

Acidic enzymes

>|Q9ET64|NSMA_RAT Sphingomyelin phosphodiesterase 2 - Rattus norvegicus (Rat).

MKHNFSRLRLRVFNLCWDIPYLSKHRADRMKRLGDFLNLESFDLALLEEVWSEQDFQYL
KQKLSLTYPDAHIFRSIIGSGLCVFSRHPIQEIVQHVVYTLNGYPYKFYHGDWFCGKAVG
LLVLHLSGLVLNAYVTHLHAEYSRQKDIYFAHRVAQAWELAQFIHHTSKKANVLLCGDL
NMHPKDLGCCLLKEWTGLRDAFVETEDFKGSEDGCTMVPKNCYVSQQDLGPPFPFVGRID
YVLYKAVSGFHICCKTLKTTTGCDPHNGTPFSDHEALMATLCVKHSPPQEDPCSAHGS
RSALISALREARTELGRGIAQARWWAALFGYVMILGLSLLVLLCVLAAGEEAREVAIMLW
TPSVGLVLGAGAVYLFHKQEAKSLCRAQAEIQHVLRTRTETQDLGSEPHPTHCRQQEADR
AEEK

>|P07686|HEXB_HUMAN Beta-hexosaminidase beta chain - Homo sapiens (Human).

MELCGLGLPRPPMILLALLLATLLAAMLALLTQVALVVQVAEAAARAPSVSAKPGPALWPLP
LSVKMTPNLLHLAPENFYISHSPNSTAGPSCITLLEAFRRYHGYIFGFYKWHHEPAEFQAK
TQVQQLLVSITLQSECDAPNISSDESYTLLVKEPVAVLKANRVWGALRGLETFSQLVYQD
SYGTFINESTIIDSPRFSHRGILIDTSRHYLPVKIILKTLDAMAFNKFNVLHWHIVDDQSFP
YQSITFPELSNKGYSLSHVYTPNDVRMVIEYARLRGIRVLPFDTPGHTLSWGKQKDLL
TPCYSRQNKLDSPINPTLNTTYSFLTTFKKEISEVFPDQFIHLGGDEVEFKCWESNPKIQD
FMRQKGFGTDFKLESFYIQKVLDIATINKGSIVWQEVFDDKAKLAPGTIVEVWKSAYP
EELSRVTASGFVILSAPWYLDLISYGQDWRKYKVEPLDFGGTQKQKQLFIGGEACLWG
EYVDATNLTPLRWPRASAVGERLWSSKDVRDMDDAYDRLTRHRCRMVERGIAAQPLYAG
YCNHENM

>|P14925|AMD_RAT Peptidyl-glycine alpha-amidating monooxygenase - Rattus norvegicus (Rat).

MAGRARSGLLLLLLGLLALQSSCLAFRSPLSVFKRFKETTTRSFNECLGTIGPVTPLDASDF
ALDIRMPGVTPKESDITYFCMSMRLPVDEEAFVIDFKPRASMDTVHHMLLFGCNMPSSTG
SYWFCDEGTCTDKANILYAWARNAPPTLRLPKGVGFRVGGGETGSKYFVLQVHYGDISA
FRDNHKDCSGVSVHLTRVPQPLIAGMYLMMSVDTVIPPEGEKVVNADISCQYKMYPMHV
FAYRVHTHHLGKVVSGYRVRNGQWTLIGRQNPQLPQAFYVPEHPVDVTFGDILAARCV
FTGEGRTEATHIGGTSSDEMKNLYIMYYMEAKYALSFMTCCKNVAPDMFRTIPAEANI
PIPVKPDMVMMHGHHEAENKEKSALMQPKQGEEVLEQGFYSLLSKLLGEREDVHVH
KYNPTEKTESGSDLVAEIANVVQKDLGRSDAREGAEHEEWGNAILVRDRIHRFHQLE
STLRPAESRAFSFQQPGEGPWEPEPSGDFHVEEELDWPGVYLLPGQVSGVALDSKNN
LVIFHRGDHVWDGNSFDSKFVYQQRGLGPIEEDTILVIDPNNAEILQSSGKNLFYLP
HGLSIDTDGNYWVTDVALHQVFKLDPHSKEGPLLILGRSMQPGSDQNHFCQPTDVA
VEPSTGAVFVSDGYCNSRIVQFSPSGKFVTQWGEESGSSPRPGQFSVPHSLALVPHLD
QLCVADRENGRIQCFKTDTKEFVREIKHASFGRNVFAISYIPGFLFAVNGKPYFGD
QEPVQGFVMNFSSGEIIDVFKPVRKHFDMPHDIVASEDGTVYIGDAHTNTVWKF
TLTEKMEHRSVKKAGIEVQEIKEAEAVVEPKVENKPTSELQKMQEKKLSTEPGSG
SVVLLITLLVLPVLLAIVMFIRWKKSRAFGDHDKLESSGRVLGRFRGKSGGLNLGN
FFASRKGYSRKGFDREVSTEGSDQEKDEDDGTESEEEYSAPLPKPAPSS

>|P35475|IDUA_HUMAN Alpha-L-iduronidase - Homo sapiens (Human).

MRPLRPRAALLALLASLLAAPPVAPAEAPHLVHVDAARALWPLRRFWRSTGFCPPLPHSQ
ADQYVLSWDQQLNLAYVGVAPHRGIKQVRTHWLELVTTTRGSTGRGLSYNFTHLDGYL
DLLRENQLLPGFELMGSASGHFTDFEDKQQVFWEKDLVSSLARRYIGRYGLAHVSKWNF
ETWNEPDHDFDNVSMTMQGFLNYDACSEGLRAASPALRLGGPGDSFHTPPRSPLSWG
LLRHCHDGTNFFTGEAGVRLDYISLHRK GARSSISILEQEKVVAQQIRQLFPKFADTPYND
EADPLVGWSLPQPWRADVYAAMVVKVIAQHQNLLANTTSAPFYALLSNDNAFLSYHP
HPFAQRTLARFQVNNTRPPHVQLLRKPVLTAMGLLALLDEEQLWAEVSAQAGTVLDSNHT
VGVLASAHRPQGPADAWRAAVLIYASDDTRAHPNRSVAVTLRLRGVPPGGLVYVTRYLD
NGLCSPDGEWRRLLGRPVFPTAEQFRRMRAAEDPVAAAPRPLPAGGRLLR PALRLPSLLLV
HVCARPEKPPGQVTRLRALPLTQGGQLVLVWSDEHVGSKCLWTYEQFSQDGKAYTPVSRK
PSTFNLVVFSPDTGAVSGSYRVRALDYWARPGPFSDPVYPYLEVPVPRGPPSPGNP

>|Q12570|laccase|EC 1.10.3.2|Botrytis cinerea|Swiss-Prot

MKNSFFSSLAKFASLSLAFALPTAEVIPSAL EERQSCANTATTRSCWGQYSASTNSYTTVPK
TGYWLVVQNTTSLADGVS RPTLNFGTIPGPQITADWGDDVIVHV TNKLT SNGT SIHWHG
IRQLNNAQYDGVPGITQCPIAPGGTLYKFHADNYGSSWYHSHFILQYGDGLFGPLVINGP
ATANYDVDLGMFLNDWNHVPVQSLWDKAKTGAPPTLLTGLMNGTNTYNGAGKKFQT
TFTPLKYRIRVVNTAVDGHFQFSIDGHSFQVIAMDFVPIVPYNATSILVSIAQRYDIIVTAN
AAVGNWYRIRAGWQTACSGNTNAANITGILRYTGSSSTADPTTTSTVTASTSCLDEPLASLV
PFVPIPVASSIMKTTLTTGGGQWLFNGSSLLLNWTDPTLLTVLNSGNIWPTEYNVIPIESTT
ANKGWAVLAISGPNPNHPIHLHGDFWTL SQGTGAYTATTALNLVNP RRDM TLP TGG
HLVIAFQIDNPGSWLMHCHIAWHASEGLALQFVESESSILPTIGTADVSTFQNTCAAWKAW
TPTEFPFQDDSGI

>|P42254|ABFA_ASPNG Alpha-N-arabinofuranosidase A - Aspergillus niger.

MVAFSALS GVS AVS LLLSLVQNAHG ISLKVSTQGGNSSSPILYGFMFEDINHSGDGGIYGQ
MLQNPLGQTAPNLTAWAAVGDATIAIDGDSPLTSAIPSTIKLNIAD DATGAVGLTNEG YW
GIPVDGSEFHSSFWIKGDYSGDITVRLVGN YTGTEY GSTTITHTSTADNFTQASVKFPTTKA
PDGNVLYELTVDG SVAAGSSLNFGYLT LFGETYKSRENGLKPQLANVLDDMKGSFLRFPG
GNNLEGNSAENRWKWN ETIGDLCDRPGREGTWTYYNTDGLGLHEFYWCEDLGLVPVL
GVWDGFALES GGNTPLTGDALTPYIDDLNELEYILGDTSTTYGAWRAANGQE EPWNLT
MVEIGNEDMLGGGCESYAERFTAFYDAIHAAYPDLILIASTSEADCLPEMPEG SWVDYH
DYSTPDGLVGQFN YFDNLNRSVPYFIGEYSRWEIDWPNMKGSVAEAVFMIGFERNSDVVK
MAAYAPLLQLINSTQWTPDLIGYTQSPGDIFLSTSYVQEMFSRNRGDTIKEVTS DSDFGPL
YWVASSAGDSYVVKLANYGSETQDLTVSIPGTSTGKLTVLADSDPDAYNSDTQTLVTPSE
STVQASNGTFTFSLPAWAVAVLAAN

>|P10481|NANH_CLOPE Sialidase - Clostridium perfringens.

MCNKNNTFEKNLDISHKPEPLILFNKDNNIWNSKYFRIPNIQLLNDGTILTFSDIRYNGPDD
HAYIDIASARSTDFGKTWSYNIAMKNNRIDSTYSRVMDSTTVITNTGRILIAGSWNTNGN
WAMTTSTRSDWSVQMIYSDDNGLTWSNKIDLT KDSSKVKNQPSNTIGWLGGV GSGIVM
DDGTIVMPAQISLRENNENNYSLIYSKDNGETWTMGNKVPNSNTSENMVIELDGALIM
STRYDYSGYRAAYISHDLGTTWEIYEPLNGKILT GKGSGCQGSFIKATTSNGHRIGLISAPK

NTKGEYIRDNIAVYMIDFDDLKSGVQEICIPYEDGNKLGGGYSCLSFKNNHLGIVYEANG
NIEYQDLTPYYSLINKQ

>|O00105|IPUA_ASPNG Isopullulanase - *Aspergillus niger*.

MRSTGYLLTLSAAFQVAQAAVTANNSQLLTWWHNTGEINTQTPVADGNVRQSGLYSVKV
QTTPASSSLYYDSFVYLAIPGNGMSDQLQYTQGYNQTAWTSFLYSHDATVKISRNGSSA
NSNVVIRPTSLNFPVRYDNQSVYITVPYSPTGYRFSVEFDDDLISLAPSGARQOPENALLIFAS
PFENSSTKPQPGSPNSIAPAPGRVGLNNTTASTVVFNPGVYYFTGHDHMLVSSSVTWVYF
APGAYVKGAVEFLSTASEVKASGHGVLSGEQYVWYADPDEGYQKASGANNGLRMWR
GTLGNSSQTFVLNGVTVSAPPFNSMDWSGNSLDLITCRVDDYKQVGAFYQTDGLEMYP
GTILQDVFYHTDDDGLKMYYSNVTARNIVMWKESVAPVVEFGWTPRNTENVLFDNV DVI
HQAYANAGNNPGIFGAVNNYLYAPDGLSSNHSTGNSNMTVRNITWSNFRAEGSSSALFRI
NPIQLNDNISIKNVSIESFEPLSINTTESWMPVWYDLNNGKQITVTD FSIEGFTVGNTTITAS
NAASVGRIDGVDPAYAGSVHYID

>|P58228|DCEA_ECO57 Glutamate decarboxylase alpha - *Escherichia coli* O157:H7.

MDQKLLTDFRSELLDSRFGAKAISTIAESKRFLHEMRDDVAFQIINDELYLDGNARQNLA
TFCQTWDDENVHKLMDLSINKNWIDKEEYPQSAIDLRCVNMVADLWHAPAPKNGQAV
GTNTIGSSEACMLGGMAMKWRWRKRMEAAAGKPTDKPNLVCGPVQICWHKFARYWDVE
LREIPMRPGQLFMDPKRMIEACDENTIGVVPTFGVTYTGNYEFPQPLHDALDKFQADTGI
DIDMHIDAASGGFLAPFVAPDIVWDFRLPRVKSISASGHKFG LAPLGCGWVIWRDEEALP
QELVFNVDYLGQIGTFAINFSRPAGQVIAQYYEFLRLGREGYTKVQNASYQVAAYLADEI
AKLGPYEFICTGRPDEGIPAVCFKLKEGEDPGYTLYDL SERLRLRGWQVPAFTLGGEATDI
VVMRIMCRRGFEMDFAELLEDDYKASLKYLSDHPKLQGIAQQNSFKHT

>|P19136|PEM4_PHACH Peroxidase manganese-dependent H4 - *Phanerochaete chrysosporium*
(White-rot fungus) (*Sporotrichum pruinosum*).

MAFGSLLAFVALAAITRAAPTAESA VCPDGRVTNAACCAFIPLAQDLQETL FQGDCGED
AHEVIRLTFHDAIAISQSLGPQAGGGADGSMLHFPTIEPNFSANSGIDDSVNNLLPFMQKH
DTISAADLVQFAGAVALSNCPGAPRLEFMAGRPNNTTIPAVEGLIPEPQDSVTKILQRFEDAG
NFSPEFVVSLLASHTVARADKVDE TIDAAPFDSTPFTFDTQVFLEVLLKGTGFPGSNNNTG
EVMSPPLPLGSGSDTGEMRLQSDFALARDERTACFWQSFVNEQEFMAASFKAAMAKLAIL
GHSRSSLIDCSDVVPVPKPAVNKPATFPATKGP KDLDTLTCKALKFP TLTSDPGATETLIPHC
SNGGMSCPGVQFDGPA

>|Q7X9A9|beta-primeverosidase|EC 3.2.1.149|*Camellia sinensis*|TrEMBL

MMAAKGSVVVGVLAI VAYALVVSEVAIAAQISSFNRTSFPDGFVFGAASSAYQFEGAAKE
GGKGPNIWDTFTHEFP GKISNGSTGDVADDFYHRYKEDVKVLKFIGLDGFRMSISWARVL
PRGKLSGGVNKEGIAFYNNVINDLLSKGIQPFITIFHWDLPQALEDEYGGFLSPHIVNDFRD
FAELCFKEFGDRVKHWITMNEPWSYSYGGYDAGLLAPGRCSAFMAFCPKGNSGTEPYIV
THNLLLSHAAAVKLYKEYQAYQKQIGITLVTYWMIPYSNSKADK DAAQRALDFMYG
WFIEPLSFGEYPKSMRRLVGKRLPRFTKEQAMLVKGSFDFLGLNYIANYVLNVPTSNSV
NLSYTTDSLNSQTAFRNGVAIGRPTGVPAFFMYPKGLKDLLVYTKKEYNDPVIYITENGM
GDNNNVTTTEEGIKDPQRVYFYNQHLLSLKNAIAAGVKVKGYFTWAFLDNFEWLSGYTQR

FGIVYVDFKDGLKRYPKHSALWFKKFLK

>|P32329|YPS1_YEAST Aspartic proteinase 3 - *Saccharomyces cerevisiae* (Baker's yeast).
MKLKTVRS AVLSSLFASQVLGKIIPAANKRDDDSNSKFVKLPFHKLYGDSLENVGSDKKPE
VRLK RADGYEEIITNQSFYSVDLEVGTPPQNVTVLVD TGSSDLWIMGSDNPYCSSNSM
GSSRRRVIDKRDDSSSGSLINDINPFGWLTGTGSAIGPTATGLGGGSGTATQSV PASEATM
DCQQYGTFTSGSSTFRSNNTYFSISYGDGTFASGTFGTDVLDLSDLNVTGLSFVANETNS
TMGV LIGLPELEV TYSGSTASHSGKAYKYDNFIVLKN SGAIKSNTYSLYLNDSDAMHG
TILFGAVDHSKYTG TLYTIPIVNTLSASGFSSPIQFDV TINGIGISDSGSSNKLT TTTKIPALLD
SGTTLTYLPQTVVSMIATELGAQYSSRIGYVLD CPSSDMSMEIVFDFGGFHINAPLSSFILST
GTTCLLGIPTSDDTGTILGDSFLT NAYVVYDLENLEISMAQARYNTTSENIEITSSVPSAVK
APGYTNTWSTASIVTGGNIFTVNSSQTASFSGNLTTSTASATSTSSKRNVGDHIVPSLPLTL
ISLLFAFI

>|Q03674|PLB2_YEAST Lysophospholipase 2 - *Saccharomyces cerevisiae* (Baker's yeast).
MQLRNILQASSLISGLSLAADSSSTTGDGYAPSIIPCSDDTSLVRNASGLSTAETDWLKKR
DAYTKEALHSFLSRATSNFSDTSLSTLFSSNSSNVPKIGIACSGGGYRAMLGAGMIAAM
DNRTDGANEHGLGGLLQSSTYLSGLSGGNWLTGTLAWNNWTSVQEIVDHMSESDSIWNI
TKSIVNPGGSNLTYTIERWESIVQEVQAKSDAGFNISLSDLWARALSYNFFPSLPDAGSALT
WSSLRDVDVFKNGEMPLPITVADGRYPGTTVINLNATLFEFTPFEMGSWDPSLNAFTDVK
YLGTVNTNGKPVNKDQCVSGYDNAGFVIATSASLFNEFSLEASTSTYYKMINSFANKYVN
NLSQDDDDIAIYAANPFKDTEFVDRNYTSSIVDADDLFLVDGGEDGQNLPLVPLIKKERDL
DVVFALDISDNTDESWP SGVCMNTNYERQYSKQKGMAFPYVPDVNTFLNLGLTNKPTF
FGDAKNLTDLEYIPPLVVYIPNTKHSFNGNQSTLKMNYNVTERLGMIRNGFEAATMGNF
TDDSNFLGCIGCAIIRRKQESLNATLPPECTKCFADYCWNGTLSTSANPELSGNSTYQSGAI
ASAISEATDGIPTALLGSSTSGNTTSTSTSSNVTSNSNSSSNTTLNSNSSSSSISSSTARSS
SSTANKANAA AISYANTNTLMSLLGAILFLGLI

