Supplementary Data 1 *D. semiclausum* OBP and OR amino acid sequences

>DsemOBP1

MFGRAATALLIVVSLYGFPDVSADLPDFVTPEIIEMVQDDKVRCMDKFGTDQGMIDQVNNGNILNDPKLTCYMHCLFESFGVIDEDSGDFEYEMLLGFFPEDIQSQGRDILGGCA

>DsemOBP2

FQVSLIFHQFSQLPDFVTPEIIEMVQDDKVRCMDKFGTDQGMIDQVNNGNILNDPKLTCYMHCLFESFGVIDEDSGDFEYEMLLGFFPEDIQSQGRDILGGCA

>DsemOBP3

GLPDVSADLPDFVTREIIEMVQDDKVRCMDKFGTDQGMIDQVNNGNILNDPKLTCYMHCLFVSFGVIDEDSGDFEYEMLLGFFPEDIQSQGRDILGGCA

>DsemOBP4

FQVSLIFHQFSQLPDFVTPEIIEMVQDDKVRCMDKFGTDQGMIDQVNNGNILNDPKLTCYMHCLFESFGVVRNLNLDN

>DsemOBP5

MSIPILLGILILCVAKISAISDEMKQMAQVLHDACVEETGVEEKFIEQCRQGEFPEDANLKCYMKCLMTKVPLFTEDGDIDEDFIIKIVPAEYREIAIPVIRGCGTIKGADLCETAFLTNKCWHSK

>DsemOBP6

MAVRNKMALRYSGWLVIVVCAAFLRNNRVDGAMTMAQMETAATGFRNVCIPKSGADPAIVAGLRSGNFPEDHNFQCYLKCVMAMLKTIKNNQPLLDPIIKQIKVMMPAELQDRNIGAARKCAALEFNDDACVAAWQYIKCQYETDPEVFFFP

>DsemOBP7

MAVRNKMALRYSGWLVIVVCAAFLRNNRVDGAMTMAQMETAATGFRNVCIPKSGADPAIVAGLRSGNFPEDHNFQCYLKCVMAMLNTIKNNQPQQETIIKEIKVMMPAELQDRNIGAARKCAALEFNDDACVAAWQYIK

>DsemOBP8

MMKYLLVLGCLLQATLFCSANRPSFVSDTMINVASSVVNVCRARTGVDVADIEAVRMGEWPETESLKCYMYCLWKQFGMVDNKKELDLKGMLTFFQRIPAYREEVRRAVSHCKVIARTSVSGDNCQYAYTFNRCYADLSPNTYYLF

>DsemOBP9

MKIFAVVLLVCVAGSFAAISEEHKAKLRELKLACITETGVNAEVVENAKKGVLDESDPKLACFAACFLKKLGFLTENGVFDETTFRAKIPADIPTEKVDAIVNKCKPMTGANACETGAKLLKCYIENKTISIFE

>DsemOBP10

MYRSVALVVLVVLASCVLGDPGKGRSQAWTKCMEESGIAKGSFKDTPWDDPKKKCFQACLMREHGHLKEDGTVDSEKMIADIPPDVEDRDRISAAITECSANQNDDQCETAHLVMKCLHDKDAMTFPGGKKMHAAMKKCMQENGVEHKDFRELPPDDQKMKCFGACMMKEQGHLKEDGTVDSEKAVADLPPDVPDRDRVVAAMTECGAQSNLHRFPAFLINSFVAY

>DsemOBP11

MKIFAIAIAFCLVVAASALTDEQKTKLAGHRDHCVAETGIERAKVDAAKLGTFDETDDKLACFSACLLKRIGIMNADGTFNEEATRAKIPSDIARDKAEEVITKCKDLTGATDCETGMKLMKCYMKNKTFSVLE

>DsemOBP12

MNRRFQSMQIFVFFFQAAISEEHKAKLRELKLACITETGVNAEVVENAKKGVLDESDPKLACFAACFLKKLGFLTENGVFDETTFRAKIPADIPTEKVDAIVNKCKPMTGANACETGAKLLKCYIENKTISIFE

>DsemOBP13

MKVLVIFLAVPILAVSAALTPADIVEFGRARQRCGNEFTVDPTSLDRARAGETVNDPEFDCYMACILEGMHMMGPDGKLDVNAAIDKVPNAPFHDGLVGAINSCANQSGRNNCDTARRLLACMQDQGVPSMFKV

>DsemOBP14

MKCLHDKDAMTFPGGKKMHAAMKKCMQENGVEHKDFRELPPDDQKMKCFGACMMKEQGHLKEDGTVDSEKAVADLPPDVPDRDRVVAAMTECGAQKGDNDCETAGLVWKCLEEKNALP

>DsemOBP15

MKSCVILIAFCLVVAADSRTVKLTKEKLLEYRKYCEDEKDISRQAMKNDNGYYSAADRSGCITACISKRIGLMNTDGSFNLEVARSTLPDIFHINNVQDFITAQNFITKCMNHTEANDCETGFQMIMCFMENIAPINPGNSA

>DsemOBP16

MSLDEELFFGNSNKRSSGNTSRNGSNNGQSSNGNNGDNRRNDRSRQDSVFNNRMTNPSNYDWMNERVNGMSNQNQYSNYHTSQSQNPDNNNNHRDRAECVTHCLFDELNLVDQRGFPERGSVMEVMTRGVQDPSLRDFIEESITECFHYLESDTNNHEKCSFSNNLMNCFADKARDVRYLKMNIHRCSTFFSPRIPTKKKKPFVKIVRIYFSFFSIDLSDFFQRCEDWDNQ

>DsemOBP17

MSLDEELFFGNSNKRSSGNTSRNGSNNGQSSNGNNGDNRRNDRSRQDSVFNNRMTNPSNYDWMNERVNGMSNQNQYSNYHTSQSQNPDNNNNHRDRAECVTHCLFDELNLVDQRGFPERGSVMEVMTRGVQDPSLRDFIEESITECFHYLESDTNNHEKCSFSNNLMNCFADKARDRCEDWDNQ

**>DsemOR1**

MAMELEFKTRKLSLDITIENKDYKSDLNHAICYTRAVLTGLGIWPLLKKDSSKKELLSTALLIPTGMLLISYVLIPETIYIALRVRSLTIFLKMLGPTAVAYGNFSKYCFFIRRRGLIKMCFEHIENDWKMAESAFDRKIMRRNAVIGRQVTVLCMVFRYASGFIYLTLMPLWRGRIARAHNLTTRPLPYPIYHLFVDTQSTPQYELVFTFSCVSSWVSFTVMIGACSSLAVFVAHTCGQIDIITTRLDTLFEKLDDDIDLLTDRVSFIIRCHVRVIRLAEAVESAFKDIFLTEVMAATIIICLLEWRLTQWNTSDHVTICTYFIILISGLFDLFVQCYCGELLMEKCDTVGKATYLSEWWRMPPKHGQALIMIIALAQIPRRLTAGGLVDLSLASFGAIIKTSLAYLNMLRTFNV-

**>DsemOR2**

RTVGRKSVKRELQHGCESFDAIYSLVFNLARDWPYVISDASRLDKFISKLLIPFPPLVISLLLVPLVSLPIYRNLTPSQFILLLAPLSFRVSSVLKILILILRRDDIKFCIQHMETDWRRIETDEDREIMMKNLQIGRNLTIFCVLCRYSGTILYNILPLFSPRKLNAMNETIRPITVPGIDIYVDLRAGHNYEIVVFISCISIFYVSAIICAICNLAAVLICHACGQIQIVTSRLERLVGQEDQEITDKGNLQRGIAFIVRIHVRVLRFASKIDQLLGELCLLEVVAATLVICLVAYNFITGQKNTGIIASISYTTILLSLSFNIFIFCHIGELLKEKCEAVGKAAYMTEWYRLPGKTGLTLVMFITMAHYPRRLTAGRIIELSISTFGNIMRTSFGYLNMLRTMTE-

