNPLIYSLRNPEVWMA LVKVLSRAGLROMC

>004895

MANDALSAIFSNPSRKGVQPSTSIVSYTNNEDDIIDVENGKFNKNKNINTNVYVDNSSIE ESEVVPLPETKSIWSKIYYDFIVLDKTTLNVSLKESFLYNRDLKPVEEERRCWSWFNYLY FWLADCFNINTWQIAGTGLQLGLNWWQCWLTVWIGYTFAGIFVVLNSRFGSAYHLSFPIT VRASFGIFFSMWPIINRVVMAIVWYAVQAWLGATPVALMLKSIFGKNLEDRIPNHFGSPN STTFEFMCFFIFWVVSIPFVLVAPHKIRHLFTVKAALIPFAAFGFLIWALKKSHGKIELG TLNDYSPHGSEFSWIFVRSLMACVANFAALIINAPDFGRFAKNPQASLWPQLVAIPLFFA ITCLIGIIVTAAGYHLYGVNYWSPLDVLGQFLETTYTRGTRAGVFLISFVFALAQLGTNI SANSLACGADMTALFPRYINIRRGSLFCVAMALCICPWNLMASSSKFTSALGAYAIFLSS IAGVICADYFVVRRGYVKLTHLFLAQKGSFYMFGNKFGANWRAFVAYICGIAPNLPGFIG DVGAPKITVSEGAMRLYYLGYPVGFFISAVIYLILCYFFPVPGTPVTNFLTEKGWFQRWA YVEDFEQDWKNELRRDDLCDDTVSIYDGTEEKIVY

>P07869

MSQKQTPLKLNTFQGISIVANTMLGAGLLTLPRALTTKANTPDGWITLILEGFIFIFIY LNTLIQKKHQYPSLFEYLKEGLGKWIGSIIGLLICGYFLGVASFETRAMAEMVKFFLLER TPIQVIILTFICCGIYLMVGGLSDVSRLFPFYLTVTIIILLIVFGISFKIFDINNLRPVL GEGLGPIANSLTVVSISFLGMEVMLFLPEHMKKKKYTFRYASLGFLIPIILYILTYIIVV GALTAPEVKTLIWPTISLFQSFELKGIFIERFESFLLVVWIIQFFTTFVIYGYFAANGLK KTFGLSTKTSMVIIGITVFYFSLWPDDANQVMMYSDYLGYIFVSLFLLPFILFFIVALKR RITTK

>P0AE14

MTLFTTLLVLIFERLFKLGEHWQLDHRLEAFFRRVKHFSLGRTLGMTIIAMGVTFLLLRA LQGVLFNVPTLLVWLLIGLLCIGAGKVRLHYHAYLTAASRNDSHARATMAGELTMIHGVP AGCDEREYLRELQNALLWINFRFYLAPLFWLIVGGTWGPVTLMGYAFLRAWQYWLARYQT PHHRLQSGIDAVLHVLDWVPVRLAGVVYALIGHGEKALPAWFASLGDFHTSQYQVLTRLA QFSLAREPHVDKVETPKAAVSMAKKTSFVVVVVIALLTIYGALV >P0AE16

MSSQYLRIFQQPRSAILLILGFASGLPLALTSGTLQAWMTVENIDLKTIGFFSLVGQAYV FKFLWSPLMDRYTPPFFGRRRGWLLATQILLLVAIAAMGFLEPGTQLRWMAALAVVIAFC SASQDIVFDAWKTDVLPAEERGAGAAISVLGYRLGMLVSGGLALWLADKWLGWQGMYWLM AALLIPCIIATLLAPEPTDTIPVPKTLEQAVVAPLRDFFGRNNAWLILLLIVLYKLGDAF AMSLTTTFLIRGVGFDAGEVGVVNKTLGLLATIVGALYGGILMQRLSLFRALLIFGILQG ASNAGYWLLSITDKHLYSMGAAVFFENLCGGMGTSAFVALLMTLCNKSFSATQFALLSAL SAVGRVYVGPVAGWFVEAHGWSTFYLFSVAAAVPGLILLLVCRQTLEYTRVNDNFISRTA YPAGYAFAMWTLAAGVSLLAVWLLLLTMDALDLTHFSFLPALLEVGVLVALSGVVLGGLL DYLALRKTHLT

>0923X1

MRLLPLLVGFSTLLNCSYTQNCSKTTCLPNAKCEVHNGVEACFCSQGYSGNGVTICEDID ECSESSVCGDHAVCENVNGGFSCFCREGYQTATGKSQFTPNDGSYCQDIDECSESSVCGD HAVCENVNGGFSCFCREGYQTATGKSQFTPNDGSYCQESMNSNCHLEHACIAANINKTLK RIGPITEQTTLLQEIYRNSEAELSLMDIVTYIEILTESSSLLGHPNSTTSYKDAHFNSTL TEFGETINNFVERSTHKMWDQLPTNHRRLHLTKLMHTAELVTLQIAQNIQKNSQFDMNST DLALKVFAFDSTHMKHAHPHMNVDGGYVKISPRRKAAHGTTGNVVVAFLCYKSIGPLLSS SDNFLLDTQNDNSEGKEKVISSVISASISSNPPTLYELEKITFTLSHVKLSDKHRTQCAF WNYSVDAMNNGSWSTEGCELTHSNDTHTSCRCSHLTHFAILMSSTSSIGIKDYNILTRIT QLGIIISLICLAICIFTFWFFSEIQSTRTTIHKNLCCSLFLAELVFLIGININTNKLVCS IIAGLLHYFFLAAFAWMCIEGIHLYLIVVGVIYNKGFLHKNFYIFGYLSPAVVVGFSASL GYRYYGTTKVCWLSTENNFIWSFIGPACLIILVNLLAFGVIIYKVFRHTAGLKPEVSCYE NIRSCARGALALLFLLGTTWIFGVLHVVHASVVTAYLFTVSNAFQGMFIFLFLCVLSRKI QEEYYRLFKNVPCCFGCLR

>P17644

MAPGCCTTRPRPIALLAHIWRHCKPLCLLLVLLLLCETVQANPDAKRLYDDLLSNYNRLI RPVSNNTDTVLVKLGLRLSQLIDLNLKDQILTTNVWLEHEWQDHKFKWDPSEYGGVTELY VPSEHIWLPDIVLYNNADGEYVVTTMTKAILHYTGKVVWTPPAIFKSSCEIDVRYFPFDQ QTCFMKFGSWTYDGDQIDLKHISQKNDKDNKVEIGIDLREYYPSVEWDILGVPAERHEKY YPCCAEPYPDIFFNITLRRKTLFYTVNLIIPCVGISYLSVLVFYLPADSGEKIALCISIL LSQTMFFLLISEIIPSTSLALPLLGKYLLFTMLLVGLSVVITIIILNIHYRKPSTHKMRP WIRSFFIKRLPKLLLMRVPKDLLRDLAANKINYGLKFSKTKFGQALMDEMQMNSGGSSPD SLRRMQGRVGAGGCNGMHVTTATNRFSGLVGALGGGLSTLSGYNGLPSVLSGLDDSLSDV AARKKYPFELEKAIHNVMFIQHHMQRQDEFNAEDQDWGFVAMVMDRLFLWLFMIASLVGT FVILGEAPSLYDDTKAIDVQLSDVAKQIYNLTEKKN

>088662

MLVILAFIIVFHIVSTALLFISTIDNAWWVGDSFSADLWRVCTNSTNCTEINELTGPEAF EGYSVMQAVQATMILSTILSCISFLIFLLQLFRLKQGERFVLTSIIQLMSCLCVMIGASI YTDRRQDLHQQNRKLYYLLQEGSYGYSFILAWVAFAFTFISGLMYMILRKRK

>021898

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MPNWGQVMFQDAASSVMLQLVSFHDHALLVLTLVLTVVGYALLALMLNKQVNRYIMEAQT
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YMLPTSDLLPGDYRLLEVDNRMVVPMQLEIRMLITAADVIHSWTVPALGVKVDAVPGRLN
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MNEFFPLASAAGMTVGLAVCALIVGLALAMFFAVWESAKWRPVAWAGSALVTILRGLPEI LVVLFIYFGSSQLLLTLSDGFTINLGFVQIPVQMDIENFDVSPFLCGVIALSLLYAAYAS QTLRGALKAVPVGQWESGQALGLSKSAIFFRLVMPQMWRHALPGLGNQWLVLLKDTALVS LISVNDLMLQTKSIATRTQEPFTWYIVAAAIYLVITLLSQYILKRIDLRATRFERRPS >015399

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>Q04121

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>P21534

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>P14319

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MLNSILVILCLIAVSAFFSMSEISLAASRKIKLKLLADEGNINAQRVLNMQENPGMFFTV VQIGLNAVAILGGIVGDAAFSPAFHSLFSRYMSAELSEQLSFILSFSLVTGMFILFADLT PKRIGMIAPEAVALRIINPMRFCLYVCTPLVWFFNGLANIIFRIFKLPMVRKDDITSDDI YAVVEAGALAGVLRKQEHELIENVFELESRTVPSSMTPRENVIWFDLHEDEQSLKNKVAE HPHSKFLVCNEDIDHIIGYVDSKDLLNRVLANQSLALNSGVQIRNTLIVPDTLTLSEALE SFKTAGEDFAVIMNEYALVVGIITLNDVMTTLMGDLVGQGLEEQIVARDENSWLIDGGTP IDDVMRVLDIDEFPQSGNYETIGGFMMFMLRKIPKRTDSVKFAGYKFEVVDIDNYRIDQL LVTRIDSKATALSPKLPDAKDKEESVA

>P31302

MLDHITPFFALVAFFLVLMPFAWHIKSKNVGLIMLSIWLMLGNLDNFVNSMVWWKTTADL APAYCELSVRLRHLLFIAIPASNLAIARKLESIASTRQVRAGPGDHRRAVIIDLLICLGI PIIYTSLMIVNQSNRYGILEEAGCWPMMVFSWLWVLLVAAPVIVVSLCSAVYSALAFRWF WVRRRQFQAVLASSASTINRSHYVRLLLLTAIDMLLFFPIYVGTIAAQIKSSISIPYGSW SSVHTGFNQIPQYPASLVLMENTFQRNLILARLVCPLSAYIFFAMFGLGLEVRQGYKEAF HRALLFCRLRKEPKASALQHVVADIEVVTFRSHDTFDANTSTKSEKSDIDMRGSEAA >P24882

MNNFFQDFNLLFSSSLFSSYMDWFYNFNCSLLFGVLSFVSTMFVYLLLSSFYFKSKKIEY QFGELLCSVFPTLILVMQMVPSLSLLYYYGLMNLDSSLTVKVTGHQWYWSYEFSDIPGLE FDSYMKSLDQLELGEPRLLEVDNRCVVPCDVNIRFCITSGDVIHSWALPSMSIKLDAMSG ILSTLSYSFPVVGVFYGQCSEICGANHSFMPVALEVTLLDNFKSWCVGLLSD >P24888

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>P24889

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>Q8VF13

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>P98024

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MGVTMAVGLAKAAMGKISSAIGERSKRISGAMNEPRRKRKILLVIVCIAMLLDNMLYMVI VPIIPNYLETIRTYKLVYITTPSNGTNGSLLNSTQRAVLERNPNANEDIQIGVLFASKAI LQLLSNPFTGTFIDRVGYDIPLLIGLTIMFFSTITFAFGESYAVLFAARSLQGLGSAFAD TSGIAMIADKYTEESERTQALGIALAFISFGSLVAPPFGGVLYQFAGKWVPFLVLSFVCL LDGILLLMVVTPFASRTRENMLQGTPIYKLMIDPYIAVVAGALTTCNIPLAFLEPTISNW MKKTMNASEWQMGITWLPAFFPHILGVYITVKLAAKYPNYQWFYGAVGLVIIGASSCTIP ACRNFEELIIPLCALCFGIALVDTALLPTLAFLVDIRYVSVYGSVYAIADISYSVAYALG PIMAGQIVHDLGFVQLNLGMGLVNILYAPALLFLRNVCQMKPSLSERNILLEEGPKGLYD TIIMEERKAAKEPHGSSSGNHSVHAVLSDOEGYSE

>O8VES2

MPRTPSYTNTKTTQVNNVTEITVFILLGFTDDVDMNIFLFILFLAIYVVTLIGNLGLVVL VIEDSRLHNPMYYFLTVLSSLDACFSSVLTPKMLVNFLSKNKSISFAGCATQMLLFVTFG TTECFLLAAMAYDRYLAIYSPLLYAVRMSPRVYVPLIIASYTGGILHATIHTVATFSLSF CGSNEIRHVFCDIPPLLALSCSDTHLNQLLLFYCAGSIKLITILIVLVSYGFVLLAILKI NSAEGRRKIFSTCGAHLTGVSIFHGTILFMYVRPSSNYTLEQDMVVSTFYTIVIPMLNPI IYSLRNKDVKEAMRKLLKRKLVHE

>014764

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>060NK2

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LFVIVVNIGILIAVTRVISQISADNYKIHGDPSAFKLTAKAVAVLLPILGTSWVFGVLAV
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>001670

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>Q92J98

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>Q8NGA1

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>P54209

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>P47787

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>08NNK5

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>097827

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>P54210

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>Q8NGB2

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>Q00975

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MGAKNNVTEFVLFGLFESREMQHTCFVVFFLFHVLTVLGNLLVIITINARKTLKSPMYFF LSQLSFADICYPSTTIPKMIADTFVEHKIISFNGCMTQLFSAHFFGGTEIFLLTAMAYDR YVAICRPLHYTAIMDCRKCGLLAGASWLAGFLHSILQTLLTVQLPFCGPNEIDNFFCDVH PLLKLACADTYMVGLIVVANSGMISLASFFILIISYVIILLNLRSQSSEDRRKAVSTCGS HVITVLLVLMPPMFMYIRPSTTLAADKLIILFNIVMPPLLNPLIYTLRNNDVKNAMRKLF RVKRSLGEK

>Q8NGB8

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>P44450

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>P51676

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>Q8IZF6

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VSASISDDMFIQNLADPVVITLQHIGGNQNYGQVHCAFWDFENNGLGGWNSSGCKVKETN VNYTICQCDHLTHFGVLMDLSRSTVDSVNEQILALITYTGCGISSIFLGVAVVTYIAFKL RKDYPAKILINLCTALLMLNLVFLINSWLSSFQKVGVCITAAVALHYFLLVSFTWMGLEA VHMYLALVKVFNIYIPNYILKFCLVGWGIPAIMVAITVSVKKDLYGTLSPTTPCWIKDDS IFYISVVAYFCLIFLMNLSMFCTVLVQLNSVKSQIQKTRRKMILHDLKGTMSLTFLLGLT WGFAFFAWGPMRNFFLYLFAIFNTLQDGSSRCQIKVGYKQEGLKKIFEHKLLTPSLKSTA TSSTFKSLGSAQGTPSEISFPNAPELSALHVVASEPTTG

MNPTDIADTTLDESIYSNYYLYESIPKPCTKEGIKAFGELFLPPLYSLVFVFGLLGNSVV VLVLFKYKRLRSMTDVYLLNLAISDLLFVFSLPFWGYYAADQWVFGLGLCKMISWMYLVG FYSGIFFVMLMSIDRYLAIVHAVFSLRARTLTYGVITSLATWSVAVFASLPGFLFSTCYT ERNHTYCKTKYSLNSTTWKVLSSLEINILGLVIPLGIMLFCYSMIIRTLQHCKNEKKNKA VKMIFAVVVLFLGFWTPYNIVLFLETLVELEVLQDCTFERYLDYAIQATETLAFVHCCLN PIIYFFLGEKFRKYILQLFKTCRGLFVLCQYCGLLQIYSADTPSSSYTQSTMDHDLHDAL >P39925

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>Q8VEW2

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>Q8NGC7

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>P03959

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>Q17292

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>Q99LJ5

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>003530

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>P77894

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>P11049

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>Q9UNX9

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>Q8VF76

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>P37255

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>098PE4

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>06AXS0

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>Q9D8F3

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>09EOR3

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>08NGE3

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>P26844

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>094523

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>039524

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>061041

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>P39952

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>08NGF8

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>P37278

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>000229

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>Q96PS8

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MNHVVKHNHTAVTKVTEFILMGITDNPGLQAPLFGLFLIIYLVTVIGNLGMVILTYLDSK

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>P40501

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>P24181

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>P09888

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>0695T8

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>P79826

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>P37298

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>P70604

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>059932

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>08NGI0

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>P39981

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>Q8NGI2

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>Q695U0

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>Q8NGI7

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>064474

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>009473

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>P33303

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>P36646

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>047494

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>047495

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>P77156

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>Q8NGJ0

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>08NGJ2

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>08NGJ3

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>P33310

MIVRMIRLCKGPKLLRSQFASASALYSTKSLFKPPMYQKAEINLIIPHRKHFLLRSIRLQ SDIAQGKKSTKPTLKLSNANSKSSGFKDIKRLFVLSKPESKYIGLALLILIISSSVSMAV PSVIGKLLDLASESDGEDEEGSKSNKLYGFTKKQFFTALGAVFIIGAVANASRIIILKVT GERLVARLRTRTMKAALDQDATFLDTNRVGDLISRLSSDASIVAKSVTQNVSDGTRAIIQ GFVGFGMMSFLSWKLTCVMMILAPPLGAMALIYGRKIRNLSRQLQTSVGGLTKVAEEQLN ATRTIQAYGGEKNEVRRYAKEVRNVFHIGLKEAVTSGLFFGSTGLVGNTAMLSLLLVGTS MIQSGSMTVGELSSFMMYAVYTGSSLFGLSSFYSELMKGAGAAARVFELNDRKPLIRPTI GKDPVSLAQKPIVFKNVSFTYPTRPKHQIFKDLNITIKPGEHVCAVGPSGSGKSTIASLL LRYYDVNSGSIEFGDEDIRNFNLRKYRRLIGYVQQEPLLFNGTILDNILYCIPPEIAEQD DRIRRAIGKANCTKFLANFPDGLQTMVGARGAQLSGGQKQRIALARAFLLDPAVLILDEA TSALDSQSEEIVAKNLQRRVERGFTTISIAHRLSTIKHSTRVIVLGKHGSVVETGSFRDL IAIPNSELNALLAEQQDEEGKGGVIDLDNSVAREV

>Q9JMF7

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MSTLPTQIAPNSSTSMAPTFLLVGMPGLSGAPSWWTLPLIAVYLLSALGNGTILWIIALQ PALHRPMHFFLFLLSVSDIGLVTALMPTLLGIALAGAHTVPASACLLQMVFIHVFSVMES SVLLAMSIDRALAICRPLHYPALLTNGVISKISLAISFRCLGLHLPLPFLLAYMPYCLPQ VLTHSYCLHPDVARLACPEAWGAAYSLFVVLSAMGLDPLLIFFSYGLIGKVLQGVESRED RWKAGQTCAAHLSAVLLFYIPMILLALINHPELPITQHTHTLLSYVHFLLPPLINPILYS

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>08NGK3

MSASNITLTHPTAFLLVGIPGLEHLHIWISIPFCLAYTLALLGNCTLLLIIQADAALHEP MYLFLAMLAAIDLVLSSSALPKMLAIFWFRDREINFFACLAQMFFLHSFSIMESAVLLAM AFDRYVAICKPLHYTKVLTGSLITKIGMAAVARAVTLMTPLPFLLRCFHYCRGPVIAHCY CEHMAVVRLACGDTSFNNIYGIAVAMFIVVLDLLLVILSYIFILQAVLLLASQEAHYKAF GTCVSHIGAILAFYTTVVISSVMHRVARHAAPHVHILLANFYLLFPPMVNPIIYGVKTKQ IRESILGVFPRKDM

>008832

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>Q8NGK6

MLGPAYNHTMETPASFLLVGIPGLQSSHLWLAISLSAMYITALLGNTLIVTAIWMDSTRH EPMYCFLCVLAAVDIVMASSVVPKMVSIFCSGDSSISFSACFTQMFFVHLATAVETGLLL TMAFDRYVAICKPLHYKRILTPQVMLGMSMAVTIRAVTFMTPLSWMMNHLPFCGSNVVVH SYCKHIALARLACADPVPSSLYSLIGSSLMVGSDVAFIAASYILILRAVFDLSSKTAQLK ALSTCGSHVGVMALYYLPGMASIYAAWLGQDIVPLHTQVLLADLYVIIPATLNPIIYGMR TKQLLEGIWSYLMHFLFDHSNLGS

>P77172

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LDSHLKQFRFFWDGMPMQPQIGVSYCYVRSPVNHIYLLLGELNTVAELSIVTNAPENMQR
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>P59533

MLTLTRIRTVSYEVRSTFLFISVLEFAVGFLTNAFVFLVNFWDVVKRQALSNSDCVLLCL SISRLFLHGLLFLSAIQLTHFQKLSEPLNHSYQAIIMLWMIANQANLWLAACLSLLYCSK LIRFSHTFLICLASWVSRKISQMLLGIILCSCICTVLCVWCFFSRPHFTVTTVLFMNNNT RLNWQIKDLNLFYSFLFCYLWSVPPFLLFLVSSGMLTVSLGRHMRTMKVYTRNSRDPSLE AHIKALKSLVSFFCFFVISSCAAFISVPLLILWRDKIGVMVCVGIMAACPSGHAAILISG NAKLRRAVMTILLWAQSSLKVRADHKADSRTLC

>P39210

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MNQKKLSLFGFFALTASMVLTVYEYPTFATSKLHLVFFLLLGGLLWFLPVALCAAEMATV EGWKNGGIFSWVSQTLGERFGFAAIFFQWFQITVGFVTMIYFILGALSYVLNFQALNTDP LIKFIGLLIIFWGLTFSQLGGTQRTAKLVKAGFVVGIVIPSVILFGLAAAYFIGGNPIEI PINSHAFVPDFSQVSTLVVFVSFILAYMGVEASASHINELENPKRNYPLAMILLVILAIS LDAIGGFSVAAVIPQKELSLSAGVIQTFQTLILHFNHHLGWLVKVIALMIAFGVMGEVSS WVVGPSRGMFAAAQRGLLPKFLRKTNTHEVPVPLVMIQGIIVTLWGAVLTFGGGGNNLSF LVAISLTVVIYLVGYLLFFIVYFVLIYKKQNLKRTYNVPGKIIGKTIIAGIGFLLSIFAL FISFVPPASIAKNETHTYQMILLISFVVTAILPFIIYELHDKKGHDTIEEPTHFKAGDVN PAIYPAARGEHHIIKKEEHI

>Q8NGL4

MMASERNQSSTPTFILLGFSEYPEIQVPLFLVFLFVYTVTVVGNLGMIIIIRLNSKLHTI MCFFLSHLSLTDFCFSTVVTPKLLENLVVEYRTISFSGCIMQFCFACIFGVTETFMLAAM AYDRFVAVCKPLLYTTIMSQKLCALLVAGSYTWGIVCSLILTYFLLDLSFCESTFINNFI CDHSVIVSASYSDPYISQRLCFIIAIFNEVSSLIIILTSYMLIFTTIMKMRSASGRQKTF STCASHLTAITIFHGTILFLYCVPNPKTSSLIVTVASVFYTVAIPMLNPLIYSLRNKDIN NMFEKLVVTKLIYH

>P36672

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ALGVIETRLKRIVPDYLYLVVVPVCSLILAVFLAHALIGPFGRMIGDGVAFAVRHLMTGS
FAPIGAALFGFLYAPLVITGVHQTTLAIDLQMIQSMGGTPVWPLIALSNIAQGSAVIGII
ISSRKHNEREISVPAAISAWLGVTEPAMYGINLKYRFPMLCAMIGSGLAGLLCGLNGVMA
NGIGVGGLPGILSIQPSYWQVFALAMAIAIIIPIVLTSFIYQRKYRLGTLDIV
>Q8NGL7

MEKSNNSTLFILLGFSQNKNIEVLCFVLFLFCYIAIWMGNLLIMISITCTQLIHQPMYFF LNYLSLSDLCYTSTVTPKLMVDLLAERKTISYNNCMIQLFTTHFFGGIEIFILTGMAYDR YVAICKPLHYTIIMSRQKCNTIIIVCCTGGFIHSASQFLLTIFVPFCGPNEIDHYFCDVY PLLKLACSNIHMIGLLVIANSGLIALVTFVVLLLSYVFILYTIRAYSAERRSKALATCSS HVIVVVLFFAPALFIYIRPVTTFSEDKVFALFYTIIAPMFNPLIYTLRNTEMKNAMRKVW CCOILLKRNOLF

>099819

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>08NGL9

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>P59541

MITFLPIIFSILIVVIFVIGNFANGFIALVNSIEWVKRQKISFVDQILTALAVSRVGLLW VLLLHWYATQLNPAFYSVEVRITAYNVWAVTNHFSSWLATSLSMFYLLRIANFSNLIFLR IKRRVKSVVLVILLGPLLFLVCHLFVINMDETVWTKEYEGNVTWKIKLRSAMYHSNMTLT MLANFVPLTLTLISFLLLICSLCKHLKKMQLHGKGSQDPSTKVHIKALQTVTSFLLLCAI YFLSMIISVCNLGRLEKQPVFMFCQAIIFSYPSTHPFILILGNKKLKQIFLSVLRHVRYW VKDRSLRLHRFTRAALCKG

>P23574

MGSGKVFLFSPSLLWSQTRGVRLIFLLLTLHLGNCIDKADDEDDEDLTMNKTWVLAPKIH EGDITQILNSLLQGYDNKLRPDIGVRPTVIETDVYVNSIGPVDPINMEYTIDIIFAQTWF DSRLKFNSTMKVLMLNSNMVGKIWIPDTFFRNSRKSDAHWITTPNRLLRIWSDGRVLYTL RLTINAECYLQLHNFPMDEHSCPLEFSSYGYPKNEIEYKWKKPSVEVADPKYWRLYQFAF VGLRNSTEISHTISGDYIIMTIFFDLSRRMGYFTIQTYIPCILTVVLSWVSFWINKDAVP $\label{thm:condition} ARTSLGITTVLTMTTLSTIARKSLPKVSYVTAMDLFVSVCFIFVFAALMEYGTLHYFTSN\\ NKGKTTRDRKLKSKTSVSPGLHAGSTLIPMNNISMPQGEDDYGYQCLEGKDCATFFCCFE\\ DCRTGSWREGRIHIRIAKIDSYSRIFFPTAFALFNLVYWVGYLYL\\ \\$

>P59544

MITFLYIFFSILIMVLFVLGNFANGFIALVNFIDWVKRKKISSADQILTALAVSRIGLLW ALLLNWYLTVLNPAFYSVELRITSYNAWVVTNHFSMWLAANLSIFYLLKIANFSNLLFLH LKRRVRSVILVILLGTLIFLVCHLLVANMDESMWAEEYEGNMTGKMKLRNTVHLSYLTVT TLWSFIPFTLSLISFLMLICSLYKHLKKMQLHGEGSQDLSTKVHIKALQTLISFLLLCAI FFLFLIVSVWSPRRLRNDPVVMVSKAVGNIYLAFDSFILIWRTKKLKHTFLLILCQIRC >099821

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MEEVIKNAHTYDVEDVLKFLDVNKDNGLKNEELDDRRLKYGLNELEVEKKKSIFELILNO FDDLLVKILLLAAFISFVLTLLDMKHKKIEICDFIEPLVIVLILILNAAVGVWQECNAEK SLEALKELQPTKAKVLRDGKWEIIDSKYLYVGDIIELSVGNKTPADARIIKIYSTSLKVE QSMLTGESCSVDKYAEKMEDSYKNCEIQLKKNILFSSTAIVCGRCIAVVINIGMKTEIGH IOHAVIESNSEDTOTPLOIKIDLFGOOLSKIIFVICVTVWIINFKHFSDPIHGSFLYGCL YYFKISVALAVAAIPEGLPAVITTCLALGTRRMVKKNAIVRKLOSVETLGCTTVICSDKT GTLTTNOMTTTVFHLFRESDSLTEYOLCOKGDTYYFYESSNLTNDIYAGESSFFNKLKDE GNVEALTDDGEEGSIDEADPYSDYFSSDSKKMKNDLNNNNNNNNSSRSGAKRNIPLKEM KSNENTIISRGSKILEDKINKYCYSEYDYNFYMCLVNCNEANIFCNDNSOIVKKFGDSTE LALLHFVHNFDILPTFSKNNKMPAEYEKNTTPVQSSNKKDKSPRGINKFFSSKNDNSHIT STLNENDKNLKNANHSNYTTAQATTNGYEAIGENTFEHGTSFENCFHSKLGNKINTTSTH NNNNNNNNSNSVPSECISSWRNECKOIKIIEFTRERKLMSVIVENKKKEIILYCKGAPE NIIKNCKYYLTKNDIRPLNETLKNEIHNKIONMGKRALRTLSFAYKKLSSKDLNIKNTDD YYKLEODLIYLGGLGIIDPPRKYVGRAIRLCHMAGIRVFMITGDNINTARAIAKEINILN KNEGDDEKDNYTNNKNTQICCYNGREFEDFSLEKOKHILKNTPRIVFCRTEPKHKKQIVK VLKDLGETVAMTGDGVNDAPALKSADIGIAMGINGTEVAKEASDIVLADDNFNTIVEAIK EGRCIYNNMKAFIRYLISSNIGEVASIFITALLGIPDSLAPVOLLWVNLVTDGLPATALG FNPPEHDVMKCKPRHKNDNLINGLTLLRYIIIGTYVGIATVSIFVYWFLFYPDSDMHTLI NFYOLSHYNOCKAWNNFRVNKVYDMSEDHCSYFSAGKIKASTLSLSVLVLIEMFNALNAL SEYNSLFEIPPWRNMYLVLATIGSLLLHVLILYIPPLARIFGVVPLSAYDWFLVFLWSFP VIILDEIIKFYAKRKLKEEORTKKIKID

>Q53GQ0

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>P59551

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>09TL13

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MSNASLVTAFILTGLPHAPGLDALLFGIFLVVYVLTVLGNLLILLVIRVDSHLHTPMYYF LTNLSFIDMWFSTVTVPKMLMTLVSPSGRAISFHSCVAQLYFFHFLGSTECFLYTVMSYD RYLAISYPLRYTSMMSGSRCALLATGTWLSGSLHSAVQTILTFHLPYCGPNQIQHYFCDA PPILKLACADTSANVMVIFVDIGIVASGCFVLIVLSYVSIVCSILRIRTSDGRRRAFQTC ASHCIVVLCFFVPCVVIYLRPGSMDAMDGVVAIFYTVLTPLLNPVVYTLRNKEVKKAVLK LRDKVAHPQRK

>P43117

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>Q05521

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>08IZR5

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>P33361

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>P32709

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>P69336

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>P09169

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>P20262

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>08NGP0

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SRKAISSVK

>08NGP2

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>POAEG1

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>P16395

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>P20272

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LAIMVYDVFGKMNKLIKTVFAFCSMLCLLNSTVNPIIYALRSKDLRHAFRSMFPSCEGTA
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>P0A742

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>09CD58

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 $\verb"YPPEQQPSQSPYWPQPAPSYPGQAPPPYPSYPPCPSYPPPGQSAPDAGKPPAQLDEGVSPSNPPAHG"$

>08NG00

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>P50363

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>08NG01

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>Q8NH01

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>08NG03

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>Q8NH04

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>Q8NH05

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>Q8NGQ6

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>002211

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>002212

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>P83792

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>D12404

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>05UAW9

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>Q92JJ9

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>P39277

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>08NGR6

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>P75925

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>079551

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>008962

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>P45843

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>038998

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>08NGS2

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>Q8NGS5

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>P12428

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>012001

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>Q8NGT1

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>08NGT2

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>P28877

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>POAEK7

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>Q95N03

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>Q8NGU2

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>O8NGU4

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>Q8NH49

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>P75955

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>P35315

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>004941

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>O8NGV0

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>P92943

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>Q8NH54

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>P22215

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>004947

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>08NH57

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>Q8NH59

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>001608

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>099063

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>06P5W5

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>O6DN61

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>P96169

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>O8NGX0

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>P32791

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>08NH73

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>05NUL3

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>Q01625

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>015440

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>08NH79

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>Q8NVK5

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>025157

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>015391

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>014739

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>Q8NGY1

MGQTNVTSWRDFVFLGFSSSGELQLLLFALFLSLYLVTLTSNVFIIIAIRLDSHLHTPMY LFLSFLSFSETCYTLGIIPRMLSGLAGGDQAISYVGCAAQMFFSASWACTNCFLLAAMGF DRYVAICAPLHYASHMNPTLCAQLVITSFLTGYLFGLGMTLVIFHLSFCSSHEIQHFFCD TPPVLSLACGDTGPSELRIFILSLLVLLVSFFFITISYAYILAAILRIPSAEGQKKAFST CASHLTVVIIHYGCASFVYLRPKASYSLERDQLIAMTYTVVTPLLNPIVYSLRNRAIQTA LRNAFRGRLLGKG

>Q8NH83

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>Q8NH85

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>POAEP1

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>0960E2

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>P15029

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>P35356

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>P15030

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>08NH90

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LKVIGKKLF

>08NGZ2

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>Q8NH93

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>P0AF01

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>069076

>POAEO6

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>P35363

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>P34709

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>09WVL3

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>Q9SAF5

MTKCRRRLHLSNIYAFKGRKSNFQEDHSHIGGPGFSRVVYCNEPNSPAAERRNYVGNYV RSTKYTLASFIPKSLFEQFRRVANFYFLVTGVLSLTALSPYSPISALLPLTFVIAASMVK EAIEDWGRKKQDIEMNNRKVKVHDGNGIFRREGWRDLKVGNIVRVEKDEFFPADLLLLSS SYEDSICYVETMNLDGETNLKVKQGLEATSSALHEDSDFKELKAVVKCEDPNADLYTFVG TLHFEEQRLPLSITQLLLRDSKLRNTEYIYGVVVFTGHDTKVIQNSTDPPSKRSRIERKM DKIIYLMFGVVFLMSFIGSIVFGIETREDRVRNGGRTERWYLRPDNADIFFDPDRAPMAA VYHFFTAVMLYSYFIPISLYVSIEIVKVLQSLFINNDILMYYEENDKPAHARTSNLNEEL GMVDTILSDKTGTLTCNSMEFIKCSIAGTAYGRGITEVERSMAMRSNGSSLVGDDLDVVV DQSGPKIKGFNFLDERVMKGNWVKQRDAAVLQKFFRLLAVCHTAIPETDEATGSVSYEAE SPDEAAFVVAAREFGFEFFSRTQNGISFRELDLASGKTVERVYRLLNVLEFNSARKRMSV IVRDEDGRLLLLSKGADNVMFERLAKNGRKFEEKTREHVNEYADAGLRTLILAYREVDEN EYIEFSKNFNEAKNSVTADRESLIDEITEQMERDLILLGATAVEDKLQNGVPDCIDKLAQ AGIKIWVLTGDKMETAINIGFACSLLRQEMKQIINLETPHIKALEKAGEKDAIEHASRE SVVNQMEEGKALLTASSSASSHEAFALIIDGKSLTYALEDDFKKKFLDLATGCASVICCR

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>POAER3

MSIDWNWGIFLQQAPFGNTTYLGWIWSGFQVTIALSICAWIIAFLVGSFFGILRTVPNRF LSGLGTLYVELFRNVPLIVQFFTWYLVIPELLPEKIGMWFKAELDPNIQFFLSSMLCLGL FTAARVCEQVRAAIQSLPRGQKNAALAMGLTLPQAYRYVLLPNAYRVIVPPMTSEMMNLV KNSAIASTIGLVDMAAQAGKLLDYSAHAWESFTAITLAYVLINAFIMLVMTLVERKVRLP GNMGGK

>P0AF16

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>P11847

AEYQNFFNQVQVAGAPEMGLKEDVDTFERTPAGMFNILGWMGNAQIGPIYLGIAGTVSLA FGAAWFFTIGVWYWYQAGFDPFIFMRDLFFFSLEPPPAEYGLAIAPLKQGGVWQIASLFM AISVIAWWVRVYTRADQLGMGKHMAWAFLSAIWLWSVLGFWRPILMGSWSVAPPYGIFSH LDWTNQFSLDHGNLFYNPFHGLSIAALYGSALLFAMHGATILAVTRFGGERELEQIVDRG TASERAALFWRWTMGFNATMEGIHRWAIWMAVMVTLTGGIGILLSGTVVDNWYVWAQVHG YAPVTP

>014817

MARACLQAVKYLMFAFNLLFWLGGCGVLGVGIWLAATQGSFATLSSSFPSLSAANLLIIT GAFVMAIGFVGCLGAIKENKCLLLTFFLLLLLVFLLEATIAILFFAYTDKIDRYAQQDLK KGLHLYGTQGNVGLTNAWSIIQTDFRCCGVSNYTDWFEVYNATRVPDSCCLEFSESCGLH APGTWWKAPCYETVKVWLQENLLAVGIFGLCTALVQILGLTFAMTMYCQVVKADTYCA >P34711

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GYIIDRVGYEIPMILGLCTMFFSTAIFALGKSYGVLLFARSLQGFGSAFADTSGLAMIAD
RFTEENERSAALGIALAFISFGCLVAPPFGSVLYSLAGKPVPFLILSFVCLADAIAVFMV
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TPGWLVGVIWLPPFFPHVLGVYVTVKMLRAFPHHTWAIAMVGLAMEGIACFAIPYTTSVM
QLVIPLSFVCFGIALIDTSLLPMLGHLVDTRHVSVYGSVYAIADISYSLAYAFGPIIAGW
IVTNWGFTALNIIIFATNVTYAPVLFLLRKVHSYDTLGAKGDTAEMTQLNSSAPAGGYNG
KPEATTAESYQGWEDQQSYQNQAQIPNHAVSFQDSRPQAEFPAGYDPLNPQW
>P41943

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>P35384

MALYSCCWILLAFSTWCTSAYGPDQRAQKKGDIILGGLFPIHFGVAVKDQDLKSRPESVE CIRYNFRGFRWLQAMIFAIEEINSSPALLPNMTLGYRIFDTCNTVSKALEATLSFVAQNK IDSLNLDEFCNCSEHIPSTIAVVGATGSGISTAVANLLGLFYIPQVSYASSSRLLSNKNQ

FKSFLRTIPNDEHQATAMADIIEYFRWNWVGTIAADDDYGRPGIEKFREEAEERDICIDF SELISOYSDEEKIOOVVEVIONSTAKVIVVFSSGPDLEPLIKEIVRRNITGRIWLASEAW ASSSLIAMPEYFHVVGGTIGFGLKAGQIPGFREFLQKVHPRKSVHNGFAKEFWEETFNCH LOEGAKGPLPVDTFLRGHEEGGARLSNSPTAFRPLCTGEENISSVETPYMDYTHLRISYN VYLAVYSIAHALQDIYTCIPGRGLFTNGSCADIKKVEAWQVLKHLRHLNFTSNMGEQVTF DECGDLAGNYSIINWHLSPEDGSIVFKEVGYYNVYAKKGERLFINDEKILWSGFSREVPF SNCSRDCLAGTRKGIIEGEPTCCFECVECPDGEYSDETDASACDKCPDDFWSNENHTSCI AKEIEFLSWTEPFGIALTLFAVLGIFLTAFVLGVFIKFRNTPIVKATNRELSYLLLFSLL CCFSSSLFFIGEPODWTCRLROPAFGISFVLCISCILVKTNRVLLVFEAKIPTSFHRKWW GLNLOFLLVFLCTFMOIVICAIWLNTAPPSSYRNHELEDEIIFITCHEGSLMALGFLIGY TCLLAAICFFFAFKSRKLPENFNEAKFITFSMLIFFIVWISFIPAYASTYGKFVSAVEVI AILAASFGLLACIFFNKVYIILFKPSRNTIEEVRCSTAAHAFKVAARATLRRSNVSRQRS SSLGGSTGSTPSSSISSKSNSEDPFPQQQPKRQKQPQPLALSPHNAQQPQPRPPSTPQPQ POSOOPPRCKOKVIFGSGTVTFSLSFDEPOKTAVAHRNSTHOTSLEAOKNNDALTKHOAL LPLOCGETDSELTSOETGLOGPVGEDHOLEMEDPEEMSPALVVSNSRSFVISGGGSTVTE **NMLRS**

>P21627

MPEIYHYLQQLVNGLTVGSTYALIAIGYTMVYGIIGMINFAHGEVYMIGSYIAFIAITLL AMMGLDSVPLMMLAAFAASIIVTSAFGYSIERVAYRPLRGGNRLIPLISAIGMSIFLQNA VMLSQDSKEKAIPTLLPGNFVFGESSMNGVVISYMQILIFVVTFLVMFGLTLFISRSRLG RACRACAEDLKMTNLLGINSNNIIALTFVIGAALAAVAAVLLGMQYGVINPGIGFLAGIK AFTAAVLGGIGSIPGAMLGGLLLGVAEAFGADVFGDQYKDVVAFGLLILVLLFRPTGILG RPEVEKV

>P21628

MSQSLKRALFSALLVILVSYPILGLKLRTVGIKLEVLGADAQTLWTIAAAALAMFVWQLF RDRIPLKLGRGVGYKVNGSGLKNFLSLPSTQRWAVLALVVVAFVWPFFASRGAVDIATLI LIYVMLGIGLNIVVGLAGLLDLGYVGFYAVGAYTYALLAEYAGFGFWTALPIAGMMAALF GFLLGFPVLRLRGDYLAIVTLGFGEIIRILLRNMTEITGGPNGIGSIPKPTLFGLTFERR APEGMQTFHEFFGIAYNTNYKVILLYVVALLLVLLALFVINRLMRMPIGRAWEALREDEV ACRALGLNPTIVKLSAFTIGASFAGFAGSFFAARQGLVTPESFTFIESAMILAIVVLGGM GSQLGVILAAVVMVLLQEMRGFNEYRMLIFGLTMIVMMIWRPQGLLPMQRPHLELKP >POAF32

MIQYLNVFFYDIYPYICATVFFLGSWLRYDYGQYTWRASSSQMLDKRGMVIWSNLFHIGI LGIFFGHLFGMLTPHWMYAWFLPVAAKQLMAMVLGGICGVLTLIGGAGLLWRRLTNQRVR ATSTTPDIIIMSILLIQCLLGLSTIPFSAQYPDGSEMMKLVGWAQSIVTFRGGSSEMLNG VAFVFRLHLVLGMTIFLLFPFTRLVHVWSAPFEYFTRRYQIVRSRR

>Q8BXS7

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>P14413

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>P22292

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>08VG03

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>001685

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SGQLSAFYLFSCIWGTFILISENYISDPTILWRAYPHNLMTFQMKFFYIAQLAYWFHAFP
ELYFQKTKKEDIPRQLVYIGLYLFHIAGAYLLNLNHLGLVLLVLHYFVEFLFHISRLFYF
SDEKYQKGFSLWAVLFVLGRLLTLILSVLTVGFGLARAENQKLDFSAGNFNVLAVRIAVL
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GADSPRNRKEKSS

>08VG04

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>014843

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LWYKTRPRLGQAGLVSVACWLLASAHCSVVYVIEFSGDISHSQGTNGTCYLEFRKDQLAI
LLPVRLEMAVVLFVVPLIITSYCYSRLVWILGRGGSHRRQRRVAGLLAATLLNFLVCFGP
YNVSHVVGYICGESPAWRIYVTLLSTLNSCVDPFVYYFSSSGFQADFHELLRRLCGLWGQ
WQQESSMELKEQKGGEEQRADRPAERKTSEHSQGCGTGGQVACAES
>042191

MAFRQTLSIRSRLFARRNQPVYHIIPRESDHERDSFCQETSQRSYHSFLHQRSVNNSDFS KVSGGSLHLPLAPTSGFAFYRYMSSAPGVGSEKIGVMSDIAEVITDSTLQDVPAQAAAAV SEVTLAAADSFFPIAALQQCIDMVHTFTGFEWWASIVVATILIRSSTVPLLIKQMKDTTK LALMRPRLESIREEMQNKGMDSVTMAEGQKKMKNLFKEYGVTPFTPMKGMFIQGPLFICF FLAIRNMAEKVPSFQTGGALWFTDLTTPDSLYILPVITGLTFLITVECNAQEGMEGNPMA GTVKTVCRVFALLTVPMTMSFPQAIFCYWITSNLFSLMYGLVIKRPQVKKMLRIPDLPPP PPGQQPSFDLFSALKKMKAMTQDHTQNQIEPPSPVNPRLSSTSLSPVSKRLKALESQVKG RKKNSSKKK

>P52382

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MASTIMAAASRAVVAKTPFLSGQGRAASASPLRDIAAATNGRITMGNDLWYGPDRVKYLG PFSAQTPSYLNGEFPGDYGWDTAGLSADPEAFARNRALEVIHGRWAMLGALGCVFPEVLQ KWVGVEFKEPVWFKAGSQIFSEGGLDYLGNPNLVHAQSILAVLGFQVLLMGLVEGFRING LDGVGEGNDLYPGGQYFDPLGLADDPVTFAELKVKEIKNGRLAMFSMFGFFVQAIVTGKG PLENLFDHLDDPVANNAWVFATKFAPGS >095157

MELENDTRIPEFLLLGFSEEPKLQPFLFGLFLSMYLVTILGNLLLILAVSSDSHLHTPMY FFLANLSFVDICFTCTTIPKMLVNIQTQRKVITYESCIIQMYFFELFAGIDNFLLTVMAY DRYMAICYPLHYMVIMNPQLCSLLLLVSWIMSALHSLLQTLMVLRLSFCTHFQIPHFFCE LNQMIQLACSDTFLNNMMLYFAAILLGVAPLVGVLYSYFKIVSSIRGISSAHSKYKAFST CASHLSVVSLFYCTSLGVYLSSAAPQSTHTSSVASVMYTVVTPMLNPFIYSLRNKDIKGA LNVFFRGKP

>Q24563

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ATVFGNSLVILAVIRERYLHTATNYFITSLAVADCLVGLVVMPFSALYEVLENTWFFGTD
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SFPAIVWWRAARDGEMPAYKCTFTEHLGYLVFSSTISFYLPLLVMVFTYCRIYRAAVIQT
RSLKIGTKQVLMASGELQLTLRIHRGGTTRDQQNQVSGGGGGGGGGGGGGGGGSLSHSHSHS
HHHHHNHGGGTTTSTPEEPDDEPLSALHNNGLARHRHMGKNFSLSRKLAKFAKEKKAAKT
LGIVMGVFIICWLPFFVVNLLSGFCIECIEHEEIVSAIVTWLGWINSCMNPVIYACWSRD
FRRAFVRLLCMCCPRKIRRKYQPTMRSKSQRFATRRCYSTCSLHGIQHVRHNSCEQTYI
>P31413

 ${\tt MSDLCPVYAPFFGAMGCTAAIVFTCLGASYGTAKSGVGIAAMGVLRPDLIVKNIVPVIMA} \\ {\tt GIIGIYGLVVSVLISDALTQDHYALYTGFIQLGAGLAVGLAGLAAGFAIGIVGDAGVRGTAQQPRLFVGMILILIFAEVLGLYGLIVALLMNSKATLNTSC} \\$

>P07213

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>P0A7C8

MTSLSRPRVEFISTILQTVLNLGLLCLGLILVVFLGKETVHLADVLFAPEQTSKYELVEG LVVYFLYFEFIALIVKYFQSGFHFPLRYFVYIGITAIVRLIIVDHKSPLDVLIYSAAILL LVITLWLCNSKRLKRE

>P24996

MNRSVVLILLLNIIVSVVIVLSSHSWFSVCDGLELNTLSVLPILCGQFSPRGVESTIKYF LVQAFSAAMILNVALVQLWLCSSWSVSCPLNSFSSIVLTLALCLKLGLFPCHFWFPDVLQ GLSFLQGLLLSTWQKVAPFIILVSVCNIISINVLTTLGCLSVLVGGWGGLNQSQVRKIMA FSSISHLGWICSVLSYSIYVGCIMFVVYIVLSSTVFLINNEGNLYNLSSLARLVYCNNVM GNVLVLVILSLGGLPPLTGFLNKFIALECLLSNNLLVPCAILIVGSLLSLFFYLRISFNS VLCLFPQHSMMLFSWRNVSGYYGNTSFYTVLLSILSSMSILGLLLVPALW

>P21653

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>042266

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>P47862

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>035052

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>P58295

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>P47871

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>09SHV2

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>P31436

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>042281

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>P0AF80

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>086S04

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>Q86SQ6

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>POAEY8

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>P37327

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>P47888

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>P31442

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>09MIY9

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>08NHB7

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>P31452

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>017444

>021326

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>08NHC6

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>035092

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>P51790

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>P51795

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>P91645

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>P37367

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>P26949

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>P49810

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>P97544

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>Q9LFN5

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>P77228

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>099808

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>096R27

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>Q51392

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>Q13433

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>P17064

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>09U357

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>P34054

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>P23634

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>07A3D6

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>067ES6

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VINNCIFTSIPFALSQSTFLMLIFSLWRHYKKMQQHAQRCRDTLTNAHIKVLQTMIMYVL
LSAIFFLFLSMQIWRNKLMENILFIRFCETVAAVFPSGHSCVLIWGDTNLRQTFLSVLWW
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>Q9ZS51

MGSSPPKKTTLQRYLSQLQQHPLRTKAITAGVLSGVSDVVSQKLSGIQKIQLRRVLLKVI FAGGFLGPAGHFFHTYLDKFFKGKKDTQTVAKKVILEQLTLSPLNHLLFMIYYGVVIERT PWTLVRERIKKTYPTVQLTAWTFFPVVGWINYKYVPLHFRVILHSLVAFFWGIFLTLRAR SMTLALAKAK

>P23645

MADESLHTVPLEHNIDYHIVTLFERLEAMRKDSHGGGHGVNNRLSSTLQAPKRSMQAEIR TLEFWRSIISECLASFMYVFIVCGAAAGVGVGASVSSVLLATALASGLAMATLTQCFLHI SGAHINPAVTLALCVVRSISPIRAAMYITAQCGGGIAGAALLYGVTVPGYQGNLQAAISH SAALAAWERFGVEFILTFLVVLCYFVSTDPMKKFMGNSAASIGCAYSACCFVSMPYLNPA RSLGPSFVLNKWDSHWVYWFGPLVGGMASGLVYEYIFNSRNRNLRHNKGSIDNDSSSIHS EDELNYDMDMEKPNKYQQSQGTYPRGQSNGNGGGQAAGNGQHQAANMGQMPGVVANAGQG NYCQNLYTAPPLSSKYDQQQEPLYGGTRSLYCRSPTLTRSNLNRSQSVYAKSNTAINRDI VPRPGPLVPAQSLYPMRTQQQQQQQQQQQQQQVAPAPQSSHLQNQNVQNQMQQRSESIYGM RGSMRGQQQPIQQQQQQQQQQQQQQQQQMQPPPQMMSDPQQPQGFQPVYGT

 $\label{thm:control} RTNPTPMDGNHKYDRRDPQQMYGVTGPRNRGQSAQSDDSSYGSYHGSAVTPPARHPSVEP\\ SPPPPPMLMYAPPPQPNAAHPQPIRTQSERKVSAPVVVSQPAACAVTYTTSQGSAVTAQQ\\ QQQQQQQQQQQQQQQQQMMMQQQQQHYGMLPLRPN\\$

>P23648

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>P71377

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>P60955

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MLKRCLSPLTLVNQVALIVLLSTAIGLAGMAVSGWLVQGVQGSAHAINKAGSLRMQSYRL LAAVPLSEKDKPLIKEMEQTAFSAELTRAAERDGQLAQLQGLQDYWRNELIPALMRAQNR ETVSADVSQFVAGLDQLVSGFDRTTEMRIETVVLVHRVMAVFMALLLVFTIIWLRARLLQ PWRQLLAMASAVSHRDFTQRANISGRNEMAMLGTALNNMSAELAESYAVLEQRVQEKTAG LEHKNQILSFLWQANRRLHSRAPLCERLSPVLNGLQNLTLLRDIELRVYDTDDEENHQEF TCQPDMTCDDKGCQLCPRGVLPVGDRGTTLKWRLADSHTQYGILLATLPQGRHLSHDQQQ LVDTLVEQLTATLALDRHQERQQQLIVMEERATIARELHDSIAQSLSCMKMQVSCLQMQG DALPESSRELLSQIRNELNASWAQLRELLTTFRLQLTEPGLRPALEASCEEYSAKFGFPV KLDYQLPPRLVPSHQAIHLLQIAREALSNALKHSQASEVVVTVAQNDNQVKLTVQDNGCG VPENAIRSNHYGMIIMRDRAQSLRGDCRVRRRESGGTEVVVTFIPEKTFTDVQGDTHE

MNPHAKLISLISLLLGTTITISSNHWIMAWTGLEINTLAIIPLISKSHHPRAVEASVKYF LVQAAASALVLFSSMSNAWATGQWDITQLTHPTASMLLTAAIAIKLGLVPFHFWFPEVLQ GTSLTTALLLSTLMKLPPMAILLMTSPSLNPTVLTSMALASAALGGWMGLNQTQTRKILA FSSIAHLGWMTMIIIYNPKLTLLTFYLYILMTATVFLSLNTTKTLKLSTLMTSWTKAPVL NAALMLTLLSLAGLPPLTGFMPKWLILQELTKQEMTTVATIIALLSLLGLFFYLRLAYYA TITLPPNSANHMKQWYISNPTNTSIAILSSLSAILLPISPMILAAL

>067ET2

MAIITTDSDYYTHRYEVIIPFVVSTIDCIVGIIGNGFITVIYGTELVRSKRLPTGEHLML MLSFSRLLLQIWIMVEITYQLFFPMIYNHNAMYKLFKTISVFLNYCNLWFAAWLNVFYCL KIVNFAHPLFLMMKQKIVVLMPRLMSLSVLVSISLSSFFSKDIFNVYMNTSVPIPFSNST KMKYFFKTNVLNLAFLYYMGIFIPLFMFIMAAILLITSLKRHTLNMESSTTGSRDSSMEA HLGAIKSTSYSLILYIINALALFISMSNIFGAYSTWNSVCSFILTAYPAGQSVHLILRNP GLRRAWRRFQHHVRLYLKR

>P51055

MNAKRPVNLDLTKFHFPPMAILSIGHRISGFVLFLCMPLMFYLLHRATASAESFYHLHQL LLHNGWIKLAVWIMLSATLFHLFAGIRHLAMDLGFWESVPEGRISAYTVFVVSFIAIVLA GVWIW

>P51057

MVDRTSRRGYRDWFVQRITALLSGIYAVFVIVFLLVHHPISYPQWHALFSHLIMKIFTLI VIFSILWHAWIGMWTIFTDYVKNKPIRLALETLVCLLLVGYFVWAIEFLWIAR >043603

MNVSGCPGAGNASQAGGGGGWHPEAVIVPLLFALIFLVGTVGNTLVLAVLLRGGQAVSTT NLFILNLGVADLCFILCCVPFQATIYTLDGWVFGSLLCKAVHFLIFLTMHASSFTLAAVS LDRYLAIRYPLHSRELRTPRNALAAIGLIWGLSLLFSGPYLSYYRQSQLANLTVCHPAWS APRRRAMDICTFVFSYLLPVLVLGLTYARTLRYLWRAVDPVAAGSGARRAKRKVTRMILI VAALFCLCWMPHHALILCVWFGQFPLTRATYALRILSHLVSYANSCVNPIVYALVSKHFR KGFRTICAGLLGRAPGRASGRVCAAARGTHSGSVLERESSDLLHMSEAAGALRPCPGASQ PCILEPCPGPSWQGPKAGDSILTVDVA

>POAFA7

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>P79945

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>067ET7

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>059998

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SEVADYEEIAGHGIRAVVQNQVVIAGNDRLLHREKIDHDTCDVAGTVVHLAVDGRYGGYI
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IEQLLDPSGKAKLAFVGDGINDAPVIARADVGIAMGGLGSDAAIETADVVLMTDAPSKVA
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K

MSISLTTKLSYGFGAFGKDFAIGIVYMYLMYYYTDVVGLSVGLVGTLFLVARIWDAINDP IMGWIVNATRSRWGKFKPWILIGTLTNSLVLFLLFSAHLFEGTAQVVFVCVTYILWGMTY TIMDIPFWSLVPTITLDKREREQLVPFPRFFASLAGFVTAGITLPFVSYVGGADRGFGFQ MFTLVLIAFFIASTIVTLRNVHEVYSSDNGVTAGRPHLTLKTIVGLIYKNDQLSCLLGMA LAYNIASNIINGFAIYYFTYVIGDADLFPYYLSYAGAANLLTLIVFPRLVKMLSRRILWA GASVMPVLSCAGLFAMALADIHNAALIVAAGIFLNIGTALFWVLQVIMVADTVDYGEFKL NIRCESIAYSVQTMVVKGGSAFAAFFIALVLGLIGYTPNVAQSAQTLQGMQFIMIVLPVL FFMMTLVLYFRYYRLNGDMLRKIQIHLLDKYRKTPPFVEQPDSPAISVVATSDVKA >P39301

