

**Supporting Information S1.** The benchmark dataset consists of a positive dataset and a negative dataset. The positive dataset contains 254 antioxidant proteins, while the negative dataset contains 1567 non-antioxidant proteins.

**The positive dataset** contains 254 antioxidant proteins

>antioxidant\_1

MTKGILLGDKFPDFRAETNEGFIPSFYDWIGKDSWAILFSHPRDFTPVCTTELARLVQLAPE  
FNKRNVLKIGLSCDSAESHKRWVDDIMAVCKMKCNDGDTCCSGNKLFPPIADENRFLAT  
ELGMMDPDERDENGALNARCVFIIIGPEKTLKLSILYPATTGRNFDEILRVVDSLQLTAVKL  
VATPVDWKDGDCCVVLPTIDDTEAKKLFGEKINTIELPSGKHLYLRMVAHPK

>antioxidant\_2

MLPGLALLLLAAWTARALEVPTDGNAGLLAEPQIAMFCGRLNMHMNVQNGKWSDSPS  
GTKTCIDTKEGILQYCQEVYPELQITNVVEANQPVTIQNWCKRGRKQCKTHPHFVIPYRCL  
VGEFVSDALLVPDKCKFLHQERMDVCETHLHWHTVAKETCSEKSTNLHDYGMLLPCGID  
KFRGVEFVCCPLAEESDNVDSADAEEEDSDVWWGGADTDYADGSEDKVVVEAEVEEVA  
EVEEEEADDEDDEDGDEVEEEAEPEYEEATERTTSIATTTTTTTESVEEVVREVCSEQAE  
TGPCRAMISRWFYFDVTEGKCAPFFYGGCGGNRNNFDTEEYCMVAVCGSAMSQSLLKTTQE  
PLARDPVKLPTTAASTPDAVDKYLETPGDENEHAHFQKAKERLEAKHRERMSQVMREW  
EEAERQAKNLPKADKKAVIQHFQEKVESLEQEAANERQQLVETHMARVEAMLNDRRL  
ALENYITALQAVPPRPRHVFNMLKKYVRAEQKDRQHTLKHFEHVRMVDPKKAAQIRSQV  
MTHLRVIYERMNQSLSLLYNVPAVAEEIQDEVDELLQKEQNYSDDLANMISEPRISYGND  
ALMPSLTETKTTVELLPVNGEFLDDLQPWHSFGADSVANTENEVEPVDARPAADRGLT  
TRPGSGLTNIKTEEISEVKMDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVVI  
ATVIVITLVMLKKKQYTSIHGTVVEVDAAVTPEERHLSKMQQNGYENPTYKFFEQMQN

>antioxidant\_3

MAIALSSSSTITSITLQPKLKTIHGLGTVLPGYSVKSHFRS VSLRRSAVVVSAITGASSGAGI  
GKGTADSLD TVKVLDLRGNEIPISDLWKDRKAVVAFARHFGCVLCRRAAYLAEKKDVM  
DASGVALVLIGPSIDQANTFVEQTKFKGEVYADPNHAS YEALEFVSGVSVTFTPKAAMKI  
LESYMEGYRQDWKLSFMKDTVERGGWQQGGILVAGPGKDNISYIRKDKEAGDDPPVEEI  
LKACCA

>antioxidant\_4

MITSSKIVSAMLSTSLWIGVASAAYAETTNEAEGYSTIGGTYQDGNPQPINIYSVNGVQ  
AINFVNRGDFAEYDVS VSTAGEYSIEYLIGTSIASGSAVEISVLVDGNWQSAGSTNVPLGQ  
WDNFQALAAANNISLAQGTNRKITGAGTHDWQWNLD AFSLTLVTPENPDNPDNPDNPD  
DGNTGQPPTIEMEAFDATGSDDPRAQGMVIGERGYPEDKHTVVDNQTDDWVDYNI  
NFPVSGNYRIEMLASGQTS HATAILFVDNVQINEVAVDTGNQAVFLDFELTDSTYISAGAH  
TIRVQSGSQINEFSWMWFGDALFTPLDGGSTGDADNDGVLDSVDTCNP TPAGA QVDA  
NGCEIIVDNDTDNDGVDNSIDQCPNTPAGA QVDANGCEIVAVVDADNDGVEDSLDMCPN  
TPAGAPVNGQGCADSQLDADNDGVSDIDQCPSTPAGSVVDGTGCIVVTPPADSNDGV  
VDTLDMCPNTAAGLTVDSQGCALSQLDSDNDGVTDIDQCANTPSGETANATGCSSSQE  
GGGTDPTPQPGLLYGELAGAMNVSDTNPWERTDLLQTEDSVKGNTEVYTGFIYDA  
DGHISFYEHIDDSVRLYIDGVLVLSNDSWEASSQTDLNLTPGTHEIELRIGNADGGSGAVD  
GIGFGIDVDGGTNFVHPSTLSESIFTSVGEETGNPDLEQEGDIIVELESFVFTSTNGRVGSDS  
VEGFSPTATGVNWWVTNGDYGDYMTFEEPGTYGAYITISAANDGSYGARVDVDGWVPA  
WGYFGGTGSWDVSSENLLYGGTFVVEQAGEKVV RVEAIGGSDWQWSGDRVRFRLGDV