**>DsemOR3**

MERTRYFRTANQFNIATNLLSGNVFPLGDEKTSLSFFSLLWVVFVWLINVTYILSVMSGSLYFAELSTKEALKRSGAIIALFFELTIPLVNLNLRRNAFRNLIRKYNVILIDSDDLKKFVLDTVEPYKRGLKIYTVACFIVTTAWKIEPIFKIFNNDTFTYTDFTIPAYFPGEPFGKKMFTVGVIVQVLGACFINFGKISIDHYVGYFVAVLSAQYKFVRSQVAKTLSQSSDHQQDELSIISALQNCVRHHGAVIETGQKLTQLLAFHIGAAYLTCIMKFCFLAFGFATFESANVEKASYLVYAFACVVQIFLLCSSIQELFDESTSVTRDAFHENWHARSAAVKKIFCLMEMSNQMECRLSAYRIVDLAVPALAVILSKSYSFCLLLLEIN-

**>DsemOR4**

MAMELEFKTRKLSLDITIENKDYKSDLNHAICYTRAVLTGLGIWPLLKKDSSKKELLSTALLIPTGMLLISYVLIPETIYIALRVRSLTIFLKMLGPTAVAYGNFSKYCFFIRRRGLIKMCFEHIENDWKMAESAFDRKIMRRNAVIGRQVTVLCMVFRYASGFIYLTLMPLWRGRIARAHNLTTRPLPYPIYHLFVDTQSTPQYELVFTFSCVSSWVSFTVMIGACSSLAVFVAHTCGQIDIITTRLDTLFEKLDDDIDLLTDRVSFIIRCHVRVIRLAEAVESAFKDIFLTEVMAATIIICLLEWRLTQWNTSDHVTICTYFIILISGLFDLFVQCYCGELLMEKCDTVGKATYLSEWWRMPPKHGQALIMIIALAQIPRRLTAGGLVDLSLASFGAIIKTSVAYLNMIRTFDKN-

**>DsemOR5**

MAMELEFKTRKLSLDITIENKDYKSDLNHAICYTRAVLTGLGIWPLLKKDSSKKELLSTALLIPTGMLLISYVLIPETIYIALRVRSLTIFLKMLGPTAVAYGNFSKYCFFIRRRGLIKMCFEHIENDWKMAESAFDRKIMRRNAVIGRQVTVLCMVFRYASGFIYLTLMPLWRGRIARAHNLTTRPLPYPIYHLFVDTQSTPQYELVFTFSCISSWVSYTVMIGACSSLAIFVAHTCGQIDIIMSRLDTLFEKLDDDIDLLTSRVSFIIRSHVRVIRLAEAVEAAFKEIFLTEVIASTVIICLLEWRLTQWQTTDHVTICTYFIVLISALFNLFVHCASGELLMEKCDTVGRVTYLSEWWRMPPKHGQALILVIALAQIPRRLTAGGLMELSLASFGAIIKTSVAYLNMLRTFNV-

**>DsemOR6**

MNTDNSGNLEGETKASKKLKTQGTMEYSVRHLRWLLRLLGVWPLVTANPSQTEKLIGTIVRPIAVFYSTLVLFPMFAEVAAQRAPREEMISLVAPLAYQAFNVMKHFFLLLRIKIISTSLRHMEHDWEQIDNDKDRKTMTKSIQQANQLAIMITISMYVGGTLHNFILPALADSYLNELNETIRVLCFPGGDFFLDVQADVVFEIVFVTYWMSDMFVVTVSMALFTLALILLRHSCGQIKILISNLGRLVDSDQEIELPAENTVAPLVRHHARLLVFSMHIEKILKEVCAMEVICDTLILCFLGYVLIMDISNYDLTTIFTYVMLLVTIAFNLYLYCQIGEVLKEEYESVGTAAYMIDWYKLPGKASLDLIMIINMSAQPRRLTAGGMMDLSRTSYVAIMKTSFAYLNMLRTMA-

**>DsemOR7**

MYQSKTQFLYFSSYDFNARSFCSRSLHEMIDQAQKYEKYANNIKRLFLLAGVSHGPAPYKFINYLLPVYLSTIVIQMSMTVVYAADHITDMGVITKMMGMLISGFAGILKMSLYLWNRDEFSQMHDILETSFRNEFRNPDTRKVLLAPLNFFYHSTIIMSRTFIALPVVFCIGPLLEIIAQCVEGADPIDYQLPFLAKFPWDPYSSLTVYVIHYIFMFICGMGVGFISVSIDSAFGYYVFQIGAQFRVLSYRLENLKATDDYHALIKECVLRHRTLNQCREFLERVYGPIILFFMITSAISLCANVYQISKKNSDSIVISVIYIIAKLAQAFFYACFGSFLTSETESFRDAAYNSGWPGSGQTPFMTSILILLLWKPLVLSACGFSTISLDMFVAILNTAMSYFFLLQTIDDSKQ-

**>DsemOR8**

MERTRYFRSANKFNVFVNNFSGNIFPLSEEKTSLALFMIIWVIFVWTVKITYFFTVLSGSLYFANITTQDALKKSGAASSVCIELLIPVIYLNLRRDDLRNLIKKYNRILIDSDELKKLVLDTIEPYKKGLKFYIVTCIIAVASWSATPILSMSHNDQYTYADYAAPAYLPGAPFSANVFLAGITLQVVGSSFITIGKISIDIYISHLIAVLSAQYKYIRILMTKALSQENNREDESSVIRSLHKCIGHHCAVIEIGQILAEILALQIGATYITCIMKFCFLAFGVITFESANIEKAAYLVYALACVLQIFLLCSCIQELLDVSTSVTEDAFHENWHGRSATVKKIFCIMEMSTQMGCRLSAYRIVDLVVPTMAVILSKSYSVCLLLLKVN-

**>DsemOR9**

MRMSFLNTEKKGIIISDKLKCIFNRKFVAREPRKKVTSGFSPRTLQSRLKLCSYRTMARHGNGIDSASWKNVKNKNYKKNIKQTFQYTRLFFTISGIWPMITKYPSERVKYLSRLIILVCFVMIAFTFVPTASHMIFREKNSSVRIVLLGPVGTSFASILKYTIILLRTNTIKKCVEQMKNDWMVVESVDEHAIMTSNANTGRKISVVCALFLYTAGVSFFAVVPILKGTKINEFNQTIRPLAYPGYDIFVDAQRTPTYEIIFFLIFVSAYVRYTVTIGIISLAAALVGHACGQIEIVMLRLNKLFDGIDEYLDKDELRERIAKIIKCHVNGFRFSARIDESFREACFVEIMSSTLVICLLEYSCMWTFLNRDAAGVVTYVLLLTSYVFNVFIFCHIGELLQTQYETVGKSAYMIEWYRLPDKLGLSLVMVMAITGCPRKLTAGRMLDLSIRNFGVIIRTTVTYLNMLRAMTTT-

**>DsemOR10**

MDFRTLNKYNVLANAVSGNFLPIHGEKTKFHFPSTFWGTFVWIVELTYITSWIIGNARYNPIAVAFQEASASWILAVELIILTIHLNVHRGDLRDLIRRLNEILVDSDDFKRCLSKNVNPNVTYLKMYTVMAFGSTVLWAVTPIFQVFSRDQFTYGDWTMTAYMPGEPFGPTAFACGVLFQVFGGCYLVLKKLSIDIYVSYFVTLLTTQYKYVREQLAKALHKEIETDRDEQSVIDALKKCVEHHCAVIQISRDFMKIVAINVGLTYIGSIFRFCFVSFAVVAFRGFYVYQFVFVLYGMGVFAQVFILCLAAQQLLDASTTVTEDAFHENWHRNNKKVKKVFFTIELSNYMECKLTAYRTVDLIIPTLAVIMNKAYSVFLLLQEMD-