MEILYNIFTVFFNQVMTNAPLLLGIVTCLGYILLRKSVSVIIKGTIKTIIGFMLLQAGSG ILTSTFKPVVAKMSEVYGINGAISDTYASMMATIDRMGDAYSWVGYAVLLALALNICYVL LRRITGIRTIMLTGHIMFQQAGLIAVTLFIFGYSMWTTIICTAILVSLYWGITSNMMYKP TQEVTDGCGFSIGHQQQFASWIAYKVAPFLGKKEESVEDLKLPGWLNIFHDNIVSTAIVM TIFFGAILLSFGIDTVQAMAGKVHWTVYILQTGFSFAVAIFIITQGVRMFVAELSEAFNG ISQRLIPGAVLAIDCAAIYSFAPNAVVWGFMWGTIGQLIAVGILVACGSSILIIPGFIPM FFSNATIGVFANHFGGWRAALKICLVMGMIEIFGCVWAVKLTGMSAWMGMADWSILAPPM MQGFFSIGIAFMAVIIVIALAYMFFAGRALRAEEDAEKQLAEQSA

>096R67

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>P53744

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>P50406

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>073700

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VKSVTFYWLVIVLVFLNTLTISSEHYNQPDWLTQIQDIANKVLLALFTCEMLVKMYSLGL OAYFVSLFNRFDCFVVCGGIVETILVELEIMSPLGISVFRCVRLLRIFKVTRHWASLSNL VASLLNSMKSIASLLLLLFLFIIIFSLLGMQLFGGKFNFDETQTKRSTFDNFPQALLTVF OILTGEDWNAVMYDGIMAYGGPSSSGMIVCIYFIILFICGNYILLNVFLAIAVDNLADAE SLNTAQKEEAEEKERKKNARKESLENKKSEKSEGDQKKPKDSKVTIAEYGEGEDEDKDPY PPCDVPVGEDEEDEPEVPAGPRPRRISELNMKEKITPIPEGSAFFIFSSTNPIRVGC HRLINHHIFTNLILVFIMLSSVSLAAEDPIRSHSFRNNILGYADYVFTSMFTFEIILKMT AFGAFLHKGSFCRNYFNLLDLLVVGVSLVSFGIOSSAISVVKILRVLRVLRPLRAINRAK GLKHVVOCVFVAIRTIGNIMIVTTLLOFMFACIGVOLFKGKFYKCTDEAKONPEECRGIY IVYKDGDVDNPMVKERVWONSDFNFDNVLSAMMALFTVSTFEGWPALLYKAIDSNGENVG PVYNYRVEISIFFIIYIIIIAFFMMNIFVGFVIVTFQEQGEQEYKNCELDKNQRQCVEYA LKARPLRRYIPKNPYOYKFWYVVNSTGFEYIMFVLIMLNTLCLAMOHYGOSKLFNDAMDI MNMVFTGVFTVEMVLKLIAFKPKIFVRKKERWLGYFSDAWNTFDSLIVIGSIVDVVLSEA DPKPTETVTTDESGNSEDSARISITFFRLFRVMRLVKLLSRGEGIRTLLWTFIKSFQALP YVALLIAMLFFIYAVIGMOVFGKVAMRDNNOINRNNNFOTFPOAVLLLFRCATGEAWOEI MLACLPGKRCDPESDYNPGEEYTCGSNFAIIYFISFYMLCAFLIINLFVAVIMDNFDYLT RDWSILGPHHLDEFKRIWSEYDPEAKGRIKHLDVVTLLRRIQPPLGFGKLCPHRVACKRL VAMNMPLNSDGTVMFNATLFALVRTALKIKTEGNLEOANEELRAVIKKIWKKTSMKLLDO VVPPAGDDEVTVGKFYATFLIQDYFRKFKKRKEQGLVGKYPAKNTTIALQAGLRTLHDIG PEIRRAISCDLODDEPEENNPDEEEEVYKRNGALFGNHINHISSDRRDSFOOINTTHRPL HVQRPSIPSASDTEKNIYPHTGNSVYHNHHNHNSVGKQVPNSTNANLNNANVSKVVHGKH ANFGSHEHRSENGYHSYSRADHEKRRPSSRRTRYYETYIRSDSGDGRRPTICREERDIR DYCNDDHYLGEQEYYSGEEYYEEDSMLSGNRHVYDYHCRHHCHDSDFERPKGYHHPHGFF EEDDSQTCYDTKRSPRRRLLPPTPASNRRSSFNFECLRRQSSQDDIPLSPNFHHRTALPL HLMQQQVMAVAGLDSSKAHKHSPSRSTRSWATPPATPPNRDHTPYYTPLIQVDRAESTEH MNGSLPSLHRSSWYTDDPDISYRTFTPANLTVPNDFRHKHSDKQRSADSLVEAVLISEGL GRYAKDPKFVSATKHEIADACDMTIDEMESAASNLLNGNISNGTNGDMFPILSRODYELO DFGPGYSDEEPEPGRYEEDLADEMICITSL

>Q925I4

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RKS

>Q9ZDF2

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>P39328

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MAGGAFVSEGGGGGNSYEGGVTVFVIMTCIVAAMGGLLFGYDLGISGGVTSMEEFLSKFF
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AFLIGSLFNAFATNVAMLIVGRLLLGVGVGFANQSTPVYLSEMAPAKIRGALNIGFQMAI
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EIRPAGQAINVSVNMFFTFLIGOFFLTMLCHMKFGLFYFFGGMVAVMTVFIYFLLPETKG

VPIEEMGRVWKQHPFWKRYMPDDAVIGGGEENYVKEV

>P33449

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>P02708

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>P49892

MAQSVTAFQAAYISIEVLIALVSVPGNILVIWAVKMNQALRDATFCFIVSLAVADVAVGA LVIPLAIIINIGPQTEFYSCLMMACPVLILTESSILALLAIAVDRYLRVKIPVRYKSVVT PRRAAVAIACCWIVSFLVGLTPMFGWNNLNKVLGTRDLNVSHSEFVIKCQFETVISMEYM VYFNFFVWVLPPLLLMLLIYLEVFNLIRTQLNKKVSSSSNDPQKYYGKELKIAKSLALVL FLFALSWLPLHILNCITLFCPSCKTPHILTYIAIFLTHGNSAMNPIVYAFRIKKFRTAFL QIWNQYFCCKTNKSSSSSTAETVN

>P39338

MAQVINEMDVPSHSFVFHGTGERYFLICVVNVLLTIITLGIYLPWALMKCKRYLYANMEV NGQRFSYGITGGNVFVSCLFFVFFYFAILMTVSADMPLVGCVLTLLLLVLLIFMAAKGLR HQALMTSLNGVRFSFNCSMKGFWWVTFFLPILMAIGMGTVFFISTKMLPANSSSSVIISM VLMAIVGIVSIGIFNGTLYSLVMSFLWSNTSFGIHRFKVKLDTTYCIKYAILAFLALLPF LAVAGYIIFDQILNAYDSSVYANDDIENLQQFMEMQRKMIIAQLIYYFGIAVSTSYLTVS LRNHFMSNLSLNDGRIRFRLTLTYHGMLYRMCALVVISGITGGLAYPLLKIWMIDWQAKN TYLLGDLDDLPLINKEEQPDKGFLASISRGVMPSLPFL

>P26235

MEFIGILCLILVATTIGSHISRRFGIPAVIGQLLVGVLLGQAGLGWVHPNILVHDFSEIG VILLMFLAGLESDLSLLKKYFKPGMFVALLGILFPVFFGWLTGEAFQVANNEAIFFGIIL AATSVSISVEVLKELNVVNTKEGSTILGASVVDDILVVLVLSFSLSFLTGKSTSNLPLPL LLLEQLFYFLFIFLLVKWIAPFLMSLAEKIYANSAIIIMSLVICLGMSYLADLIGLSSVI GAFFAGIAVSQTKVKHEVYNNVEALGYAVFIPVFFVSVGLEVDFSKFSEQILFILILTLV AILTKLIGGYIGAKFSSFSSNSALMVGAGMISRGEMALIILQIGQQSNLIENHYYSPLVI VVLLSTLISPLILKYFTKKVYAN

>P51099

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SAQFPLHVWLPDAMEGPTPISALIHAATMVAAGIFLVARLLPLFIVIPHIMNFISLIGII
TVFLGATLALAQKDIKRGLAYSTMSQLGYMMLALGMGSYRSALFHLITHAYSKALLFLGS
GSVIHSMETLVGYCPKKSQNMVLMGGLTKHVPITKTSFLLGTLSLCGIPPLACFWSKDEI
LNDSWLYSPIFAIIAWSTAGLTAFYMCRIYLLTFEGHLNVHFQNYSGKKNTPFYSISLWG
KDGSKISNKNFRLVTLLKMKKNGRASFFSNKVYKIDDNVRNMIQPFLSIPHFGNTKTYSY
PSESDNTMLFPILILILFTLFVGFLGIPFNQDGVNLDILSKWLTPSINLLHKNSNNSIDW
YEFFKDAVFSVSIASFGIFIAFFLYKPVYSSFQNLDLINSFVKMGPKRIFSDKIKNGIYD
WSYNRGYIDAFYGTFLTVGMRKLAEFAHFFDRRIIDGIPNGVCLISFFVAEVIKSVGGGR
ISSYLFFYFSYVSIFLLIYYFLNVFQNIS

>POAFE8

MLLPWLILIPFIGGFLCWQTERFGVKVPRWIALITMGLTLALSLQLWLQGGYSLTQSAGI PQWQSEFDMPWIPRFGISIHLAIDGLSLLMVVLTGLLGVLAVLCSWKEIEKYQGFFHLNL MWILGGVIGVFLAIDMFLFFFFWEMMLVPMYFLIALWGHKASDGKTRITAATKFFIYTQA SGLVMLIAILALVFVHYNATGVWTFNYEELLNTPMSSGVEYLLMLGFFIAFAVKMPVVPL HGWLPDAHSQAPTAGSVDLAGILLKTAAYGLLRFSLPLFPNASAEFAPIAMWLGVIGIFY GAWMAFAQTDIKRLIAYTSVSHMGFVLIAIYTGSQLAYQGAVIQMIAHGLSAAGLFILCG QLYERIHTRDMRMMGGLWSKMKWLPALSLFFAVATLGMPGTGNFVGEFMILFGSFQVVPV ITVISTFGLVFASVYSLAMLHRAYFGKAKSQIASQELPGMSLRELFMILLLVVLLVLLGF YPQPILDTSHSAIGNIQQWFVNSVTTTRP

>P20350

MENLTQNVNETKVDLGQEKEKEASQEEEHATAAKETIIDIPAACSSSSNSSSYDTDCSTA SSTCCTRQGEHIYMQREAIPATPLPESEDIGLLKYVHRQHWPWFILVISIIEIAIFAYDR YTMPAQNFGLPVPIPSDSVLVYRPDRRLQVWRFFSYMFLHANWFHLGFNIVIQLFFGIPL EVMHGTARIGVIYMAGVFAGSLGTSVVDSEVFLVGASGGVYALLAAHLANITLNYAHMKS ASTQLGSVVIFVSCDLGYALYTQYFDGSAFAKGPQVSYIAHLTGALAGLTIGFLVLKNFG HREYEQLIWWLALGVYCAFTVFAIVFNLINTVTAQLMEEQGEVITQHLLHDLGVS >P02710

MILCSYWHVGLVLLLFSCCGLVLGSEHETRLVANLLENYNKVIRPVEHHTHFVDITVGLQ LIQLISVDEVNQIVETNVRLRQQWIDVRLRWNPADYGGIKKIRLPSDDVWLPDLVLYNNA DGDFAIVHMTKLLLDYTGKIMWTPPAIFKSYCEIIVTHFPFDQQNCTMKLGIWTYDGTKV SISPESDRPDLSTFMESGEWVMKDYRGWKHWVYYTCCPDTPYLDITYHFIMQRIPLYFVV NVIIPCLLFSFLTGLVFYLPTDSGEKMTLSISVLLSLTVFLLVIVELIPSTSSAVPLIGK YMLFTMIFVISSIIITVVVINTHHRSPSTHTMPQWVRKIFIDTIPNVMFFSTMKRASKEK QENKIFADDIDISDISGKQVTGEVIFQTPLIKNPDVKSAIEGVKYIAEHMKSDEESSNAA EEWKYVAMVIDHILLCVFMLICIIGTVSVFAGRLIELSQEG

>096J05

MHQTYSRHCRPEESTFSAAMTTMQGMEQAMPGAGPGVPQLGNMAVIHSHLWKGLQEKFLK GEPKVLGVVQILTALMSLSMGITMMCMASNTYGSNPISVYIGYTIWGSVMFIISGSLSIA AGIRTTKGLVRGSLGMNITSSVLAASGILINTFSLAFYSFHHPYCNYYGNSNNCHGTMSI LMGLDGMVLLLSVLEFCIAVSLSAFGCKVLCCTPGGVVLILPSHSHMAETASPTPLNEV >P02714

MVLTLLIICLALEVRSENEEGRLIEKLLGDYDKRIIPAKTLDHIIDVTLKLTLTNLISL NEKEEALTTNVWIEIQWNDYRLSWNTSEYEGIDLVRIPSELLWLPDVVLENNVDGQFEVA YYANVLVYNDGSMYWLPPAIYRSTCPIAVTYFPFDWQNCSLVFRSQTYNAHEVNLQLSAE EGEAVEWIHIDPEDFTENGEWTIRHRPAKKNYNWQLTKDDTDFQEIIFFLIIQRKPLFYI INIIAPCVLISSLVVLVYFLPAQAGGQKCTLSISVLLAQTIFLFLIAQKVPETSLNVPLI GKYLIFVMFVSMLIVMNCVIVLNVSLRTPNTHSLSEKIKHLFLGFLPKYLGMQLEPSEET PEKPQPRRRSSFGIMIKAEEYILKKPRSELMFEEQKDRHGLKRVNKMTSDIDIGTTVDLY KDLANFAPEIKSCVEACNFIAKSTKEQNDSGSENENWVLIGKVIDKACFWIALLLFSIGT LAIFLTGHFNOVPEFPFPGDPRKYVP

MAVLLALFGALVLSGGLCVNQEERLIHHLFEERGYNKEVRPVASADEVVDVYLALTLSNL ISLKEVDETLTTNVWVEQSWTDYRLQWNTSEFGGVDVLRLLPEMLWLPEIVLENNNDGLF EVAYYCNVLVYNTGYVYWLPPAIFRSACPINVNFFPFDWQNCTLKFSSLAYNAQEINMHL KEESDPETEKNYRVEWIIIDPEGFTENGEWEIIHRPARKNIHPSYPTESSEHQDITFYLI IKRKPLFYVINIVTPCVLIAFMAILVFYLPADSGEKMTLVISVLLAQSVFLLLVSQRLPA TSHAIPLIGKYLLFIMLLVTAVVVICVVVLNFHFRTPSTHVMSDWVRGVFLEILPRLLHM SHPAESPAGAPCIRRCSSAGYIAKAEEYYSVKSRSELMFEKQSERHGLASRVTPARFAPA ATSEEQLYDHLKPTLDEANFIVKHMREKNSYNEEKDNWNRVARTLDRLCLFLITPMLVVG TLWIFLMGIYNHPPPLPFSGDPFDYREENKRYI

>066515

>P02717

MRALGFIGIILSIFSSFAYASEAKLDTGNTAWMLVASALVVFMTVPGLALFYGGLDKSKS ILNTIAMSFSAFAVVTLTWIFVGYSVAYGDDIFGFIGNPFQYVLGKGISGINSDTGYPAL LDLMFQLTFATITTALISGSFVGRMKFSAWILFAILWSVFVYPPVAHWVWGGGFLANDGA LDFAGGTVVHINAGIAGLVGALILGRRKDTSLIPNNVPLVALGAGILWFGWFGFNAGSAL GANESAAWAMINTTVATSTAALAWMFTEWLHVGKPTVVGISSGIVAGLVAITPAAGFVNL IGSIFIGAIASVCAYFMVALVKPKFGYDDALDVFGIHGVRGIVGAVLTGVFADPNVGGTP GLLYGNPKQVLIQIEGVIATILYSAILTAVILLVLKAVVGLRVSEEEELELDSSLHGEKA YNL

>Q9FH75

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>P87073

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>P0A830

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>Q9H209

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>P53790

MDSSTLSPAVTATDAPIQSYERIRNAADISVIVIYFVVVMAVGLWAMFSTNRGTVGGFFL AGRSMVWWPIGASLFASNIGSGHFVGLAGTGAAAGIAMGGFEWNALVFVVVLGWLFVPIY IKAGVVTMPEYLRKRFGGKRIQIYLSVLSLLLYIFTKISADIFSGAIFINLALGLDIYLA IFILLAITALYTITGGLAAVIYTDTLQTAIMLVGSFILTGFAFREVGGYEAFMDKYMKAI PTLVSDGNITVKEECYTPRADSFHIFRDPITGDMPWPGLIFGLSILALWYWCTDQVIVQR CLSAKNMSHVKAGCTLCGYLKLLPMFLMVMPGMISRILYTDKIACVLPSECKKYCGTPVG CTNIAYPTLVVELMPNGLRGLMLSVMMASLMSSLTSIFNSASTLFTMDIYTKIRKGASEK ELMIAGRLFILVLIGISIAWVPIVQSAQSGQLFDYIQSITSYLGPPIAAVFLLAIFCKRV NEPGAFWGLILGFLIGISRMITEFAYGTGSCMEPSNCPKIICGVHYLYFAIILFAISVVT VLVISLLTKPIPDVHLYRLCWSLRNSTEERIDLDAGEEEPVEEDPKDTIEIDAEAPQKEK GCFRKAYDLFCGLDQDKGPKMTKEEEEAMKLKMTDTSEKPLWRTVVNINGIILLAVAVFC HAYFA

>09ZDI2

MSSLVTQINFNKINNSQSTVKDYILLMKPRVMSLVIFTGFVGMWLAPDSIHPLIAGIAVI CIALGAGSAGAMNMWYDRDIDILMKRTQNRPIVRGVIEPDEALSFGLITGFFAVFFMALC VNILASFLLLFTIFYYICIYTIWLKRRSIQNIVIGGVSGALPPVIGHAAVSNTISLESII LFLIIFIWTPPHSWAIALFCNDDYKHCKIPMMPVVKGTLYTKKQILIYSIILFIVSLMPF FIGMNNDIYLIIVCIIGLVFLYYAFSLFYDTPDNKQAKRFFTYSIFYLCFIFILLSSTST IHSLRDIIFG

>054088

MSLKIKSKITIGVLLIIFLLSIIFTLENVSLAQTSPQISVYKVVGSADLSNPGSAGYWSQ IPWTNISLTANIPMAPTSGLTHYLLVKAAWNGSWIFILEEWQAPEPAFNAWSTAVAGIYP NASGPGLFRMIELTPGTTYSLERNYTNYVSIINGKEETGRIVFNYSGITLPAPNNTEITV MSNGTILLWHSPRPVEDLLYNDGMFYGYYVNSTWYYPDRAAIMWYLGSGVPTKDDMNIGG KYPGQQFDGITFKDAGGSLAQSGGSANIWMWVSGATWNNSTYDPAFKSNIWQNESLTGLS YVDSGNHGFAVPLYTNNTNMYEVDTAGIWYTPVASEGLNGSLFFIWTGAKYENGSWVVEF ARPLSVPLDYQPFMPNITVGKTYYVAFAVWQGRLGETLFDKSITSSFLSLELVTTPPTST TTSTSPVTTISSAIPPVTLYVTIIGVVVALVALVILYVVFRR

>P13156

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>P20375

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YMLNYNNLNQFRLLETDNRMVIPMKIPLRLITTSTDVIHSWTVPSLGIKVDAVPGRINQL
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MFDYILSLGGTVFVPIIMIVIGLIFRIPWLQAIKAGVTVGIGFVGMGLVIVMAIDSLSPP IKVMIERFGLALHVFDVGAGPASGVGYATAIGAMIIPVIFLLNVAMLVTRLTKTMNVDIY NYWHYAITGTVVQLMTGSLIYGVLGAICHAALSLKMADWTAKRVQNIVGLEGISIPQGYG SSSVPLFVLLDAIYEKIPFMKGRNIDAQEIQKRYGMVGDPVIIGVVLGLIFGLAAGEGFK GCASLMITVAAIMVLFPRMIRLIVEGLLPISDGARKFFQKYFKGREVYIGLDTAVTLGHP TTIAVGLLLIPIMLILASILPGNKVLPLADLPVAPFFICMATVIHRGDLVRTLISGVIVM ITVLLIATQFAPYFTEMALKGGFSFAGESAQISALSVGNMFGWSISELMSLGIIGVVVAV GIVASVVLFLRKRELSE

>P79217

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>Q8N349

MEKWNHTSNDFILLGLLPPNQTGIFLLCLIILIFFLASVGNSAMIHLIHVDPRLHTPMYF LLSQLSLMDLMYISTTVPKMAYNFLSGQKGISFLGCGVQSFFFLTMACSEGLLLTSMAYD RYLAICHSLYYPIRMSKMMCVKMIGGSWTLGSINSLAHTVFALHIPYCRSRAIDHFFCDV PAMLLLACTDTWVYEYMVFVSTSLFLLFPFIGITSSCGRVLFAVYHMHSKEGRKKAFTTI STHLTVVIFYYAPFVYTYLRPRNLRSPAEDKILAVFYTILTPMLNPIIYSLRNKEVLGAM RRVFGIFSFLKE

>028524

MAPWPHGNSSLVPWPDVPTLAPNTANTSGLPGVPWAAALAGALLALAVLATVGGNLLVIV
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VTASIETLCALAVDRYLAVTNPLRYGALVTKRRARAAVVLVWVVSAAVSFAPIMSQWWRV
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FTLCWLPFFLANVLRALGGPSLVPDPAFLALNWLGYANSAFNPLIYCRSPDFRSAFRRLL
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MEDLRRRFPTKKNGEEISNVAVDPPLRKASDALPLPLYLTNTFFLSLFFATVYFLLSRWR EKIRNSTPLHVVDLSEICALIGFVASFIYLLGFCGIDLIFRSSSDDDVWVNDGMIPCNQS LDCREVLPIKPNSVDPPRESELDSVEDEEIVKLVIDGTIPSYSLETKLGDCKRAAAIRRE AVQRITGKSLTGLPLEGFDYNSILGQCCEMPVGYVQIPVGIAGPLLLDGVEYSVPMATTE GCLVASTNRGFKAIHLSGGAFSVLVKDAMTRAPVVRFPSARRAALVMFYLQDPSNFERLS LIFNKSSRFARLQSITCTIAGRNLYPRFACSTGDAMGMNMVSKGVQNVLDFVKSEFPDMD VIGISGNYCSDKKASAVNWIEGRGKHVVCEAFIKAEIVEKVLKTSVEALVELNTLKNLVG SAMAGSLGGFNAHSSNIVSAVFIATGQDPAQNVESSHCMTMILPDGDDLHISVSMPCIEV GTVGGGTQLASQAACLNLLGVKGSNNEKPGSNAQQLARIVAGSVLAGELSLMSAIAAGQL VKSHMKYNRSSRDIGPSSQVNR

>P19057

ALLSFERKYRVPGGTLIGGSLFDFWVGPFYVGFFGVTTIFFATLGFLLILWGAAMQGTWN PQLISIFPPPVENGLNVAALDKGGLWQVITVCATGAFCSWALREVEICRKLGIGFHIPVA FSMAIFAYLTLVVIRPMMMGSWGYAFPYGIWTHLDWVSNTGYTYGNFHYNPFHMLGISLF FTTAWALAMHGALVLSAANPVKGKTMRTPDHEDTYFRDLMGYSVGTLGIHRLGLLLALNA VFWSACCMLVSGTIYFDLWSDWWYWWVNMPFWADMAGGING >060669

MPPMPSAPPVHPPPDGGWGWIVVGAAFISIGFSYAFPKAVTVFFKEIQQIFHTTYSEIAW ISSIMLAVMYAGGPVSSVLVNKYGSRPVVIAGGLLCCLGMVLASFSSSVVQLYLTMGFIT GLGLAFNLQPALTIIGKYFYRKRPMANGLAMAGSPVFLSSLAPFNQYLFNTFGWKGSFLI LGSLLLNACVAGSLMRPLGPNQTTSKSKNKTGKTEDDSSPKKIKTKKSTWEKVNKYLDFS LFKHRGFLIYLSGNVIMFLGFFAPIIFLAPYAKDQGIDEYSAAFLLSVMAFVDMFARPSV GLIANSKYIRPRIQYFFSFAIMFNGVCHLLCPLAQDYTSLVLYAVFFGLGFGSVSSVLFE TLMDLVGAPRFSSAVGLVTIVECGPVLLGPPLAGKLVDLTGEYKYMYMSCGAIVVAASVW LLIGNAINYRLLAKERKEENARQKSRESEPLSKSKHSEDVNVKVSNAQSVTSERETNI

MQRRWVFVLLDVLCLLVASLPFAILTLVNAPYKRGFYCGDDSIRYPYRPDTITHGLMAGV TITATVILVSAGEAYLVYTDRLYSRSDFNNYVAAVYKVLGTFLFGAAVSQSLTDLAKYMI GRLRPNFLAVCDPDWSRVNCSVYVQLEKVCRGNPADVTEARLSFYSGHSSFGMYCMVFLA LYVQARLCWKWARLLRPTVQFFLVAFALYVGYTRVSDYKHHWSDVLVGLLQGALVAALTV CYISDFFKARPPQHCLKEEELERKPSLSLTLTLGEADHNHYGYPHSSS >P38723

MKENEVKDEKSVDVLSFKQLEFQKTVLPQDVFRNELTWFCYEIYKSLAFRIWMLLWLPLS VWWKLSSNWIHPLIVSLLVLFLGPFFVLVICGLSRKRSLSKQLIQFCKEITEDTPSSDPH DWEVVAANLNSYFYENKTWNTKYFFFNAMSCQKAFKTTLLEPFSLKKDESAKVKSFKDSV PYIEEALQVYAAGFDKEWKLFNTEKEESPFDLEDIQLPKEAYRFKLTWILKRIFNLRCLP LFLYYFLIVYTSGNADLISRFLFPVVMFFIMTRDFQNMRMIVLSVKMEHKMQFLSTIINE QESGANGWDEIAKKMNRYLFEKKVWNNEEFFYDGLDCEWFFRRFFYRLLSLKKPMWFASL NVELWPYIKEAQSARNEKPLK

>085PS1

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>P18409

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>005731

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>P36051

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>P39396

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LALGIVVLNPELKMPAMTQYIDGTGPLWKGALFPFLFITIACGAVSGFHALISSGTTPKL
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YIWVTVVPAVWLLICTTWALGLKLFSTNPQMEGFFYMASQYKEKIANGTDLTAQQIANMN
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>P53039

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>P18414

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>P42619

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>056ZN6

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ISKMAILLAFVILCIYLFRSLTPQQEAAGLGRAMSAYITVAAFLLGALCSGIAGYVGMWV SVRANVRVSSAARRSAREALQIAVRAGGFSALVVVGMAVIGIAILYSTFYVWLGVGSPGS MNVTDLPLLLVGYGFGASFVALFAQLGGGIYTKGADVGADLVGKVEQGIPEDDPRNPAVI ADLVGDNVGDCAARGADLFESIAAEIISAMILGGTMAKKCKIEDPSGFILFPLVVHSFDL IISSIGILSIKGTRDASVKSPVEDPMAVLQKGYSLTIILAVITFGASTRWLLYTEQAPSA WFNFALCGLVGIITAYIFVWISKYYTDYKHEPVRTLALASSTGHGTNIIAGVSLGLESTA LPVLTISVAIISAYWLGNTSGLVDENGIPTGGLFGTAVATMGMLSTAAYVLTMDMFGPIA DNAGGIVEMSQQPESVREITDLLDAVGNTTKATTKGFAIGSAALASFLLFSAYMDEVSAF ANVSFKEVDIAIPEVFVGGLLGAMLIFLFSAWACAAVGRTAQEVVNEVRRQFIERPGIME YKEKPDYSRCVAIVASAALREMIKPGALAIASPIVVGLVFRILGYYTGQPLLGAKVVASM LMFATVCGILMALFLNTAGGAWDNAKKYIETGALGGKGSEAHKAAVTGDTVGDPFKDTAG PSIHVLIKMLATITLVMAPV

>P19072

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>079673

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>P35400

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>003061

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>P35405

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>P36062

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>P42628

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>P22300

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>P43286

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>Q18007

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>096K78

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>P35413

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>P79266

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>P25656

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>Q7TQA8

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KEKKP

>P42640

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>044902

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>P49190

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>Q9ESD6

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>012142

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>001727

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>P48546

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>P0C0H0

>P28222

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>Q9DAC0

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>P35449

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RRADFNV

>POAFPO

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>037704

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>P28235

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>P53099

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>085099

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>035881

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>P47900

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>POAFQ2

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>005000

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>Q9C6L5

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>P35462

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>P32129

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>Q6PEM8

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>POAFR2

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>Q96D31

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>027960

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>POAFR7

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>P0A0V3

MTKQLKLSALFVALLASGTAVAGEASVQGYTVSGQSNEIVRNNYGECWKNAYFDKASQGR VECGDAVAAPEPEPEPAPAPVVVVEQAPQYVDETISLSAKTLFGFDKDSLRAEAQDNL KVLAQRLSRTNVQSVRVEGHTDFMGSDKYNQALSERRAYVVANNLVSNGVPVSRISAVGL GESQAQMTQVCEAEVAKLGAKVSKAKKREALIACIEPDRRVDVKIRSIVTRQVVPAHNHH OH

>027963

MALSELALLRRLQESRHSRKLILFIVFLALLLDNMLLTVVVPIIPSYLYSIEHEKDALEI QTAKPGLTASAPGSFQNIFSYYDNSTMVTGNSTDHLQGALVHEATTQHMATNSSSASSDC PSEDKDLLNENVQVGLLFASKATVQLLTNPFIGLLTNRIGYPIPMFTGFCIMFISTVMFA FSRTYAFLLIARSLQGIGSSCSSVAGMGMLASVYTDDEERGNAMGIALGGLAMGVLVGPP FGSVLYEFVGKTAPFLVLAALVLLDGAIQLFVLQPSRVQPESQKGTPLTTLLRDPYILIA AGSICFANMGIAMLEPALPIWMMETMCSHKWQLGVAFLPASVSYLIGTNVFGILAHKMGR WLCALLGMIIVGMSILCIPLAKNIYGLIAPNFGVGFAIGMVDSSMMPIMGYLVDLRHVSV YGSVYAIADVAFCMGYAIGPSAGGAIAKAIGFPWLMTIIGIIDILFAPLCFFLRSPPAKE EKMAILMDHNCPIKTKMYTQNSSQSHPIGEDEESESD

>Q8MLV1

MQHSPSTTTDHIHFAARFFDRNSYTMDRRLRRPRRTEDVSSGPLLAQSKQPSLLPVTRRT GSVTAAGATATATAGPATRTRASPSRNKVVAPPSPDLGPRTRRSSRPRSSVGPLTGSG SGSSLPIKAAIKARTPIPEVSEVSSPIRLSTSNLPMTLTTNTSSGAPNKAFNTSSVNSGN SFSRTTTSSTTTTTERIEIRAEGDGEVDTDSIRKRITERLRRSVSKTISNLAGTPVTNTE EGSRYSRSVSRSVYDDEKSSKRSYSTGEEDIDEEDELEEDQFRSFNVTRKSATPAEISCR QLKAPREFGGWLGAFLFLLLLPTAVYYLTWSCTARNACQFKHLNLGILLDVNYLTRQVFQ PRVVGAFAAYQVVVFLLVALLPGRRVHLTRETYKFNCLAVSLTLLIASGVAEYLKYPVVT FVLRHYLRFCIFGLVGAFVAAAWSYWLVDTAKYNVLRQTLTNDYGRTGSFVVDFALGRQL NPKWLGRVDWKQFQYRLSLVTTLIYATCYIYQTLVWPQKPQLGEQEGYLYQAKYYWNNVN YDPATLFSASCLLFYVLDAIIFEHHLSSSFELQHEGYGCLLLLRYAATPYLLTAVTKYFY EQRVPISCWYAPLAVAALLSLGLLVKRFSCAYKYKYRLNSQSPIFANIETIHTYQGSRLL LSGMWGWVRQPNYLGDIVALLALAAPMALRPAWPPVLGLSLIILLLHRATRANARNQAR YHSSWQRYSTQVRSYILPRVY

>088855

MAANTTSPAAPSSPGGMSLSLLPIVLLSVALAVGLPGNSFVVWSILKRMQKRTVTALLVL NLALADLAVLLTAPFFLHFLARGTWSFREMGCRLCHYVCGISMYASVLLITIMSLDRSLA VARPFMSQKVRTKAFARWVLAGIWVVSFLLAIPVLVYRTVKWNNRTLICAPNYPNKEHKV FHLLFEAITGFLLPFLAVVASYSDIGRRLQARRFRRSRRTGRLVVLIILAFAAFWLPYHL VNLVEAGRTVAGWDKNSPAGQRLRLARYVLIALAFLSSSVNPVLYACAGGGLLRSAGVGF VVKLLEGTGSEVSSTRRGGTLVQTPKDTPACPEPGPTDSFMTSSTIPESS >008362

MTSTSIPTFPFDRPVPTEPSPMLSELRNSCPVAPIELPSGHTAWLVTRFDDVKGVLSDKR FSCRAAAHPSSPPFVPFVQLCPSLLSIDGPQHTAARRLLAQGLNPGFIARMRPVVQQIVD NALDDLAAAEPPVDFQEIVSVPIGEQLMAKLLGVEPKTVHELAAHVDAAMSVCEIGDEEV SRRWSALCTMVIDILHRKLAEPGDDLLSTIAQANRQQSTMTDEQVVGMLLTVVIGGVDTP IAVITNGLASLLHHRDQYERLVEDPGRVARAVEEIVRFNPATEIEHLRVVTEDVVIAGTA LSAGSPAFTSITSANRDSDQFLDPDEFDVERNPNEHIAFGYGPHACPASAYSRMCLTTFF TSLTQRFPQLQLARPFEDLERRGKGLHSVGIKELLVTWPT >POAFS7

MVNVRQPRDVAQILLSVLFLAIMIVACLWIVQPFILGFAWAGTVVIATWPVLLRLQKIMF GRRSLAVLVMTLLLVMVFIIPIALLVNSIVDGSGPLIKAISSGDMTLPDLAWLNTIPVIG AKLYAGWHNLLDMGGTAIMAKVRPYIGTTTTWFVGQAAHIGRFMVHCALMLLFSALLYWR GEQVAQGIRHFATRLAGVRGDAAVLLAAQAIRAVALGVVVTALVQAVLGGIGLAVSGVPY ATLLTVLMILSCLVQLGPLPVLIPAIIWLYWTGDTTWGTVLLVWSGVVGTLDNVIRPMLI RMGADLPLILILSGVIGGLIAFGMIGLFIGPVLLAVSWRLFAAWVEEVPPPTDQPEEILE ELGEIEKPNK

>Q9UX84

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DLVGLVTTIALIIITIYLTTMTIEIPVTSQKLRGIRRTIPLNFLYVSSIPVIFVAVLGSD
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ILFGILWVDVAGLDPATQAQQLVEAGIEIPGVRNNPKIIEGILARYIYPLAFFSSIIVGL
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>P51802

MEEIVGLREGSPRKPVPLQELWRPCPRIRRNIQGSLEWLKERLFRVGEDWYFLVALGVLM ALISYAMNFAIGRVVRAHKWLYREIGDGHLLRYLSWTVYPVALLSFSSGFSQSITPSSGG SGIPEVKTILTGVILEDYLDIKNFGAKVVGLSCTLATGSTIFLGKLGPFVHLSVMIAAYL GRVRTKTVGEPENKTKEMELLAAGAAVGVATVFAAPISGVLFSIEVMSSHFSVWDYWRGF FAATCGAFMFHLLAVFNSEQETITSIYKTSFPVDIPFDLPEIFFFVALGAICGILSCGYN YCQRTSLFFLKSNGFTSKLLATSKPLYSALAAVVLASITYPPGVGRFMASRLSMSEYLET LFDNNSWALMTKNSSPPWSAEPDPQNLWLEWCHPQMTVFGTLVFFLVMKFWMLILATTIP IPAGYFLPIFVYGAAIGRLFGEVLSLAFPEGIVAGGKVSPIMPGAYALAGAAAFSGAVTH TLSTALLAFEVSGQIVHALPVLMAVLAANAICQSYQPSFYDGTIIVKKLPYLPWIRGRKI GSHLVTVGHFMNCTLTTLAKDMPLEEVIKVVISTDVTQYPLVETTESQVLVGIVKRTHLV QSLHTDSASWAPGQQPCLQDILANGCPTQPVTLQLSTETSLHETHNLFELLNLQLLFVTS RGRAVGSVSWVELKKAISTLTNPPAPK

>03ZC80

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>Q9Y2T5

MNESRWTEWRILNMSSGIVNVSERHSCPLGFGHYSVVDVCIFETVVIVLLTFLIIAGNLT

VIFVFHCAPLLHHYTTSYFIQTMAYADLFVGVSCLVPTLSLLHYSTGVHESLTCQVFGYI ISVLKSVSMACLACISVDRYLAITKPLSYNQLVTPCRLRICIILIWIYSCLIFLPSFFGW GKPGYHGDIFEWCATSWLTSAYFTGFIVCLLYAPAAFVVCFTYFHIFKICRQHTKEINDR RARFPSHEVDSSRETGHSPDRRYAMVLFRITSVFYMLWLPYIIYFLLESSRVLDNPTLSF LTTWLAISNSFCNCVIYSLSNSVFRLGLRRLSETMCTSCMCVKDQEAQEPKPRKRANSCS

>P21729

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>P55013

MEPAFPASSAGVOSOSGPEPGAGOOEPPPPATPLRPVASOSRFOVDLVTEGGGGGDGOKG QTAAQPAAAAKDKDRGDGGAAAPSPASPAAAAEPPAAAAEEAKGRFRVNFVDPASDEPPL SSQQQPPPPSSASSAHGGHQPPSESMNGYPQNGDTMMSEGSLHSSGTGAHHYYDTHTNTY YLRTFGHNTIDAVPRIDHYRHTVAQLGEKLIRPSLAELHDELDKEPFEDGYVNGEESSPA EEAVSKHVADNKGVVKFGWIKGVLVRCMLNIWGVMLFIRLSWIVGHAGIGLALLVIGTAT VVTTITGLSTSAITTNGFVRGGGAYYLISRSLGPEFGGAIGLIFAFANAVAVAMYVVGFA ETVRDLLVEHNALMIDEMSDIRIIGSVTIVVLFGISVAGMEWEAKAOIVLLGILLLAIVN FTVGTFIPANDKRAKGFFNYRGEIFSENFVPDFRDGEDFFSVFAIFFPAATGILAGANIS GDLADPOLAIPKGTLLAILITTIVYAGAAVSVGSCIVREATGNLTDAIIPGTVTNCTNVA CKLGFNFSSCATNKCSYGLMNDFQVMSLVSGFGPLITAGIFSATLSSALASLVSAPKIFQ ALCKDNIYPGLHVFSVGYGKNNEPLRGYVLTFFIGLGFILIAELNVIAPIISNFFLASYA LINFSVFHASLAKSPGWRPAFRFYNMWISLIGAILCCGVMFVINWWAALLTNVIVLALYI YVTYKKPDVNWGSSTOALTYLNALOHAIRLTGVEDHVKNFRPOCLLMTGAPTSRPALLHL VHAFTKNVGLVVCGHVHTGPRRQALKEISTDQAKYQRWLIKNKMKAFYAPVYAEDLREGT OFLLQAVGLGRMRPNTLVFGFKKDWRQALMKDVENYINAIHDAFDYQYGVVVIRLKEGFN ISHLQAQEELCTSQEKSAHPKDIVVNLEHSDADSSKPSSKSVSETNSPAVCQDQKDEEDD GKASTQPLLKKEVKDPSVPLNMTDQKLLQASSQFQKKQGKGTIDVWWLFDDGGLTLLIPY LLTTKKKWKDCKIRVFIGGKINRIDHDRRTMATLLSKFRIDFSDITVLGDMNTKPSKDNI TAFEEMIEPFRLHEDDKEOEASEKMKEEEPWRITDNELEIYRMKTYROIRLNELLRENSG TANLIVMSLPVARKGAVSSALYMAWIETLSKDLPPILLVRGNHQSVLTFYS >P27611

MEKKATVGFTLLLLGVMMAIIIASMFVLKVEPHIPLVVCLLIAAVFGRYLRVGWNDLESA MIDGLKIGIKPIFILALVGIVIAVWMMSGTVPTLLFYGLSIISPEWFAVSTLLICMIVSS FTGSSFTTVGTIGVAMMGIGTALGIDPAIAAGAVVCGACFGDKMSPLSDTTNFAPGIVGV DLFDHIRHLLWTTVPSFVITVILFLMIGRSQATSTTQDIQAMLTALDSQFTLSVLTLLSP LLVVILAMRRFPTIPVLVVGILTGIITAAFVQGNADVVRWFTIIQNGFSMETGNEVIDGI VNRGGLQSMMWSISLVMIALTLGGVIQRIGVIDTLLQSANKKIIFTWTFDCSDSTSSIGV NVVTGEQYLSILLPGKTFESFYTKLNVAKKNLSRTLEDAGTLVNPLIPWGVSGAFFASTL GVDVIDYLPFAFFLFLSPFMTILFGYLGIGVGKEQSLANKRG

>09LV72

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GLGIVAAKERSMWVFFQPLTPNLWITSAAFFVLTGIIVWLIERAENKEFQGSWPQQIGVV IWFGFSTLVYAHREKLQHNLSRFVVTVWVFAVLILVTSYTATLTSMMTVQQIRFNANEDY VGHLSGSLIANAALTNSSLRAMRLLGLNTSEDYAQALMNKSVSYIVSELPYLKILLGENP GHFLMVKTQSTTNGFGFMFQKGSELAPNVSREIAKLRTSERLNEMERRWFDKQLPYTTDD TSNPITLYRFRGLFMITGVSFAFALAVLLILWLRERWEILVNSVNIYFSQRLRHFRILFT RTIHPSPLGLDNPIGENAVOMAORNRR

>088870

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>P21730

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>Q9Y2U8

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>089AU6

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>P47946

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AFVTFIVFAYTAVGSREVIDSYDLRRGWWALFSSASSFNDLGFSLIPSSFVPMNRNIFLL LISSLFIIAGNTGFPCFFRTFIWTTYKLYPFSFEKKEAMAFLLDHPRRCFTLLFPSGATW VLFFVLLLLNVIDLVLFMVLDTGSKAVASLPKGIRVVNAIFQSVCTRTAGFTSVSISELH PAVLVSYMVMMYISVYPVAINMRNTNVYEERSLGVYRTEDDEGKSFLKDHLTEQLSYDLW YIFLGLFIICICEGGKISNPLDTDFSIFTVLFEVVSAYGTVGLSTGLSSSNCSLSARFTT ISKLVIIALELRGRHRGLPRAVDRAILLPSEKNNLKEEEDYQRRHGFSIDNARGSIAVSR

>P28285

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>Q8BZ39

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VLKEYLDNVQLGHILEREGGWDSVQDWMDVLSGGEKQRMAMARLFYHKPQFAILDECTSA
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>P34849

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>0330C3

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MNPNSNSITKSHLFHIVNPSPWPILTSFALLLLVIGGISSMHGYKFNMYILSAGVISVIY CLYSWWRDVVQEGIVEHQHTSPVRKGLKIGMVLFILTETVFFSVFFASFLKSSISPVGIL DGVWVVKQGIWPPPTIKTFDPFDIPFINTLILLLSGTTITGAHYALEEKNQKDCVTALAF TIVLGIFFTLMQVYEYYHAEFKFTDGIYASNFYLATGFHGAHVVIGTIFLIVCYFRAKRG DFTTEGNGHLGFEFAAWYWHFVDVVWLFLFTFVYILGS

>P04761

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>09NUN7

MAPAADREGYWGPTTSTLDWCEENYSVTWYIAEFWNTVSNLIMIIPPMFGAIQSVRDGLE KRYIASYLALTVVGMGSWCFHMTLKYEMQLLDELPMIYSCCIFVYCMFECFKIKNSVNYH LLFTLVLFSLIVTTVYLKVKEPIFHQVMYGMLVFTLVLRSIYIVTWVYPWLRGLGYTSLG IFLLGFLFWNIDNIFCESLRNFRKKVPPIIGITTQFHAWWHILTGLGSYLHILFSLYTRT LYLRYRPKVKFLFGIWPVILFEPLRKH

>027218

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>054814

MASNEEELKTVVETFETTPYEYEWAPPCEKVSIRELGSWLLPPLYSLVFIVGLLGNMMVV LILIKYRKLQIMTNIYLLNLAISDLLFLFTVPFWIHYVLWNEWGFGHCMCKMLSGLYYLA LYSEIFFIILLTIDRYLAIVHAVLALRARTVTFATITSIITWGFAVLAALPEFIFHESQD NFGDLSCSPRYPEGEEDSWKRFHALRMNIFGLALPLLIMVICYSGIIKTLLRCPNKKKHK AIQLIFVVMIVFFIFWTPYNLVLLLSAFHSTFLETSCQQSIHLDLAMQVTEVITHTHCCI NPIIYAFVGERFRKHLRLFFHRNVAIYLRKYISFLPGEKLERTSSVSPSTGEQEISVVF >P27648

MTIHETLAADAHGEKAIERQSVYVYEAPVRIWHWINAFSILTLALTGYFIGSPLPSVPGE ASANFLMGYIRFIHFAAGQLLAVFLILRVYWAFVGNVHARQIFYVPFWSGRFWKEWLHEV GWYTFLVRQPKKYVGHNPLPQFTMFLMFTLPLLFMAITGFALYSEGAGRDSWEYSLFGWV FSIWPNSQDIHTYHHLGMWVILVFVMVHIYVAVREDIMSRQSIISSMISGERLFKDRED >09U3N4

MASQVGAINSVNALISRVFVQPKGDLADRLNSRVTVVILAVSSALLLSSHFIGDPITCWT PAQFNAQWVNFVNQYCFVHGTYFVPLDQQLAFEEEERTKVSIQYYQWVPYVFALQAFLFY IPRFIWKAMIAYSGYDLAAAVKYVDRFWSENRDKDDKFKTRLAAFEGRPSVYIWDGIRLA RKKRSRNMALFYTLSTVWQAVNAWIQFYILTQLLDSSIYTLWGPSILGDLLQGNDWQTTG HFPRIVHCDFNRRRPASVQLDTVLCVLTLNIYYEKLFIFLWFWLVFVAVVSTVNCFKWIY YLCNKTKAQKTIKNYLSTAPIKSTISDDQFFSALGEDGLFIMDQMALNLGDIPASYLTIS MRNICQDFIESEDYIDEERTPFVKSIKHT

>Q9XT77

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SGSLSTISSAFNSLATVTMEDLIRPWFPECSEAQAIMLSRSLAFGYGLLCLGMAYISSQM
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>054827

MERELPAAEESASSGWRRPRRRRWEGRTRTVRSNLLPPLGTEDSTIGAPKGERLLMRGCI OHLADNRLKTTKYTLLSFLPKNLFEOFHRLANVYFVF1ALLNFVPAVNAFOPGLALAPVL FILAVTAIKDLWEDYSRHRSDHEINHLGCLVFSREEKKYVNRYWKEIRVGDFVRLCCNEI IPADILLLSSSDPDGLCHIETANLDGETNLKRRQVVRGFSELVSEFNPLTFTSVIECEKP NNDLSRFRGYIMHSNGEKAGLHKENLLLRGCTIRNTEAVAGIVIYAGHETKALLNNSGPR YKRSQLERQMNCDVLWCVLLLVCISLFSAVGHGLWVRRYQEKKALFDVPESDGSSLSPAT AAVYSFFTMIIVLQVLIPISLYVSIEIVKVCQVYFINQDIELYDEETDSQLQCRALNITE DLGOIKYIFSDKTGTLTENKMVFRRCTVSGIEYSHDANAORLARYOEADSEEEEVVSKVG TISHRGSTGSHQSIWMTHKTQSIKSHRRTGSRAEAKRASMLSKHTAFSSPMEKDITPDPK LLEKVSECDRFLAIARHOEHPLAHLSPELSDVFDFFIALTICNTVVVTSPDOPROKVRVR FELKSPVKTIEDFLRRFTPSRLASGCSSIGNLSTSKSSHKSGSAFLPSLSQDSMLLGLEE KLGQTAPSIASNGYASQAGQEESWASECTTDQKCPGEQREQQEGELRYEAESPDEAALVY AARAYNCALVDRLHDQVSVELPHLGRLTFELLHTLGFDSIRKRMSVVIRHPLTDEINVYT KGADSVVMDLLLPCSSDDARGRHQKKIRSKTQNYLNLYAVEGLRTLCIAKRVLSKEEYAC WLOSHIEAEASVESREELLFOSAVRLETNLHLLGATGIEDRLOEGVPETIAKLROAGLOI WVLTGDKOETAINIAYACKLLDHGEEVITLNADSOEACAALLDOCLSYVOSRNPRSTLON SESNLSVGFSFNPVSTSTDASPSPSLVIDGRSLAYALEKSLEDKFLFLAKOCRSVLCCRS TPLOKSMVVKLVRSKLKAMTLAIGDGANDVSMIQVADVGVGISGQEGMQAVMASDFAVPR FRYLERLLIVHGHWCYSRLANMVLYFFYKNTMFVGLLFWFQFYCGFSASAMIDQWYLIFF NLLFSSLPQLVTGVLDKDVPADMLLREPQLYKSGQNMEEYRPRAFWLNMVDAAFQSLVCF FIPYLAYYDSDVDVFTWGTPVTAIALFTFLLHLGIETKTWTWLNWLACGFSTFLFFSVAL IYNTSCATCYPPSNPYWTMOTLLGDPLFYLTCLIAPIAALLPRLFFKALOGSLFPTOLOL GROLAKKPLNKFSDPKETFAOGOPPGHSETELSERKTMGPFETLPRDCASOASOFTOOLT ${\tt CSPEASGEPSAVDTNMPLRENTLLEGLGSQASGSSMPRGAISEVCPGDSKRQSTSASQTA}$ RLSSLFHLPSFGSLNWISSLSLASGLGSVLQLSGSSLQMDKQDGEFLSNPPQPEQDLHSF **QGQVTGYL**

>035161

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DREEVEHYSFGVEAVDHGSPAMSSSASVSITVLDVNDNDPMFTQPVYELRLNEDAAVGSS
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DGTRSHTAQVFINVTDANTHRPVFQSSHYTVSVSEDRPVGTSIATISATDEDTGENARIT
YVLEDPVPQFRIDPDTGTIYTMTELDYEDQAAYTLAITAQDNGIPQKSDTTSLEILILDA

NDNAPRFLRDFYQGSVFEDAPPSTSVLQVSATDRDSGPNGRLLYTFQGGDDGDGDFYIEP TSGVIRTORRLDRENVAVYNLWALAVDRGSPNPLSASVGIOVSVLDINDNPPVFEKDELE LFVEENSPVGSVVARIRANDPDEGPNAQIIYQIVEGNVPEVFQLDLLSGDLRALVELDFE VRRDYMLVVOATSAPLVSRATVHIRLLDONDNPPELPDF0ILFNNYVTNKSNSFPSGVIG RIPAHDPDLSDSLNYTFLQGNELSLLLLDPATGELQLSRDLDNNRPLEALMEVSVSDGIH SVTALCTLRVTIITDDMLTNSITVRLENMSOEKFLSPLLSLFVEGVATVLSTTKDDIFVF NIQNDTDVSSNILNVTFSALLPGGTRGRFFPSEDLQEQIYLNRTLLTTISAQRVLPFDDN ICLREPCENYMKCVSVLRFDSSAPFISSTTVLFRPIHPITGLRCRCPPGFTGDYCETEID LCYSNPCGANGRCRSREGGYTCECFEDFTGEHCOVNVRSGRCASGVCKNGGTCVNLLIGG FHCVCPPGEYEHPYCEVSTRSFPPOSFVTFRGLRORFHFTVSLAFATODRNALLLYNGRF NEKHDFIALEIVEEQLQLTFSAGETTTTVTPQVPGGVSDGRWHSVLVQYYNKPNIGHLGL PHGPSGEKVAVVTVDDCDAAVAVHFGSYVGNYSCAAQGTQSGSKKSLDLTGPLLLGGVPN LPEDFPVHSRQFVGCMRNLSIDGRIVDMAAFIANNGTRAGCASQRNFCDGTSCQNGGTCV NRWNTYLCECPLRFGGKNCEOAMPHPORFTGESVVLWSDLDITISVPWYLGLMFRTRKED GVLMEATAGTSSRLHLQILNSYIRFEVSYGPSDVASMQLSKSRITDGGWHHLLIELRSAK EGKDIKYLAVMTLDYGMDOSTVOIGNOLPGLKMRTIVIGGVTEDKVSVRHGFRGCMOGVR MGETSTNIATLNMNDALKVRVKDGCDVEDPCASSPCPPHRPCRDTWDSYSCICDRGYFGK KCVDACLLNPCKHVAACVRSPNTPRGYSCECGPGHYGOYCENKVDLPCPKGWWGNPVCGP CHCAVSQGFDPDCNKTNGQCQCKENYYKPPAQDACLPCDCFPHGSHSRACDMDTGQCACK PGVIGROCNRCDNPFAEVTSLGCEVIYNGCPRAFEAGIWWPOTKFGOPAAVPCPKGSVGN AVRHCSGEKGWLPPELFNCTSGSFVDLKALNEKLNRNETRMDGNRSLRLAKALRNATOGN STLFGNDVRTAYOLLARILOHESROOGFDLAATREANFHEDVVHTGSALLAPATEASWEO IORSEAGAAOLLRHFEAYFSNVARNVKRTYLRPFVIVTANMILAVDIFDKLNFTGAOVPR FEDIOEELPRELESSVSFPADTFKPPEKKEGPVVRLTNRRTTPLTAOPEPRAERETSSSR RRRHPDEPGQFAVALVVIYRTLGQLLPEHYDPDHRSLRLPNRPVINTPVVSAMVYSEGTP LPSSLQRPILVEFSLLETEERSKPVCVFWNHSLDTGGTGGWSAKGCELLSRNRTHVTCQC SHSASCAVLMDISRREHGEVLPLKIITYAALSLSLVALLVAFVLLSLVRTLRSNLHSIHK NLIAALFFSOLIFMVGINOTENPFLCTVVAILLHYVSMGTFAWTLVENLHVYRMLTEVRN IDTGPMRFYHVVGWGIPAIVTGLAVGLDPQGYGNPDFCWLSLQDTLIWSFAGPVGTVIII NTVIFVLSAKVSCORKHHYYERKGVVSMLRTAFLLLLLVTATWLLGLLAVNSDTLSFHYL FAAFSCLQGIFVLLFHCVAHREVRKHLRAVLAGKKLQLDDSATTRATLLTRSLNCNNTYS EGPDMLRTALGESTASLDSTTRDEGVQKLSVSSGPARGNHGEPDTSF1PRNSKKAHGPDS DSDSELSLDEHSSSYASSHTSDSEDDGGEAEDKWNPAGGPAHSTPKADALANHVPAGWPD ESLAGSDSEELDTEPHLKVETKVSVELHROAOGNHCGDRPSDPESGVLAKPVAVLSSOPO EORKGILKNKVTYPPPLPEOPLKSRLREKLADCEOSPTSSRTSSLGSGDGVHATDCVITI KTPRREPGREHLNGVAMNVRTGSAQANGSDSEKP

>P14551

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>P38085

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>09H2C5

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>003713

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>Q9GZM5

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GYSVLSRVFSVLSILVVLGSIITMCLNSLPDFQIPDSQGNPGEDPRFEIVEHFGIAWFTF
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RIFRILKLARHSTGLRSLGATLKYSYKEVGLLLLYLSVGISIFSVVAYTIEKEENEGLAT
IPACWWWATVSMTTVGYGDVVPGTTAGKLTASACILAGILVVVLPITLIFNKFSHFYRRQ
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>P13908