TAIPSPYINPDDHFVAEIQGPQTDVTYLKKPVEIPANKKVLKSDVWYTYPQNRELEGYDNF  
GATGAFWGHPPPEHDFYDDTVIMDWAVDAVYAFQAEGYEYTARGEFDWGYGWFTEYTTN  
PQPHYVRTLDDRNVMTFMGYLSHDGYNNWLSNHSPAFVPMKQVDQILKANPKL  
MFDQTNRSTDRDFGGDFSPYAMENFRVWLSKKYSTGELAALGINDINSFDYGDFLR  
AQQVTHTSWSNAGDTLSGNIPLQEDYIYFNRDVWNQKFAEVLDIRQQPDIEIGASTHL  
FESRGYVFENLTLFSGELNLGARTTISELPTNILVHLKGAQAVDKTLVYFPYWEFDELRL  
QDAPRFRGRGWAQAYAYGGLFSIPANVWVGGEVWTWSPGADNYRDIYLFVRAQADLLD  
DYTSYSKVLVHAMYSSMKAGFIDGGNQIQSSTKLLTEGNINFDLLVFGDEGYVPRPE  
DFDKFDHIFFDGDEQYLTAEQALLDQQGDKVRHIGQRGTVSGIEITVSISGTESNETVSAV  
SRIHETDAAAPYVHLVNRPFAGGVTPTLNNEVAIPQSYFPEVVTGATLHLPDGTSTSLTL  
STNADGDVVLVNNLEVWGILELAH

>antioxidant\_5

MANSGLWELITIGSAVRNVAKSYLKAEESSITAKQLYDASKITSSKRSTSDLHVQLLEKYR  
NGKVKHASQIKELGLSSKDKRLLGNSLDVQKASGVKHLQEQQSKEIKNPISQPILPNK  
KDEISPAKPSAIDSSIKDVTKSHPATNANFTADFESSIEESYSTENKSPVILSSSKVPSSQWSR  
LWHYGGGLATSLVGAIGEKMCRMWGISKDDGALLNERNVEILVNKLTQMRGAALKMG  
QMLSFQDSKLIDPRVSQILERVDRGAHSMPEKQLEQVMVKNLGNWMTHTYSEFDRKPM  
AAASIGQVHRARLASNHMEVVVKVQYPGVMSSIDSLNNLAYLLKASRILPKGLFLENSL  
AAARKELKWECDYEREAFAERFGSLLKNDSDFKVPVMVFREASGPSVITLEYLHGIALGK  
QKYSQATRNHIGYLLTKQCLREISEYHFMQTDPNWSNFLYNGKTKKIELLDFGASIEYDEK  
FIKKYCRLLAAAHNRKCKKLSVELGYLNNHESAQMIDAHINSIFTLAEPFAFDAPDVY  
DFGDQTITARVKQQIPVMLDLRLQPPPEETYSLHRRLSGHFLLCAKLGAKVRCKELFSGM  
LKHYAD

>antioxidant\_6

MAVTNVAELNALVERVKAQREYASFTQEVDKIFRAAALAAADARIPLAKMAVAESGM  
GIVEDKVIKNHFASEYIYNAYKDEKTCGVLSEDDTFGTITIAEPIGIIICGIVPTTNPSTAIKFS  
LISLKTRNAIIFSPHPRAKDATNKAADIVLQAAIAAGAPKDLIGWIDQPSVELSNALMHHP  
DINLILATGGPGMVKAAYSSGKPAIGVGAGNTPVVIDETADIKRAVASVLMKTFDNGVIC  
ASEQSVVVVDSVYDAVRERFATHGGYLLQGKELKAVQDVILKNGALNAAIVGQPAYKIAE  
LAGFSVPENTKILIGEVTVVDESEPFHEKLSPTLAMYRAKDFEDAVEKAEKLVAMGGIGH  
TSCLYTDQDNQPARVSYFGQKMKTARILINTPASQGGIGDLYNFKLAPSLTLGCGSWGNS  
ISENVGPKHLINKKTVAKRAENMLWHKLPKSIYFRRGSLPIALDEVITDGHKRALIVTDRF  
LFNNGYADQITSVLKAAGVETEVEFEVEADPTLSIVRKGAEANSFKPDVIALGGGSPMD  
AAKIMWVMYEHPEHFEELALRFMDIRKRIYKFKPMGVKAKMIAVTTTSGTGSEVTPFAV  
VTDDATGQKYPLADYALTPDMAIVDANLVMMPKSLCAFGGLDAVTHAMEAYVSVLAS  
EFSQGALQALKLLKEYLPASYHEGSKNPVARERVHSAATIAGIAFANAFLGVCHSMAHK  
LGSQFHIPHLANALLICNVIRYNANDNPTKQTAFSQRDPQARRRYAEIADHLGLSAPGD  
RTAAKIEKLLAWLETLKAEKGIPKSIREAGVQEAFLANVDKLSAFAFDDQCTGANPRYP  
LISELKQILLDTYYGRDYVEGETAAKKEAAPAKAEKKAKKSA

>antioxidant\_7

MSDLVNKKFPAGDYKFQYIAISQSDADSECKMPQTVESKLIENKKVIITGAPAAFSPT  
CTVSHIPGYINYLDLVKEKEVDQVIVVTVDNPFANQAWAKSLGVKDTTHIKFASDPGCA  
FTKSIGFELAVGDGVYWSGRWAMVVENGIVTYAAKETNPGTDVTVSSVESVLAHL

>antioxidant\_8

MALLTIGDQFPEYDLTAVVGGDLSKVDKQPDDYFTRVTSKDYEGKWRIIFFWPKDFTFV  
CPTEIAAFGKLNEDFEDRDAKVLGVSVDNEFVHFQWRAQHEDLKTLPFPMVSDLKRELT  
AACGVLNADGVADRATFIVDPNNEVQFVSVTAGSVGRNVDEVLRVLDALQSDELACACN  
WKKGDPTINAGELLAGAV

>antioxidant\_9

MSLINKEILPFTAQAFDPKKDQFKEVTQEDLKGWSVVCFYPADEFVFCPTELEDLQNQYE  
ELQKLGNNVFSVSTDTHFVHKAWHDHSDAISKITTYTMIGDPSQTITRNFDVLDEATGLAQ  
RGTFIIDPDGVVQASEINADGIGRDASTLAHKIKAAQYVRKNPGEVCPAKWEEGAKTLQP  
GLDLVGKI