**>DsemOR11**

RWRRTVIKSVLSAMAKDWAITRSDEERNVMLENAKYARFISYMSVALASGVMLAFSSVRAWTAPQERKFITNETKLAIGMLYSAYFPYDTTQSRGFLPTWFSQFFLTILAMVGYSGPDSLIAMMTLHLCGQLATVRIALANIVDEECIKDPSIYWKRLSSIVQRHEELNRCGELLEASFNVLLLMQMIFCTLTFCFQGFVTFTTLIGALTEDGELPVLQMTFLIVHLFYTILHLFVYCWTGDLLVVESTALSYAPYESDWFNLSPAQAKALMMITNRSRIPLQMTAGKFVGFSLELFTSVGPYKPFFQHHLLDQSFYHVFFSPVDHENIDGLSLGTTGYARLVFVV-

**>DsemOR12**

INKKVTSWQIWKLKAKDYIFRLVIYYGLILTHLSHPVLKKILQVMDPRNGSEPAPFPVLMKSRYLDTDVHYFSILPFYVVRLCAILIVILAADTLFIVQVQHGCAMFTVLGHQLQKVANQVTDDWATCSRPVEDPAFRYLTTCIKNHTKAIEYSDLLESIYSPGFLVVVVLNMILISITLFQAALVAKEEPVQAFVFILATFGQIGHLFFLCYFSQKLMDHSQRVREFLCEAEWYRTTLYAQKLFILIAMRTLVPCQLSAGKFLVMSLESFTM

**>DsemOR13**

MPSFFDHEYYKWNKISLACLGTWPEQSFFMRCLIPFIFCTNVISLIFVETRYVTNVWPNLDIFLEWLPAFCVLLTSLLQLINGSIQHHKFATILNHIYSDWQRFSPSPHIKILDKYAARGCWITKTYFRWMYSACLCYLTMPMVMPKIIELFAPVNGSTGKIYLFYADYGVNSDDYYFSIFTHMFVESWLSIISIISNDAMYFVFAEHACALFEIVGENLKSVSSNDTSAKDSEDDVNYKIICSSIDLHRKAIIFSALVDSCYNICLLAILGASLLALSVTGLQVLMHLDEPGELVRFVSFAVAQIFHLYFNSVPGQKILDHSSSIFQYAYSVDWYDLSPRAQKLLILIMVRSQRPCQITAGKIYIMTMENYSAVRNRKLFVLKIS-

**>DsemOR14**

SSDSMYFVFVEHACALFEIVRLNLTKLSNSVMDLNNRSKDSSYQIISDSVHLHRDAIFFASLIESSYTACFGGVIVFCLLLLSVTGLQVLMHLNEPGNFIRFFIFGIAQIVHLYLNSVPGQKIMDYSLSISEYVYSVNWYNMNPRAQKMLLIIMQRSLTPCYITAGKIYIMSMENYSAVIQKSMSFFTV

**>DsemOR15**

MSEESTNLNGDGIPDRAVVIESNREYLRSIRTPKNTLSEKDYEYSTQMNRYFLKPIGIWPRRPETGICKKGLVNIQICCCYFLICFLLVPCALHTFLIEKDPALQLKMIGPLSFCLMAIMKFSFLVYHRNDIYDCLKHIAVDWESIESSREREIMLDDAKFGRFVASLCAGFMYGGGFFYHTIMPLSCGVIVTPDNTTLRPLTYPVYDPFFDAQVSPTYDIVFITQWCSGFVMYTITIGACSIAAVFAIHACGQFKILVNRLNNLVDGDDQKSDSVSERMANIVELHVRTLNFVNHVEGVLNEVCLVEFVGCTMNICFLGYYFMTEWERSETISTVTYCVLLVSFTFNIFIFCYIGEKLTEQSKRVGTMTYMIDWYRLQHQKARGLILILVMSKYPARITAGKMAELSMTCFSNVLKTALTYLNLLRTVAS-

**>DsemOR16**

TNPIAIIRFIQVIVFTIYRESLVELHETLEKSFREDLQNVEYQPVLLSPIAYFDRPTLYLSLSTLGVITMYNLGPIIGIIIQLSHGNAIIKHRTPFPSKYPLPESNGLYLTRYIIEVGASCAIGSITAATDALFGFYVFQMSSQLRVLSHRMNKLTVADDHQRIIRECTIRRQLLARCRDKLQTIYGPIILWMLTTSAMTMCANIFQASQISMDKAALVFVYITMKLMQCLLYGWFGLFLTTESEAYRDAIYSCGWPGCGDRLFVSNIKTMLMCRPLVLKAWQFYVISVDMFMAIMNTTASYFFLLRTLDEK-

**>DsemOR17**

MVDQMTSYRKYVRGIRGLLLFTGLWPSRKWAGTAYRFIPFINALVCFSLSCAVLNFCGDQLNNLELLTKGFGIVGSYWTAVLKVSCFLINHKEVMDLHRTLEKYFEKSLANVEIREQIFGPLSIFVIPFYAITCLLFIATLAFFIAPVIIVCMQLSHDIRPLKFLLPYPGKYPYSFEGGSLLYYVHYAWQMLAATYLLCLTSGVDSLFGYYVFQMHAIFQLMNNRVKSLGLTDQDNPTIVRECVEMHQMLAKCRDQLQMIYGPIVFWIFLTSAIILCSLIFQASQTGQLTVGRGVLFVTYISLKLLQALMYAWYGSVIVTESERFRDAVYGCEWPGSGDKFVMRNVLIMMCNKPLGITACKFLTISTNMFTTIVNTTMSYFFLLQKLDESA-

**>DsemOR18**

MHTLQLNFRIFQYIGMWQPVMWSTGWKPLVYTCYSIYMILSFYMFGLSQFIELIVASHNINDFAHSSLFLAILAGCGKCASIMKHRKDIIQLANVLKNDLSRPRNNDEMEIQIAFERDARSNTLWYTSVAGTTACLISLRSVLMDTPARNMPFEGWLPFDRKLSGMVYWLVYTNQIIAHASFAMINCSFDTLVTGFVQSICAQMKILKYRIETLPEMTMVTENDSFDGNANDVKSQEYFQSREAELLTGCIKHHVQIFQLANSFSDIFSNMVFFQIALSSLILCVSAYEISAMKLFSPEFTATMMYLCCMTVQIFLYCFYGGELTLQSVGICDAVYRMDWSRLDIKTKKSILVIMLRSLRPITFICGNVITVSLDSFNSIVKLSYSVFNVLQQQSDTA-

**>DsemOR19**

MSNVAVREQKEFDEAAKVLSWNRWLLSFLGIWPKSPSGFLFGLNFGYFCYHMLMEYLDLCLFIDNLEHVIENLTENMAFSQILIRMAMLKRYNKALGTVIEEVVKDFDSRKYKTIEECDAFIKYNKKSKLFVKLLSAFVVLTASSYYVKPLTTEPPEDLSIVIPENATAPYILPYRFHVFYEIEDDQTYLYTYLSQLPFVFVSGFGQTAADCLMVTLVFHVCGQMSILAMRISQVSSDADSCEEELRNIVKDHNRLLEMGTAVQEAFSQTLLGHLIGATSLVCILGYQVLTNYAKGQNADLATFVTFAFLVLLVLYAHCTVGESLITESLNVCNAFYDCKWYNMPPKKARVLIICMARSQKPLCLTAGKFGIFCLSTLTEVLKTAMGYLSVLRTLL-