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>Q01035

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>Q46909

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>P00803

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>DNAG90

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>P54417

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NDPEKREWINSWTIFYWAWWISWSPFVGIFIARVSRGRTIREFLIGVLVTPCILTFLWFS
IFGVSAMDLQQKGAFNVAKLSTETMLFGTLDHYPLTMVTSILALILIAVFFITSADSATF
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>P37433

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>07TON7

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>Q801D8

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>003721

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>003727

>P31553

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>09GZN6

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>08WZ84

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>009614

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>P61649

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>054851

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>P19807

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>P27681

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>09ZZZ0

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>08WZ94

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>07TOP4

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>P77308

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>Q6IYF8

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>P04035

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>P37476

>P94304

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>077750

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>077751

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>09DAR1

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>09ET37

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>027295

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>Q9BX95

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>001098

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>P36836

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>POCOY9

>P24392

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>Q5R9A7

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>P23749

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>036426

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>Q8LBL1

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>P30974

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>P06775

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>09BQ31

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>P50501

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>P46628

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>P53845

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>09UBL9

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>Q9GZW8

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>P33532

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>P16552

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>06VZZ7

MALNHTALPQDERLPHYLRDEDPFASKLSWEADLVAGFYLTIIGILSTFGNGYVLYMSSR RKKKLRPAEIMTINLAVCDLGISVVGKPFTIISCFCHRWVFGWFGCRWYGWAGFFFGCGS LITMTAVSLDRYLKICYLSYGVWLKRKHAYICLAVIWAYASFWTTMPLVGLGDYAPEPFG TSCTLDWWLAQASGGGQVFILSILFFCLLLPTAVIVFSYAKIIAKVKSSSKEVAHFDSRI HSSHVLEVKLTKVAMLICAGFLIAWIPYAVVSVWSAFGRPDSIPIQLSVVPTLLAKSAAM YNPIIYQVIDYRFACCQAGGLRGTKKKSLEDFRLHTVTAVRKSSAVLEIHPESSSRFTSA HVMDGESHSNDGDCGKK

>003028

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>Q7Z403

MAQPLAFILDVPETPGDQGQGPSPYDESEVHDSFQQLIQEQSQCTAQEGLELQQREREVT GSSQQTLWRPEGTQSTATLRILASMPSRTIGRSRGAIISQYYNRTVQLRCRSSRPLLGNF VRSAWPSLRLYDLELDPTALEEEEKQSLLVKELQSLAVAQRDHMLRGMPLSLAEKRSLRE KSRTPRGKWRGQPGSGGVCSCCGRLRYACVLALHSLGLALLSALQALMPWRYALKRIGGQ FGSSVLSYFLFLKTLLAFNALLLLLLVAFIMGPQVAFPPALPGPAPVCTGLELLTGAGCF THTVMYYGHYSNATLNQPCGSPLDGSQCTPRVGGLPYNMPLAYLSTVGVSFFITCITLVY SMAHSFGESYRVGSTSGIHAITVFCSWDYKVTQKRASRLQQDNIRTRLKELLAEWQLRHS PRSVCGRLRQAAVLGLVWLLCLGTALGCAVAVHVFSEFMIQSPEAAGQEAVLLVLPLVVG LLNLGAPYLCRVLAALEPHDSPVLEVYVAICRNLILKLAILGTLCYHWLGRRVGVLQGQC WEDFVGQELYRFLVMDFVLMLLDTLFGELVWRIISEKKLKRRKPEFDIARNVLELIYGQ TLTWLGVLFSPLLPAVQIIKLLLVFYVKKTSLLANCQAPRRPWLASHMSTVFLTLLCFPA FLGAAVFLCYAVWQVKPSSTCGPFRTLDTMYEAGRVWVRHLEAAGPRVSWLPWVHRYLME NTFFVFLVSALLLAVIYLNIQVVRGQRKVICLLKEQISNEGEDKIFLINKLHSIYERKER EERSRVGTTEEAAAPPALLTDEQDA

>P0A8Q3

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MKINYPLLALAIGAFGIGTTEFSPMGLLPVIARGVDVSIPAAGMLISAYAVGVMVGAPLM TLLLSHRARRSALIFLMAIFTLGNVLSAIAPDYMTLMLSRILTSLNHGAFFGLGSVVAAS VVPKHKQASAVATMFMGLTLANIGGVPAATWLGETIGWRMSFLATAGLGVISMVSLFFSL PKGGAGARPEVKKELAVLMRPQVLSALLTTVLGAGAMFTLYTYISPVLQSITHATPVFVT AMLVLIGVGFSIGNYLGGKLADRSVNGTLKGFLLLLMVIMLAIPFLARNEFGAAISMVVW GAATFAVVPPLQMRVMRVASEAPGLSSSVNIGAFNLGNALGAAAGGAVISAGLGYSFVPV MGAIVAGLALLLVFMSARKQPETVCVANS

>Q9PUQ8

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>09BPV8

MNTTVMQGFNRSERCPRDTRIVQLVFPALYTVVFLTGILLNTLALWVFVHIPSSSTFIIY LKNTLVADLIMTLMLPFKILSDSHLAPWQLRAFVCRFSSVIFYETMYVGIVLLGLIAFDR FLKIIRPLRNIFLKKPVFAKTVSIFIWFFLFFISLPNMILSNKEATPSSVKKCASLKGPL GLKWHQMVNNICQFIFWTVFILMLVFYVVIAKKVYDSYRKSKSKDRKNNKKLEGKVFVVV AVFFVCFAPFHFARVPYTHSQTNNKTDCRLQNQLFIAKETTLFLAATNICMDPLIYIFLC KKFTEKLPCMQGRKTTASSQENHSSQTDNITLG

>000555

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>033980

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>Q4G2J3

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>Q8HYC3

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>P15928

SATASTATQPKPLEWLNRLRANPRIPLIVAGSAAVAIVVAMVLWAKTPDYRTLFSNLSDQ DGGAIVAQLTQMNIPYRFANGSGAIEVPADKVHELRLRLAQQGLPKGGAVGFELLDQEKF GISQFSEQVNYQRALEGELARTIETLGPVKSARVHLAMPKPSLFVREQKSPSASVTVTLE PGRALDEGQISAVVHLVSSAVAGLPPGNVTLVDQSGHLLTQSNTSGRDLNDAQLKFANDV ESRIQRRIEAILSPIVGNGNVHAQVTAQLDFANKEQTEEHYSPNGDASKATLRSRQLNIS EQVGAGYPGGVPGALSNQPAPPNEAPIATPPTNQQNAQNTPQTSTSTNSNSAGPRSTQRN ETSNYEVDRTIRHTKMNVGDIERLSVAVVVNYKTLADGKPLPLTADQMKQIEDLTREAMG FSDKRGDTLNVVNSPFSAVDNTGGELPFWQQQSFIDQLLAAGRWLLVLVVAWILWRKAVR PQLTRRVEEAKAAQEQAQVRQETEEAVEVRLSKDEQLQQRRANQRLGAEVMSQRIREMSD NDPRVVALVIROWMSNDHE

>P06029

MLLLINNLILNDVPTPWGLYFQDSSTPNQEGIIELHDNIMFYLVLILCTVSWLLFSIVKD SSKNPLPHKYLVHGQTIEIIWTILPAVVLLIIAFPSFILLYLCDEVISPAMTIKAIGLQW YWRYEYSDFINDSGETIEFESYVIPEDLLEDGQLRLLDTDTSVVCPVNTHIRFIVSAADV IHDFAIPSLGIKVVASPGRLNQVSALIQREGVYYGMCSETCGVAHSAMPMKIEVVSTKEF LTWLNEO

>P49219

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AHVKNHDYQILPPSIWPFFGAIGAFVMLTGAVAWMKGITFFGLPVEGPWMFLIGLVGVLY VMFGWWADVVNEGETGEHTPVVRIGLQYGFILFIMSEVMFFVAWFWAFIKNALYPMGPDS PIKDGVWPPEGIVTFDPWHLPLINTLILLLSGVAVTWAHHAFVLEGDRKTTINGLIVAVI LGVCFTGLQAYEYSHAAFGLADTVYAGAFYMATGFHGAHVIIGTIFLFVCLIRLLKGQMT QKQHVGFEAAAWYWHFVDVVWLFLFVVIYIWGR

>P56449

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MGRRRIRSRIRKSHFYTFKCLRPKTLEDQGPHIINGPGYTRIVHCNQPHLHLAKVLRYTS NYVSTTRYNLITFLPKCLYEOFHRVANFYFLVAAILSVFPLSPFNKWSMIAPLIFVVGLS MGKEALEDWRRFMQDVKVNSRKATVHRGDGDFGRRKWKKLRVGDVVKVEKDQFFPADLLL LSSSYEDGICYVETMNLDGETNLKVKRCLDVTLPLERDDTFOSFSGTIKCEDPNPNLYTF VGNLEYDGQVYPLDPSQILLRDSKLRNTSYVYGVVVFTGHDTKVMQNSTKSPSKRSRIEK RMDYIIYTLFALLVLVSFISSLGFAVMTKMHMGDWWYLRPDKPERLTNPRNPFHAWVVHL ITAVLLYGYLIPISLYVSIELVKVLQATFINQDLQMYDSESGTPAQARTSNLNEELGQVD TILSDKTGTLTCNOMDFLKCSIAGTSYGVRASEVELAAAKOMAIDLDEEQGEEVTHLPRT RGRMHGYAKMPSKTSSDIELETVITATDEGDOTOSTGIKGFSFEDORLMGGNWLNEPNSD DILMFLRILAVCHTAIPEVDEDTGKCTYEAESPDEVAFLVAAGEFGFEFTKRTOSSVFIS ERHSGQPVERIFYREYKFLNVLDFTSKRKRMSVIVRDEKGQILLLCKGADSIIFERLSKN GKNYLEATSKHLNGYGEAGLRTLALSYRKLDETEYSIWNSEFHKAKTSVGADRDEMLEKV SDMMEKELILVGATAVEDKLOKGVPOCIDKLAQAGLKIWVLTGDKMETAINIGYACSLLR OGMKQIYIALRNEEGSSODPEAAARENILMQIINASQMIKLEKDPHAAFALIIDGKTLTY ALEDDIKYOFLALAVDCASVICCRVSPKOKALVTRLAKEGTGKTTLAIGDGANDVGMIQE ADIGVGISGVEGMQAVMASDFSIAQFRFLERLLVVHGHWCYKRIAQMICYFFYKNITFGL TLFYFEAFTGFSGQAIYNDSYLLLFNVILTSLPVIALGVFEQDVSSEVCLQFPALYQQGP KNLFFDWYRIIGWMANGVYASVVIFSLNIGIFHVQSFCSGGQTADMDAMGTAMFTCIIWA VNVOIALTMSHFTWIOHVLIWGSIVTWYIFLALFGMLPPKVSGNIFHMLSETLAPAPIFW LTSLLVIAATTLPYLAYISFORSLNPLDHHIIOEIKHFRIDVODECMWTRERSKAREKTK IGVTARVDAKIRQLRGRLQRKHSILSVMSGLSGVSASTDTTSTTQHS >P26361

MQKSPLEKASFISKLFFSWTTPILRKGYRHHLELSDIYQAPSADSADHLSEKLEREWDRE QASKKNPQLIHALRRCFFWRFLFYGILLYLGEVTKAVQPVLLGRIIASYDPENKVERSIA IYLGIGLCLLFIVRTLLLHPAIFGLHRIGMOMRTAMFSLIYKKTLKLSSRVLDKISIGOL VSLLSNNLNKFDEGLALAHFIWIAPLOVTLLMGLLWDLLOFSAFCGLGLLIILVIFOAIL GKMMVKYRDORAAKINERLVITSEIIDNIYSVKAYCWESAMEKMIENLREVELKMTRKAA YMRFFTSSAFFFSGFFVVFLSVLPYTVINGIVLRKIFTTISFCIVLRMSVTROFPTAVOI WYDSFGMIRKIODFLOKOEYKVLEYNLMTTGIIMENVTAFWEEGFGELLEKVOOSNGDRK HSSDENNVSFSHLCLVGNPVLKNINLNIEKGEMLAITGSTGSGKTSLLMLILGELEASEG IIKHSGRVSFCSQFSWIMPGTIKENIIFGVSYDEYRYKSVVKACQLQQDITKFAEQDNTV LGEGGVTLSGGQRARISLARAVYKDADLYLLDSPFGYLDVFTEEQVFESCVCKLMANKTR ILVTSKMEHLRKADKILILHOGSSYFYGTFSELOSLRPDFSSKLMGYDTFDOFTEERRSS ILTETLRRFSVDDSSAPWSKPKOSFROTGEVGEKRKNSILNSFSSVRKISIVOKTPLCID GESDDLQEKRLSLVPDSEQGEAALPRSNMIATGPTFPGRRRQSVLDLMTFTPNSGSSNLQ RTRTSIRKISLVPQISLNEVDVYSRRLSQDSTLNITEEINEEDLKECFLDDVIKIPPVTT WNTYLRYFTLHKGLLLVLIWCVLVFLVEVAASLFVLWLLKNNPVNSGNNGTKISNSSYVV IITSTSFYYIFYIYVGVADTLLALSLFRGLPLVHTLITASKILHRKMLHSILHAPMSTIS KLKAGGILNRFSKDIAILDDFLPLTIFDFIQLVFIVIGAIIVVSALQPYIFLATVPGLVV FILLRAYFLHTAQQLKQLESEGRSPIFTHLVTSLKGLWTLRAFRRQTYFETLFHKALNLH TANWFMYLATLRWFOMRIDMIFVLFFIVVTFISILTTGEGEGTAGIILTLAMNIMSTLQW AVNSSIDTDSLMRSVSRVFKFIDIQTEESMYTQIIKELPREGSSDVLVIKNEHVKKSDIW PSGGEMVVKDLTVKYMDDGNAVLENISFSISPGORVGLLGRTGSGKSTLLSAFLRMLNIK GDIEIDGVSWNSVTLQEWRKAFGVITQKVFIFSGTFRONLDPNGKWKDEEIWKVADEVGL KSVIEQFPGQLNFTLVDGGYVLSHGHKQLMCLARSVLSKAKIILLDEPSAHLDPITYQVI RRVLKQAFAGCTVILCEHRIEAMLDCQRFLVIEESNVWQYDSLQALLSEKSIFQQAISSS EKMRFFQGRHSSKHKPRTQITALKEETEEEVQETRL >P26362

MQRSPIEKANAFSKLFFRWPRPILKKGYRQKLELSDIYQIPSSDSADELSEMLEREWDRE LATSKKNPKLVNALRRCFFWRFLFYGILLYFVEFTKAVOPLCLGRIIASYNAKNTYEREI AYYLALGLCLLFVVRTLFLHPAVFGLQHLGMQMRIALFSLIYKKILKMSSRVLDKIDTGQ LVSLLSNNLNKFDEGVAVAHFVWIAPVOVVLLMGLIWNELTEFVFCGLGFLIMLALFOAW LGKKMMQYRDKRAGKINERLAITSEIIDNIQSVKVYCWEDAMEKIIDDIRQVELKLTRKV AYCRYFSSSAFFFSGFFVVFLSVVPYAFIHTIKLRRIFTTISYNIVLRMTVTROFPSAIO TWYDSLGAIRKIODFLHKDEHKTVEYNLTTKEVEMVNVTASWDEGIGELFEKVKONDSER KMANGDDGLFFSNFSLHVTPVLKNISFKLEKGELLAIAGSTGSGKSSLLMMIMGELEPSD GKIKHSGRISYSPQVPWIMPGTIKDNIIFGLSYDEYRYTSVVNACQLEEDITVFPNKDKT VLGDGGITLSGGORARISLARALYKDADLYLLDSPFSHLDVTTEKDIFESCLCKLMVNKT RILVTSKLEHLKKADKILLLHEGHCYFYGTFSELQGEKPDFSSQLLGSVHFDSFSAERRN SILTETFRRCSVSSGDGAGLGSYSETRKASFKOPPPEFNEKRKSSLIVNPITSNKKFSLV OTAMSYPOTNGMEDATSEPGERHFSLIPENELGEPTKPRSNIFKSELPFOAHRROSVLAL MTHSSTSPNKIHARRSAVRKMSMLSQTNFASSEIDIYSRRLSEDGSFEISEEINEEDLKE CFADEEEIONVTTTWSTYLRYVTTNRNLVFVLILCLVIFLAEVAASLAGLWIISGLAINT GSQTNDTSTDLSHLSVFSKFITNGSHYYIFYIYVGLADSFLALGVIRGLPLVHTLVTVSK DLHKQMLHSVLQGPMTAFNKMKAGRILNRFIKDTAIIDDMLPLTVFDFVQLILIVVGAIC VVSVLOPYTLLAAIPVAVIFIMLRAYFLRTSOOLKOLESEARSPIFSHLITSLRGLWTVR AFGROSYFETLFHKALNLHTANWFLYLSTLRWFOMRIDIVFVLFF1AVTF1A1ATHDVGE GOVGIILTLAMNITSTLOWAVNSSIDVDGLMRSVSRVFKYIDIPPEGSETKNRHNANNPS DVLVIENKHLTKEWPSGGOMMVNNLTAKYTSDGRAVLODLSFSVNAGORVGLLGRTGAGK STLLSALLRLLSTEGEIQIDGISWNSVSLQKWRKAFGVIPQKVFVFSGTFRKNLDPYEQW SDEEIWKVTEEVGLKSMIEQFPDKLNFVLVDGGYILSNGHKQLMCLARSILSKAKILLLD EPTAHLDPVTFQIIRKTLKHTFSNCTVILSEHRVEALLECQQFLVIEGCSVKQFDALQKL LTEASLFKQVFGHLDRAKLFTAHRRNSSKRKTRPKISALQEEAEEDLQETRL

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STGIDFTVWASVIGGVIAIGCAFVGTVMLHFITAKRQPAQGAPQEKTPEVITPPEQGGIC
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>Q9BXC0

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>028620

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>P73437

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>P25714

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>000590

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>P63681

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>P80667

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>P63685

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IPADGAVLSGASDVDQRSITGESMPVAKARGDEVFAGTVNGSGVLHLVVTRDPSQTVVAR
IVELVADASATKAKTQLFIEKIEQRYSLGMVAATLALIVIPLMFGADLRPVLLRAMTFMI
VASPCAVVLATMPPLLSAIANAGRHGVLVKSAVVVERLADTSIVALDKTGTLTRGIPRLA
SVAPLDPNVVDARRLLQLAAAAEQSSEHPLGRAIVAEARRRGIAIPPAKDFRAVPGCGVH
ALVGNDFVEIASPQSYRGAPLAELAPLLSAGATAAIVLLDGVAIGVLGLTDQLRPDAVES
VAAMAALTAAPPVLLTGDNGRAAWRVARNAGITDVRAALLPEQKVEVVRNLQAGGHQVLL
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>P63687

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>06H1V1

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SLSPQSSVRSSPTKMPQVPEVLITAAEAPAFSADSHQHDSTTSILSLEFTGVQPSGTEQQ
VEPSGTPPGDPNPQTTSASTERDLFKFEEDLEDDRFPKRWSLPEFLESRHTSLGNLGPDP
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>09JHE8

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>P32940

MATVILFVAWMACLMVGVCYQEFQTQQNFPDISNPSQELNQEPAHRIVQLDSIQNNGALN MSTGNVLNMSPPPPSPCLSRAKIRHAFKYVTTILSCVIFLVGIVGNSTLLRIIYKNKCMR NGPNVLIASLALGDLFYILIAIPIISISFWLSTGHSEYIYQLVHLYRARVYSLSLCALSI DRYRAVASWNRIRSIGIPVRKAIELTLIWAVAIIVAVPEAIAFNLVELDFRGQTILVCML PMEQTSDFMRFYQEVKVWWLFGFYFCLPLACTGVFYTLMSCEMLSIKNGMRIALNDHMKQ

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>035910

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GLVLLLEAVAVLIGPPSGGKLLDATKVYKYVFILAGAEVLTSSLVLLLGNFFCIGKRKRP
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>093WD2

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>059442

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MIAVTATIIVFLVVVYFESMRVEIPLGYRGVTIRGRYPIKFLYVSNIPIILTFALYANIQ
LWARVLDRFGHPWLGRFDPVTGNPIGGFVLYVIPPRNIFTVIDNPVRAIIYLILTIIFSL
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>Q9XF89

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>P79350

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>003166

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>P05425

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>09XF91

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>025321

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>Q8WZK2

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>P0AGM0

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>P0AGM2

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>P32977

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>P15994

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>018968

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>P48625

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>P48626

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>P28303

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>014916

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>046372

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>070578

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>P22426

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>035101

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>032619

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>P76045

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>P53192

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>P18577

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>P22456

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>P45320

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>P34904

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>091WW2

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 ${\tt NRDFSVLDYILFQTSLVLTSVNSCANPIIYFFVGSFRHRLKHKTLKMVLQSALQDTPETP} \\ {\tt ENMVEMSRSKAEP}$

>091WW4

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>P34907

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>P25005

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>Q9M643

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>Q6CEA5

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>P0A1W8

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>P25025

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>P21823

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>P32248

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>05Y4Y9

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>P32249

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>Q5Y4Z0

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>Q5Y4Z2

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>Q9UR17

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>09BY08

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VKEKYYRHFLQITLCVCELYGCWMTFLPEWLTRSPNLNTSNWLYCWLYLFFFNGVWVLIPGLLLWOSWLELKKMHOKETSSVKKFO

>004440

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>P34956

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MVIFLFRALKPLLVLALLTVVFVLGGCSNASVLDPKGPVAEQQSDLILLSIGFMLFIVGV VFVLFTIILVKYRDRKGKDNGSYNPEIHGNTFLEVVWTVIPILIVIALSVPTVQTIYSLE KAPEATKDKEPLVVYATSVDWKWVFSYPEQDIETVNYLNIPVDRPILCKISSADSMASLW IPQLGGQKYAMAGMLMDQYLQADKVGTYEGRNANFTGEHFADQEFDVNAVTEKDFNSWVK KTQNEAPKLTKEKYDELMLPENVDELTFSSTHLKYVDHGQDAEYAMEARKRLGYQAVSPH CKTDPFENVKKNEFKKSDDTEE

>P17972

>P34957

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>004444

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>Q9BY15

 $\label{thm:condinection} \begin{matrix} MQGPLLLPGLCFLLSLFGAVTQKTKTSCAKCPPNASCVNNTHCTCNHGYTSGSGQKLFTF\\ PLETCNDINECTPPYSVYCGFNAVCYNVEGSFYCQCVPGYRLHSGNEQFSNSNENTCQDT\\ TSSKTTEGRKELQKIVDKFESLLTNQTLWRTEGRQEISSTATTILRDVESKVLETALKDP\\ \end{matrix}$

EQKVLKIQNDSVAIETQAITDNCSEERKTFNLNVQMNSMDIRCSDIIQGDTQGPSAIAFI
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IIAGALHYLYLAAFTWMLLEGVHLFLTARNLTVVNYSSINRLMKWIMFPVGYGVPAVTVA
ISAASWPHLYGTADRCWLHLDQGFMWSFLGPVCAIFSANLVLFILVFWILKRKLSSLNSE
VSTIQNTRMLAFKATAQLFILGCTWCLGLLQVGPAAQVMAYLFTIINSLQGFFIFLVYCL
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>09BY19

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>P0C1P7

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>P38176

>092036

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>P34970

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MIQAQTLQHFGNGAREGDQSYFDPGAPPPFKIADIRAAIPKHCWEKSTLRSLSYVLRDVL VVTALAASAISFNSWFFWPLYWPAQGTMFWALFVLGHDCGHGSFSNSSKLNSFVGHILHS LILVPYNGWRISHRTHHQNHGHVEKDESWVPLTEKVYKNLDDMTRMLRYSFPFPIFAYPF YLWNRSPGKEGSHFNPYSNLFSPGERKGVVTSTLCWGIVLSVLLYLSLTIGPIFMLKLYG VPYLIFVMWLDFVTYLHHHGYTHKLPWYRGQEWSYLRGGLTTVDRDYGWINNVHHDIGTH VIHHLFPQIPHYHLVEATKSAKSVLGKYYREPQKSGPLPFHLLKYLLQSISQDHFVSDTG DIVYYQTDPKLHQDSWTKSK

>P34979

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>Q8VI47

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>08TB61

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>P55167

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>P78036

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REEGLVSLPVGEVVVGDIIFLEAGDIIPADGKVLQANHLRCMESFLTGESVPVDKSVVNT
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LCLCNNATVNTNGDSTGDPTEIALLQWLDRDGLELNHYTRVYEKAFDSNRKLMSVVVQKD
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RQAILGVDLDPAKIMEYRVFARVTPQQKLEIVNAWKQAGYTVAVTGDGVNDAPALVTSDV
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TKNLFYNRGGFDLIWQSLLLSFLTLLFYSLGMVYAINDPELGKSGDLINRAGATCGFMVL
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>P34985

MMQITMENKSSVSEFILMGLTDQPELQLPLFVLFLMNYTATVMGNLTLMNLICLNSNLHT PMYFFLFNLSFIDFCYSMVFTPKMLMSFILEKNTISFGGCMAQLFFFLFFVNSESYVLTA MAYDRYVAICKPLTYKVIMSPKICCLLIFSSYLMGFASAMAHTGCMIRLSFCDSNIINHY MCDIFPLLPLSCSSTYVNELMSSVVVGSAIILCCLIILISYAMILFNIIHMSSGKGWSKA LGTCGSHIITVSLFYGSGLLAYVKPSSAKTVGQGKFFSVFYTLLVPMLNPLIYSLRNKDV KLAVKKTWKRITS

>P34986

MENITNISEFILMGFPTAPWLQILLFSIFFITYVFVLLENLVIILTVWVTGSLHKPMYYF LSTMSFLEAWYISVTVPKMLAGFLFRPNTISFLGCMTQLYFFMSLACTECVLLAAMAYDR YVAICWPLRYPVMMTTGFCVQLTISSWVSGFTISMAKVYFISRVAFCGNNVLNHFFCDVS PILKLACMNLSMAETVDFALAIVILIFPLSATVLSYGFIVSTVLQIPSATGQRKAFSTCA SHLTVVVIFYTAVIFMYVRPRAIASFNSNKLISAIYAVFTPMLNPIIYCLRNKEVKDAIR KTIAGGRAPALGESIS

>P31646

MDNRVSGTTSNGETKPVCPVMEKVEEDGTLEREQWTNKMEFVLSVAGEIIGLGNVWRFPY LCYKNGGGAFFIPYLIFLFTCGIPVFFLETALGQYTNQGGITAWRKICPIFEGIGYASQM IVSLLNVYYIVVLAWALFYLFSSFTTDLPWGSCSHEWNTENCVEFQKTNNSLNVTSENAT SPVIEFWERRVLKISDGIQHLGSLRWELVLCLLLAWIICYFCIWKGVKSTGKVVYFTATF PYLMLVVLLIRGVTLPGAAQGIQFYLYPNITRLWDPQVWMDAGTQIFFSFAICLGCLTAL GSYNKYHNNCYRDCVALCILNSSTSFVAGFAIFSILGFMSQEQGVPISEVAESGPGLAFI AYPRAVVMLPFSPLWACCFFFMVVLLGLDSQFVCVESLVTALVDMYPRVFRKKNRREILI LIVSVVSFFIGLIMLTEGGMYVFQLFDYYAASGMCLLFVAIFESLCVAWVYGASRFYDNI EDMIGYKPWPLIKYCWLFFTPAVCLATFLFSLIKYTPLTYNKKYTYPWWGDALGWLLALS SMVCIPAWSIYKLRTLKGPLRERLRQLVCPAEDLPQKSQPELTSPATPMTSLLRLTELES

>004473

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ILLSLPCYIAWSIFISPILRRRLDEKFARNADNQSFLVESVSAIDTIKALAVTPQMTNIW
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SGQVIAPVVRLAQLWQDFQQVGISITRLGDVLNSPTENYQGKLSLPEIFGDIAFKHIRFR
YKPDAPIILDDVNLSVKQGEVIGIVGRSGSGKSTLTKLLQRFYIPENGQVLIDGHDLALA
DPNWLRRQIGVVLQDNVLLNRSIRDNIALTDPSMSMERVIYAAKLAGAHDFISELREGYN
TIVGELGAGLSGGQRQRIAIARALVNNPRILIFDEATSALDYESEHIIMQNMQKICHGRT
VIIIAHRLSTVKNADRIIVMEKGHIVEQGKHNQLLENENGLYYYLNQLQSN
>P38196

MPVSDSGFDNSSKTMKDDTIPTEDYEEITKESEMGDATKITSKIDANVIEKKDTDSENNI
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EAKRRTWTWKQYIFFWISGSFNVNTWQISATGLQLGLNWWQTWICIWVGYTFVAFFLILG
SKVGNNYHISFPISSRVSFGIYFSIWIVINRVVMACVWNSTLAYIGSQCVQLMLKAIFGT
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KSSVYSQLIALPVCYAIISLIGILSVSAAYTLYGVNYWSPLDILNRYLDNYTSGNRAGVF
LISFIFAFDQLGANLSGNSIPAGTDLTALLPKFINIRRGSYICALISLAICPWDLLSSSS
KFTTALAAYAVFLSAIAGVISADYFIVRKGYVNIFHCYTDKPGSYYMYNKYGTNWRAVVA
YIFGIAPNFAGFLGSVGVSVPIGAMKVYYLNYFVGYLLAALSYCILVYFYPIKGIPGDAK
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>014246

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MESALPSILTLVIIAEFIIGNLSNGFIVLINYIDWVSKRELSSVDKLLIILAISRIGLIW EILVSWFLALHYLAIFVSGTGLRIMIFSWIVSNHFSLWLATILSIFYLLKIASFSSPAFL YLKWRVNKVILMILLGSLVFLFLNLIQINIHIKDWLDRYEGNTTWNFSMSDFVTFSVSVK FTMTMFSLTPFTVALISFSLLIFSLQKHLQKMQLNYKGHREPRTKVHTNALKIVISFLLL YASFFLCILISWISELYQNTAIYMLCETIGLFYPSSHSFLLILGNPKLRQAFLLVAAKVW >0645V2

MGGVIKNISTFVLIVEFIIGNLGNSFIALVNCIDWVKRRKISLVDQLLTALAISRISLVW LIFGSWCVSAFFPALFATEKMFRMLTNIWAVTNHFSVWLATGLGTFYFLKIANFSNSIFI YLKWRVKKVVLVLLLVTSVFLFLNIALINIHINASINGYGGNKTCSSDSNDFTRFSSLIA LTSSVFIFIPFILSLAIFLLLTFSLWKHCKKMQHTVKASGDASTKAHRGVMQTVIAFLLL YPIFSLSFFIAVWTSGWLEENLIILSQVMGMAYPSCHSCILILGNKKLRQASLSVLWWLK YRFKDGEPSGHKGFRESS

>P34997

MNSPISLDMGAITYNMDDLYKELAIYSNSTEIPLQDSIFCSTEEGPLLTSFKTIFMPVAY SLIFLLGMMGNILVLVILERHRHTRSSTETFLFHLAVADLLLVFILPFAVAEGSVGWVLG TFLCKTVIALHKINFYCSSLLLACIAVDRYLAIVHAVHAYRRRRLLSIHITCSTIWLAGF LFALPELLFAKVVQPHNNESLPQCIFSQENEAETRAWFASRFLYHTGGFLLPMLVMAWCY VGVVHRLLQAQRRPQRQKAVRVAILVTSIFLLCWSPYHIVIFLDTLERLKAVNSSCELSG YLSVAITLCEFLGLAHCCLNPMLYTFAGVKFRSDLSRLLTKLGCAGPASLCQLFPGWRKS SLSESENATSLTTF

>094741

MASASLISEPSFSAYWGGSGGFANQTVVDKVPPEMLYLVDPHWYQFPPMNPLWHGLLGFV IGVLGVISVIGNGMVIYIFSTTKSLRTPSNLLVVNLAFSDFLMMFTMSAPMGINCYYETW VLGPFMCELYALFGSLFGCGSIWTMTMIALDRYNVIVKGLSAKPMTNKTAMLRILFIWAF SVAWTIMPLFGWNRYVPEGNMTACGTDYLTKDWVSRSYILVYSFFVYLLPLGTIIYSYFF ILQAVSAHEKQMREQRKKMNVASLRSAEASQTSAECKLAKVALMTISLWFFGWTPYLIIN FTGIFETMKISPLLTIWGSLFAKANAVFNPIVYGISHPKYRAALEKKFPSLACASSSDDN TSVASGATTVSDEKSEKSASA

>Q75F43

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>P42086

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>078480

MTYNLNCDISNSFYRLAEVEVGKHLYWEIAGFKLHGQVFIVSWLVMLALIIFALNGTRKL NQIPSGIQNFMEYVYEFLQDIAKNQIGEEDYRPWVPYISTVFLFIFGANWAGALIPWKLI QLPEGELAAPTNDINVTVALALLTSISYFYAGISKKGISYFSRYVQPTPILLPINILEDF TKPLSLSFRLFGNVLADELVVSVFALLVPILIPLPVMTLGLFASSVQALIFSTLSAAYIG EALEDHGH

>Q8BLG2

MGDRRFIDFQFQDLNSSLRPRLGNATANNTCIVDDSFKYNLNGAVYSVVFILGLITSSAS LFVFCFRMKMRSETAIFITNLALSDLLFVCTLPFKIFYNFNRHWPFGDTLCKISGTAFLT NIYGSMLFLTCISVDRFLAIVYPFRSRTIRTRRNSAIVCAGVWILVLSGGISASLFSTTN VNNATTTCFEGFSKRVWKTYLSKITIFIEVVGFIIPLILNVSCSSVVLRTLRKPATLSQI GTNKKKVLKMITVHMAVFVVCFVPYNSVLFLYALVRSQAITNCLLERFAKIMYPITLCLA TLNCCFDPFIYYFTLESFQKSFYINTHIRMESLFKTETPLTPKPSLPAIQEEVSDQTTNN GGELMLESTF

>Q9HB89

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VLVVVFGICWAPFHADRVMWSVVSQWTDGLHLAFQHVHVISGIFFYLGSAANPVLYSLMS SRFRETFQEALCLGACCHRLRPRHSSHSLSRMTTGSTLCDVGSLGSWVHPLAGNDGPEAQ OETDPS

>P77400

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FNIMDNMGSERELPKLMNKSLWRQSTWGNIIVVVLIMLMTAALNLGSLASVASATFLICY
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AMVMKRNKTV

>P31675

MIWIMTMARRMNGVYAAFMLVAFMMGVAGALQAPTLSLFLSREVGAQPFWIGLFYTVNAI AGIGVSLWLAKRSDSQGDRRKLIIFCCLMAIGNALLFAFNRHYLTLITCGVLLASLANTA MPQLFALAREYADNSAREVVMFSSVMRAQLSLAWVIGPPLAFMLALNYGFTVMFSIAAGI FTLSLVLIAFMLPSVARVELPSENALSMQGGWQDSNVRMLFVASTLMWTCNTMYIIDMPL WISSELGLPDKLAGFLMGTAAGLEIPAMILAGYYVKRYGKRRMMVIAVAAGVLFYTGLIF FNSRMALMTLQLFNAVFIGIVAGIGMLWFQDLMPGRAGAATTLFTNSISTGVILAGVIQG AIAQSWGHFAVYWVIAVISVVALFLTAKVKDV

>P11350

 $\label{thm:moflow} {\tt MQFLNMFFFDIYPYIAGAVFLIGSWLRYDYGQYTWRAASSQMLDRKGMNLASNLFHIGIL} \\ {\tt GIFVGHFFGMLTPHWMYEAWLPIEVKQKMAMFAGGASGVLCLIGGVLLLKRRLFSPRVRA} \\ {\tt TTTGADILILSLLVIQCALGLLTIPFSAQHMDGSEMMKLVGWAQSVVTFHGGASQHLDGV} \\ {\tt AFIFRLHLVLGMTLFLLFPFSRLIHIWSVPVEYLTRKYQLVRARH} \\ {\tt CAMPAGE STATE STA$

>016950

MKSLKSSTHDVPHPEHVVWAPPAYDEQHHLFFSHGTVLIGIVGSLIITVAVVGNVLVCLA IFTEPILSHSKSNFFIVSLAVADLLLALLVMTFALVNDMYGYWLFGETFCFIWMSADVMC ETASIFSICVISYDRLKQVQKPLHYEEFMTTTRALLIIACLWICSFVLSFVPIFLEWHEL SVEEIKAIFKDNKTEKEKALEAHNFSSALNQTLGDNQKSNAKHVCLFDVHFTYSVIYSFI CFYVPCTLMLTNYLRLFLIAQTHQVRIRSLQMTNPPQLRGQGASSYRNQGTQGSKAARTL TIITGTFLACWLPFFIINPIAAADEHLIPLECFMVTIWLGYFNSSVNPIIYGTSNSKFRA AFKRLLRCRSVKSVVGSISPVSPAYRAFSWIRPSRLDLSSSEHPSDACDTGRGKNSKGGD CATADPTKPDVSVSEEIIYAGTKVFDSDTA

>P41441

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>094823

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DERDDASVCSGGDSTDDGGYRSSMWDQGDILESGSGTSLEEALEAPATDLARPEFCYEAE SPDEAALVHAAHAYSFTLVSRTPEQVTVRLPQGTCLTFSLLCTLGFDSVRKRMSVVVRHP LTGEIVVYTKGADSVIMDLLEDPACVPDINMEKKLRKIRARTQKHLDLYARDGLRTLCIA KKVVSEEDFRRWASFRREAEASLDNRDELLMETAQHLENQLTLLGATGIEDRLQEGVPDT IATLREAGIQLWVLTGDKQETAVNIAHSCRLLNQTDTVYTINTENQETCESILNCALEEL KQFRELQKPDRKLFGFRLPSKTPSITSEAVVPEAGLVIDGKTLNAIFQGKLEKKFLELTQ YCRSVLCCRSTPLQKSMIVKLVRDKLRVMTLSIGDGANDVSMIQAADIGIGISGQEGMQA VMSSDFAITRFKHLKKLLLVHGHWCYSRLARMVVYYLYKNVCYVNLLFWYQFFCGFSSST MIDYWQMIFFNLFFTSLPPLVFGVLDKDISAETLLALPELYKSGQNSECYNLSTFWISMV DAFYQSLICFFIPYLAYKGSDIDVFTFGTPINTISLTTILLHQAMEMKTWTIFHGVVLLG SFLMYFLVSLLYNATCVICNSPTNPYWVMEGQLSNPTFYLVCFLTPVVALLPRYFFLSLQ GTCGKSLISKAQKIDKLPPDKRNLEIQSWRSRQRPAPVPEVARPTHHPVSSITGQDFSAS TPKSSNPPKRKHVEESVLHEQRCGTECMRDDSCSGDSSAQLSSGEHLLGPNRIMAYSRGQ TDMCRCSKRSSHRRSQSSLTI

>095484

 $\label{thm:colling} $$\operatorname{MASTGLELLGMTLAVLGWLGTLVSCALPLWKVTAFIGNSIVVAQVVWEGLWMSCVVQSTG}$$ QMQCKVYDSLLALPQDLQAARALCVIALLLALLGLLVAITGAQCTTCVEDEGAKARIVLT $$\operatorname{AGVILLLAGILVLIPVCWTAHAIIQDFYNPLVAEALKRELGASLYLGWAAAALLMLGGGLLCCTCPPPQVERPRGPRLGYSIPSRSGASGLDKRDYV$

>037143

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SIAIWINHMYLIHLFELCASLTTSSMIAMWFSEIISEYGVGNGPSLLIFQNIISSIPKNL
QNYTFNIGTTNTVLNGSLILSFGIIILIINILIQEGERKIAILSAKQLGKINELNHKVIF
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VYTSLILNPEDIAKNLKKMGASIPNIRPGSETIKYLNTRINRLTLIGACFLFTITLFPTI
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MSVIPPKFFKIANISIGCIDIIAALSQLTYIFTNLNVFLLAVYGLALSVPIVYLEFKVPS NLYRYASFYFSFLGRGLSYILLSLIISFGGIYNILAGMFTFILGVAFIVFHFSQFVEEPA NFRAPGSSLSIGDDDIDDDDDMI

>P57103

>003860

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IIGICVYVIPDGETRKIKHLRVFFITAAWSIFAYIWLYMILAVFSPGVVQVWEGLLTLFF
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LVPLEGKEVDESRREMIRILKDLKQKHPEKDLDQLVEMANYYALSHQQKSRAFYRIQATR
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VSESIGVMEVKVLRTSGARGTVIVPFRTVEGTAKGGGEDFEDTYGELEFKNDETVKTIRV
KIVDEEEYERQENFFIALGEPKWMERGISALLLSPDVTDRKLTMEEEEAKRIAEMGKPVL
GEHPKLEVIIEESYEFKTTVDKLIKKTNLALVVGTHSWRDQFMEAITVSAAGDEDEDESG
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CTIGLKDSVTAVVFVAFGTSVPDTFASKAAALQDVYADASIGNVTGSNAVNVFLGIGLAW

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>050T56

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ALLSFERKYRVRGGTLIGGDLFDFWVGPFYVGFFGVTTLLFTVLGTALIVWGAALGPSWT FWQISINPPDVSYGLAMAPMAKGGLWQIITFSAIGAFVSWALREVEICRKLGIGYHIPFA FGFAILAYVSLVVIRPVMMGAWGYGFPYGFMTHLDWVSNTGYQYANFHYNPAHMLGITLF FTTCLALALHGSLILSAANPGKGEVVKGPEHENTYFQDTIGYSVGTLGIHRVGLILALSA VVWSIICMILSGPIYTGSWPDWWLWWQKLPFWNHG

>P10718

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>P0AA47

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>P87200

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>086917

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>Q8N4L2

MAADGVDERSPLLSASHSGNVTPTAPPYLQESSPRAELPPPYTAIASPDASGIPVINCRV CQSLINLDGKLHQHVVKCTVCNEATPIKNPPTGKKYVRCPCNCLLICKDTSRRIGCPRPN CRRIINLGPVMLISEEQPAQPALPIQPEGTRVVCGHCGNTFLWMELRFNTLAKCPHCKKI SSVGSALPRRRCCAYITIGMICIFIGVGLTVGTPDFARRFRATYVSWAIAYLLGLICLIR ACYWGAIRVSYPEHSFA

>016983

MEDAWEADALEAAEAAAAAQAVAADAPTTTPSPRTLQRQRACEALMEGDAPDAAPDAPL RCAIAWDGVNCWPETPAGALAVQPCFDELNGIRYDIRQNATRMCYSNGTWRNYSDYVHCR ELVEAESDEDAAMAFVFFVGFCLSLVAIAVAIWIFLYFKDLRCLRNTIHTNLMATYICND ATWIISAVVQEYVENGGLCSVLAVLMHYFYLTNFFWMFVEGLYLFLLVVATFTGEKVKLQ IYIIIGWGIPGVIVVTWAIIKHLGKTAPDNAGESHPMVLLIKHCPWMAEDYFDWIHQAPV ITVLAVNLVFLFSIMWVLITKLQSANTAETQQYRKATKALLVLFPLLGITYILMMQGPMD GVAGHVFRNAQALLLSLQGFTVALFYCFLNTEVQNTLRHRMSRWRETRTVGGGRRYTLSG HSKDWSPRSRTESIRCLOHRS

>Q8R456

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LFVLSWAPYSTVALVGFAGYSHILTPYMSSVPAVIAKASAIHNPIIYAITHPKYRAAIAQ
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>P37597

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MKKLLRLFFPLSLRVRFLLATAAVVLVLSLAYGMVALIGYSVSFDKTTFRLLRGESNLFY TLAKWENNKLHVELPENIDKQSPTMTLIYDENGQLLWAQRDVPWLMKMIQPDWLKSNGFH EIEADVNDTSLLLSGDHSIQQQLQEVREDDDDAEMTHSVAVNVYPATSRMPKLTIVVVDT IPVELKSSYMVWSWFIYVLSANLLLVIPLLWVAAWWSLRPIEALAKEVRELEEHNRELLN PATTRELTSLVRNLNRLLKSERERYDKYRTTLTDLTHSLKTPLAVLQSTLRSLRSEKMSV SDAEPVMLEQISRISQQIGYYLHRASMRGGTLLSRELHPVAPLLDNLTSALNKVYQRKGV NISLDISPEISFVGEQNDFVEVMGNVLDNACKYCLEFVEISARQTDEHLYIVVEDDGPGI PLSKREVIFDRGQRVDTLRPGQGVGLAVAREITEQYEGKIVAGESMLGGARMEVIFGRQH SAPKDE

>P0AA63

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>P0AA67

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DFVWVVLAVLGLWFLLPLGQDVSHVDLTGCALALGAGACWAIYILSGQRAGAEHGPATVA
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>P36948

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>P33607

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>096T55

MPSAGLCSCWGGRVLPLLLAYVCYLLLGATIFQLLERQAEAQSRDQFQLEKLRFLENYTC LDQWAMEQFVQVIMEAWVKGVNPKGNSTNPSNWDFGSSFFFAGTVVTTIGYGNLAPSTEA GQVFCVFYALLGIPLNVIFLNHLGTGLRAHLAAIERWEDRPRRSQVLQVLGLALFLTLGT LVILIFPPMVFSHVEGWSFSEGFYFAFITLSTIGFGDYVVGTDPSKHYISVYRSLAAIWI LLGLAWLALILPLGPLLLHRCCQLWLLSLRQGCGAKAAPGRRPRRGSTAARGVQVTPQDF PISKKGLGS

>P34271

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>087656

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>P0AA82

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>P63713

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>060748

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>Q9SCX5

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>P0A2G0

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>P0A2G3

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>P77485

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>P39524

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>096T83

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GQLSDKFYYTDCLFFGAIISATDPVTVLAIFNELHADVDLYALLFGESVLNDAVAIVLSS SIVAYOPAGLNTHAFDAAAFFKSVGIFLGIFSGSFTMGAVTGVNANVTKFTKLHCFPLLE TALFFLMSWSTFLLAEACGFTGVVAVLFCGITQAHYTYNNLSVESRSRTKQLFEVLHFLA ENFIFSYMGLALFTFOKHVFSPIFIIGAFVAIFLGRAAHIYPLSFFLNLGRRHKIGWNFO HMMMFSGLRGAMAFALAIRDTASYARQMMFTTTLLIVFFTVWIIGGGTTPMLSWLNIRVG VEEPSEEDONEHHWOYFRVGVDPDODPPPNNDSFOVLOGDGPDSARGNRTKOESAWIFRL WYSFDHNYLKPILTHSGPPLTTTLPAWCGLLARCLTSPQVYDNQEPLREEDSDFILTEGD LTLTYGDSTVTANGSSSSHTASTSLEGSRRTKSSSEEVLERDLGMGDQKVSSRGTRLVFP LEDNA

>09C0V0

MDASVSLLPEGESLHRSLSASQIQMLAFGGIIGTGLFLGIGSSLAESGPASLLISFSVLG VSVYCTMLALGEMSVYMPVAGSFCTYVGRYVDEALSFSLTWNYWLNDTIALASHVLATRL VVDFWLIPTEGDPVSASLSLPPWKEAVRIITPITSLSANIILNMLPVGGFGEIEYWLSSI KVFTVAAFIVNGILCNLGVNNEKKFIGFRYWKDPGAFNNGIIGVISSFVNAAFAYAGTES IALTAGEAKSPITTLPKAIRFTAHRVLLLYIISVLVVGINLPYNTPGLDGDSVRMSPFTF VFKKFGVPGAASIMNLVILSSALSAGNHSLYAGTRLLYSLAKSGHAPKVFSKCNKHGIPW LSVLATSATAILCLMSSQAGKTWGFLLNVIAVSNQISWIFIAVSSLRFRKALRVQGKTHR LYFPNWTYPVGPYIIILLNGVFLFLQGYKSLYPFRLSLFVSYYMEIPIVLGLYLIWKIYK KTKLVSSSEADLETDWKSLEDTDSA

>090845

MALLIAWVCVAVSIEKALGGOGDGGDLYSENITRILDKLLDGYDNRLRPGFGGAVTEVKT DIYVTSFGPVSDVEMEYTMDVFFRQTWTDERLKFGGPTEILRLNNLMVSKIWTPDTFFRN GKKSIAHNMTTPNKLFRIMONGTILYTMRLTINADCPMRLVNFPMDGHACPLKFGSYAYP KSEIIYTWKKGPLHSVEVPQESSSLLQYDLIGQTVSSETIKSNTGEYVIMTVYFHLQRKM GYFMIQIYTPCIMTVILSQVSFWINKESVPARTVFGITTVLTMTTLSISARHSLPKVSYA TAMDWFIAVCFAFVFSALIEFAAVNYFTNLQTQRAMRKAARAAALAAALSAATVPAEDEI VSHSDSNCNLKKRVNSVTSOADOSPEASIVSNSASOCOPVSAPPPAPPAPPPVGGTSKID QYSRILFPVAFAGFNLVYWVVYLSKDTMEFFEPTAMHLRNDHQSN >Q39102

MASNSLLRSSSNFFLGSHIIISSPTPKTTRKPSFPFSFVSRAKYQITRSSQDENSPNGKP NSPFSSQVALAAILLSSISSSPLALAVVDEPASPSVVIESQAVKPSTPSPLFIQNEILKA PSPKSSDLPEGSQWRYSEFLNAVKKGKVERVRFSKDGSVVQLTAVDNRRASVIVPNDPDL IDILAMNGVDISVSEGESSGNDLFTVIGNLIFPLLAFGGLFLLFRRAOGGPGGGPGGLGG PMDFGRSKSKFOEVPETGVSFADVAGADOAKLELOEVVDFLKNPDKYTALGAKIPKGCLL VGPPGTGKTLLARAVAGEAGVPFFSCAASEFVELFVGVGASRVRDLFEKAKSKAPCIVFI DEIDAVGRORGAGMGGGNDEREOTINOLLTEMDGFSGNSGVIVLAATNRPDVLDSALLRP GRFDRQVTVDRPDVAGRVKILQVHSRGKALGKDVDFDKVARRTPGFTGADLQNLMNEAAI LAARRELKEISKDEISDALERIIAGPEKKNAVVSEEKKRLVAYHEAGHALVGALMPEYDP VAKISIIPRGOAGGLTFFAPSEERLESGLYSRSYLENOMAVALGGRVAEEVIFGDENVTT GASNDFMQVSRVARQMIERFGFSKKIGQVAVGGPGGNPFMGQQMSSQKDYSMATADIVDA EVRELVEKAYKRATEIITTHIDILHKLAQLLIEKETVDGEEFMSLFIDGQAELYIS

MDYQTSTPLYDIDYGMSEPCQKLNVRQIAARLLPPLYSLVF1FGFVGNMLVVL1L1NCKK LKSMTDIYLLNLAISDLLFIITIPFWAHYAADQWVFGNTMCQLFTGFYFIGYFGGIFFII LLTIDRYLAIVHAVFALKARTVTFGAATSVVTWVVAVFASLPGIIFTKSQKEGSRHTCSP HFPSSOYHFWKNFOTLKIVILGLVLPLLVMIVCYSGIIKTLLRCRNEKKKHKAVRLIFVI MIVYFLFWAPYNIVLLLSTFQEFFGLNNCSGSNRLDQAMQVTETLGMTHCCINPIIYAFV GEKFRNYLLRFFRKYFASRFCKGCPVFQGEAPERVSSVYTRSTGEQEISV

>P43416

MLTAFARAFKTPDLRKKLLFTLGIIVIYRIGTHIPIPGVDYSAVQFCIDQTKSNSGLFGL VNMFSGGALLQITIFALGIMPYITASIILQLLTVVIPRLEALKKEGQSGTAKITQYTRYL TVALAVLOGTGLVATARSGALFSOCPOANNIVPDDSIFTTLTMVVTMTAGTAVVMWLGEL ITDRGIGNGMSILMFISIAATFPSALWSIKEQGDLAGGWIEFGIVIAVGLVMVALVVFVE QAQRRIPVQYAKRMIGRRSYGGTSTYIPLKVNQAGIIPVIFASSLLYIPALVVQFSGSTA $\label{thm:continuous} $\operatorname{GWAAWIQKNLADTAAPAHITVYFFLIIFFAFFYVAISFNPEEVADNMKKYGGFIPGIRAG RPTAEYLSYVLNRITWPGSLYLGLIALVPTMALAPLGANQNFPFGGTSILIIVGVGLETV $KQIESQLQQRNYEGFLR$$

>P51297

MSQKSDLRNRIKFTLLLLVLARLGIFIPVPGIDHDAFYASVEKNTLVNFLNIFSGGGFST IGIFALGIVPYINSSIVMQLLTKIIPDLEKLQKEEGELGRQKITQITRYLALGWATLQSG AISIWVKPYVFNWNFTFVCESVLALTAGSMIIMWLSELITEKGIGNGASLLIFQNIVSGL PKNFTQSFFDANYSNTSIKFGLFIVIFLLMIIITIFVQEGTRRIKIISARQLGKSSILDP NSYLPLKLNQGGVMPIVFASASMALPAYLTQLTQNTFLLQVLYLFCPNGSLYLVLYSVLI LFFSYFYTSIVMNPEDIATNLKKMGASIPNIRPGQATIDYLQVILNRLTFLGATFLFTVA LIPFIIEKVAQIQNLRGLGATSLLILVGVAIDTAKQIQTYVISKKYDSMTK

MDVIKKKHWWQSDALKWSVLGLLGLLVGYLVVLMYAQGEYLFAITTLILSSAGLYIFANR KAYAWRYVYPGMAGMGLFVLFPLVCTIAIAFTNYSSTNQLTFERAQEVLLDRSWQAGKTY NFGLYPAGDEWQLALSDGETGKNYLSDAFKFGGEQKLQLKETTAQPEGERANLRVITQNR QALSDITAILPDGNKVMMSSLRQFSGTQPLYTLDGDGTLTNNQSGVKYRPNNQIGFYQSI TADGNWGDEKLSPGYTVTTGWKNFTRVFTDEGIQKPFLAIFVWTVVFSLITVFLTVAVGM VLACLVQWEALRGKAVYRVLLILPYAVPSFISILIFKGLFNQSFGEINMMLSALFGVKPA WFSDPTTARTMLIIVNTWLGYPYMMILCMGLLKAIPDDLYEASAMDGAGPFQNFFKITLP LLIKPLTPLMIASFAFNFNNFVLIQLLTNGGPDRLGTTTPAGYTDLLVNYTYRIAFEGGG GQDFGLAAAIATLIFLLVGALAIVNLKATRMKFD

MNENLFTSFATPTIMGLPIVILIIMFPSIMFPSPNRLINNRLVSTQQWLLQLTSKQMLSI HNNKGQTWALMLMSLILFIGSTNLLGLLPHSFTPTTQLSMNLGMAIPLWAGTVFLGFRHK TKASLAHFLPQGTPVFLIPMLVIIETISLFIQPVALAVRLTANITAGHLLMHLIGGATLA LMNISPTTALITFIILILLTILEFAVALIQAYVFTLLVSLYLHDNT >09Z0L1

MNISTWSTLVTPESCHRLAASGHSLLIVLHYNHSGRLASRGSEDGGGLGMLRGPSVAAG CLVVLENAMVLAAIAIYMRSRRWVYYCLLNITLSDLLTGLAYVVNVLLSGTRTFQLSPVH WFLREGLLFMALAASTFSLLFTAGERFATMVRVAESGATKTSRVYGCIGLCWLLAAILGL LPLLGWNCVCAFPRCSSLLPLYSKGYVLFCVVVFALILVAILSLYGAIFRVVRANGQKSP RPPARRKSRRLLNTVLMILVAFVVCWGPLFGLLLADIFGSNVWAQEYLRGMDWILALAVF NSAINPLIYSFRSREVQRAVLAFLCCGCLWLGLRGPGDCLTRITEAHSGASTTDSSLRPR DSFRTSRSLSFRMREPLSSISSVRST

>Q06497

>003200

MLTLESALTGAVASAMANIAVYPLDLSKTIIQSQVSPSSSEDSNEGKVLPNRRYKNVVDC MINIFKEKGILGLYQGMTVTTVATFVQNFVYFFWYTFIRKSYMKHKLLGLQSLKNRDGPI TPSTIEELVLGVAAASISQLFTSPMAVVATRQQTVHSAESAKFTNVIKDIYRENNGDITA FWKGLRTGLALTINPSITYASFQRLKEVFFHDHSNDAGSLSAVQNFILGVLSKMISTLVT QPLIVAKAMLQSAGSKFTTFQEALLYLYKNEGLKSLWKGVLPQLTKGVIVQGLLFAFRGE LTKSLKRLIFLYSSFFLKHNGQRKLAST