>|P50430|ARSB_RAT Arylsulfatase B - *Rattus norvegicus* (Rat).
MGELSGCTGGSRAGGPGPRLPLLLLLLWPARASDAAPPPHVVFVLADDLGWNDLGFHG
SVIRTPHLDALAAGGVLDNYVYVQPLCTPSRSQLLTGRYQIHMGLQHYLIMTCQPNCVPL
DEKLLPQLLKDAGYATHMVGKWHLGMYRKECLPTRRGFDTYFGYLLGSEDIYTHEACA
PIECLNGTRCALDLRDGEEPAKEYTDIYSTNIFTKRATTLIANHPPEKPLFLYLAFQSVHDPL
QVPEEYMEPYDFIQDKHRRRIYAGMVSLLEAVGNVTKALKSRGLWNNTVLIFSTDNGGQ
TRSGNNWPLRGRKGTLWEGGIRGAGFVASPLLKQKGVKSRELMHITDWLPTLVNLAGG
STHGTKPLDGFVWETISEGSPSRVELLLNIDPFFDGLPCPGKNTTPEKNDSPLEHSF
NTSIHAGIRYKNWKLGTGYPGCGYWFPPPSQSNISEVPSVDSPTKTLWLFDINRDPEERHD
VSREHPHIVQNLLSRLQYYHEHSVPSYFPPLDPRCDPKGTGVWSPWM

>|P15369|Scytalidopepsin B|EC 3.4.23.32|*Scytalidium lignicolum*|Swiss-Prot
MKFTTAAVLSALVSAEIAFAAPGGNGFARRQARRQARAAGLKASPFQVNAKEATVESN
WGGAILIGSDFD TVSATANVPSASGGSSAAGTAWVGIDGDTCTAILQTGFDWYGDGTYD
AWYEWYPEVSDDFSGITISEGDSIQMSVTATSDTSGSATLENLTTGQKVSFSNESSGSLC
RTNAEFIIIDFEECNSNGSDCEFVPFASFSPAVEFTDCSVTSDGESVSLDDAQITQVIINNQD

VTDCSVSGTTVSCSYV

>|P34752|3-phytase|EC 3.1.3.8|Aspergillus niger|Swiss-Prot

MGVSAVLLPLYLLSGVTSGLAVPASRNQSSCDTVDQGYQCFSETSHLWGQYAPFFSLANES
VISPEVPAGCRVTFQAQVLSRHGARYPTDSKGGKYSALIEEIQQNATTFDGKYAFLKTYNYS
LGADDLTPFGEQELVNSGIKFYQRYESLTRNIVPFIRSSGSSRVIASGKKFIEGFQSTKLKDP
RAQPGQSSPKIDVVISEASSNNTLDPGTCTVFEDSELADTVEANFTATFVPSIRQRLNDL
SGVTLLDTEVTYLMDMCSFDTISTSTVDTKLSPFCDLFTHDEWINYDYLQSLKKYYGHGA
GNPLGPTQGVGYANELIARLTHSPVHDDTSSNHTLDSSPATFPLNSTLYADFSHDNGIISILF
ALGLYNGTKPLSTTTVENITQTDGFSSAWTVPFASRLYVEMMQCQAEQEPLVRVLVNDRV
VPLHGCPVDALGRCTRDSFVRGLSFARSGGDWAECFA

>|Q4FAT7|BGLR_PIG Beta-glucuronidase - Sus scrofa (Pig).

MVRGPAGAWAVLGPLLWGCGLALLQGGMLYPQESRSRERKELNGLWSFRADFSNRRQ
GFEQQWYRKPLRESGPTLDMPVPSSFNDISQDGRLSFIGWVWYEREAILPQRWTQDLGT
RVVLRISAHYYAIVWVNGVHVTEHEGGHLPFEADISKLVQTGPLSSCRITIAINNTLSPHT
LPPGTILYKTDTSKYPKGYFVQNTNDFFFNYAGLHRPVLLYTTPTAYIDDITVTTDQDT
GLVNYQIFVQGSDFHFLQLEVHLLDEEGRVVAKGTGGQQLQVPSAHLWWPYLMHERPAYL
YSLEVKLTAQTSAGPLSDFYTLVPGIRTAVTERQFLINGKPFYFHGVNKHEDADIRGKGF
DWSLLVKDFNLLRWLGANAFRTSHYPYAAEVMQLCDRYGIVVIDESPGVGIVLAQSFSNA
SLQHHLEVMEEMVRRDKNHPAVVMWSVANEPSSFLEQAAYYFKMLIGHTKALDPSRPVT
FVTSSSYEKDLGVPYVDVICVNSYYSWYHDYGHMEVIQLQLATQFERWHEAYQKPIIASE
YGAETIIGFHEDPLMFSEEYQKGLLQQYHVILDQKRKEYVVGELIWNFADFMTDQSPQR
AIGNRKGIFTRQRQPKSAAFLLRERYWKLANETRYLQSAVMSQCVGNSPFTV

>|Q9P3S1|PPN1_NEUCR Endopolyphosphatase - Neurospora crassa.

MSLSRCILGLACLWHGVIASPLGAVPSNIPIATDLQTAETVAQPIANSARKLHGKFLHITG
GQSRDDRKFYKPHSSTDEADACHRGKGPAGVYGAEVSDCDSPFALINATFDWIAANVKD
DIDFVIWTGDTARHDSDEGVPRNADQVLGTNRWIADKMAELFSDSTGRHLEIPIVPTLGN
NDILPHNILLPGNSWLQHYTHIWRRFVPEAQRHSFQFGGWYFVEVIPNRLAIFSLNTLYFF
DRNAGTDGCASPSEPGYKQMEWLRIQLHIMRERGMKAILMGHVPPARTDSKKLWDENC
WQKYSWLWRQYRDVVVSGVFGHMNIDHFFIHDRDINVGQLAGLADNSIDIREAMMDEL
SVTGAADYLRELQRNWAKLQPPPTDSKNSGQLKKGKKGRKGKKKKKPDVWGERYSLSLV
SPSIVPNYYPALRIVEYNISGLEDTPVWRDAAKDAMSIELEQNDRQKHLDLKRQHPHME
DDDEIDAQKKKGGKHKGGDSKPKKPDFLIPHPAKSSPPGPAYSPQPLTLTGTYFYFANLT
HINNITTEASSALLDHDEEEETWVDWLLRWRKGRHGNRPKPIHPKDPREFQFEVEYSTFN
DKLYKLRLTLVKNYVELAYRISKQPKKKGAKSIDVSYESAEEEEEEEEEEEEEDLFEEVEE
TDEEEEQEDDLDSDGEEVDDDSDEDELELETETFKKHDKKKHKKKKGKKRQNKVWMHFLT
HAFVSTVEKEDLKKFT

>|P48842|GANA_ASPAC Arabinogalactan endo-1,4-beta-galactosidase - Aspergillus aculeatus.

MFASLLAALPLLTHAALTYRGADISSLLLLLEDEGYSYKNLNGQTQALETILADAGINSIRQ
RVWVNPSDGSYDLNLELAKRVKAAGMSLYLDLHLSDTWADPSDQTTPSGWSTTDLG
TLKWQLYNYTLEVCNTFAENDIDIEIISIGNEIRAGLLWPLGETSSYSNIGALLHSGAWGVK

DSNLATTPKIMIHLLDDGWSWDQQNYFYETVLATGELLSTDFDYFGVSYYPFYASATLAS
LKTSLANLQSTYDKPVVVVETNWPVSCPNPAYAFPSDLSSIPFSVAGQQEFLEKLAAVVEA
TTDGLGVYYWEPAWIGNAGLGSSCADNLMVDYTTDEVYESIETLGEL

>|P35842|PPAB_YEAST Acid phosphatase PHO11 - *Saccharomyces cerevisiae* (Baker's yeast).
MLKSAVYSILAASLVNAGTIPLGKLSDDIKIGTQTEIFPFLGGSGPYYSFPGDYGISRDLPES
CEMKQVQMVGRHGERYPTVSKAKSIMTTWYKLSNYTGQFSGALSFLNDDYEFFIRDTKN
LEMETTLANSVNVLNPYTGEMNAKRHARDFLAQYGYMVENQTSFAVFTSNSNRCHDTA
QYFIDGLGDKFNISLQTISEAESAGANTLSAHHSCPAWDDVDNDILKKYDTKYLSGIAKR
LNKENKGLNLTSSDANTFFAWCAYEINARGYSIDCNIFTKDELVRFSYGQDLETYYQTGPG
YDVVRSVGANLFNASVKLLKESEVQDQKVWLSFTHDTHDILNYLTTIGIIDDKNLTAEHV
PFMENTFHRSWYVPQGARVYTEKFQCSNDTYVRYVINDAVVPIETCSTGPGFSCEINDFYD
YAEKRVAGTDFLKVCNVSSVSNSTELTFFWDWNTKHYNDTLLKQ

>|P43096|CARP7_CANAL Candidapepsin-7 - *Candida albicans* (Yeast).
MQRVLELLLLSSTALAVIGDGFIALPVHKLQAGEGSAHFNPRLPIFDVVNGVAKSVEDDVN
QIIQPIFGNGIFSGGSIQGTHSGNGHSVKYEVSLPSSSAQKGSNGPSSTDNDKTDPSKTGFSL
DDLMSISTDFWNLIGLNKPPTSSDNGSKDADFTPSAVSQVEQPTSKSVESTAPGSASSASS
SSSSEAASSSQPSEDSQPSSSANKKTGAFFLSLDNTQTLYTATLKVGSPAQEVQVMIDTGSS
DLWFISSGNSQCKVNGGSIDCDKYGVFDKSKSSSWHDNKTDYSISYDGDKASGTMGQD
NITFADGFSIENANFAVIDNTTSSIGVFGVGYPELEAVKSKYTNLPFAMKEQNLIKAVAYSL
YLDSRDAVQGYILFGGIDHAFYTGDLKAFDIVQCNDKYVYSQIPLTSVASSLNNYTNAYGL
PAGSNHPKVGAVIYNGTDSFNNGVDLKDTLTLLDTGTTYSYLSKDQVESIVGLYGNVTYN
DAGKAYEVPWVGNPGNYLEFNFKNEQYIKVPTSEFVISVGTYASGAELCVFGILPGTHSI
LGDNFMRSVYAVFDLEDHVISIAQAAYNDNHAVVPIE

>|Q8WWR8|NEUR4_HUMAN Sialidase-4 - *Homo sapiens* (Human).
MGVPRTPSRTVLFERERTGLTYRVPSLLPVPPGPTLLAFVEQRLSPDDSHAHRLVLRGTL
AGGSVRW GALHVLGTAALAEHRSMNCPVHDAGTGTVFLFFIAVLGHTPEAVQIATGRNA
ARLCCVASRDAGLSWGSARDLTEEAIAGGAVQDWATFAVGPGHGVQLPSGRLLVPAYTYRV
DRRECFGKICRTSPHSFAFYSDDHGRTWRGGLVPNLRSQECQLAAVDGGQAGSFLYCNA
RSPLGSRVQALSTDEGTSFLPAERVASLPETAWGCQGSIVGFPAPAPNRPRDDSWSVGPGSP
LQPPLGPGVHEPPEAAVDPRGGQVPGGPF SRLQPRGDGPRQPGPRPGVSGDVGSWTLA
LPMPFAAPPQSPTWLLYSHPVGRRARLHMGIRLSQSPLDPRSWTEPWVIYEGPSGYSDLAS
IGPAPEGGLVFACLYESGARTSYDEISFCTFSLREVLENVPASPKPPNLGDKPRGCCWPS

>|O60502|NCOAT_HUMAN Bifunctional protein NCOAT - *Homo sapiens* (Human).
MVQKESQATLEERESELSNPAASAGASLEPPAAPAGEDNPAGAGGA AVAGAAGGARRF
LCGVVEGFYGRPWVMEQRKELFRRLQKWELNTYLYAPKDDYKHRMFWREMYSVEEAE
QLMTLISAAREYEIEFIYAI SPGLDITFSNPKEVSTLKRKLDQVSQFGCRSFALLFDDIDHNM
CAADKEVFSSFAHAQVSITNEIYQYLGE PETFLFCPT EYCGTFCYPNVSQSPYLRTVGEKLL
PGIEVLWTGPKVVSKEIPVESIEEVSKIIKRAPVIWDNIHANDYDQKRLFLGPYKGRSTELIP
RLKGVLTNP NCFEANYVAIHTLATWYKSNMNGVRKDVVMTDSEDSTVSIQIKLENEGSD
EDIETDVL YSPQMALKLALTEWLQEFVPHQYSSRQVAHSGAKASVVDGTPLVAAPSLNA

TTVVTTVYQEPIMSQGAALSGETTLTKEEEKKQPDEEPMDMVVEKQEETDHNKNDNQILS
EIVEAKMAEELKPMDDTKESIAESKSPMSMQEDCISDIAPMQTDEQTNKEQFVPGPNEK
PLYTAEPVTLLEDLQLLADLFYLPYEHGPKGAQMLREFQWLRANSSVSVNCKGKDSEKIE
EWSRAAKFEEMCGLVMGMFTRLSNCANRTILYDMYSYVWDIKSIMSMVKSFVQWLGC
RSHSSAQFLIGDQEPWAFRGGLAGEFQRLLPIDGANDLFFQPPPLTPTSKVYTIRPYFPKDE
ASVYKICREMYDDGVGLPFQSQPDLIGDKLVGGLLSLSLDYCFVLEDEDGICGYALGTVD
VTPFIKKCKISWIPFMQEKYTKPNGDKELSEAEKIMLSFHEEQEVLPETFLANFPSLIKMDI
HKKVTDPSVAKSMMACLLSSLKANGSRGAFCEVRPDDKRILEFYSKLGCFEIAKMEGFPK
DVVILGRSL

>|P04067|EBAG_STRPL Endo-beta-N-acetylglucosaminidase H - Streptomyces plicatus.
MFTPVRRRVRTAALALSAAAALVLGSTAASGASATPSPAPAPAPAPVKQGPTSVAYVEVNN
NSMLNVGKYTLADGGGNAFDVAVIFAANINYDTGKTAYLHFNENVQRVLDNAVQIRPL
QQQGIKVLVSLGNHQGAGFANFPSQQAASAFKQLSDAVAKYGLDGVDFDDEYAEYGN
NGTAQPNDSSFVHLVTALRANMPDKIISLYNIGPAASRLSYGGVDVSDKFDYAWNPPYYGT
WQVPGIALPKAQLSPAAVEIGRTSRSTVADLARRTVDEGYGVYLTYNLDGGDRTADVSAF
TRELYGSEAVRTP

>|P41893|PPAL_SCHPO Low molecular weight phosphotyrosine protein phosphatase -
Schizosaccharomyces pombe (Fission yeast).
MTKNIQVLFVCLGNICRSPMAEAVFRNEVEKAGLEARFDITDSCGTGAWHVGNRPDPRTL
EVLKKNGIHTKHLARKLSTSDFKNFYIFAMDSSNLRNINRVKPGSRAKVMLFGEYASP
GVSKIVDPPYYGGSDGFGDCYIQLVDFSQNFLKSIA

>|P10342|ISOA_PSEAY Isoamylase - Pseudomonas amyloclavata.
MKCPKILAAALLGCAVLAVPAMPAAHAINSMSLGASYDAQANITFRVYSSQATRIVLYL
YSAGYGVQESATYTLSPAGSGVWAVTPVSSIKAAGITGAVYYGYRAWGPNWPYASNWG
KGSQAGFVSDVDANGDRFNPKNLLDPYAQEVSDPLNPSNQNGNVFASGASYRTTDSGI
YAPKGVVLPSTQSTGTPTRAQKDDVIYEVHVRGFTEQDTSIPAQYRGTYGAGLKASY
LASLGVTAVEFLPVQETQNDANDVVPNSDANQNYWGYMTENYFSPDRRYAYNKAAGGP
TAEFQAMVQAFHNAGIKVYMDVYVNHNTAEGGTWTSSDPTTATIYSWRGLDNATYYELTS
GNQYFYDNTGIGANFNTYNTVAQNLIIVDSLAWANTMGVDGFRFDLASVLGNSCLNGAY
TASAPNCPNGGYNFDAADSNVAINRILREFTVRPAAGGSGLDLFAEPWAIGGNSYQLGGFP
QGWSEWNGLFRDSLRLQAQNELGSMYIYVTQDANDFSGSSNLFQSSGRSPWNSINFIDVHD
GMTLKDVIYSCNGANNSQAWPYGPSDGGTSTNYSWDQGMSAGTGAAVDQRRRAARTGM
AFEMLSAGTPLMQGGDEYLRTLQCNNAYNLDSSANWLTYSWTTDQSNFYTFAQRLLAF
RKAHPALRPSSWYSGSGLTWYQPSGAVADSNYWNNTSNYAIAYAINGPSLGDNSNIYVAY
NGWSSSVTFTLPAPPSGTQWYRVTDTCDWNDGASTFVAPGSETLIGGAGTTYGQCGQSLL
LLISK

>|Q9NTJ4|MA2C1_HUMAN Alpha-mannosidase 2C1 - Homo sapiens (Human).
MAAAPALKHWRTTLERVEKFSPLYFTDCNLRGRLFGASCPVAVLSSFLTPERLPYQEAQV
RDFRPAQVGDSEFGPTWWTCWFRVELTIPEAWVGGQEVHLCWESDGEGLVWRDGEVQGL
TKEGKTSYVLTDRLLGERDPRSLTLYVEVACNLLGAGKGSMAIAPDPEKMFQLSRAELA

VFHRDVHMLLVDELELLGIAKGLGKDNQRSFQALYTANQMVNVCDPAQPETFPVAQALA
SRFFGQHGGESQHTIHATGHCHIDTAWLWPFKETVRKCARSWVTALQLMERNPEFIFACS
QAQQLWVKSRYPGLYSRIQEFACRQGFVPGGTWVEMDGNLPSGEAMVRQFLQGQNF
FLQEFGKMCSEFWLPDFTFGYSAQLPQIMHGCGIRRLTQKLSWNLVNSFPHTFFWEGLD
GSRVLVHFPPGDSYGMQGSVEEVKTVANNRDKGRANHSAFLFGFGDGGGGPTQTMLD
RLKRLSNTDGLPRVQLSSPRQLFSALESSEQLCTWVGELFLELHNGTYTTHAQIKKGNR
ECERILHDVELLSSALARSAQFLYPAAQLQHLWRLLLLNQFHDVVTGSCIQMVAAEEAMC
HYEDIRSHGNTLLSAAAAALCAGEPGPEGLLIVNTLPWKRIEVMALPKPGGAHSLALVTV
PSMGYAPVPPPTSLQPLLQQPVFVVQETDGSVTLDNHIIKRVKLDPTGRLTSLVLVASGREA
IAEGAVGNQFVLFDDVPLYWDAWDVMDYHLETRKPVLGQAGTLAVGTEGGLRGSAWFL
LQISPNSRLSQEVVLDVGCOPYVRFHTEVHWHEAHKFLKVEFPARVRSSQATYEIQFGHLQ
RPTHYNTSWDWARFEVWAHRWMDLSEHGFLALLNDCKYGASVRGSILSLSLLRAPKAP
DATADTGRHEFTYALMPHKGSFQDAGVIQAAYSLNFLLALPASPAPATSWSAFSVSSPAV
VLETVKQAESSPQRSLVLRLYEAHGSVDCWLHLSLPVQEAILCDLLERPDPAHLTLRD
NRLKLTFSFPQVLSLLLVLQPPPH

>|P25026|PRXC_PSEPY Non-heme chloroperoxidase - Pseudomonas pyrocinia.