**>DsemOR20**

MSEEAVSWHDEKTDRDVVTEPKKKYLHSIRTRKNSSFEKDYEYSTQMNRYFLKLIGIWPAGPEAGICEKVFIKFRICCCYFLMSYLLVPCVLFKFLAEKNPALKLKMIGPLSFVSMAMLKFTFLVIHRQNIYDCLEHITGDWANVTSSRERKIMLEDAKFGRFLASLCAGFMYGGGFFYHTILPLTIVIVTPDNVTLRPLTHPVYDPFFDSQSSPIYEIVFVTRWCSACIAYTITIAACGIAAVFAIHACGQFKIIVSRLNNLIDGREQTCDSVDERMADIVELHLRTLNFVTNLEGVLNEVCLVELIGCTMNICFLGYYFMAGWENRETIGTITYCVLLLSFTFNIFMFCYIGEKLTEQSKRVGTMTYMIDWYKLQYAEARGLILILVISKYPARITAGKMSELSMTCFLNVLKTAFTYLNLLRTMAN-

**>DsemOR21**

CIMNVFTAGQFRMLQRKFELVKCTDGFDSPIKSFMEISLDNKSGNISRNGSAEKLYKCNETLQDCIQKHQTLIGFVESVESMYTLVILGQVVVFSLLICLVSYQAVLADGEFSRRMIFIVHSAGTFTQLFMFTLTCDDLTSESKAVAEAAYTARWYLCLSDPSRKTFGKDLLFVIMRARRSCCLTAGGFFPISLETFTTILSTAMSYLTLLRNGQAND-

**>DsemOR22**

MESNDSSDLEVETNVSEKLDSYGTMEYSVRHLRWLLRLLGVWPLVQENSSSLEKITSKIVRPIAVVYASSVLIPMFAELFVQRASREELILLVAPLSYQACNVMKHFVLLLRVDIVKASFHHMETDWQMIDNDKERAIMMKRFKTANKVAIVIIASVYVGGTLHNFVLPALADSQLNEFNETVRVLCFPGGDLLFDVQAKIVFEIVFLTYWISDMFVVTMSMALFMLAIILLSHICGQIEIVESRLEALIDSDQDVDILLKNRVAFIIRSHARLLKFSMQMEDVLKEACSLEVISDTLIICFLGYVSIADFDDNDFVTTMTYVMLVITISFNLFLYCEIGEIFKSQCQNVGKAAYMIDWYKLPAKTSLDIIMIINASARPRELTAGGMLPICRVSFASIMKTSFAYLNMLRTMM-

**>DsemOR23**

MFWNSERTPYFQRVNRLNAFVNFFSGHFLPVSDDDEKLGYFNSLWMVFAWAVKIVYFVTAALGTLHFANLTVDQALKKSGAITVLSIEILVPFFYFHIRRKDLRKLIENYNLILIDSDQWRHCISRVVQYYNKGLKFYLVVGLVAAFFFPAAPFFQIFDSEQFTYADFTVPAYLPGEPFGRGVFAAGVVIQIFGGCAIHVGAIGIYLYVIHYISLLVGQYKYVRIRFAEAMCEKNGRKDDSCVITELRKCIQHHAAVINVGRRLIEILAFYVGMTYITCIMEFCLLAYGVMTFENAVVEMATYVSYIFCRILLVFMLCSSIQELVDASTSVTDDAFHENWYTRSKAVQQTFYIIQLSNQIECRISAYRIVDLVVPTLALILSKSYSVCLLLLNVK-

**>DsemOR24**

MNLARKETRPSWNESVPVASSVRRHKPKNILSLVSTRIMNHFSPSSSEYDRLIKPIEIVSRIIAIWPVERDHTKLKALLSRCHKICMICVAVIMTTAVGLDVTRHWNDLNEATECALIASAFALSIVRLVIYTIHENDMRYVLDTMRKDWEESPPEDKLVLAEKCRWSFKLAKQFIISVGLALMLFMLTPMIEIVVFHSEDRILPFRGYFMRNQTSSPIYERLYVVNVILGGLCGTTIASATSFNLVSTIHAAARFTVLQKKLEALKGDDADSEGAMVDCVKRHQNAIK-

**>DsemOR25**

MYFQYDWQKWDGEQEIQVFHEYAETGRKITTFYAAAVYATTVIFITQPVLPKIIDSLIYNGTQPGEFPFPVYYCQLDQQKYFFHIIALIYVGVSVIVVITIASDIMLIIHVQHACGVFAAIGQKLKRVGEEKKSIEGRDVDFENLTICIDRHNGAIEFADLLESLYSPCFFFVVGFNMILMSVTALQILTKSNEPEETLRFIVLVGAQITHLYIESYISQILMDHSLSIHDHVHSGKWYNISLKARKLLGLMIMRSRTPCKLTAGKICTMSVETFGVVVKTSMSYFTLLRSMQ-

**>DsemOR26**

MDVFQRYYKLTEILMKSIGQWPYQTRLARRTFLGILIFLCTVQIVPQILAVIEFRDDSQIILESISPFLVDAASFTKLVTYLCTSDMRLKMLNRVREDWKKWDGEREIEVLHEYAKAGKKMTTFYAVMVYVTTVLFITQPVLPKLIDTLFSNGTKPGEFPFPIYHCQLDQQKYYFHIIAFTYVGASMVLIITIATDVMFIMHVQHVCGIFAAIGQKLKRVGEEESCPAGRDINFENLATCIDRHNGAIEFAEHIENLYCPCFFFVVAFNMIIMSVTGLQILTKSNEPQETVRFIAFVGAQMIHLYIESYISQILMDHSLSIRDHIHSGKWYNISLKAQKLLGPMTMRCNTPCKLTAGKICTMSVETFGVVRDKNHLNLLHDLKKKKTT-

**>DsemOR27**

MTCDLAPNKNYKEDFSYDMQLNRFFLHIIGIWPATSRRSKLLSKLSITISVLLLLFFYLPQSSYVFLVEEDSAKRLEEFGPLSFTTMAIMRYAIMLWKLDRFSACIDVIANDWRQADDRICRPIMLRYARASKLFTKLYAMVMYGGVGFYTWVLPFVNDHDKAHNSTDRPLPYPVEFFVIDAQTSPMYEIVFVGYSISMLGIVCTTTCGICTITVKLVMHACSQFEIVIGFVNSLEDYTLDNKNKGSADSVAGNVHVEWRVAEIIRRHLYALAFVDLIEEILTEICLIDVVGGTLNICIVGYYLLTEWNNSEAVGLVTYFMLWLTMVSSVFVFCFIGEHLSEQCERVGIAIYMTDWWKMKKDQMKAMILVIASSQTPVKFTAGKMATLSLFTFGSVMKASMAYLNALRTVM-

**>DsemOR28**

MDQNPLRGKERIEGLNMGKSNVNCDADIDYAVKMNRWLLKPLGVWPPTSHENWSLMGKFLNRSLVFLTTFLLGFILLPGSLYTFMREKKTEVRVKLIGALSFCVMAILKYISLLTGNAGVGSCVEHLINDWRYVSNPQDRHIMLSYAFFGRFGTVICAFFMYGGGLFYAVVMPLLRGTIFIPEANLTVRPLAYPSYYVFFDPQIKPFYEIVFATHCCCAFVMHTIATAGCGLGVLFVMHACGQLEILIAWLNDLVESYSKGIFTLDDSIARIIRQHVRVLRFITSTEEVLRNICLVEMAGCTLNLCLLGHYFLLEWEQSDAIAILTYTILLASFTFNILLFCYIGELLTEEVQKQSFSQFLNFNALVLLDFSFIERFVPLFFFLSIFFLTTVRENRWNDLHDGLVPFATEQEFRIYSNDCNFSTTFDNHCRTIGESVTRHILQCRENFGNLFESFANCRCVKFDNYLRNYEKKIQSNPVLCINSQEKSHSPMTPVFFVIVSLKLQTRIYFSSNKSLMAIQTQKFCRESFFLCVDHEMMHKFPQF-