>antioxidant\_10

MPIDTVMETLPGYAKDIKLNYSSTLVRQNTELTPQQLWGTVVASAIATRNDTLTAALEDG  
AQLHSEQALEAARIAALMSMNNIFYRFQHLSSNEKYATMPARLRMNGMRTHGVEPVDF  
ELWSLAVSAINGCGKCVDSHEKVLREKGAGEDLVLA AVRVASVIHAIGAVLDAEKVHQPE  
AAMA

>antioxidant\_11

MAALDAIREALPEPARDIKLNLQAVLQPGTLTPAQRWGVAVATAAAARNERLLAAALADA  
RAEVEPAVIEDALAAAAMMNNVYYRFRHVMGKASYAEKPARLRMNRLVKPAASKVD  
FELFALAVSAVNGCETCVRSHEQVVVAGGLEDQVHEAVRIA AVLHAAVSLAAGYAAV  
PSAAAAAG

>antioxidant\_12

MSIEALKTQLPAFAKDVKLNLSALPREDSLTEQQLYGLLVACGYTTRNGTVAQALEAEAA  
PHLSPAALDAAKAAASIMAMNNVYYRFTHLASNKAYETLPAKLRMSVIGNPGVDKVD  
LWSLAVSAMNGCGRCIDAHEAVLREAGLSEAQIQTAVRVGAIISA AAVALEAAGAGFPEAA  
E

>antioxidant\_13

MSPIEQIYDKIPDFAKDVRINLTSLMADETLSPRRKYGVLVASAVATRNSALIAAVESAASG  
VMTSVAIAAKAAASVVMMNNVYYRFVHLASNPEYKTMPPRLRMDVIGNPGVDKSDFE  
LWSLAVSSINGCGICIDAHERTLRAAGVNSETIQTAVRFAAITQSVAIALEAAGPASPQAGD

>antioxidant\_14

MSIEALRARLPDYAHD LGTNLALLVDDPALDPEARWGC FVASACAVGEPQTLRAIDAAAT  
AAGLTAEANRAARKAAAMMAMTNVYFRAVHLMEGAAYQALPCRLRLNRLAHAGARGV  
TYDLSCVAVSAINGCGACLD SHEADLRGRGVEPTQIQ AALRIA AVVSAVARTLAAEAALHP  
QNLEI

>antioxidant\_15

MSIENLKSALPAYAKDQKLNIGSLTRSTELNEEQ LWGSLVAAAAATRNDLVLSEILEEAREH  
LSEEAVDAALGSATVMAMNNVAYRAKSWLGDDFAQVKFGLRMNIIAKPGVDKATFELWS  
TVVSAINGCEHCLSAHANTLLEEGVTKEQIWEGIKVAGVVEAVAQALQAEAVRSAE

>antioxidant\_16

MLQTYKDQLPDYAKDLKLNLTQVLSESPSEL SNQQITGVALAVAYATRNRQLIELIFQKAE  
AELDESTLQAIKAAASIMAMNNIYYRFVHLVKDSEYQRLPANLRMNIIANPGIDKKDFELY  
SLAVSAINGCGLCIDAHANTLIKAGFSKHSIQHVIRIAAVLNGLAQVSIENKT

>antioxidant\_17

MTVARLRELLPDYARDLRLNLG SVTSQSNLSAQQ LWGTVLAAA IASRGRTVLVELEPEAL  
DHLSAEAATAARTAAALMAMNNVYYRSLHLEDEEYSRLRAGLRMNALANPGVDKVD

VELWSLAVSAVNGCGRCLTAHEHELGRGVAREVIQDAIRVASVVHAVAVTVEALETSSGT  
NRVAAAD

>antioxidant\_18

MSLETLKTLIPDYAKDIRLNIGSLANETILSEQQKYGCYLASAHAVGEAQTLRAIEAARG  
KLSVEALNAAKAASAIMGMNNVYYRATHLVSNTTYTTMPARLRMNVIGNPGVEKVDDEL  
WSLAVSAINGCGMCLDAHEAELRKHGVTSEQIQAAIRIGAVVNAAARVLAAEAALAAEP  
A

>antioxidant\_19

MNLEALLDTPAYARDLKLNFSAVVRQNTTELTEQQLWGTVVACAAASRNRTLLDAIVEEA  
KGKLSAQAVEAAKGAAILSMNNIFYRFQHLAVNKKYETMRAGLRMNFRLQHGVDPLD  
FELWALAVSAVNGCGKCIDAHERVLLQKEFSEEKILAAIRVASTIYGLAVVFDAAEPPKGDV  
GAPVNTDAYSTTTI

>antioxidant\_20

MSIENLKNLPEYAKDLKLNLSIARSTVLNEQQLWGTLLASAAATRSATTLREIAEEAAD  
VLSAEAYNAALGAASIMGMNNVFYRKGKAFLLGGRYDDLRAGLRMQIIGNPGVDKADFEL  
WSFAVSSINGCAHCLEAHEHTLREAGVSREVIFESLRVAAIVAGVGGQAVQSTEALAAA  
AV

>antioxidant\_21

MSIEALKARLPDYAKDLRLNLGSLVLTSSLKPGQVWGAAIAAAYAARNDDVTRAIVAEAA  
QHLDAAGLTAAKAAGAIMGMNNVYYRTVHLSGNADFKKIPARLRMNVIGNPGVEKVDL  
ELWSLAASAVNGCGMCIEAHEREVMHKGGMSTENIQDAVRIA AVIHAVATVLDAAEALS  
GQDGSTAVAA

>antioxidant\_22

MELEQLLSVPEYAKDLKLNMGVLRQTELTEQQAWGTAVACAIAARNPQLRESVLGEA  
AKHLNEQALFAAKAAASVMGMNNIFYRFRHLSTNPKYGAMPARLRMQVIAKHGSDPIDF  
ELWCLAVSAMNGCGVCVDSHENVLREKGVSEEAVLAAIRIASTIHGLAAILDVEADPIA