>P06129

MIKKASLLTACSVTAFSAWAQDTSPDTLVVTANRFEQPRSTVLAPTTVVTRQDIDRWQST SVNDVLRRLPGVDITQNGGSGQLSSIFIRGTNASHVLVLIDGVRLNLAGVSGSADLSQFP IALVQRVEYIRGPRSAVYGSDAIGGVVNIITTRDEPGTEISAGWGSNSYQNYDVSTQQQL GDKTRVTLLGDYAHTHGYDVVAYGNTGTQAQTDNDGFLSKTLYGALEHNFTDAWSGFVRG YGYDNRTNYDAYYSPGSPLLDTRKLYSQSWDAGLRYNGELIKSQLITSYSHSKDYNYDPH YGRYDSSATLDEMKQYTVQWANNVIVGHGSIGAGVDWQKQTTTPGTGYVEDGYDQRNTGI YLTGLQQVGDFTFEGAARSDDNSQFGRHGTWQTSAGWEFIEGYRFIASYGTSYKAPNLGQ LYGFYGNPNLDPEKSKQWEGAFEGLTAGVNWRISGYRNDVSDLIDYDDHTLKYYNEGKAR IKGVEATANFDTGPLTHTVSYDYVDARNAITDTPLLRRAKQQVKYQLDWQLYDFDWGITY QYLGTRYDKDYSSYPYQTVKMGGVSLWDLAVAYPVTSHLTVRGKIANLFDKDYETVYGYQ TAGREYTLSGSYTF

>P43439

MAVTKMEKVTLISDKKNREILLQAVQGLHAVEIRDLFQESENNQWVETFFPEPEMIDKDK ELAKLSYKLTDIRTAIQFIEHHGEKSQKKQHLKRRELSLDTLEKNYSEEAFSKKLEEVLL LKEQWEQLVDERQQLEDQENWLLNWQNLDLAPKAFDSQMTKLVIGTVNAKNAESFKAEVA EINEAYLEEINSSPTTTYFAYIVLRADESRMEEIASRYGFVKEDYLYEGTPQQQLVAAKQ SLQEIKDQQKKLSSAIGACSGYIKDFEWTEEIFLARSEREAIKDRIIHTPYLILIQGWVD HEEKQELIHMLQNILASEEVYLTFDEPTDNEIAEEVPTKLKNHPIVAPFEMLTEMYSLPK YEEVDPTPWMMPFYLVFFGMMVADIGYGLLMFLGAFLLQKLVVLPRGMQRFAKFFEILAI PSIIWGFIYSSFFGAALPKEIFGIHLPFPILSTTDDVNTILILSVIFGLIQILVGLFIAA KEHIKRKAYVDAVNDGFAWQWILLGIILILLGTMTLKNNAFVYLGGALAVLSAVCILIIP VFQSSSKAKGIAKGAYNLYGLTGYIGDLVSYTRLMALGISGGSIAAAFNMLVAFMPPAAR FSVGILLIIVLQALNMFLTLLSAYVHGARLQYVEFFGKFYTGGGRSFKPLKTVEKYVNIN HKKK

>09Z0M6

MRGVRCPGLLVVCILLSLSGAGTQKAESKNCAKWCPINSKCVSNRSCVCKPGFSSEKELI
TNPAESCEDINECLLPGFSCGDFAMCKNSEGSYTCVCNLGYKLLSGAESFVNESENTCQA
SVNTGTTPVPSRIHTVTTAPGNLPEQTTTVHQTQMGDSEERTPKDVNECISGQNHCHQST
HCINKLGGYSCICRQGWKPVPGSPNGPVSTVCEDVDECSSGQHQCHNSTVCKNTVGSYKC
HCRPGWKPTSGSLRGPDTICQEPPFPTWTLLPTAHSQTLLRFSVEVQNLLRDFNPATVNY
TIQKLIEAVDKLLEDPMETQTQQVAAQLLSNLEQSLRTLAQFLPKGPFTYTSPSNTELSL
MVKEQDNKDVTTVHHGQTWMELDWAVTAGAKISENGSSVAGILSSPNMEKLLGNTPLNLE
QRRASLEDFYGSPIPSVSLKLLSNINSVFLTNTNTEKLASNVTFKFDFTSVESIEPRHEL
ICAFWKAHNGNGYWDTDGCSMNGTGFCHCNHLTSFAILMAQYHVQDPRLELITKVGLLLS
LICLLCILTFLLVKPIQSSRTMVHLHLCICLFLGSIIFLVGVENEGGEVGLRCRLVAMM
LHFCFLAAFCWMALEGVELYFLVVRVFQGQGLSTWQRCLIGYGVPLLIVAISMAVVKMDG
YGHATYCWLDFRKQGFLWSFSGPVAFIIFCNAAIFVITVWKLTKKFSEINPNMKKLRKAR
VLTITAIAQLLVLGCTWGFGLFLFNPHSTWLSYIFTLLNCLQGLFLYVMLCLLNKKVREE
YWKWACMVTGSKYTEFNSSTTGTGTSOTRALRSSESGM

MEKASGRQSIALSTVETGTVNPGLELMEKEVEPEGSKRTDAQGHSLGDGLGPSTYQRRSR WPFSKARSFCKTHARLFKKILLGLLCLAYAAYLLAACILNFQRALALFVITCLVIFVLVH SFLKKLLGKKLTRCLKPFENSRLRLWTKWVFAGVSLVGLILWLALDTAQRPEQLIPFAGI CMFILILFACSKHHSAVSWRTVFSGLGLQFVFGILVIRTDLGYTVFQWLGEQVQIFLNYT VAGSSFVFGDTLVKDVFAFQALPIIIFFGCVVSILYYLGLVQWVVQKVAWFLQITMGTTA TETLAVAGNIFVGMTEAPLLIRPYLGDMTLSEIHAVMTGGFATISGTVLGAFIAFGVDAS SLISASVMAAPCALASSKLAYPEVEESKFKSEEGVKLPRGKERNVLEAASNGAVDAIGLA TNVAANLIAFLAVLAFINAALSWLGELVDIQGLTFQVICSYLLRPMVFMMGVEWTDCPMV AEMVGIKFFINEFVAYQQLSQYKNKRLSGMEEWIEGEKQWISVRAEIITTFSLCGFANLS

SIGITLGGLTSIVPHRKSDLSKVVVRALFTGACVSLISACMAGILYVPRGAEADCVSFPN TSFTNRTYETYMCCRGLFOSTSLNGTNPPSFSGPWEDKEFSAMALTNCCGFYNNTVCA

>Q8K1P8

MALPSPASEEAEGPCQEANQEYQEPVCSPVPEPEPEPEPEPEPEPEPEPPPVPVPPPEPQPEPE PQPLPDPAPLPVLGFEAEPVQEPEPTPTVETRGTARGFQPPEGGFGWIVVFAATWCNGSI FGIHNSVGILYSMLLEEEKEKNRQVEFQAAWVGALAMGMIFFCSPIVSIFTDRLGCRITA TTGAAVAFIGLHTSSFTSPLSLRYFTYGILFGCGCSFAFQPSLVILDHYFQRRLGLANGV VSAGSSIFSMSFPFLIKMLGDRIKLAQTFQVLSTFMFVLTLLSLTYRPLLPSSQDTPSKR GAHTLRQRFLVQFRKYFNMRVFRQRTYRIWAFGIAAAALGYFVPYVHLMKYVEDKFKEIK ETWVLLVCIGATSGLGRLVSGHISDSIPGLKKIYLQVLSFLLLGLMSMMIPLCRDFGGLI VVCLFLGLCDGFFITIMAPIAFELVGPMQASQAIGYLLGMMALPMIAGPPIAGLLRNCFG NYHVAFYFAGVPPIIGAVILFFVPLMHQRMFKKEQRESSKDKMLSHDPDPNGELLPGSPT PEEPI

>P02930

MKKLLPILIGLSLSGFSSLSQAENLMQVYQQARLSNPELRKSAADRDAAFEKINEARSPL LPQLGLGADYTYSNGYRDANGINSNATSASLQLTQSIFDMSKWRALTLQEKAAGIQDVTY QTDQQTLILNTATAYFNVLNAIDVLSYTQAQKEAIYRQLDQTTQRFNVGLVAITDVQNAR AQYDTVLANEVTARNNLDNAVEQLRQITGNYYPELAALNVENFKTDKPQPVNALLKEAEK RNLSLLQARLSQDLAREQIRQAQDGHLPTLDLTASTGISDTSYSGSKTRGAAGTQYDDSN MGQNKVGLSFSLPIYQGGMVNSQVKQAQYNFVGASEQLESAHRSVVQTVRSSFNNINASI SSINAYKQAVVSAQSSLDAMEAGYSVGTRTIVDVLDATTTLYNAKQELANARYNYLINQL NIKSALGTLNEQDLLALNNALSKPVSTNPENVAPQTPEQNAIADGYAPDSPAPVVQQTSA RTTTSNGHNPFRN

>013780

MYYDNAFGYIPAHWVTILAVILFSIAFILHVACLAFTRKWLVIVPIIGTIGELAGWACRL DASYNPDDYNAFLGQIIALIIAPVFYSAQAYVLFHHIVLLYGPRFSVLSPKLYGGIFITF DIIALILQAAGGGVAGGADSGSQLQTQGSQIMLGGICFQLFTIVVFSILFSIFFIALYTH HPIRPSTGRREPDVPYTRVRTMSCNCLALATFAMVVRSVYRVIELAQGWEGAVITHEVWF DIFDFIPMIFTSALLIPSLYPALERSKLPFTEKHVSSMEYAPSEYGPSEYGPSINDITNM SAVIYPDSFLAPKDPKKSFSSEEL

>P40107

MSELKTGHAGHNPWASVANSGPISILSYCGSSILMTVTNKFVVNLKDFNMNFVMLFVQSL VCTITLIILRILGYAKFRSLNKTDAKNWFPISFLLVLMIYTSSKALQYLAVPIYTIFKNL TIILIAYGEVLFFGGSVTSMELSSFLLMVLSSVVATWGDQQAVAAKAASLAEGAAGAVAS FNPGYFWMFTNCITSALFVLIMRKRIKLTNFKDFDTMFYNNVLALPILLLFSFCVEDWSS VNLTNNFSNDSLTAMIISGVASVGISYCSGWCVRVTSSTTYSMVGALNKLPIALSGLIFF DAPRNFLSILSIFIGFLSGIIYAVAKQKKQQAQPLRK

>P09480

MGWPCRSIIPLLVWCFVTLQAATREQKQPHGFAEDRLFKHLFTGYNRWSRPVPNTSDVVI VKFGLSIAQLIDVDEKNQMMTTNVWLKQEWSDYKLRWNPEDFDNVTSIRVPSEMIWIPDI VLYNNADGEFAVTHMTKAHLFSNGKVKWVPPAIYKSSCSIDVTYFPFDQQNCKMKFGSWT YDKAKIDLENMEHHVDLKDYWESGEWAIINAIGRYNSKKYDCCTEIYPDITFYFVIRRLP LFYTINLIIPCLLISCLTVLVFYLPSDCGEKITLCISVLLSLTVFLLLITEIIPSTSLVI PLIGEYLLFTMIFVTLSIIITVFVLNVHHRSPSTHTMPHWVRSFFLGFIPRWLFMKRPPL LLPAEGTTGQYDPPGTRLSTSRCWLETDVDDKWEEEEEEEEEEEEEEEKAYPSRVPSG GSQGTQCHYSCERQAGKASGGPAPQVPLKGEEVGSDQGLTLSPSILRALEGVQYIADHLR AEDADFSVKEDWKYVAMVIDRIFLWMFIIVCLLGTVGLFLPPYLAGMI >P49333

MEVCNCIEPQWPADELLMKYQYISDFFIAIAYFSIPLELIYFVKKSAVFPYRWVLVQFGA
FIVLCGATHLINLWTFTTHSRTVALVMTTAKVLTAVVSCATALMLVHIIPDLLSVKTREL
FLKNKAAELDREMGLIRTQEETGRHVRMLTHEIRSTLDRHTILKTTLVELGRTLALEECA
LWMPTRTGLELQLSYTLRHQHPVEYTVPIQLPVINQVFGTSRAVKISPNSPVARLRPVSG
KYMLGEVVAVRVPLLHLSNFQINDWPELSTKRYALMVLMLPSDSARQWHVHELELVEVVA
DQVAVALSHAAILEESMRARDLLMEQNVALDLARREAETAIRARNDFLAVMNHEMRTPMH
AIIALSSLLQETELTPEQRLMVETILKSSNLLATLMNDVLDLSRLEDGSLQLELGTFNLH
TLFREVLNLIKPIAVVKKLPITLNLAPDLPEFVVGDEKRLMQIILNIVGNAVKFSKQGSI
SVTALVTKSDTRAADFFVVPTGSHFYLRVKVKDSGAGINPQDIPKIFTKFAQTQSLATRS
SGGSGLGLAISKRFVNLMEGNIWIESDGLGKGCTAIFDVKLGISERSNESKQSGIPKVPA
IPRHSNFTGLKVLVMDENGVSRMVTKGLLVHLGCEVTTVSSNEECLRVVSHEHKVVFMDV
CMPGVENYQIALRIHEKFTKQRHQRPLLVALSGNTDKSTKEKCMSFGLDGVLLKPVSLDN
IRDVLSDLLEPRVLYEGM

>05J0S5

MKSDNHSFLGDSPKAFILLGVSDRPWLELPLFVVLLLSYVLAMLGNVAIILASRVDPQLH SPMYIFLSHLSFLDLCYTTTTVPQMLVNMGSSQKTISYGGCTVQYAVFHWLGCTECIVLA AMALDRYVAICKPLHYAVLMHRALCQQLVALAWLSGFGNSFVQVVLTVQLPFCGRQVLNN FFCEVPAVIKLSCADTAVNDTILAVLVAFFVLVPLALILLSYGFIARAVLRIQSSKGRHK AFGTCSSHLMIVSLFYLPAIYMYLQPPSSYSQEQGKFISLFYSIITPTLNPFTYTLRNKD MKGALRRLLARIWRLCG

>P50676

MAQAQLPLDTPLSLPEHPKAWKWYDYFTFNVDHKVIGIQYLVTAFIFYLIGGLMAVAMRT ELATADSDFLDPNLYNAFLTNHGTIMIFLWVVPAAIGGFGNYLVPLMIGARDMAFPRLNA

LAFWLNPPAGALLLASFLFGGAQAGWTSYPPLSTITATTAQSMWILAIILVGTSSILGSV NFIVTIWKMKVPSMRWNQLPLFCWAMLATSLLALVSTPVLAAGLILLLFDINFGTSFYKP DAGGNVVIYQHLFWFYSHPAVYLMILPIFGIMSEVIPVHARKPIFGYQAIAYSSLAICCV GLFVWVHHMFTSGTPPWMRMFFTISTLIVAVPTGVKIFSWVATLWGGKIRLNSAMLFAIG LMSMFVLGGLSGVTLGTAPVDIHVHDTYYVVAHFHYVLFGGSVFGLYAGIYHWFPKMTGR LLDERLGILHFVLTLIGTNWTFLPMHELGLKGMPRRVAMYDPQFEPVNLICTIGAFVLAF SIIPFLINIIWSWNKGKIAGDNPWGGLTLEWTTSSPPLIENWEVLPVVTKGPYDYGIERR OESTDEDHDE

>P46000

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GELSTRGMILESFNFKGGKIYSNDEMLNDRLRSYTPTVRGIASSQAVVTIKQGGVVILQK
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SLSRANKYDKIHSGQSYGLKYSKNKVDTGTTVTLATYRYSTKDFYSFNDFVSKNDSVQYV
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WRLAIGSDSVINGAAVVETEFISGIKVRQGGETSLLGTAIVTSMQPYTENRIDLDTQNIP
DDLFISNASKKIVPEKGAVVPVKYNLFKGKQIVFSLKRYDGTPLPFGSVVSLVGSDSEIT
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MEQNGSFRVDSEFRYTLFPIVYSVIFVLGVVANGYVLWVFATLYPSKKLNEIKIFMVNLT VADLLFLMTLPLWIVYYSNEGDWIVHKFLCNLAGCLFFINTYCSVAFLGVITYNRYQAVA YPIKTAQATTRKRGITLSLVIWISIAATASYFLATDSTNVVPKKDGSGNITRCFEHYEPY SVPILVVHIFITSCFFLVFFLIFYCNMVIIHTLLTRPVRQQRKPEVKRRALWMVCTVLAV FVICFVPHHVVQLPWTLAELGYQTNFHQAINDAHQITLCLLSTNCVLDPVIYCFLTKKFR KHLSEKFYSMRSSRKCSRATSDTCTEVMMPANQTPVLPLKN >P50688

MAHAVQYGFQDAAAPIMEELLYFHDHTLMIVFMISSLVLYIISLMLSTELTHTSTMDAQE VETVWTILPAVILILIALPSLRILYMMDEIETPSLTLKTVGHQWYWSYEYTDYDKLCFDS YMTPTPDLEPGDLRLLEVDNRVVLPTEMSIRMLITSEDVLHSWTVPALGIKTDAIPGRLN QATLMTSRVGIYYGQCSEICGANHSYMPIVLELVPLKYFEEWLLKTL >P26489

MTDTPTQALPPKAPQAGPTVPGTVRRAVPGSAAAALVIAASHFAALSAFDPRILLVLLVI VVLASSGGLFAGLAATAVSALGLALRGLLSGDTVVADWQSLGLLTIAGAGIAVLGERLRR TRLDAVARDRALLAREAHLSSILDTVPDAMIVIDERGIMQSFSITAERLFGYSPSEVIGR NVSMLMPNPHRDQHDLYLSRYLTTGERRIIGIGRVVTGERKDGATFPMELAVGEMHSVSG RFFTGFIRDLTERQNTEARLQELQAELVHISRLTALGEMASTLAHELNQPLSAIANYIKG SRRLLDDGDPKRIPMLQGALDKAAEQALRAGQIIRRLRDFVSRGETERRVESLSKLIEEA SALALVGAKEHGIQVRYQIDTSCDLVLADKVQVQQVLLNLMRNALEAMMDASRRQLLVQT TPAEDDMVTVSVCDTGHGISDEMRAQLFTPFVTTKAQGMGVGLSISRTIIEAHGGRIWAE PNAGGGTIFRFTLRTVDEEA

>09C8E7

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SQIRGTENMFKGFCIDVFTAAVNLLPYAVPVKFIPYGNGKENPSYTHMVEMITTGNFDGV VGDVAIVTNRTKIVDFTQPYAASGLVVVAPFKKLNSGAWAFLRPFNRLMWAVTGCCFLFV GIVVWILEHRTNDEFRGPPKRQCVTILWFSFSTMFFAHRENTVSTLGRLVLIIWLFVVLI INSSYTASLTSILTVQQLSSPIKGIESLRERDDPIGYQVGSFAESYLRNELNISESRLVP LGTPEAYAKALKDGPSKGGVAAIVDERPYVELFLSSNCAYRIVGQEFTKSGWGFAFPRDS PLAIDLSTAILELAENGDLQRIHDKWLMKNACTLENAELESDRLHLKSFWGLFLICGVAC LLALFLYFVQIIRQLYKKPTDDAIARDQQQNHDSSSMRSTRLQRFLSLMDEKEESKHESK KRKIDGSMNDTSGSTRSRGFDRERSFNSVNPLD

>P13386

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>083746

MRIIPFSEFKDRIASGEIVKVVVGSPYFVGYTSARPAPSARGFSLLSEREAPTYHAIGVL SDSFLSMLDERQVVYSIKPRERNYLIETFQYLFPLLILFFVWRFFFKRMASNVSGLGSSI FSAGHARSAAVEEGKVTTRFADVAGVDEAKEELMEVVDFLKFPKKYTEIGGKIPRGVLLV GPPGTGKTLLARAVAGEASVPFFRISGSDFIEMFVGIGASRVRDLFKQAREKAPGIIFID ELDAIGKSRLNAIHSNDEREQTLNQLLVEMDGFDNTTGLILLAATNRPDVLDPALLRPGR FDRQVCVDRPDLKGREAILRIHAQNVKLAPEVDLKAVARITGGYSGADLANVVNEAALLA VRSGRAQVIETDLDEAVEKTMIGLQKKSRVIREEERRIIAYHETGHALAGTFTKGADKVH KITIIPRGTSALGYTFHIPEDDRHIVTEQQLLAEVDVLLSGRAAEFVAFGEVSTGAGNDI SRATDIVRKMITDYGMSEKFQNVALTRRGTGYLAEPQLAREYSECTQQYVDEEVARVLAE RYRAVVALLTEKKELLEYIATRLLERETIERDEFEEVIRCEHDLEGLKKRLSQQQEGASA PAOGOSPPS

>P10047

MHKSAMSVSQKLWPSLPLQHRIRRMWTYAALAFLAVVASLWTSGEIGQHRAEAALEEQA RMDVTLNAALLRTVLEKYRALPFVLSQDTALAAALVGNDAGTFERLSQKLEILAAGTKAA VIYVIDKDGIAVSASNWREPTSFVGNDYRFREYFQGAVERGQAEHFALGTVSKKPGLYIS QRISGSNGLLGVVVVKVEFDDVEADWNASGTPSYVVDERGIVLITSLPSWRFMTIGRIAE DRLTAIRESLQFGAAPLQPLPLDMVRNLGEGLDVVEIVMPGDAGKTRFLDVATSVPATGW HLQHLVALGPSVDAGIREARMLALLILLPLLAGAAFLLRRRHTIALRISSEQQAREELER RVVERTLDLSQARDRLQAEIIGHKSTEQKLQAVQQDLVQANRLAILGQVAAGVAHEINQP VATIRAYADNARTFLDRGQTAPAGENLESIAALTERIGSITEELKTFARKGRGSAEPTGL KDVIEGAVMLLRSRFAGRMDTLDIDLPPDELQVMGNRIRLEQVLINLLQNALEAVAPKAG EGRVEIRTSTDAGMVTVTVADNGPGIPTEIRKGLFTPFNTSKESGLGLGLVISKDIVGDY GGRMDVASDSGGTRFIVOLRKA

>P10049

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>POAAA1

MNIFEQTPPNRRRYGLAAFIGLIAGVVSAFVKWGAEVPLPPRSPVDMFNAACGPESLIRA AGQIDCSRNFLNPPYIFLRDWLGLTDPNAAVYTFAGHVFNWVGVTHIIFSIVFAVGYCVV AEVFPKIKLWQGLLAGALAQLFVHMISFPLMGLTPPLFDLPWYENVSEIFGHLVWFWSIE IIRRDLRNRITHEPDPEIPL

>09NP94

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>079875

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>P46026

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>P49374

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>P02980

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TIPFLIKVMVPGKSTKNTLDIVGIVLMSISIICFMLFTTNYNWTFLILFTIFFVIFIKHI
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FINYSSGVYSNILVAMAILIILCCLLTIIVFKRSEKQFE

MSNQMTDSTSAGSGTEHSVDTNTALKAGSPNDLKVSHEEDLNDLEKTAEETLQQKPAKEY IFVSLCCVMVAFGGFVFGWDTGTISGFVNQTDFLRRFGQEKADGSHYLSNVRTGLIVSIF NIGCAVGGIVLSNIGDRWGRRIGLITVIIIYVIGIIIQIASVDKWYQYFIGRIISGLGVG GITVLSPMLISETAPKHLRGTLVSCYQLMITFGIFLGYCTNYGTKNYSNSVQWRVPLGLC FAWAIFMVLGMMFVPESARFLVETDQIEEARKSLAKTNKVSIDDPVVKYELLKIQSSIEL EKAAGNASWGELITGKPSMFRRTLMGIMIQSLQQLTGDNYFFYYGTTIFQSVGMDDSFET SIVLGIVNFASTFFALYTVDHFGRRNCLLYGCVGMVACYVVYASVGVTRLWPDGPDHPDI SSKGAGNCMIVFACFYIFCFATTWAPIAYVVISESYPLRVKGKAMAIASASNWIWGFLIG FFTPFITSAIHFYYGYVFMGCMVFAFFYVYFFVPETKGLTLEEVNEMYSEGVLPWKSSSW VPSSRRGAEYDVDALQHDDKPWYKAML

>P53259

>P02982

>P02983

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CALRWGSFDYAAHLGGSMMGVLYGWYISKAVEKQRQRRLQAAGRWF
>P29057

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>POAAC6

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>012328

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>09Z0S5

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>P23174

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>P30391

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>090ZI9

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TITSWYSPDAKFQKVSSKWLAVWFKMGSSWLCLLLYLWTLVAPLVLTGRDFS > 005962

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>Q8NCM2

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>POAAD2

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>08BM96

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ETSLS

>001926

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>099385

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>P32300

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>P78831

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>Q92847

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>P08104

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>P42867

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>001931

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>028005

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>P0AAG5

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>005143

>012361

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>Q86VI4

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>P76169

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>080WK7

>P45428

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>Q25479

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>012372

>P21906

>002667

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DN

>P25116

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>P18696

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>P21917

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>Q93XM7

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>Q9UKG4

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>P04950

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>055653

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>Q99PD7

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>095500

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>P31712

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>P27843

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>095528

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>P08183

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>P37617

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>P37619

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>P08194

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>Q49SQ1

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>052351

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>041933

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>P37630

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>Q7TSN4

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>Q7TSN5

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>08K9L4

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>P14772

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>09HBX8

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NSFCFLVVAGAYIKLYCDLPRGDFEAVWDCAMVRHVAWLIFADGLLYCPVAFLSFASMLG
LFPVTPEAVKSVLLVVLPLPACLNPLLYLLFNPHFRDDLRRLRPRAGDSGPLAYAAAGEL
EKSSCDSTQALVAFSDVDLILEASEAGRPPGLETYGFPSVTLISCQQPGAPRLEGSHCVE
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>P37642

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>09LIK7

>P07561

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>P21210

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>09DCP2

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>POAAS3

MELMVVHPHIFWLSLGGLLLAAEMLGGNGYLLWSGVAAVITGLVVWLVPLGWEWQGVMFA ILTLLAAWLWWKWLSRRVREQKHSDSHLNQRGQQLIGRRFVLESPLVNGRGHMRVGDSSW PVSASEDLGAGTHVEVIAIEGITLHIRAVS

>P54642

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>P37662

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>000619

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>P72292

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MKKILEAILAINLAVLSCIVFINIILRYGFQTSILSVDELSRYLFVWLTFIGAIVAFMDN AHVQVTFLVEKLSPAWQRRVALVTHSLILFICGALAWGATLKTIQDWSDYSPILGLPIGL MYAACLPTSLVIAFFELRHLYQLITRSNSLTSPPQGA >P23913

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>Q03965

MAFTTKMQRSAVASRSSTVRVQAAGKTVSGSKTVSGGKTVGSASAESRRVAEVQAYLATL PGCGVESGPFKGVWDPLSLAATATVGDVRRWRESEITHGRVAMLAALGFVVGEQLEDFPA FFNFDGHITGQAIKQFDQVQQGFWEPLLIAIGLAESYRVSLGWATPTGTGFNNLKDEYDL GNLYFDPLGLKPEDPEELRELQTKELNNGRLAMIAIAGFVLQEVAEPGVEIFQHLFFTIE KDIVEEIDIIEKDLGLPPSFPVPTLPNLSS

>P37683

>P37674

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>P24585

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>P21245

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>001290

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>P54678

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>091559

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>088397

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>P0AB67

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>P41587

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>P23945

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>Q9SZR1

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>P41595

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>P39603

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>096TW8

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>006551

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>POAAZO

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>Q9NPR9

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>P27178

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(6) 151 lipid-anchor membrane proteins

>P18791

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>P01119

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>P53994

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>006282

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>Q02937

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>P26093

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>007085

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>P87068

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>P18149

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>P21875

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>075695

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>Q9YGL6

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>P09615

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>P70900

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>P70901

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>P70904

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>080HV3

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>082481

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>P12624

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>P29721

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>009914

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>P01120

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>P0A3P1

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>013928

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>096390

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>P14013

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>030405

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>P79348

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>09SW27

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>P41052

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>Q8LCS8

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>09MAB9

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>003751

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>054313

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>P20440

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>091XV3

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>P44833

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>P11910

>076081

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>P41069

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>P23640

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>000194

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>P10324

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>D04846

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>003113

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>P31304

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>P22279

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>P23291

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>P61320

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>P23292

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>P13670

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>Q47474

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>P0A139

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>008137

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>007337

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>P08631

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>Q3UNH4 MRDCCSS

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>09UP65

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>P62343

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>P0A3S7

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>P34726

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>043687

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>P26493

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>028175

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>P77774

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>P22280

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>073557

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>P21625

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>P23440

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>P40710

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>P43262

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>Q37935

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>009090

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>09LSD8

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>P32777

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>P13979

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>096FZ7

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>09S142

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>Q8C180

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>P51147

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>P34164

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>081223

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>P11221

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>070443

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>014642

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TFLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGPSALFASRVRPGQR
VYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSWAH
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>043559

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>062226

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>P13980

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>P60905

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>081445

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>09H4M9

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>P80724

 $\label{eq:grkkkkgynvndekakdkkaegagteeegtpkeneaqaaaetpevkegkeekpek \\ \text{DaQdttkpedkegekdaeaakedapkaepeptegaegkpeppkdaeqepaaasgpstggd} \\ \text{Apkaseaeaaepaaptkddkskeggdatkteapaapaaqetksdgapasdskpssteaap} \\ \text{SSKetpaateapsstpkaqapaapadevkpaetpaansdqtvavke} \\$

>P18852

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>P69776

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>P51153

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>P51154

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>P0A3N8

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>P22735

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>P31484

 $\label{thm:mikpliavalaavtltg} $$ MIKPLIAVAIAAVTLTGCANNNTLSGDVFSASQAKQVQTVTYGTLLSVRPVTIQGGDDNN $$ VMGAIGGAVLGGFLGNTVGGGTGRSLATAAGAVAGGMAGQGVQGAMNRTDGVQLEVRKDD $$ GTTILVVQKQGPTRFSVGQRVMLASSGSTVTVSPR$

>P70897

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>055074

>P70899

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>P27601

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>094486

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>P07643

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>Q50367

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>08GWJ6

MAGEEDWIELKFRLADGTDIGPSKYNQSMTVSSLKEKLISQWPKDKENTPKTVNDMKLIN AGKILENNRTLAESRLPVCELPGMIITMHIVLRLPTLDKKSEKLQNDPPMKNRCVCTIL >P33950

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>P00387

GAQLSTLGHMVLFPVWFLYSLLMKLFQRSTPAITLESPDIKYPLRLIDREIISHDTRRFR FALPSPQHILGLPVGQHIYLSARIDGNLVVRPYTPISSDDDKGFVDLVIKVYFKDTHPKF PAGGKMSQYLESMQIGDTIEFRGPSGLLVYQGKGKFAIRPDKKSNPIIRTVKSVGMIAGG TGITPMLQVIRAIMKDPDDHTVCHLLFANQTEKDILLRPELEELRNKHSARFKLWYTLDR APEAWDYGQGFVNEEMIRDHLPPPEEEPLVLMCGPPPMIQYACLPNLDHVGHPTERCFVF >Q8WTQ7

MVDMGALDNLIANTAYLQARKPSDCDSKELQRRRRSLALPGLQGCAELRQKLSLNFHSLC

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>004968

MKKYLLGIGLILALIACKQNVSSLDEKNSVSVDVPGGMKVLVSKEKNKDGKYDLMATVDN VDLKGTSDKNNGSGILEGVKADKSKVKLTVADDLSKTTLEVLKEDGTVVSRKVTSKDKST TEAKFNEKGELSEKTMTRANGTTLEYSQMTNEDNAAKAVETLKNGIKFEGNLASGKTAVE IKEGTVTLKREIDKNGKVTVSLNDTASGSKKTASWQESTSTLTISANSKKTKDLVFLTNG TITVQNYDSAGTKLEGSAAEIKKLDELKNALR

(7) 182 Gpi-anchor membrane proteins

>P07140

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WNPNTNVSEDCLYINVWAPAKARLRHGRGANGGEHPNGKQADTDHLIHNGNPQNTTNGLP
ILIWIYGGGFMTGSATLDIYNADIMAAVGNVIVASFQYRVGAFGFLHLAPEMPSEFAEEA
PGNVGLWDQALAIRWLKDNAHAFGGNPEWMTLFGESAGSSSVNAQLMSPVTRGLVKRGMM
QSGTMNAPWSHMTSEKAVEIGKALINDCNCNASMLKTNPAHVMSCMRSVDAKTISVQQWN
SYSGILSFPSAPTIDGAFLPADPMTLMKTADLKDYDILMGNVRDEGTYFLLYDFIDYFDK
DDATALPRDKYLEIMNNIFGKATQAEREAIIFQYTSWEGNPGYQNQQQIGRAVGDHFFTC
PTNEYAQALAERGASVHYYYFTHRTSTSLWGEWMGVLHGDEIEYFFGQPLNNSLQYRPVE
RELGKRMLSAVIEFAKTGNPAQDGEEWPNFSKEDPVYYIFSTDDKIEKLARGPLAARCSF
WNDYLPKVRSWAGTCDGDSGSASISPRLQLLGIAALIYICAALRTKRVF
>013421

MALQRLDPCWSCGDRPGSLLFLLFSLGWVHPARTLAGETGTESAPLGGVLTTPHNISSLS PRQLLGFPCAEVSGLSTERVRELAVALAQKNVKLSTEQLRCLAHRLSEPPEDLDALPLDL LLFLNPDAFSGPQACTRFFSRITKANVDLLPRGAPERQRLLPAALACWGVRGSLLSEADV RALGGLACDLPGRFVAESAEVLLPRLVSCPGPLDQDQQEAARAALQGGGPPYGPPSTWSV STMDALRGLLPVLGQPIIRSIPQGIVAAWRQRSSRDPSWRQPERTILRPRFRREVEKTAC PSGKKAREIDESLIFYKKWELEACVDAALLATQMDRVNAIPFTYEQLDVLKHKLDELYPQ GYPESVIQHLGYLFLKMSPEDIRKWNVTSLETLKALLEVDKGHEMSPQAPRRPLPQVATL IDRFVKGRGQLDKDTLDTLTAFYPGYLCSLSPEELSSVPPSSIWAVRPQDLDTCDPRQLD VLYPKARLAFQNMNGSEYFVKIQSFLGGAPTEDLKALSQQNVSMDLATFMKLRTDAVLPL TVAEVQKLLGPHVEGLKAEERHRPVRDWILRQRQDDLDTLGLGLGQGGIPNGYLVLDLSVQ ETLSGTPCLLGPGPVLTVLALLLASTLA

>P05186

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>P05187

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MELRARGWWLLCAAAALVACARGDPASKSRSCGEVRQIYGAKGFSLSDVPQAEISGEHLR ICPQGYTCCTSEMEENLANRSHAELETALRDSSRVLQAMLATQLRSFDDHFQHLLNDSER TLQATFPGAFGELYTQNARAFRDLYSELRLYYRGANLHLEETLAEFWARLLERLFKQLHP QLLLPDDYLDCLGKQAEALRPFGEAPRELRLRATRAFVAARSFVQGLGVASDVVRKVAQV PLGPECSRAVMKLVYCAHCLGVPGARPCPDYCRNVLKGCLANQADLDAEWRNLLDSMVLI TDKFWGTSGVESVIGSVHTWLAEAINALQDNRDTLTAKVIQGCGNPKVNPQGPGPEEKRR RGKLAPRERPPSGTLEKLVSEAKAQLRDVQDFWISLPGTLCSEKMALSTASDDRCWNGMA RGRYLPEVMGDGLANQINNPEVEVDITKPDMTIRQQIMQLKIMTNRLRSAYNGNDVDFQD ASDDGSGSGSGDGCLDDLCGRKVSRKSSSSRTPLTHALPGLSEQEGQKTSAASCPQPPTF LLPLLLFLALTVARPRWR

>000689

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>Q63691

MKLMLGLLLLPLTLVHASPATPEPCELDQDEESVRCYCNFSDPQPNWSSAFLCAGEDVEF YGGGRSLEYLLKRVDTEANLGQYTDIIRSLPLKRLTVRSARVPTQILFGTLRVLGYSGLR ELTLENLEVTGTALSPLLDATGPDLNTLSLRNVSWATTDTWLAELQQWLKPGLKVLSIAQ AHSLNFSCKQVGVFPALATLDLSDNPELGEKGLISALCSHKFPTLQVLALRNAGMETTSG VCSALAAARVPLQALDLSHNSLRDTAGAPSCDWPSQLNSLNLSFTGLEHVPKGLPAKLSV LDLSYNRLDRKPRPEELPEVGSLSLTGNPFLHSESQSEAYNSGVVIATALSPGSAGLSGT LALLLGHRLFV

>P21588

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>P25291

MVGSYVLWLALASCILTLASPEQQGNRNLINTRSYDPCQNYTLLDEPSRSTENTEGSQVC DKDKHGWYRFVGDGGVRMPETCVPMYRCQTDAPLWLNGTHPTLAEGIVNRTACAHWSGNC CLWKTVVQVKACPGEFHVYRLEGTPKCSLRYCTDASTATDKCKNLCRPEEACSFLNGTWD CFCRSDLNSSDVHSLQPRLNCGAKEIQVSLDKCQLGGLGFGDEVIAYLRDWNCSNMMQRE ERNWISVTSPTQARACGNILERNGTHAIYKNTLSLANEFIIRDTILNINFQCAYPLDMKV SLQTALHPIVSSLNISVDGEGEFTVRMALFQDQSYISPYEGAAAVLAVESMLYVGAILEK GDTSRFNLLLRNCYATPTKDKTDPVKYFIIRNSCPNQYDSTIHVEENGVSSESRFSVQMF MFAGNYDLVFLHCEIHLCDSLNEQCQPCCSRSQQRSEIVALNPARVLDLGPITRRSSASV DITDGTPSTAGFLLAWPMLLLPILLAELF

>09LZX4

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>080517

MAMNGLSKMAVAAATALLLVLTIVPGAVAVTYTIEWTTGVDYSGWATGKTFRVGDILEFK YGSSHTVDVVDKAGYDGCDASSSTENHSDGDTKIDLKTVGINYFICSTPGHCRTNGGMKL AVNVVAGSAGPPATPTPPSSTPGTPTTPESPPSGGSPTPTTPTPGAGSTSPPPPPKASGA SKGVMSYVLVGVSMVLGYGL

>P11602

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YPVSAAYTKLVGKDVAMFIDWMEEKFNYPLNNVHLLGYSLGAHAAGIAGSLTKKKVNRIT
GLDPAGPTFEYADAPIRLSPDDADFVDVLHTYTRGSPDRSIGIQKPVGHIDIYPNGGGFQ
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LCLSCRKNRCNNLGYKVNRVRTKRNTKMYLKTRAQMPYKVFHYQVKIHFFGKTNVTKVDQ
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SKENSAHESA

>014798

MARIPKTLKFVVVIVAVLLPVLAYSATTARQEEVPQQTVAPQQQRHSFKGEECPAGSHRS EHTGACNPCTEGVDYTNASNNEPSCFPCTVCKSDQKHKSSCTMTRDTVCQCKEGTFRNEN SPEMCRKCSRCPSGEVQVSNCTSWDDIQCVEEFGANATVETPAAEETMNTSPGTPAPAAE ETMNTSPGTPAPAAEETMTTSPGTPAPAAEETMTTSPGTPASSHY LSCTIVGIIVLIVLIVFV

>P91885

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>009553

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FMSECEADAARGACTDKCKTLLNQTIETSVGSVFSNCTCTARDDQLCTNLKDNLLGVCLK NTPGVTLSPSDNSITDAPGGNDLADSSVGHGFNILSAISVYLLTVLVF >P40244

MVKSHIGSWLLVLFVATWSDIGFCKKRPKPGGGWNTGGSRYPGQGSPGGNRYPPQGGGGW GQPHGGGWGQPHGGGWGQPHGGGWGQGGGSHGQWGKPSKPKTNMKHVAGAA AAGAVVGGLGGYMLGSAMSRPLIHFGNDYEDRYYRENMYRYPNQVYYKPVDQYSNQNNFV HDCVNITVKQHTVTTTTKGENFTETDMKIMERVVEQMCVTQYQRESEAYYQRGASAILFS PPPVILLISLIILIVG

>P19813

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LAFLRENIETLALELDFWAENRTISVSSGGNSHTLNRYHVPYGGPRPESYSKDTELAHTL
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SGFYSRLGNESQATKYRNLRAQRIAALTALLWDEDKGAWFDYDLENQKKNHEFYPSNLTP
LWAGCFSDPAIADKALQYLQDSQILNHRHGIPTSLQNTGQQWDFPNAWAPLQDLVIRGLA
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>060935

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>P34116

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LSFNVTIPDDTIFPASLETFSIYKPSVPLSIAIFGSNIKNLYVNSPLTGYSIPTLINVNP
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>P31428

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>04WFV6

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>Q94CD8

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>063198

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>P31358

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>062682

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>P49616

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 $\label{thm:conft} FHSNQTFHFLKCCNFTQCNGGPVLDLQSLPPNGFQCYSCEGNEHLWMFLRRDVLIDCRGP\\ MNQCLEATGLDVLGNRSYTVRGCATASWCQGSHVADSFQTHVNLSISCCNGSGCNRPTGG\\ APGPGPAHLILIASLLLTLRLWGIPLWT$

>P32736

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>055162

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 $\label{thm:constraint} MKAVLLALLMAGLALQPGTALLCYSCKAQVSNEDCLQVENCTQLGEQCWTARIRAVGLLT\\ VISKGCSLNCVDDSQDYYVGKKNITCCDTDLCNASGAHALQPAAAILALLPALGLLLWGP\\ GOL$

>09SZ11

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SSVLVDFKKQSQYETVYKVEENIRDILDSAIEDIKKFADAVVIQKLSVFPVAQSFITTQT
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>026474

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>Q9C7F7

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>P10675

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TEMKOLTLFAPSNAAWSETTANNLLTDRKKFREILNLHIVAEKLSIESIVEQNVKQVPTM ADRKNLYFNVVHGPAGNKTVTVEGGGVNATIVQPNIAATNGMVHIINKILGVPYTTVKEK LRTDPMLNKTYHLGEMSDFNKMLDEKHTKFTYFVPRDLAWKKMEVRDPSAHRKLFMKEFT YQVKQILERHLVISDRVYTMGALKKLASNTSSVLPTMRDHLRLRVRETEKSYYVEWQGEW THIFRPDVECTNGIIHVMDYVFMKEGDIVVGGPDGAGQQVASFAVVASAHLVVLATVRWL LH

>Q4WCX9

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>08JG54

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>012355

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>Q93070

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>008602

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>Q8R4F1

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>Q06084

>P14384

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>P20946

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>013449

 $\label{thm:colling} \begin{substituted the temperature of the temper$

>P20947

MWIILALLTLAGSRVAHGAGKNVNGVEFNLFCHIANMLNAEKIEDDKTDGLDRQAAEAWT AIDSIFTVTANESYYSEGPASAANTTDENQDAKPERVAKWVQKRNQIDKIAAPGNEKNGK YARRPRDRMSAATGAKLDTVFTLASEARVRLMQIDTEIATNKQEIRQQLGLHCSEGQGKG QSRNQHPDNAAFASDYSTACKGSTGPGKSLANDLVCICSTDTSQAQSTLQMCTSIDDANS LFSTLHKRSQCQGDFPCPHRVCAKTAETSELTETNINNCVTAFTATLGRHTKSSATNEGA YVFGSGQNSGDECNGGAATGQSCVSYHDLITAKSGTTLSGAITRLKQLQIAKAKLKARRL LLQNRERQQTRLMALADKMQELYQEALHDEVQLRKEAQNKPQETPDSDKQKACEKYHNKS KECKENGCQWSGTEETIGKCEAKPKAGTEAATTGPGERDAGATANTTGSSNSFVIKTSPL LFAFLLF

>P20949

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>P26327

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>P36091

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>P27274

 $\label{thm:condition} \begin{tabular}{ll} MRARRGFILLLLLAVLCSTGVSLRCYNCLDPVSSCKTNSTCSPNLDACLVAVSGKQVYQQ\\ CWRFSDCNAKFILSRLEIANVQYRCCQADLCNKSFEDKPNNGAISLLGKTALLVTSVLAA\\ ILKPCF\\ \end{tabular}$

>063064

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>Q9M088

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>P15693

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>062680

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>P58019

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>P20950

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>P19111

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>P83456

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KILRRNPNGFYLLVEGGRIDHGHHEGKDKQAIHEAVEMDRAIGRADLMTSTSDTLTVVTA
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>P38566

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GYYLK

>P26330

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>P26331

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>P38568

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>P26333

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>P10252

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>08GUL8

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>Q9SSG3

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>P29240

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>P06014

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>Q8N6Q3

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>013157

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>P21978

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>055186

 $\label{thm:convex} {\tt MRAQRGLILLLLLAVFCSTAVSLTCYHCFQPVVSSCNMNSTCSPDQDSCLYAVAGMQVY} \\ {\tt QRCWKQSDCHGEIIMDQLEETKLKFRCCQFNLCNKSDGSLGKTPLLGTSVLVAILNLCFLSHL} \\ {\tt SHL}$

>005588

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>Q62997

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>P53379

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>P47178

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>P23505

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>Q9GZZ7

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>P12729

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>064389

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>09T076

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>P02896

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>09SK27

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>028896

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IQLFYLS

>P43477

 $\label{thm:local_match} $\operatorname{MWTGWWLWPLVAVCTADQFRDNAVRLMQSTPVIDGHNDLPWALLKKFNNQLQDPRANLTS}$$ LNSTHTNIPKLKAGFVGAQFWSAYTPCDTQNKDSVKRTVEQIDVIQRMCQLYPETFLCVTDSAGIQQAFQEGKVASLVGVEGGHSIDSSLGVLRALYHLGMRYLTLTHSCNTPWADNWLVDTGEDKAQSQGLSSFGQSVVKEMNRLGIIIDLAHVSVATMEAALQLSKAPVIFSHSSAYSLCHHRRNVPDHVLQLVKQTGSLVMVNFYNDYVSCKAEANLSQVADHLDYIKKVAGAGAVGFGGDYDGVSRLPSGLEDVSKYPDLVAELLRRQWTEEEVRGALAENLLRVFKAVEQASDHKQAPGEEPIPLGQLEASCRTKYGYSGTPSLHLQPGSLLASLVTLLLSLCLL$

 ${\tt MKTALLVLLVLAVATSPAWALRCHVCTNSANCKNPQVCPSNFYFCKTVTSVEPLNGNLVRKECANSCTSDYSQQGHVSSGSEVTQCCQTDLCNERLVSAAPGHALLSSVTLGLATSLSLLTVMALCL}$

>P23223

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>Q07488

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>095980

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>Q93Z08

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>P20827

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>Q94F08

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>011000

>P21840

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>09NPA2

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>09Z2S9

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>P04933

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>P04934

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>086UN2

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>P16444

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>086UN3

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>075015

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>P24823

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>090UG3

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>P52803

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>P08571

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>09ZU91

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>P10279

 $\label{thm:mass} $\operatorname{MVKSHIGSWILVLFVAMWSDVGLCKKRPKPGGGWNTGGSRYPGQGSPGGNRYPPQGGGGWGQPHGGGWGQPHGGGWGQPHGGGWGQGTHGQWNKPSKPKTNM $\operatorname{MVAGAAAAGAVVGGLGGYMLGSAMSRPLIHFGSDYEDRYYRENMHRYPNQVYYRPVDQY $\operatorname{NQNNFVHDCVNITVKEHTVTTTTKGENFTETDIKMMERVVEQMCITQYQRESQAYYQRG $\operatorname{ASVILFSSPPVILLISFLIFLIVG}$

>P97527

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>P22146

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>P97528

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>Q9R0S3

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>08X176

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>064253

 $\label{thm:convergence} \begin{tabular}{l} MRVFLPVLLAALLGMEQVHSLMCFSCTDQKNNINCLWPVSCQEKDHYCITLSAAAGFGNV\\ NLGYTLNKGCSPICPSENVNLNLGVASVNSYCCQSSFCNFSAAGLGLRASIPLLGLGLLL\\ SLLALLOLSP \end{tabular}$

>P27590

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>096GW7

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>09FJ62

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>P08796

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>Q03643

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>Q8LC95

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>Q95211

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>04WI46

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>Q03646

>095274

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>04WLB9

>062643

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>P50496

>P51655

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>P48794

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>09FHD4

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>Q4WNS8

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>014210

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>094BT2

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>P55290

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>Q62803

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>P13265

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>013547

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>P07208

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>P05533

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>P17981

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>Q9VN14

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>Q9DA79

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>010588

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>Q9FM65

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>Q9BZM5

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>Q9BZM6

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>P27177

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>09SJ81

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>P01831

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>Q8WWA0

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>075326

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LDKRDCENYITLLERRSEGLLACGTNARHPSCWNLVNGTVVPLGEMRGYAPFSPDENSLV
LFEGDEVYSTIRKQEYNGKIPRFRRIRGESELYTSDTVMQNPQFIKATIVHQDQAYDDKI
YYFFREDNPDKNPEAPLNVSRVAQLCRGDQGGESSLSVSKWNTFLKAMLVCSDAATNKNF
NRLQDVFLLPDPSGQWRDTRVYGVFSNPWNYSAVCVYSLGDIDKVFRTSSLKGYHSSLPN
PRPGKCLPDQQPIPTETFQVADRHPEVAQRVEPMGPLKTPLFHSKYHYQKVAVHRMQASH
GETFHVLYLTTDRGTIHKVVEPGEQEHSFAFNIMEIQPFRRAAAIQTMSLDAERRKLYVS
SQWEVSQVPLDLCEVYGGGCHGCLMSRDPYCGWDQGRCISIYSSERSVLQSINPAEPHKE
CPNPKPDKAPLQKVSLAPNSRYYLSCPMESRHATYSWRHKENVEQSCEPGHQSPNCILFI
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LGLLVH

(8) 610 peripheral membrane proteins

>085093

MSALRLRKVDALLAQATRELGAGQSLGFSAAGQDAELTLLPLLADAGEPAGAVWLSTAIG PLLLSDAEALLSLLGDIPLTLGGEQQAWYWQLFNQRLSPTVARLLAPVEPLHNKPQAPTL GCRVQIRRGGEQLHAHMHATPDTLLRLLRSASWQARTRTVDESWSVASPLIIGEMSLTRE QIASLRPGDVVLPAHCQFDSAGQGFLSLAGRQWAAQTDQHAQRLFLRLSHEEHRHHEY >09SE83

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>P00174

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>09LVM5

MAMEIGEDEWKVCCGSSEFAKQMSTSGPLTSQEAIYTARDIWFNQVNVTDWLEAFSAHPQ IGNTPSPSINSDFARRSVSEQSTAFATTSASALQELAEWNVLYKKKFGFIFIICASGRTH AEMLHALKERYENRPIVELEIAAMEQMKITELRMAKLFSDKAKVISETDSSSSPVSTKPQ DRLRIIGGHLNVAAEAKAPKRSRPPITTHVLDVSRGAPAAGVEVHLEVWSGTTGPSFVHG GGGVWSSVGTSATDRDGRSGPLMDLVDALNPGTYRISFDTAKYSPGCFFPYVSIVFQVTE SQKWEHFHVPLLLAPFSFSTYRGS

>070537

MDLTSVLSLETWVLLAISLVLLYRLGTHKYDIFKKQGIPGPKPLPFLGNVLNYYKGIWTF DIECHKKYGKIWGLFEGQRPLFTVTDTEMIKNVLVKECYSIFTNRRDFGPVGIMSKAVSI SKDEEWKRIRALLSPTFTSGKLKEMFPIIEQYGDILVKFLRREAEKGNPVTTKEVFGAYS MDVITSTAFGVSVDSLNNPKDLLWKGRKLLRFDFFDPLFLSVVLFPFLIPIYEKLNVSMF PKDSISFFRKFVDKTKENRLDYNQKHRVDFLQLMMNSHDNSKDSHKALSDMEIIAQSIIF IFAGYDTTSSTLSFALYLLATHPDVQKKLQEEIDIALPNKARPSYDKVMEMEYLDMVLNE TLRLYPIGSRLERVCKQDVEMDGVFVPKGSIVMVPVFALHYDPQYWPEPEKFRPERFSKE NKGSIDPYIFLPFGNGPRNCIGMRFALMNMKLALTKVLQNFSLQPCKETQIPMKLSRKAM LQPEKPIILKVVPRDAIITG

>P40961

MSNSAKLIDVITKVALPIGIIASGIQYSMYDVKGGSRGVIFDRINGVKQQVVGEGTHFLV PWLQKAIIYDVRTKPKSIATNTGTKDLQMVSLTLRVLHRPEVLQLPAIYQNLGLDYDERV LPSIGNEVLKSIVAQFDAAELITQREIISQKIRKELSTRANEFGIKLEDVSITHMTFGPE FTKAVEQKQIAQQDAERAKFLVEKAEQERQASVIRAEGEAESAEFISKALAKVGDGLLLI RRLEASKDIAQTLANSSNVVYLPSQHSGGGNSESSGSPNSLLLNIGR

>P07000

MFQQQKDWETRENAFAAFTMGPLTDFWRQRDEAEFTGVDDIPVRFVRFRAQHHDRVVVIC PGRIESYVKYAELAYDLFHLGFDVLIIDHRGQGRSGRLLADPHLGHVNRFNDYVDDLAAF WQQEVQPGPWRKRYILAHSMGGAISTLFLQRHPGVCDAIALTAPMFGIVIRMPSFMARQI LNWAEAHPRFRDGYAIGTGRWRALPFAINVLTHSRQRYRRNLRFYADDPTIRVGGPTYHW VRESILAGEQVLAGAGDDATPTLLLQAEEERVVDNRMHDRFCELRTAAGHPVEGGRPLVI KGAYHEILFEKDAMRSVALHAIVDFFNRHNSPSGNRSTEV

>Q05919

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>005779

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>08C0E2

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>P01123

 $\label{thm:colling} $$\operatorname{MNSEYDYLFKLLLIGNSGVGKSCLLLRFSDDTYTNDYISTIGVDFKIKTVELDGKTVKLQ}$$ $$\operatorname{IWDTAGQERFRTITSSYYRGSHGIIIVYDVTDQESFNGVKMWLQEIDRYATSTVLKLLVG}$$ $$\operatorname{NKCDLKDKRVVEYDVAKEFADANKMPFLETSALDSTNVEDAFLTMARQIKESMSQQNLNE}$$ $$\operatorname{TTQKKEDKGNVNLKGQSLTNTGGGCC}$$$

>09UN19

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>Q9UBT7

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>013853

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>P52332

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>P00180

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TTSTTLRYGLLLMKHPEVIAKVQEEIERVIGRHRSPCMQDRSRMPYTDATVHEIQRYIN
LIPNNVPRATTCNVKFRSYLIPKGTAVITSLTSMLYNDKEFPNPDRFDPGHFLDASGKFR
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PLYQLSFIPA

>P17710

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>Q07528

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>P30414

MGAODRPOCHFDIEINREPVGRIMFOLFSDICPKTCKNFLCLCSGEKGLGKTTGKKLCYK GSTFHRVVKNFMIQGGDFSEGNGKGGESIYGGYFKDENFILKHDRAFLLSMANRGKHTNG SOFFITTKPAPHLDGVHVVFGLVISGFEVIEQIENLKTDAASRPYADVRVIDCGVLATKS IKDVFEKKRKKPTHSEGSDSSSNSSSSSESSESELEHERSRRRKHKRRPKVKRSKKRRK EASSSEEPRNKHAMNPKGHSERSDTNEKRSVDSSAKREKPVVRPEEIPPVPENRFLLRRD MPVVTAEPEPKIPDVAPIVSDQKPSVSKSGRKIKGRGTIRYHTPPRSRSCSESDDDDSSE TPPHWKEEMORLRAYRPPSGEKWSKGDKLSDPCSSRWDERSLSORSRSWSYNGYYSDLST ARHSGHHKKRRKEKKVKHKKKGKKOKHCRRHKOTKKRRILIPSDIESSKSSTRRMKSSCD RERSSRSSLSSHHSSKRDWSKSDKDVQSSLTHSSRDSYRSKSHSQSYSRGSSRSRTASK SSSHSRSRSKSRSSSKSGHRKRASKSPRKTASQLSENKPVKTEPLRATMAQNENVVVQPV VAENIPVIPLSDSPPPSRWKPGQKPWKPSYERIQEMKAKTTHLLPIQSTYSLANIKETGS SSSYHKREKNSESDQSTYSKYSDRSSESSPRSRSRSSRSRSYSRSYTRSRSLASSHSRSR SPSSRSHSRNKYSDHSQCSRSSSYTSISSDDGRRAKRRLRSSGKKNSVSHKKHSSSSEKT LHSKYVKGRDRSSCVRKYSESRSSLDYSSDSEQSSVQATQSAQEKEKQGQMERTHNKQEK NRGEEKSKSERECPHSKKRTLKENLSDHLRNGSKPKRKNYAGSKWDSESNSERDVTKNSK NDSHPSSDKEEGEATSDSESEVSEIHIKVKPTTKSSTNTSLPDDNGAWKSSKQRTSTSDS EGSCSNSENNRGKPOKHKHGSKENLKREHTKKVKEKLKGKKDKKHKAPKRKOAFHWOPPL EFGEEEEEIDDKOVTOESKEKKVSENNETIKDNILKTEKSSEEDLSGKHDTVTVSSDLD OFTKDDSKLSISPTALNTEENVACLONIOHVEESVPNGVEDVLOTDDNMEICTPDRSSPA KVEETSPLGNARLDTPDINIVLKQDMATEHPQAEVVKQESSMSESKVLGEVGKQDSSSAS LASAGESTGKKEVAEKSQINLIDKKWKPLQGVGNLAAPNAATSSAVEVKVLTTVPEMKPQ GLRIEIKSKNKVRPGSLFDEVRKTARLNRRPRNQESSSDEQTPSRDDDSQSRSPSRSRSK SETKSRHRTRSVSYSHSRSRSRSSTSSYRSRSYSRSRSRGWYSRGRTRSRSSSYRSYKSH RTSSRSRSSSYDPHSRSRSYTYDSYYSRSRSRSRSQRSDSYHRGRSYNRRSRSCRSYG SDSESDRSYSHHRSPSESSRYS