MPYVTTKDNVEIFYKDWGPKDAQPIVFHHGWPLSGDDWDAQMLFFVQKGYRVIAHRR
GHGRSAQVSDGHDMDHYAADAFAVVEALDLRNAVHIGHSTGGGEVARYVANDGQPAGR
VAKAVLVSAVPLMLKTESNPEGLPIEVFDGFRKALADNRAQFFLDVPTGPFYGFNRAGAT
VHQGVIRNWWRQGMESAKAHYDGKAFSETDQTEDLKSITVPTLVLHGEDDQIVPIAD
AALKSIKLLQNGTLKTYPGYSHGMLTVNADVLNADLLAFVQA

>|P07311|ACYP1_HUMAN Acylphosphatase-1 - Homo sapiens (Human).

MAEGNTLISVDYEIFGKVQGVFFRKHQAEGKKLGLVGWVQNTDRGTVQGGQLQGPISKV
RHMQEWLETRGSPKSHIDKANFNNEKVLKLDYSDFQIVK

>|P28351|AGAL_ASPNG Alpha-galactosidase A - Aspergillus niger.

MIQGLESIMNQGTKRILLAATLAATPWQVYGSIEQPSLLPTPPMGFNNWARFMCDLNETLF
TETADTMAANGLRDAGYNRINLDDCWMAQRSDNGSLQWNTTKFPHGLPWLAKYVKA
KGFHFGIYEDSGNMTCCGGYPGSYNHEEQDANTFASWGIDYKLDGCNVYATQGRTEEE
YKQRYGHWHQVLSKMQHPLIFSESAPAYFAGTDNNTDWYTVMDWVPIYGELARHSTDIL
VYSGAGSAWDSIMNNYNYNTLLARYQRPGYFNDPDLIPDHPGLTADEKRSHEALWASFS
APLIISAYIPALSKDEIAFLTNEALIAVNQDPLAQQATLASRDDTLDILTRSLANGDRLLTVL
NKGNTTVTRDIPVQWLGLTETDCTYTAEDLWDGKTQKISDHKIELASHATAVFRSLPQG
CSSVPTGLVFN TASGNCLTAASNSSVAFQSCNGETSQIWQVTPSGVIRPVSQTTQCLAAD
GNLVKLQACDSTSDGQKWYYPVTGNLKNAKTDGCLTEGSVQMKSCLYERDGGVFLP
SGVQLA

>|Q06350|chitinase|EC 3.2.1.14|Saccharomyces cerevisiae|Swiss-Prot

MVGHSAQHRSSSLVSHLLILLIFITIIIEMCLYNKIFKNQRSDDIRDNFNNGGHRVPSNVQN
HGTHIRDEAFISGVYYSNWSPIKPRFHFPDINLKQVSHIYYAFFKINSRTGGIENTDSWSD
LEMNLYKSLAIKNSSELIKESSNNSVQNILPLGCIGELFYLNKNTCSDKKFKVIMSIGGWSSE
NFKIIKDDKLLQNFVDSSVETMFRLGFDGIDLWDFPGNNESEPRGYLKLVRMLRLKLS

LESQIFGKRTEDHFQLSIAAPAFKDKLFYLPITEIDQYVDYWNMMTYDYYGSWSETTGYH
SNLFSSETLNGNFAMHYMIDRFGVNSRKLVLGMAAYGRSFHIKDNKFEPFNQNTVLINKIF
KGVGKPTKEIDKADGKEGIWPYKNLPKIGTIEQYDPKYVSAYCFDEKNSIFISYDNTKSVK
TKAEYVTHNNLGGGFWWESCGEAYANESRSLINAFNEGLHFNVSCKPSIFQDVRVKKYLL
NKYGDGGFLSPYLKHLDSRKQ

>|P80366|PPAF_PHAVU Iron(III)-zinc(II) purple acid phosphatase - Phaseolus vulgaris (Kidney bean) (French bean).

FVRKTNKNRDMPLDSDVFRVPPGYNAPQQVHITQGDLVGRAMIISWVTMDEPGSSAVRY
WSEKNGRKRIAKGKMSTYRFFNYSSGFIHHTTIRKLKYNTKYYYEVGLRNTTRRFSFITPP
QTGLDVPYTFGLIGDLGQSFDSNTTLSHYELSPKKGQTVLFGDLSYADRYPNHDNVRW
DTWGRFTERSVAYQPWIWTAGNHEIEFAPEINETEPFKPFSYRYHVPYEASQSTSPFWYSIK
RASAHIIVLSSHAIYGRGTPQYTWLKKELRKVKRSETPWLIVLMHSPLYNSYNHHFMEGE
AMRTKFEAWFVKYKVDVVFAGHVHAYERSERVSNIAYKITDGLCTPVKQDQSAVYITIGD
AGNYGVIDSNMIQPQPEYSAFREASFGHGMFDIKNRTHAHFSWNRNQDGVAVEADSVWF
FNRHWYPVDDST

>|Q8J0I9|GUN16_TRIHA Endo-1,6-beta-D-glucanase BGN16.3 - Trichoderma harzianum (Hypocrea lixii).

MRYALIASMLGQAAISVAMPSEPAHSPRAAGAQAAYASNQAGNYKLTSIAAPVQNGSGPGP
STWNLSIDDTSSGYKQKIVGFGAAVTDATVSAFNELSASTLSQLLDELMTGAGASFSLMR
HTIGASDLSGDPAYTYDDNNGGNADPGMTGFNLGDRGTAMATMLAQMKGLNSNLQIFGSP
WSAPGWMKLNNAIDGNTNNNNLNDGYLTNNGAQYSAFAQYFVKYIQAFESHGATINAI
TLQNEPLNSQAGYPTMYMFSYEQGDLIQNYVAPALKAAGLSTKIWAYDHNTDQPDFPEQ
VMGIAADDVSAVAWHCYATNLDWTVLTFNHNHNSYPNTDQYMTECWTPSTGAWNQAASFT
MGPLQNWARGVAAWTLGTTAQDGPLSSGGCGTCTGLVTINNGQYTFQTAYYMMQAQFS
KFMPVGATVLSGTGSYTYSGSGGVQSVASLNPDGTRTVVIENTFGNDIYIHLSTSSGQEWS
GNVPTNSVTTWVLPVAV

>|P30920|CDGT1_BACCI Cyclomaltodextrin glucanotransferase - Bacillus circulans.

MFQMAKRAFLSTTLTLGLLAGSALPFLPASAVYADPDTAVTNKQSFSTDVIYQVFTDRFLD
GNPSNNPTGAAYDATCSNLKLYCGGDWQGLINKINDNYFSDLGVTALWISQPVENIFATIN
YSGVTNTAYHGYWARDFKKTNPYFGTMADFQNLITTAHAKGIKIVIDFAPNHTSPAMETD
TSAENGRLYDNGTLVGGYTNDTNGYFHHNGGSDFFSLENGIYKNLYDLADFNHNNATID
KYFKDAIKLWLDMGVDGIRVDAVKHMPLGWQKSWMSSIAHKPVFTFGWFLGSAASD
ADNTDFANKSGMSLLDFRFNSAVRNVFRDNTSNMYALDSMINSTATDYNQVNDQVTFID
NHDMDRFKTSAVNNRRLQALAFTLTSRGVPAIYYGTEQYLTGNQDPNRAKMPFSKST
TAFNVISKLAPLRKSNPAIAYGSTQQRWINNDVYVYERKFGKSVAVVAVNRNLSTSASITG
LSTSLPTGSYTDVLGGVLNGNITSTNGSINNFLLAAGATAVWQYTTAETPTIGHVGPVM
GKPGNVVTIDGRGFGSTKGTVYFGTTAVTGAAITSWEDTQIKVTIPVAAGNYAVKVAASG
VNSNAYNNFTILTGDQVTVRFVNNASTTLGQNLVLTGNVAELGNWSTGTAIGPAFNQVI
HQYPTWYYDVSVPAGKQLEFKFFKNGSTITWESGSNHTFTTPASGTATVTVNWQ

>|P55329|XYN1_ASPNG Endo-1,4-beta-xylanase I - Aspergillus niger.

MKVTAFAFAGLLVTAFAPVPEPVLVSRASAGINYVQNYNGNLGDFTYDESAGTFSMYWED
GVSSDFVVGWLTGSSSKAITYSAEYSASGSSSYLAVYGWVNYPPQAEYYIVEDYGDYNP
CSSATSLGTVYSDGSTYQVCTDTRTNEPSITGTSTFTQYFSVRESTRTSGLTVTVANHFNFWA
QHGFNGSDFNYQVMAVEAWSGAGSASVTISS

>|Q9BTY2|FUCO2_HUMAN Plasma alpha-L-fucosidase - Homo sapiens (Human).

MRPQELPRLAFPLLLLLLLLLLPPPPCPAHSATRFDPTWESLDARQLPAWFDQAKFGIFHWG
VFSVPSFGSEWFWWYQKEKIPKYVEFMKDNYPSPFKYEDFGPLFTAKFFNANQWADIF
QASGAKYIVLTSKHHEGFTLWGSEYSWNWNAIDEGPKRDIVKELEVAIRNRTDLRFGLYY
SLFEWFHPLFLEDESSSFHKRQFPVSKTPELYELVNNYQPEVLWSDGDGGAPDQYWNST
GFLAWLYNESPVRGTVVTNDRWGAGSICKHGGFYTCSDRYNPGHLLPHKWENCMIDKL
SWGRRREAGISDYLTIEELVKQLVETVSCGGNLLMNIGPTLDGTISVVFEERLRQVGSWLK
VNGEAIYETYTWRSQNDTVPDQVWYTSKPKEKLVYAIFLKWPTSGQLFLGHPKAILGATE
VKLLGHGQPLNWISELQNGIMVELPQLTIHQMPCKWGWALALTNVI

>|Q44052|IMD_ARTGO Isomalto-dextranase - Arthrobacter globiformis.

MMNLSRRTLLTTGSAATLAYALGMAGSAQAATAVTARPGVPVTAAPPLRLASRNSVFTRS
GAGPRYWNIGYSPHNAPIPENNEWKANIDWLAGNFADFGYDIACDGDWIEGSSRTTGNG
YITSYNSDWQHDWAYWANYLAARKMKLGVYYNPLWVHRAAVEDASKTVLGRPDVKIA
DLVVPDGFDFARDIGGNQLYWLDVTKSGAKEYVQGYVRYFKDLGVPYLRIDFLSWYEDGR
DANIGQVNAPHGRANYELALSWINEAAGEDMEVSLVMPHMFQDGSALANGDLVRINA
DADKGGWDRLSGMRQNWQDAWPNWANPFCGFTGWSHRNRRGQLILDGDFMRASFAS
DEERKTMMNLMVAAGSPLAIADTYQQIGNNAWVYTNKEVLQLNADGLVGKPLYRSATPF
SKDPGSRDTERWAGQLPDGSWGVALFNRSDETETVTKTIDFAKDLGLATGGNVRDLWEHR
NLGMDSRATAALPHASAIFRVTPPKMHGTRYPAFAAWGGGAGFNNNHPGYDGNFV
DGLQAGSGSADPLVTFVAVQVPHRAATPSGYRYANATDDNTTSKTTTCKKANPEKADRSTVD
GPVHVSFPGLATWDTWGVAAAGTITLDAGLNLVTIGRGATDKGAINLNWIELDM

>|Q8MZS4|physarolisin|EC 3.4.21.103|Physarum polycephalum|Swiss-Prot

MRLLSLLFLLGLATLSFAVRSQWAQQGRATHEALITIRFALTQQNLDVLERTLLDISDTTSK
NYGKWKTAEEVTELVAAREISERVASFLERQGATKVENFRDMVKVTAPVSWIEETLHTN
LFFFQHKTRTSKVIIRADGGYKIPAEIAEHVDFVAGLFEFPSIKNARTQVGAGVDGYIVPYVI
FDLYGIPTTFPVHPNSSICLVEFQDDQSINKDDLKFAKENEITETVVSHTVGPYSGSSADT
ESTLDVQYGGAIALNTTVWFVWTVEDWMYDFATDFLNTKNPPLVVSMSWGWPEPEQCQV
GNCTGDETSLEYVVRTNVEFQKIGAIGTLLAASGDQGAPGDSPECNSSKKPLSSIFPGA
SPWVLSVGATMLSNMTTEDADPSAEPICKSWTCSTSTTELCTIPQALITGGGFSYSLQ
PSYQNAVAAYFKSGVPLPPQTDENASNRGFPDVSALGHNYLIALSGDFEQVDGTSASTPV
FAAIIAHLNSYRLNNGKPPLAFVPLIYQAFASDPTIFNDITTDGNKCTEDCCSKFGYEATK
GWDPVTGVGTPVFSKLLAFVQTLF

>|Q06902|PEPA_ASPOR Aspergillopepsin A - Aspergillus oryzae.

MVILSKVAAVAVGLSTVASALPTGSPHSHARRGFTINQITRQTARVGPKTASFPAYSRALA
KYGGTVPAAHLKSAVASGHGTVVTSPENIDIEYLTPVNIGGTTLNLDLDFDTSADLWVFSEEL

PKSEQTGHDEVYKPSGNASKIAGASWDISYGDGSSASGDVYQDTVTVGGVTAQGGQAVEAA
SKISDQFVQDKNNDGLLGLAFSSINTVKPKPQTTFFDTVKDQLDAPLFAVTLKYHAPGSYD
FGFIDKSKFTGELAYADVDDSQGFVQFTADGYSVKGKDAQKAPITGIADTGTTLVMLDDE
IVDAYYKQVQGAKNASAGGYVFPCEDELPEFTVVIGSYNAVIPGKHINYAPLQEGSSTCV
GGIQSNSGLGLSILGDVFLKSQYVVFDSQGPRLGFAAQA

>|Q9QZK8|DNS2A_RAT Deoxyribonuclease-2-alpha - Rattus norvegicus (Rat).

MAAPSSLLLAALLWVPAEALSCYGDGRVDFVYKLPANSGSGDKPWKGLMYKYM
DQNSEGWQDGVGHIDSKDGAUGLTLQPLYQKNSSQLAFLLYNDQPPKSSSAQDSSSRGHT
KGVLLLDQEGGFVWVHSVPRFPSPASSGAYSWPPNARTYGQTLCCVSLPFSQFPGIGKQLT
YTYPLVYDHLKLEGIFAQKLPDLEEVTKGHHVLRPWNSSVILTSRAGTTFQSFAGKFGKFGD
DLYSGWLAALGTNLQVQFWPNSPILPSNCSGTHKILDVTETGFPGPSGPTFNATEDHSK
WCVAPEGPWVCVGDMMNRNKRETHRGGGTLCQVPALWKAFRSLVKACKPC

>|Q13510|ASAHI_HUMAN Acid ceramidase - Homo sapiens (Human).

MPGRSCVALVLLAAAVSCAVAQHAPPWTEDCRKSTYPPSGPTYRGAVPWYTINLDLPPYK
RWHELMLDKAPMLKVIVNSLKNMINTFVPSGKVMQVVDEKLPGLLGNFPFPFEEEMKGI
AAVTDIPLGEIISFNIFYELFTICTSIVAEDKKGHLIHRNMDFGVFLGWNINNDTWVITEQL
KPLTVNLDFQRNNKTVFKASSFAGYVGMILTGFKPLFSLTLNERFSINGGYLGILEWILGK
KDAMWIGFLTRTVLENSTSYEEAKNLLTKTKILAPAYFILGNGQSGEGCVITRDRKESLDV
YELDAKQGRWYVVQTNVDRWKHPFLDDRTPAKMCLNRTSQENISFETMYDVLSTKPV
LNKLTVYTTLIDVTKGQFETYLRDCPDPCIGW

>|O74213|PGLR1_ASPAC Polygalacturonase 1 - Aspergillus aculeatus.

MHLNNTLLVSLALGAASVLAASPAPAITAPPTAEIARATTCTFSGSNGASSASKSKTSCST
IVLSNVAVPSGTTLDLTKLNDGTHVIFSGETTFGYKEWVSGPLISVSGSDLTITGASGHSINGD
GSRWWDGEGGNGGKTKPKFFAAHSLTNSVISGLKIVNSPVQVFSVAGSDYLTLDITIDNS
DGDDNGGHNTDAFDIGTSTYVTISGATVYNQDDCVAVNSGENIYFSGGYCSGGHGLSIGS
VGGRSNTVKNVTFVDSTIINSNGVRIKTNIDTTGSVSDVTYKDITLTSIAKYGIVVQQN
YGDTSSTPTTGVPITDFVLDNVHGSVSSGTNILISCGSGSCSDWTWTDVSVSGGKTSSKC
TNVPSGASC

>|P24021|NUS1_ASPOR Nuclease S1 - Aspergillus oryzae.

MPRLLPISAATLALAQLTYGWNLGHETVAYIAQSFVASSTESFCQNILGDDSTSYLANVAT
WADTYKYTDAGEFSKPYHFIDAQDNPPQSCGVYDRDCGSAGCSISAIQNYTNILLES
GSEALNALKFVVHIIIGDIHQPLHDENLEAGNGIDVTYDGETTNLHHIWDTNMPEEAAGG
YSLSVAKTYADLLTERIKTGTYSKKDSWTDGIDIKDPVSTSMIWAADANTYVCSTVLD
GLAYINSTDLGGEYDYSQPVFEELIAKAGYRLAAWLDLIASQPS

>|P00654|RNU2_USTSP Ribonuclease U2 - Ustilago sphaerogena (Smut fungus).

CDIPQSTNCGGNVYSNDDINTAIQGALDDVANGDRPDNYPHQYYDEASEDITLCCGSGPW
SEFPLVYNGPYYSSRDNYVSPGPDRVIYQNTNTGEFCATVTHTGAASYDGFTQCS

>|Q06115|CBH_LACPL Choloylglycine hydrolase - Lactobacillus plantarum.

MCTAITYQSYNNYFGRNFDYEISYNEMVTITPRKYPLVFRKVENLDHHYAIIGITADVESYP
LYYDAMNEKGLCIAGLNFAGYADYKKYDADKVNITPFELIPWLLGQFSSVREVKKNIQKL
NLVNINFSEQLPLSPLHWLVADKQESIVIESVKEGLKIYDNPVGVLTNNPNFDYQLFNLNN
YRALSNSTPQNSFSEKVDLDSYSRGMGGLGLPGDLSSMSRFVRAAFTKLNLSMQTESGS
VSQFFHILGSVEQQKGLCEVTDGKYEYTIYSSCCDMDKGVYYR TYDNSQINSVSLNHEH
LDTTELISYPLRSEAQYYAVN

>|P79019|AXHA_ASPNG Alpha-L-arabinofuranosidase - *Aspergillus niger*.