**>DsemOR29**

FVFPDQPMPTFATYPFSIDSGIVMYLIFVHQSIVGLQSSAALTIDCQMAMLMWFAGARLEILAQEIRTCSGIKDFRLFAKKHQRLLHYAERVSETMRYIALITTGVSGIASIMCCMQFVGNQPLMVQMQFGPVTIVGLTNLMICTWPAENMIRVCDSIGTAAYETSWFDMSPKLTKDIVMILQRSRQPVEVSIGGFLPALSFRFYSSFLSTVFSYFTTLRLVITDDEK-

**>DsemOR30**

MEEILEGREIRDVERKDNKKYFNENYKNDIDYVVKIARTLLTPIGIYPLYGNDSVAAQIRARCQTIVVFGLMCFLLVPHFIYTFFDAEDLSRLMKVIAAQIFSLLAIIKFFTMIINKSDLRYCLDELESHWRNVTCEEDREVMTNSAKIGRFCTIAYLGLSYGGALPYHIVLPLVAERIVKDDNTTQIPLPYPSDYVFFVPEDSPGYEMLFVSQILISSIILSTNCGVYSLIAIYVMHACCLFQVVQRQLATIFDYSRTLEELSQRLAVIVDNHIAAIRYAQRIEKALNVVFLSEMVGCTVIICFLEFGVLKDWEDRKLIGVMTYAVLMTSIFVNVFIFSFTGDRLKEQSEKVGEFSYSLEWYDLPTNLAADLMFIMIRASRPSTLTAGKVFDLSLQGFCEVVKTSAAYLNFLRAMVT-

**>DsemOR31**

AGDCENWEKDFDNVGIADQHNVRRVWSTIMDGTDARPDPRLAEGFLFDSYFPFSTNDLLIFLPIWLGQFFGTLLSMASYSGPDCIVSMMVLHLCGQLRILRHSLKNIINERTIREPVLYRKNLKLIVNRHEQLNKDTQCSPPWSIEMVLPF-

**>DsemOR32**

MEDDISEAKSLFEMNKQIFTIFGVWPVQPSNVRFIIWIVYILTFISTELVDLFDHFGDFEGIVLNLTETTLFIMIFVKMNVMRFSETLVALMTRIIDGIDSKAFESPEELKTYLGYNRIAKTLSKFWLVMATASEGAYILKAYLPRAVSALKNETIPYVLAYRSRVFVDTSKPYNYWLISVCQGPVAMLPIYIAATIGYVFCLSLHVCGKLSVLVFRIKKLDLELIETDGSLRAAVFRDILKKHHEVLEMAEDINRVFGFVMLEELLMCTLLVGLTIYSGLENVNFEKSTMFLTYLCYGFTVLAFICGYCIAGEYLITESRNLCDAYYQCQWYDVSESFKKQLVICMIRATKPIHLNAAGFYVFSLESFTSIVKSAAGYISMLRT

**>DsemOR33**

MVQRVSLKEAIKFTRLSVRLVCTWPPSESATKWEIARENWAWCISVLTVLCLFFPLINAINQFIDNPLVITQTMCYCSACIIILIKTMILRFHRKKCQDLIAEMEEFMANCCEHERQVLQNYVDKCWVYHMIVSFLNYFASICMIISPFVIPDQKMPTAAVYPFSIESGIPMYLAYIHQSIVAFQTSASLTVDCQMAMLLWYACARLELLAIEIKNSSGIKEFGYLIEKHDRLLLYAARVSQIMRYVAFTSACVCGIASIVCCLQLVSNQSIWVKLQFGPGSFVGLTNLMVSAWPAENVVRVCNLIGTAIYEAPWVGMSPKLSRDIVMILQISQRPVIVSISGFLPALSFQFYTSFLSCVFSYFTTLRLVMLGADGKTS-

**>DsemOR34**

MHTLPLHFTILKLCGMWRPLPCLAGWKFVLYNCYTFFVVCIICAFVVSEFVELFGSFDSAEEFAHGSFLLLTMIGISGKIAILLKKRQEIIQLTIALKNDICGPRDDNEIQIHADSERDARWMASRYTALVLSSVFIMMFQSLTVDLPQRQLFAQGWLPYAYNSTQIVFFLTYSHQAMAASTGAVINIGFDTLFPGLIMLTCSQIQTLKYRFEALPKILTRRKKLLELDNSDECARENQTLESQLIADCIRHHIQIFQLADTLNSIFGFVVFLQFTVSSLVICVSVYEVSKVKVLSSEFASTVLYLGSMLAQIFVFCFYGGELSLQVLYSRLLSSLSKCLHCF-

**>DsemOR35**

MQSPPKNKTNSTKPEIKANKNYEFDKRYMAQYTKWLLEILGVWPMVTNECSFKSKLLSKLSVTVCLLSMAFLLVPTGLHISLRVRDLAGARVSIGYFSPCVASVLKYAFIIFHSKKIKLCIKHMETDWMNVSDDNDRAIMIKNAKIEHAITAASGLLLYSGGVFLHAIMPLIKGSSLNARNETIRPIVYPGYDLFVNPQITPTYEIIFCTICFSAFIRFTVTIAAVHLTALFVTHACGQMEIVMSRLDKLFDGIDDVKDQIKVEQRLSFLVLCHVRGLRLSSIIDEALKEVCLVEVVTATLILCLLEYYVMDWRSLGLIQTITFSLLLVSYTYNIYMFCYIGELLKEQIQKVGKAAYMIEWYRIPRKRELSMIL

**>DsemOR36**

QEDELSVIRALQKCIGHHSAVIEIGQDLGDILALQIGTTYILCIFKLCFLAFGVITFGSANIEKITYVVYAIGCVLQIFLLCSCVQELLDVSTSVTDDAFHENWHGRGYRVKKIFCIMEMSSQMGCRLSAYRIVDLVVPTVGVILSKSYSVCLLLLEVN-

**>DsemOR37**

MKNPFCHDSFCFQRWMASRYTALVLSSVFIMMFQSLTVDLPQRQLFAQGWLPYAYNSTQIVFFLTYSHQAMAASTGAVINIGFDTLFPGLIMLTCSQIQTLKYRFEALPKILTRRKKLLELDNSDECARENQTLESQLIADCIRHHIQIFQLADTLNSIFGFVVFLQFTVSSLVICVSVYEVSKV

**>DsemOR38**

TMARNGNGTDFAICQRIRNDNYKSNIKRTFQYVRSFFTVLGFWPMISKIASRQTKCCSYLIILLCFSMIAFTFVPCASHMIFREKNAAVKLVLLGPVGAGFGAMLKYAMILFRASTIKLCVDQMENDWMIVERADEHAIMTNHANTGRKIAVICTLFLYTGGMSLHAMVPILKGTKINEFNQTIRPLGYPGYDIFIDAQKTPTYEIIFFLICVSAYVRYTVTIGIISLAATFVGHACGQIEIIILRLNKLFDGIDEFLDKDVLRQRISDIIRCHVNGLRFSTTIDKSLREACLIEIMSSTLSICLLEYSCMWAFFNKDTVSIITYVMLLTSYIFNVFIFCHIGELLQNQYETVGKAAYMIEWYRLPDKLGLSLVMV

**>DsemOR39**

MTFCFQGYVLSTTLFSGLTGDDGFPFLQMMFLTCFALFAMMHLFVYCWAVDLLVVESTSLSYAPYESEWYLLEPHEARALMMFTYRARVPLQLTAGKFVGFSLELFTMVMHFIKTKVDQINPVKVVL-