>antioxidant\_23

MSLDSLKSRIPTYAKDLKLNLSVIGNSGLPAQQLWGTVLSTAIASRSAIVLRELEPEAKA  
NLSPEAYTAAKAAAVMAMNNVFYRTRHLLSDHEYGNLRAGLRMNVIGNPGVDKVDL  
FWSFAVSAINGCGMCLDSTKQVLRKAGVERRSSRRRSDCRGTQAVAATLDAAEAFS

>antioxidant\_24

MKWVTFISLLFLFSSAYSRGVFRRDAHKSEVAHRFKDLGEENFKALVLIAFAQYLQCPFE  
DHVKLVNEVTEFAKTCVADESAENCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEP  
ERNECFQHKDDNPNLPRVLRPEVDVMCTAFHDNEETFLKKYLYEIAARRHPYFYAPELFF  
AKRYKAAFTECCQAADKAAACLLPKLDELDEGKASSAKQRLKCASLQKFGERAFKAWAV  
ARLSQRFPAEFAEVSKLVTDLTKVHTECCHGDLLECADDRADLAKYICENQDSISSKLKE  
CCEKPLLEKSHCIAEVENDEMPADLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYARR  
HPDYSVVLRLAKTYETTLEKCCAAADPHECYAKVFDEFKPLVEEPQNLKQNCLEFEQ  
LGEYKFQNALLVRYTKKVPQVSTPTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVV  
LNQLCVLHEKTPVSDRVTKCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLS  
EKERQIKKQTALVELVKHKPKATKEQLKAVMDDFAAFVEKCKADDKETCFEEGKGLV  
AASQAALGL

>antioxidant\_25

MVKAVTVLNSSEGGPHGIVYFAQEGDGPTTV

>antioxidant\_26

MSTIPFRKNYVFKNWAGIYSAKPERYFQPSSIDEVVELVKSARLAEKSLVTVGSGHSPSNM  
CVTDEWLVNLDRLDKVQKFVEYPELHYADVTVDAGMRLYQLNEFLGAKGYSIQNLGSIS  
EQSVAGIISTGSHGSSPYHGLISSQYVNLTVNGKSELKFLDAENDPEVFKAALLSVGKIGII  
VSATIRVVPGFNIKSTQE VITFENLLKQWDTLWTSSEFIRVWVWYPYTRKCVLWRGNKTTD  
AQNGPAKSWWGTKLGRFFYETLLWISTKIYAPLTPFVEKFVFNRYGKLEKSSTGDVNVT  
DSISGFNMDCLSQFVDEWGPCMDNGLEVLRSLDHSIAQAAINKEFYVHVPMEVRCNNT  
LPSEPLDTSKRTNTSPGPVYGNVCRPFLDNTPSHCRFAPLENTNSQLTLYINATIYRPFGC  
NTPHKKWFTLFENTMMVAGGKPHWAKNFGSTTLAAGPVKKD TDYDDFEMRGMALKVE  
EWYGEDLKKFRKIRKEQDPDNVFLANKQWAIINGIIDPSELSD

>antioxidant\_27

MFLKAVVLTALVAVAGARAEVSADQVATVMWDYFSQLSNNAKEAVEHLQKSELTQQLN  
ALFQDKLGEVNTYAGDLQKKLVPFATELHERLAKDSEKLKEEIGKELEELRARLLPHANE  
VSQKIGDNLRELQQRLEPYADQLRTQVNTQAEQLRRQLTPYAQRMERVLRENADSLQASL  
RPHADELKAKIDQNVEELKGRTPYADEFKVKIDQTV EELRRSLAPYAQDTQEKLNHQLE  
GLTFQMKKNAEELKARISASAEELRQLAPLAEDVRGNLRGNTEGLQKSLAELGGHLDQ  
QVEEFRRRVEPYGENFNKALVQQMEQLRQKLGPHAGDVEGHLSFLEKDLRDKVNSFFST  
FKEKESQDKTSLPELEQQEQEQEQEQEQVQMLAPLES

>antioxidant\_28

MKVLWAALLVTFLAGCQAKVEQAVETEPEPELRQQTEWQSGQRWELALGRFWDYLRWV  
QTLSEQVQEELLSSQVTQELRALMDETMKELKAYKSELEEQLTPVAEETRARLSKELQAA  
QARLGADMEDVCGRLVQYRGEVQAMLGQSTEELRVRLASHLRKLRKRLRDADDLQKR  
LAVYQAGAREGAERGLSAIRERLGPLVEQGRVRAATVGS LAGQPLQERAQAWGERLRAR  
MEEMGSRTRDRLDEVKEQVAEVRAKLEEQAQQIRLQAEAFQARLKS WFEPLVEDMQRQ  
WAGLVEKVQAAVGTSAAPVPSDNH

>antioxidant\_29

MFHQVWAALLSLYGLLFNSMNQCPEHSQLTALGMDDETETPEPHLGLWYFIAGAASTTEEL  
ATFDPVDNIVFNMAAGSAPRQLQLRATIRTKSGVCVPRKWTYRLTEGKGNMELRTEGRPD  
MKTDLFSSSCPGGIMLKETGQGYQRFLLYNRSHPPEKCV EEFQSLTSCLDKFAFLVTPRN  
QEACPLSSK

>antioxidant\_30

MAAPIVDAEYLKEITKARRELRS LIANKNCAPIMLRLAWHDAGTYDAQSKTGGPNGSIRN  
EEEHTHGANSGLKIALDLCEGVKAKHPKITYADLYQLAGVVAVEVTGGPDIVFVPRKDS  
NVCPEGRLPDAKQGFQHLRDVFYRMGLSDKDIVALSGGHTLGRAHPERSGFDGPWTQE  
PLKFDNSYFVELLKGESEGLLKLPTDKTLLEDPEFRRLVELYAKDEDAFFRDYAESHKCLS  
ELGFNPSSAGKAVADSTILAQSAFGVAVAAVVAFGYFYEIRKRMK