MKFLKAKGSLSSGIYLIAPFVNAKCALPSTYSWTSTDALATPKSGWTALKDFTDVVS
NGKHIVYASTTDTQGNYGSMGFGAFSDWSDMASASQTATSFSAVAPTLFYFQPKSIWVLA
YQWGSSTFTYRTSQDPTNVNGWSSEQUALFTGKISGSSTGAIDQTVIGDDTNMYLFFAGDN
GKIYRSSMSINDFPGSFGSQYEEILSGATNDLFEAVQVYTVDDGEGDSKYL MIVEAIGSTG
HRYFRSFTASSLGGEWTAQAASEDQPFAGKANS GATWTDDISHGDLVRNNPDQMTVDP
CNLQLLYQGHDPNSNSDYNLLPWKPGVLT LKQ

>|P18278|DHET_ACEAC Alcohol dehydrogenase [acceptor] - *Acetobacter aceti*.

MTRPASAKRRSLLGILAAAGTICAAALPYAAV PARADGQNTGEAIIHADDHPENWLSYGR
TYSEQRYSPLDQINRSNVGDLKLLGYTLD TNRGQEATPLVVDGIMYATTNWSKMEALD
AATGKLLWQYDPKVPGNIADKGCCTVNRGAGY WNGKVFWDGTFDGR LVAADAKTGKK
VWAVNTIPADASLGKQRSYTVDGAVRVAKGLVL IGGAEFGARGFVSAFDAETGK LKW
RFYTVPNKNNEPDHAASDNILMNKAYKTWGP KGAWVRQGGGGTVWDSLVDVSDLIY
LAVGNGSPWNYKYRSEGIGSNLFLGSIVAL KPETGEYVWHFQATPMDQWDYTSVQQIMT
LDMPVKGEMRHVIVHAPKNGFFYVLD AKTGEFLSGKNYVYQNWANGLDPLTGRPMYNP
DGLYTLNGKFWYGIPGPLGAHNF MAMAYSPKTHLVYIPAHQIPFGYKNQVGGFKPHADS
WNVGLDMTKNGLPDTPEARTAYIKDLHG WLLAWDPVKMETVWKIDHKGPWNGGILAT
GGDLLFQGLANGEFHAYDATNGSDLYKFDA QSGIAPPMTYSVNGKQYVAVEVGGGIY
PISMGGVGRTSWTVNHSYIAAFSLDGKAKL PALNNRGLFPVKPPAQYDQKVVDNGYFQ
YQTYCQTCHGDNGEGAGMLPDLRWAGAIR HQDAFYNVVGRGALTAYGMDRFDTSMT P
DEIEAIRQYLIKRANDTYQREVDARKNDKN IPENPTLGINP

>|P42210|ASPR_HORVU Phytapsin - *Hordeum vulgare* (Barley).

MGTRGLALALLAAVLLLQTVLPAASEA EGLVRIALKKRPIDRNSRVATGLSGGEEQPLLSG
ANPLRSEEEGDIVALKNYMNAQYFGEIGV GTPPKFTVIFDTGSSNLWVPSAKCYFSIACY
LHSRYKAGASSTYKKNKPAAIQYGTGSIAGY FSEDSVTVGDLVVKDQEFIEATKEPGITF
LVAKFDGILGLGFKEISVGKAVPVWYK MIEQGLVSDPVFSFWLNRHVDEGEGGEIIFGGM
DPKHVYVEHTYVPVTQKGYWQFDMGDV LVGGKSTGFCAGGCAAIADSGTSLLAGPTAI I
TEINEKIGAAGVVSQECKTIVS QYGGQILDLL LAETQPKKICSQVGLCTFDGTRGVSAGIRS
VVDDEPVKSNGLRADPMC SACEMAVVWMQNQLA QNKTDLILDYVNQLCNRLSPMG
ESAVDCGSLGSMPIEFTIGGKKFALKPEE YILKVGEAAAQCISGFTAMDIPPPRGPLWIL
GDVFMGPYHTVFDYGKLRIGFAKAA

>|Q9UUZ4|AGALC_ASPNG Alpha-galactosidase C - *Aspergillus niger*.

MIGSSHAVVALGLFTLYGHSAAAPAIGASNS QTIVTNGTSFALNGDNVSYRFHVNSSTGDLI
SDHFGGVVSGTIPSPVEPAVNGWVGMPGRIR REFDPQGRGDFRIPAVRIRESAGYTVSDLQ

YVSHEVIEGKYALPGLPATFGDAQDATTLVVHLYDNYSSVAADLSYSIFPKYDAIVRSVNV
TNQGPGNITIEALASISIDFPYEDLDMVSLRGDWAREANVQRSKVQYGVQGFSGSTGYSS
HLHNPFLAIVDPATTESQGEAWGFNLVYTGFSFAQVEKGSQGFTRALLGFNPDQLSWNLG
PGETLTSPECVAVYSDKGLGSVSRKFHRLYRNHLMKSKFATSDRPVLLNSWEGVYFDYNQ
SSIETLAEESAALGVHLFVMDGWFWDKYPVSDNAGLGDWMPNPARFPDGLTPVVQDI
TNLTVNGTESTKLRFGIWVEPEMVNPNSTLYHEHPEWALHAGPYPRTEERRNQLVLNLALP
AVQDFIIDFMTNLLQDTGISYVKWDNNRGIHETPSPSTDHQMGLYRVFDTLTTRFPDVL
WEGCASGGGRFDAGMLQYVPQIWTSDNTDAIDRITIQFGTSLAYPPSAMGAHLSAVPNAQ
TGRTVPFTFRAHVAMMGSGFLELDPATVEGDEIVPELLALAEKVNPIILNGDLYRLRLPQ
DSQWPAALFVSQDGAQAVLFYFQVQPNVNHAVPWVRLQGLDPKADYTVDGDQTYSGAT
LMNLGLQYSFDTEYGSKVVFLERQ

>|Q9UUZ3|MANBA_ASPNG Beta-mannosidase - Aspergillus niger.

MRHSIGLAAALLAPTL PVALGQHIRDLSSEKWTLSRRALNRTVPAQFPSQVHLDLLRAGVI
GEYHGLNDFNLRWIAAANWTYTSQPIKGLLDNYGSTWL VFDGLDTFATISILWTANRIHG
QSVSPVSGSMYLPALAEACQRRILIRKVSFRGGVTAEVNTCYLHIEWPDDVQLTYEYPNRW
FMRKEQSDFGWDWGPAPAGPWKPAYIVQLDKKESVYVLNTDLDIYRKNQINYLPPDQ
SQPWVNASIDILGPLPAKPTMSIEVRDTHSGTILTSRTLNNVSVAGNAITGVTVLDGLNPK
LWWPQSSVIRTSTMFLSLSKVEGTRPWPVWTNGRASAPFFLNQRNITEVQRAQGIAPGAN
WHFEVNGHEFYAKGSNLIPPSFWTRVTEERISRLFDVAVVGNQNMRLRVWSSGAYLHDYI
YDLADEKGILLWSEFEFS DALYPSDDAFLENVAAEIVYNVRRVNHHPSLALWAGGNEIESL
MLPRVKDAAPSSYSYVGEYKMYISLFLPLVYENTRSISYSPSSTTEGYLYIDLSAPVMA
ERYDNTTSGSYGDTDHYDYDTSVAFDYGSYPVGRFANEFGFHSMPSLQTWQQAVDTE
LYFNSSVVMRLRNHHDPAAGGLMTDNYANSATGMGEMTMGVISYPIPSKSDHISNFSAWC
HATQLFQADMYKSQIQFYRRGSGMPERQLGSLYWQLEDIWQAPSWAGIEYGGRWKVLH
HVMRDIYQPVIVSPFWNYTTGSLDVYVTSDLWSPAAGTVDLTWLDLSGRPIAGNAGTPKS
VPFTVGGLNSTRIYGTNVSSLGLPDTKDAVLILSLSAHGRLPNSDRTTNLTHENYATLSWP
KDLKIVDPGLKLGYSKKT TVTVEATSGVSLYTWLDYPEGVVG YFEENAFVLAPGEKKEI
GFTVLDDTTNGAWVRNITVQSLWDQKVRG

>|O43451|MGA_HUMAN Maltase-glucoamylase, intestinal [Includes: Maltase - Homo sapiens (Human)].

MARKKLLKFFTTLEIVLSVLLLVLFIISIVLIVLLAKESLKSTAPDPGTTGTPDPGTTGTPDPG
TTGTTTHARTTGPPDPGTTGTTTPVSAECPVVNELERINCIPDQPPTKATCDQRGCCWNPQGA
VSPVWCYYSKNHSYHVEGNLVNTNAGFTARLKNLPSSPVFGSNVDNVLLTAEYQTSNRF
HFKLTQDQTNRFEPHEHVQSFSGNAAASLTYQVEISRQPFSIKVTRRSNNRVLFDSSIGPL
LFADQFLQLSTRLPSTNVYGLGEHVHQYRHD MNWKTWPIFN RDTPNGNGTNLYGAQ
TFFLCLEDASGLSFGVFLMNSNAMEVVLQPAIT YRTIGGILDFYVFLGNTPEQVVQEYL
ELIGRPALPSYWALGFHLSRYEYGTLDNMREVVERNRAAQLPYDVQHADIDYMDERRDF
TYDSVDFKGFPEFVNELHNGQKLVII VDPAINNSSSSSKPYGPYDRGSDMKIWNSSDGV
TPLIGEVWPGQTVFPDY TNPNCVWWTKEFELFHNQVEFDGIWDMNEVSNFVDGVS
CSTNNLNNPPFTPRILDG YLFCKTLCMDAVQHWGKQYDIHNLYGYSM AVATAEAAKT VFP
NKRSFILTRSTFAGSGKFAAHLGDN TATWDDLRSIPGVLEFNLF GIPMVGPDICGFALD
TPEELCRRWMQLGAFYPPSRNHNGQGYKQDPASFGADSLLLNSSRHYLNIRYTL LPLY

TLFFRAHSRGDTVARPLLHEFYEDNSTWDVHQFLWGPGLLITPVLDEGAEKVMAYVPD
AVWYDYETGSQVRWRKQK VEMELPGDKIGLHLRGGYIFPTQQPNTTTLASRKNPLGLIIA
LDENKEAKGELFWDDGETKDTVANKVYLLCEFSVTQNRLEVNISQSTYKDPNNLAFNEIK
ILGTEEPSNVTVKHNGVPSQTSPTVTYDSNLKVAIITDIDLLLGEAYTVEWSIKIRDEEKIDC
YPDENGASAENCTARGCIWEASNSSGVPFCYFVNDLYSVSDVQYN SHGATADISLKSSVY
ANAFPSTPVNPLRLDVTYHKNEMLQFKIYDPNKNRYEVPVPLNIPSMPSSTPEGQLYDVLI
KKNPFGIEIRKSTGTIIWDSQLLGFTFSDMFIRISTRRLPSKYLYGFGETEHRSYRRDLEWHT
WGMFSRDQPPGYKKNSYGVHPYMGLEEDGSAHGVLNNSNAMDVTFQPLPALT YRTT
GGVLDIFYVFLGPTPELV TQQYTELIGRPVMVPYWSLGFQLCRYGYQNDSEIASLYDEMVA
AQIPYDVQYSDIDYMERQLDFTLSPKFAGFPALINRMKADGMRVILILDPAISGNETQPYPY
FTRGVEDDVFIKYPNDGDIVWGK VWPDPDVVNGSLDWDSQVELYRAYVAFPDFFRNS
TAKWWKREIEELYNNPQNPERSLKFDGMWIDMNEPSSFVNGAVSPGCRDASLNHPPYMP
HLESRRDGLSSKTL CMESQQILPDGSLVQHYNVHNL YGWSQTRPTYEAVQEVTGQRGVVI
TRSTFPSSGRWAGHWLGDNTAAWDQLKKSII GMMEFSLFGISYTGADICGFFQDAEYEMC
VRWMQLGAFYPFSRNHNTIGTRRQDPVSWDVAFVNISRTVLQTRYTLLPYLYTLMHKAH
TEGVTVVRPLLHEFVSDQVTWDIDSQFLLGPAFLVSPVLERNARNVTAYFPRARWYDYTT
GVDINARGEWKTL PAPLDHINLHVRGGYILPWQEPALNTHLSRQKFMGFKIALDDEGTAG
GWLFWDDGQSIDTYGKGLY LASFSASQNTMQSHIIFNNYITGTNPLKLG YIEIWGVGSVP
VTSVSISVSGMVITPSFNNDPTTQVLSIDVTDRNISLHNFTSLTWISTL

>|P09889|PPA5_PIG Tartrate-resistant acid phosphatase type 5 - *Sus scrofa* (Pig).

MDTWTVLLILQASLVLP GAVGTRTNRTRTAPTILRFVAVGDWGGVNPAPFHTAREMANAK
AIATTVKTLGADFILSLGDNFYFTGVHDAKDKRFQETFEDVFS DPSLRNVPWHVLAGNHD
HLGNVSAQIAYS KISKRWNFSPYYRLRFKIPRSNVSV AIFMLDVTLCGNSDDFVSQQPE
RPRNLALARTQLAWIKKQLAAAKEDYVLVAGHY PVWSIAEHGPTHCLVKQLLPLLTTHK
VTAYLCGHDHNLQYLQDENGLGFVLSGAGNFMDPSKKHLR KVPNGYLRFFHGAENSLG
GFAYVEITPKEMSVTYIEASGKSLFKTKLPRRARSEHQHRA

>|P14518|BROM2_ANACO Stem bromelain - *Ananas comosus* (Pineapple).

AVPQSIDWRDYGAVTSVK NQNPCGACWAF AAIATVESIYKIKKGILEPLSEQQVLDCAKG
YGCKGGWEFRAF EFIISNKGVASGAIYPYKAAKGTCKTDGVPNSAYITGYARVPRNNESS
MMYAVSKQPITVAVDANANFQYYKSGVFNGPCG TSLNHAVTAIGYGQDSIIPKKWGAK
WGEAGYIRMARDVSSSSGICGIAIDPLYPTLEE

>|P42255|ABFB_ASPNG Alpha-N-arabinofuranosidase B - *Aspergillus niger*.

MFSRRNLVALGLAATVSAGPCDIYEAGDTPCVA AHSTTRALYSSFSGALYQLQRGSDDTTT
TISPLTAGGVADASAQDTFCANTTCLITIIYDQSGNGNHLTQAPPGGFDGPDVDGYDNLAS
AIGAPVTLNGQKAYGVFMSPGTGYRNNEATGTATGDEPEGMYAVLDGTHYNDACCFDYG
NAETSSTDTGAGHMEAIYLG NSTTWGYGAGDGPWIMVDMENNLFSGADEGYNSGDPSIS
YSFVTA AVKGGADKWAIRGGNAASGSLSTYYSGARPDYSGYNPMSKEGAILGIGGDNSN
GAQGT FYEGVMTSGYPSDDVENS VQENIVA AKYVSGSLVSGPSFTSGEVVSLRVTTPGYT
TRYIAHTDTTVNTQVVDDDSSTLKEEASWTVVTGLANSQCFSFESVDTPGSYIRHYNFE
LLNANDGTKQFHEDATFCPQAPLN GEGTSLRSWSYPTRYFRHYENVLYAASNGGVQTF
DSKTSFNNDVSFEIETAFAS

Alkaline enzymes

>|P0A392|DHLE_BACCR Leucine dehydrogenase - *Bacillus cereus* (strain ATCC 14579 / DSM 31).

MTLEIFEYLEKYDYEQVVFCQDKESGLKAIHDTTLGPALGGTRMWTYDSEEAIEDAL
RLAKGMTYKNAAGLNLGGAKTVIIGDPRKDKSEAMFRALGRYIQGLNGRYITAEDVGT
TVDDMDIIIHEETDFVTGISPSFGSSGNPSPVTAYGVYRGMKAAAKEAFGTDNLEGKVIAVQ
GVGNVAYHLCKHLHAEGAKLIVTDINKEAVQRAVEEFGASAVEPNEIYGVECDIYAPCAL
GATVNDETIPQLKAKVIAGSANNQLKEDRHGDIIHEMGIVYAPDYVINAGGVINVADELYG
YNRERALKRVESIYDTIAK VIEISKRDGIATYVAADRLAEERIASLKNSRSTYLNRNGHDIISR
R

>|Q08352|DHA_BACSU Alanine dehydrogenase - *Bacillus subtilis*.

MIIGVPKEIKNNENRVALTPGGVSQLISNGHRVLVETGAGLGSGFENEAYESAGAEIADPK
QVWDAEMVMKVKEPLPEEYVYFRKGLVLFYTLHLAAPELAQALKDKGVTAIAYETVSE
GRTLPLTPMSEVAGRMAAQIGAQFLEKPKGGKILLAGVPGVSRGKVTIIGGGVVGNA
AKMAVGLGADVTIIDLNADRLRQLDDIFGHQIKTLISNPVNIADAVAEADLLICAVLIPGAK
APTLVTEEMVKQMKPGSVIVDVAIDQGGIVETVDHITTHDQPTYEKHG VVHYAVANMPGA
VPRSTIALTNVTPYALQIANKGAVKALADNTALRAGLNTANGHVTYEAVARDLGYEYV
PAEKALQDESSVAGA

>|Q51758|EST1_PSEFL Carboxylesterase 1 - *Pseudomonas fluorescens*.

MTEPLILQPAKPADACVIWLHGLGADRYDFLPVAEALQETLLSTRFVLPQAPTRPVTINGG
YEMPSWYDIKAMSPARSISLEELETSAKTVTDLIETQQRGTIDTSRIFLAGFSQGGAVVFHT
AFKKWEGPLGGVIALSTYAPTFDNDLQLSASQQRIP TLCLHGQYDEVVQNAMGRSAYEH
LKGRGVTVTWQEYPMGHEVLPQEIH DIGAWLAERLR

>|P58388|THTM_ECO57 3-mercaptopyruvate sulfurtransferase - *Escherichia coli* O157:H7.

MSTTWFGADWLAEHIDDPEIQIIDARMASPGQEDRNVAQEYLNHHPGAVFFDIEALS DH
TSPLPHMLPRPETFAVAMRELGVNQDKHLIVYDEGNLFSAPRAWWMLRTFGVEKVSILGG
GLAGWQRDDLLEEGAVELPEGEFNAAFNP EAVVKVTDVLLASHENTAQIIDARPAARFN
AEVDEPRPGLRRGHIPGALNVPWTELVREGELKTDELDAIFFGRGVSYDKPIIVSCGSGV
TAAVLLALATLDVPNVKLYDGAWSEW GARADLPVEPLK

>|P32277|RLIG2_BPT4 RNA ligase 2 - Bacteriophage T4.

MFKKYSSLENHYN SKFIEKLYSLG LTGGEWVAREKIHGTNFSLI IERDKVTC AKRTGPILPA
EDFFGYE IILKNYADSIKAVQDIMETS AVVSYQVFGEFAGPGIQKNVDYCDKDFYVFDIIVT
TESGDVTYVDDYMMESFCNTFKFKMAPLLGRGKFEELIKLPNDLDSVVQDYNFTVDHAG
LVDANKCVWNAEAKGEVFTAEGYVLKPCYPSWLRNGNRVAIKCKNSKFSEKKKSDKPIK
AKVELSEADNKL VGILACYVTLNRVNNVISKIGEIGPKDFGKVMGLTVQDILEETSREGITL
TQADNPSLIKKELVKMVQDVL RPAWIELVS

>|Q8XAP1|CYAA_ECO57 Adenylate cyclase - *Escherichia coli* O157:H7.