**>DsemOR40**

MEEQLRKYESYARVVKNLLLISGLWPGRVSFKLFRLVVVFHSSLSIFTVCGIIYFVIGHITNLDLFTKGVGIAVSFCLMLLKATVFTKYRPSLVELHETLEMNFRQDLANPEYQSVLLSTVAYFYHPTLFLSVSTLGLSTMYNLTPIISILIQLSQGNEIIKHRTPFPAKYPFPESNAFYFTRYIIEVGASYAIGAITAATDALFGFYIFQITSQIRVLGYRMKNLTTADDYQKIIKECLIRREILVQCRDKLQDIYGPIVLWMLVTSAMVMCTNIYQASHMSMDKALIVCIYITMKLLQSLLYAWFGLCLTTESEDFRDSIYSCGWPGCGDKLFLSNIKTMLLCRSLVVKACQFYVISVEMFIAVCYNLSININVSGGRGAM-

**>DsemOR41**

MASFFDHPYYKWNKISLESIGIWPEQPFLKRCFLQIFVCINLWSIIIPELVYVKKTWPNFDVFLEWVPEFGVLLLANIQLLNVSFQRKKFIAMLDHIHSDWERHGDSPNAKVLHKYAAGGRWITKHYFGWMYSACLCYVMMPLVMPMILKPPESVNGTAEPIYLYNADYFVNSDDYRGAILFHMFMESWLCIISIISNDAMYFIFVEHACALFGLVGEGLKRIHINDTIPDDSRDDINYRIICHCIEHHREAIIFTSLIESSYNLCLLAVIGVSLIMLSITGLQVLMHHEEPGQLIRFASFSIAQIFHLYLNSMPGQKILDHSLSIFDHAYSVNWHCLTPKAQKLLILMMVRSLRPCQITAGKIYVITMENYSAVMQTSMSFFTVLSSVQ-

**>DsemOR42**

MPLIQHVLDPLGNNTKQEPLPVYYYRFDVQEYYYPIYAHAFITAWMFVASLVAADSIYVVLVENACAMFSLVSHRLQKAVPTDQKYIDAGAKKSNDQAYNNFIDCIKRHKAAIKFADEVESSLSVSFLLTVGTNMIIISFTGTQLAESVGELNDVARHGAMIFAQMGHLYMENHYAQKLSDYSCDVYTKIWNSNWENTSLRTQKLLVFFIMRSLEPSVITIGGFYVMSIDTFNWLLRTSAS

**>DsemOR43**

MHTLRLNFAILQFCGMWRPLVWSSGWKSMVYNFYTIFMVSSLYLFALSQFLGLVLSSENVKEFSHGSYMFLTVLAACGKCASVVKQRKGIIDITNTLTNHFCQPRNEDESKIQNDCERDARFNTFWYSVLGGTTCSLITLRSLIVDISERNMPFKGWLPFDPKAGPEFGFWLAYFHQLIAHATTAILNSSFDTLVPGFMMQTCMQMKILKYRIESLPKVMEAKRTLLREQNHEESLQKRQSQESELLTECIRHHIQIFQLANSVNEIFSNVVFLQFSLSSLILCVSVYETSTMRLFSSEFTALMLYLCCMIVQIFIFCFYGGELTLQSVDMCDAVYQMDRSLLSTRTKKSLVMMMMRSLRPITFTCGNVITVSIDSFNKLIKLSYSVYNVLQRSGE

**>DsemOR44**

QEDELSVIRALQKCIGHHSAVIEIGQDLGDILALQIGVTYILCIFKLCFLAFGIITYESANIEKLTYVVYGTGCVLQILLLCSCVQELLDVSTSVTDDAFHENWHGRGSRVKKIFCIMEMSSQMGCRLSAYRIVDLVVPTVGVILSKSYSVCLLLLEVN-

**>DsemOR45**

MHTLPLHFTILKLCGMWRPLPCLAGWKFVLYNCYTFFVVCIICAFVVSEFVELFGSFDSAEEFAHGSFLLLTMIGISGKIAILLKKRQEIIQLTIALKNDICGPRDDNEIQIHADSERDARWMASRYTALVLSSVFIMMFQSLTVDLPQRQLFAQGWLPYAYNSTQIVFFLTYSHQAMAASTGAVINIGFDTLFPGLIMLTCSQIQTLKYRFEALPKILTRRKKLLELDNSDECARENQTLESQLIADCIRHHIQIFQLADTLNSIFGFVVFLQFTVSSLVICVSVYEVSKVKVLSSEFASTVLYLGSMLAQIFVFCFYGGELSLQSMEICQAVYKMDWSSFGIKTKQSLVMIMLRAQQPITFVCYHVITLTLDAFVSLVKLSYSAFNVISNDT-

**>DsemOR46**

LESRYYRVNANILRLIGQWPYEQRKCQKFHQILFHMSVMTVMLTQMKRLFEQIKTDWSNLHRQDEIEILKAYSEQGRKLSIIYIVSMYVTIAIYLTIPMMPKILDIILPLNESRPLTYLYRTEYFVDPEKYFYAIVLHTYTGTIITVSVVAAADAMFNAYVQHVCGVLAIVGYRFENLVKIHDAQEDPSKRNDPCYQELVRCIDQHFQAAEYVMLLEKSYSMAYMVQTIVSMILLSMSAVQLLMKFGERDEMIRMIQFNLAQFFHIFYNSWPGQKLLDQSVSLRNSVYSSEWYSLSMRSKVLLKFIMMRTLAPLKITAGKLYDLSMENFGAVIRASASYFTVFASLR-

**>DsemOR47**

MDQNPLRGKERIEGLNMGKSNVNCDADIDYAVKMNRWLLKPLGVWPPTSHENWSLMGKFLNRSLVFLTTFLLGFILLPGSLYTFMREKKTEVRVKLIGALSFCVMAILKYISLLTGNAGVGYCVEHLINDWRYVSNPQDRHIMLSYAFFGRFGTVICAFFMYGGGLFYAVVMPLLRGTIFIPEANLTVRPLAYPSYYVFFDPQIKPFYEIVFATHCCCAFVMHTIATAGCGLGVLFVMHACGQLEILIAWLNDLVESYSKGIFTLDDSIARIIRQHVRVLRFITSTEEVLRNICLVEMAGCTLNLCLLGHYFLLEWEQSDAIAILTYTILLASFTFNILLFCYIGELLTEECEKIGGTTYMMDWYRLPPNKSLGFILTIATSQRPSTITAGRLVNLSLGTFCSVVKTSVTYLNLLRTVVV-

**>DsemOR48**

YFTCDYADLSVDILVIMSFGLIGLIKLIFYYINRRNLCLNIESAIEDWSSMETSAIDSITRKYKRYYEKVIRIYLALGLSASLMYPFKVFYFDRESFVNTKIYDDQQQTIVKKKFLFPSVCLFNDSSTTVYDLVILNQFFQFIICVGVNLTADSFFITIAYHLCGQFAILKQRLASFEKLDNETKTKREFGCLVARHKHLLMLTTSIEKSLNIIIFTQVVCNLILFNVAGINFLIYLKKKDNYSAVTHFGIISFTLTQTFMYACIGENVSSTIETITQSIYEGNWQTLPKNLSKDVIFLMTFSNSTIYLTGGKLFRMKKSTFTQVLKTSISYLSVFNALVNDY-

**>DsemOR49**

MMDKYENARNLFKWIESFFSLLGTWPLRSTNARFFICITYFAIHFFFSQVYLYYVFGDLQAMVMNVTDTGLMLMVSSRLITLKFSRKLGKILELTINFIDEKHFRNEQEWELYLHYNRLAKSYFKYVVPIALVTTVMFWLKPIQLRLVAALHNETKPYTLAYTTNYFFEVKDDTTFYLIWFYNFPMVFFAPWYTSSIGLLVSLMYHVSGRLAVLCNRIKNLSVKDFQNEQAVRMVFRELAQTHLEISEFAKNVNAVFGPLLLNELFITTIIIGLTIYASLMSIDVANPVEIFSSSSYGLSVLLLIYSSCAAGEVVMAESSNLYAAYYDFLWYDLSIICQKQLIICMIGASRPIQLSAAGFNTYSRFLFISILKTAGGYTSLLRSMIEKQQ-