>antioxidant\_31

MAERVS LTLNGTLLSPPPTTTTTTMSSSLRSTTAASLLLRSSSSSRSTLTSASSLSFVRS L  
VSSPRLSSSSLSQKKYRIASVNRFSNSTTAATKSSSDPDQLKNAREDIKELLSTKFCHPIL  
VRLGWH DAGTYNKNIKEWPQRGGANGLRFDIELKHAANAGLVNALNLIKDIKEKYSGI  
SYADLFQLASATAIEEAGGPKIPMKYGRVDASGPEDCPEEGRLPDAGPPSPATHLREVFYR  
MGLDDKDIVALSGAHTLGRSRPERSGWGKPKETKYTK EPGAPGGQSWTPEWLKFDNSYF  
KEIKEKRDEDLLVLP TDAAIFEDSSFKVYAEKYAADQDAFFKDYAVAHAKLSNLGAEFNPP  
EGIVI

>antioxidant\_32

MGESERSEAFGIPRDSPLSSGDAAELEQLRREA AVLREQL ENAVGSHAPTRSARDIHQLEA  
RIDSLAARN SKLMETLKEARQQLLALREEVDRLGQPPSGYGVLLATHDDDTVDVFTSGR  
KMRLTCSPNIDAASLKKGQTVRLNEALTVEAGTFEAVGEISTLREILADGHRALVVGHA  
DEERVVWLADPLIAEDLPDGLPEALNDDTRPRKLRPGDSSLVDTKAGYAFERIPKAEVEDL  
VLEEVDPVSYADIGGLSRQIEQIRDAVELPFLHKELYREYSRPPKGVLLYGPPGCGKTLIA  
KAVANSLAKKMAEVRGDDAHEAKSYFLNIKGPELLNKFVGETERHIRLIFQRAREKASEG  
TPVIVFFDEMDSIFRTRGTGVSSDVETTVPQLLSEIDGVEGLENVIVIGASNREDMIDPAIL  
RPGRLDVKIKIERPDAAEAQDIYSKYLTEFLPVHADDLAEFDGDRSACIKAMIEKVVDRM  
YAEIDDNRFLLEVTYANGDKEVMYFKDFNSGAMIQNVVDRAKKNAIKSVLETGQPGLRIQ  
HLLDSIVDEFAENEDLPNTTNPDDWARISGKKGERIVYIRTLVTGKSSSASRAIDTESNLGQ  
YL

>antioxidant\_33

MSQARPATVLGAMEMGRRMDVTSSSASVRAFLQRGHTEIDTAFVYANGQSETILGDLGL  
GLGRSGCKVKIATKAAPMFGKTLKPADVRFQLETSLKRLQCPRVDLFYLFHPDHGTPIEET  
LQACHQLHQEGKFVELGLSNYVSWEVAEICTLCKKNGWIMPTVYQGMYNAITRQVETEL  
FPCLRHFGRLRFYAFNPLAGLLTGRYKYQDKDGNPESRFFGNPFSQLYMDRYWKEEHFN  
GIALVEKALKTTYGPTAPSMISA AVRWMYHHSQLKGTQGD AVILGMSSLEQLEQNLALVE  
EGPLEPAVVDAFDQAWNLAHECPNYFR

>antioxidant\_34

MEDSHKSTTSETAPQPGSAVQGAHISHIAQQVSSLSESEESQDSSDSIGSSQKAHGILARRPS  
YRKILKDLSSDTRGRKGDGENSGVSAAVTSM SVPTPIYQTSSGQYIAIAPNGALQLASPG  
TDGVQGLQTLTMTNSGSTQQGTTILQYAQTS DGQQILVPSNQVVVQTASGDMQTYQIRTT  
PSATSLPQTVVMTSPVTLTSQTTKTDDPQLKREIRLMKNREAARECRKKKEYVKCLENR  
VAVLENQNKTLIEELKTLKDLYSNKSV

>antioxidant\_35

MPKHEFSVDMTCEGCSNAVTRVLNKLGGVQFDIDLPNKKVCINSEHSVDTLLETLGKTGK  
AVSYLGPK

>antioxidant\_36

MTYSFFVDMTCGGCSKAVNAILSKIDGVSNIQIDLENKKVSCCESSKMGADPELLKNIQKTG  
KKCSIIA

>antioxidant\_37

MSMASIASSSSTLLSSSRVLLPSKSSLLSPTVSFPRIIPSSSASSSSLCSGFSSLGSLTTNRSAS  
RRNFAVKAQADDLPLVGNKAPDFEAEAVFDQEFIKVKLSEYIGKKYVILFFYPLDFTFVCP  
TEITAFSDRYEEFEKLNTEVLGVSVD SVFSLAWVQTD RKSGGLGDLNYPLVSDITKSISKS  
FGVLIPDQGIARGLFIIDKEGVIQHSTINNLGIGRSVDETMRTLQALQYVQENPDEVCPAG  
WKPGEKSMKPPDKLSKEYFSAI

>antioxidant\_38

GLFIIDKEGVIQHSTINNEGVIQHSTINNLAI GRFGVLLADQGLALRSIPNGPSAL

>antioxidant\_39

MNPLKAGDIAPKFSLPDQDGEQVNLTDFQGQRVLVYFYPKAMTPGCTVQACGLRDNMD  
ELKKAGVDVLGISTDKPEKLSRFAEKELLNFTLLSDEDHQVCEQFGVWGEKSFMGKTYD  
GIHRISFLIDADGKIEHVFD DFKTSNHHDVVLNWLKEHA