MYLYIETLKQRDLAINQLRVDRALAAMGPAFQQVYSLPPTLLHYHHPLMPGYLDGNVPK
GICLYTPDETQRHYLNELELYRGMSVQDPPKGEIPITGVVYTMGSTSSVGQSCSSDLDIWVC
HQSWLDSEERQLLQRKCSLLESWAASLGVEVSFFLIDENRFRHNESGSLGGEDCGSTQHIL
LLDEFYRTAVRLAGKRILWNMVPCEDEEHYDDYVMTLYAQGVLPNEWLDLGGSSLSA
EYFGASLWQLYKSIDSPYKAVLKTLLLEAYSWEYPNPRLLAKDIKQRLHDGEIVSFGLDP
YCMMLERVTEYLTAIEDFTRLDLVRRCFYLVKCEKLSRERACVGVRRAVLSQLVSEGW
DEARLAMLNDRANWKIDQVREAHNELLDAMMQSYRNLIRFARRNNLSVSPQDQIGVLT
RKYAAFEALPGKVTLVNPQISPDLEPNLTFIYVPPGRANRSGWYLYNRPNIESIISHQPL
EYNRYLNKLVAAWFNGLLTSRTRLYIKNGGIVDLPKLQEMVADVSHHFPLRLPAPTPKAL
YSPCEIRHLAIIVNLEYDPTAAFRNQVVFHDFRKLDFVDFGENQNCLVGSVDLLYRNSWNE
VRTLHFNGEQSMIEALKTILGKMHQDAAPPDSVEVFCYSQHLRGLIRTRVQQVSECIELR
LSSTRQETGRFKALRVSGQWGLFFERLNVSVQKLENAIEFYGAISHNKLHGLSVQVETN
HVKLPAVVDGFASEGIIQFFFEETQDENGFNIIYILDESNRVEVYHHCEGSKEELVRDVSRYF
SSSHDRFTYGSSFINFNLPQFYQIVKVDGREQVIPFRTKSIGNMPPANQDHDTPLLQQYFS

>|P15925|FOLC_LACCA Folylpolylglutamate synthase - *Lactobacillus casei*.

MNYTETVAYIHSFRLAKTGDHRRILTLHALGNPQQQGRYIHVTGTNGKGSAAANIAHV
LEASGLTVGLYTSFIMRFNERIMIDHEPIPDAALVNAVAFVRAALERLQQQQADFNVTEFE
FITALGYWYFRQRQVDVAVIEVGIGGDTDSTNVITPVVSVLTEVALDHQKLLGHTITAIKH
KAGIIRKGPVVTGNLVPDAAAVVAAKVATTGSQWLRFRDRDFSVPKAKLHGWGQRFTYE
DQDGRISDLEVPLVGDYQQRNMAIAIQTAKVYAKQTEWPLTPQNIRQGLAASHWPARLEK
ISDTPLIVIDGAHNPDGINGLITALKQLFSQPITVIAGILADKDYAAMADRLTAAFSTVYLV
VPGTPRALPEAGYEALHEGRLKDSWQEALAAASLNDVPDQPIVITGSLYLASAVRQTLLGG
KS

>|Q9Y5Z0|BACE2_HUMAN Beta-secretase 2 - *Homo sapiens* (Human).

MGALARALLPLLAQWLLRAAPELAPAPFTPLRVAAATNRVAVPTPGPTAERHADGL
ALALEPALASPAGANFLAMVDNLQGDSEGRGYYLEMLIGTPPQKLQILVDTGSSNFAVAG
TPHSYIDTYFDTERSSTYRSKGFVTVKYTQGSWTGFVGEDLV TIPKGFNTSFLVNIATIFE
SENFPLPGIKWNGILGLAYATLAKPSSSLETFFDSLVTQANIPNVFSMQMCGAGLPVAGSGT
NGGSLVLGGIEPSLYKGDWYTPIKEEWYQIEILKLEIGGQSLNLDREYNADKAIVDSGT
TLLRLPQKVFDAVVEAVARASLIPEFSDGFWTGSQLACWTNSETPWSYFPKISYLRDENSS
RSFRITILPQLYIQPMMGAGLNYECYRFGISPSTNALVIGATVMEGFYVIFDRAQKRVGFAA
SPCAEIAAGAAVSEISGPFSTEDVASNCVPAQSLSEPILWIVSYALMSVCGAILLVLIVLLLLPF
RCQRRPRDPEVVNDESSLVRHRWK

>|A7ZQK5|CYSH_ECO24 Phosphoadenosine phosphosulfate reductase - *Escherichia coli*
O139:H28 (strain E24377A / ETEC).

MSKLDLNALNELPKVDRILALAEETNAELEKLDAGEVAVAWALDNLPGEYVLSSSFQIAAV
SLHLVNQIHPDIPVILDTGTGLFPETYRFIDELTDKLNKLVYRATESAAWQEARYGKLW
EQGVEGIEKYNDINKVEPMNRALKELNAQTWFAGLRREQSGSRANLPVLAIQRGVFKVL
PIIDWDNRITIQYLQKHGLKYHPLWDEGYLSVGDTHTRKWEPMSEETRFFGLKREC
GLHEG

>|P35914|HMGCL_HUMAN Hydroxymethylglutaryl-CoA lyase, mitochondrial - Homo sapiens (Human).

MAAMRKALPRRLVGLASLRVSTSSMGTLPKRVKIVEVGPRDGLQNEKNIVSTPVKIKLID
MLSEAGLSVIETTSFVSPKWVPQMGDHEVLKGIQKFPGINYPVLTPLNLKGFEAAVAAGA
KEVVIFGAASELFTKKNINCSIEESFQRFDAILKAAQSANISVRGYVSCALGCPYEGKISPA
KVAEVTKKFYSMGCYEISLGDITIGVGTGPGIMKDMLSAVMQEVPLAALAVHCHDITYGQAL
ANTLMALQMGVSVVDSSVAGLGGCPYAQGASGNLATEDLVYMLEGLGIHTGVNLQKLL
EAGNFICQALNRKTSSKVAQATCKL

>|PYRB_VIBS2

MANPLFRKHIVSINDISRNELELIVKTAAKLKKQPPELLKNKVIASCFEASTRTRLSFETA
IQRLGGTVIGFDNASNTSLAKKGETLADSISSVISSVYVDAFVMRHPQEGAARLASEFSNPV
INGGDGSNQHPTQTLLDLFSIYETQGCLDNLNIALVGDLYGRTVHSLAQALAKFSGCKF
YFIAPDALAMPEYICDELDEHNVSYACYNISIEEVVPEIDVLYMTRVQKERFDETEYQHMK
AGFILSASSLKHAADNLKVLHPLPRVDEIAVDVDKTPYAYYFQQAENGVYAREALLALVL
NATIEG

>|P00371|OXDA_PIG D-amino-acid oxidase - Sus scrofa (Pig).

MRVVVIGAGVIGLSTALCIHERYHSVLQPLDVKVYADRFTPTTTDVAAGLWQPYTSEPSN
PQEANWNQQTFFNYLLSHIGSPNAANMGLTPVSGYNLFREAVDPYWKDMVLGFRKLT
ELDMFPDYRYGWFNTSLILEGRKYLQWLTERLTERGVKFFLRKVESFEEVARGGADVIINC
TGVWAGVLQPDPLLQPRGQIIKVDAPWLKNFIITHDLERGIYNSPYIIPGLQAVTLGGTFQ
VGNWNEINNIQDHNTIWEGCCRLEPTLKDIAKIVGEYTGFRPVRPQVRLEREQLRFGSSNT
EVIHNYGHGGYGLTIHWGCALEVAKLFGKVLEERNLLTMPPSHL

>|Q9H4B8|DPEP3_HUMAN Dipeptidase 3 - Homo sapiens (Human).

MQPTGREGSRALSRRYLRRLLLLLLLLLRRQPVTTRAETTPGAPRALSTLGSPSLFTTPGVPS
ALTPGLTTPGTPKTLDLRGRAQALMRSFPLVDGHNDLPQVLRQRYKNVLQDVNLRNFS
HGQTSLDRLRDGLVGAQFWSASVSCQSQDQTAVRLALEQIDLIHRMCASYSELELVTSAE
GLNSSQKLACLIGVEGGHSLDSSLSVLRSFYVLGVRYLTLTFTCSTPWAESSTKFRHHMYT
NVSGLTSFGEKVVEELNRLGMMIDLSYASDTLIRRVLEVSQAPVIFSHSAARAVCDNLLNV
PDDILQLLKNNGGIVMVTLSMGVLQCNLLANVSTVADHFDHIRAVIGSEFIGIGGNVDGTG
RFPQGLEVDVSTYPVLEIELLSRSWSEEELQGVLRGNLLRVFRQVEKVREESRAQSPVEAEF
PYGQLSTSCHSHLVPQNGHQATHLEVTKQPTNRVPWRSSNASPYLVPGLVAAATIPTFTQW
LC

>|P07662|G7AC_PSEU7 Glutaryl-7-aminocephalosporanic-acid acylase - Pseudomonas sp. (strain SY-77).

MLRVLHRAASALVMATVIGLAPAVAFALAEPTSTPQAPIAAYKPRSNEILWDGYGVPHIYG
VDAPSAFYGYGWAQARSHGDNILRLYGEARGKGAEYWGPDYEQTTVWLLTNGVPERAQ
QWYAQQSPDFRANLDAFAAGINAYAQQNPDDISPEVRQVLPVSGADVVAHAHRLMNFY
VASPGRTLGEGDPPDLADQGSNSWAVAPGKTANGNALLLQNPFLSWTTDYFTYYEAHLV
TPDFEYIYGATQIGLPVIRFAFNQRMGITNTVNGMVGATNYRLLTLDGGYLYDQVVRPFERF
QASYRLRQADGTTVDKPLEIRSSVHGVPVFERADGTAVAVRVAGLDRPGMLEQYFDMITAD

SFDDYEAAALARMQVPTFNIVYADREGTINYSFNGVAPKRAEGDIAFWQGLVPGDSSRYLW
TETHPLDDLPRVTNPPGGFVQNSNDPPWTPTWPVITYPKDFPSYLAPQTPHSLRAQQSVR
LMSENDDLTLERFMALQLSHRAVMADRTLPLDIPAAALIDPDEVQAAARLLAAWDREFTS
DSRAALLFEEWARLFAGQNFAGQAGFATPWSLDPKPVSTPYGVRDPKAAVDQLRTAIANTK
RKYGAIDRPFGDASRMILNDVNVPGAAGYGNLGSFRVFTWSDPDENGVRTPVHGETWVA
MIEFSTPVRAYGLMSYGNSRQPGTTHYSQIERVSRADFRELLLRREQVEAAVQERTPFNF
KP

>|P49366|DHYS_HUMAN Deoxyhypusine synthase - Homo sapiens (Human).

MEGSLEREAPAGALAAVLKHSSTLPPESTQVRGYDFNRGVNYRALLEAFGTTGFQATNFG
RAVQQVNAMEKKLEPLSQDEQHADLTQSRRLTSTCTIFLGYTSNLISGIRETIRYLQH
NMVDVLVTTAGGVEEDLIKCLAPTYLGEFSLRGKELRENGINRIGNLLVPNENYCKFEDW
LMPILDQMVMEQNTGKWTSPKMIARLGKEINNPESVYYWAQKNHIPVFSPALTDGSLG
DMIFFHSYKNPGLVLDIVEDLRLINTQAIFAKCTGMILGGGVVKHHIANANLMRNGADYA
VYINTAQEFDGSDSGARPDEAVSWGKIRVDAQPVKYADASLVFPLVAETFAQKMDAFM
HEKNED

>|P09155|RND_ECOLI Ribonuclease D - Escherichia coli (strain K12).

MNYQMITDDALASLCEAVRAFPALDTEFVRTRTYYPQLGLIQLFDGEHLALIDPLGITD
WSPLKAILRDPSTIKFLHAGSEDLVFLNVFGLPQPLIDTQILAAFGRPMSWGFASMVE
EYSGVTLDKSESRTDWLARPLTERQCEYAAADVWYLLPITAKLMVETEASGWLPAALDE
CRLMQMRRQEVVAPEDAWRDITNAWQLRTRQLACLQLLADWRLRKARERDLAVNFVVR
EEHLWSVARYMPGSLGELDSLGLSGSEIRFHGKTLALVEKAQTLPEDALPQMLNMDM
PGYRKAFKAIKSLITDVSETHKISAELLASRRQINQLLNWHWKLKPQNNLPELISGWRGEL
MAEALHNLLQEYPQ

>|P07327|ADH1A_HUMAN Alcohol dehydrogenase 1A - Homo sapiens (Human).

MSTAGKVIKCKAAVLWELKKPFSIEVEVAPPKAHEVRIKMVAVGICGTDHVVSGTMVT
PLPVILGHEAAGIVESVGEVTTVKPGDKVIPLAIPQCGKCRICKNPESNYCLKNDVSNPQ
GTLQDGTSRFTCRRKPIHFLGISTFSQYTVVDENAVAKIDAASPLEKVCLIGCGFSTGYGS
AVNVAKVTPGSTCAVFLGGVGLSAIMGCKAAGAARIIVDINKDKFAKAKELGATECINP
QDYKKPIQEVLEKEMTDGGVDFSFEVIGRLDTMMASLLCCHEACGTSVIVGVPPDSQNL
MNPMLLLTGRTWKGAILGGFKSKECVPKLVADFMAKKFSLDALITHVLPFEKINEGFDLL
HSGKSIRTILMF

>|Q9BDJ5|VNN1_PIG Pantetheinase - Sus scrofa (Pig).

MITSPLLAYVAILFFCVLKASSLDTFIAAVYEHAAILPDAPLTPVSHEEALMLMNRNLDLLE
GAVTSAKQGAHIIVTPEDGVYGGFFSRESIYSYLEDIPDPHVNWIPCTNPSRFGHTPVQKR
LSCLARDNSIYIVANIGDKKPCNASDPDCPHDGRYQYNTDVVDFDSEGRVARYHKQNLFL
GEDQFDAPKEPEIVTFDITTFGRFGIFTFCGILFHDPVTLVKDFQVDITLFPATWVNLPHLT
AIEFHSAWAMGMRVNFLEANIHFLRKMGTSGIYAPDSPRAFHYDMKTKEGKLLLSQLDS
HHRPAVNWTSYASGLPTPLVGNQEFKSTVFFDEFTFLELKGVAGNYTVCQKDLCCQLSY
RMLEKREDEVYALGAFDGLHTVEGSYLLQICTLLKCKTMDLHSCGDSVETASTRFEMFSL
SGTFGTQYVFPEVLLSDIQLAPGEFQVSSDGRLFSLKPPSGPVLTVTLFGRLYERDSASGAS

ADLVAQGLRVMLGVIIITIMYLSW

>|P15636|API_ACHLY Protease 1 - Achromobacter lyticus.

MKRICGSLLLLGLSISAALAAPASRPAAFDYANLSSVDKVALRTMPAVDVAKAKAEDLQR
DKRGDIPRFALAIIDVDMTPQNSGAWWEYADGQFAVWRQVRSEKALSINFGFTDYMPA
GGRLLVYPATQAPAGDRGLISQYDASNNNSARQLWTAVVPGAEAVIEAVIPRDKVGEFKLR
LTKVNHDYVGFGLARRLAAASGEKGVSGSCNIDVVCPEGDGRRDIIRAVGAYSKSGTLA
CTGSLVNNANTANDRKMFLTAHHCMTASTAASIVVYWNQNSTCRAPNTPASGANGD
GSMSQTQSGSTVKATYATSDFTLLELNNAANPAFNLFWAGWDRRDQNYPGAIAIHHPNVA
EKRISNSTSPTSFVAWGGGAGTTHLNVQWQPSGGVTEPGSSGSPISPEKRVLGQLHGGPS
SCSATGTNRSDQYGRVFTSWTGGGAAASRLSDWLDPASTGAQFIDGLDSGGGTPNTPVA
NFTSTTSGLTATFTDSSDSDGSIASRSWNFGDGSTSTATNPSKTYAAAGTYTVTLTVDNG
GATNKTGSVTVSGGPGAQTYTNDTDVAIPDNATVESPITVSGRTGNGSATTPIQVTIYHTY
KSDLKVDLVAPDGTVYNLHNRTGGSAHNIIQTFTKDLSSSEAAQRAPGSCG

>|Q53464|HAD_PSEUY (S)-2-haloacid dehalogenase - Pseudomonas sp. (strain YL).

MDYIKGIAFDLYGTLFDVHSVVGRCDEAFPGRGREISALWRQKQLEYTWLRSMLNRYVN
FQQATEDALRFTCRHLGLDLARTRSTLCDAYLRLAPFSEVPDSLRELKRRGLKLAILSNG
SPQSIDAVVSHAGLRDGFHLLSVDPVQVYKPDNRVYELAEQALGLDRSAILFVSSNAWD
ATGARYFGFPTCWINRTGNVFEEMGQTPDWEVTSLRAVVELFETAAGKAKEG

>|Q148L6|DHDH_BOVIN Trans-1,2-dihydrobenzene-1,2-diol dehydrogenase - Bos taurus (Bovine).

MALRWGIVSAGLISSDFTTMLRMLPRSEHQVVAVAARDLSRAKEFAKKHDIPKAYGSYEE
LAKDPDVEVAYIGTQHPQHKAAVLLCLTAGKAVLCEKPMGVNAAEVREMVAEARSRLGF
FMEAIWTRFFPAVEALRSVLAQGTGLDLRVRAEFGKNLTHVHRATDWAQAGGGLDLG
IYCLQFISMVFGGQKPEKISAVGRRHETGVDDTVTVILQYPPGVHGSFTCSISAQLSNTVSV
SGTKGMAQLLDPCWSPTELVKGEHKEFPLPPAPGKEFNFTNGMGMSYEAKHVRECLQK
GLKESPIPLVESELLADILEEVRKAIGITFPQDKH

>|O35049|NSMA2_RAT Sphingomyelin phosphodiesterase 3 - Rattus norvegicus (Rat).