**>DsemOR50**

MVQRVSLKEAIKFTRLSVRLVCTWPPSESATKWEIARENWAWCISVLTVLCLFFPLINAINQFIDNPLVITQTMCYCSACIIILIKTMILRFHRKKCQDLIAEMEEFMANCCEHERQVLQNYVDKCWVYHMIVSFLNYFASICMIISPFVIPDQKMPTAAVYPFSIESGIPMYLAYIHQSIVAFQTSASLTVDCQMAMLLWYACARLELLAIEIKNSSGIKEFGYFIEKHDRLLLYATRVSQIMRYIAFTSTCVCGIGSIVCCLQLVSNQSIWVKLQFGPVSFVGLTNLMVSAWPAENVVRVCNLIGTAIYEAPWVGMSPKLSRDIVMILQISQRPVIVSISGFLPALSFQFYTSFLSCVLSYFTTLRLVMLGADEKTS-

**>DsemOR51**

CPAGLKFVLYNCYTFFIILLICTFVVSEIIELFGSFNSAEEFAHGSFMLLSMIGMSGKMMIMLRKRQEIIDLINSLKNGICEPRDEVEIQIQADSERDARWTSSRYTAMTLSTAFIMVLQSMIVDIPERKLPFNGWLPYTYDSGQIIFLVTYFHQATAACTGAAVNSAFDTLFPGLVVLTCAQMKILKYRLEVIPRIIETRKKSLDDEDSWGNDQALESELLADCIRHHIKILQLADTLNRVFGFVIFLQFSVSTLVLCVSVYEVSKVQLLSAEFAGTVMYLGAMLVQIFVFCFYGGELSLQVLYSRLLSSL-

**>DsemOR52**

MPSFFDHEYYKWNKISLACLGTWPEQSFFMRCLIPFIFCTNVISLIFVETRYVTNVWPNLDIFLEWLPAFCVLLTSLLQLINGSIQHHKFATILNHIYSDWQRFSPSPHIKILDKYAARGCWITKTYFRWMYSACLCYLTMPMVMPKIIELFAPVNGSTGKIYLFYADYGVNSDDYYFSIFTHMFVESWLSIISIISNDAMYFVFAEHACALFEIVGFVEKKFYEEKSQFLTNSM-

**>DsemOR53**

MKKARTANQSQSIPNSRRIMNSVKKAYYGKTLLLLSVFGVNPYQNRPSRFAAVFAYCGIACTQLSFKIAFVAQKWPDVDIFIQQTPPILVDFISIFKMLNCAVNFNKIKDLFDQILFSADPLLSYEELDIIERHDEHCRKFTIVWFTYLVSAATIFYAMPLIQHVLDPLGNNTKQEPLPVYYYRFDVQEYYYPIYAHAFITAWMFVASLVAADSIYVVLVENACAMFSLVSHRLQKAVPTDQKYIDAGAKKSNDQAYNNFIDCIKRHKAAIKLVQSIPFNNNSDALELTFHRKFNELNTNFHNIVQKYCFH-

**>DsemOR54**

MLAPRNAANDGAGEIRLQDVPFEKFLGRDVGVLRIAGLFSLNSVFGDKIVQSSLWEAASFTVGVMHIFFVASCEFATIIRVCRTDPNYAIGSFTAMFSGILCAVKGLRLWFWREEFRKLLRLLAIMWNESRDRERINRENERTATSVTRVNKRYIVMVFVLCSSYALRPYILLLHYHWHEKLSNSSYDYSVTIYPTTYPLFTTDTMSKYIICVSWEQFVIVFVALYWMGSDIMFAQMTTHTAIQFRVLRHDLKYITTKADGQDSRIEEELIARLSRIARRHRDLYRHCEMIEQIYNPITFLTMLLTAVNMCFCVFRLEKELSNKNWDEVIKYLFHAVTLIVQAIIYCGYADKLTYQSSLMADAAYDCQWVDRSEEFKMLLHVIMMRSQKIFKCTAYGFFTVNLNQITVIANTAASYFALLKTVA-

**>DsemOR55**

MKGARDKKDKYEQAKKLFTWIERFFVVLGTWPLRPMNVRFTMWMIYLAIHLTFAQIDLYYVMGDLQLMVDNLTETGLLFIMIFRLMSAKFSRKLRTIISLAIQFIDAKHFRADEEWQLYLNYHRRARSYFKVVVPIAIVTTFMFWFKPMQLRLTAALRNETKPYPLAYRVNYLFEIDTDRTFYLIWFYQAPQVYFAPWYCSSIGLELALVYHMTGQLSILSFRVRNLTINDFANEQSARMVFQDLAQTHHDIVELAKGVNGVFGLLLLDELLISTILVGLTIYTTIVNVEQVDDILSSLSYGLSVLLLIYSSCVAGEYLATESANLCAAYYECFWYDMPTTCKKQLLICMIGASKPIHLSAAGFYDYTMMLFLSIVKTAGGYISLLRTMTEKQQE-

**>DsemOR56**

MECNEHVATLSKNVKNHEHHIKRTFQFTRLFFTVSGIWPMITKYSSRRVKYLSNFVIVVCFVMIGFTFVPCALHTIFREKNPAVRVVLLGPVGASFGAVLKYAIILFRSDTIKKCVEQIKNDWTSVESAEELAIMTRHANTGRGIAIICTLFLYTGGMSFHAIVPILKGTRINEFNQTIRPLGYPGYDIFVDPQTTPTYEIIFFLICVSAHVRYTVTIGIISLAAVFVTHACGQVQIVMLRLAKLFDGIDHRFDRDELRLRISRIINGHVNGLRLSATINDSLREVCLVEVMSSTLSICLLEYSCMRAFFNNDTVSLITFFLLLLSYIFNVFIFCHIGQLLQEQYETVGKAAYMIEWYRLPDKLGLSLVMV

**>DsemOR57**

MVGKSNDKTAILVEKYILYQKALKKMLLFAGVWPKTDPSDFYRCLIWAHGFGSFLMLLAVARFCYEHATNLNLFLTGLSLAIGFVTIIQKMICLTIYRNNLIEMHRTLAHTFVKDYSDVEMQPILMSPLSPFYRLSQIMMGTAWSGMAMYWTVPLLLVIIQSSKGGVVKYLLPFPTSFPWPISANKFVYAGLYIFEVYTSTCLTIFTVAVDSLFGYYIFQISGQLRTLSHRIRNLNSRDNHREVIVECVSRHRTLMRCQESLERIYGPIVLWLSVASAIVLCALIY

**>DsemOR58**

MGIERKSKLSGYLWYTRTSLKAVGLWPTGSDGILNFTYFLFVAGTFIAQVFQMLTNCWMNYTNFESAAESIGPMMALITSFGKMCIYRKERSRLGHLAISLDNCIKNGPLDVLEYLEDYAKISSLACGSLLIVSWLLTVVFLSAPILLNERVLPFASWYPFDYENSDIFYVIAYAHEALLTCLGCCTMSTEITFVWSIFHCCSRLRVLRHELSNLSDGKNNDDDTISHDISFKLSSLMDLHYEVLRDLVEINVAYTYITSVLFFAALIAICCAGLQITGSSVESSNWTAGLFLVLAMYYAEQLLFYYLPGEIVAQEATGVALAAYSSGWETLDVKHRKTIGLIIMRSQLPPKLFVGQMIPLRLENYGAVSNSFDSPQMQFCFSV-