>antioxidant\_40

MEIDQNLQFPISTRDAVHEKNCTLRVKSTKKRRSSTKDEETRGMHPHIKSSFRNGMNHA

RVIREEDMEVVFEPFCFINLSKPVYVNVNGIGGINEIHKLPILFSSFVLCFFGNVSGDYGYVDN  
VPLHISVISHFYPCLOSYNTDVGITTDTVENICQWKAHLPRALQFSLPVISDSNNEICREM  
GMLHPLGGAKLALDAIVIIDSIGRRRDILPIRTTTCVSTLITAVQETVRFLAIENGRLL

>antioxidant\_41

MSATESSSIFTLSHNSNLQDILAAANAKWASQMNNIQPTLFPDHNAKGQSPHTLFIGCSDSR  
YNENCLGVLPGEVFTWKNVANICHSEDLTKATLEFAIICLKVNKVIICGHTDCGGIKTCLT  
NQREALPKVNC SHLYKYLLDDIDTMYHEESQNLHLKTQREKSHYLSHCNVKRQFNRIEN  
PTVQTAVQNGELQVYGLLYNVEDGLLQTVSTYTKVTPK

>antioxidant\_42

MKLLILTCLVAVALARPKHPIKHQGLPQEVLNENLLRFFVAPFPEVFGKEKVNELSKDIGSE  
STEDQAMEDIKQMEAESISSEEIVPNSVEQKHIQKEDVPSEYLGYLEQLLRLKKYKVPQ  
LEIVPNSAEERLHSMKEGIHAQQKEPMIGVNQELAYFYPELFRQFYQLDAYPSGAWYYVP  
LGTQYTDAPSFSDIPNPIGSENSEKTTMPLW

>antioxidant\_43

MKVLILACLVALALARELEELNVPGEIVESLSSSEESITRINKKIEKFQSEEQQQTEDELQDK  
IHPFAQTQSLVYPPGPIPNLQNIPLTQTPVVVPPFLQPEVMGVSKVKEAMAPKHKEMP  
FPKYVPEPFTESQSLTLTDVENLHLPLQLSWMHQPHQLPPTVMFPPQSVLSLSQSKVLP  
VPQKAVPYPQRDMPIQAFLLYQEPVLGPVVRGPFPIIV

>antioxidant\_44

MDPYKHRPSSGNSSSFWTTNSGAPVWNNNSALTVGQRGPILLEDYHLIEKLAQFDRERIPE  
RVVHARGASAKGFFEVTVDVSHLTCADFLRAPGVQTPVIVRFSTVVHERGSPETLRDPRG  
FAVKFYTREGNFDLVGNMMPVFFIRDGMKFPDMVHAFKPNPKTNLQENWRIVDFFSHHPE  
SLHMFTFLFDDVGIPLNYRHMEGFGVNTYSLINRDGKPHLVKFHWKPTCGVKCLLDNEA  
VTVGGTCHSHATKDLYDSIAAGNYPEWKLYIQTIDLHEDKFDPLDVTKTWPEDIPLQ  
PVGRMVLNKNVDNFFAENEQIAFCPAISVPAIHYSDDKLLQTRIFS YADTQRHRLGPNYLM  
LPVNAPKCAHHNNHHDGFMNFMHRDEEVNYFSPSRFDPARHAEKVIPIPRVLTREKCI  
QKENNFKQAGERYRSFDPARQDRFIQRWVDALTHPRVTHEHRTIWISYWSQCDAAALGQK  
LPSRLNLKPSM

>antioxidant\_45

MADSRDPASDQMKHWKEERAAQKPDVLTAGGNPVGDKLNIMTVGPRGPLLVQDVVFT  
DEMAHFDRERIPERVVHAKGAGAFAYFEVTHDITKYCKAKVFEHIGKKTPIAVRFSTVAGE  
SGSADTVRDRPRGFAVKFYTEEGIWDLVGNNTPIFFIRDALLFPSFIHSQKRNPQTHLKDPDM  
MWDFWSLRPELSLHQVSFLFSDRGIPDGHRHMNGYGSHTFKLVNGSGEAVYCKFHYKTDQ  
GIKNLSVEDAARLSQEDPDYGLRDLFNAIATGNYPSTLYIQVMTFQQAQSFNPFDLTK  
IWPBKDYPLIPVGKLVNLRNPVNYFAEVEQIAFDPSNMPPGIEPSPDKMLQGRLFAYPDTH  
RHRLGPNYLQIPVNCYPYRTRVANYQRDGPVCVTDNQQGAPNYYPNSFSAPVEQRQALEH  
TSRCSGDVGRYNSTDDDNVTQVRAFYTQVLNEEQRRRLCENIAGHLKDAQLFIQKKAVK  
NFMVDVHPDYGNRIQTLLDKYNVEKPKNAIHTFVQDGSLSAKEKANL

>antioxidant\_46

MRLSLWNLGLSGLVVASCPYMSGEDQEYHISHIQARGTDSEFLDQFKVEDSNSYLTDA  
GGPIQDDASLKAGERGPTLLEDIFRQKIQHFDHERVPERAVHARGAGAYGTFTSYADWT  
NITAASFLNSKGKETPVFVRFSTVAGSRGSADTVRDVHGFATRFYTDEGNFDIVGNNIPVFF  
IQDAILFPDLVHAVKPSPDSEIPQAATGHDSA WDFFSQQPSTLHTLFWAMSGHGIPRSYRH  
MDGFGVHTMRLVTDDGKSKLVKWHWKTQKQKASLVWEEAQILAGKNPDFHRQDLWD

DINAGNGPEWELGVQIVDEEDVQAFGFDLLDPTKFLPEELVPVTILGKMKLTDNPTNYFAE  
TEQVMFQPGHIVRGVDFSDDLLQGRIYSYLDLTLNRNGGPNFEQLPVNRPRTKVHNNN  
RDGAGQMFIHTNKAPYSPNSLSGGNPKQANQTKGRGFFTAPSRKVVGSLHRGTASSFADV  
WSQPRMFYNSLIPSEQQFLVNAIRFEISQLKSDLIKKNTLMQLNRVSNLDRVAAVIGYKP  
LDPSPEFYTNATTDYVTIFGKPLPSVVGFTVGILASTSSSTSISQAAQLATSFSSRGIRAVIVG  
ESLLSGTDQTYSSADATAFDVAVVVMGAETLFGPVAKPNTLFPSSGRPSQILHDAYRWGKP  
VGAUSKASVVLEPLPGTKNQGGVYRVESVNELATSIAKGLETFRFVDRFPLDS