MVLYTTPFPNSCLSALHAVSWALIFPCYWLVDRLVASFIPTTYEKRQRADDPCYLQLFCTV
LFTPVYLALLVAALPFAFLGFIFWSPLQSARRPYSYRLEDKSPAGGAALLSEWKGTGAGK
SFCFATANVCLLPDSLARLNNVFNTQARAKEIGQRIRNGAARPQIKIYIDSPNTSISAASFS
SLVSPQSGD GARAVPGSIKRTASVEYKGDGGRHPSDEAANGPASGEQADGSLEDSCIVRIG
GEEGGRAQEADDPAPGSQARNGAGGTPKGGQTPNHNQRDGDGSGSLGSPSASRESLVKARA
GQDSGSGGEPGSNSKLLYKTSVVKKAAARRRRHPDEAFDHEVS AFFPANLDFLCLQE VFD
KRAAAKLKEQLHGYFEYILYDVG VYGCHGCCNFKCLNSGLFFASRYPMVMDVAYHCYPNG
CSFDALASKGALFLKVQVGSTPQDQRIVGYIACHTLHAPPEDSAIRCEQLDLLQDWLADF
RKSTSSTANPEELV VFDVICGDLNFDNCSSDDKLEQQHSLFTRYKDPCRLGPGEEKPWA
IGTLLDINGLYDEDVCTPDNLQKVLESEEGRREYLAFPTSKSPGAGQKGRKDLLKGNRRRI
DYMLHAEGLCPDWKAEVEEFSFITQLSGLTDHLPVAMRLMVSAGEEEA

>|P08594|AQL1_THEAQ Aqualysin-1 - Thermus aquaticus.

MRKTYWLMALFAVLVLGGCQMASRSDPTPTLAEAFWPKEAPVYGLDDPEAIPGRYIVVF
KKGKGQSLQGGITTLQARLAPQGVVVTQAYTGALQGFAAEMAPQALEAFRQSPDVEFI
EADKVVRAWATQSPAPWGLDRIDQRDLPLSNSYTYTATGRGVNVYVIDTGIRTTHREFGG
RARVGYDALGGNGQDCNGHGTHVAGTIGGVTYGVAKAVNLYAVRVLDCNGSGSTSGVIA
GVDWVTRNHRRPAVANMSLGGGVSTALDNAVKNSIAAGVVYAVAAGNDNANACNYSPA
RVAEALTVGATTSSDARASFSNYGSCVDLFPAGASIPSAWYTSDATQTLNGTSMATPHVA
GVAALYLEQNPSATPASVASAILNGATTGRLSGIGSGSPNRLLYSLLSSGSGSTAPCTSCSY
TGSLSGPGDYNFQPNGTYYYSPAGTHRAWLRGPAGTDFDLYLWRWDGSRWLTVGSSTGP
TSEESLSYSGTAGYYLWRIYAYSGSGMYEFLWRP

>|O43708|MAAI_HUMAN Maleylacetoacetate isomerase - Homo sapiens (Human).

MQAGKPILYSYFRSSCSWRVRIALALKGIDYKTPINLIKDRGQQFSKDFQALNPMKQVPT
LKIDGITIHQSLAIIIEYLEETRPTPRLLPQDPKKRASVRMISDLIAGGIQPLQNLVSKQVGE
EMQLTWAQNAITCGFNALEQILQSTAGIYCVGDEVTMADLCLVPQVANAERFKVDLTPYP
TISSINKRLLVLEAFQVSHPCRQPDTPTELRA

>|P00455|FENR_SPIOL Ferredoxin--NADP reductase, chloroplast - Spinacia oleracea (Spinach).

MTTAVTAAVSFPSTKTTLSARSSSVISPDKISYKKVPLYRNVSATGKMGPIRAQIASDVE
APPPAPAKVEKHSKKMEEGITVNFKPKTPYVGRCLLNTKITGDDAPGETWHMVFSHEGE
IPYREGQSVGVIPDGEDKNGKPKHLRLYSIASSALGDFGDAKSVSLCVKRLIYTNDAGETI
KGVCSNFLCDLKPGAIEVKTGPVKGEMLMKDPNATIIMLTGTGTGIAPFRSFLWKMFFEK
HDDYKFNGLAWLFLGVPTSSSLYKEEFEKMKKAPDNFRLDFAVSREQTNEKGEKMYIQ
TRMAQYAVELWEMLKDNTYFYMCGLKGMKEGIDDIMVSLAAAEGIDWIEYKRQLKKA
EQWNVEVY

>|Q16853|AOC3_HUMAN Membrane copper amine oxidase - Homo sapiens (Human).

MNQKTIIVLLILAVITIFALVCVLLVGRGGDGGEPSQLPHCPSVSPSAQPWTHPGQSQLFAD
LSREELTAVMRFLTQRLGPGLVDAQAARPSDNCVFSVELQLPPKAAALAHLDGRGSPPPARE
ALAIVFFGRQPQPNVSELVVGPLPHPSYMRDVTVERHGGPLPYHRRPVLFQEYLDIDQMIF
NRELPAQASGLLHHCCFYKHRGRNLVMTTAPRGLQSGDRATWFGLYYNISGAGFFLHHV
GLELLVNHKALDPAWRTIQKVFYQGRYYDSLAQLEAQFEAGLVNVVLIPDNGTGGSWSL
KSPVPPGPAPPLQFYYPQGRFSVQGSRVASSLWTFSGFLGAFSGPRIFDVRVQGERLVYEISL
QEALAIYGGNSPAAMTTRYVDGGFGMGKYTTPLTRGVDCPYLATYVDWHFLLESQAPKT
IRDAFCVFEQNQGLPLRRHSDLYSHYFGGLAETVLVVRSMSTLLNYDYVWDTVFHPSG
AIEIRFYATGYISSAFLFGATGKYGNQVSEHTLGTVHTSAHFKVDLDVAGLENWVWAED
MVFVPMAPVWSPEHQLQLQVTRKLEEMEEQAFLVGSATPRYLYLASNHSNKWGHPR
GYRIQMLSFAGEPLPQNSSMARGFSWERYQLAVTQRKEEEPSSSSVFNQNDPWAPTVDFS
DFINNETIAGKDLVAWVTAGFLHIPHAEDIPNTVTGNGVGFLLRPYNFFDEDPSFYASDSI
YFRGDQDAGACEVNPLACLPAQAACAPDLPAFSHGGFSHN

>|P32260|CYSKP_SPIOL Cysteine synthase, chloroplast/chromoplast - Spinacia oleracea (Spinach).

MASLVNNAYAALRTSKLELREVKNLANFRVGPSSSLSCNNFKKVSSSPITCKAVSLSPSTI
EGLNIAEDVSQLIGKTPMVYLNNSKGSVANIAAKLESMEPCCSVKDRIGYSMIDDAEQK

GVITPGKTTLVEPTSGNTGIGLAFIAAARGYKITLTMASMSMERRVILKAFGAELVLTDP
KGMKGAVEKAEEILKKTTPDSYMLQQFDNPANPKIHYETTGPFIWEDTKGKVDIFVAGIGT
GGTISGVGRYLKERNPGVQVIGIEPTESNILSGGKPGPHKIQGLGAGFVPSNLDLGMDEV
IEVSSEEAVEMAKQLAMKEGLLVGISSGAAAAA AVRIGKRPENAGKLIAVVFPFGERYLS
SILFQSIREECENMKPE

>|A7ZRT7|CCA_ECO24 Multifunctional CCA protein [Includes: CCA-adding enzyme -
Escherichia coli O139:H28 (strain E24377A / ETEC).

MKIYLVGGAVRDALLGLPVKDRDWVVVGSTPQEMLDAGYQQVGRDFPVFLHPQTHEEY
ALARTERKSGSGYTGFTCYAAPDVTLEDDLKRRDLTINALAQDDNGEIIDPYNGLGDLQN
RLLRHVSPAFGEDPLRVL RVARFAARYAHLGFRIADETLTLMREMTHAGELEHLTPERVW
KETESALTRNPQVFFQVLRDCGALRVLFPEIDALFGVPAPARWHPEIDTGIHTLMTLSMA
AMLSPQVDVRFATLCHDLGKGLTPPELWPRHHGHGPAGVKLVEQLCQRLRVPNEIRDLAR
LVAEFHDLIHTFPM LNPKTIVKLFDSIDAWRKPQRVEQLALTSEADVRGRTGFESADYPQG
RWLREAW EVAQS VPTKAVVEAGFKGVEIREELTRRRIAAIASWKEQRCPKPD

>|P56216|VAOX_PENSI Vanillyl-alcohol oxidase - *Penicillium simplicissimum*.

MSKTQEFRPLTLPPKLSLSDNFNIQDIIRIVGSENVEVISSKDQIVDGSYMKPHTHDPHHV
MDQDYFLASAI VAPRNVADVQSIVGLANKFSFPLWPISIGRNSGYGGAAPRVSGSVLDM
GKNMNRVLEVNVEGAYCVVEPGVTYHDLHNYLEANNLRDKLWLDVDPDLGGGSVLGNA
VERGVGYTPYGDHWMHSGMEVVLANGELLRTGMGALPDPKRPETMGLKPEDQPWSK
IAHLFPYGFPGYIDGLFSQSNMGIVTKIGIWLMPNPRGYQSYLITLPKDGLKQAVDIIRPL
RLGMALQNVPTIRHILLDAAVLGDKRSYSSRTEPLSDEELDKIAKQLNLGRWNFYGALYG
PEPIRRVLWETIKDAFSAIPGVKIFYFPEDTPENSVLVRD KTMQGIPTYDELKWIDWLPNG
AHLFFSPIAKVSGEDAMM QYAVTKKRCQEAGLDFIGTFTVGMREMHIVCIVFNKKDLIQ
KRKVQWLMRTLIDDCAANGWGEYRTHLAFMDQIMETYNNWNNSSFLRFNEVLKNAVDPN
GIIAPGKSGVWPSQYSHVTWKL

>|P13266|NEUA_ECOLX N-acetylneuraminate cytidyltransferase - *Escherichia coli*.

MRTKIIAIPARSGSKGLRNKNALMLIDKPLLAYTIEAALQSEMFEKVIVTTDSEQYGAIAES
YGADFLLRPEELATDKASSFEFIKHALSIYTDYESFALLQPTSPFRDSTHIIIEAVKLYQTLEK
YQCVVSVTRSNKPSQIIRPLDDYSTLSFFDL DYSKYNRNSIVEYHPNGAIFIANKQHLYHT
KHFFGRYSLAYIMDKESSLDIDDRMDFELAITIQKKNRQKIDLYQNIHNRINEKRNEFDSV
SDITLIGHSLFDYWDVKKINDIEVNNLGIAGINSKEYEYIIEKELIVNFGFVFFIFGTNDIV
VSDWKKEDTLWYLKKTCCQYIKKNAASKIYLLSVPPVFGRIDRDNRIINDLNSYLRENV
FAKFISLDHVLKDSYGNLNKMYTYDGLHFNSNGYTVLENEIAEIVK

>|Q58FK9|KAT3_RAT Kynurenine--oxoglutarate transaminase 3 - *Rattus norvegicus* (Rat).

MLLAQRRLFSLGCRAKPIKTIYSSKVLGLSTSAKMALRFKNAKRIEGLDQNVWVEFTKLA
ADPSVVNLGQGFDPITLPSYVQEELSKAAAFIDNLNQYTRGFGHPSLVKALSCLYGKIYQKQ
IDPNEEILVTVGGYGSFNAIQGLVDPGDEVIIIMVPFYDCYEP MVKMAGAVPVFIPLRSKRT
DGMKWTSSDWTFNPQELESKFSSKTKAAILNTPHNPIGKVYTREELQVIADLCIKHDTLCIS
DEVYEWLVYTGHKHIKVASLPGMWDRTLTIGSAGKTFSVTGWKLGWSIGPGHLIKHLRT
VQQTSVYTCATPLQAALAEAFWIDIKRMDDPECYFNLSLPKELEVKRDRMACLLNSVGLK

PIIPDGGYFIIADVSSLGVDLSDVKSDEPYDYKFKVWMTKNKKLSAIPVSAFCDSESKPHF
EKLVRFCFIKKDSTLDAAEIIFRTWNSRKS

>|P0AEB2|DACA_ECOLI D-alanyl-D-alanine carboxypeptidase dacA - Escherichia coli (strain K12).

MNTIFSARIMKRLALTTALCTAFISAAHADDLNIKTMIIPGVVPQIDAESYILIDYNSGKVLAE
QNADVRRDPASLTKMMTSYVIGQAMKAGKFKETDLVTIGNDAWATGNPVFKGSSLMFLK
PGMQVPVSQLIRGINLQSGNDACVAMADFAAGSQDAFVGLMNSYVNALGLKNTHFQTV
HGLDADGQYSSARDMALIGQALIRDVPNEYSIYKEKEFTFNGIRQLNRNGLLWDNSLNVD
GIKTGHTDKAGYNLVASATEGQMRLISAVMGGRTFKGREAESKLLTWGFRFFETVNPLK
VGKEFASEPVWFGSDRASLGVDKDVYLTPRGRMKDLKASYVLNSELHAPLQKNQVV
GTINFQLDGKTIEQRPLVVLQEIPEGNFFGKIIDYIKLMFHHWFG

>|P00971|RLIG_BPT4 RNA ligase - Bacteriophage T4.

MQELFNNLMELCKDSQRKFFYSDDVSASGRTYRIFSYNYASYSDWLLPDALECRGIMFE
MDGEKPVRIASRPMEKFFNLNENPFTMNIDLNDVDYILTKEDGSLVSTYLDGDEILFKSKG
SIKSEQALMANGILMNINHHRLRDRLKELAEDGFTANFEFVAPTNRIVLAYQEMKIILLNV
RENETGEYISYDDIYKDATLRPYLVERYEIDSPKWIEEAKNAENIEGYVAVMKDGSHFKIKS
DWYVSLHSTKSSLDNPEKLFKTIIDGASDDLKAMYADDEYSYRKIEAFETTYLKYLDRAL
FLVLDCHNKHCGKDRKTYAMEAQGVAKGAGMDHLFGIIMSLYQGYDSQEKVMCEIEQN
FLKNYKKFIPEGY

>|P04055|PA21B_RAT Phospholipase A2 - Rattus norvegicus (Rat).

MKLLLLAALLTAGVTAHSISTRVWQFRNMIKCTIPGSDPLREYNNYGCYCGLGGSGTPV
DDLDRCCQTHDHCYNQAKKLESCFLIDNPYTNTYSYKCSGNVITCSDKNNDCESEFICNC
DRQAAICFSKVPYNKEYKDLDTKKHC

>|P24228|DACB_ECOLI D-alanyl-D-alanine carboxypeptidase dacB - Escherichia coli (strain K12).

MRFSRFIIGLTSCIAFSVQAANVDEYITQLPAGANLALMVQKVGASAPAYHSQQMALPA
STQKVITALAALIQLGPDFRFTTTLETKGNVENGVKGDVLRVFGADPTLKRQDIRNMVAT
LKKSGVNQIDGNVLIDTSIFASHDKAPGWPNWDMTQCFSAPPAAIVDRNCFSVSLYSAP
KPGDMAFIRVASYPVTMFSQVRTLPRGSAEAQYCELDVVPGLNRFLLTGCLPQRSEPLP
LAFVQDGASYAGAILKDELKQAGITWSGTLRQTQVNEPGTVVASKQSAPLHDLLKIML
KSDNMIADTVFRMIGHARFNVPGTWRAGSDAVRQILRQQAGVDIGNTIIADGSGLSRHN
LIAPATMMQVLQYIAQHDNELNFISMLPLAGYDGSLLQYRAGLHQAGVDGKVSATGSLQ
GVYNLAGFITASQRMAFVQYLSGYAVEPADQRNRRIPVRFESRLYKDIYQNN

>|Q08D86|GLPK5_BOVIN Putative glycerol kinase 5 - Bos taurus (Bovine).

MSEQSTVPEQSASDSRRAGFVLGVDVGSSMIRCHVYDRAARICGSSAQKVESLYPQPGW
VEIDPDVLWLQFVAVIKESVKAAGIETNQIVGLGISTQRATFITWDKKTGKHFHNFISWQD
LRATELVKSWNGSLLMKLIHSSCRVLHFFTRSKQFLAASLFTFTTQHVSRLAWILQNLTE
VQKAVEEENCFCFTVDTWLLHKLTKGSEFATDFSNASTTGLFDPYEMCWSKIVTSLLSIPL
SLLPPVKDTSNFGSVDEEIFGVPIPIVALVADQQAAMFGECCFQTGDVKLTMGTTFLDI

NTGNNPQQSVGGFYPLIGWKIGQEVVCLAESNAGDTGTAIEWAQQLDLFTDAAETEKMA
QSLEDSEGVYFVPSFSGLQAPLNDPCACASFMGLKPSTNKYHLVRAILESIAFRNKQLYET
MQKEIHIPVRKIRADGGVCKNSFVMQMTSDLINETIDRPVHIDMSCSGAASLAGLAVGFW
SDKEELKKLRQSEMVFQKQKWQEYEVNMGNWVKAVKRSMNWKYKT

>|Q15165|PON2_HUMAN Serum paraoxonase/arylesterase 2 - Homo sapiens (Human).

MGAWVGCGLAGDRAGFLGERLLALRNRLKASREVESVDLPHCHLIKIEAGSEDIDILPN
GLAFFSVGLKFPGLHSFAPDKPGGILMMDLKEEKPRARELRISRGFDLASFNPHGISTFIDN
DDTVYLFVNVHPEFKNTVEIFKFEEAENSLHLKTVKHELLPSVNDITAVGPAHFYATNDH
YFSDPFLKYLETYLNHWANVVYYSPNEVKVVAEGFDSANGINISPDCKYIYVADILAHEI
HVLEKHTNMNLTQLKVLELDTLVDNLSIDPSSGDIWVGCHPNGQKLFVYDPNNPPSSEVL
RIQNILCEKPTVTTVYANNGSVLQGSSVASVYDGKLLIGTLYHRALYCEL

>|Q54GE6|MDHA_DICDI Probable malate dehydrogenase 1 - Dictyostelium discoideum (Slime mold).

MEQAILRINNISSQLTGKCPFKAHGGGAGKCPYKLGQILDQSKAWSLVNVNVTANVDQVT
PIKVLVTGAAGQIAYSLMFMASGQMFQPHQPVLHLLDIPKMADALKGVVMELODCSYP
LLQSVVATTDIQTAFHINVAIVGAFPRGPGMQRKDLLKVNVSIFKEQGEALNKYASRGV
KVLVVGPNPANTNALTALMKASDLPTSNFSALTRLDQNRAQSMISEKVGTVNDNVHNVIIW
GNHSQTQVPDVNHGYILNYPNRGLIEPIPSVNDKWLNEQFIPLVQNRGATVIAARKLSS
AASAANAIVGHVRDWLLGTKDGEHVSMAVYSDGSYNVPGKLFISFPVTCHNGQWTIVQG
LKINSSTQQKIDATIKELQEEKETAMSFLN

>|P04993|EX5A_ECOLI Exodeoxyribonuclease V alpha chain - Escherichia coli (strain K12).