>005785

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>P32959

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>039214

MASATVDFGIGRILSVLENETLLLSGVHGEIDKMKKELLIMKSFLEDTHKHGGNGSTTTT TOLFOTFVANTRDLAYOIEDILDEFGYHIHGYRSCAKIWRAFHFPRYMWARHSIAOKLGM VNVMIQSISDSMKRYYHSENYQAALLPPIDDGDAKWVNNISESSLFFSENSLVGIDAPKG KLIGRLLSPEPORIVVAVVGMGGSGKTTLSANIFKSOSVRRHFESYAWVTISKSYVIEDV FRTMIKEFYKEADTOIPAELYSLGYRELVEKLVEYLOSKRYIVVLDDVWTTGLWREISIA LPDGIYGSRVMMTTRDMNVASFPYGIGSTKHEIELLKEDEAWVLFSNKAFPASLEOCRTO NLEPIARKLVERCQGLPLAIASLGSMMSTKKFESEWKKVYSTLNWELNNNHELKIVRSIM FLSFNDLPYPLKRCFLYCSLFPVNYRMKRKRLIRMWMAORFVEPIRGVKAEEVADSYLNE LVYRNMLQVILWNPFGRPKAFKMHDVIWEIALSVSKLERFCDVYNDDSDGDDAAETMENY GSRHLCIOKEMTPDSIRATNLHSLLVCSSAKHKMELLPSLNLLRALDLEDSSISKLPDCL VTMFNLKYLNLSKTOVKELPKNFHKLVNLETLNTKHSKIEELPLGMWKLKKLRYLITFRR NEGHDSNWNYVLGTRVVPKIWOLKDLOVMDCFNAEDELIKNLGCMTOLTRISLVMVRREH GRDLCDSLNKIKRIRFLSLTSIDEEEPLEIDDLIATASIEKLFLAGKLERVPSWFNTLQN LTYLGLRGSQLQENAILSIQTLPRLVWLSFYNAYMGPRLRFAQGFQNLKILEIVQMKHLT EVVIEDGAMFELOKLYVRACRGLEYVPRGIENLINLOELHLIHVSNOLVERIRGEGSVDR SRVKHIPAIKHYFRTDNGSFYVSLSS

>P93788

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>Q9BXF6

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>P0AD65

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>P37105

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>Q9ERG2

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>Q7SIB8

 ${\tt AKVEVGDEVGNFKFYPDSITVSAGEAVEFTLVGETGHNIVFDIPAGAPGTVASELKAASM} \\ {\tt DENDLLSEDEPSFKAKVSTPGTYTFYCTPHKSANMKGTLT}$

>P49418

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>09UN37

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KPNIRWNDVAGLEGAKEALKEAVILPIKFPHLFTGKRTPWRGILLFGPPGTGKSYLAKAV ATEANNSTFFSVSSSDLMSKWLGESEKLVKNLFELARQHKPSIIFIDEVDSLCGSRNENE SEAARRIKTEFLVQMQGVGNNNDGTLVLGATNIPWVLDSAIRRRFEKRIYIPLPEEAARA QMFRLHLGSTPHNLTDANIHELARKTEGYSGADISIIVRDSLMQPVRKVQSATHFKKVCG PSRTNPSMMIDDLLTPCSPGDPGAMEMTWMDVPGDKLLEPVVCMSDMLRSLATTRPTVNA DDLLKVKKFSEDFGOES

>Q9UBV8

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>P37116

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>092572

MIKAILIFNNHGKPRLSKFYQPYSEDTQQQIIRETFHLVSKRDENVCNFLEGGLLIGGSD NKLIYRHYATLYFVFCVDSSESELGILDLIQVFVETLDKCFENVCELDLIFHVDKVHNIL AEMVMGGMVLETNMNEIVTQIDAQNKLEKSEAGLAGAPARAVSAVKNMNLPEIPRNINIG DISIKVPNLPSFK

>P69741

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>08IWJ2

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>P07030

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>09EPN1

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TAAGSGLPTGSTSSIFAAPGATPKSMINTTGAVDSGSSSSSSSSFVNGATSKNLPAVOT VAPMPEDSAENMSITAKLERALEKVAPLLREIFVDFAPFLSRTLLGSHGOELLIEGLVCM KSSTSVVELVMLLCSQEWQNSIQKNAGLAFIELINEGRLLCHAMKDHIVRVANEAEFILN RORAEDVHKHAEFESOCAOYAADRREEEKMCDHLISAAKHRDHVTANOLKOKILNILTNK HGAWGAVSHSQLHDFWRLDYWEDDLRRRRRFVRNAFGSTHAEALLKSAVEYGTEEDVVKS KKAFRSOAIVNONSETELMLEGDDDAVSLLOEKEIDNLAGPVVLSTPAOLIAPVVVAKGT LSITTTEIYFEVDEDDAAFKKIDTKVLAYTEGLHGKWMFSEIRAVFSRRYLLQNTALEVF MANRTSVMFNFPDQATVKKVVYSLPRVGVGTSYGLPQARRISLATPRQLYKSSNMTQRWQ RREISNFEYLMFLNTIAGRTYNDLNOYPVFPWVLTNYESEELDLTLPGNFRDLSKPIGAL NPKRAVFYAERYETWEEDOSPPFHYNTHYSTATSALSWLVRIEPFTTFFLNANDGKFDHP DRTFSSIARSWRTSQRDTSDVKELIPEFYYLPEMFVNSNGYHLGVREDEVVVNDVDLPPW AKKPEDFVRINRMALESEFVSCQLHQWIDLIFGYKQRGPEAVRALNVFHYLTYEGSVNLD SITDPVLREAMEAQIQNFGQTPSQLLIEPHPPRSSAMHLCFLPQSPLMFKDQMQQDVIMV LKFPSNSPVTHVAANTLPHLTIPAVVTVTCSRLFAVNRWHNTVGLRGAPGYSLDQAHHLP IEMDPLIANNSGVNKRQITDLVDQSIQINAHCFVVTADNRYILICGFWDKSFRVYSTETG KLTOIVFGHWDVVTCLARSESYIGGDCYIVSGSRDATLLLWYWSGRHHIIGDNPNSSDYP APRAVLTGHDHEVVCVSVCAELGLVISGAKEGPCLVHTITGDLLRALEGPENCLFPRLIS VSSEGHCIIYYERGRFSNFSINGKLLAOMEINDSTRAILLSSDGONLVTGGDNGVVEVWO ACDFKQLYIYPGCDAGIRAMDLSHDQRTLITGMASGSIVAFNIDFNRWHYEHQNRY >056218

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>033406

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MAALGITVALLVWMATLLFISIWKHIYSSWKLPPGPFPLPIIGNLLQLDIKNIPKSFTRL AERYGPVFTLYLGSQRAVVVHGYKPVKEVLLDYKNEFSGRGENPGFQMHKNNGIIFNNGS TWRDTRRFSLTTLRDLGMGKQGNEQRIQREAHFLLEVLRKTQGQPFDPTFVVGFAPYNVI SDILFHKRFDYKDQTSLRLMSLFNENFYLLSSPWIQLYNNFPDYLQYLPGSHRKLLKNVS EVKSYALERVKDHQKSLEPSCPRGFLDTMLIEMAKERHSVDPMYTLENIAVTVADLLFAG TETTSTTLRYGLLILMKYPEVEEKLHEEIDRVIGPSRIPAVKDRLDMPYLDAVVHEIQRF IDLLPSNLLHEATQDTVFRGYVIPKGTVVIPTLDSVLHDRQEFPEPEKFKPEHFLNENGK FKYSDHFKAFSAGKRVCVGEGLARMELFLLLAAILQHFNLKSLVDPKDIDLSPIAIGFGK IPPRYKLCLIPRSKV

>093436

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>09XH48

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>Q8NFA2

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>029473

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>Q56221

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MTGPILSGLDPRFERTLYAHVGKEGSWTLDYYLRHGGYETAKRVLKEKTPDEVIEEVKRS GLRGRGGAGFPTGLKWSFMPKDDGKQHYLICNADESEPGSFKDRYILEDVPHLLIEGMIL AGYAIRATVGYIYVRGEYRRAADRLEQAIKEARARGYLGKNLFGTDFSFDLHVHRGAGAY ICGEETALMNSLEGLRANPRLKPPFPAQSGLWGKPTTINNVETLASVVPIMERGADWFAQ MGTEQSKGMKLYQISGPVKRPGVYELPMGTTFRELIYEWAGGPLEPIQAIIPGGSSTPPL PFTEEVLDTPMSYEHLQAKGSMLGTGGVILIPERVSMVDAMWNLTRFYAHESCGKCTPCR EGVAGFMVNLFAKIGTGQGEEKDVENLEALLPLIEGRSFCPLADAAVWPVKGSLRHFKDQ YLALAREKRPVPRPSLWR

>Q56224

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>P10121

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VNGVGKTTTIGKLARQFEQQGKSVMLAAGDTFRAAAVEQLQVWGQRNNIPVIAQHTGADS ASVIFDAIQAAKARNIDVLIADTAGRLQNKSHLMEELKKIVRVMKKLDVEAPHEVMLTID ASTGQNAVSQAKLFHEAVGLTGITLTKLDGTAKGGVIFSVADQFGIPIRYIGVGERIEDL RPFKADDFIEALFARED

>P56654

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>P12669

 ${\tt MIKSWKPQELSISYHQFTVFQKDSTPPVMDWTDEAIEKGYAAADGAISFEAQRNTKAFIL} \\ {\tt FRLNSSETVNSYEKKVTVPFHVTENGIHIESIMSKRLSFDLPKGDYQLTCWTVPAEMSDL} \\ {\tt HADTYIIDAVSV} \\$

>P56657

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>Q9LDJ3

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>P46892

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>P78723

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MASKTTSEELKTATALKKRSSDVHAVDHSGNVYKGFQIWTDLAPSVKEEPDLMFAKCIVQ AGTDKGNLTCVQIDPPGFDEPFEVPQANAWNVNSLIDPMTYGDIGMLPHTNIPCVLDFLK VRFMKNQIYTTADPLVVAINPFRDLGNTTLDWIVRYRDTFDLSKLAPHVFYTARRALDNL HAVNKSQTIIVSGESGAGKTEATKQIMRYFAAAKTGSMDLRIQNAIMAANPVLEAFGNAK
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MERPRAPPSPLNDAESLSERRSLEIFNPSSGKETHGSTSSSSKPPLDGNNKGSSSKWMEF QDSAKITERTAEWGLSAVKPDSGDDGISFKLSSEVERSKNMSRRSSEESTSSESGAFPRV SOELKTALSTLOOTFVVSDATOPHCPIVYASSGFFTMTGYSSKEIVGRNCRFLOGPDTDK NEVAKIRDCVKNGKSYCGRLLNYKKDGTPFWNLLTVTPIKDDQGNTIKFIGMQVEVSKYT EGVNDKALRPNGLSKSLIRYDAROKEKALDSITEVVOTIRHRKSOVOESVSNDTMVKPDS STTPTPGRQTRQSDEASKSFRTPGRVSTPTGSKLKSSNNRHEDLLRMEPEELMLSTEVIG QRDSWDLSDRERDIRQGIDLATTLERIEKNFVISDPRLPDNPIIFASDSFLELTEYSREE ILGRNCRFLOGPETDOATVOKIRDAIRDOREITVOLINYTKSGKKFWNLFHLOPMRDOKG ELOYFIGVOLDGSDHVEPLONRLSERTEMOSSKLVKATATNVDEAVRELPDANTRPEDLW AAHSKPVYPLPHNKESTSWKAIKKIQASGETVGLHHFKPIKPLGSGDTGSVHLVELKGTG ELYAMKAMEKTMMLNRNKAHRACIEREIISLLDHPFLPTLYASFOTSTHVCLITDFCPGG ELFALLDROPMKILTEDSARFYAAEVVIGLEYLHCLGIVYRDLKPENILLKKDGHIVLAD FDLSFMTTCTPQLIIPAAPSKRRRSKSQPLPTFVAEPSTQSNSFVGTEEYIAPEIITGAG HTSAIDWWALGILLYEMLYGRTPFRGKNRQKTFANILHKDLTFPSSIPVSLVGRQLINTL LNRDPSSRLGSKGGANEIKOHAFFRGINWPLIRGMSPPPLDAPLSIIEKDPNAKDIKWED DGVLVNSTDLDIDLF

>P0A7A7

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>Q8K4L3

MKRKERIARRLEGIENDSQPILLQSCTGLVTHRLLEEDTPRYMRATDPASPHIGRSKEEE DTPGSSLEKQTPSKYCIETSGIHSSGSMDTHSLESKAERIARYKAERRRQLAEKYGLTLD PEADSEYLSRYAKSRKDPDVTERRGKSDKQEEQSKDANSRHSRTESGPRTSLVASQDCTP LGSNMSDQEQLLNVENQRRVQDPPLGEDGSSAFFSERSISFPEVPRSPKQIPSSPLQQPA SPNHPGDSPLPTEARASTGKPTHEWFLQRDSEGDTPSLINWPSRVKVREKLVKEESARSS PELTSESLTQRRQQPAPAHFLPIQSESSTFDRVTSKAVSSLQPSQSGVLPTDPVHAIKLV TMDTPESTSEFSWVGSATPKVIKSTTLKILEGGSRDAPVLHICESKAEDWLSPEPLERSP KSLLTSEDDRLVRGHKDPSGNKDLDKAIICSIDVESERERQVQHLPTQRTGRSEMLLYVQ SGPVSQDATLTSHTKEASPKKRKVLARSLSDYTGPPQLQVPRHKDEAPSQELELQSSRAE GPGAEASVLDTRVSVAQLRNIFMESTRASKKPELQSRVERSAEGIGLPMERERGSRKPRR

YLSPGESRKTSERFRTQPITSAERKESDRYPSGSEIPVVEDEEKVDERAKLSVAAKRLLF REMEKSFDEHTVPKRHSRNAAVEORLRRLODRSHTOPITTEEVVIAATEPIPASCSGVTH PVTARLPSPTVARSSVQPARLQASAHQKALARDQANEGRESAEPGEPDSSTLSLAEKLAL FNKLSOPVSKAISTRNRIDVRORRMNARYOTOPVTLGEVEOVOSGKLISFSPTVNTSVSI MASAVAPTYAGDLRKLSVDNNTSATDYKSPPAENSDSPVRSILKPQAWRPLVEHSGSKGM PGESGKTESKNALTVAAEDSGVOTRGAFEEEEEPSYPILGRVREGDGOKEPKHVVLRRGS LELGNPSAAHLGDELKEVSTAKSSLQENLDLKDKQASEENTDVETVMRKFSLKEFGETTS EOTEVAARKASVOMATPGAWKOOESSEOLAEKLFKNPCAMFASGEVKVPVGDSFLDSPSK TMSIKERLALLKKSGEEDWKNRLIRKOEYGKATGGLHTOEVEOSLKKKRVTESRESOMTI EERKHLITVREEAWKTKGRGAANDSTOFTVAGRMVKKGLASPTSITPISSPLCSKSRGTT PVSKPLEDIEARPDMQLESDLKLDRLETFLRRLNNKVAGIQETVLTVTGKSVKEVMKLDD DETFAKFYRSVDHSIPRSPVELEEDFDVIFDPYAPKLTSSVAEHKROVRPKRRVOASKNP LKLLAARDDLLQEYTEQRLNVAFMESKRMKVEKMSSNSNFSEVTLAGLASRENFSNINLR SVNLMEONSNNSAMPYKKLMLLOIKGRRHVOTRLVEPRASSLNSGDCFLLLSPOYCFLWV GEFSNVIEKAKASELATLIOTKRELGCRATYIOTIEEGINTHTHAAKDFWKLLGGOTSYO SAGDPKEDELYETAIIETNCVYRLTDDKLVPDDDYWGKIPKCSLLQSKEVLVFDFGSEVY VWHGKEVTLAQRKIAFQLAKHLWNGTFDYENCDINPLDPGECNPLIPRKGQGRPDWAIFG RVTEHNETILFKEKFLDWTELKRPTEKNSGEVVQQKDDPRADVKPYDVTRMVATPQITAG TILDGVNVGRGYGLVEGDDRRQFEIATVSVDVWHILEFDYSRLPRQSIGQFHEGDAYVVK WKYMASTAVGSROKGEHLVRVAGKEKCVYFFWOGRHSTVSEKGTSALMTVELDEERGAOV OVLOGKEPPCFLOCFOGGMVVHSGRREEEEENVOSEWRLYCVRGEVPMEGNLLEVACHCS SLRSRTSMVVLNINKALIYLWHGCKAQGHTKEVGRTAANKIKEECPLEAGLHSSSNVTIH ECDEGSEPLGFWDALGRRDRKAYDCMLQDPGSFNFAPRLFILSSSSGDFSATEFVYPAQA PSAVSSMPFLQEDLYSAPQPALFLVDNHHEVYLWQGWWPTENKITGSARIRWASDRKSAM ETVLQYCRGKNLKRPPPKSYLIHAGLEPLTFTNMFPSWEHREDIAEITEMDTEVSNQITL VEDVLAKLCKTIYPLADLLARPLPEGVDPLKLEIYLTDEDFEFALDMSRDEFNALPTWKO VNLKKSKGLF

>P15070

 ${\tt MSDMNNPADDNNGAMDDLWAEALSEQKSTSSKSAAETVFQQFGGGDVSGTLQDIDLIMDI} \\ {\tt PVKLTVELGRTRMTIKELLRLTQGSVVALDGLAGEPLDILINGYLIAQGEVVVVADKYGV} \\ {\tt RITDIITPSERMRRLSR} \\$

>P58404

MMEERAAAAVASAASSCRPLGSGTAPNPTAAAPASSPAPGPGPVGKGGGGGGSPGPTAGP EPLSLPGILHFIQHEWARFEAEKARWEAERAELQAQVAFLQGERKGQENLKTDLVRRIKM LEYALKQERAKYHKLKFGTDLNQGEKKTDLSEQVSNGPVESVTLENSPLVWKEGRQLLRQ YLEEVGYTDTILDMRSKRVRSLLGRSLELNGAGEPVEGAPRASPGPGGLSGGESLLVKQI EEQIKRNAAGKDGKERLGGSVLEQIPFLQNCEDEDSDEDDELDSVQHKKQRVRLPSKALV PEMEDEDEEDDSEDAINEFDFLGSGEDGEGSPDPRRCTSEGNPHELESRRVKLQGILADL RDVDGLPPKVTVPPPGTPQPRPHEGSFGFSSDVFIMDTIGGGEVSLGDLADLTVTNDNDL SCDLSDSKDAFKKTWNPKFTLRSHYDGIRSLAFHHSQSALLTASEDGTLKLWNLQKAVTA KKNAALDVEPIHAFRAHRGPVLAVTMGSNSEYCYSGGADARIHSWKIPDLNMDPYDGYDP SVLSHVLEGHGDAVWGLAFSPTSQRLASCSADGTVRIWDPSSSGPSCLCTFPMAGEHGIP TSVAFTSTEPAHVVASFRSGDTVLYDLEAGSALLTLESRGSSGPAQINQVVSHPSQPLTI TAHDDRGIRFLDNRTGKSVHSMVAHLDAVTCLAVDPNGVFLMSGSHDCSLRLWSLDNKTC VQEITAHRKKHEEAIHAVACHPSKALIASAGADALAKVFV

>P22437

MSRRSLSLWFPLLLLLLPPTPSVLLADPGVPSPVNPCCYYPCQNQGVCVRFGLDNYQCD CTRTGYSGPNCTIPEIWTWLRNSLRPSPSFTHFLLTHGYWLWEFVNATFIREVLMRLVLT VRSNLIPSPPTYNSAHDYISWESFSNVSYYTRILPSVPKDCPTPMGTKGKKQLPDVQLLA QQLLLRREFIPAPQGTNILFAFFAQHFTHQFFKTSGKMGPGFTKALGHGVDLGHIYGDNL ERQYHLRLFKDGKLKYQVLDGEVYPPSVEQASVLMRYPPGVPPERQMAVGQEVFGLLPGL MLFSTIWLREHNRVCDLLKEEHPTWDDEQLFQTTRLILIGETIKIVIEEYVQHLSGYFLQ LKFDPELLFRAQFQYRNRIAMEFNHLYHWHPLMPNSFQVGSQEYSYEQFLFNTSMLVDYG VEALVDAFSRQRAGRIGGGRNFDYHVLHVAVDVIKESREMRLQPFNEYRKRFGLKPYTSF

QELTGEKEMAAELEELYGDIDALEFYPGLLLEKCQPNSIFGESMIEMGAPFSLKGLLGNP ICSPEYWKPSTFGGDVGFNLVNTASLKKLVCLNTKTCPYVSFRVPDYPGDDGSVLVRRST >O70J99

MATLLSHPOORPPFLROAIKIRRRRVRDLODPPPOMAPEIOPPSHHFSPEORALLYEDAL YTVLHRLGHPEPNHVTEASELLRYLQEAFHVEPEEHQQTLQRVRELEKPIFCLKATVKQA KGILGKDVSGFSDPYCLLGIEOGVGVPGGSPGSRHROKAVVRHTIPEEETHRTOVITOTL NPVWDETFILEFEDITNASFHLDMWDLDTVESVRQKLGELTDLHGLRRIFKEARKDKGQD DFLGNVVLRLODLRCREDOWYPLEPRTETYPDRGOCHLOFOLIHKRRATSASRSOPSYTV HLHLLQOLVSHEVTOHEAGSTSWDGSLSPQAATVLFLHATOKDLSDFHQSMAQWLAYSRL YOSLEFPSSCLLHPITSIEYOWIOGRLKAEOOEELAASFSSLLTYGLSLIRRFRSVFPLS VSDSPARLQSLLRVLVQMCKMKAFGELCPNTAPLPQLVTEALQTGTTEWFHLKQQHHQPM VQGIPEAGKALLGLVQDVIGDLHQCQRTWDKIFHNTLKIHLFSMAFRELQWLVAKRVQDH TTVVGDVVSPEMGESLFQLYISLKELCQLRMSSSERDGVLALDNFHRWFQPAIPSWLQKT YNEALARVORAVOMDELVPLGELTKHSTSAVDLSTCFAOISHTAROLDWPDPEEAFMITV KFVEDTCRLALVYCSLIKARARELSSGOKDOGOAANMLCVVVNDMEOLRLVIGKLPAOLA WEALEORVGAVLEOGOLONTLHAOLOSALAGLGHEIRTGVRTLAEOLEVGIAKHIOKLVG VRESVLPEDAILPLMKFLEVELCYMNTNLVQENFSSLLTLLWTHTLTVLVEAAASQRSSS LASNRLKIALQNLEICFHAEGCGLPPKALHTATFQALQRDLELQAASSRELIRKYFCSRI QQQAETTSEELGAVTVKASYRASEQKLRVELLSASSLLPLDSNGSSDPFVQLTLEPRHEF PELAARETOKHKKDLHPLFDETFEFLVPAEPCRKAGACLLLTVLDYDTLGADDLEGEAFL PLREVPGLSGSEEPGEVPOTRLPLTYPAPNGDPILOLLEGRKGDREAOVFVRLRRHRAKO ASOHALRPAP

>P45306

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>P29122

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>Q29496

MELIPSFSLETWVLLAISLVLLYLYGTYSHGLFKKLGVSGPRPLPYFGNVLSYRKGVCEF
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FPKSAVDFLTKSVKRIKESRLKDNQKPRVDFLQLMINSQNSKETDNHKALSDQELMAQSV
IFIFAGYETTSNTLSFLLYILATHPDVQQKLQEEIDATFPNKAPPTYDVLAQMEYLDMVV
NETLRMFPIAVRLDRLCKKDVEIHGVSIPKGTAVTVPIFVLHRDPQLWPEPEEFRPERFS
KKNKDSINPYVYLPFGTGPRNCIGMRFAIMNMKLAIVRVLQNFSFKPCKETQIPLKINSQ
GLIRPEKPIFLKVVLRDETI

>P51581

MAVFGVTIALLVWVATLLIVSIWKQIYSSWNLPPGPFPLPILGNIFQLDLKNIPKSLTKL AERFGPVFTLHLGSKRIVVLHGYKAVKEVLLNHKNEFSGRGDIPVFQEYMNKGIIFNNGP TWKDVRRFSLSILRDYGMGKQGNEARIQREAHFLMEELKKTNGQPFDPTFLVGCAPFNVI SDILFHKRFDYNDKTCLRLMSLFNENFYLLSTPWIQAYNNFENYLRYLPGSHRKIMKNAS EIRQYTLAKAKEHLQSLDSSCPRDVTDCLLIEMEKEKDSQEPMYTMENISVTLADLFFAG TETTSTTLRYGLLILMKYPEVEEKLHEEIDRVIGPSRVPVFKDRLEMPYMDAVVHEIQRF ISLIPSNLPHEATRDTMFRGYVIPKGTVVIPTLDSLLYDSQEFPDPEKFKPEHFLNENGK FKYSDHFKAFSAGKRVCVGEGLARMELFLLLTAILQHFNLKSLVDPKDIDLNPVTIGFGC VPPEFKLCVIPRS

>P0A7B1

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WLRHYFKQYLRQHITPILINPDTDLVQFLKDDYTYLAVEIIRGDTIRYALLEIPSDKVPR
FVNLPPEAPRRKPMILLDNILRYCLDDIFKGFFDYDALNAYSMKMTRDAEYDLVHEMEA
SLMELMSSSLKQRLTAEPVRFVYQRDMPNALVEVLREKLTISRYDSIVPGGRYHNFKDFI
NFPNVGKANLVNKPLPRLRHIWFDKAQFRNGFDAIRERDVLLYYPYHTFEHVLELLRQAS
FDPSVLAIKINIYRVAKDSRIIDSMIHAAHNGKKVTVVVELQARFDEEANIHWAKRLTEA
GVHVIFSAPGLKIHAKLFLISRKENGEVVRYAHIGTGNFNEKTARLYTDYSLLTADARIT
NEVRRVFNFIENPYRPVTFDYLMVSPQNSRRLLYEMVDREIANAQQGLPSGITLKLNNLV
DKGLVDRLYAASSSGVPVNLLVRGMCSLIPNLEGISDNIRAISIVDRYLEHDRVYIFENG
GDKKVYLSSADWMTRNIDYRIEVATPLLDPRLKQRVLDIIDILFSDTVKARYIDKELSNR
YVPRGNRRKVRAQLAIYDYIKSLEQPE

>P27381

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>P27382

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MERQQQQQQLRNLRDFLLVYNRMTELCFQRCVPSLHHRALDAEEEACLHSCAGKLIHSN HRLMAAYVQLMPALVQRRIADYEAASAVPGVAAEQPGVSP >064403

MGLLTGDALFSVAVAVAIFLLLVDLMHRRQRWAARYPPGPVPVPGLGNLLQVDFENMAYS CDKLRHQFGDVFSLQFVWTPVVVVNGLLAVREALVNNSTDTSDRPTLPTNALLGFGPKAQ GVIGAYYGPAWREQRRFSVSSLRNFGLGKKSLEQWVTEEAACLCAAFTNHAGQPFCPKAL LNKAVCNVISSLIYARRFDYDDPMVLRLLEFLEETLRENSSLKIQVLNSIPLLLRIPCVA AKVLSAQRSFIALNDKLLAEHNTGWAPDQPPRDLTDAFLTEMHKAQGNSESSFNDENLRL LVSDLFGAGMVTTSVTLSWALLLMILHPDVQRHVQEEIDEVIGQVRCPEMADQAHMPFTN AVIHEVQRFADIVPMGVPHMTSRDTEVQGFLIPKGTMLFTNLSSVLKDETVWEKPLHFHP GHFLDAEGRFVKREAFMPFSAGPRICLGEPLARMELFLFFTSLLQRFSFSVPEGQPRPSD RGAPYLVVLPSPYQLCAVLR

>Q9WVP1

SASAVFILDVKGKPLISRNYKGDVPMTEIDHFMPLLMQREEEGVLAPLLSHGRVHFLWIK HSNLYLVATTLKNANASLVYSFLYKTVEVFCEYFKELEEESIRDNFVIVYDLLDELMDFG FPQTTDSKILQEYITQQGNKLETGKSRVPPTVTNAVSWRSEGIKYKKNEVFIDVIESVNL LVNANGSVLLSEIVGTIKLKVFLSGMPELRLGLNDRVLFELTGRSKNKSVELEDVKFHQC VRLSRFDNDRTISFIPPDGDFELMSYRLSTQVKPLIWIESVIEKFSHSRVEIMVKAKGQF KKQSVANGVEISVPVPSDADSPRFKTSVGSAKYVPEKNVVIWSIKSFPGGKEYLMRAHFG LPSVETEEVEGRPPIGVKFEIPYFTVSGIQVRYMKIIEKSGYQALPWVRYITQSGDYQLR TS

>008378

MDGASAEQDGLQEDRSHSGPSSLPEAPLKPPGPLVPPDQQDKVQCAEVNRASTEGESPDG PGQGGLCQNGPTPPFPDPPSSLDPTTSPVGPDASPGVAGFHDNLRKSQGTSAEGSVRKEA LQSLRLSLPMQETQLCSTDSPLPLEKEEQVRLQARKWLEEQLKQYRVKRQQERSSQPATK TRLFSTLDPELMLNPENLPRASTLAMTKEYSFLRTSVPRGPKVGSLGLPAHPREKKTSKS SKIRSLADYRTEDSNAGNSGGNVPAPDSTKGSLKONRSSAASVVSEISLSPDTDDRLENT SLAGDSVSEVDGNDSDSSSYSSASTRGTYGILSKTVGTQDTPYMVNGQEIPADTLGQFPS IKDVLQAAAAEHQDQGQEVNGEVRSRRDSICSSVSLESSAAETQEEMLQVLKEKMRLEGQ LEALSLEASQALKEKAELQAQLAALSTKLQAQVECSHSSQQRQDSLSSEVDTLKQSCWDL ERAMTDLQNMLEAKNASLASSNNDLQVAEEQYQRLMAKVEDMQRSMLSKDNTVHDLRQQM TALOSOLOOVOLERTTLTSKLKASOAEISSLOSVROWYOOOLALAOEARVRLOGEMAHIO VGOMTOAGLLEHLKLENVSLSOOLTETOHRSMKEKGRIAAOLOGIEADMLDOEAAFMOIO EAKTMVEEDLORRLEEFEGERERLORMADSAASLEOOLEOVKLTLLORDOOLEALOOEHL DLMKOLTLTOEALOSREOSLDALOTHYDELOARLGELOGEAASREDTICLLONEKIILEA ALQAAKSGKEELDRGARRLEEGTEETSETLEKLREELAIKSGQVEHLQQETAALKKOMQK IKEQFLQQKVMVEAYRRDATSKDQLISELKATRKRLDSELKELRQELMQVHGEKRTAEAE LSRLHREVAQVRQHMADLEGHLQSAQKERDEMETHLQSLQFDKEQMVAVTEANEALKKQI EELOOEARKAITEOKOKMRRLGSDLTSAOKEMKTKHKAYENAVGILSRRLOEALAAKEAA DAELGOLRAOGGSSDSSLALHERIOALEAELOAVSHSKTLLEKELOEVIALTSOELEESR EKVLELEDELQESRGFRKKIKRLEESNKKLALELEHEKGKLTGLGQSNAALREHNSILET ALAKREADLVOLNLOVOAVLORKEEEDROMKHLVOALOASLEKEKEKVNSLKEOVAAAKV EAGHNRRHFKAASLELSEVKKELQAKEHLVQKLQAEADDLQIREGKHSQEIAQFQAELAE ARAQLQLLQKQLDEQLSKQPVGNQEMENLKWEVDQKEREIQSLKQQLDLTEQQGRKELEG LQQLLQNVKSELEMAQEDLSMTQKDKFMLQAKVSELKNNMKTLLQQNQQLKLDLRRGAAK TRKEPKGEASSSNPATPIKIPDCPVPASLLEELLRPPPAVSKEPLKNLNSCLOOLKOEMD SLOROMEEHALTVHESLSSWTPLEPATASPVPPGGHAGPRGDPORHSOSRASKEGPGE >099KJ8

ADPKYADLPGIARNEPDVYETSDLPEDDQAEFDAEELSSTSVEHIIVNPNAAYDKFKDKR VGTKGLDFSDRIGKTKRTGYESGDYEMLGEGLGVKETPQQKYQRLLHEVQELTTEVEKIK TTVKESATEEKLTPVVLAKQLAALKQQLVASHLEKLLGPDAAINLADPDGALAKRLLLQL EATKSSKGSSGGKATAGAPPDSSLVTYELHSRPEQDKFSQAAKVAELEKRLTELEATVRC DQDAQNPLSAGLQGACLMETVELLQAKVSALDLAVLDQVEARLQSVLGKVNEIAKHKASV EDADTQNKVHQLYETIQRWSPVASTLPELVQRLVTIKQLHEQAMQFGQLLTHLDTTQQMM ASSLKDNTALLTQVQTTMRENLATVEGNFASIDARMKRLG

>064406

>008379

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MSEETRQSKLAAAKKKLREYQQRNSPGVPTGAKKKKKIKNGSNPETTTSGGCHSPEDTPK DNAATLOPSDDTVLPGGVPSPGASLTSMAASONHDADNVPNLMDETKTFSSTESLROLSO QLNGLVCESATCVNGEGPASSANLKDLESRYQQLAVALDSSYVTNKQLNITIEKLKQQNQ EITDQLEEEKKECHQKQGALREQLQVHIQTIGILVSEKAELQTALAHTQHAARQKEGESE DLASRLQYSRRRVGELERALSAVSTQQKKADRYNKELTKERDALRLELYKNTQSNEDLKQ EKSELEEKLRVLVTEKAGMQLNLEELQKKLEMTELLLQQFSSRCEAPDANQQLQQAMEER AQLEAHLGQVMESVRQLQMERDKYAENLKGESAMWRQRMQQMSEQVHTLREEKECSMSRV OELETSLAELRNOMAEPPPPEPPAGPSEVEOOLOAEAEHLRKELEGLAGOLOAOVODNEG LSRLNREOEERLLELERAAELWGEOAEARROILETMONDRTTISRALSONRELKEOLAEL OSGFVKLTNENMEITSALOSEOHVKRELGKKLGELOEKLSELKETVELKSOEAOSLOOOR DQYLGHLQQYVAAYQQLTSEKEVLHNQLLLQTQLVDQLQQQEAQGKAVAEMARQELQETQ ERLEAATQQNQQLRAQLSLMAHPGEGDGLDREEEEDEEEEEEAVAVPQPMPSIPEDLES REAMVAFFNSAVASAEEEQARLRGQLKEQRVRCRRLAHLLASAQKEPEAAAPAPGTGGDS VCGETHRALOGAMEKLOSRFMELMOEKADLKERVEELEHRCIOLSGETDTIGEYIALYOS ORAVLKERHREKEEYISRLAODKEEMKVKLLELOELVLRLVGDRNEWHGRFLAAAONPAD EPTSGAPAPOELGAANOOGDLCEVSLAGSVEPAOGEAREGSPRDNPTAOOIMOLLREMON PRERPGLGSNPCIPFFYRADENDEVKITVI

>P14423

 $\label{thm:mkvlllavvimafgsiqvqgsllefgqmilfktgkradvsygfygchcgvggrgspkda \\ \mbox{TDWCCVTHDCCYNRLEKRGCGTKFLTYKFSYRGGQISCSTNQDSCRKQLCQCDKAAAECF} \\ \mbox{ARNKKSYSLKYQFYPNKFCKGKTPSC}$

>P22443

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>09Y251

MLLRSKPALPPPLMLLLLGPLGPLSPGALPRPAQAQDVVDLDFFTQEPLHLVSPSFLSVT IDANLATDPRFLILLGSPKLRTLARGLSPAYLRFGGTKTDFLIFDPKKESTFEERSYWQS QVNQDICKYGSIPPDVEEKLRLEWPYQEQLLLREHYQKKFKNSTYSRSSVDVLYTFANCS GLDLIFGLNALLRTADLQWNSSNAQLLLDYCSSKGYNISWELGNEPNSFLKKADIFINGS QLGEDFIQLHKLLRKSTFKNAKLYGPDVGQPRRKTAKMLKSFLKAGGEVIDSVTWHHYYL NGRTATREDFLNPDVLDIFISSVQKVFQVVESTRPGKKVWLGETSSAYGGGAPLLSDTFA AGFMWLDKLGLSARMGIEVVMRQVFFGAGNYHLVDENFDPLPDYWLSLLFKKLVGTKVLM ASVQGSKRRKLRVYLHCTNTDNPRYKEGDLTLYAINLHNVTKYLRLPYPFSNKQVDKYLL RPLGPHGLLSKSVQLNGLTLKMVDDQTLPPLMEKPLRPGSSLGLPAFSYSFFVIRNAKVA ACI

>018992

MGLDALVPLAVTVAIFVLLVDLMHRRQRWAARYPPGPMPLPGLGNLLHVDFQNTPNSFNQ LRRRFGDVFSLQLAWTPVVVLNGLEAVREALVTRGEDTADRPPVPITEMLGFGPHSQGLF LARYGPAWREQRRFSVSTLRNLGLGKKSLEQWVTEEATYLCAAFADHAGRPFRPNGLLDK AVSNVIASLTCRRRFEYNDPCLLRLLDLTMEGLKEESGLLREVLNAIPVLLRIPGLAGKV LRSQKAFLAQLDELLTEHRMTWDPAQPPRDLTEAFLAEMEKTKGNPESSFNDENLHLVVA DLFSAGMVTTSITLAWGLLLMILHPDVQRRVQQEIDDVIGRVRRPEMGDQTYMPYTTAVI HEVQRFADIVPLGVTHMTSRDIEVQGFLIPKGTTLFTNLSSVLKDEANWEKPFRFHPEHF LDAQGRFVKPEAFLPFSAGRRACLGEPLARMELFLFFTCLLQRFSFSVPAGQPRPSPHGV FAFLVTPSPYELCAVPR

>018993

MDFIPNLAVETWLLLAVSLVLLYLYGTHSHGLFKKLGIPGPTPLPFLGTVLYYRQGFWKF

DMECYKKYGKMWGIYDGRQPVLAITDPNIIKTVLVKECYSVFTNRRPFGPVGFMKSAISI AQDDEWKRIRSLLSPTFTSGKLKEMVPIIAQYGEVLVRNLRREAEKGKPINMKDIFGAYS MDVITGTSFGVNIDSLNNPQDPFVESTKKLLRFDFLDPFFLSITIFPFLTPILEALNISM FPRDSTSFLRKSIKRIKESRLKDTHKHRVDFLQLMIDSQNSKETESDKALSDLELVAQSI IFIFAGYETTSSTLSFIMYELATHPDVQQKLQEEIDAVLPNKAPATYDTVLQMEYLDMVV NETLRLFPLAMRLERVCKKDVEINGVFIPKGVVVMIPSYALHYDPKYWTEPEKFLPERFS KNNKDNIDPYIYTPFGTGPRNCIGMRFALMNMKLALIRVLQNFSFKPCKETQIPLKLRLG GLLQTEKPIVLKVEPRDGTV

>P13485

MSLVVDTNKRKQKGKSFYTEEQKKVMIENTVIKCILKSLKNNLGSLELLISIDSEHQFLE
DYQLFLKLKERRSGTESEFPLQNTGSLEYKTEINAHVLPMPVEMGQTYDFYVEFRKKYED
AEQEPLLKRLSAEVNSIERAFHVDQTTELLILPYTTDKGNFSIKVKREAKIIRFDQIEIS
SEEISITGYAGYLSSENQYRIKNLNLILKKGGETPIEEKFPIKLERKTHGLENMRADGFV
PELYDFEVKVPLKEIPFSNEKRYVYRLFMEYICNDDEGTDIQFNSTALVLGDRKNKLKGL
VSIIKTNNAPVRYEVFKKKKKQTLGIRVNDYSLKTRMKYFIKGKKKRLVSKIKKITKMRN
KLITKTYKSLFMMASRMPVKRKTVIFESFNGKQYSCNPRAIYEYMRENHPEYKMYWSVNK
QYSAPFDEKGIPYINRLSLKWLFAMARAEYWVVNSRLPLWIPKPSHTTYLQTWHGTPLKR
LAMDMEEVHMPGTNTKKYKRNFIKEASNWDYLISPNGYSTEIFTRAFQFNKTMIESGYPR
NDFLHNDNNEETISLIKSRLNIPRDKKVILYAPTWRDDQFYAKGRYKFDLDLDLHQLRQE
LGNEYIVILRMHYLVAENFDLGPFEGFAYDFSAYEDIRELYMVSDLLITDYSSVFFDFAN
LKRPMLFFVPDIETYRDKLRGFYFDFEKEAPGPLVKTTEETIEAIKQISSPDYKLPVSFG
PFYDKFCYLESGRSSEKVVNTVFKAE

>022874

MYTPSYLKYSIISIISVLFLQGTHGDDGGWQGGHATFYGGEDASGTMGGACGYGNLYGQG YGTNTAALSTALFNNGLTCGACYEMKCNDDPRWCLGSTITVTATNFCPPNPGLSNDNGGW CNPPLQHFDLAEPAFLQIAQYRAGIVPVSFRRVPCMKKGGIRFTINGHSYFNLVLISNVG GAGDVHAVSIKGSKTQSWQAMSRNWGQNWQSNSYMNDQSLSFQVTTSDGRTLVSNDVAPS NWOFGOTYOG

>P53191

MTALHSVSKTPAIKEEEEDGDERDGRGVPLGPRNHDYRGRKGDEESGADTVTSPITFEKK KIAPRASTHSEQSILSSISLKSMVNQHRQQQLQQESSTGAGTGFVDRKQQIQSPAMVSIL RKNSAEENVRSSHSSKLGEGQIDGRKASASKEIGKTLPFTDDQRSNPELDPTNSVVDVSR GKNTKSKTVFNELEDDADDDDEVRQKNLTTQALRKLSSFKMNASSNLRLSKENKAKESSS SSTSSVSSSSTSKVENIVDKLTTTNSSSMSQLRFGNTNVIIDSVNHAAKPPHQQMLRKPS LEFLPQPASSTNLNFNSNKHKSNVRQISNPKKPLYIPAVLRKVSETNITNDDLLNATLSS YYKKASNLEHGFNPSKSQSASVQNANNLRIISSQSSVQSNTSSILESYKNKISSYLFPNS IPNSDRINLIPTISNRNSARVNPPTKDHWIPDSKRNSCRYCHKPFTLWERKHHCRHCGDI FCQDHLRHWLYLDSQANFIMINELNNGGINGGGTLCKICDDCLVEYENLSTTNHNANTNE DNINVEEGEDDDNDNRKKLRNYYKNRQMNALFRPKKGGSSQEHATVDRDTTTPIQVKSND EEADNENTGGEQEEGNDVLGSVIGSVPANWNWSSF

>P51590

MLVTAGSLLGAIWTVLHLRILLLAAVTFLFLADFLKHRRPKNYPPGPWRLPLVGCLFHLD PKQPHLSLQQFVKKYGNVLSLDFANIPSVVVTGMPLIKEIFTQMEHNFLNRPVTLLRKHL FNKNGLIFSSGQTWKEQRRFALMTLRNFGLGKKSLEQRIQEEAYHLVEAIKDEGGLPFDP HFNINKAVSNIICSVTFGERFEYHDSQFQEMLRLLDEAMCLESSMMCQLYNIFPRILQYL PGSHQTLFSNWRKLKLFISDIIKNHRRDWDPDEPRDFIDAFLKEMAKYPDKTTTSFNEEN LICSTLDLFFAGTETTSTTLRWALLCMALYPEVQEKMQAEIDRVIGQGRQPNLADRDSMP YTNAVIHEVQRIGNIIPFNVPREVAVDTYLAGFNLPKGTMILTNLTALHRDPKEWATPDT FNPEHFLENGQFKKRESFLPFSMGKRACLGEQLARSELFIFITSLIQKFTFKPPVNEKLS LOFRMSVTISPVSHRLCAIP

>024564

MSPFGSKKNRSLSVRVSTFDSELEFKLEPRASGQDLFDLVCRTIGLRESWYFGLQYVDTR SNVSWLKMEKRVRDQRVELHASNNVYVFSFYAKFFPENVSEELIQEITQHLFFLQVKQSI LSMDIYCRPEASVLLASYAVHVQYGPYDYETYKDGMLAGGELLPKGVTDQYQMTPEMWEE RIKTWYMDHEPMTRDEVEMEYLKIAQDLDMYGVNYFPITNKNKTKLWLGVTSVGLNIYDE RDKLTPKTTFQWNEIRHVSFDDKKFTIRLVDAKVSNFIFYSQDLHINKMILDLCKGNHDL YMRRRKPDTMEIQQMKAQAKEEKQRRQIERKKFIREKKLREKAEHERYELEKSMEHLQNE MRMANDALRRSEETKELYFEKSRVNEEQMQLTECKANHFKTEMDRLRERQMKIEREKHDL EKKIRDADFYVHQLTVENDKREAETEKLRKELICAKMAEREATARLLEFLNSGRKSSTDS LLTASSVSHAANTASSMAAISTPSLITSSSTNDLETAGGAELTTHSSHYLVQGDNSSGIS DDFEPKEFILTDNEMEQITNEMERNHLDYLRNSKQVQSQLQTLRSEIAPHKIEENQSNLD ILSEAQIKAGENKYSTLKKLKSGSTKARVAFFEEL

>P08011

ADLKQLMDNEVLMAFTSYATIILAKMMFLSSATAFQRLTNKVFANPEDCAGFGKGENAKK FLRTDEKVERVRRAHLNDLENIVPFLGIGLLYSLSGPDLSTALIHFRIFVGARIYHTIAY LTPLPOPNRGLAFFVGYGVTLSMAYRLLRS

>POABA6

MAGAKEIRSKIASVQNTQKITKAMEMVAASKMRKSQDRMAASRPYAETMRKVIGHLAHGN LEYKHPYLEDRDVKRVGYLVVSTDRGLCGGLNINLFKKLLAEMKTWTDKGVQCDLAMIGS KGVSFFNSVGGNVVAQVTGMGDNPSLSELIGPVKVMLQAYDEGRLDKLYIVSNKFINTMS QVPTISQLLPLPASDDDDLKHKSWDYLYEPDPKALLDTLLRRYVESQVYQGVVENLASEQ AARMVAMKAATDNGGSLIKELQLVYNKARQASITQELTEIVSGAAAV

>P53199

MSKIDSVLIIGGSGFLGLHLIQQFFDINPKPDIHIFDVRDLPEKLSKQFTFNVDDIKFHK GDLTSPDDMENAINESKANVVVHCASPMHGQNPDIYDIVNVKGTRNVIDMCKKCGVNILV YTSSAGVIFNGQDVHNADETWPIPEVPMDAYNETKAIAEDMVLKANDPSSDFYTVALRPA GIFGPGDRQLVPGLRQVAKLGQSKFQIGDNNNLFDWTYAGNVADAHVLAAQKLLDPKTRT AVSGETFFITNDTPTYFWALARTVWKADGHIDKHVIVLKRPVAICAGYLSEWVSKMLGKE PGLTPFRVKIVCAYRYHNIAKAKKLLGYTPRVGIEEGINKTLAWMDEGL

>P31412

ATALYTANDFILISLPQNAQPVTAPGSKTDSWFNETLIGGRAFVSDFKIPEFKIGSLDTL IVESEELSKVDNQIGASIGKIIEILQGLNETSTNAYRTLPINNMPVPEYLENFQWQTRKF KLDKSIKDLITLISNESSQLDADVRATYANYNSAKTNLAAAERKKTGDLSVRSLHDIVKP EDFVLNSEHLTTVLVAVPKSLKSDFEKSYETLSKNVVPASASVIAEDAEYVLFNVHLFKK NVQEFTTAAREKKFIPREFNYSEELIDQLKKEHDSAASLEQSLRVQLVRLAKTAYVDVFI NWFHIKALRVYVESVLRYGLPPHFNIKIIAVPPKNLSKCKSELIDAFGFLGGNAFMKDKK GKINKQDTSLHQYASLVDTEYEPFVMYIINL

>P34756

MSSEEPHASISFPDGSHVRSSSTGTSSVNTIDATLSRPNYIKKPSLHIMSTSTTSTTTDL VTNPILSNISVPKISPPTSSSIATATSTSHVTGTASHSNIKANANTSTSVNKKNLPPTTS GRIPSSTIKRYPSRYKPSHSLQLPIKNDSNFKRSSIYASKSTVTAIPIRNNRPISMQNSY ARTPDSDHDDVGDEVSSIKSASSSLTASLSKSFLFAFYNNRKKDKTSNNGVLSKEYWMKD ESSKECFSCGKTFNTFRRKHHCRICGOIFCSSCTLLIDGDRFGCHAKMRVCYNCYEHADT YEDSSDEENDSTMOLNEPRSRSRSRSSSNTNPYSHSHLHLISODNHNGTDLHDPVAATD NPOOONEVYLLNDDDVOSIMTSGEDSKLFISTPPPPPKMAIPATKOGGSLEISFDSENDR ALHYODDNPGRHHHLDSVPTRYTIRDMDNISHYDTNSNSTLRPHYNTNNSTITINNLNNT TSNNSNYNNTNSNSNINNPAHSLRRSIFHYVSSNSVNKDSNNSSATPASSAQSSSILDPA NRIIGNYAHRNYKFKFNYNSKGPSQONDTANGNNDNNNNNNNNNNNNNNNSASGIADNNN IPSNDNGTTFTLDKKKRNPLTKSKSTSAYLEYPLNEEDSSEDEGSMSIYSVLNDDHKTDN PIRSMRNSTKSFQRAQASLQRMRFRRKSKSKHFPNNSKSSIYRDLNFLTNSTPNLLSVVS DDNLYDDSSPLQDKASSSAASRLTDRKFSNSSGSNNNSNSNSNINTDPWKRIASISGFKL KKEKKRELNEVSLLHMHALLKQLLNDQEISNLQEWITLLDGALRKVLRTILNARDLNTLD FRQTYVKIKRISGGSPQNSEYIDGVVFSKALPSKTMPRHLKNPRILLIMFPLEYQKNNNH FLSIESVFROEREYLDKLVSRLKSLHPDIIYVGANVSGYALELLNDSGIVVOFNMKPOVI ERIAKLTEADIAISVDKLATNIKMGECETFEVKSYIYGNISKTYTFLRGCNPELGGTILL RGDSLENLRKIKOVSEFMVYAIFSLKLESSFFNDNFIOLSTDVYLKRAESKKLOVFEGYF ADFLIKFNNRILTVSPTVDFPIPFLLEKARGLEKKLIERINQYESESDLDRQTQLNMLQG LESTITKKHLGNLIKFLHEMEIENLELEFQKRSRQWEVSYSSSQNLLGTGSHQSITVLYS

MVSTKTATPCVGPQIVTIDYFWDSDISIGQFIENVVGTARYPCQQGCNGLYLDHYRSYVH GSGKVDVLIEKFOTRLPKLKDIILTWSYCKKCGTSTPILOISEKTWNHSFGKYLEVMFWS YKDSVTGIGKCPHDFTKDHVKYFGYNDLVVRLEYSDLEVHELITPPRKIKWKPHIDIKLK VELYYKILEKINNFYGSVLSRLERIKLDSMTKDKVLSGOAKIIELKSNATEEOKLMLODL DTFYADSPCDQHLPLNLVIKSLYDKAVNWNSTFAIFAKSYLPSETDISRITAKQLKKLFY DSSRKDSEDKKSLHDEKAKTRKPEKNELPLEGLKDVEKPKIDSKNTTENRDRTNEPONAV TITTFKDDTPIIPTSGTSHLTVTPSASSVSSSLTPQTEERPPISRSGTGISMTHDKSTRP NIRKMSSDSSLCGLASLANEYSKNNKVSKLATFFDQMHFDALSKEFELERERERLQLNKD KYQAIRLOTSTPIVEIYKNVKDAVDEPLHSRSSGNNLSSANVKTLEAPVGEHSRANNCNP PNLDONLETELENSISOWGENILNPSGKTTASTHLNSKPVVKETSENPKSIVRESDNSKS EPLPPVITTTVNKVESTPQPEKSLLMKTLSNFWADRSAYLWKPLVYPTCPSEHIFTDSD VIIREDEPSSLIAFCLSTSDYRNKMMNLNVQQQQQQTAEAAPAKTGGNSGGTTQTGDPS VNISPSVSTTSHNKGRDSEISSLVTTKEGLLNTPPIEGARDRTPQESQTHSQANLDTLQE LEKIMTKKTATHLRYOFEEGLTVMSCKIFFTEHFDVFRKICDCOENFIOSLSRCVKWDSN GGKSGSGFLKTLDDRF1IKELSHAELEAF1KFAPSYFEYMAQAMFHDLPTTLAKVFGFYQ IOVKSSISSSKSYKMDVIIMENLFYEKKTTRIFDLKGSMRNRHVEOTGKANEVLLDENMV EYIYESPIHVREYDKKLLRASVWNDTLFLAKMNVMDYSLVIGIDNEGYTLTVGIIDFIRT FTWDKKLESWVKEKGLVGGASVIKOPTVVTPROYKKRFREAMERYILMVPDPWYREGN >P40094

MARSRKNSLVRDIASHPTIPESQTIVGLLDDSYLFDKLKKLSLAVENSDSLQRTDVSEGC SEVNGSEATTSADVKKTNKYLYYTTYLDQLNIKIDEYKVVLDQTRQVNDQLDSSIKKFRK ISQDTGAFIEETKTIYEKQSKLSNLTESIPKALHYFEVLDPIMRRLNHATSPAIVKKSSF TTMLATIDESLRFLDENSDLKDAAAYRIKFKQCLIRACELISHFLTNLLKQTNQEILDKT KNKNSLTGLPSTTRDAFLYSKFYTIADTFKIQVSEIVKRSNEKAYNKYHDELNSILYECF NHYFQTRLRLLTPVIWSHIDEIVVKDKDQGLVKFIQDGKVYFQQLCADEYKLFVEFFPEK ECRFKINQWFLQLCEPLYDSIRVRVLKETDICTLCDSVTLFAPYYEFEEGSEEYVKQFTD IQYDKLFEPIVQKVQARLILRVQIYVQQNILSYRPTRDVFMISNRRRKSKTSLQGGNEDA TTSDDNPDPLLESYLSSFKNRSILPISPNDADDKSIDSEESTDKISQLQTYYPPLLKTLA LLSKIYEMINSVVFDDLAHHVVHDCIVSLRNAYDMVIKSSAGKSDFNNLDISLAYLKNLL MLRDSIQNFNIQYTVNETYLDFSGVEGFFKSLKENGRNVLKKTKSSSILTLARELVPKVV NNMVDARTELISELRNVIKDFTESTSLELIDDTLDINSDEDLLSKNVKLRENIKARLPRI YEQILNYIDDQEIVTNLLDAVQELITQSYSKYYETITELAENGKFAKDQVADVMYLDVFT DFFAKEVADLLRNGDIDTIT