>antioxidant\_47

MSFRAPNLIRSTVGRRAGQTLNLRVQVIRRRFATEGGPEITKPSAPRSSNTGYIFAGLGVA  
VGAAYFYGTGRTEHDSTNKADTVVREAVATVEAKTGLRRGKDEYQKVYNRIAETLDKE  
GYDDGSLAPVLLRLAWHASGTYSKADGTGGSNFATMRFKPEAEHSANGLHVAREHME  
KIKQEFPWISYGDWTLGGVCAIQESGGPTIPWRPGRIDGYAAQVTPDGRLPDATQAQDH  
LRFIFNRMGFNDQEIVALSGAHAMGRCHPNRSGFDGPWTFSPVTFSNQYFALLRDEPWQ  
WKKWTGPAQFEDKKTTLMLPTDMALVKDKSFKKYVDIYADNEEKFFSDFAKAFSKLI  
ELGVPERQWAGEPWTMATS

>antioxidant\_48

MKILILGIFLFCSTPAWAKEKHYYIGIETTWDYASDHGEKKLISVDTEHSNIYLQNGPDRI  
GRLYKKALYLQYTDFTFRITIEKPVWLGLFGPIIKAETGDKVYVHLKNLASRPYTFHSHGI  
TYYKEHEGAIYPDNTTDFQRADDKVYPGEQYTYMLLATEEQSPGEGDGNVCVTRIIYHSHID  
APKDIASGLIGPLIICKKDSLDKEKEKHIDREFVVMFVVDENFSWYLEDNIKTICYSEPEKV  
DKDNEDFQESNRMYSVNGYTFGSLPGLSMCAEDRVKWYLFMGNEVDVHAAFFHGQA  
LTNKNYRIDTINLFPATLFDAYMVAQNPGEWMLSCQNLNHLKAGLQAFFVQVECNKSSSK  
DNIRGKHVRHYIAAEEIWNYPAGSIDIKTENLTAPGSDSAVFFEQGTTRIGGSYKLVY  
REYTDASFTNRKERGPEEEHLGILGPVIWAEVGDITRVTFHNKGAYPLSIEPIGVRFNKNNE  
GTYYSPNYNPQRSVPPSASHVAPTETFTYEWTVPKVGPVCLAKMYYSAVDPTK  
DIFTGLIGPMKICKKGS LHANGRQKDVDKEFYLFPTVFDENESLLEDNIRMFTTAPDQVD  
KEDEDFQESNKMHSNMGFMYGNQPLTMCKGDSVWVYLFSAAGNEADVHGIYFSGNTYL  
WRGERDANLFPQTSLLHMPDTEGTFNVECLTTDHYTGGMKQKYTVNQCRRQSED  
STFYLGERTYYIAAVEVEWDYSPQREWEKELHHLQEQNVSNAFLDKGEFYIGSKYKVV  
YRQYTDSTFRVPVERKAEHLGILGPQLHADVGDVKIIFKNMATRPYSIHAHGVTQESS  
TVTPTLPGETLTYVWKIPERSGAGTEDSACIPWAYYSTVDQVKDLYSGLIGPLIVCRRPYLK  
VFNPRRKLEFALLFLVFDENESWYLLDNIKTYS DHPEKVNKDDEEFIESNKMHAINGRMF  
GNLQGLTMHVGDEVNMYLMGMGNEIDLHTVHFHGHFSFYKHRGVYSSDVDFIFPGTYQ  
TLEMFPRTPGIWLLHCHVTDHIHAGMETTYTVLQNEDETKSG

>antioxidant\_49

MEMALLPQSPARYFLRTPSWSAVAIFQAVKIKPLQLRTNSSNSVTPNLISPSKKS WKDLFS  
KRWQYYAEISRAGSPTGYLLYSPCTWSILMAAYAYDSSLVNVTKMLALFGVGSFLM RSA  
GCVINDLWDRELDKVERSRSRPLASGKLSVRQAISLLSVQLTASLGILLQLNPYTIKLGVA  
SLVPVCIYPAMKRITYYPQVVLGLTFGYGAVMGWPALAGEACMNWSV VAPLYLSTISWIV  
LYDTIYAHQDKRDDVKANIYSTALRFGDNTKPVLCGLAALQIATLATAGIMNGQGPV FYT  
LGVAGAAAYRLSSMIYKVDLDDPKDCFRWFKRNSNTGYLVAAAIALDWLAKSFIYDS

>antioxidant\_50

MSCNQKKECKKECQEKECCKECCPRIKAFKFFINTFEKAQIGKEAPEFKAPAYCPCGSI  
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WCEADKSKGGVGLTFPLVSDIKRCISIKYGMLNVEAGIARRGYVIIDDKGKVRYIQMND  
DGIGRSTEETIRIVKAIQFSDEHGAVCPLNWKPGKDTIEPTPDGIKKYLTAH

>antioxidant\_51

MGDVEKGGKIFIMKCSQCHTVEKGGKHKGTGPNLHGLFGRKTGQAPGYSYTAANKNKGII  
WGEDTLMEYLENPKKYIPGTKMIFVGIKKKEERADLIAYLKATNE

>antioxidant\_52

MHLSERVEQLRLNDCPDWLYLLHEFDALYRQGSDDGSRPIRTHRKRVRDSLALIVEANPA  
VNDRPPEVKPVT AHLGRALDLGERGAVQGM SRALARVAGRLTWEYGYEKVPKALARKY  
AYCEILGPRGPICAEERLILGFVLFAPSTTYPQHSHKDIEESYISVAGAWSENDAAVHAPGSLI  
LNRPGLEHRITTDGDLSPCLLAYAWTGSEERLNQPGMKLSSPRKARIEKGI