MKLQKQLLEAVEHKQLRPLDVQFALTAVAGDEHPAVTLAAALLSHDAGEGHVCLPLSRLE
NNEASHPLLATCVSEIGELQNWEECLLASQAVSRGDEPTMILCGDRLYLNRMWCNERTV
ARFFNEVNHAIEVDEALLAQTLDKLFVPSDEINWQKVAAAVALTRRISVISGGPGTGKTTT
VAKLLAALIQMADGERCRIRLAAPTGKAAARLTESLGKALRQLPLTDEQKKRIPEDASTLH
RLLGAQPGSQRLRHHAGNPLHLDVLVVEASMIDLPMMSSLIDALPDHARVIFLGDRDQL
ASVEAGAVLGDICAYANAGFTAERARQLSRLTGTHVPAGTGTEAASLRDSLCLLQKSYRF
GSDSGIGQLAAAINRGDKTAVKTVFQDFTDIEKRLQSGEDYIAMLEEALAGYGRYLDL
LQARAEPDLIIQAFNEYQLLALREGPFGVAGLNERIEQFMQQKRKIHRPHSRWYEGRP
VMIARNDSALGLFNGDIGIALDRGQGTRVWFAMPDGNISVQPSRLPEHETTAMTVHK
SQGSEFDHAALILPSQRTPVVTRELVYTAVTRARRRSLYADERILSAAIATRTERSSGLAAL
FSSRE

>|Q01134|CHKA_RAT Choline kinase alpha - Rattus norvegicus (Rat).

MKTKFCTGGEAEPSPGLLLLSCGGSAAPTPGVQQRDAAGELESKQLGGRSQPLALPPPP
PPPLPLPPPPSPPLADEQPEPRTRRRAYLWCKEFLPGAWRGLREDQFHISVIRGGLSNMLFQ
CSLPDSIASVGDPRKVLRLRYGAILKMRSCKEGSEQAQNEQNEFQGAEMVLESVMFAI
LAERSLGPPLYGIFPQGRLEQFIPSRRLDTEELCLPDISAIEIAEKMATFHGMKMPFNKEPKW
LFGTMEKYLNQVLRKFSREARVQQLHKFLSYNPLELENLRSLLQYTRSPVVFCHNDCQ
EGNILLLEGQENSEKQKMLIDFEYSSNYRGFIDIGNHFCEWYDYTYEKYPFFRANIQK
YPTRKQQLHFISSYLTFQNDFESLSSEEQSATKEDMLLEVNRFFALASHFLWGLWSIVQAKI

SSIEFGYMEYAQARFDAYFDQKRKLGV

>|P63186|GGT_BACNA Gamma-glutamyltranspeptidase - *Bacillus subtilis* subsp. natto.
MKRTWNVCLTALLSVLLVAGSVPFHAEAKKPKSYDEYKQVDVVGKDGMMVATAHALASEI
GADVLLKGGNAIDAAVAIQFALNVTEPMMSGIGGGGFMVYDGKTKDTTIIDSRRERAPA
GATPDMFLDENGKAIPFSERVTKGTAVGVPGTLKGLLEEALDKWGTRSMKLLITLIKLAEK
GFPIDSVLADAISDYQEKLSTAAKDVFLPNGEPLKEGDTLIQKDLAKTFKLIRSKGTDAF
YKGFKAFTLSDTVQDFGGSMTTEKDLNENYDITIDEPIWGDYQGYQIATTPPPSSGGIFLLQM
LKILDDFNLSQYDVRSWEKYQLLAETMHLASYADRASYAGDPEFVNVPLKGLLHPDYIKER
QQLINLDQVNKKPKAGDPWKYQEGSANYKQVEQPKDKVEGQTTHTFTVADRWGNVVS
YTTTIEQLFGTGIMVPDYGVILNNELTDFDAIPGGANEVQPNKRPLSSMTPTILFKDDKPVLT
VGSPGGATIISVLTILYHIEYGMGLKAAVEEPRIYTTSMSSYRYEDGVPKDVLKLNMG
GHRFGTSPVDIGNVQSSIDHENGTFKGVVISGSNDAAIGINLKRK

>|Q08426|EHP_HUMAN Peroxisomal bifunctional enzyme - *Homo sapiens* (Human).
MAEYTRLHNALALIRLRNPPVNAISTTLRDIKEGLQKAGRDTIKAIVICGAEGKFSAGA
DIRGFSAPRTFGLILGHVVDEIQRNEKPVVAIQGMAFGGGLELALGCHYRIAHADAQVG
LPEVTLGLLPGARGTQLLPRLTGVPAALDLITSGRRILADEALKLGILDKVVNSDPVEEAI
FAQRVSDQPLESRRCLCNKPIQSLPNMDSIFSEALLKMRRQHPGCLAQEACVRAVQAAVQY
PYEVGIKKEEELFLYLLQSGQARALQYAFFAERKANKWSTPSGASWKTASARPVSSVGVV
GLGTMGRGIVISFARARIPVIGVDSKQNLATANKMITSVLEKEASKMQQSGHPWSGPKP
RLTSSVKELGGVDLVIEAVFEEMSLKKQVFAELSAVCKPEAFLCTNTSALDVDEIASSTDRP
HLVIGTHFFSPAHEVMKLEVIPSYSSPTTIATVMNLSKKIKKIGVVVGNCFGFVGNRMLN
PYYNQAYFLLEEGSKPEEVDQVLEEFGFKMGPFVSDLAGLDVGVKSRKGGQGLTGPTLL
PGTPARKRGNRRYCPIDVLCVLRGFGQKTGKGWYQYDKPLGRIHKPDPWLSTFLSRYRK
PHHIEPRTISQDEILERCLYSLINEAFRILGEGIAASPEHIDVVYLHGYGCARHKGPMFYAS
TVGLPTVLEKLQKYRQNPDIQLEPSDYLLKLASQGNPPLKEWQSLAGSPSSKL

>|P08394|EX5B_ECOLI Exodeoxyribonuclease V beta chain - *Escherichia coli* (strain K12).
MSDVAETLDPLRLPLQGERLIEASAGTGKFTTIAALYLRLLLGLGGSAAFPRLTVEELLVV
TFTEAATAELRGRIRSNHELRIACLRETTDNPLYERLLEEIDDKAQAAQWLLAERQMDE
AAVFTIHGFCQRMNLNNAFESGMLFEQQLIEDESLLRYQACADFWRRHICYPLPREIAQVV
FETWKGPQALLRDINRYLQGEAPVIKAPPDDETLASRHAQIVARIDTVKQQWRDAV
DALIESSGIDRRKFNRSNQAQWIDKISAWAEEETNSYQLPESLEKFSQRFLDRTKAGGETP
RHPLFEAIDQLLAEPLSIRDLVITRALAEIRETVAREKRRRGELGFDDMLSRLDSALRSESG
EVLAAAIRTRFPVAMIDEFQDTPQQYRIFRRIWHHQPETALLLIGDPKQAIYAFRGADIFT
YMKARSEVHAHYTLDTNWRSAAPGMVNSVNLKFSQTDDAFMFREIPFIPVKSAGKNQALR
FVFKGETQPAMKMWLMEGESCGVGDYQSTMAQVCAAQIRDWLQAGQRGEALLMNGD
DARPVRASDISVLVRSRQEAQVRDALTLLEIPSVYLSNRDSVFETLEAQEMLWLLQAVM
TPERENTLRSALATSMMLNLDIETLNNDEHAWDVVVVEEFDGYRQIWRKRGVMPMLR
ALMSARNIAENLLATAGGERRLDILHISELLQEAGTQLESEHALVRWLSQHILEPDSNASS
QQMRLESKHLVQIVTIHKSGLYPLVWLPFITNFRVQEAFYHDRHSFEAVLDLNAAPE
SVDLAEAEERLAEDLRLLYVALTRSVWHCSLGVAPLVRRRRGDKKGD TDVHQSALGRLLQK
GEPQDAAGLRTCIEALCDDDIAWQTAQTGDNQPWQVNDVSTAELNAKTLQRLPGDNWR

VTSYSGLQQRGHGIAQDLMPRLDVDAAGVASVVEEPTLTPHQFPRGASPGTFLHSLFEDL
DFTQPVDPNWVREKLELGGFESQWEPVLTEWITAVLQAPLNETGVSLSQLSARNKQVEM
EFYLPSEPLIASQLDTRLRQFDPLSAGCPPLEFMQVRGMLKGFIDLVRHEGRYLLDYKS
NWLGEDSSAYTQQAMAAAMQAHRYDLQYQLYTLALHRYLRHRIADYDYEHHFGGVIYL
FLRGVDKEHPQQGIYTTRPNAGLIALMDEMFAGMTLEEA

>|AMPL_BOVIN

MFLLPLPAAARVAVRHLSVKRLWAPGPAAADMTKGLVLGIYSKEKEEDEPQFTSAGENFN
KLVSGKLRILNISGPPLKAGKTRTFYGLHEDFPSVVVVGLGKKTAGIDEQENWHEGKENI
RAAVAAGCRQIQDLEIPSVEVDPCGDAQAAAEGAVLGLYEYDDLKQKRKVVS AKLHGS
EDQEAWQRGVLFASGQNLARRLMETPANEMTPTKFAEIVEENLKSASIKTDVFIRPKSWIE
EQEMGSFLSVAKGSEPPVFLEIHYKGSNASEPPLVFGKGITFDSGGISIKAAANMDLM
RADMGGAATICS AIVSAAKLDLPINIVGLAPLCENMPSGKANKPGDVVRARNGKTIQVDN
TDAEGRLLADALCYAHTFNPKVIINAATLTGAMDIALGSGATGVFTNSSLWNKLF EASI
ETGDRVWRMPLFEHYTRQVIDCQLADVNNIGKYRSAGACTAA AFLKEFVTHPKWAHLDI
AGVMTNKDEVYLRKGMAGRPTRTLIEFLFRFSQDSA

>|P04995|EX1_ECOLI Exodeoxyribonuclease I - Escherichia coli (strain K12).

MMNDGKQQSTFLFHDYETFGTHPALDRPAQFAAIRTDSEFN VIGEPEVFYCKPADDYLPQP
GAVLITGITPQEARAKGENEAAFAARIHSLFTVPKTCILGYNNVRFDDEVTRNIFYRNFYDP
YAWSWQHDSNRWDLDDVMRACYALRPEGINWPENDDGLPSFRLEHLTKANGIEHNAH
DAMADVYATIAMA KLVKTRQPR LFDYLFTHRNKHKLMALIDVPQMKPLVHVS GMFGAW
RGNTSWVAPLAWHPENR NAVIMVDLAGDISPLELSDTLRERLYTAKTDLGDNAAVPVK
LVHINKCPVLAQANTLRPEDADRLGINRQHCLDNL KILREN PQVREKVVAIFAEAEPTPS
DNVDAQLYNGFFSDADRAAMKIVLETEPRNLPALDITFVDKRIEKLLFN YRARNFP GTLDY
AEQQRWLEHRRQVFTPEFLQGYADELQMLVQQYADDKEKVALLKALWQYAE EIV

>|P04968|THD1_ECOLI Threonine dehydratase biosynthetic - Escherichia coli (strain K12).

MADSQPLSGAPEGAEYLRAVLRAPVYEA AQVTPLQKMEKLS SRLDNVILVKREDRQP VH
SFKLRGAYAMMAGLTEE QKAHG VITASAGNHAQGVAFSSARLGVKALIVMPTATADIKVD
AVRGGFGEVLLHG ANFDEAKAKAIELSQQGGFTWVPPFDHPMVIAGQGT LALELLQQDA
HLDRVFPVPGGGGLAAGVAVLIKQLMPQIKVIAVEAEDSACLKAALDAGHPVDLPRVGLF
AEGVAVKRIGDETFR LQCQEYLDDIITVDSDAICAAMKDLFEDVRAVAEPSGALALAGM KK
YIALHNIRGERLAHILSGANVNFHGLRYV SERCELGEQREALLAVTIPEEKGSFLKFCQLLG
GRSVTEFN YRFADAKNACIFVGVRLSRGLEERKEILQMLNDGGYSVVDLSDD EMAKLHV
RYMVGGRPSHPLQERLYSFEFPESGALLRFLNTLGTYWNISL FHYRSHGTDYGRVLA AFE
LGDHEPDFETRLNELGYDCHDETNNPAFRFFLAG

>|LEU3_SALTY

MSKNYHIAVLPGDGIGPEVMAQALKVMDAVRSRFD MRITTSHYDVGGIAIDNHGHPLPKA
TVEGCEQADAILFGSVGGPKWENLPPE SQPERGALLPLRKHF KLFNSLRPAKLYQGLEAFC
PLRADIANGFDILCVRELTGGIYFGQPKGREGSGQY EKAFDTEVYHRFEIERIARIAFESA
RKR RRK VTSIDKANVLQSSILWREIVNDVAKTYPDVELAHMYIDNATMQLIKDPSQFDVL
LCSNFLGDILSDECAMITGSMGMLPSASLNEQGFGLYEPAGGSAPDIAGKNIANPIAQILSL

ALLLRYSLDANDAATAIEQAINRALEEGVRTGDLARGAAAVSTDEMGDIIARYVAEGV

>|P11886|GAL_PSEFL Galactose 1-dehydrogenase - Pseudomonas fluorescens.

MQPIRLGLVGYGKIAQDQHPAINANPAFTLVSVATQGKPCPGVENFQSLGELLENGPPVD
AIAFCTPPQGRFALVQQALAAGKHVLVEKPPCATLGKAALWIKREQASAPCSPCIAYAPAIA
AARDWLATRTLQSVQIDWKEDVRKWHPGQAWIWQPGLGVFDPGINALSIVTHLLPLPLF
VESAEALRVPSNCQSPIAASIKMSDPRLLDVRAEFDHGHDELWSIQIRCAEGTLRLDNGG
ALLSIDGVRQTVAAEEGEYAAVYRHFQQLIGDKTSDVDVQPLRLVADSFVGSRVSVVEAFYD

>|Q924C3|ENPP1_RAT Ectonucleotide pyrophosphatase/phosphodiesterase family member 1 - Rattus norvegicus (Rat).

MERDGEQAGQGPRHGPAGNGRELESPAAASLLAPMDLGEEPLEKAERARTAKDPNTYKV
LSLVLSVCVLTTLGCFGLKPSCAKEVKSCCKGRFCERTFSNCRCDAAACVSLGNCCLDFQET
CVEPHTHIWTCNKFRCGEKRLSRFVCSADDCKAHNDCCINYSSVCQEKKSWVEEACETID
APQCPAEFESPTLLFSLDGFRAEYLHTWGGLLPVISKLNKCGTYTKNMRPVYPTKTFPNH
YSIVTGLYPESHGIIDNKMYDPKMNASFSLKSKEKFNPLWYKGGQPIWVTANHQEVRSPTY
FWPGSDVEIDGILPDIYKVYNGSVPFEEILAVLEWLQLPSYERPHFYTYLEEDSSGSHS
GPVSSEVIKALQKVDHIVGMLMDGLKDLGLDKCLNLILISDHGMEQGSCKKYVYLNKYL
GDVNNVKVVYGPAARLRPTEVPETYYSFNYEALAKNLSCRETNQHFRPYLKHFLPKRLH
FAKNDRIEPLTFYLDLPQWQLALNPSEKCYGSGFHGSDNLFNSMQALFIGYGPAFKHGAE
VDSFENIEVYNLMCDLLGLIPAPNNESHGSLNHLKPIYTPSHPKESFSLQCPIKSVSSDL
GCTCDPSIVPIMDFEKQFNLTDAVEDVYSMTVPNGRPRNLQKQHRVCLLHQQQFLTGYSL
LDLLMPLWTSYTFSLNDQFSTDDFSNCLYQDLRIPLSPMHKCSYKSTSKLSYGFLTPPRL
NRVSRQIYSEALLTSNIVPMYQSFQVIWQYLHDTVLRRYAQERNGVNVVSGPVDFDFYDG
RYDSSEILKQNTRVIRSQENLIPTHFFIVLTSCKQLSESPLKCTALESSAFLLPHRPDNIESCT
HGKQESAWVEELLALHRARVTDVELITGLSFYQDRQESVSELLRLKTHLPIFSQED

>|PYRG_ECOL5

MTTNYIFVTGGVVSSLGKGIAAASLAAILERGLNVTIMKLDPYINVDPGTMSPIQHGEVF
VTEDGAETDLDLGHYERFIRTKMSRRNNFTTGRIYSDVLRKERRGDYLGATVQVIPHITNA
IKERVLEGGEHGDVVLVEIGGTVDIESLPFLEAIRQMAVEIGREHTLFMHLTLVPYMAAS
GEVKTQKPTQHSVKELLSIGIQPDILICRSDRAVPANERAKIALFCNVPEKAVISLKDVDYSYK
IPGLLKSQGLDDYICKRFSNCPANLSEWEQVIFEEANPVSEVTIGMVGKYIELPDAYKS
VIEALKHGGLKNRVSVNIKLIDSQDVETRGVEILKGLDAILVPGGFGYRGVEGMITTARFA
RENNIPYLGICLGMQVALIDYARHVANMENANSTEFVPDCKYPVVALITEWRDENGNEVEV
RSEKSDLGGTMRLGAQQCQLVDDSLVRQLYNAPTIVERHRHRYEVNMLLKQIEDAGLR
VAGRSGDDQLVEIIEVPNHPWFVACQFHPEFTSTPRDGHPLFAGFVKAASEFQKRQAK

>|P13702|MVA_A_PSEMV 3-hydroxy-3-methylglutaryl-coenzyme A reductase - Pseudomonas mevalonii.

MSLDSRLPAFRNLSPAARLDHIGQLLGLSHDDVSLLANAGALPMDIANGMIENVIGTFELP
YAVASNFQINGRDVLPVVEEPSIVAAASYMAKLARANGGFTTSSSAPLMHAQVQIVGIQ
DPLNARLSLLRRKDEIIELANRKDQLLSLGGGCRDIEVHTFADTPRGPMLVAHLIVDVRD
AMGANTVNTMAEAVAPLMEAITGGQVRLRILSNLADLRLARAQVRITPQQLETAEFSGEA

VIEGILDAYAFAAVDPYRAATHNKGIMNGIDPLIVATGNDWRAVEAGAHAYACRSGHYGSL
TTWEKDNNHGLVGTLEMPMPVGLVGGATKTHPLAQLSLRILGVKTAQALAEIAVAVGLA
QNLGAMRALATEGIQRGHMALHARNIAVVAGARGDEVDWVARQLVEYHDVRAVAL
LKQKRGQ

>|P14550|AK1A1_HUMAN Alcohol dehydrogenase [NADP+] - Homo sapiens (Human).

MAASCVLLHTGQKMPLIGLGTWKSEPGQVKAASKYALSVGYRHIDCAAIFYGNEPEIGEA
LKEDVGPVKAVPREELFVTSKLVNTKHHPEDEVPAALRKTALDLQLEYLDLYLMHWPYAF
ERGDNPFKNADGTICYDSTHYKETWKALEALVAKGLVQALGLSNFNSRQIDDILSVASV
RPAVLQVECHPYLAQNELIAHCQARGLEVTAYSPLGSSDRAWDPDEPVLLEEVVLLALA
EKYGRSPAQILLRWQVQRKVICIPKSITPSRILQNIKVFDFTFSPPEEMKQLNALNKNWRYIV
PMLTVDGKRVPRDAGHPLYPFNDPY

>|P51740|PPBJ_RAT Intestinal alkaline phosphatase 2 - Rattus norvegicus (Rat).