>Q6ZQM0

MSQPSLWKDSHYFIMWASCCNWFCLDGQPEEAPPPQGARTQAYSNPGYSSFPSPTGSEPS CKACGVHFASTTRKQTCLDCKKNFCMTCSSQEGNGPRLCLLCLRFRATAFQREELMKMKV KDLRDYLSLHDISTEMCREKEELVFLVLGQQPVISEADRTRVPHLPQAFPEQQAFLTQPQ TSTVPPTSPGLPSSPAQVTSVPLAQDQETQQAVGHVSQDHEEPIFPESTARVPTEDETQS VDSEDSFVPGRRASLSDLTHLEDIEGLTVRQLKEILARNFVNYKGCCEKWELMERVTRLY KDQKGLQHLVSGNEDQNGGAVPSGLEENLCKICMDSPIDCVLLECGHMVTCTKCGKRMNE CPICROYVIRAVHVFRS

>P75409

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RALRTSFAYQREWFTDGPIAAANVRSAWLVDAVPVEPGHAHHPAGRVVETTRINEPEMHN
PHYQELQTQANDQPWLPTPGIATPVHLSIPQAASVADVSEGTSASLSFACPDWSPPSSNG
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EVNPKQKSSFPQTIFFWDVYQRICLKDLTGAQISLSLTAFTTQYAGQLKVHLSVSAVNAV
NQKWKMTPQDIAITQFRVSSELLGQTENGLFWNTKSGGSQHDLYVCPLKNPPSDLEELQI
IVDECTTHAQFVTMRAASTFFVDVQLGWYWRGYYYTPQLSGWSYQMKTPDGQIFYDLKTS
KIFFVQDNQNVFFLHNKLNKQTGYSWDWVEWLKHDMNEDKDENFKWYFSRDDLTIPSVEG
LNFRHIRCYADNQQLKVIISGSRWGGWYSTYDKVESNVEDKILVKDGFDRF
>08R5A3

 ${\tt MGESNEDIDQMFSTLLGEMDLLTQSLGVDTLPPPDPNPPREEFNYTVGFKDLNESLNALE}$

DQDLDALMADLVADISEAEQRTIQAQKESSQNQDRFALLRASDGQGTASGGYGASAAAID VSHHEEALPPPPVEPMLDLLPPPPPPPPPPPLLSKEEEEAKAKADKIKLALEKLKEAKVKK LVVKVHMDDSSTKSLMVDERQLARDVLDNLFEKTHCDCNVDWCLYEIYPELQIERVFEDH ENVVEVLSDWTRDTENKVLFLEKEERYAVFKNPQNFYLDNKGKKENKETNEKMNAKNKEY LLEESFCGTSIIVPELEGALYLKEDGKKSWKRRYFLLRASGIYYVPKGKTKTSRDLACFI QFENVNIYYGIQCKMKYKAPTDHCFVLKHPQIQKESQYIKYLCCDDARTLSQWVMGIRIA KYGKTLYDNYQRAVARAGLASRWTNLGTVGTPMPAQPSTVSSGLKTGTSQPNGQMPQAIP SAGPPLQEAQTQIETTKDEKQGLGNHSPGATRENHRPKSSLPPPPPPVRRSSDTCGSPAL PSKVKGPGTCTFPHPPENFLPPPPPPPEEDNSGLLPPPPPPPYLEEPPDFVPPPPPAA VEDSALPPPPPPPCLSQEITKSSPLPPKKPLVPPKRQENQGLPGAPGNSEQDFMSDLMK ALQKKRGNIP

>Q9WTW1

MLAVSLKWRLGVVRRRPKDDGPYSKGGKDTAGTDGALVCRRQSIPEEFRGITMVELIKRE GSTLGLTISGGTDKDGKPRVSNLRPGGLAARSDLLNVGDYIRSVNGIRLTRLRHDEIITL LKNVGERVVLEVEYELPPPAPENNPRIISKTVDVSLYKEGNSFGFVLRGGAHEDLHKSRP LVLTYVRPGGPADREGSLKVGDRLLSIDGIPLHGASHATAIATLQQCSHEALFQVEYDVA TPDTVANASGPLVVEIAKTPGSALGISLTTGSHRNKPAITIDRIKPASVVDRSGALHAGD HILAIDGTSTEHCSLVEATKLLASVTEKVRLEILPAPOSRRPLKPPEAVRIORSEOLHHW DPCVPSCHSPRPSHCRAPTWAPGGQDQSRSVSSTPFSSPTMNPAFPCANASTLPRGPMSP RTTAGRRRORRKEHRSSLSLASSTVGPGGOIVHTETTEVVLCGDPLSGFGLOLOGGIFAT ETLSSPPLVRFIEPDSPAERCGLLQVGDRVLAINGIATEDGTMEEANQLLRDAALARKVV LEIEFDVAESVIPSSGTFHVKLPKRRGVELGITISSASRKRGEPLIISDIKKGSVAHRTG TLEPGDKLLAIDNIRLDHCPMEYAVQILRQCEDLVKLKIRKDEDNSDEQESSGAVSYTVE LKRYGGPLGITISGTEEPFDPIIISGLTKRGLAERTGAIHVGDRILAINSVSLKGRPLSE AIHLLQVAGETVTLKIKKQLDRPLLPRQSGSLSEASDVDEDPPEALKGGLLTTHFSPAVP SVDSAVESWGSSATEGGFGGSGSYTPOVAVRSVTPOEWRSSRLKSSPPPLEPRRTSYTPG PTDESFPEEEEGDWEPPMSPAPGPAREEGFWRVLGEALEDLESCGOSELLRELEASIMTG TVOSVAVDGRPGSRPWRRSREVGTSPEDLQELLLPTPLEMHRVTLHKDPVRNDFGFSVSD GLLEKGVYVHTVRIDGPAQHGGLQPFDRLLQVNHVRTRDFDCCLAVPLLAEAGDILELVV SRNPLAQSRRTPGAPGPSSPQMI

>P14292

APIKRGDRFPTTDDVYYIPPEGGEPGPLELSKFVKTKKFVVVSVPGAFTPPCTEQHLPGY IKNLPRILSKGVDFVLVISQNDPFVLKGWKKELGAADAKKLVFVSDPNLKLTKKLGSTID LSAIGLGTRSGRLALIVNRSGIVEYAAIENGGEVDVSTAQKIIAKL

>P0A241

 ${\tt MYTSGYANRSSSFPTTTHNAARTATENAAAGLVSEVVYHEDQPMMAQLLLLPLLRQLGQQ} \\ SRWQLWLTPQQKLSREWVQSSGLPLTKVMQISQLAPRHTLESMIRALRTGNYSVVIGWMT\\ EELTEEEHASLVEAAKVGNAVGFIMRPVRAHALPRRQHSGLKIHSNLYH$

>013127

MFYTCGPNEAMVVSGFCRSPPVMISGGSVFVFPCVQQIQRISLNTLTLNVKSDKVYTRHG VPVSVTGIAQMKIQGQNKQMLAAKCQMFLGKSESDIAHIALETLEGHQRAIIAHLTVEEI YKDRKKFSEQVFKVASSDLFNMGISVVSYTLKDVHDDQDYLHSLGKARTAQVQKDARIGE AKNKRDAVIREANAIQEKVSAQYMNEIEMAKAQRDYELKKAVYDIEVCTKKAESEMAYQL QVAKTKQQIEEEKMQVMVVERSQQIMLQEQEIARKEKELEAQVMKPADAERYRLEKLAEA ERLQLIMEAEAEAESIKMRGEAEAYAVEARGRAEAEQMAKKAEAFQTYKEGAMVDMLMEK LPLIAEEISKPLSATNKVTMVSSGGSEIGAAKLTGEVLDIMTKLPETIEKLTGVSISQVA RTG

>P62166

 $\label{thm:constraint} GKSNSKLKPEVVEELTRKTYFTEKEVQQWYKGFIKDCPSGQLDAAGFQKIYKQFFPFGDPTKFATFVFNVFDENKDGRIEFSEFIQALSVTSRGTLDEKLRWAFKLYDLDNDGYITRNEMLDIVDAIYQMVGNTVELPEEENTPEKRVDRIFAMMDKNADGKLTLQEFQEGSKADPSIVQALSLYDGLV$

>P50002

AQNIGKVVQVIGPVVDVKFQKDKLPKLNNAVNIELNGHTLVIEVAQQLGDDIVRCIAMDS

TDGLMRNQEAVDTGSAIQVPVGKATLGRMFNVLGEPIDGKPFDTKDVVMHPIHRHPPSFE EQQTQPEMFETGIKVVDLICPYVRGGKIGLFGGAGVGKTVLIQELINNIATQHGGLSVFA GVGERTREGNDLYYEMMESGVINKTALCFGQMNEPPGARMRIALAGLTMAEYFRDDEGQD VLLFIDNIFRFTQAGSEVSALLGRMPSAVGYQPTLATEMGALQERITSTSKGSITSVQAV YDPADDLTDPAPATTFAHLDATTVLSRAITEKGIYPAVDPLDSTSRILDPKIVGQEHYET AREVQEILQRYKELQDIIAILGMDELSDADKITVSRARKVERLFANHLMLRNSLPVRWGI CKRFGDTIKGFKEILQGQHDDLPESAFLLVGTIEDAVVKAKKIKG

MQLNSTEISELIKQRIAQFNVVSEAHNEGTIVSVSDGVIRIHGLADCMQGEMISLPGNRY AIALNLERDSVGAVVMGPYADLAEGMKVKCTGRILEVPVGRGLLGRVVNTLGAPIDGKGP LDHDGFSAVEAIAPGVIERQSVDQPVQTGYKAVDSMIPIGRGQRELIIGDRQTGKTALAI DAIINQRDSGIKCIYVAIGQKASTISNVVRKLEEHGALANTIVVVATASESAALQYLAPY AGCAMGEYFRDRGEDALIIYDDLSKQAVAYRQISLLLRRPPGREAFPGDVFYLHSRLLER AARVNAEYVEAFTKGEVKGKTGSLTALPIIETQAGDVSAFVPTNVISITDGQIFLETNLF NAGIRPAVNPGISVSRVGGAAQTKIMKKLSGGIRTALAQYRELAAFSQFASDLDDATRKQ LDHGQKVTELLKQKQYAPMSVAQQSLVLFAAERGYLADVELSKIGSFEAALLAYVDRDHA PLMQEINQTGGYNDEIEGKLKGILDSFKATQSW

>096JB2

AEAALLLLPEAAAERDAREKLALWDRRPDTTAPLTDRQTDSVLELKAAAENLPVPAELPI EDLCSLTSQSLPIELTSVVPESTEDILLKGFTSLGMEEERIETAQQFFSWFAKLQTQMDQ DEGTKYRQMRDYLSGFQEQCDAILNDVNSALQHLESLQKQYLFVSNKTGTLHEACEQLLK EQSELVDLAENIQQKLSYFNELETINTKLNSPTLSVNSDGFIPMLAKLDDCITYISSHPN FKDYPIYLLKFKQCLSKALHLMKTYTVNTLQTLTSQLLKRDPSSVPNADNAFTLFYVKFR AAAPKVRTLIEQIELRSEKIPEYQQLLNDIHQCYLDQRELLLGPSIACTVAELTSQNNRD HCALVRSGCAFMVHVCQDEHQLYNEFFTKPTSKLDELLEKLCVSLYDVFRPLIIHVIHLE TLSELCGILKNEVLEDHVQNNAEQLGAFAAGVKQMLEDVQERLVYRTHIYIQTDITGYKP APGDLAYPDKLVMMEQIAQSLKDEQKKVPSEASFSDVHLEEGESNSLTKSGSTESLNPRP QTTISPADLHGMWYPTVRRTLVCLSKLYRCIDRAVFQGLSQEALSACIQSLLGASESISK NKTQIDGQLFLIKHLLILREQIAPFHTEFTIKEISLDLKKTRDAAFKILNPMTVPRFFRL NSNNALIEFLLEGTPEIREHYLDSKKDVDRHLKSACEQFIQQQTKLFVEQLEEFMTKVSA LKTMASQGGPKYTLSQQPWAQPAKVNDLAATAYKTIKTKLPVTLRSMSLYLSNKDTEFIL FKPVRNNIQQVFQKFHALLKEEFSPEDIQIIACPSMEQLSLLLLVSK

>P0ABB4

ATGKIVQVIGAVVDVEFPQDAVPRVYDALEVQNGNERLVLEVQQQLGGGIVRTIAMGSSD GLRRGLDVKDLEHPIEVPVGKATLGRIMNVLGEPVDMKGEIGEEERWAIHRAAPSYEELS NSQELLETGIKVIDLMCPFAKGGKVGLFGGAGVGKTVNMMELIRNIAIEHSGYSVFAGVG ERTREGNDFYHEMTDSNVIDKVSLVYGQMNEPPGNRLRVALTGLTMAEKFRDEGRDVLLF VDNIYRYTLAGTEVSALLGRMPSAVGYQPTLAEEMGVLQERITSTKTGSITSVQAVYVPA DDLTDPSPATTFAHLDATVVLSRQIASLGIYPAVDPLDSTSRQLDPLVVGQEHYDTARGV QSILQRYQELKDIIAILGMDELSEEDKLVVARARKIQRFLSQPFFVAEVFTGSPGKYVSL KDTIRGFKGIMEGEYDHLPEQAFYMVGSIEEAVEKAKKL

>Q9Y5L4

MEGGFGSDFGGSGSGKLDPGLIMEQVKVQIAVANAQELLQRMTDKCFRKCIGKPGGSLDN SEQKCIAMCMDRYMDAWNTVSRAYNSRLQRERANM

>P42783

MASPVTVLENPIPKSGQHLLFFLTSKQQLALEQRPIESSLGYSAYVDHGVSQGVIVNPSS IAAAMRSSLITVYGITKPGTDKQYISVISPTYNLIANRQNQPIETTQKALAACSDNDRNN WVYYLNLPQGTAQYAIYELNIQDSTSAPTVYSGPTPSGNSNLAAVYFPPNKDRFIIFSNT DTRHYLYWVNSTLQSANRIAGTGSVMSASPLAATTITNVQTRSMTIFLYYMDVNTLLNRI VGKVTDNEIHWYANQVVEGAPPMKVDTLLTGVVVEEKWNCLYYIPDGDTEFRAFNDTIRD SFFDEPREG

>P69797

TIAIVIGTHGWAAEQLLKTAEMLLGEQENVGWIDFVPGENAETLIEKYNAQLAKLDTTKG VLFLVDTWGGSPFNAASRIVVDKEHYEVIAGVNIPMLVETLMARDDDPSFDELVALAVET GREGVKALKAKPVEKAAPAPAAAAPKAAPTPAKPMGPNDYMVIGLARIDDRLIHGQVATR WTKETNVSRIIVVSDEVAADTVRKTLLTQVAPPGVTAHVVDVAKMIRVYNNPKYAGERVM LLFTNPTDVERLVEGGVKITSVNVGGMAFRQGKTQVNNAVSVDEKDIEAFKKLNARGIEL EVRKVSTDPKLKMMDLISKIDK

>069282

SDSPKNAPRITDEADVVLIGAGIMSSTLGAMLRQLEPSWTQIVFERLDGPAQESSSPWNN AGTGHSALCELNYTPEVKGKVEIAKAVGINEKFQVSRQFWSHLVEEGVLSDPKEFINPVP HVSFGQGADQVAYIKARYEALKDHPLFQGMTYADDEATFTEKLPLMAKGRDFSDPVAISW IDEGTDINYGAQTKQYLDAAEVEGTEIRYGHEVKSIKADGAKWIVTVKNVHTGDTKTIKA NFVFVGAGGYALDLLRSAGIPQVKGFAGFPVSGLWLRCTNEELIEQHAAKVYGKASVGAP PMSVPHLDTRVIEGEKGLLFGPYGGWTPKFLKEGSYLDLFKSIRPDNIPSYLGVAAQEFD LTKYLVTEVLKDQDKRMDALREYMPEAQNGDWETIVAGQRVQVIKPAGFPKFGSLEFGTT LINNSEGTIAGLLGASPGASIAPSAMIELLERCFGDRMIEWGDKLKDMIPSYGKKLASEP ALFEOOWARTOKTLKLEEA

>P0A257

MLYIFRLIVTVIYSILVCVFGSIYCLFSPRNPKHVATFGHMFGRLAPLFGLKVECRKPAD AENYGNAIYIANHQNNYDMVTAANIVQPPTVTVGKKSLLWIPFFGQLYWLTGNLLIDRNN RAKAHSTIAAVVNHFKKRRISIWMFPEGTRSRGRGLLPFKTGAFHAAIAAGVPIIPVCVS NTSNKVNLNRLNNGLVIVEMLPPVDVSEYGKDQVRELAAHCRALMEQKIAELDKEVAERE ATGKV

>096JC1

MHDAFEPVPILEKLPLQIDCLAAWEEWLLVGTKQGHLLLYRIRKDVVPADVASPESGSCN RFEVTLEKSNKNFSKKIQQIHVVSQFKILVSLLENNIYVHDLLTFQQITTVSKAKGASLF TCDLQHTETGEEVLRMCVAVKKKLQLYFWKDREFHELQGDFSVPDVPKSMAWCENSICVG FKRDYYLIRVDGKGSIKELFPTGKQLEPLVAPLADGKVAVGQDDLTVVLNEEGICTQKCA LNWTDIPVAMEHQPPYIIAVLPRYVEIRTFEPRLLVQSIELQRPRFITSGGSNIIYVASN HFVWRLIPVPMATQIQQLLQDKQFELALQLAEMKDDSDSEKQQQIHHIKNLYAFNLFCQK RFDESMQVFAKLGTDPTHVMGLYPDLLPTDYRKQLQYPNPLPVLSGAELEKAHLALIDYL TQKRSQLVKKLNDSDHQSSTSPLMEGTPTIKSKKKLLQIIDTTLLKCYLHTNVALVAPLL RLENNHCHIEESEHVLKKAHKYSELIILYEKKGLHEKALQVLVDQSKKANSPLKGHERTV QYLQHLGTENLHLIFSYSVWVLRDFPEDGLKIFTEDLPEVESLPRDRVLGFLIENFKGLA IPYLEHIIHVWEETGSRFHNCLIQLYCEKVQGLMKEYLLSFPAGKTPVPAGEEEGELGEY RQKLLMFLEISSYYDPGRLICDFPFDGLLEERALLLGRMGKHEQALFIYVHILKDTRMAE EYCHKHYDRNKDGNKDVYLSLLRMYLSPPSIHCLGPIKLELLEPKANLQAALQVLELHHS KLDTTKALNLLPANTQINDIRIFLEKVLEENAQKKRFNQVLKNLLHAEFLRVQEERILHQ QVKCIITEEKVCMVCKKKIGNSAFARYPNGVVVHYFCSKEVNPADT

>P25953

MDSIEKVSKNLIEEAYLTKASDIHIVPRERDAIIHFRVDHALLKKRDMKKEECVRLISHF KFLSAMDIGERRKPQNGSLTLKLKEGNVHLRMSTLPTINEESLVIRVMPQYNIPSIDKLS LFPKTGATLLSFLKHSHGMLIFTGPTGSGKTTTLYSLVQYAKKHFNRNIVTLEDPVETRD EDVLQVQVNEKAGVTYSAGLKAILRHDPDMIILGEIRDAETAEIAVRAAMTGHLVLTSLH TRDAKGAIYRLLEFGINMNEIEQTVIAIAAQRLVDLACPFCENGCSSVYCRQSRNTRRAS VYELLYGKNLQQCIQEAKGNHANYQYQTLRQIIRKGIALGYLTTNNYDRWVYHEKD >088951

MAALVEPLGLERDVSRAVELLERLQRSGELPPQKLQALQRVLQSRFCSAIREVYEQLYDT LDITGSAEVRAHATAKATVAAFTASEGHAHPRVVELPKTDEGLGFNIMGGKEQNSPIYIS RVIPGGVADRHGGLKRGDQLLSVNGVSVEGEHHEKAVELLKAAQGSVKLVVRYTPRVLEE MEARFEKMRSARRRQQHHSYTSLESRG

>002805

MFSSSSRPSKEPLLFDIRLRNLDNDVLLIKGPPDEASSVLLSGTIVLSITEPIQIKSLAL RLFGRLRLNIPTVLQTVHGPHKRYSKFERNIYSHFWDDFNIKSYFQNLYDNHNNGKITIS SKSSTNLAALPKRKRALSTASLISSNGQTSASKNYHTLVKGNYEFPFSAIIPGSLVESVE GLPNAAVTYALEATIERPKQPDLICKKHLRVIRTLAIDAVELSETVSVDNSWPEKVDYTI SIPTKAIAIGSSTMINILIVPILKGLKLGPVRISLVENSQYCGSYGGVINQERMVAKLKL

KDPLKHVAQIKKKRSLNEAADEGVDTDTGEFQDKWEVRALLNIPASLTKCSQDCRILSNI
KVRHKIKFTISLLNPDGHISELRAALPVQLFISPFVPVNVKTSDVIERTLKTFGPSYQVT
SQHDNSFSSKNFVDDSEEDVIFQRSASALQLSSMPTIVSGSTLNINSTDAEATAVADTTM
VTSLMVPPNYGNHVYDRVYGEVTNEDETSASASSSAVESQAIHNIQNLYISDSNNSNNPI
LAPNPQIKIEDDSLNNCDSRGDSVNNSNLNLVNSNLTISENWNNNSPSANRYNNIINAGL
NSPSLTPSFAHLSRRNSYSRQTSSTSLKNDLELTDLSRVPSYDKAMKSDMIGEDLPPAYP
EEELGVQENKKIELERPQILHHKSTSSLLPLPGSSKSSNNLKRSSSRTHLSHSPLPRNNS
GSSVSLQQLARNNTDSSFNLNLSFTSAKSSTGSRHFPFNMTTSFTSNSSSKNNSHFDKTD
STSDANKPREEENYTSATHNRRSRSSSVRSNNSNSPLRQGTGSFANLMEMFTKRDRS
>086S00

MEEHSYIQKELDLQNGSLEEDSVVHSVENDSQNMMESLSPKKYSSSLRFKANGDYSGSYL TLSQPVPAKRSPSPLGTSVRSSPSLAKIQGSKQFSYDGTDKNIPMKPPTPLLNTTSSLSG YPLGRADFDHYTGRDSERALRLSEKPPYSKYSSRHKSHDNVYSLGGLEGRKASGSLLAMW NGSSLSDAGPPPISRSGAASMPSSPKQARKMSIQDSLALQPKLTRHKELASENINLRTRK YSSSSLSHMGAYSRSLPRLYRATENOLTPLSLPPRNSLGNSKRTKLGEKDLPHSVIDNDN YLNFSSLSSGALPYKTSASEGNPYVSSTLSVPASPRVARKMLLASTSSCASDDFDQASYV GTNPSHSLLAGESDRVFATRRNFSCGSVEFDEADLESLRQASGTPQPALRERKSSISSIS GRDDLMDYHRRQREERLREQEMERLERQRLETILSLCAEYTKPDSRLSTGTTVEDVQKIN KELEKLQLSDEESVFEEALMSPDTRYRCHRKDSLPDADLASCGSLSQSSASFFTPRSTRN DELLSDLTRTPPPPSSTFPKASSESSYLSILPKTPEGISEEORSOELAAMEETRIVILNN LEELKOKIKDINDOMDESFRELDMECALLDGEOKSETTELMKEKEILDHLNRKIAELEKN IVGEKTKEKVKLDAEREKLERLOELYSEOKTOLDNCPESMREOLOOOLKRDADLLDVESK HFEDLEFOOLEHESRLDEEKENLTOOLLREVAEYORNIVSRKEKISALKKOANHIVOOAO REODHFVKEKNNLIMMLOREKENLCNLEKKYSSLSGGKGFPVNPNTLKEGYISVNEINEP CGNSTNLSPSTQFPADADAVATEPATAVLASQPQSKEHFRSLEERKKQHKEGLYLSDTLP RKKTTSSISPHFSSATMGRSITPKAHLPLGQSNSCGSVLPPSLAAMAKDSESRRMLRGYN HOOMSEGHROKSEFYNRTASESNVYLNSFHYPDHSYKDOAFDTLSLDSSDSMETSISACS PDNISSASTSNIARIEEMERLLKOAHAEKTRLLESREREMEAKKRALEEEKRRREILEKR LOEETSOROKLIEKEVKIRERORAOARPLTRYLPVRKEDFDLRSHVETAGHNIDTCYHVS ITEKTCRGFLIKMGGKIKTWKKRWFVFDRNKRTFSYYADKHETKLKGVIYFQAIEEVYYD HLKNANKSPNPLLTFSVKTHDRIYYMVAPSPEAMRIWMDVIVTGAEGYTH

>P35585

SASAVYVLDLKGKVLICRNYRGDVDMSEVEHFMPILMEKEEEGMLSPILAHGGVRFMWIK HNNLYLVATSKKNACVSLVFSFLYKVVQVFSEYFKELEEESIRDNFVIIYELLDELMDFG YPQTTDSKILQEYITQEGHKLETGAPRPPATVTNAVSWRSEGIKYRKNEVFLDVIEAVNL LVSANGNVLRSEIVGSIKMRVFLSGMPELRLGLNDKVLFDNTGRGKSKSVELEDVKFHQC VRLSRFENDRTISFIPPDGEFELMSYRLNTHVKPLIWIESVIEKHSHSRIEYMVKAKSQF KRRSTANNVEIHIPVPNDADSPKFKTTVGSVKWVPENSEIVWSVKSFPGGKEYLMRAHFG LPSVEAEDKEGKPPISVKFEIPYFTTSGIQVRYLKIIEKSGYQALPWVRYITQNGDYQLR

>P42949

MAHRAFIQVIITGTQVFGKAFAEAYRQAASQSVKQGATNASRRGTGKGEYGGITLDESCK ILNIEESKGDLNMDKINNRFNYLFEVNDKEKGGSFYLQSKVYRAAERLKWELAQREKNAK AKAGDASTAKPPPNSTNSSGADNSASSNQ

>004272

GQKSSKVHITKTDRAILEVKRSKDEIHKFTRRTDNLILVEKSQLKDLIRKNPENYKSNMK VRFLLKRIHYQEHLLQQASDQLINLENMVSTLEFKMVEKQFINGLKNGNEILKKLNKEFS NVDELMDDVQDQIAYQNEINETLSRSLVGTSNYEDDLDKELDALESELNPEKMNNAKVAN MPSTEGLPSLPQGEQTEQKEREEFATEERSDTKEPLALLS

>P0A411

SHTVKIYDTCIGCTQCVRACPTDVLEMVPWDGCKAAQVASSPRTEDCVGCKRCETACPTD FLSIRVYLGAETTRSMGLAY

>P46150

MSPKALNVRVTTMDAELEFAIQSTTTGKQLFDQVVKTIGLREVWFFGLQYTDSKGDSTWI

KLYKKVMNQDVKKENPLQFRFRAKFYPEDVAEELIQDITLRLFYLQVKNAILTDEIYCPP ETSVLLASYAVQARHGDHNKTTHTAGFLANDRLLPQRVIDQHKMSKDEWEQSIMTWWQEH RSMLREDAMMEYLKIAQDLEMYGVNYFEIRNKKGTDLWLGVDALGLNIYEQDDRLTPKIG FPWSEIRNISFSEKKFIIKPIDKKAPDFMFFAPRVRINKRILALCMGNHELYMRRRKPDT IDVQQMKAQAREEKNAKQQEREKLQLALAARERAEKKQQEYEDRLKQMQEDMERSQRDLL EAQDMIRRLEEQLKQLQAAKDELELRQKELQAMLQRLEEAKNMEAVEKLKLEEEIMAKQM EVQRIQDEVNAKDEETKRLQDEVEDARRKQVIAAEAAAALLAASTTPQHHHVAEDENENE EELTNGDAGGDVSRDLDTDEHIKDPIEDRRTLAERNERLHDQLKALKQDLAQSRDETKET ANDKIHRENVRQGRDKYKTLREIRKGNTKRRVDQFENM

>P12868

MSLSSWRQFQLFENIPIRDPNFGGDSLLYSDPTLCAATIVDPQTLIIAVNSNIIKVVKLN OSOVIHEFOSFPHDFOITFLKVINGEFLVALAESIGKPSLIRVYKLEKLPNREOLYHSOV ELKNGNNTYPISVVSISNDLSCIVVGFINGKIILIRGDISRDRGSQQRIIYEDPSKEPIT ALFLNNDATACFAATTSRILLFNTTGRNRGRPSLVLNSKNGLDLNCGSFNPATNEFICCL SNFIEFFSSSGKKHOFAFDLSLRKRIFCVDKDHILIVTEETGVPTTSISVNELSPTIINR IFIIDAKNKIISLNFVVSSAIIDIFSTSQSGKNITYLLTSEGVMHRITPKSLENQINIII OKELYPFALOLAKOHSLSPLDVOEIHKKYGDYLFKKGLRKEATDOYIOCLDVVETSEIIS KFGVKEVPDPESMRNLADYLWSLIKNSISQRDHVTLLLIVLIKLKDVEGIDTFIQHFDRK GIWNEGVVMDDMDDVTFFYSDNDFFDLDLILELMKESDFKRLSYRLAKKYSKDSLIIVDI LLNLLHNPVKAIKYIKSLPIDETLRCLVTYSKKLLEESPNETNALLIEVFTGKFKPSTFE VDLDRRDTTGDFSENIRTVFYSYKTFFNYMNSNGTSDAMSESSEASHEHEEPTYHPPKPS IVFSSFVTKPFEFVVFLEACLACYQQYEGFDEDRQVILTTLYDLYLNLAQNDVPERIDDW RSRATGVLRESNKLVYSAASNNTSKRVDNSIMLLISHMDQSSASAKDKTKIDIASFANDN PEMDLLSTFRAMTLNEEPSTCLKFLEKYGTEEPKLLQVALSYFVSNKLIFKEMGGNEVLK EKVLRPI1EGERMPLLDI1KALSRTNVAHFGL1QDI11DHVKTEDTE1KRNEKL1ESYDK ELKEKNKKLKNTINSDQPLHVPLKNQTCFMCRLTLDIPVVFFKCGHIYHQHCLNEEEDTL ESERKLFKCPKCLVDLETSNKLFEAOHEVVEKNDLLNFALNSEEGSRDRFKVITEFLGRG AISYSDITI

>P38135

MKVTLTFNEQRRAAYRQQGLWGDASLADYWQQTARAMPDKIAVVDNHGASYTYSALDHAA SCLANWMLAKGIESGDRIAFQLPGWCEFTVIYLACLKIGAVSVPLLPSWREAELVWVLNK CQAKMFFAPTLFKQTRPVDLILPLQNQLPQLQQIVGVDKLAPATSSLSLSQIIADNTSLT TAITTHGDELAAVLFTSGTEGLPKGVMLTHNNILASERAYCARLNLTWQDVFMMPAPLGH ATGFLHGVTAPFLIGARSVLLDIFTPDACLALLEQQRCTCMLGATPFVYDLLNVLEKQPA DLSALRFFLCGGTTIPKKVARECQQRGIKLLSVYGSTESSPHAVVNLDDPLSRFMHTDGY AAAGVEIKVVDDARKTLPPGCEGEEASRGPNVFMGYFDEPELTARALDEEGWYYSGDLCR MDEAGYIKITGRKKDIIVRGGENISSREVEDILLQHPKIHDACVVAMSDERLGERSCAYV VLKAPHHSLSLEEVVAFFSRKRVAKYKYPEHIVVIEKLPRTTSGKIQKFLLRKDIMRRLT ODVCEEIE

>P38137

MTSAATVTASFNDTFSVSDNVAVIVPETDTQVTYRDLSHMVGHFQTMFTNPNSPLYGAVF RQDTVAISMRNGLEFIVAFLGATMDAKIGAPLNPNYKEKEFNFYLNDLKSKAICVPKGTT KLQSSEILKSASTFGCFIVELAFDATRFRVEYDIYSPEDNYKRVIYRSLNNAKFVNTNPV KFPGFARSSDVALILHTSGTTSTPKTVPLLHLNIVRSTLNIANTYKLTPLDRSYVVMPLF HVHGLIGVLLSTFRTQGSVVVPDGFHPKLFWDQFVKYNCNWFSCVPTISMIMLNMPKPNP FPHIRFIRSCSSALAPATFHKLEKEFNAPVLEAYAMTEASHQMTSNNLPPGKRKPGTVGQ PQGVTVVILDDNDNVLPPGKVGEVSIRGENVTLGYANNPKANKENFTKRENYFRTGDQGY FDPEGFLVLTGRIKELINRGGEKISPIELDGIMLSHPKIDEAVAFGVPDDMYGQVVQAAI VLKKGEKMTYEELVNFLKKHLASFKIPTKVYFVDKLPKTATGKIQRRVIAETFAKSSRNK SKL

>P42951

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>Q99MI1

MYGSARSVGKVEPSSOSPGRSPRLPRSPRLGHRRTNSTGGSSGNSVGGGSGKTLSMENIO SLNAAYATSGPMYLSDHENVGAETPKSTMTLGRSGGRLPYGVRMTAMGSSPNIASSGVAS DTIAFGEHHLPPVSMASTVPHSLRQARDNTIMDLQTQLKEVLRENDLLRKDVEVKESKLS SSMNSIKTFWSPELKKERALRKDEASKITIWKEQYRVVQEENQHMQMTIQALQDELRIQR DLNOLFOODSSSRTGEPCVAELTEENFORLHAEHEROAKELFLLRKTLEEMELRIETOKO TLNARDESIKKLLEMLOSKGLSAKATEEDHERTRRLAEAEMHVHHLESLLEOKEKENNML REEMHRRFENAPDSAKTKALQTVIEMKDSKISSMERGLRDLEEEIQMLKSNGALSSEERE EEMKOMEVYRSHSKFMKNKVEOLKEELSSKDAOGEELKKRAAGLOSEIGOVKOELSRKDT ELLALQTKLETLTNQFSDSKQHIEVLKESLTAKEQRAAILQTEVDALRLRLEEKETMLNK KTKQIQDMAEEKGTQAGEIHDLKDMLDVKERKVNVLQKKIENLQEQLRDKEKQMSSLKER VKSLOADTTNTDTALTTLEEALADKERTIERLKEORDRDEREKOEEIDTYKKDLKDLREK VSLLQGDLSEKEASLLDIKEHASSLASSGLKKDSRLKTLEIALEQKKEECLKMESQLKKA HEATLEARASPEMSDRIQQLEREISRYKDESSKAQTEVDRLLEILKEVENEKNDKDKKIA ELESLTSROVKDONKKVANLKHKEOVEKKKSAOMLEEARRREDSLSDSSOOLODSLRKKD DRIEELEEALRESVOITAEREMVLAQEESARTNAEKQVEELLMAMEKVKQELESMKAKLS STQQSLAEKETHLTNLRAERRKHLEEVLEMKQEALLAAISEKDANIALLELSSSKKKTQE EVAALKREKDRLVOOLKOOTONRMKLMADNYEDDHFRSSRSNOTNHKPSPDOIIOPLLEL DONRSKLKLYIGHLTALCHDRDPLILRGLTPPASYNADGEOAAWENELOOMTOEOLONEL EKVEGDNAELQEFANTILQQIADHCPDILEQVVNALEESS

>P35594

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SDGNMDAGNILKPALARGELQLVGATTLNEYRIIEKDAALERRMQPVKVDEPTVDETITI
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IIEQKTNIPVGDLKEKEQSQLIHLAEDLKSHVIGQDDAVDKIAKAIRRNRVGLGTPNRPI
GSFLFVGPTGVGKTELSKQLAIELFGSADSMIRFDMSEYMEKHSVAKLVGAPPGYVGYDE
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NAGTGKTEASVGFGAAREGRTNSVLGELGNFFSPEFMNRFDGIIEFKALSKDNLLQIVEL
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>054749

MIMFLSSLVTTFWEALHLKTLVLAVVTFLFLINILRSRHPKNYPPGPWRLPFVGNFFQID TKQTHLVLQQFVKKYGNVFSLELGQSPVVVVSGLPLIKEMFTHLDQNFVNRFMTPVRERI TGKNGLVVSNGQTWKEQRRLALMALRNFGLGKKSLEERIQEETHHLVEAIREEGGQPFNP HLKLINAVSNIICSVTFGERFDYEDCQFQELLQLLDETMHLMGSSAGQLYNGFPCIMKYL PGPHQKIFRNWGKLKLFVSHIVKKHEKDWNPDEPRDFIDAFLIEMQKDPDRTTSFNEENL ISTTLDLFLGGTETTSSTLRWALLYMSSYPEIQENVQAEIDRVIGHKRQVSLSDRESMPY TNAVIHEVQRMGNIVPLNSSREVTVDTKFNGFHLPKGTMILTNLTALHRDPKEWATPEVF NPEHFLENGQFKKRESFLPFSMGKRACLGEQLAKSELFIFFSALMQKFTFKPPINEKLSL KFRMGLILSPASYRICAIPR

>P37199

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DMDYPLQGPGLLSVPSLPEISTIRRVPLRLSWLNSLDTCSVTAMMGVFPPISRAWLTIDS DIFMWNYEDGGDLAYFDGLSETILAVGLVKPKAGIFOPHVRHLLVLATPVDIVILGLSYA NVQTGSGILNDSVCGGLQLLPDPLYSLPTDNTYLLTITSTDNGRIFLAGKDGCLYEVAYQ AEAGWFSORCRKINHSKSSLSFLVPSLLOFTFSEDDPIVOIEIDNSRNILYTRSEKGVIO VYDLGHDGQGMSRVASVSQNAIVCAAGNIARTIDRSVFKPIVQIAVIENSESLDCQLLAV THAGVRLYFSTCPFROPLARPNTLTLVHVRLPPGFSASSTVEKPSKVHKALYSKGILLMT ASENEDNDILWCVNHDTFPFQKPMMETQMTTRVDGHSWALSAIDELKVDKIITPLNKDHI PITDSPVVVQQHMLPPKKFVLLSAQGSLMFHKLRPVDQLRHLLVSNVGGDGEEIERFFKL HOEDQACATCLILACSTAACDREVSAWATRAFFRYGGEAQMRFPATLPTPSNVGPILGSP MYSSSPVPTGSPYPNPSSLGTPSHGAOPPTMSTPMSAVGNPAMOAASLSGLTGPEIVYSG KHNGICIYFSRIMGNIWDASLVVERVFKSSNREITAIESSVPIQLLESVLQELKGLQEFL DRNSQFSGGPLGNPNTTAKVQQRLLGVMRPENGNTQQMQQELQRKFHEAQLSEKISLQAI QQLVRKSYQALALWKLLCEHQFTVIVGELQKEFQEQLKITTFKDLVIREKEVTGALIASL INCYIRDNAAVDGISLHLODTCPLLYSTDDAVCSKANELLORSROVOSKSERERMLRESL KEYOKI SNOVDLPSVCAOYROVRFYEGVVELSLTAAEKKDPOGLGLHFYKHGEPEEDVVG LOTFOERLNSYKCITDTLOELVNOSKAAPOSPSVPKKPGPPVLSSDPNMLSNEEAGHHFE OMLKLAORSKDELFSIALYNWLIOADLADKLLOIASPFLEPHLVRMAKVDONRVRYMDLL WRYYEKNRSFSSAARVLSKLADMHSTEISLQQRLEYIARAILSAKSSTAISSIAADGEFL HELEEKMEVARIQLQIQETLQRQYSHHSSVQDAISQLDSELMDITKLYGEFADPFKLAEC KLAIIHCAGYSDPILVHTLWODIIEKELSDSVTLSSSDRMHALSLKLVLLGKIYAGTPRF FPLDFIVOFLEOOVCTLNWDVGFVIOTMNEIGVPLPRLLEVYDOLFKSRDPFWNRVKSPL HLLDCIHVLLTRYVENPSLVLNCERRRFTNLCLDAVCGYLVELQSMSSSVAVQAITGNFK SLQAKLERLH

>P35596

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>061967

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>029748

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>086WG5

MARLADYFIVVGYDHEKPGSGEGLGKIIQRFPQKDWDDTPFPQGIELFCQPGGWQLSRER KOPTFFVVVLTDIDSDRHYCSCLTFYEAEINLOGTKKEEIEGEAKVSGLIOPAEVFAPKS LVLVSRLYYPEIFRACLGLIYTVYVDSLNVSLESLIANLCACLVPAAGGSQKLFSLGAGD ROLIOTPLHDSLPITGTSVALLFOOLGIONVLSLFCAVLTENKVLFHSASFORLSDACRA LESLMFPLKYSYPYIPILPAQLLEVLSSPTPFIIGVHSVFKTDVHELLDVIIADLDGGTI KIPECIHLSSLPEPLLHQTQSALSLILHPDLEVADHAFPPPRTALSHSKMLDKEVRAVFL RLFAQLFQGYRSCLQLIRIHAEPVIHFHKTAFLGQRGLVENDFLTKVLSGMAFAGFVSER GPPYRSCDLFDELVAFEVERIKVEENNPVKMIKHVRELAEOLFKNENPNPHMAFOKVPRP TEGSHLRVHILPFPEINEARVOELIOENVAKNONAPPATRIEKKCVVPAGPPVVSIMDKV TTVFNSAORLEVVRNCISFIFENKILETEKTLPAALRALKGKAAROCLTDELGLHVOONR AILDHOOFDYIIRMMNCTLODCSSLEEYNIAAALLPLTSAFYRKLAPGVSOFAYTCVODH PIWTNQQFWETTFYNAVQEQVRSLYLSAKEDNHAPHLKQKDKLPDDHYQEKTAMDLAAEQ LRLWPTLSKSTQQELVQHEESTVFSQAIHFANLMVNLLVPLDTSKNKLLRTSAPGDWESG SNSIVTNSIAGSVAESYDTESGFEDSENTDIANSVVRFITRFIDKVCTESGVTODHIKSL HCMIPGIVAMHIETLEAVHRESRRLPPIQKPKILRPALLPGEEIVCEGLRVLLDPDGREE ATGGLLGGPOLLPAEGALFLTTYRILFRGTPHDOLVGEOTVVRSFPIASITKEKKITMON OLOONMOEGLOITSASFOLIKVAFDEEVSPEVVEIFKKOLMKFRYPOSIFSTFAFAAGOT TPOIILPKOKEKNTSFRTFSKTIVKGAKRAGKMTIGROYLLKKKTGTIVEERVNRPGWNE DDDVSVSDESELPTSTTLKASEKSTMEQLVEKACFRDYQRLGLGTISGSSSRSRPEYFRI TASNRMYSLCRSYPGLLVVPQAVQDSSLPRVARCYRHNRLPVVCWKNSRSGTLLLRSGGF HGKGVVGLFKSONSPOAAPTSSLESSSSIEOEKYLOALLNAVSVHOKLRGNSTLTVRPAF ALSPGVWASLRSSTRLISSPTSFIDVGARLAGKDHSASFSNSSYLONOLLKRQAALYIFG EKSQLRNFKVEFALNCEFVPVEFHEIRQVKASFKKLMRACIPSTIPTDSEVTFLKALGDS EWFPOLHRIMOLAVVVSEVLENGSSVLVCLEEGWDITAOVTSLVOLLSDPFYRTLEGFOM LVEKEWLSFGHKFSQRSSLTLNCQGSGFAPVFLQFLDCVHQVHNQYPTEFEFNLYYLKFL AFHYVSNRFKTFLLDSDYERLEHGTLFDDKGEKHAKKGVCIWECIDRMHKRSPIFFNYLY SPLEIEALKPNVNVSSLKKWDYYIEETLSTGPSYDWMMLTPKHFPSEDSDLAGEAGPRSO RRTVWPCYDDVSCTOPDALTSLFSEIEKLEHKLNOAPEKWOOLWERVTVDLKEEPRTDRS QRHLSRSPGIVSTNLPSYQKRSLLHLPDSSMGEEQNSSISPSNGVERRAATLYSQYTSKN DENRSFEGTLYKRGALLKGWKPRWFVLDVTKHOLRYYDSGEDTSCKGHIDLAEVEMVIPA GPSMGAPKHTSDKAFFDLKTSKRVYNFCAQDGQSAQQWMDKIQSCISDA

>P47102

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>Q9NXG6

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>P18900

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VELMSNSIANLVEGEFMQLKNTSIDADIDTIENGHKLLPVPSKKLEVKEHDFRVPSRQQG
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>P50980

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VEELFQNPKHPYTRSLLRSNPSAETVSDDLYVIPGSVPSLSEIEYDKDLFLARVPWMKEE
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>P34008

>P34009

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>Q12451

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SSYASTTKRVAKPFNPLLGETFEYSRPDKQYRFFTEQVSHHPPISATWTESPRWDFWGES
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VVNHTTGDHCKLYFKARGWRSSGAYEITGEVYNKKKQKVWILGGHWNEAIFAKKVVKDGD
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>012452

MNRKVAIVTGTNSNLGLNIVFRLIETEDTNVRLTIVVTSRTLPRVQEVINQIKDFYNKSG RVEDLEIDFDYLLVDFTNMVSVLNAYYDINKKYRAINYLFVNAAQGIFDGIDWIGAVKEV FTNPLEAVTNPTYKIQLVGVKSKDDMGLIFQANVFGPYYFISKILPQLTRGKAYIVWISS IMSDPKYLSLNDIELLKTNASYEGSKRLVDLLHLATYKDLKKLGINQYVVQPGIFTSHSF SEYLNFFTYFGMLCLFYLARLLGSPWHNIDGYKAANAPVYVTRLANPNFEKQDVKYGSAT SRDGMPYIKTQEIDPTGMSDVFAYIQKKKLEWDEKLKDQIVETRTPI

>P18766

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>P79739

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>Q9HB21

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>Q86YB8

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>Q9SSX0

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>P98181

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>P0A9C0

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>P25051

MNRIKVAILFGGCSEEHDVSVKSAIEIAANINKEKYEPLYIGITKSGVWKMCEKPCAEWE NDNCYSAVLSPDKKMHGLLVKKNHEYEINHVDVAFSALHGKSGEDGSIQGLFELSGIPFV GCDIQSSAICMDKSLTYIVAKNAGIATPAFWVINKDDRPVAATFTYPVFVKPARSGSSFG VKKVNSADELDYAIESARQYDSKILIEQAVSGCEVGCAVLGNSAALVVGEVDQIRLQYGI FRIHQEVEPEKGSENAVITVPADLSAEERGRIQETAKKIYKALGCRGLARVDMFLQDNGR IVLNEVNTLPGFTSYSRYPRMMAAAGIALPELIDRLIVLALKG

MSIVMQLQDVAESTRLGPLSGEVRAGEILHLVGPNGAGKSTLLARMAGMTSGKGSIQFAG QPLEAWSATKLALHRAYLSQQQTPPFATPVWHYLTLHQHDKTRTELLNDVAGALALDDKL GRSTNQLSGGEWQRVRLAAVVLQITPQANPAGQLLLLDEPMNSLDVAQQSALDKILSALC QQGLAIVMSSHDLNHTLRHAHRAWLLKGGKMLASGRREEVLTPPNLAQAYGMNFRRLDIE GHRMLISTI

>P23453

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>095271

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>099640

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YGEVFKVRSKEDGRLYAVKRSMSPFRGPKDRARKLAEVGSHEKVGQHPCCVRLEQAWEEG
GILYLQTELCGPSLQQHCEAWGASLPEAQVWGYLRDTLLALAHLHSQGLVHLDVKPANIF
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CNMELPHGGEGWQQLRQGYLPPEFTAGLSSELRSVLVMMLEPDPKLRATAEALLALPVLR
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>P06616

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MAAIASTLSLSSTKPQRLFDSSFHGSAISAAPISIGLKPRSFSVRATTAGYDLNAFTFDP IKESIVSREMTRRYMTDMITYAETDVVVVGAGSAGLSAAYEISKNPNVQVAIIEQSVSPG GGAWLGGQLFSAMIVRKPAHLFLDEIGVAYDEQDTYVVVKHAALFTSTIMSKLLARPNVK LFNAVAAEDLIVKGNRVGGVVTNWALVAQNHHTQSCMDPNVMEAKIVVSSCGHDGPFGAT GVKRLKSIGMIDHVPGMKALDMNTAEDAIVRLTREVVPGMIVTGMEVAEIDGAPRMGPTF GAMMISGQKAGQLALKALGLPNAIDGTLVGNLSPELVLAAADSAETVDA

>Q9Z266

 ${\tt MAAAGSAAVSGAGTPVAGPTGRDLFAEGLLEFLRPAVQQLDSHVHAVRESQVELREQIDN \\ LATELCRINEDQKVALDLDPYVKKLLNARRRVVLVNNILQNAQERLRRLNHSVAKETARR \\ RAMLDSGVYPPGSPSK$

>05SKZ7

SASSERELYEAWVELLSWMREYAQAKGVRFEKEADFPDFIYRMERPYDLPTTIMTASLSD GLGEPFLLADVSPRHAKLKRIGLRLPRAHIHLHAHYEPGKGLVTGKIPLTKERFFALADR AREALAFA

>P10355

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>Q9C5X3

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>P42043

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>09JHS3

 $\label{toyloop} {\tt MLRPKALTQVLSQANTGGVQSTLLLNNEGSLLAYSGYGDTDARVTAAIASNIWAAYDRNG} \\ {\tt NQAFNEDSLKFILMDCMEGRVAITRVANLLLCMYAKETVGFGMLKAKAQALVQYLEEPLT} \\ {\tt OVAAS}$

>P31482

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>09COC9

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>P06625

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>P49815

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>Q9ERS5

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RTSDV

>Q810B6

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>Q9C7S7

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>09M9P0

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>P46194

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>P79760

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>P79761

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>043283

MANFOEHLSCSSSPHLPFSESKTFNGLODELTAMGNHPSPKLLEDOOEKGMVRTELIESV HSPVTTTVLTSVSEDSRDQFENSVLQLREHDESETAVSQGNSNTVDGESTSGTEDIKIQF SRSGSGSGFLEGLFGCLRPVWNIIGKAYSTDYKLOOODTWEVPFEEISELOWLGSGAOG AVFLGKFRAEEVAIKKVREONETDIKHLRKLKHPNIIAFKGVCTOAPCYCIIMEYCAHGO LYEVLRAGRKITPRLLVDWSTGIASGMNYLHLHKIIHRDLKSPNVLVTHTDAVKISDFGT SKELSDKSTKMSFAGTVAWMAPEVIRNEPVSEKVDIWSFGVVLWELLTGEIPYKDVDSSA IIWGVGSNSLHLPVPSTCPDGFKILMKOTWOSKPRNRPSFROTLMHLDIASADVLATPOE TYFKSQAEWREEVKKHFEKIKSEGTCIHRLDEELIRRRREELRHALDIREHYERKLERAN NLYMELSAIMLOLEMREKELIKREOAVEKKYPGTYKRHPVRPIIHPNAMEKLMKRKGVPH KSGMOTKRPDLLRSEGIPTTEVAPTASPLSGSPKMSTSSSKSRYRSKPRHRRGNSRGSHS DFAAILKNQPAQENSPHPTYLHQAQSQYPSLHHHNSLQQQYQQPPPAMSQSHHPRLNMHG QDIATCANNLRYFGPAAALRSPLSNHAQRQLPGSSPDLISTAMAADCWRSSEPDKGQAGP WGCCOADAYDPCLOCRPEOYGSLDIPSAEPVGRSPDLSKSPAHNPLLENAOSSEKTEENE FSGCRSESSLGTSHLGTPPALPRKTRPLOKSGDDSSEEEEGEVDSEVEFPRRORPHRCIS SCOSYSTFSSENFSVSDGEEGNTSDHSNSPDELADKLEDRLAEKLDDLLSOTPEIPIDIS SHSDGLSDKECAVRRVKTQMSLGKLCVEERGYENPMQFEESDCDSSDGECSDATVRTNKH YSSATW

>012489

MSAQDYYGNSASKQSYSRPSAPPPGYETASRGYAPSQSQQNYYPPQQQQQQYQQQPQYYQ QQQPQYYQQHPQQPIYVQQQPASSGNEDCLAGCLAGLCLCCTLDMLF >09HB55

MDLIPNFAMETWVLVATSLVLLYIYGTHSHKLFKKLGIPGPTPLPFLGTILFYLRGLWNF DRECNEKYGEMWGLYEGQQPMLVIMDPDMIKTVLVKECYSVFTNQMPLGPMGFLKSALSF AEDEEWKRIRTLLSPAFTSVKFKEMVPIISQCGDMLVRSLRQEAENSKSINLKDFFGAYT MDVITGTLFGVNLDSLNNPQDPFLKNMKKLLKLDFLDPFLLLISLFPFLTPVFEALNIGL FPKDVTHFLKNSIERMKESRLKDKQKHRVDFFQQMIDSQNSKETKSHKALSDLELVAQSI IIIFAAYDTTSTTLPFIMYELATHPDVQQKLQEEIDAVLPNKAPVTYDALVQMEYLDMVV NETLRLFPVVSRVTRVCKKDIEINGVFIPKGLAVMVPIYALHHDPKYWTEPEKFCPERFS KKNKDSIDLYRYIPFGAGPRNCIGMRFALTNIKLAVIRALQNFSFKPCKETQIPLKLDNL PILOPEKPIVLKVHLRDGIT

>09XTY6

MSASQGNVFTRGLSRISRRKKKTKSIQNSLVSEQQPSFDAAIVPMPIPNDKSSIFSKGMD RLRRSLRLPKKRRDRSHDRHLSPDVTGGSKTEQWQPDEGAVRTGTCCFNVKYLGSVEVYE SRGMQVCEGALKSLKASRRKPVKAVLYVSGDGLRVVDQGNSRGLLVDQTIEKVSFCAPDR QTDKGFAYICRDGASRRWMCHGFLATKETGERLSHAVGCAFSICLEKKKRRDEETAQVNV QSAQESTSSTPPKDIFHPNWEDNTSEGTSTQNPSNSRSNLAYQSFRKHVSIEDRYLDPQS VIINEVPASNHMDEIRRISKPRPTGNPALFLRQGSLRAPPDMPSSSDQFKRNMSLRTVSN NPTERSPEKKSFGTQLYNEPIYEGDEDPLGLGITPPVVTKTSGSLSNNGLDGINLNWKSI PAPVHQMQQHNANGDFVAAWPQNTIEKPTVGPLDKLQKQFEDIKLISISSGENTPTTRSK ADEWLDDVLRVSMSMSPTSPSSDPPSTSSYSVLPKSGPPPAHAPPPLPVRQAVSNGSPSI YQQQLQQANSTRNSPAGINWNSSPNPMKISQPPAKPVDPFDVQWSRLAVNNTH

MSALPPVYSFPPLYTRQPNSLTRRQQISTWIDIISQYCKTKKIWYMSVDGTVINDNELDS GSTDNDDSKKISKNLFNNEDIQRSVSQVFIDEIWSQMTKEGKCLPIDQSGRRSSNTTTTR YFILWKSLDSWASLILQWFEDSGKLNQVITLYELSEGDETVNWEFHRMPESLLYYCLKPL CDRNRATMLKDENDKVIAIK

>P18004

MNNPLEAVTQAVNSLVTALKLPDESAKANEVLGEMSFPQFSRLLPYRDYNQESGLFMNDT TMGFMLEAIPINGANESIVEALDHMLRTKLPRGIPLCIHLMSSQLVGDRIEYGLREFSWS GEQAERFNAITRAYYMKAAATQFPLPEGMNLPLTLRHYRVFISYCSPSKKKSRADILEME NLVKIIRASLQGASITTQTVDAQAFIDIVGEMINHNPDSLYPKRRQLDPYSDLNYQCVED SFDLKVRADYLTLGLRENGRNSTARILNFHLARNPEIAFLWNMADNYSNLLNPELSISCP FILTLTLVVEDQVKTHSEANLKYMDLEKKSKTSYAKWFPSVEKEAKEWGELRQRLGSGQS SVVSYFLNITAFCKDNNETALEVEQDILNSFRKNGFELISPRFNHMRNFLTCLPFMAGKG LFKQLKEAGVVQRAESFNVANLMPLVADNPLTPAGLLAPTYRNQLAFIDIFFRGMNNTNY NMAVCGTSGAGKTGLIQPLIRSVLDSGGFAVVFDMGDGYKSLCENMGGVYLDGETLRFNP FANITDIDQSAERVRDQLSVMASPNGNLDEVHEGLLLQAVRASWLAKENRARIDDVVDFL KNASDSEQYAESPTIRSRLDEMIVLLDQYTANGTYGQYFNSDEPSLRDDAKMVVLELGGL EDRPSLLVAVMFSLIIYIENRMYRTPRNLKKLNVIDEGWRLLDFKNHKVGEFIEKGYRTA RRHTGAYITITQNIVDFDSDKASSAARAAWGNSSYKIILKQSAKEFAKYNQLYPDQFLPL QRDMIGKFGAAKDQWFSSFLLQVENHSSWHRLFVDPLSRAMYSSDGPDFEFVQQKRKEGL SIHEAVWQLAWKKSGPEMASLEAWLEEHEKYRSVA