**>DsemOR59**

MGVRSIKTRGESSIFFPSTVKFMTGKLNVYSHINTICQPFFVSINTNSGHLICCLNETVGNNRGGKNISLMMTAALATMTNLFQERYYIINKTLLSLIGGWPYTRQPVRRSALFFIVFLLAAGITPQAFTLREILNDWDVLVGTLLSWVMNIGCLIKLATVIVNMKKIQILLEHVKIDWLSLVGQPELQILHEFAERGRQYSIAYGVIYYGLILTHLSHPVLKKILQVMDPRNGSEPAPFPVLMKSRYLDTDVHYFSILPFYVVRLCAILIVILAADTLFIVQVQHGCAMFTVLGHQLQKVANQVTDDWATCSRPVEDPAFRYLTTCIKNHTKAIECEAEWYRTTLYAQKLFILIAMRTLVPCQLSAGKFLVMSLESFTMAIQTSISYFTLLLSMQ-

**>DsemOR60**

VAKVFICINRKSIRARYKMPFAFHFHSCICCIRDDERCTFRSSSERIIMSLEINRRQVPADIGIQNKDFKSDMNYTIYYTKSMLAMLGIWSLVKQNPRKQELILSIILVTTGLFLLAFVLVPIAIFIAVKVNSFTSFLKMLGPLTFNSGNFAKYCLIIHRRKFIKACFKHVQTDWEAVASVLDREIMKKNATVGRRVSLLSMGLMYSSGLAYLTLMPFWRAKAARTQNITIRPLPYPVYDLYVDSQATPQYEIIFSTSLLMGTVMFTVMVAACSLAAIFVSHVCGQIEIIMSRLDTLFDDLDGNVQVFNTRITFIIRSHVRVLRLVDAVQIALKEILLAEVIASTLVICLLEWRLTQWRISDNVTLSTYWIVLVSVTFNLFIFCYSGQLLIEQCKIVGRAAYLSDWWKMRGKSGQALILLIAISHIPRRLTAGGMLELSMASFGAVIRTSVAYLNMI

**>DsemOR61**

MPSFFDHEYYKWNKISLACLGTWPEQSFFMRCLIPFIFCTNVISLIFVETRYVTNVWPNLDIFLEWLPAFCVLLTSLLQLINGSIQHHKFATILNHIYSDWQRFSPSPHIKILDKYAARGCWITKTYFRWMYSACLCYLTMPMVMPKIIELFAPVNGSTGKIYLFYADYGVNSDDYYFSIFTHMFVESWLSIISIISNDAMYFVFAEHACALFEIVGENLKSVSSNDTSAKDSEDDVNYKIICSSIDLHRKAIMFVNVIQKFYSHC-

**>DsemOR62**

MGIERKSKLSGYLWYTRTSLKAVGLWPTGSDGILNFTYFLFVAGTFIAQVFQMLTNCWMNYTNFESAAESIGPMMALITSFGKMCIYRKERSRLGHLAISLDNCIKNGPLDVLEYLEDYAKISSLACGSLLIVSWLLTVVFLSAPILLNERVLPFASWYPFDYENSDIFYVIAYAHEALLTCLGCCTMSTEITFVWSIFHCCSRLRVLRHELSNLSDGKNNDDDTISHDISFKLSSLMDLHYEVLRDLVEINVAYTYITSVLFFAALIAICCAGLQITGSSVESSNWTAGLFLVLAMYYAEQLLFYYLPGEIVAQEATGVALAAYSSGWETLDVKHRKTIGLIIMRSQLPPKLFVGQMIPLRLENYGAFLTTTASYFTSIRAVA-

**>DsemOR63**

MDLSDSVAIRLTRFFMRFTGIWITHSRREHFLMELTTTYTISTIIISWQINGSDLWFCRADFQRAIYAACNVLTILLISIKLGMFAWRREKFVNLIKFCYQHFWEVQYDAGDMKIMKTCDIKCVLFVGLFTLFAWSTVCAYTAYPIVENMGKNHSERIHAFPVRFSFIPATTTPYFELIFITET-

**>DsemOR64**

GCFWKCRYSLPAEIFCSEVHRKFFIPGSVMGTINKHCAWNSETTYALGLYKLIARILGIWPPSSRGILARLQVVVICFLQVTMMTSMIAEINTECSSISGIVEVISLISCSILSILKVTILSGCPSLLLEVISSAVEDWSNVKTPNARNIMKKHAKLGRFVVLFQLGSGYVTTIPMIIGSLPFLVPQIDLNGTNSSVQFRPLPLRTTCVFGDMSDISYAIVFTMQALQLLTTCTANVGIDVYFFGIVMHVCGQFRLLGQDLENFKSDLAETEQREILVQIIHRHVKLTRLAEHIEDSFNFIILVQLSANAMQMCLMGIQMLLSLKSGNTVMIVNTIIIFYVMSLQLFLYSYAGDRLSSEMANLRVSAYFSPWYEMPSTLARDVLFIMIRNQKNFNITGGKIYRIDIDNFKNLIKALGSSFSVLRIMFDA-

**>DsemOR65**

MMTASLAIMTNLFQERYYRINKTLLILTGGWPYLPRTTRSTVLILILCSSVMAIIPQVIAVSEVINDWDLAVESIPPFGIDIAFAIKLYTVVINAKKQMQKILEHIQIDWISLAGQPELRILQEYGEQGRQFTIAYAAGFYLTTMLFMMQPVIPKILQVMNPSNDSELAKYPLPANYYGIDTDANYFYLLPFTYVTTAIILTVIVAADTLFIVQVQHGCAMFSVLGHKLRRMADKVTDDWAICIRPVEDPVFRHLTACIKNHNAVIECEAEWYRTTLYAQRLLTFISMRTLVPCRLTAGKFSVMSLETFTSVVKTSMSYFTLLRSMQ-

**>DsemOR66**

MTHMDRDWRSRDDVTGTKVLHHWAERGRILAKGYALYLFIGGTLYVCAPLFPFFLDVVKPLNETRPREFLFRTEYFVDQDQYFVPIFLHALTTTSISMVIVTACDTMYSAFIHYACAIFVELSQELEYPVKNKDDSFHVSKSDDNVYEHIVKCVKKHKEVIEFCDFLESTYTVYNFGTVGLNIFLISFTGVQTVMKVDNPSLFVRYSIYVFGQIMHAFFGCWHGQLLIDHSEAILNSAYKSRWYASSFRSCRLLTLIMMRSTKPCQLTAGKLFSVSLQTFTTIIKTAMSYFTLLRSFQ-

**>DsemOrco**

MMKFKQQGLVSDLMPNIRLMQISGHFMFNYYADGMKFMHKIYCVVHLFLVLLQFGLCLVNMAMESGDVDDLTANTITVLFFAHSIVKVAYFAVRSKLFYRTLGIWNNPNSHPLFAESNARYHAIALTKMRRLLFAVGGATALSVICWTGITFVGDSVKKVTDPVTNETTMVEIPRLMVRSFYPFDASHGMTHILVLVFQFYWLVFTMFDANSIDVLFCSWLLFACEQLQHLKAIMKPLMELSATLDTVVPNSNELFKAGSAEHLRDNGNNVQPPPSAQGDNMLDLDLRGIYSNRQDFTATFRPTAGTQFNGGVGPNGLTKKQEMLVRSAIKYWVERHKHVVRLVTAIGDAYGVALLLHMLITTISLTLLAYQATKVNSVDVYAATTIGYFMYALGQVFLFCIFGNRLIEESSSVMEAAYSCHWYDGSEEAKTFVQIVCQQCQKAMSISGAKFFTVSLDLFASVLGAVVTYFMVLVQLK-