MQGAWVLLLLGFRLQLSLSVIPVEEENPAFWTQKAADALNVAKKLQPIQTSAKNLIIFLGD
GMGVATVTATRILKGQLEGNLGPETPLAMDHFYPMALSPTYSDRQVPSASTATAYLCG
VKTNYKTIGVSAARFDQCNTTFGNEVLSVMYRAKKAGKSVGVGDHTRVQHASPAGTY
VHTVTSNWYGDADMPALPLQEGCKDIATQLISNMDINVLGGGRKYMFPAGTPDPEYPND
VNETGTRLGKKNLVQEWLSKHQGSQYVWNRQELIQKSLDPSVTYLMGLFEPVDTKFEIQ
RDPLMDPSLKDMTEAALHVLNRNPKGFYLFVEGGRIDRGHHLGTAYLALTEAVMFDSEIE
RASLQASEQDTLITVADHSHVFSFGGYTLRGTSTIFGLAPLNALDGKPYTSILYGNPGYV
GTGERPNVTDASHDPSYQQAAVPVKSETTVGKDVAIFARGPQAHLLHGVQEQNYIAH
VMAFAGCLEPYTDCGLAPPADENRPTTPVQNSTTTTTTTTTTTTTTTTTTTTTTRVQNSASSLGPAT
APLAWHYWPRR

>|Q59516|DHGY_METEX Glycerate dehydrogenase - Methylobacterium extorquens
(Protomonas extorquens).

MTKKVVFLLDRESLDATVREFNFPHEYKEYESTWTPPEIVERLQGAIEIAMINKVPMRADTL
KQLPDLKLIAVAATGTDVVDKAAAKAQGITVVNIRNYAFNTVPEHVVGMLFALRRAIVPY
ANSVRRGDWNKSKQFCYFDYPIYDIAGSTLGIIGYGALGKSIKRAEALGMKVLAFDVFP
QDGLVDLETILTQSDVITLHVPLTPDTKNMIGAEQLKMKRSAILINTARGGLVDEAALLQ
ALKDGTIGGAGFDVVAQEPPKDGNILCDADLPNLIVTPHVAWASKEAMQILADQLVDNVE
AFVAGKPNVVEA

>|P10860|DHE3_RAT Glutamate dehydrogenase 1, mitochondrial - Rattus norvegicus (Rat).

MYRRLGEVLLLSRAGPAALGSAADSAALLGWARGQPSAVPQPGLTPVARRHYSEAATD
REDDPNFFKMVEGFFDRGASIVEDKLVEDLKTRENEEQKRNRVRGILRIKPCNHVLSLSFP
IRRDDGSWEVIEGYRAQHSQHRTPCGGIRYSTDVSVDVKALASLMTYKCAVVDVVPFG
GAKAGVKINPKNYTDNELEKITRRFTMELAKKGFIPGIDVPAPDMSTGEREMSWIADTY
ASTIGHYDINAHACVTGKPISSQGGIHGRISATGRGVFHHGIENFINEASYMSILGMTPLGDK
TFVVQGFVGLHSMRYLHRFGAKCVGVGESDGSIWNPDGIDPKELEDFKLQHGSLGFP
KAKVYEGSILEADCILIPAASEKQLTKSNAPRVKAKIIAEGANGPTTPEADKIFLERNIMVI
PDLYLNAGGVTVSYFEWLKLNHVSYGRLTFKYERDSNYHLLMSVQESLERKFGKHGGT
IPVVPTAEFQDRISGASEKDIVHSLAYTMERSARQIMRTAMKYNLGLDLRTAAYVNAIEK

VFKVYNEAGVTFT

>|P0C2P1|BSD_ASPTN Blastocidin-S deaminase - *Aspergillus terreus* (strain NIH 2624).
MPLSQEESTLIERATATINSIPISEDYSVASAALSSDGRIFTGVNVYHFTGGPCAELVVLGTA
AAAAAGNLTICIVAIGNENRGILSPCGRCRQVLLDLHPGIKAVVKDSDGQPTAVGIRELLPSG
YMNRA

>|Q8CGV7|THTPA_RAT Thiamine-triphosphatase - *Rattus norvegicus* (Rat).
MAQGLIEVERKFTPGPDTEERLQKLGATLEHRVTFRDTYYDTSELSLMLSDHWLRQREGS
GWEFKCPGVTGVSGPHNEYVEVTSESIAVTQLFELLGSGEQETAGVAAVLGRLKLQEVAS
FITRSSWKLALSAGAHEEESLLTVDLDDSTDFGYAVGEVEAVVHEKAEVPAALEKIISVSSML
GVPAQEKAPAKLLVYLRFRPQDYQRLLEADSSGEATGDSVP

>|Q0TAE8|K6PF_ECOL5 6-phosphofructokinase - *Escherichia coli* O6:K15:H31 (strain 536 / UPEC).
MIKKIGVLTSGGDAPGMNAAIRGVVRSALTEGLEVMGIYDGYLGLYEDRMVQLDRYSVS
DMINRGGTFLGSARFPEFRDENIRAVAIENLKKRGIDALVIGGDGSYMGAMRLTEMGFPC
IGLPGTIDNDIKGTDYTGFFTALSTVVEAIDRLRDTSSSHQRISVVEVMGRYCGDLTAAAI
AGGCEFVVPEVEFSREDLVNEIKAGIAKGGKHAIVAITEHMCDVDELAHFIEKETGRETR
ATVLGHIQRGGSPVPYDRILASRMGAYAIDLLLAGYGGRCVGIQNEQLVHHDIIAIIENMK
RPFKGDWLDCAKKLY

>|Q43869|PLSB_SPIOL Glycerol-3-phosphate acyltransferase, chloroplast - *Spinacia oleracea* (Spinach).
MLVLSAPPVLEVCKDRVSSSFSTSSSSSSSAFSAVVFRRSFFTRFNSSLICCCSSKLKMA
DTALPSSSSSTSASASYSAAAKSVEEENHEIPVKKEDDNQLLSRTRYRNVRSAEELISEIKR
ESEIGRLPKSVAYAMEGLFHYRNAVLSGGISHADEIVLSNMSVMLDFVLLDIEDPFVFPF
HKAIREPADYYSFGQDYIRPLVDFGNSYVGNIAIFQEMEEKLKQGDNIILMSNHQSEADPA
VIALLEKTNSLIAENLIYIAGDRVITDPLCKPFSMGRNLLCVYSKKHMYDDPELVDVKKR
ANTRSLKELVLLLRGGSKIWIAPSGGRDRPDAVTGEWYPGTFDFAALDNMRLVEHAGR
PGHIYPLALLCYDIMPPPAQVEKEIGEKRVMSFHGVGVSVEPEINYNDVSLGCKNDEEAKS
VYGQALYNSVNEQYNVLKAAIHGKQSGASTPTTSLSQPWAS

>|Q03522|MURD_BACSU UDP-N-acetylmuramoylalanine--D-glutamate ligase - *Bacillus subtilis*.
MENDQFLQKQHFLILGLAKSGYAAASILHEKGIYVAVNDQKPFEEENPAQKLSEKGIEVVC
GEHPVSLFDQHQITILIKNPGIPYENIMVQEAERKIPVWTEIELAYYLTSKFIGITGSNGK
TTTTTLIYEMLKADSQKALIAGNIGTVASEVAYHADGDEWIVTELSSFQLMGTHAFRPEISL
ILNVFDAHLDYHHTRENYEKAKQKVYLHQTASDKAIVNQDDET VVRLAEAGKAEIVPFS
VSKTLEQGAYVKDSMIMFNGEAILPLEEVVLPGAHNLENILAAIAVVKTAGASNEAVKKV
LTSFTGVKHLRQYVTTVNGRKFYNDKATNILATSKALSAFDKPVILLAGGLDRNGFDD
LKPYMKHVKAFLTFGQTAPKLEKLGNELGIQHVKRVDNVEQAVSAAFALSNEGDVILLSP
ACASWDQFKTFEERGDMFIDAVHMLK

>|P07648|EX5C_ECOLI Exodeoxyribonuclease V gamma chain - Escherichia coli (strain K12).
MLRVYHSNRLDVLEALMEFIVERERLDDPFEPEMILVQSTGMAQWLQMTLSQKFGIAANI
DFPLPASFIWDMFVRVLPPEIPKESAFNKQSMSWKLMTLLPQLLEREDFTLLRHLYLTDDSDK
RKLFLSSKAADLFDQYLVRPDWLAQWETGHLVEGLGEAQAWQAPLWKALVEYTHQL
GQPRWHRANLYQRFIETLESATTCPPLPSRVFICGISALPPVYLQALQALGKHIEIHLFTN
PCRYWGDIDKPAYLAKLLTRQRRHSFEDRELPLFRDSENAGQLFNSDGEQDVGNPLLAS
WGKLGRDYIYLLSDLESSQELDAFVDVTPDNLHNIQSDILELENRAVAGVNIIEEFSRSDN
KRPLDPLDSSITFHVCHSPQREVEVLHDRLLAMLEEDPTLTPRDIIVMADIDSYSPFIQAVF
GSAPADRYLPYAISDRRARQSHPVLEAFISLLSLPDSRFVSEDVLALLDVPVLAARFDITEE
GLRYLRQWVNESGIRWGIDDDNVRELELPATGQHTWRFGLTRMLLGYAMESAQGEWQS
VLPYDESSGLIAELVGHLASLLMQLNIWRRGLAQERPLEEWLPVCRDMLNAFFLPDAETE
AAMTLIEQQWQAIIEGLGAQYGDVPLSLLRDELAQRDLQERISQRFLAGPVNICTLMP
MRSIPFKVCLLGMNDGVYPRQLAPLGFDLMSQKPKRGDRSRDDDRYLFLEALISAQQ
KLYISYIGRSIQDNSERFPSVLVQELIDYIGQSHYLPGDEALNCDESEARVKAHLTCLHTRM
PFDPQNYQPGERQSYAREWLPAASQAGKAHSEFVQPLPFTLPETVPLETLQRFWAHPVRA
FFQMRLQVNFRTEDSEIPDTEPFIEGLSRYQINQQLNALVEQDDAERLFRFRFAAGDLP
YGAFGEIFWETQCQEMQQLADRVIACRQPGQSMEIDLACNGVQITGWLPQVQPDGLLRW
RPSLLSVAQGMQLWLEHLVYCASGGNGESRFLRKGGEWRFPPLAAEQALHYLSQLIEGY
REGMSAPLLVLPESGGAWLKTCYDAQNDAMLDDDDSTLQKARTKFLQAYEGNMMVRGE
GDDIWYQRLWRQLTPETMEAIVEQSQRFLPLFRFNQS

>|P51659|DHB4_HUMAN Peroxisomal multifunctional enzyme type 2 - Homo sapiens (Human).
MGSPLRFDGRVVLVTGAGAGLGRAYALAFERAGLVVVNDLGGDFKGVGKGSAAADKV
VEEIRRRGGKAVANYDSVEEGEKVVKTALDAFGRIDVVVNNAGILRDRSFARISDEDWDII
HRVHLRGSFQVTRAWEHMKKQKYGRIIMTSSASGIYGNFGQANYSAAKLGLLGLANSL
AIEGRKSNIHCNTIAPNAGSRMTQTVMPEDLVEALKPEYVAPLVLWLCHESEENGGLFE
VGAGWIGKLRWERTLGAIVRQKNHPMTPEAVKANWKKICDFENASKPQSIQESTGSIIEVL
SKIDSEGGVSANHTSRATSTATSGFAGAIGQKLPPFSYAYTELEAIMYALGVGASIKDPKDL
KFIYEGSSDFSLPTFGVIIQKSMGGGLAEIPGLSINFAKVLHGEQYLELYKPLPRAGKL
KCEAVVADVLDKSGSVVIMDVYSYSEKELICHNQFSLFLVGSFGGFGKRTSDKVKVAVAI
PNRPPDAVLDTTSLNQAALYRLSGDWNPLHIDPNFASLAGFDKPIHLGLCTFGFSARRVL
QQFADNDVSRFKAIKARFAKPVYPGQTLQTEMWKEGNRIHFQTKVQETGDIVISNAYVDL
APTSGTSAKTPSEGGKLQSTFVFEIQRRLKDIGPEVVKKVNAVFEWHITKGGNIGAKWTI
DLKSGSGKVYQGPAKGAADTTIILSDEDFMEVVVLGKLDPQKAFFSGRLKARGNIMLSQKL
QMILKDYAKL

>|Q39522|SMT_COPIA (S)-scoulerine 9-O-methyltransferase - Coptis japonica (Japanese
goldthread).
MCTSLSELKCPVFSTKRKLLLEFALRTSVDMAAQEGVNYLSGLGLSRLICLPMALRAAIEL
NVFEIISQAGPDAQLSPSDIVAKIPTKNPSAAISLDRILRMLGASSILSVSTTKSGRVYGLNEE
SRCLVASEDKVSVPMLLFTSDKAVVESFYNIKDVVLEEGVIPFDRTHGMDFFQYAGKEER
VNKSFNQAMGAGSTIAFDEVFKVYKGFNDLDELVDVGGGIGTSLSNIVAKHPHIRGINFEL
PHVIGDAPDYPGVEHVPGDMFEGVPNAQNILLKVVLDHWDHDDRSIKILKNCWKALPEN
GTVIVIEFVLPQVLGNNAESFNALTPDLLMMALNPGGKERTTIEFDGLAKAAGFAETKFFPI

SQGLHVMEFHKINC

>|P0A9S5|GLDA_ECOLI Glycerol dehydrogenase - Escherichia coli (strain K12).

MDRIIQSPGKYIQGADVINRLGEYLKPLAERWLVVGDKFVLGFAQSTVEKSFKDAGLVVEI
APFGGECSSQNEIDRLRGIAETAQCMAILGIGGGKTLDTAKALAHFMGVPVAIAPTIASDAP
CSALSVIYTDEGEFDRYLLLPNNPNMVIVDTKIVAGAPARLLAAGIGDALATWFEARACSR
SGATTMAGGKCTQAALALAEALCYNTLLEEGERKAMLAEEQHVVTPALERVIEANTYLSGV
GFESGGLAAAHAVHNGLTAIPDAHYYHGEKVAFGTLTQLVLENAPVEEIEETVAALSHAV
GLPITLAQLDIKEDVPAKMRIVAEAAACAEGETIHNMPGGATPDQVYAALLVADQYGRFL
QEWE

>|Q8N5Z0|AADAT_HUMAN Kynurenine/alpha-aminoadipate aminotransferase mitochondrial - Homo sapiens (Human).

MNYARFITAASAARNPSPIRTMTDILSRGPKSMISLAGGLPNPNMFPFKTAVITVENGKTIQF
GEEMMKRALQYSPSAGIPELLSWLKQLQIKLHNPPTIHYPPSQGQMDLCVTSQSQQGLCK
VFEMIINPGDNVLLDEPAYSGTLQSLHPLGCNIINVASDESIVPDSLRDILSRWKPEDAKNP
QKNTPKFLYTPVNGNPTGNSLTSEKKEIYELARKYDFLIEDDPYFYLQFNKFRVPTFLS
MDVDGRVIRADSFSKIISGLRIGFLTGPKPLIERVILHIQVSTLHPSTFNQLMISQLLHEWGE
EGFMAHVDRVIDFYSNQKDAILAAADKWLTLGLAEWHVPAAGMFLWIKVKGINVVKELIE
EKAVKMGVLMPLGNFYVDSSAPSPYLRASFSSASPEQMDVAFQVLAQLIKESL

>|Q1JPA0|AL3B1_BOVIN Aldehyde dehydrogenase 3B1 - Bos taurus (Bovine).

MDPFADTLQRLREAFVSGRTRPAEFRDAQKGLSRFLRENKQLLQEAALDHLKSAFEAE
VSEISISQNEINLALRNLRTWMKDEKVSKNLATQLDSAFIRKEPFGLVLILSPWNYPLNLSL
GPLVGALAAGNCVVLKPSKNTKVLAEVLPYLDQSCFAVVLGGPQETGRLLLEHKFD
YIFFTGPNPQVGKIVMTAAAKHLTPVTLELGGKNPCYVDDNCDPQTVANRVAFFRCFNAGQ
TCVAPDYVLCSPEMQAQLVPALQSAITRFYGDDPQSSPNLGRISQKHFQRLRGLLSCGRV
VIGGQSDECDLYIAPTVLVDVQETDPMQEEIFGPILPIVNVRSLGQAIDFINRREKPLALYA
FSNSSQVVKRVLAQTSSGGFCGNDGFMHLTLASLPFGGVGSSGMGNHYHGKFSFDTFSHH
RACLLRRPGLEKIYAIRYPHTPRNLRVLLMAMETRSCSCTLL

>|P11310|ACADM_HUMAN Medium-chain specific acyl-CoA dehydrogenase, mitochondrial - Homo sapiens (Human).

MAAGFGRCRVLRSISRFWRSQHTKANRQREPGLGFSFEFTEQQKEFQATARKFAREEII
PVAEYDKTGEYPVPLIRRAWELGLMNTHIPENCGGLGLGTFDACLISEELAYGCTGVQT
AIEGNSLGQMPHIIAGNDQKQKYLGRMTEEPLMCAYCVTEPGAGSDVAGIKTKAEKKG
EYIINGQKMWITNGGKANWYFLLARSDPDPKAPANKAFTGFIVEADTPGIQGRKELNMG
QRCSDTRGIVFEDVKVPKENVLIGDGAGFKVAMGAFDKTRPVVAAGAVGLAQRALDEAT
KYALERKTFGKLLVEHQAISFMLAEMAMKVELARMSYQRAAWEVDSGRRNTYYASIAK
AFAGDIANQLATDAVQILGGNGFNTEYPVEKLMRDAKIYQIYEGTSIQRLIVAREHIDKY
KN

>|P11884|ALDH2_RAT Aldehyde dehydrogenase, mitochondrial - Rattus norvegicus (Rat).

MLRAALSTARRGPRLSRLLSAAATSAPVAPNQPEVFCNQIFINNEWHDAVSKKTFPTVNP

STGEVICQVAEGNKEDVDKAVKAAQAAFQLGSPWRRMDASDRGRLLYRLADLIERDRTY
LAALETLDNGKPYVISYLVLDLDMVLKCLRYYAGWADKYHGKTIPIDGDFFSYTRHEPVG
CGQIIPWNFPLLMQAWKLGALATGNVVVMKVAEQTPLTALYVANLIKEAGFPPGVVNI
PGFGPTAGAAIASHEDVDKVAFTGSTEVGHILQVAAGSSNLKRVTLLELGGKSPNIIMSDAD
MDWAVEQAHFALFFNQGCCAGSRTFVQEDVYDEFVRSVARAKSRVVGPNPFSRTEQ
GPQVDETQFKKILGYIKSGQQEGAKLLCGGGAAADRGYFIQPTVFGDVKDGMTIAKEEIF
GPVMQILKFKTIEVVGRANNSKYGLAAVFTKDLKANYLSQALQAGTVWENCYDVFG
AQSPFGGYKMSGSGRELGEYGLQAYTEVKT VTKVPQKNS