>P33241

MAEASSDPGAEEREELLGPTAQWSVEDEEEAVHEQCQHERDRQLQAQDEEGGGHVPERPK QEMLLSLKPSEAPELDEDEGFGDWSQRPEQRQQHEGAQGALDSGEPPQCRSPEGEQEDRP GLHAYEKEDSDEVHLEELSLSKEGPGPEDTVQDNLGAAGAEEEQEEHQKCQQPRTPSPLV LEGTIEQSSPPLSPTTKLIDRTESLNRSIEKSNSVKKSQPDLPISKIDQWLEQYTQAIET AGRTPKLARQASIELPSMAVASTKSRWETGEVQAQSAAKTPSCKDIVAGDMSKKSLWEQK GGSKTSSTIKSTPSGKRYKFVATGHGKYEKVLVEGGPAP

>P42064

MSTLLEVNNLKTYFFRKKEPIPAVDGVDFHISKGETVALVGESGSGKSITSLSIMGLVQS SGGKIMDGSIKLEDKDLTSFTENDYCKIRGNEVSMIFQEPMTSLNPVLTIGEQITEVLIY HKNMKKKEARQRAVELLQMVGFSRAEQIMKEYPHRLSGGMRQRVMIAIALSCNPKLLIAD EPTTALDVTIQAQVLELMKDLCQKFNTSILLITHDLGVVSEAADRVIVMYCGQVVENATV DDLFLEPLHPYTEGLLTSIPVIDGEIDKLNAIKGSVPTPDNLPPGCRFAPRCPKAMDKCW TNOPSLLTHKSGRTVRCFLYEEEGAEQS

>P42065

MTAANQETILELRDVKKYFPIRSGLFQRKVGDVKAVDGVSFSLKKGETLGIVGESGCGKS TAGRTMIRLYKPTEGQILFKGQDISNLSEEKLRKSVRKNIQMVFQDPFASLNPRKTLRSI IKEPFNTHNMYTMRERNEKVEELLARVGLHPSFAGRYPHEFSGGQRQRIGIARALTLNPE LIIADEPVSALDVSIQPQVINLMEELQEEFNLTYLFISHDLSVVRHISDRVGVMYLGKMM ELTGKHELYDNPLHPYTQALLSSVPVTRKRGSVKRERIVLKGELPSPANPPKGCVFHTRC PVAKPICKEQIPEFKEAAPSHFVACHLYS

>P40608

MKLRTVAASLLLMLSATTVRASAADVGAPVPIYTEAELIKLIEQNKHLQRVRADNCQLVE DIVARATRINLPAYEFLYGDMLAWGVCVEQDVELGLYYMENAAQQGLPAALEQIGRYYSR GTLVQQDKERAIPYLREAASMGNLNARIHLAELLLRDYGSPLDYEDAYRWLYNSVTADQR QHKRIAVLRRGLEQRMPQNIVARAKRRDMFW

>004616

QDWTSECDLLVVGSGGGALTGAYTAAAQGLTTIVLEKTDRFGGTSAYSGASIWLPGTQVQ ERAGLPDSTENARSYLRALLGDAESERQDAYVETAPAVVALLEQNPNIEFEFRAFPDYYK AEGRMDTGRSINPLDLDPADIGDLAGRCVRNCTKTDRMDHAPGRMIGGRALIAVSAAVQS TARQNFAPESVLTSLIVEDGRVVGGLRSNPRYRQRIKANRGVLMHAGGGFEGNAEMREQA GTPGKAIWSMGPSGPTPATRSPPELAGRRRNSLARSGVVLPRGRAARRRRLHGRVRGGLV VDSPGSVPQRVASVRPVRTSHGCSPDDNGSAVPSFMIFDSREVTDCPPSASRTRPPPSTS KPEPGSVPTLSKNSLPRPDYRPERIAQHCRKVQRCRKLGVDEEFHRGEDPYDAFFCPPNG GANAALTAIENGPFYAARDRLSDLGTKGGLVTDVNGRVLRADGSAIDGLYAAGNTSASVA PFYPGPGVPLGTAMVFSYRAAODMAK

>Q13439

MFKKLKQKISEEQQQLQQALAPAQASSNSSTPTRMRSRTSSFTEQLDEGTPNRESGDTQS FAQKLQLRVPSVESLFRSPIKESLFRSSSKESLVRTSSRESLNRLDLDSSTASFDPPSDM DSEAEDLVGNSDSLNKEQLIORLRRMERSLSSYRGKYSELVTAYOMLOREKKKLOGILSO SODKSLRRIAELREELOMDOOAKKHLOEEFDASLEEKDOYISVLOTOVSLLKORLRNGPM NVDVLKPLPOLEPOAEVFTKEENPESDGEPVVEDGTSVKTLETLOORVKROENLLKRCKE TIOSHKEOCTLLTSEKEALOEOLDERLOELEKIKDLHMAEKTKLITOLRDAKNLIEOLEO DKGMVIAETKRQMHETLEMKEEEIAQLRSRIKQMTTQGEELREQKEKSERAAFEELEKAL STAQKTEEARRKLKAEMDEQIKTIEKTSEEERISLQQELSRVKQEVVDVMKKSSEEQIAK LOKLHEKELARKEOELTKKLOTREREFOEOMKVALEKSOSEYLKISOEKEOOESLALEEL ELOKKAILTESENKLRDLOOEAETYRTRILELESSLEKSLOENKNOSKDLAVHLEAEKNK HNKEITVMVEKHKTELESLKHOODALWTEKLOVLKOOYOTEMEKLREKCEOEKETLLKDK EIIFOAHIEEMNEKTLEKLDVKOTELESLSSELSEVLKARHKLEEELSVLKDOTDKMKOE LEAKMDEOKNHHOOOVDSIIKEHEVSIORTEKALKDOINOLELLLKERDKHLKEHOAHVE NLEADIKRSEGELQQASAKLDVFQSYQSATHEQTKAYEEQLAQLQQKLLDLETERILLTK OVAEVEAOKKDVCTELDAHKIOVODLMOOLEKONSEMEOKVKSLTOVYESKLEDGNKEOE OTKOILVEKENMILOMREGOKKEIEILTOKLSAKEDSIHILNEEYETKFKNOEKKMEKVK OKAKEMOETLKKKLLDOEAKLKKELENTALELSOKEKOFNAKMLEMAOANSAGISDAVSR LETNQKEQIESLTEVHRRELNDVISIWEKKLNQQAEELQEIHEIQLQEKEQEVAELKQKI LLFGCEKEEMNKEITWLKEEGVKODTTLNELOEOLKOKSAHVNSLAODETKLKAHLEKLE VDLNKSLKENTFLQEQLVELKMLAEEDKRKVSELTSKLKTTDEEFQSLKSSHEKSNKSLE DKSLEFKKLSEELAIQLDICCKKTEALLEAKTNELINISSSKTNAILSRISHCQHRTTKV KEALLIKTCTVSELEAQLRQLTEEQNTLNISFQQATHQLEEKENQIKSMKADIESLVTEK EALOKEGGNOOOAASEKESCITOLKKELSENINAVTLMKEELKEKKVEISSLSKOLTDLN VOLONSISLSEKEAAISSLRKOYDEEKCELLDOVODLSFKVDTLSKEKISALEOVDDWSN KFSEWKKKAQSRFTQHQNTVKELQIQLELKSKEAYEKDEQINLLKEELDQQNKRFDCLKG EMEDDKSKMEKKESNLETELKSQTARIMELEDHITQKTIEIESLNEVLKNYNQQKDIEHK ELVOKLOHFOELGEEKDNRVKEAEEKILTLENOVYSMKAELETKKKELEHVNLSVKSKEE ELKALEDRLESESAAKLAELKRKAEQKIAAIKKQLLSQMEEKEEQYKKGTESHLSELNTK LQEREREVHILEEKLKSVESSQSETLIVPRSAKNVAAYTEQEEADSQGCVQKTYEEKISV LQRNLTEKEKLLQRVGQEKEETVSSHFEMRCQYQERLIKLEHAEAKQHEDQSMIGHLQEE LEEKNKKYSLIVAOHVEKEGGKNNIOAKONLENVFDDVOKTLOEKELTCOILEOKIKELD SCLVRQKEVHRVEMEELTSKYEKLQALQQMDGRNKPTELLEENTEEKSKSHLVQPKLLSN MEAQHNDLEFKLAGAEREKQKLGKEIVRLQKDLRMLRKEHQQELEILKKEYDQEREEKIK OEOEDLELKHNSTLKOLMREFNTOLAOKEOELEMTIKETINKAOEVEAELLESHOEETNO LLKKIAEKDDDLKRTAKRYEEILDAREEEMTAKVRDLQTQLEELQKKYQQKLEQEENPGN DNVTIMELQTQLAQKTTLISDSKLKEQEFREQIHNLEDRLKKYEKNVYATTVGTPYKGGN LYHTDVSLFGEPTEFEYLRKVLFEYMMGRETKTMAKVITTVLKFPDDQTQKILEREDARL MFTSPRSGIF

>P22680

MMTTSLIWGIAIAACCCLWLILGIRRRQTGEPPLENGLIPYLGCALQFGANPLEFLRANQ RKHGHVFTCKLMGKYVHFITNPLSYHKVLCHGKYFDWKKFHFATSAKAFGHRSIDPMDGN TTENINDTFIKTLQGHALNSLTESMMENLQRIMRPPVSSNSKTAAWVTEGMYSFCYRVMF EAGYLTIFGRDLTRRDTQKAHILNNLDNFKQFDKVFPALVAGLPIHMFRTAHNAREKLAE

SLRHENLQKRESISELISLRMFLNDTLSTFDDLEKAKTHLVVLWASQANTIPATFWSLFQ MIRNPEAMKAATEEVKRTLENAGQKVSLEGNPICLSQAELNDLPVLDSIIKESLRLSSAS LNIRTAKEDFTLHLEDGSYNIRKDDIIALYPQLMHLDPEIYPDPLTFKYDRYLDENGKTK TTFYCNGLKLKYYYMPFGSGATICPGRLFAIHEIKQFLILMLSYFELELIEGQAKCPPLD QSRAGLGILPPLNDIEFKYK

>061161

MALLRDVSLQDPRDRFELLQRVGAGTYGDVYKARDTVTSELAAVKIVKLDPGDDISSLQQ EITILRECRHPNVVAYIGSYLRNDRLWICMEFCGGGSLQEIYHATGPLEERQIAYVCREA LKGLHHLHSQGKIHRDIKGANLLLTLQGDVKLADFGVSGELTASVAKRRSFIGTPYWMAP EVAAVERKGGYNELCDVWALGITAIELGELQPPLFHLHPMRALMLMSKSSFQPPKLRDKT RWTQNFHHFLKLALTKNPKKRPTAERLLQHPFTTQHLPPALLTQLLDKASDPHLGTLSPE DSELETHDMFPDTIHSRSHHGPAERTPSEIQFHQVKFGAPRRKETDPLNEPWEEEWTLLG KEELSGSLLQSVQEALEERSLTIRPALELQELDSPDDAIGTIKRAPFLGLPHTESTSGDN AQSCSPGTLSAPPAGPGSPALLPTAWATLKQQEDRERSSCHGLPPTPKVHMGACFSKVFN GCPLQIHAAVTWVHPVTRDQFLVVGAEEGIYTLNLHELHEDTMEKLISQRCSWLYCVNNV LLSLSGKSTHIWAHDLPGLFEQRRLQHQAPLSIPTNRITQRIIPRRFALSTKIPDTKGCL QCRVVRNPYTGSTFLLAALPASLLLLQWYEPLQKFLLKNFSSPLPSPAGMLEPLVLDGK ELPQVCVGAEGPEGPGCRVLFHVLPLEAGLTPDILIPPEGIPGSAQQVIQVDRDTVLVSF ERCVRIVNLQGEPTAALAPELTFDFTIETVVCLQDSVLAFWSHGMQGRSLDTNEVTQEIT DETRIFRVLGAHRDIILESIPTDNPGAHSNLYILTGHQSSY

>Q03677

MVKVYIHDNKVDSDYRAPHNSGTELSLDELAKLGVIYKYCANEEEVNEIARQREYKNRDV VNICEGSFKSEAEFNEKLATFYQEHLHEDEEIRYCLEGAGYFDVRDASTPENWIRCLVES GDLLILPPGIYHRFTLTTSNHIKALRLFKDEPKWQAINRSNQADSLPVRKDYIALINQY >Q53143

MRRSLTAGLALVLIAGAAGLWLTRPVKSDPELFAGLTGEASRGERIFWAGGCASCHAAPD ASGEARLVLSGGERLTTDFGTFVVPNISPDPDHGIGGWTVADLDSALRHGTSPERSHYYP SFPYTSYAHVEPQDVADLKAFLDTLPPSDRADEPHDLAFPFNQRIILGGWKLLAGGPSWI VEGDLAPEEERGRYLVEGLGHCGECHTPRNGLGLRDKSRWLAGGPNPEGRGTIPNITPAK LDWSAGDIAEYLSSGFTPDYDSAGGQMADVVRNTSQLPDEDRRAIAAYLKRVPAIE >Q9PTL2

METRVQHGSGSQALLQARRDSGRPHGEPDLRDVLTQQVHILSLDQIRAIRNTNEYTEGPT VAPRPGVKSAPRSASQPKSERPHGLPEHRHFGRVQHTQTHASPRAPLSRSISTVSTGSRS STRTSTSSNSSEQRLLGSSSGPVADGIVRMQPKSELKSSELKPLSKEDLGAHSYRCEDCG KCKCKECTYPRTLPSCWICDKQCLCSAQNVVDYGTCVCCVKGLFYHCSNDDEDNCADNPC SCSQSHCCTRWSAMGVVSLFLPCLWCYLPAKGCLKLCQGCYDRVNRPGCRCKHSNTVCCK VPSVPPRNFEKPT

>024008

MVQFLGKQGTAGELIHMVTLDKTGKKSFGICIVRGEVKDSPNTKTTGIFIKGIVPDSPAH LCGRLKVGDRILSLNGKDVRNSTEQAVIDLIKEADFKIELEIQTFDKSDEQQAKSDPRSN GYMQAKNKFNQEQTTNNNASGGQGMGQGQGQGQGGMAGMNRQQSMQKRNTTFTASMRQKHS NYADEDDEDTRDMTGRIRTEAGYEIDRASAGNCKLNKQEKDRDKEQEDEFGYTMAKINKR YNMMKDLRRIEVQRDASKPLGLALAGHKDRQKMACFVAGVDPNGALGSVDIKPGDEIVEV NGNVLKNRCHLNASAVFKNVDGDKLVMITSRRKPNDEGMCVKPIKKFPTASDETKFIFDQ FPKARTVQVRKEGFLGIMVIYGKHAEVGSGIFISDLREGSNAELAGVKVGDMLLAVNQDV TLESNYDDATGLLKRAEGVVTMILLTLKSEEAIKAEKAAEEKKKEEAKKEEEKPQEPATA EIKPNKKILIELKVEKKPMGVIVCGGKNNHVTTGCVITHVYPEGQVAADKRLKIFDHICD INGTPIHVGSMTTLKVHQLFHTTYEKAVTLTVFRADPPELEKFNVDLMKKAGKELGLSLS PNEIGCTIADLIQGQYPEIDSKLQRGDIITKFNGDALEGLPFQVCYALFKGANGKVSMEV TRPKPTLRTEAPKA

>Q9W4E2

MLGVLASYSITVKELKLLFGTMKATNGKWPRHSAKLLNVLRQMPHRNGPDVFFSFPGRKG SAMVLPPLAKWPYENGFTFTTWFRLDPINSVNIEREKPYLYCFKTSKGVGYTAHFVGNCL VLTSMKVKGKGFQHCVKYEFQPRKWYMIAIVYIYNRWTKSEIKCLVNGQLASSTEMAWFV

STNDPFDKCYIGATPELDEERVFCGQMSAIYLFSEALTTQQICAMHRLGPGYKSQFRFDN ECYLNLPDNHKRVSHFOLLPATLGASALSGGSGSGTGSGTGNDASAAAAAAAAAAAGOOOOL QLQFQILAAEQEARAIDWSDEKLDLNAAFVKIRAVLTARNAVTLAGSSSTGTTAVATAAA AAAAAGAGAGTTAAATSAAAAAAATONENDAAVGOOOHATHHHATAATGSADDPLGHLPT GNASSSSSFEQLRRMSSVSSLNSMVGSADTEEVNQLKAVLYDGKLSNAIVFMYNPVATD GQLCLQSSPKGNVSYFVHTPHALMLQDVKAVVTHSIHCTLNSIGGIQVLFPLFSQLDMAH EGLGDIKRDPTLCSKLLGFICELVETSQTVQQHMIQNRGFLVISFMLQRSSREHLTLEVL GSFLNLTKYLVTCLSANSDLLLKOLLDHVLFNPALWIYTPANVQARLYSYLATEFLSDTQ IYSNVRRVSTVLQTVHTLKYYYWVVNPRAKSGIIPKGLDGPRPAQKDILAIRAYILLFLK OLIMIGNGVKEDELOSILNYLTTMHEDENLHDVLOMLISLMSEHPSSMVPAFDVKHGVRS IFKLLAAESQLIRLQALKLLGFFLSRSTHKRKYDVMSPHNLYTLLAERLLLYEESLSLPT YNVLYEIMTEHISQQILYTRHPEPESHYRLENPMILKVVATLIRQSKQTESLIDVKKLFL QDMTLLCNSNRENRRTVLQMSVWQEWLIAMAYIHPKSSEEQKISDMVYSLFRMLLHHAIK HEYGGWRVWVDTLAIVHSKVSYEEFKLOFAOMYEHYERORTDNITDPALROARPISTISG WEREELHOOONGGSAAAVATNOTAAVKGSVSIASLEDVPPVVEEEVEELELEEVEIOEGP ITEETEOKSVIANISDVYNEOLKTDATCNGNLEDVKEEEPVOOOIGDLEKOPEPSTPLGA LRETLQLGDDMDVEELELATAKDALNAEQHVSRVLQASEAALNDCKMAVDDVLQESSSVL KDEEIELAVNEVVQGVLNNEKKTQSQDNKDNKEQPGEQDVNVSLLNSKNLLNNNNNNNN SPSPTPTTATATAETEAETEVNANEIVSSTEAPKAETETSVAPEVETPETAKPSPIVPSP VLATNOKTEDAANKLNNNEKLAEISASPEPPIVVETPEADLLOLSDSETKPNKETEAEDS VALAVRDIVEQLIDKVIDATEAESASETKTETNNNEIPKKEKQTSEEPEDVETAETLAAA AKEIVQEVVEAALVMVQEESTQEKPEKGANSEEEKNEIGKEEILLQLEEKPASTEVQETK IEGDLKKPEDPKGHSSVEPKTPNLEEPKPOETEOOKSOEVAEELPOKPEEOVVAIVNOVL DTLVDDTVKAVAAEQTTQTSPAPEEQSPQILAMESPATSVRVKPTEVDSTTQTTPKNEAG SSLLVEQVQQVLQEDDAQQSAGMTIEDEDYSNQQAAAAVENANSSQLDANHYGPGNPESK OOOORSKSGSTRPMFSPGPTRPPFRIPEFKWSYIHORLLSDVLFSLETDIOVWRSHSTKS VLDFVNSSENAIFVVNTVHLISOLADNLIIACGGLLPLLASATSPNSELDVLEPTOGMPL EVAVSFLORLVNMADVLIFATSLNFGELEAEKNMSSGGILROCLRLVCTCAVRNCLECKE RTRYNVGALARDVPGAAHLQALIRGAQASPKNIVESITGQLSPVKDPEKLLQDMDVNRLR AVIYRDVEETKQAQFLSLAIVYFISVLMVSKYRDILEPPAEPQIQRQSPVLQRTAGGEAA SARPLFPQWSHHVYPQFLPESHQNHNSNMQHQQQQQQQQQQQHQQQQHYYQQQQQQVVHNH SHHHMTAAYYQQQHQQVAAGQQQHSPTPLATHSTSSSASSTATSQPASSSSLSSLASQS QQQSHRQLHKQQQQQQQQQQQPHYHPHQPHYGLINGHQQHPQLNGKHYAENGSTAGYH PHSHPHPHGGYMRNGDTSTLOONGMPDYOAVGLMNGHGSGGTGNNNNSSLMNNMRNLRNG GGANSSSSPPGSHQVIQGVATAGAVNANAAVGVGMGGAVGVGMGGVAGGLDGGVVYKTSA INNNYRYNGRNASAGTGGROIODSDYEIIVVDENNPSVLADNDSHSSGPPSIKSVDSDVG SLNMNSTENEVPEVESSSEILIDDHKPSHSNDESWTDVNLNEDAAVQAASAGIVVGLVDN RGNVISDKHDPSHHNQQQQQAGIIGQQQQHGSLGHSERGDKPDSEISVVRVPDGYGGAG SGGGVNSGQGQGVPSNQRPRPEELPMKAPALVAQLPLTTPSREASLTQKLEIALGPVCPL LREIMVDFAPFLSKTLVGSHGQELLMEGKGLTTFKNSHSVVELVMLLCSQEWQNSLQKHA GLAFIELINEGRLLSHAMKDHIVRVANEAEFILNRMRADDVLKHADFESQCAQTLLERRE EERMCDHLITAARRDNVIASRLLEKVRNIMCNRHGAWGDSSSTSSGGAIVGAVOKSPYW KLDAWEDDARRRKRMVONPRGSSHPOATLKAALENGGPEDAILOTRDEFHTOIAVSRTHP SGQHNGELLDDAELLIEDRELDLDLTGPVNISTKARLIAPGLVAPGTVSITSTEMFFEVD EEHPEFOKIDGEVLKYCDHLHGKWYFSEVRAIFSRRYLLONVALEIFLASRTSILFAFPD QHTVKKVIKALPRVGVGIKYGIPQTRRASMMSPRQLMRNSNMTQKWQRREISNFEYLMFL NTIAGRTYNDLNQYPIFPWVLTNYESKDLDLSLPSNYRDLSKPIGALNPSRRAYFEERYE SWDSDTIPPFHYGTHYSTAAFTLNWLVRVEPFTTMFLALQGGKFDYPDRLFSSVSLSWKN CQRDTSDVKELIPEWYFLPEMFYNSSGYRLGHREDGALVDDIELPPWAKSPEEFVRINRM ALESEFVSCOLHOWIDLIFGYKORGPEAIRATNVFYYLTYEGSVDLDGVLDPVMREAVEN OIRNFGOTPSOLLMEPHPPRSSAMHLSPMMFSAMPEDLCOMLKFYONSPVIHISANTYPO LSLPSVVTVTAGHOFAVNRWNCNYTASVOSPSYAESPOSPGSNOPLTIDPVLAVHGTNNN SNAASRRHLGDNFSQMLKIRSNCFVTTVDSRFLIACGFWDNSFRVFATETAKIVQIVFGH FGVVTCMARSECNITSDCYIASGSADCTVLLWHWNARTQSIVGEGDVPTPRATLTGHEQA VTSVVISAELGLVVSGSSNGPVLIHTTFGDLLRSLDPPAEFHSPELITMSREGFIVINYD KGNVAAYTINGKKLRHETHNDNLQCMLLSRDGEYLMTAGDRGIVEVWRTFNLAPLYAFPA CNAGIRSLALTHDQKYLLAGLSTGSIIVFHIDFNRWHHEYQQRY >P78980

MTDKLVKVMQKKKSAPQTWLDSYDKFLVRNAASIGSIESTLRTVSYVLPGRFNDVEIATE TLYAVLNVLGLYHDTIIARAVAASPNAAAVYRPSPHNRYTDWFIKNRKGYKYASRAVTFV KFGELVAEMVAKKNGGEMARWKCIIGIEGIKAGLRIYMLGSTLYQPLCTTPYPDREVTGE LLETICRDEGELDIEKGLMDPQWKMPRTGRTIPEIAPTNVEGYLLTKVLRSEDVDRPYNL LSRLDNWGVVAELLSILRPLIYACLLFRQHVNKTVPASTKSKFPFLNSPWAPWIIGLVIE ALSRKMMGSWLLRQRQSGKTPTALDQMEVKGRTNLLGWWLFRGEFYQAYTRPLLYSIVAR LEKIPGLGLFGALISDYLYLFDRYYFTASTL

>Q5VIR6

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>Q9LN94

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>0925E0

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>P81127

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>07Z6B0

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>P32602

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>014254

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>P33265

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>P32609

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>006096

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LILLVRKNLISVVNTGQFKLLASFLNELVKFFQNRFLVKFMQNKFKLLQSKLASNVSLKR YIPKGEEQSATSRSVSPPANKFSPLSRFTFRGAAASALTNIQSNLQAVVAEDEDSILALH HYLIYLNTLYLSKVYVHRLLSIEILEDDSQRILRDNFPFDNDAAQLQNLIINSEKLVLEQ TDKLSKWAVKYLFQNILQNRVRNLLGTVFVNSASSNSSTSNQKNVSRDYSAGSNQKNYIT SIEDFEDLSQINSFNSKWNQLIIPYKNILHNEAYAELLSVIVDYIVTTLEQRIWTLEFNE LGVTKLDRELSLFIGNMCGLNYNLREKFLKLTQIVLLLGLDDDNFDLTTGDIKDDFNGTF DWVINSQERIKARNMKIDRTQ

>038864

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>061187

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>08TCT0

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>086UT5

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>Q9WUA6

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>P18031

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>P32472

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>043609

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>P24457

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>Q70E73

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>P38503

>P04136

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>Q96SQ9

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>043610

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>P24463

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>002113

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>P24464

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>002114

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>P74872

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>P13107

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>P11509

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>P47195

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>Q06401

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>092095

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>095630

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>P33292

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>P11510

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>P06836

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>P06837

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>P38380

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>008012

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>Q562C9

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>P75830

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>P18068

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>060700

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>004675

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>09JK48

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>P45754

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>P35056

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>Q9FMF5

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>014449

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>Q99N48

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>P38540

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>P29720

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>P03376

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>0921W0

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>Q92265

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>Q7BLV3

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>018PE0

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>000469

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>099N50

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>P95246

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>P12353

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>P12354

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>075351

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>Q60592

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>033994

>P61966

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>P24802

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>043813

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>Q08058

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>P17444

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>P12504

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>P0A9P0

>P11707

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>Q42965

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>P32830

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>P26417

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>P0C0A9

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>P50478

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>DOART2

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>P16658

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>08NFX7

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>P11712

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>060HT9

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>P0AC41

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>000587

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>005812

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>P41807

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>000731

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>P23888

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>075381

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>086YR6

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>P54774

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>Q07428

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>099144

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>P05176

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>P05178

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>09UJY4

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>09UJY5

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>P10796

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>092462

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TDYRSYSENDQIIKWFWELMDEWSNEKKSRLLQFTTGTSRIPVNGFKDLQGSDGPRKFTI
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>092608

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>P27242

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>P19225

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>061491

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>P08661

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>09H3O1

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>P0A4D8

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>P05181

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>P0A2J9

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>027902

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>Q9H267

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>09UJZ1

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>P36213

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>POABX8

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>008245

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>P36078

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>Q8WWQ2

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>P39707

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>P46927

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>P38909

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>059601

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>Q06651

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>P08682

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>Q64148

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FPRQSTNFFKKFITTMKKNRLHSNQKTRMDFFQLMMNTQNSKGKESQKALSDLEMAAQAI
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>P08686

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LRQHKESLVAGQWRDMMDYMLQGVAQPSMEEGSGQLLEGHVHMAAVDLLIGGTETTANTL
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LALPHRTTRPSSISGYDIPEGTVIIPNLQGAHLDETVWERPHEFWPDRFLEPGKNSRALA
FGCGARVCLGEPLARLELFVVLTRLLQAFTLLPSGDALPSLQPLPHCSVILKMQPFQVRL
OPRGMGAHSPGONO

>P0A9V1

ATLTAKNLAKAYKGRRVVEDVSLTVNSGEIVGLLGPNGAGKTTTFYMVVGIVPRDAGNII IDDDDISLLPLHARARRGIGYLPQEASIFRRLSVYDNLMAVLQIRDDLSAEQREDRANEL MEEFHIEHLRDSMGQSLSGGERRRVEIARALAANPKFILLDEPFAGVDPISVIDIKRIIE HLRDSGLGVLITDHNVRETLAVCERAYIVSQGHLIAHGTPTEILQDEHVKRVYLGEDFRL >Q9T052

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>Q86D96

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>088811

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>P33695

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>Q55332

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>P14175

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>09NOS1

MQAERGARGGRGRPGGDRHSERPGAAAAVARGGGGGGGGGGGRGRGRGRGFR GARGGRGGGAPRGSRREPGGWGAGASAPVEDDSDAETYGEENDEQGNYSKRKIVSNWDR YQDIEKEVNNESGESQRGTDFSVLLSSAGDSFSQFRFAEEKEWDSEASCPKQNSAFYVDS ELLVRALQELPLCLRLNVAAELVQGTVPLEVPQVKPKRTDDGKGLGMQLKGPLGPGGRGP IFELKSVAAGCPVLLGKDNPSPGPSRDSQKPTSPLQSAGDHLEEELDLLLNLDAPIKEGD $\verb|NILPDQTSQDLKSKEDGEVVQEEEVCAKPSVTEEKNMEPEQPSTSKNVTEEELEDWLDSM| \\ \verb|TS| \\$

>P29029

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>P08845

 $\label{thm:condition} $$\operatorname{MRTQSLYQPHFGHGSYTTRNVAKNTDIGKENGLISELVYNERQPAVAQLLLPLLLQLGKQ}$$\operatorname{SRWLLWLTPQQKLSKQWLQQSGLPVDKMVQLSQISPVNTVEAMEKALQTGNYSVVLGWLP}$$\operatorname{ELTEEDRLKLRRAAELGNAYGFIMRPQRDISPTHGHCSTLKIHSSLYH}$$

>P13527

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>P46010

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>08N1B4

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>P38932

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MKRGICLAALLCLFNYLGAGHGENAEEDIRNSEGKVNFFSLDSNLKKNKKSKHNRVKRRN AKISNFLSQKAYVKETDNASGKDAEGSRPSHDSSFVNLNGHVDGKSLSYSVHVKESTPHS TTRESTEKGKENEKIQGVLSSFVQSQEGGESDDLEGMYNSIVDMSEKLKENDKYNLVFDM EIDFVDLQFFNLILELIPKDSQYHTYYEETLKQQVTEYTNSLKTLMDSCISEKDQMIILE YEINYAKRKSIETETLGDKETKLSAVSQAYAKHLESYKGVLKPKLNDIKNNAFSVLKDSY CKDNCGEYVQKYNTMRKNFISSSDQYKMEAYVYIPKSINDYTVLDKILSESNELGIDIQE TVNSLKLLGEEISEVSHLYVINSTLIDDAAKKLESINEEDESAEIDLQKFEDNSKALANN YCIFOYIKTLNEPIKKAYESKVIKSNELLSTIIDTLGKSATALOESTFDQEECNKIKTEA EKVKDDAEDICEKNEQIYYEIPESEDETIDDKINDLQDLIDQMKEYKDEIVNNSEFISNR YKNIYENLKETYETELNDIGKLENDTSKVNFYLMQIRKINTEKTKIDESLQTVEKFYKEI LDSKEKIYELKIEFEKSVTEINRLODGESARDLHEEQIKEILDKMAKKVHYLKELLSLKG KSSVYFTEMNELLNTASYDNMEGFSAKKEKADNDINALYNSVYREDINALIEEVEKFVTE NKESTLEMLKDEEMEEKLQDAKETFAKLNFVSDDKLTDVYTKMSAEVTNAEGIKKEIAQK OFENVHKKMKEFSDAFSTKFEALONSMOOYNOEGDAIEKHKONRSEKEEEYFKNESVEED LSREETEEQEYTKHKNNFSRRKGEISAEITNMREVINKIESQLNYYGVIEKYFSLIGDQN EVSTAKALKEKIVSDSLRDKIDQYETEFKEKTSAVENTVSTIQSLSKAIDSLKRLNGSIN NCKKYNTDIDLLRSKIKTLREEVOKEIAETEGDKVVGENTTALLLKSLRDKMGKINEKLN DGRLNSLDTKKEDLLKFYSESKSKIHLSKDQKGPQDPLNRIDEWEDIKREVDELNVNYQV ISENKVTLFKNNSVTYIEAMHSHINTVAHGITSNKNEILKSVKEVEDKLNLVEQNEDYKK VKNPENEKQLEAIRGSMSKLKEVINKHVSEMTQLESTANTLKSNAKGKENEHDLEELNKT KGOMRDIYEKLKKIAEELKEGTVNELKDANEKANKVELEFERNIIGHVLERITVEKDKAG KVVEEMNSLKTKIEKLIQETSDDSQNELVTTSITKHLENAKGYEDVIKRNEEDSIQLREK AKSLETLDEMKKLVOOVNMNLOSAIOGNAGISKELNELKGVIELLISTNYSSILEYVKKN SSESVRFSQLANGEFTKAEGEEKNASARLAEAEKLKEQIVKDLDYSDIDDKVKKIEGIKR EILKMKESALTFWEESEKFKQMCSSHMENAKEGKKKIEYLKNNGDGGKANITDSQMEEVG NYVSKAEHAFHTVEAQVDKTKAFYESIVAYVTKMDNLFNESLMKEVKVKCEKKNDEAEQI FGQIKTVDGRIKARVSENERKISELKEKAKVEKKESSQLNDVSTKSLLQIDNCRQQLDSV LSNIGRVKONALOYFDSADKSMKSVLPISELGAEKSLDKVKAAKESYEKNLETVONEMSR INVEEGSLTDIDKKITDIENDLLKMKKQYEEGLLQKIKENADKRKSNFELVGSEINALLD PSTSIFIKLKLKEYDMTGDLKNYAVKMNEIHGEFTKSYNLIETHLSNATDYSVTFEKAOS LRELAEKEEEHLRRREEEAIKLLNDIKKVESLKLLKEMMKKVSAEYEGMKRDHTSVSQLV QDMKTIVDELKTLNDISECSSVLNNVVSIVKKVKESKHADYKRDANSMYESMVTLANYFL SDEAKISSGMEFNAEMKSNFKTDLELEIFSVISNSNELLKKIEQDSNDVIQKERESEQLA KDATDIYNVIKLKNEFNEKLEEAKNKEEVVSEKVREALKRLSQVEGIRCHFENFHRLLDN TEELENLKKMVTIYRDKKSEAPKESGLQEMENEMNTYSNSITQLEGIVVSAGESKEDIEK LERSNEEMRNISEKISTIDSKVIEMNSTIDELYKLGKNCOAHWISLISYTANMKTSKKLI MINKEKENTEKCVDYIKDNSSSTDGYVETLKGFYGSKLTFSSASEIVONADTYSVNFAKH EKESLNAIRDIKKELYLFHQNSDISIVEGGVQNMLALYDKLNEEKREMDELYRNISETKL KOMEHSTDVFKPMIELHKGMNETNNKSLLEKEKKLKSVNDHMHSMEAEMIKNGLKYTPES VQNINNIYSVIEAEVKTLEEIDRDYGDNYQIVEEHKKQFSILIDRTNALMDDIEIFKKEN NYNLMEVNTETIHRVNDYIEKITNKLVQAKTEYEQILENIKQNDDMLQNIFLKKVSIIEY FENVKKKKESILNDLYEQERLLKIGEHLDEIKRNVTETLSSYEIDQKMEMMSKNLLEKKS KMMNYTSIYELEREANEINRDAKQIKDDDTILNSVLEAAIQKRGDMDAIFSQMSADRNPN EYKSAEKYMNEANEIIROLEVKLREIGOLVODSESILSEMNSKKSAIEKEKTARALRTSE NNRREEEERARVOEMSMNNDPTOSETTHSEGSIGEGKESDSDETGLTHDAGADEDSTSSA KGAHELEEEETTAPMEETEMNDNTLLGYDTTRSDEPDMHTENTODGTYODTSNSSDEADI LNGKFNFNNVKYAGAFVLLCTSAVIGAIIAHKKDDQEELNNGVEDDKVFEVKKSMHPENK EEIIDDSFVDIEY

>Q15643

MSSWLGGLGSGLGOSLGOVGGSLASLTGOISNFTKDMLMEGTEEVEAELPDSRTKEIEAI HAILRSENERLKKLCTDLEEKHEASEIQIKQQSTSYRNQLQQKEVEISHLKARQIALQDQ LLKLOSAAOSVPSGAGVPATTASSSFAYGISHHPSAFHDDDMDFGDIISSOOEINRLSNE VSRLESEVGHWRHIAQTSKAQGTDNSDQSEICKLQNIIKELKQNRSQEIDDHQHEMSVLQ NAHQQKLTEISRRHREELSDYEERIEELENLLQQGGSGVIETDLSKIYEMQKTIQVLQIE KVESTKKMEQLEDKIKDINKKLSSAENDRDILRREQEQLNVEKRQIMEECENLKLECSKL OPSAVKOSDTMTEKERILAOSASVEEVFRLOOALSDAENEIMRLSSLNODNSLAEDNLKL KMRIEVLEKEKSLLSQEKEELQMSLLKLNNEYEVIKSTATRDISLDSELHDLRLNLEAKE OELNOSISEKETLIAEIEELDRONOEATKHMILIKDOLSKOONEGDSIISKLKODLNDEK KRVHQLEDDKMDITKELDVQKEKLIQSEVALNDLHLTKQKLEDKVENLVDQLNKSQESNV SIQKENLELKEHIRQNEEELSRIRNELMQSLNQDSNSNFKDTLLKEREAEVRNLKQNLSE LEQLNENLKKVAFDVKMENEKLVLACEDVRHQLEECLAGNNQLSLEKNTIVETLKMEKGE IEAELCWAKKRLLEEANKYEKTIEELSNARNLNTSALOLEHEHLIKLNOKKDMEIAELKK NIEOMDTDHKETKDVLSSSLEEOKOLTOLINKKEIFIEKLKERSSKLOEELDKYSOALRK NEILROTIEEKDRSLGSMKEENNHLOEELERLREEOSRTAPVADPKTLDSVTELASEVSO LNTIKEHLEEEIKHHOKIIEDONOSKMOLLOSLOEOKKEMDEFRYOHEOMNATHTOLFLE KDEEIKSLQKTIEQIKTQLHEERQDIQTDNSDIFQETKVQSLNIENGSEKHDLSKAETER LVKGIKERELEIKLLNEKNISLTKQIDQLSKDEVGKLTQIIQQKDLEIQALHARISSTSH TODVVYLOOOLOAYAMEREKVFAVLNEKTRENSHLKTEYHKMMDIVAAKEAALIKLODEN KKLSTRFESSGODMFRETIONLSRIIREKDIEIDALSOKCOTLLAVLOTSSTGNEAGGVN SHOFEELLOERDKLKOOVKKMEEWKOOVMTTVONMOHESAOLOEELHOLOAOVLVDSDNN SKLOVDYTGLIOSYEONETKLKNFGOELAOVOHSIGOLCNTKDLLLGKLDIISPOLSSAS LLTPOSAECLRASKSEVLSESSELLQOELEELRKSLQEKDATIRTLQENNHRLSDSIAAT SELERKEHEQTDSEIKQLKEKQDVLQKLLKEKDLLIKAKSDQLLSSNENFTNKVNENELL RQAVTNLKERILILEMDIGKLKGENEKIVETYRGKETEYQALQETNMKFSMMLREKEFEC HSMKEKALAFEOLLKEKEOGKTGELNOLLNAVKSMOEKTVVFOOERDOVMLALKOKOMEN TALONEVORLRDKEFRSNOELERLRNHLLESEDSYTREALAAEDREAKLRKKVTVLEEKL VSSSNAMENASHQASVQVESLQEQLNVVSKQRDETALQLSVSQEQVKQYALSLANLQMVL EHFOOEEKAMYSAELEKOKOLIAEWKKNAENLEGKVISLOECLDEANAALDSASRLTEOL DVKEEQIEELKRQNELRQEMLDDVQKKLMSLANSSEGKVDKVLMRNLFIGHFHTPKNQRH EVLRLMGSILGVRREEMEQLFHDDQGSVTRWMTGWLGGGSKSVPNTPLRPNQQSVVNSSF SELFVKFLETESHPSIPPPKLSVHDMKPLDSPGRRKRDTNAPESFKDTAESRSGRRTDVN PFLAPRSAAVPLINPAGLGPGGPGHLLLKPISDVLPTFTPLPALPDNSAGVVLKDLLKO >Q9R0C0

MSVPEPPPPDGVLTGPSDSLEAGEPTPGLSDTSPDEGLIEDFPVDDRAVEHLVGGLLSHY LPDLQRSKRALQELTQNQVVLLDTLEQEISKFKECHSMLDINALFTEAKHYHAKLVTIRK EMLLLHEKTSKLKKRALKLOOKROREELEREOOREKEFEREKOLTAKPAKRT >052866

STEITHHOAMINGYRMHYVTAGSGYPLVLLHGWPOSWYEWRNVIPALAEOFTVIAPDLRG LGDSEKPMTGFDKRTMATDVRELVSHLGYDKVGVIGHDWGGSVAFYFAYDNRDLVERLFI LDMIPGLIKAGDSFPIPVALMINHIFFHGGNPDWATALISKDVNLYLRRFLTTLDYNYSP NVFSEEDIAEYVRVNSLPGSIRSGCOWYATGLREDTENLAKATDKLTIPVIAWGGSHFLG DIRPAWQEVAENVEGGAVENCGHFVPEEKPQFVIDTALKFFAPLR

>000940

MFKLLSFANAPAIVRANOKDSYFESRLHNOLLDVVKAIKGSHFVHKYPEELRTLATALYL CLTTLVGSKTLGEEYVDLVYVSRDGRKIPKFASRFGFVVAYVLFPYAVRQLLQKLKAQQS RLAQLVSGVSYMNVMDLLNLHLALFYFTGKYYQFAKRLFGLRYAFGYRVDKNQQRARGNY ELLGLLIIFQTVFKNVANLRKLWGATKTVQDSGDLIYRFRDQTSDVIDLADPKVLPYLPE ASRTCMLCLSPMKDPSCGECGHVFCWKCVLDWVKERQECPLCRAKMRESQLLPLR >Q9FL76

MELLKRKLYAKILMMVMVIWIAPMTNGHDHASHVPGGRPGAHPSHGAHPAHGAHPSHGAH PSHGAHPSHGAHPSHGALPSHGGQVPHSGWGHGRATFYGDINGGETQQGACGYGDLHKQG YGLETAALSTALFNNGSRCGACYEIMCEHAPQWCLPGSIKITATNFCPPDFTKPNDNWCN

PPQKHFDLSQPMFLKIAKYKAGVVPVKFRRVPCAKIGGVKFEIKGNPHFLMILPYNVGGA GAVRAMQIKGTRTQWIAMKKNWGQIWSTGVVLTGQCLSFRLTTSDGVMKEFIDVTPPDWK CNGOSFDGKVNF

>09FL77

MKLLEQMVYVECFMIIMATLLVSMSYGHRAMINDVAEAPVIDNVGSPTNGLDSSWYDARA TFYGDIHGGETQQGACGYGDLFKQGYGLETAALSTALFNEGYTCGACYQIMCVHDPQWCL PGTIKITATNFCPPDYSKTEGVWCNPPQKHFDLSLPMFLKIAQYKAGVVPVKYRRISCAR TGGVKFETKGNPYFLMILPYNVGGAGDIKLMQVKGDKTGWITMQKNWGQNWTTGVNLTGQ GISFRVTTSDGVTKDFNNVMPNNWGFGQTFDGKINF

>P35602

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GFPQTTESRILQEYITQEGQKLISAPRPPMAVTNAVSWRSEGIKYRKNEVFLDVIESVNM
LASANGTVLQSEIVGSVKMRVYLTGMPELRLGLNDKVLFEGSGRGKSKSVELEDVKFHQC
VRLSRFDTDRTISFIPPDGAFELMSYRLTTVVKPLIWIETSIERHSHSRVSFIIKAKSQF
KRRSTANNVEIIIPVPSDADSPKFKTSIGSVKYTPEQSAFVWTIKNFPGGKEYLLTAHLS
LPSVMSEESEGRPPIKVKFEIPYFTTSGIQVRYLKIIEKSGYQALPWVRYITQNGEYEMR
MK

>P29981

MEFITILLSTALFIVTFLFLFRQGAKRARFVYLVNKLPGPTAYPVVGNAIEAIVPRNKLF QVFDRRAKLYGPLYRIWAGPIAQVGLTRPEHVELILRDTKHIDKSLVYSFIRPWLGEGLL TGTGAKWHSHRKMITPTFHFKILDIFVDVFVEKSEILVKKLQSKVGGKDFDIYPFITHCA LDIICETAMGIQMNAQEESESEYVKAVYEISELTMQRSVRPWLHPKVIFDLTTMGKRYAE CLRILHGFTNKVIQERKSLRQMTGMKPTISNEEDELLGKKKRLAFLDLLLEASENGTKMS DTDIREEVDTFMFEGHDTTSAGICWALFLLGSHPEIQDKVYEELDHIFQGSDRSTTMRDL ADMKYLERVIKESLRLFPSVPFIGRVLKEDTKIGDYLVPAGCMMNLQIYHVHRNQDQYPN PEAFNPDNFLPERVAKRHPYAYVPFSAGPRNCIGQKFATLEEKTVLSSILRNFKVRSIEK REDLTLMNELILRPESGIKVELIPRLPADAC

>P00293

 ${\tt IEILLGGDDGSLAFVPNNFTVASGEKITFKNNAGFPHNVVFDEDEIPSGVDSGKISMNEE} \\ {\tt DLLBAPGZVYZVZLTZKGSYSFYCSPHQGAGMVGKVTVN}$

>08X1F5

MSQPTDEADKSTGNAQVTHESINFANFNQDSTCVSVGYQSGYKIFNVEPFTKCLSLADTS IGIVEMLFSSSLVAIVGLGELPDSSPRKLKVFNTKRRSIICELTFPTSILAVKMNRERMV VLLEDTIYIYDINTMRILHTIETPSNPEGLIALSSSTENNILAYPSPPKLPNRQETSTKG TTNDNDRSHLENIPENVNANSSNLRNGDVIIFNSHTLQPISVIEAHKAQLSAIALSSDGT LLATASNKGTIVRVFDVETGVKLYQFRRGTYPTKIYCLSFSQDNRFVCASSATETVHIFR LGQDEANNTMPSRWSKNQKLALQRYKQSMKQXQGSKPSSLVDSDSDPDVDELVENDNSDD DELEEDIDDELAEERFNSSLTVPRRVSSTTSLGSYGSQESIGDKIEPHVDSARRSVARMI RRTSQSLGRKAAEKMGPYLHPKFSSLLEPNRHFASLKVPASKDTKTVVAIGNSVGQGELL QLGEHEDVDNSSSTSDSTFHQKLLHVMVVSSEGFFYNFGLDTERGGDCTLLSQYSLLTDV NDG

>000013

MTLKASEGESGGSMHTALSDLYLEHLLQKRSRPEAVSHPLNTVTEDMYTNGSPAPGSPAQ VKGQEVRKVRLIQFEKVTEEPMGITLKLNEKQSCTVARILHGGMIHRQGSLHVGDEILEI NGTNVTNHSVDQLQKAMKETKGMISLKVIPNQQSRLPALQMFMRAQFDYDPKKDNLIPCK EAGLKFATGDIIQIINKDDSNWWQGRVEGSSKESAGLIPSPELQEWRVASMAQSAPSEAP SCSPFGKKKKYKDKYLAKHSSIFDQLDVVSYEEVVRLPAFKRKTLVLIGASGVGRSHIKN ALLSQNPEKFVYPVPYTTRPPRKSEEDGKEYHFISTEEMTRNISANEFLEFGSYQGNMFG TKFETVHQIHKQNKIAILDIEPQTLKIVRTAELSPFIVFIAPTDQGTQTEALQQLQKDSE AIRSQYAHYFDLSLVNNGVDETLKKLQEAFDQACSSPQWVPVSWVY

>09VWR5

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HGIMGGFGIICAQEDIWRHARRETIDWLKALGMTRRPGELRARLERRIARGVDECVRLFD
TEAKKSCASEVNPLPALHHSLGNIINDLVFGITYKRDDPDWLYLQRLQEEGVKLIGVSGV
VNFLPWLRHLPANVRNIRFLLEGKAKTHAIYDRIVEACGQRLKEKQKVFKELQEQKRLQR
QLEKEQLRQSKEADPSQEQSEADEDDEESDEEDTYEPECILEHFLAVRDTDSQLYCDDQL
RHLLADLFGAGVDTSLATLRWFLLYLAREQRCQRRLHELLLPLGPSPTLEELEPLAYLRA
CISETMRIRSVVPLGIPHGCKENFVVGDYFIKGGSMIVCSEWAIHMDPVAFPEPEEFRPE
RFLTADGAYQAPPQFIPFSSGYRMCPGEEMARMILTLFTGRILRRFHLELPSGTEVDMAG
ESGITLTPTPHMLRFTKLPAVEMRHAPDGAVVOD

>P62072

 ${\tt MDPLRAQQLAAELEVEMMADMYNRMTSACHRKCVPPHYKEAELSKGESVCLDRCVSKYLD} \\ {\tt IHERMGKKLTELSMQDEELMKRVQQSSGPA}$

>P70091

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LKNGNYTSRFGSIQGLSYLGMNERGIIFNNNVTLWKKIRTYFAKALTGPNLQQTVDVCVS
SIQAHLDHLDSLGHVDVLNLLRCTVLDISNRLFLNVPLNEKELMLKIQKYFHTWQDVLIK
PDIYFKFRWIHHRHKTATQELQDAIKRLVDQKRKNMEQADKLDNINFTAELIFAQNHGEL
SAENVTQCVLEMVIAAPDTLSLSLFFMLLLLKQNPHVEPQLLQEIDAVVGERQLQNQDLH
KLQVMESFIYECLSFHPVVDFTMRRALSDDIIEGYRISKGTNIILNTGRMHRTEFFLKGN
QFNLEHFENNVPRPPTFQPFGSGPRACIGKHMAMVMMKSILVTLLSQYSVCTHEGPILDC
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>O7KRY7

MFKCIPIFKGCNROVEFVDKRHCSLPOVPEEILRYSRTLEELFLDANHIRDLPKNFFRLH RLRKLGLSDNEIGRLPPDIONFENLVELDVSRNDIPDIPDDIKHLOSLOVADFSSNPIPK LPSGFSQLKNLTVLGLNDMSLTTLPADFGSLTQLESLELRENLLKHLPETISQLTKLKRL DLGDNEIEDLPPYLGYLPGLHELWLDHNQLQRLPPELGLLTKLTYLDVSENRLEELPNEI SGLVSLTDLDLAONLLEALPDGIAKLSRLTILKLDONRLORLNDTLGNCENMOELILTEN FLSELPASIGOMTKLNNLNVDRNALEYLPLEIGOCANLGVLSLRDNKLKKLPPELGNCTV LHVLDVSGNQLLYLPYSLVNLQLKAVWLSENQSQPLLTFQPDTDAETGEQVLSCYLLPQQ EYOPITPARDLESDSEPFEEREPSRTVVKFSEEATOEKETPFVRONTPHPKDLKAKAOKL KVERSRNEEHANLVTLPEENGTKLAETPTETRTIANNHQQQPHPVQQPIVGVNSKQPVVV GVVTPTTTTVAPTGVQGGSEGASSTANNVKAATAAVVAELAATVGGSDEVQDDDEQEDEF ESDRRVGFOVEGEDDDFYKRPPKLHRRDTPHHLKNKRVOHLTDKOASEILANALASOERN DTTPOHSLSGKVTSPIEEEEOLEVEOEOOOOOOHPFDSSLSPISAGKTAEASTDPDNLD GVTELRLEQYEIHIERTAAGLGLSIAGGKGSTPFKGDDDGIFISRVTEAGPADLAGLKVG DKVIKVNGIVVVDADHYQAVQVLKACGAVLVLVVQREVTRLIGHPVFSEDGSVSQISVET RPLVADAPPAASISHERYIPAPIEIVPQQQHLQQQQQPIQQVAPTHSYSGNVFATPTAA OTVOPAVSAAPNGLLLNGREAPLSYIOLHTTLIRDOIGOGLGFSIAGGKGSPPFKDDCDG IFISRITEGGLAYRDGKIMVGDRVMAINGNDMTEAHHDAAVACLTEPQRFVRLVLQREYR GPLEPPTSPRSPAVLNSLSPSGYLANRPANFSRSVVEVEQPYKYNTLATTTPTPKPTVPA SISNNNNTLPSSKTNGFATAAAATIDSSTGOPVPAPRRTNSVPMGDGDIGAGSTTSGDSG EAOPSSLRPLTSDDFOAMIPAHFLSGGSOHOVHVARPNEVGVSAVTVNVNKPOPDLPMFP AAPTELGRVTETITKSTFTETVMTRITDNQLAEPLISEEVVLPKNQGSLGFSIIGGTDHS CVPFGTREPGIFISHIVPGGIASKCGKLRMGDRILKVNEADVSKATHQDAVLELLKPGDE IKLTIOHDPLPPGFOEVLLSKAEGERLGMHIKGGLNGORGNPADPSDEGVFVSKINSVGA ARRDGRLKVGMRLLEVNGHSLLGASHQDAVNVLRNAGNEIQLVVCKGYDKSNLIHSIGQA GGMSTGFNSSASCSGGSRQGSRASETGSELSQSQSVSSLDHEEDERLRQDFDVFASQKPD AQQPTGPSVLAAAAAMVHGASSPTPPAATSNITPLPTAAAVASADLTAPDTPATQTVALI HAEQQAHQQQQQTQLAPLGQEKSTQEKVLEIVRAADAFTTVPPKSPSEHHEQDKIQKTTT VVISKHTLDTNPTTPTTPAAPLSIAGAESANSAGAPSPAVPASTPGSAPVLPAVAVQTQT OTTSTEKDEEEESOLOSTPASRDGAEEQOEEVRAKPTPTKVPKSVSDKKRFFESAMEDOH KPTOKTDKVFSFLSKDEVEKLROEEERKIATLRRDKNSRLLDAANDNIDKDAAOORTKSN SNSSSGDDNDDSDQEEGIARGDSVDNAALGHFDDAEDMRNPLDEIEAVFR >096B97

MVEAIVEFDYQAQHDDELTISVGEIITNIRKEDGGWWEGQINGRRGLFPDNFVREIKKEM KKDPLTNKAPEKPLHEVPSGNSLLSSETILRTNKRGERRRRCQVAFSYLPQNDDELELK VGDIIEVVGEVEEGWWEGVLNGKTGMFPSNFIKELSGESDELGISQDEQLSKSSLRETTG SESDGGDSSSTKSEGANGTVATAAIQPKKVKGVGFGDIFKDKPIKLRPRSIEVENDFLPV EKTIGKKLPATTATPDSSKTEMDSRTKSKDYCKVIFPYEAQNDDELTIKEGDIVTLINKD CIDVGWWEGELNGRRGVFPDNFVKLLPPDFEKEGNRPKKPPPPSAPVIKQGAGTTERKHE IKKIPPERPEMLPNRTEEKERPEREPKLDLQKPSVPAIPPKKPRPPKTNSLSRPGALPPR RPERPVGPLTHTRGDSPKIDLAGSSLSGILDKDLSDRSNDIDLEGFDSVVSSTEKLSHPT TSRPKATGRRPPSQSLTSSSLSSPDIFDSPSPEEDKEEHISLAHRGVDASKKTSKTVTIS QVSDNKASLPPKPGTMAAGGGGPAPLSSAAPSPLSSSLGTAGHRANSPSLFGTEGKPKME PAASSQAAVEELRTQVRELRSIIETMKDQQKREIKQLLSELDEEKKIRLRLQMEVNDIKK ALOSK

>Q7TN16

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SLFYTPERDVLDGDLALPLLCKDYCKEFFYTCRGHIPGLLQTTADEFCFYYARKDAGLCF
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RLFILEKEGYVKILTPEGELFKEPYLDIHKLVQSGIKGGDERGLLSLAFHPNYKKNGKLY
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PPEVFAHGLHDPGRCAVDRHPTDININLTILCSDSNGKNRSSARILQIIKGRDYESEPSL
LEFKPFSNGPLVGGFVYRGCQSERLYGSYVFGDRNGNFLTLQQSPVTKQWQEKPLCLGAS
SSCRGYFSGHILGFGEDELGEVYILSSSKSMTQTHNGKLYKIVDPKRPLMPEECRVTVQP
AQPLTSDCSRLCRNGYYTPTGKCCCSPGWEGDFCRIAKCEPACRHGGVCVRPNKCLCKKG
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>P25856

MASVTFSVPKGFTEFSGLRSSSASLPFGKKLSSDEFVSIVSFQTSAMGSSGGYRKGVTEA KLKVAINGFGRIGRNFLRCWHGRKDSPLDIIAINDTGGVKQASHLLKYDSTLGIFDADVK PSGETAISVDGKIIQVVSNRNPSLLPWKELGIDIVIEGTGVFVDREGAGKHIEAGAKKVI ITAPGKGDIPTYVVGVNADAYSHDEPIISNASCTTNCLAPFVKVLDQKFGIIKGTMTTTH SYTGDQRLLDASHRDLRRARAAALNIVPTSTGAAKAVALVLPNLKGKLNGIALRVPTPNV SVVDLVVQVSKKTFAEEVNAAFRDSAEKELKGILDVCDEPLVSVDFRCSDFSTTIDSSLT MVMGDDMVKVIAWYDNEWGYSORVVDLADIVANNWK

>P40155

MTSINSFPRNIDWPSNIGIKKIEGTNPTVNAIKGLLYNGGSIYAFLYFVIAMFVEPTLQK QYQQRNDFSLFVLLRLRRIIAQLQKRLVMTPVSSLGFNEQNNFVERSTQTSDDNIIREDN SHWAEMIYQLQNMKQELQYFNRSSGQPSESIDDFVFQIKMVTDQVELTDRSRAFSNKSRN IIQGIREIKGWFVNGOVPR

>P0A6E6

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>Q9R0E1

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>P39904

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>Q60991

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>P06197

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>05KSL6

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>Q9JII1

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>059661

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>Q64FW2

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>P53271

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>Q9ZSI1

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>P09833

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>P33891

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>P15313

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>003380

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>P20939

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>P56765

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>P38043

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>P39929

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>Q92843

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>046491

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>043150

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>Q6VVW9

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>09PUB4

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>003390

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>P12921

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>Q7NF26

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>001937

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>038709

>062768

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>P11985

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>09LX31

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>P53299

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>P09852

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>P19476

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>08N110

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LICDEPTTALDVTIQAQIIDLLKSLQNEYHFTTIFITHDLGVVASIADKVAVMYAGEIVE
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>Q07833

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>046658

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>006893

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>Q9Z0X0

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>P0A6J5

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>P32189

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>08TDJ6

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SVPMPLPTVLLDRKIETLLTEWNKNPDMLFTIHPVDGTFLVWHVKYLDEYNPGIFROVOV SFSSRIPVAFPSGDASSLSKNIMMYACINATKDSHHTLLHOEGMSVGSPHGSOPHSRSHS THMNILAPTVMMISKHIDGSLNQWAVTFADKSAFTTVLTVSHKFRYCGHRFHLNDLACHS VLPLLLTSSHHNALLTPELDCOWDSDNKLSRLMDPVKHIKGSSKOPLRNAATRTFHDPNA IYSELILWRVDPIGPLSYTGGVSELARINSLHTSAFSNVAWLPTLIPSYCLGTYCNSASA CFVASDGKNLRLYOAVVDARKLLDELSDPESSKLIGEVFNIVSOOSTARPGCIIELDAIT NQCGSNTQLLHVFQEDFIIGYKPHKEDMEKKETEIFFQPSQGYRPPPFSEKFFLVVIEKD SNNNSILHMWHLHLKSVQACLAKASEGASSESLLSVPGQKNVDSSPETSPSVSPMPHSSS IANLOTASKLILSFRLVYSOPLDLPESVEVIRATPSAGHLSSSSIYPVCLAPYLVVTTCS DNKVRFWKCCMEANPECNKSDEKEIYHWKRWPLMNDEGEDNSSTVSIVGRPVAVSCSYTG RLAVAYKQPIHHNGFVSKEFSMHVCIFECESTGGSEWVLEQTIHLDDLVKVGSVLDSRVS VDSNLFVYSKSDALLSKDRYLIPNIKHLVHLDWVSKEDGSHILTVGVGANIFMYGRLSGI VTEQTNSKDGVAVITLPLGGSIKQGVKSRWVLLRSIDLVSSVDGTPSLPVSLSWVRDGIL VVGMDCEMHVYAQWKHAVKFGDTEADSSNAEEAAMQDHSTFKSNMLARKSVVEGTAISDD VFCSPTVIQDGGLFEAAHVLSPTLPQYHPTQLLELMDLGKVRRAKAILSHLVKCIAGEVA IVRDPDAGEGTKRHLSRTISVSGSTAKETVTVGKDGTRDYTEIDSIPPLPLYALLAADOD TSYRISEESTKIPOSYEDOTVSOPEDOYSELFOIODIPTDDIDLEPEKRENKSKVINLSO YGPAYFGQEHARVLSSHLMHSSLPGLTRLEQMFLVALADTVATTSTELDESRDKSCSGRD TLDECGLRYLLAMRLHTCLLTSLPPLYRVQLLHQGVSTCHFAWAFHSEAEEELINMIPAI ORGDPOWSELRAMGIGWWVRNINTLRRCIEKVAKASFORNNDALDAALFYLSMKKKAVVW GLFRSOHDEKMTTFFSHNFNEDRWRKAALKNAFSLLGKORFEOSAAFFLLAGSLKDAIEV CLEKMEDIOLAMVIARLYESEFETSSTYISILNOKILGCOKDGSGFSCKRLHPDPFLRSL AYWVMKDYTRALDTLLEQTPKEDDEHQVIIKSCNPVAFSFYNYLRTHPLLIRRNLASPEG TLATLGLKTEKNFVDKINLIERKLFFTTANAHFKVGCPVLALEVLSKIPKVTKTSALSAK KDQPDFISHRMDDVPSHSKALSDGNGSSGIEWSNVTSSQYDWSQPIVKVDEEPLNLDWGE DHDSALDEEEDDAVGLVMKSTDAREKDKQSDQKASDPNMLLTPQEEDDPEGDTEVDVIAE OLKFRACLKILMTELRTLATGYEVDGGKLRFOLYNWLEKEIAALHEICNHESVIKEYSSK TYSKVESDLLDQEEMVDKPDIGSYERHQIERRRLQAKREHAERRKSWLQKNQDLLRVFLS YCSLHGAOGGGLASVRMELKFLLOESOOETTVKOLOSPLPLPTTLPLLSASIASTKTVIA NPVLYLNNHIHDILYTIVOMKTPPHPSIEDVKVHTLHSLAASLSASIYQALCDSHSYSQT EGNQFTGMAYQGLLLSDRRRLRTESIEEHATPNSSPAQWPGVSSLINLLSSAQDEDQPKL NILLCEAVVAVYLSLLIHALATNSSSELFRLAAHPLNNRMWAAVFGGGVKLVVKPRRQSE NISAPPVLSEDIDKHRRRFNMRMLVPGRPVKDATPPPVPAERPSYKEKFIPPELSMWDYF VAKPFLPLSDSGVIYDSDESIHSDEEDDAFFSDTOIOEHODPNSYSWALLHLTMVKLALH NVKNFFPIAGLEFSELPVTSPLGIAVIKNLENWEQILQEKMDQFEGPPPNYINTYPTDLS VGAGPAILRNKAMLEPENTPFKSRDSSAFPVKRLWHFLVKQEVLQETFIRYIFTKKRKQS EVEADLGYPGGKAKVIHKESDMIMAFSVNKANCNEIVLASTHDVQELDVTSLLACQSYIW IGEEYDRESKSSDDVDYRGSTTTLYOPSATSYSASOVHPPSSLPWLGTGOTSTGASVLMK RNLHNVKRMTSHPVHQYYLTGAQDGSVRMFEWTRPQQLVCFRQAGNARVTRLYFNSQGNK CGVADGEGFLSIWQVNQTASNPKPYMSWQCHSKATSDFAFITSSSLVATSGHSNDNRNVC LWDTLISPGNSLIHGFTCHDHGATVLQYAPKQQLLISGGRKGHVCIFDIRQRQLIHTFQA HDSAIKALALDPYEEYFTTGSAEGNIKVWRLTGHGLIHSFKSEYAKOSIFRNIGAGVMOI DIIQGNRLFSCGADGTLKTRVLPNAFNIPNRILDIL

>P82599

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>Q9NAN2

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>Q9Y8G7

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>012380

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MASKMPEGSPPTSRSIOSRNSSYSTSSNERIGTPSTISLSENSDLSKLOSTNDFESREDL SLTSDDNNDPEYVMCYNTVYHOKTKINDKLLSETEOLRKIYPLESRVFPKPTIVKEITNE RTKRYTFYDDDAPLTNOHTVLDEATYNRILKRIDFFIEKVVEVPPTYHFLSLLNVOLRIO PIWWMDEFAERNGIESLLSALRNLGHYPERASKTPLESOIIOSLFHCLNSENCRRRYOSS AKCSVPGFNALGTIAETVLSKSLNSARMATFLLKFLCNKKGLSYFKAVIRAFEWLVEOKL SKTRFSAWMHSFNDVITGVRVCADSSPQAIVHMDEFEDTDCLIDYLVATLALIRDLCAAP PDLQLRCALRHELLSAGLQKAIDSLLKWRNRHVRDALQLLIKEHNADARRFRSGSDVNNV DRKCVKKOMNYREESHTPHGNTTRKTSTPVSNNRPTTPEOOAVWDVFORIYTRFTGSEGS KESFIKLLEYFVTEPDNGKIOKSMOLLTHTLEALEGFKTAKADTNVGLTILSORLLDKLG TAEEIAEYKTKYNGAMLENKHLKEOVESMLSOLNVGPRDPMOFLKKOLDELKAELNLRDN LLASMQREFETRYRAQIQAYNKLQSQMEHVQNSNEQHLQPGLLNKVSKSFDSVHRRNLSQ DSLDAMTEQFSYHVEPNILSGSGIPVRVHTPSKTEDLDESFSGSEISSSPSPLLPDVSDT VEEQQKLLLKSPPPPPPAVIVPTPAPAPIPVPPPAPIMGGPPPPPPPGVAGAGPPPPPP PPPAVSAGGSRYYAPAPOAEPEPKIDETSLTEEOKIOLEEARKORKAADDAARAAIEKYT SIPSLRDLHKPTRPLKRVHWORVDPLPGPNVFTKFCLNFDITAKVFIDNGLLDFLDEKFD NTPREDFVAVEISDORSSLLPDTVEONMAIILRSVSNMPVEDLVOKFLVEPDFLPASILY FDRASLASTNAYTDPFIPYSTDYTKKNPKEPTADVNSLSYFEKFFVLFVVNLRHYFQERM KALKFRSTLFGDLEILEVRMKEVIDTSDSIMEDKNFAEFFOVLLIIGNYFNEPYDRASAF SLYMIYRLETLRDSSSALTLMHYFDEIIRTRFPELLQAESTFKKIQSVSGYNIDAMVAGV DGAYDEFCDFOTSLKDGALSKCDOHHPDDKAYDILSEWLPEAKERIRNIKKLKTDMLTKL ENTVKYLCEYDSIDKVRNSFFKNLNSFYEMYSIAKAENEERFEKEKRRIMSEDRDKLIRG ROKTSIVAKYRNKRELPEDSDDKODTASKDKNSLETIDEKMEDASKIEGDAKTGDDNEME DLDKMEDLEKPDYAEEKDPYITVMSELRSRIQNVPKRTVTVYSDEGVATLEPGAQGDDVV DKAKMILEKMEGHSQLLTSSANPDEEVLRAKLKAAERLQKPAIPRTRRKGHTEPKSAKSL LAELTNGSNASNLVENDROKO

>064391

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>P57744

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>09UQ49

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>Q8BIJ7

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>P51869

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>016678

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>POACD8

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>P08149

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>042393

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>042484

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>P51870

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>09UKG1

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>002696

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>Q61211

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>P47061

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>08TDM6

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>P47064

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>P79690

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>09LNU3

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>P09108

>064562

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>010951

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LNAEO

>P0A6N1

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>099732

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>07L804

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>P49758

>P70610

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>092112

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>P40531

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>09UKI2

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>061234

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>P06719

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>Q02948

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>P22758

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>09SKII2

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>090ZS8

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>014315

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>Q9F8A8

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>Q04552

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>Q6R005

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>Q99M15

>P18895

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>074401

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>Q03760

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>P10610

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>062991

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SD72244

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>P72246

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>09R001

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>P72247

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>P20094

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>P72248

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>P80269

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FYE

>P18106

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>08IZQ1

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>074423

>05H7C3

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>08BH60

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>P29475

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KCPRFLKVKNWETEVVLTDTLHLKSTLETGCTEYICMGSIMHPSQHARRPEDVRTKGQLF
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>006324

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>P87108

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>Q05523

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>P42175

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>P09152

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>Q12745

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>088339

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>P13033

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>P10633

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>P10634

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>P97813

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CATVQVLRSVDRWSAGTLENSILNAYLHTIRESQHFLYIENQFFISCSDGRTVLNKVGDE
IVDRILKAHEQGQCFRVYLLLPLLPGFEGDISTGGGNSIQAILHFTYRTLCRGEHSILHR
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GKRDSELAILIKDTEMEPSLMDGVEYQAGRFALSLRKHCFSVILGANTWPDLDLRDPVCD DFFQLWQETAENNATIYEQIFRCLPSNATRSLRALREYVAVESLATVSPSLAQSELAHIQ GHLVHFPLKFLEDESLLPPLGSKEGMIPLEVWT

>P51140

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MILQVNDVNFENMTNDEAVRVLREVVQKPGPIKLVVAKCWDPNPKGYFTIPRTEPVRPID
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PNAFIGADAVNWVLENVEDVQDRREARRIVSAMLRSNYIKHTVNKLTFSEQCYYVVNEER
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>P25342

MDPLSSVQPASYVGFDTITNQIEHRLLKKGFQFNIMVVGQSGLGKSTLINTLFASHLIDS ATGDDISALPVTKTTEMKISTHTLVEDRVRLNINVIDTPGFGDFIDNSKAWEPIVKYIKE QHSQYLRKELTAQRERFITDTRVHAILYFLQPNGKELSRLDVEALKRLTEIANVIPVIGK SDTLTLDERTEFRELIQNEFEKYNFKIYPYDSEELTDEELELNRSVRSIIPFAVVGSENE IEINGETFRGRKTRWSAINVEDINQCDFVYLREFLIRTHLQDLIETTSYIHYEGFRARQL IALKENANSRSSAHMSSNAIOR

>Q9SHD1

MASSQRYFALLALFAVSLKFCYCQNETIDVAGSGTAGVTWYGEPFGAGSTGGACGYGSAV ANPPLYAMVSAGGPSLFNNGKGCGTCYQVVCIGHPACSGSPITVTITDECPGGPCASEPV HIDLSGKAMGALAKPGQADQLRSAGVIRVNYKRAACLYRGTNIVFRMDAGANPYYISFVV EYENGDGDLSNVEIQPAGGSFISMQEMRSAVWKVNSGSALRGPFNIRLTSGESHKVIVAY NVIPANWKPDESYRSIVNF

>P15720

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MSLPIIKVHWLDHSRAFRLLWLLDHLNLEYEIVPYKRDANFRAPPELKKIHPLGRSPLLE VQDRETGKKKILAESGFIFQYVLQHFDHSHVLMSEDADIADQINYYLFYVEGSLQPPLMI EFILSKVKDSGMPFPISYLARKVADKISQAYSSGEVKNQFDFVEGEISKNNGYLVDGKLS GADILMSFPLQMAFERKFAAPEDYPAISKWLKTITSEESYAASKEKARALGSNF >Q46045

MNTNNEETFYQAMRRKGVSRRSFLKYCSLAATSLGLGAAMTPRIAWALENKPRIPVVWIH GLECTCCTESFIRSSHPLAKDVILSLISLDYDDTLMAAAGTQAEEVFEDILSRYHGRYIL AVEGNPPLGEQGMFCISGGRPFIEKAKRAAAGASAIIAWGTCASWGCVQAARPNPTQATP IDKVITDKPIVKVPGCPPIPDVMSAIITYMVTFDRLPELDRLGRPLMFYGQRIHDKCYRR AHFDAGEFVESWDDDAARKGYCLYKMGCKGPTTYNACSTTRWNGGVSFPIQSGHGCLGCS ENGFWDRGSFYSRVVDIPQMGTHSTADTVGLTALGVVASSVGVHAVASAVNQHNRHKQQL ADAGOOSPDNEDKOA

>P79102

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GLTQPEQPVILKVVPRGLGPQVEPDFL

>08JHF4

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>Q5HH27

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>Q15165

MGAWVGCGLAGDRAGFLGERLLALRNRLKASREVESVDLPHCHLIKGIEAGSEDIDILPN GLAFFSVGLKFPGLHSFAPDKPGGILMMDLKEEKPRARELRISRGFDLASFNPHGISTFI DNDDTVYLFVVNHPEFKNTVEIFKFEEAENSLLHLKTVKHELLPSVNDITAVGPAHFYAT NDHYFSDPFLKYLETYLNLHWANVVYYSPNEVKVVAEGFDSANGINISPDDKYIYVADIL AHEIHVLEKHTNMNLTQLKVLELDTLVDNLSIDPSSGDIWVGCHPNGQKLFVYDPNNPPS SEVLRIQNILCEKPTVTTVYANNGSVLQGSSVASVYDGKLLIGTLYHRAL >095712

MAEAALEAVRSELREFPAAARELCVPLAVPYLDKPPTPLHFYRDWVCPNRPCIIRNALQH WPALQKWSLPYFRATVGSTEVSVAVTPDGYADAVRGDRFMMPAERRLPLSFVLDVLEGRA OHPGVLYVOKOCSNLPSELPOLLPDLESHVPWASEALGKMPDAVNFWLGEAAAVTSLHKD HYENLYCVVSGEKHFLFHPPSDRPFIPYELYTPATYOLTEEGTFKVVDEEAMEKAEVSRT CLLTVRVLQAHRLPSKDLVTPSDCYVTLWLPTACSHRLQTRTVKNSSSPVWNQSFHFRIH ROLKNVMELKVFDODLVTGDDPVLSVLFDAGTLRAGEFRRESFSLSPOGEGRLEVEFRLO SLADRGEWLVSNGVLVARELSCLHVQLEETGDQKSSEHRVQLVVPGSCEGPQEASVGTGT FRFHCPACWEQELSIRLODAPEEQLKAPLSALPSGOVVRLVFPTSQEPLMRVELKKEAGL RELAVRLGFGPCAEEQAFLSRRKQVVAAALRQALQLDGDLQEDEIPVVAIMATGGGIRAM TSLYGQLAGLKELGLLDCVSYITGASGSTWALANLYEDPEWSQKDLAGPTELLKTQVTKN KLGVLAPSQLQRYRQELAERARLGYPSCFTNLWALINEALLHDEPHDHKLSDQREALSHG ONPLPIYCALNTKGOSLTTFEFGEWCEFSPYEVGFPKYGAFIPSELFGSEFFMGOLMKRL PESRICFLEGIWSNLYAANLODSLYWASEPSOFWDRWVRNOANLDKEOVPLLKIEEPPST AGRIAEFFTDLLTWRPLAQATHNFLRGLHFHKDYFQHPHFSTWKATTLDGLPNQLTPSEP HLCLLDVGYLINTSCLPLLOPTRDVDLILSLDYNLHGAFOOLOLLGRFCOEOGIPFPPIS PSPEEQLQPRECHTFSDPTCPGAPAVLHFPLVSDSFREYSAPGVRRTPEEAAAGEVNLSS SDSPYHYTKVTYSQEDVDKLLHLTHYNVCNNQEQLLEALRQAVQRRRQRRPH

>P33374

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TKGLHPWDGVTEPNFVLGPKAVGTPTDIKQLDEDAKYSWIKVAALAGHAMEVGPLVALHP RIRARAEDPKSYRAHYLREQVENSARAINTGIPQALGLKQTDYTVKQLLPTTIGRTLARA LEAQYCGNMMLDDWHEMMANIKAGDLTTANVDKWEPSAWPKEAKGVGHVAAPRGACGHWI RIKDGKIENYQCVVPTTWNGSPRDSKGQIGAFEASLMNTPMAKPEEPVEILRTVHSFDPC LACSTHVIRPDGQERVVVKVR

>001405

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>P38604

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LHTVGETYENSSTVRKGCDFLVSKQMKDGGWGESMKSSELHSYVDSEKSLVVQTAWALIA
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YSRAYETHTL

>015311

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>P53847

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>P97838

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>P17340

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>Q9Y1I2

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>08R4T5

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HHREEQRVEMVTFVCRVHESSPAQLAGLTPGDTIASVNGLNVEGIRHREIVDIIKASGNV LRLETLYGTSIRKAELEARLOYLKOTLYEKWGEYRSLMVOEORLVHGLVVKDPSIYDTLE SVRSCLYGAGLLPGSLPFGPLLAAPGGARGGSRRAKGDTDDAVYHTCFFGGAEPQALPPP PPPARAPGPGSAETPASVLCPAPRATLSRSASVRCAGPGGGGGGAPGALWTEAREOALC GAGLRKTKYRSFRRRLLKFIPGLNRSLEEEESQL

>P97849

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>087712

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MARTKLKFRLHRAVIVLFCLALLVALMQGASWFSQNHQRQRNPQLEELARTLARQVTLNV APLMRTDSPDEKRIQAILDQLTDESRILDAGVYDEQGDLIARSGESVEVRDRLALDGKKA GGYFNQQIVEPIAGKNGPLGYLRLTLDTHTLATEAQQVDNTTNILRLMLLLSLAIGVVLT RTLLOGKRTRWOOSPFLLTASKPVPEEEESEKKE

>P09194

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MEYATMSSSNSTHNFORKIALIGARNVGKTTLTVRFVESRFVESYYPTIENEFTRIIPYK SHDCTLEILDTAGQDEVSLLNIKSLTGVRGIILCYSIINRASFDLIPILWDKLVDQLGKD NLPVILVGTKADLGRSTKGVKRCVTKAEGEKLASTIGSODKRNQAAFIECSAELDYNVEE TFMLLLKOMERVEGTLGLDAENNNKCSIM

MSVAGLKKQFHKATQKVSEKVGGAEGTKLDDDFKEMERKVDVTSRAVMEIMTKTIEYLQP NPASRAKLSMINTMSKIRGQEKGPGYPQAEALLAEAMLKFGRELGDDCNFGPALGEVGEA MRELSEVKDSLDIEVKONFIDPLONLHDKDLREIOHHLKKLEGRRLDFDYKKKROGKIPD EELROALEKFDESKEIAESSMFNLLEMDIEOVSOLSALVOAOLEYHKOAVOILOOVTVRL EERIROASSOPRREYOPKPRMSLEFPTGDSTOPNGGLSHTGTPKPSGVOMDOPCCRALYD FEPENEGELGFKEGDIITLTNQIDENWYEGMLHGHSGFFPINYVEILVAL

>P05055

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GTEAAVLMVESEAQLLSEDQMLGAVVFGHEQQQVVIQNINELVKEAGKPRWDWQPEPVNE
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DAQVLDELMGERTDTFLFHYNFPPYSVGETGMVGSPKRREIGHGRLAKRGVLAVMPDMDK
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INAPRGDISEFAPRIHTIKINPDKIKDVIGKGGSVIRALTEETGTTIEIEDDGTVKIAAT
DGEKAKHAIRRIEEITAEIEVGRVYTGKVTRIVDFGAFVAIGGGKEGLVHISQIADKRVE
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>Q9HDV6

MSLNEIAHDOPVENGPLYSEKODHTAVDYALHILFTOFVRLSEOKISFLSRYHANEGKNA EPVRFNVGEQEAILLLKKGEDNEFDRCIQALVALASSKPVAVIESLLCWRKVRVDITSSS GTPRVVNERRSSISIYILCRVLTEIAETIPSNALEESTVSCLLECVFHQLLSAKNLPVSS SYFSLANWESFAFLVGSMSRFNFVMVSDRFIEEIEHLEKSGCDSROKETVLVHLLRAMRY LRLQLYPTTLLEESIAFLQSLTSFFMKANTALKIEYAYLMEQLLRPLISRATFEVNIPAW SRTIETIYPVVLKMCTKTKYWNVFFPFCCTLLCLSPKQFFLKHWISSLDAAFFRVKDRRL RNTGLPHLSRVVWTYSNOYKEEPSIMNSNISNILKSGFSIGKKFSVVPFATLEELDGYAO IVRVVGAHFPELVIKEILTPLSTDAFTENIGPEKLMIVVRSVYYILHDMKYKKSDSTIFE YIEFEFVDLHEVAVGTPLOOFVHNLSOKLLFLVFOLSTNTNCYLDSKNATSLLALYINAL KVFPCLMGKLEQRVIDAYVKCLNCSNKIIHTVCHNSLIYFSSGLKMSKSVISCLSRKLVK GSEYLLRTYHEVIRIWISQOEAVIEKRNSVLSNKSCASSESNTPASVKQDYDDIQSWTII EEIQSLGVLHLSSPSVGIRKFAVALLNDVKQLNTEYLMLSSDKVEVGDIYSEPTIVDVLK DCDSSILSVESHLPTAAERSRLRKFINDGTKDMLLKLATSNSGVDISIWYNVFPRFIKVC FERFPTTMALLRNTVCEKLPSITMOLLSRIESSELNFNLKSAVKNDNFPEFLLVOWKLYL IVACCTITYTSNVDYSHTDLRRTLTAVOSGNHLRGLOETIKITSAESLFSMVLPLIFTEF SPIREAVVFAIGCINVNAFPOLVRSLKPYISVLKODHOEFIFAGLNFPSVKRRNKPDLLL RSEIAHIFAMTSHLLLHELLNEDREALSVISEFLKDLKGFLSTPNVQADEKYLKLRCYFS QLLEKVLLVQNLHPSSEVLPFSGRASCWKLLDEWTGFGPARAITKNREELMRAHIRGNNK DIRERDKLLASFEAGKONLEYLAIKAMIALCTAKLQQELTEGVFLFDIEILLNWFTAVFG SPSKAIVGLARKGLTALLLENSSNEVLLOKVINRCFSKEISOTISNYYFLSLSEMLIOIN PNNLSKPKLLPLCLVNLSTNNLSVRLKAFELLGNFHLNNFTMTALMEFKTFLESSNPALY LKPOYLFSVOLASDFTEDSFTLTSECLRYFNYGHOHRRGLVTVLLPWLONLELKMDVENK TFDSFTAVILIDLIEVTAKFTNDLPNEIEALWTSLALSRHKSNWTVILFFLMOOCYORKT FSFVDCTRQITIYLAKTELLSDLYSTLLSFVCPANVSNENQEVYKFSLEDLSSTYVANLE DLFPSEKNHISYSPCQLSLLLLMDILPNPSIITVTDDVATILHAAFIQFDHYSRIVQEQC QQIFQYVVRKVLAMEGRLDYDDAYFDFNVESSLITGLRGKTKKEDDLVKYHNMILKTIEL LSSSYPELKQIWGEVALSWATTCPSRRLACNSFQLFRSLLPDFDARMLLEIISRLVGTIS DETSYLRDYSVEILRTFNSYVLVMNSDDLLSYSQILWTAIACLTTIHEDEFIESVKIAYA YFLRVEETDSATOOIMETFPONWVGDYOGLOILILKGFRSTNSFEITMNFFLLLMDFKDN DLVGVGYLRILSCLLVSLPAMVYTYEHSDPITFDLSVFCHKLATLASOFNDDALIELLDT YLKRKFRSIKDFLKHTVSYLYSYYFEDYELEIVSTLTMFLSNNLTWFRKSTLDVLKELFP LIDFOKPIYSEHGLGIVSPLLRLLPTGYAMEALSLLTDSVLHVSAPTDMOTLKLLMVDPK LKNSDDRLAGFFEIPDEDGWYEPNSEYAAAITKSNVHAVFYSCSTTEASVSTPEVRFHAD EVSNYPRHVPTDSHGSLDENSLGELVTTLHSLDVFFAEDRDEELIOPDVAVDPKLDITSE DYDDRIATILSGSLRRQKQGLMAYETESFRDYSPNEEIDASAKLPMDMPPVRVRKSSFIS KLKPHYFMDAESYYPSLKALGNSAEHRLSLDEIRGAAELKQNKNWNSMLDQSVSMINEDS VEDHETHENYYHLRTMFQGSESNESFTDTTRSRGWH

>P53860

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MNAALSQWKDAHAARLRDYSAVRVSGRVSAVRGILLECKIPAAKVGDLCEVSKADGSFLL AEIVGFTQECTLLSALGAPDGIQVGAPIRPLGIAHRIGVDDSLLGCVLDGFGRPLLGDCL GAFAGPDDRRETLPVIADALPPTQRPRITNALPTGVRAIDSAILLGEGQRVGLFAGAGCG KTTLMAELARNMGCDVIVFGLIGERGRELREFLDHELDETLRRRSVLVCATSDRSSMERA RAAFTATAIAEAFRARGQKVLLLLDSLTRFARAQREIGIASGEPLGRGGLPPSVYTLLPR LVERAGMSENGSITALYTVLIEQDSMNDPVADEVRSLLDGHIVLSRKLAERGHYPAIDVS ASISRILSNVTGREHQRANNRLRQLLAAYKQVEMLLRLGEYQAGADPVTDCAVQLNDDIN EFLRQDLREPVPLQETLDGLLRLTSRLPE

>048818

MAIKLAILFTTFVLFSLADARIPGIYSGGAWQNAHATFYGGSDASGTMGGACGYGNLYSQ GYGTNTAALSTALFNNGMSCGACFELKCANDPQWCHSGSPSILITATNFCPPNLAQPSDN GGWCNPPREHFDLAMPVFLKIAQYRAGIVPVSYRRVPCRKRGGIRFTINGHRYFNLVLIT NVAGAGDIVRASVKGSRTGWMSLSRNWGQNWQSNAVLVGQALSFRVTGSDRRTSTSWNMV PSNWOFGOTFVGKNFRV

>P25385

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>P25386

MDIIOGLIOOPKIOSVDETIPTLCDRVENSTLISDRRSAVLGLKAFSROYRESVIASGLK PLLNTLKRDYMDEDSVKAILETILILFIRGDGHDDLTRGWISOOSRLONGKYPSPLVMKO EKEQVDQFSLWIADALTQSEDLIHLLVEFWEIDNFHIRLYTIQLLEAVMATRPLKARSAL ISLPTSISTMVSLLDDMHEPIRDEAILLLMAVVNDSPHVQKLVAFENIFERLFSIIEEEG GLRGSLVVNDCLSLINNILKYNTSNOTLFLETGNLPKLAHLLSEPISODEVFFWNDORIV NINTALDIVSLTVEPGNTVTTKHQNALLDSSVLMVVLRLAFFHNIPKKVRPVALLTAANM VRSNEHAQLEFSKIDVPYFDPSLPVNSTANGGPIKLIPVVSILINWMLYANSVHTFDTRV ACSRLLKAYFMDNFDLORDFLLKOVOLCNNSTNNVGDNAKENGGSNKSDKESDSDKDTDG KDGTEYEGSFKANLFEVLLNYDAELNLNPFKLFFTTDIFMFFFOODHKYSEELREITRNV TTGNDLEDEEPLKAIQTISELLTTSLTAADIRIPISYLTFLIYWLFGDFKATNDFLSDKS VIKSLLSFSYQIQDEDVTIKCLVTMLLGVAYEFSSKESPFPRKEYFEFITKTLGKDNYAS RIKQFKKDSYFSKVDMNEDSILTPELDETGLPKVYFSTYFIQLFNENIYRIRTALSHDPD EEPINKISFEEVEKLOROCTKLKGEITSLOTETESTHENLTEKLIALTNEHKELDEKYOI LNSSHSSLKENFSILETELKNVRDSLDEMTQLRDVLETKDKENQTALLEYKSTIHKQEDS IKTLEKGLETILSQKKKAEDGINKMGKDLFALSREMQAVEENCKNLQKEKDKSNVNHQKE TKSLKEDIAAKITEIKAINENLEEMKIQCNNLSKEKEHISKELVEYKSRFQSHDNLVAKL TEKLKSLANNYKDMQAENESLIKAVEESKNESSIQLSNLQNKIDSMSQEKENFQIERGSI EKNIEQLKKTISDLEQTKEEIISKSDSSKDEYESQISLLKEKLETATTANDENVNKISEL TKTREELEAELAAYKNLKNELETKLETSEKALKEVKENEEHLKEEKIQLEKEATETKQQL NSLRANLESLEKEHEDLAAOLKKYEEOIANKEROYNEEISOLNDEITSTOOENESIKKKN DELEGEVKAMKSTSEEQSNLKKSEIDALNLQIKELKKKNETNEASLLESIKSVESETVKI KELQDECNFKEKEVSELEDKLKASEDKNSKYLELQKESEKIKEELDAKTTELKIQLEKIT NLSKAKEKSESELSRLKKTSSEERKNAEEQLEKLKNEIQIKNQAFEKERKLLNEGSSTIT QEYSEKINTLEDELIRLQNENELKAKEIDNTRSELEKVSLSNDELLEEKQNTIKSLQDEI LSYKDKITRNDEKLLSIERDNKRDLESLKEQLRAAQESKAKVEEGLKKLEEESSKEKAEL EKSKEMMKKLESTIESNETELKSSMETIRKSDEKLEQSKKSAEEDIKNLQHEKSDLISRI NESEKDIEELKSKLRIEAKSGSELETVKQELNNAQEKIRINAEENTVLKSKLEDIERELK DKQAEIKSNQEEKELLTSRLKELEQELDSTQQKAQKSEEERRAEVRKFQVEKSQLDEKAM LLETKYNDLVNKEQAWKRDEDTVKKTTDSQRQEIEKLAKELDNLKAENSKLKEANEDRSE IDDLMLLVTDLDEKNAKYRSKLKDLGVEISSDEEDDEEDEEEGQVA >09HG09

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>055106

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KRVRALLGFSSDVTDREDDKNQDSVINGTEAEVKETAMIGKSELTDSASVLDNFKFLESA
AADFSDEDEDEDTDGRAKSVIDTSTIVRKKALPDTSEDRDTKEALKEFDFLVTSEEGDNE
SRSAGDGTDWEKEDQCLTPEAWNVDQGVISKLKEQYKKERKGKKGVKRPNRSKLQDMLAN
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LGLGELAGLTVANEADSLAYDIANNKDALRKTWNPKFTLRSHFDGIRALAFHPIEPVLIT
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QSWSTTNPNVDPYDAYDPSVLRGPLLGHTDAVWGLAYSAAHQRLLSCSADGTLRLWNTTE
VAPALSVFNDNQELGIPASVDLVSSDPSHMVASFSKGYTSIFNMETQQRVLTLESNVDST
SSSSCQINRVISHPTLPISITAHEDRHIKFYDNNTGKLIHSMVAHLEAVTSLAVDPNGLY
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>P35150

MRIFKKAVFVIMISFLIATVNVNTAHAAIDVSAKSAIIIDGASGRVLYAKDEHQKRRIAS ITKIMTAVLAIESGKMDQTVTVSANAVRTEGSAIYLTEGQKVKLKDLVYGLMLRSGNDAA VAIAEHVGGSLDGFVYMMNQKAEQLGMKNTRFQNPHGLDDHENHYSTAYDMAILTKYAMK LKDYQKISGTKIYKAETMESVWKNKNKLLTMLYPYSTGGKTGYTKLAKRTLVSTASKDGI DLIAVTINDPNDWDDHMKMFNYVFEHYQTYLIAKKGDIPKLKGTFYESKAFIKRDITYLL TEEEKENVKINTTLLKPKKAWEKDASKIPDIVGHMEIMFNDATIAKVPIYYENERHQKPK KQFFETFKSIFLNAAGGAKWSI

>073686

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>Q9VXE5

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>Q8WXI2

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>P50397

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ICILSHPIKNTNDANSCQIIIPQNQVNRKSDIYVCMISSAHNVAAQGKYIAIASTTVETK
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>035728

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>08N3R9

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>006389

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>P22059

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QEIKITSKFRGKYLSIMPLGTIHCIFHATGHHYTWKKVTTTVHNIIVGKLWIDQSGEIDI
VNHKTGDKCNLKFVPYSYFSRDVARKVTGEVTDPSGKVHFALLGTWDEKMECFKVQPVIG
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>P10834

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>P80489

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>024314

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DYDEVVAQQLKAECYAEALQTLINQRNPELFYKYAPELITRLPKPTVDALMAQGSRLEVE KLVPTLIIMENREQREQTQRYLEFAIYKLNTTNDAIHNFLLHLYAEHEPKLLMKYLEIQG RDESLVHYDIYYAHKVCTDLDVKEARVFLECMLRKWISAVDLALTFDMKLAKETASRPSD SKIRRKLWLRIAYHDIKGTNDVKKALNLLKECDLLRIEDLLPFFADFEKIDNFKEAICDA LRDYNQRIQELQREMAETTEQTDRVTAELQQLRQHSLTVESQDTCEICEMMLLVKPFFIF ICGHKFHSDCLEKHVVPLLTKEQCRRLGTLKQQLEAEVQTQAQPQSGALSKQQAMELQRK RAALKTEIEDILAADCLFCGLLISTIDQPFVDDWEQVNVE

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>P0A6Y8

>044497

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>P53885

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>P33702

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>P36108

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>000560

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>P35165

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>09U0B8

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>004934

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>P20606

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>P31969

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>P75957

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>P02686

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>D32913

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>P18190

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>P31038

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VTQFKTASEFDSAIAQDKLVVVDFYATWCGPCKMIAPMIEKFSEQYPQADFYKLDVDELG DVAQKNEVSAMPTLLLFKNGKEVAKVVGANPAAIKQAIAA >063092 MPFGCVTLGDKKNYNQPSEVTDRYDLGQVVKTEEFCEIFRAKDKTTGKLHTCKKFQKRDG RKVRKAAKNEIGILKMVKHPNILQLVDVFVTRKEYFIFLELATGREVFDWILDQGYYSER DTSNVVRQVLEAVAYLHSLKIVHRNLKLENLVYYNRLKNSKIVISDFHLAKLENGLIKEP CGTPEYLAPEVVGRQRYGRPVDCWAIGVIMYILLSGNPPFYEEVEEDDYENHDKNLFRKI LAGDYEFDSPYWDDISQAAKDLVTRLMEVEQDQRITAEEAISHEWISGNAASDKNIKDGV CAQIEKNFARAKWKKAVRVTTLMKRLRAPEQSGTAATSDAATPGAAGGAVAAAAGGAAPA SGASATVGTGGDAGCAAKSDDMASADRSATPATDGSATPATDGSVTPATDGSITPATDGS VTPATDRSATPATDGRATPATEESTVPAAQSSAAPAAKAAATPEPAVAQPDSTALEGATG OAPPSSKGEEATGCAQESOR

>001464

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>P0A8U0

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>P81447

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>P53104

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>P52303

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MAAKDVQFGNEVRQKMVNGVNILANAVRVTLGPKGRNVVVDRAFGGPHITKDGVTVAKEI ELKDKFENMGAQMVKEVASKTNDVAGDGTTTATVLAQSIVAEGIKAVTAGMNPTDLKRGI DKAVAALVEELKNIAKPCDTSKEIAQVGSISANSDEQVGAIIAEAMEKVGKEGVITVEDG KSLENELDVVEGMQFDRGYLSPYFINDAEKQIAGLDNPFVLLFDKKISNIRDLLPVLEQV AKASRPLLIIAEDVEGEALATLVVNNIRGVLKTVAVKAPGFGDRRKAMLQDIAILTGAVV ISEEVGLSLEKATLDDLGQAKRIEIGKENTTVIDGFGDAAQIEARVAEIRQQIETATSDY DKEKLQERVAKLAGGVAVIKVGAATEVEMKEKKDRVEDALHATRAAVEEGVVAGGGVALL RARAALENLHTGNADQDAGVQIVLRAVESPLRQIVANAGGEPSVVVNKVLEGKGNYGYNA GSGEYGDMIGMGVLDPAKVTRSALQHAASIAGLMLTTDCMIAEIPEEKPAVPDMGGMGGM GGMM

>P46682

MVDSIHRIASALDTAKVITREAAAVATSKLGESSYTYYSQNINPQQLVTLLNSRNSREVR DAMKRIISIMASDDDSIDVQLYFADVVKNITTNDTKVKRLIHLYLLRFAENDPNLTLLSI NSLQKSLSDSNSELRCFALSALSDMKMSSLAPIILHTVKKLVTDPSAMVRGEVALAIIKL YRAGKNDYHEELLDILKELMADTDPKVISCAVLAYKECYADHLELLHGHFRRYCRIIKQL DSWSQSYLIELLIKYCKQYLPKPTVVDKSSEGSPRSCPLPDKYNEIEYPSYEVVNDPDLD LFLQSLNCLIYSSNPTVILSCCNALYQLASPLQMKNTKFIEALVRTVTMTENQGNKEMLL QAIHFLSILDQTLFLPYTKKFYVFPKDPIVASIWKIQILSTLINESNVKEIFKELKYYVA SAHFPENVVIMAVKSLSRCGQLSTSWESHVMKWLIDHMESHNLSASVLDAYVNVIRMLVQ KNPTKHLRIIFKLADLLTVQTSLADNARAGIVWLFGEIASIEFKICPDVLRRLIQNFSNE GPETRCQILVLSAKLLSYDIDNFKQAQVTGSEENNQNPPYYDFSGSRISQMYNAVLYLAK YDDEFDIRDRARMISSLFDSGKYEIVSLLLQAPKPTARSDDFIVSARLETHTPEIKEFFR MLPWNTEITEVGETGNDIREGAELKDYNKYKKSFSSQSFITNNSARSFTSSSNAKLTGIN DGDSNSISGKGNVNTFTSQNGKKYRLQSLDEFFSDIPERKSKPRKIIKVVEESSDEDEDE SEESSDDDEYSDSSLGTSSSGTSSSHLEL

>P35181

MTQLKYLLLVSRQGKIRLKKWYTAMSAGEKAKIVKDLTPTILARKPKMCNIIEYNDHKVV YKRYASLYFIVGMTPDVDNELLTLEIIHRFVETMDTYFGNVCELDIIFNFSKVYDILNEM IMCDGSIAESSRKEVLHHVTVMDTMESNDNLERVLS

>P35183

MAKDILKNQDPKLQAMIVEHSAPAPKEIPMDAPVLKRVARPLRHVKFIPIKSLIFHTKTG PMDFSYEKKIKTPIPKNKIVVRVSNVGLNPVDMKIRNGYTSSIYGEIGLGREYSGVITEV GENLNYAWHVGDEVYGIYYHPHLAVGCLQSSILVDPKVDPILLRPESVSAEEAAGSLFCL ATGYNILNKLSKNKYLKQDSNVLINGGTSSVGMFVIQLLKRHYKLQKKLVIVTSANGPQV LQEKFPDLADEMIFIDYLTCRGKSSKPLRKMLEEKKISQYDPVEDKETILNYNEGKFDVV LDFVGGYDILSHSSSLIHGGGAYVTTVGDYVANYKEDIFDSWDNPSANARKMFGSIIWSY NYTHYYFDPNAKTASANNDWIEQCGDFLKNGTVKCVVDKVYDWKDHKEAFSYMATQRAQG KLIMNVEKF

>P25708

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EPGTCKDREIIRHDPHKLVEGCLVGGRAMGARAAYIYIRGEFYNEASNLQVAIREAYEAG
LIGKNACGSGYDFDVFVVRGAGAYICGEETALIESIEGKQGKPRLKPPFPADVGVFGCPT
TVANVETVAVSPTICRRGGAWFASFGRERNSGTKLFNISGHVNNPCTVEEEMSVPLKELI
EKHAGGVTGGWDNLLAVIPGGSSTPLIPKSVCETVLMDFDALIQAQTGLGTAAVIVMDRS
TDIVKAIARLIEFYKHESCGQCTPCREGVDWMNKVMARFVRGDARPAEIDSLWEISKQIE
GHTICALGDGAAWPVQGLIRHFRPELEERMQQFAQQHQARQAAF
>P31044

AADISQWAGPLSLQEVDEPPQHALRVDYGGVTVDELGKVLTPTQVMNRPSSISWDGLDPG KLYTLVLTDPDAPSRKDPKFREWHHFLVVNMKGNDISSGTVLSEYVGSGPPKDTGLHRYV WLVYEQEQPLNCDEPILSNKSGDNRGKFKVESFRKKYHLGAPVAGTCFQAEWDDSVPKLH DQLAGK

>P22224

MDOEGOPLLSKDFOOVLLATASGNNSSWTERAVLNNESTDAVKHEPALGONDVFDLDPLS FDKWVPFLRRALDKNOLDPVIDELENSIEDNFOGLELOLLODSOMNDKLETSIDEIANIO GMVQDTLSSEISKFQIRLSESANELIVKKQMYVNNKKISLKISEATILITKVVRILELSS KCOELITERKFFKVLONLDSLEKLYLOEFKNYNFOFLIEIYNSIPFLOKVTKDECINLIR NSLNLNLGKNLIKVGOEFVAIYENELLPOWLETRSKMKLTNFKFNSPIEISMRDESFLAK LNLGEFFQLDDFHDSIMIFQNLNELSVLSGEFNKEYELRKTKLMYPLIWKKNKTAAYQMD SLLRGTGTTPGSTAHDVSTDDPFTOSLSLHFLODYFLKILGFLLYDINLNKATEFILVDN NYNSTNEFWDGLMDRLSPYLSYFIDEKLKTEEDMIKLKDFLCIYVAILENFKLNIEPLYK ILVSIFEKFCSVSLRAFDDEFOILLNDDDFMPLSINDKTLYEKVLKICWMKEGEHLSLPD PTNGEPFAVTLPFSPLYPMTCTLAKKTYSKITAFLSIFYRHELHTLNNILVKTMDDIFND IVNKKIRSKLESTSREEIAQILVNLDYFIIAAKEFSNFMTRENILQNPDMEIRLSSIKYL AESRKLAETKLIELIDSKISDILETIEIDWQITEVRQDPDISIIDLAQFLEMMFASTLQN LPYSVQTLLIFREFDSLTRQFMGLLLHDTPSTITHESIMNFEVDVNYLESIIPRIFPSTP GTIDSNGYOSPMTPSTPTFPNANGVDAPTLFENNIKSLEATFMELKOCIELLKTOGKDYN EPEIRLRKYSRIROEDAALLLSKIOHFVSSVEGANGDDTSVMDSSSIFNSESASVIDSNT SRIAKFFNRR

>P14066

MLRTKVFATTVARISGIRRYIPIRTINTVTKKNISKIEKLCEVLEVNPDGYKGKERIPTK ELTKLLYTTSRNMLVRVPMTGDLSTGNTFETRNETLQKLGEQLIHLEINKMLTITFTNFN QFNIMNKNFNYIHNLDRARVVNMDSISWLIKNSLKINQLAHLRIPANLPKEMGLTSSSND FQNLNDWKVILSFIGYLKLLEIKNDNKKFIESIIKTICIPLINYHLRKS

>P53112

MSDVVSKDRKALFDSAVSFLKDESIKDAPLLKKIEFLKSKGLTEKEIEIAMKEPKKDGIV GDEVSKKIGSTENRASQDMYLYEAMPPTLPHRDWKDYFVMATATAGLLYGAYEVTRRYVI PNILPEAKSKLEGDKKEIDDQFSKIDTVLNAIEAEQAEFRKKESETLKELSDTIAELKQA LVQTTRSREKIEDEFRIVKLEVVNMQNTIDKFVSDNDGMQELNNIQKEMESLKSLMNNRM ESGNAQDNRLFSISPNGIPGIDTIPSASEILAKMGMQEESDKEKENGSDANKDDNAVPAW KKAREQTIDSNASIPEWQKNTAANEISVPDWQNGQVEDSIP

>Q3E756

 ${\tt MSFIPIVCGMKSFDSSYDTVPGHQNLYCPNCHNYSVGPIKRKEFFTIWFIPLVPVFWGKQLHCPICNWRQDFKNDEQLNKVIQEQQNLRQKQPN}$

>009103

MQQQQPSIDQLPEPTASTSNSATTKPTIATATTSTTTTSGNNFHQQLQATTAATMQRLR TTFTRSRTPTGAEMKMQNSLEVPKQVRSASFDEMQLESQRASSSLLKQQSSSSASADERS SEAGFLQVPLAAHQQRSHSFDSATASAGSDDSGTFLEVPRRLKARRSSSTKTPPPCIHCH YLEEYERRMTAEQRYFIDHRELTALSYSNTSSEASEDEDEVEGHNAEEEEEGSAAIEDAE EETTEAATEEADEDPRTEVESEHDHDPDDDAALEMDIRIGNMSOGSSIEESRARLPROMR RHTIGSSSVTSASEDEGLEGSDNGSPHFGNTLLPPQPTTPCGITFTLSPTNGDYPSPPHL PLDPGSPPISPCSSNSGRLPALAPIISTPCSSADADDAGAAMGLPVRARRRSISROEAIF VEPTGNSLENVSHEEVDNSNTKSSVDTADSLDEASTMATCGSPGAAGGSGASSSHHNAFV VRDIYLMVPDLKRDRAASVDSCFSKLSSNAKTEELOPSADGCFLTVPNINATRSRSVDIV LPTDEQARYKALSMTGSTVTYADGRTASASNSRRPIRIVPDWTENAVQGEHYWKPTSASG DLCCLNEECIKSGORMKCSACOLVAHHNCIPFVNEKSTLACKPTYRDVGIROYREOTTTH HHWVHRKLEKGKCKOCGKFFPMKOAVOSKLFGSKEIVALACAWCHEIYHNKEACFNOAKI GEECRLGNYAPIIVPPSWIVKLPTKGNFKSSIRVSNKNNAASGSGGGAGGGAGGGGGKS KKQTQRRQKGKEEKKEPRAFIVKPIPSPEVIPVIVFINPKSGGNQGHKLLGKFQHLLNPR QVFDLTQGGPKMGLDMFRKAPNLRVLACGGDGTVGWVLSVLDQIQPPLQPAPAVGVLPLG TGNDLARALGWGGGYTDEPIGKILREIGMSQCVLMDRWRVKVTPNDDVTDDHVDRSKPNV PLNVINNYFSFGVDAHIALEFHEAREAHPERFNSRLRNKMYYGOMGGKDLILROYRNLSO WVTLECDGQDFTGKLRDAGCHAVLFLNIPSYGGGTHPWNDSFGASKPSIDDGLMEVVGLT TYOLPMLOAGMHGTCICOCRKARIITKRTIPMOVDGEACRVKPSVIEIELLNKALMLSKR KHGRGDVOVNPLEKMOLHILRVTMOOYEOYHYDKEMLRKLANKLGOIEIESOCDLEHVRN MLNTKFEESISYPKVSQDWCFIDSCTAEHYFRIDRAQEHLHYICDIAIDELYILDHEAAT MPQTPDQERSFAAFSQRQAQNERRQMDQAQGRGPGSTDEDLQIGSKPIKVMKWKSPILEQ TSDAILLAAOSGDLNMLRALHEOGYSLOSVNKNGOTALHFACKYNHRDIVKYIIASATRR LINMADKELGOTALHIAAEONRRDICVMLVAAGAHLDTLDSGGNTPMMVAFNKNANEIAT YLESKOGTOPVDGWLDD

>P00167

AEQSDEAVKYYTLEEIQKHNHSKSTWLILHHKVYDLTKFLEEHPGGEEVLREQAGGDATE NFEDVGHSTDAREMSKTFIIGELHPDDRPKLNKPPETLITTIDSSSSWWTNWVIPAISAV AVALMYRLYMAED

>P36139

SESSISSSKPSVELPQATWSHLQRYPALSKFIKYAESLPPVERLISFNLVVLGSVNQWVS ESSSSPRLVKQVVAAGKEGAFKLDELVNLLVFKEGVDGLLYNWKSHSNTPGIWLVWFFVD YVANISNTLLREFLIKPLHLQGSTASKEIGSSGEENKVTDASSLPHVAELSSTTRGMSQE IQSKVKSNYIDPTKDLAKEKYDAIVKPTTDKLQSVYIDPTKTKLNETYQRFTTVYENNLS KSESVPKAIVSTGLDLGNATIEKLKASREDQTNSKPAAVSTN

>006708

MEKSIAKGLSDKLYEKRKAAALELEKLVKQCVLEGDYDRIDKIIDELCRDYAYALHQPMA RNAGLMGLAATAIALGINDVGRYLRNILPPVLACFGDQNDQVRFYACESLYNIAKIAKGE ILVYFNEIFDVLCKISADTENSVRGAAELLDRLIKDIVAERASNYISIVNNGSHGLLPAI KTDPISGDVYQEEYEQDNQLAFSLPKFIPLLTERIYAINPDTRVFLVDWLKVLLNTPGLE LISYLPSFLGGLFTFLGDSHKDVRTVTHTLMDSLLHEVDRISKLQTEIKMKRLERLKMLE DKYNNSSTPTKKADGALIAEKKKTLMTALGGLSKPLSMETDDTKLSNTNETDDERHLTSQ EQLLDSEATSQEPLRDGEEYIPGQDINLNFPEVITVLVNNLASSEAEIQLIALHWIQVIL SISPNVFIPFLSKILSVLLKLLSDSDPHITEIAQLVNGQLLSLCSSYVGKETDGKIAYGP IVNSLTLQFFDSRIDAKIACLDWLILIYHKAPNQILKHNDSMFLTLLKSLSNRDSVLIEK ALSLLQSLCSDSNDNYLRQFLQDLLTLFKRDTKLVKTRANFIMRQISSRLSPERVYKVIS SILDNYNDTTFVKMMIQILSTNLITSPEMSSLRNKLRTCEDGMFFNSLFKSWCPNPVSVI SLCFVAENYELAYTVLQTYANYELKLNDLVQLDILIQLFESPVFTRMRLQLLEQQKHPFL HKCLFGILMIIPQSKAFETLNRRLNSLNIWTSQSYVMNNYIRQRENSNFCDSNSDISQRS VSQSKLHFQELINHFKAVSEEDEYSSDMIRLDHGANNKSLLLGSFLDGIDEDKQEIVTPI SPMNEAINEEMESPNDNSSVILKDSGSLPFNRNVSDKLKK

>P87346

 $\label{thm:continuous} ASQKHSRGHGSKQMATASTYDHSRHGYGAHGRHRDSGLLDSLGRFFGGERSVPRKGSGKE VHMSRSGYLSSSPQRSPYHAHGRHVDDNPVVHFFRNIVSPRTPPPSQPKRGFSRFSWGAE NHKPYYGGYGSRSLEHHKSSYKGYKDPHREGHGSLSRIFKLGGQRSRSSSPMARR$

>P35196

METDSGIPGHSFVLKWTKNIFSRTLRASNCVPRHVGFIMDGNRRFARKKEMDVKEGHEAG

FVSMSRILELCYEAGVDTATVFAFSIENFKRSSREVESLMTLARERIRQITERGELACKY GVRIKIIGDLSLLDKSLLEDVRVAVETTKNNKRATLNICFPYTGREEILHAMKETIVQHK KGAAIDESTLESHLYTAGVPPLDLLIRTSGVSRLSDFLIWQASSKGVRIELLDCLWPEFG PIRMAWILLKFSFHKSFLNKEYRLEEGDYDEETNGDPIDLKEKKLN >099220

MQAKIIYALSAISALIPLGSSLLAPIEDPIVSNKYLISYIDEDDWSDRILQNQSVMNSGY IVNMGDDLECFIQNASTQLNDVLEDSNEHSNSEKTALLTKTLNQGVKTIFDKLNERCIFY QAGFWIYEYCPGIEFVQFHGRVNTKTGEIVNRDESLVYRLGKPKANVEEREFELLYDDVG YYISEIIGSGDICDVTGAERMVEIQYVCGGSNSGPSTIQWVRETKICVYEAQVTIPELCN LELLAKNEDQKNASPILCRMPAKSKIGSNSIDLITKYEPIFLGSGIYFLRPFNTDERDKL MVTDNAMSNWDEITETYYQKFGNAINKMLSLRLVSLPNGHILQPGDSCVWLAEVVDMKDR FQTTLSLNILNSQRAEIFFNKTFTFNEDNGNFLSYKIGDHGESTELGQITHSNKADINTA EIRSDEYLINTDNELFLRISKEIAEVKELLNEIVSPHEMEVIFENMRNQPNNDFELALMN KLKSSLNDDNKVEQINNARMDDDESTSHTTRDIGEAGSQTTGNTESEVTNVAAGVFIEHD FI.

>P33599

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