>antioxidant\_53

MALEICVKA AVGAPDHLGDCPFSQRALLTLEEKSLTYKIHNLNSDKPQWFLDISPQGKVP  
VLKIDDKWVTDSDVIVGILEEKYPDPPLKTPAEFASVGSNIFGTFTGFLKSKDSNDGSEHAL  
LVELEALENHLKSHDGPFIAGERVSAVDLSLAPKLYHLQVALGHFKSWSVPESFPVHNY  
MKTLFSLDSFEKTKTEEKYVISGWAPKVN

>antioxidant\_54

MVESRRAAAAASAYASRCGIAPATSQRSLATPPTISVPSGEGRCRCHVARGAGRDP RRRRLR  
RRRWCGRCGYHSHLTGGEFDVNRLCQQRSRERSQQLVAVPADPRPKRQRITDVLTLALVG  
FLGGLITGISPCILPVLPIFFSGAQSVDAAQVAKPEGAVAVRRKRALSATLRPYRVIGGLVL  
SFGMVTLLGSALLSVLHLPQDAIRWAALVALVAIGAGLIFPRFEQLLEKPF SRIPQKQIVTRS  
NGFGLGLALGVLYVPCAGPILAAIVVAGATATIGLGTVVLTATFALGAALPLFFALAGQRI  
AERVGAFRRRQREIRIATGSVTILLAVALVFDLPAALQRAIPDYTASLQQQISTGTEIREQLN  
LGGIVNAQNAQLSNCSDGAAQLESCGTAPDLKGITGWLNTPGNKPIDLKS LRGKVVLIDF  
WAYSINCQRAIPHVVGWYQAYKDSGLAVIGVHTPEYAFEKVPGNVAKGAANLGISYPIA  
LDNNYATWTNRYNRYPAEYLIDATGTVRHIKFGEGDYNVTETLVRQLLNDAKPGVKLP  
QPSSTTTPDLTPRAALTPETYFGVGKVVNYGGGGAYDEGS AVFDYPPSLAANSFALRGRW  
ALDYQGATSDGNDAAIKLNYHAKDVYIVVGGTGTLT VVRD GK PATLPISGPPTTHQV VAG  
DRLASETLEVRPSKGLQVFSFTYG

>antioxidant\_55

MTHYDVVVVLGAGPGGYVA AIRAAQLGLSTAIVEPKYWGGVCLNVGCIPSKALLRNAELV  
HIFTKDAKAFGISGEVTFDYGIAYDRSRKVAEGRVAGVHFLMKKNKITEIHGYGTFADANT  
LLVDLNDGGTESVTFDNAAIATGSSTRLVPGTSLSANVVTYEEQILSRELPKSIIIAGAGAIG  
MEFGYVLKNYGVDVTIVEFLPRALPNEDADVSKEIEKQFKKLGVTILTATKVESIADGGSQ  
VTVTVKDGV AQELKAEKVLQAIGFAPNVEGYGLDKAGVALTDRKAIGVDDYMR TNVG  
HIYAIGDVNGLLQLAHVAEAQGVVAETIAGAETLTLGDHRMLPRATFCQPNVASFGLTEQ  
QARNEGVDVVAKFPFTANAKAHGVGDPSGFVKLVADAKHGELLGGHLVGH DVAELLPE  
LTLAQRWDLTASELARNVHTHPTMSEALQECFHGLVGHMINF

>antioxidant\_56

MSFPFASLLKRPSAISLLSLKKPGSWSSILLKAVGVLSRDSRWHS DLLKMLTEEMDSLNG  
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LIHAANIIHINIGEEQSNEQIKLATLVGDYLLGKASVDLAHLENN AITEIMASVIANLVEGHF  
GSRQNGSVGLSNERTILLQSAFMPAKACL CASILNNSQYINDACFN YGKFLGSLQLAHK  
PVSPDAQVLQKNN DILKTYVENAKSSLSVFPDIEAKQALMEIANSVSK

>antioxidant\_57

MKNFSIAKSRRLRSTPYTSRIEKQGVTAITYNHMLLPAAFGSIEDSYKHLKEHVQIWDVA  
AERQVEISGKDSAELVQLMTCRDLSSKIGRCYYCPIIDENGNLVNDPVVLKLDENKWWI  
SIADSDVIFFAKGLASGHKFDVKIVEPVVDIMAIQGPKSFALMEKVFGKKITELKFFGFDYF  
DFEGTKHLIARSGWSKQGGYEVYVENTQSGQKLYDHLFEVGKEFNVGPGCPNLIERIESA  
LLSYGNDFDNNNDNPFECGFDQYVSLDSINFLGKEKLKEIKLKGPKKLRGVKIDIKEISLT  
GSKNIYDENNNVIGELRSACYSPHFQKVIGIAMIKKSHWEASQGFKIQINDNTINGNVCDL  
PFI

>antioxidant\_58

MASIFPSRRVRRTPFSAGVEAAGVKGYTVYNHMLLPTVFDSLQADCAHLKEHVQVWDV  
ACERQVSIQGPDALRLMKLISPRDMDRMADDQCYVPTVDHRGGMLNDPVAVKLAADH  
YWLSLADGDLLQFGLGIAIARGFDVEIVEPDVSPLAVQGPRADDLMARVFGEAVRDIRFFR  
YKRLAFQGVVELVVARSGWSKQGGFEIYVEGSELMPLWNALFAAGADLNVVRAGCPNIE  
RVESGLLSYGNDMTRENTPYECGLGKFCNSPEDYIGKAALAEQAKNGPARQIRALVIGGEI  
PPCQDAWPLLADGRQVGQVGSIAHSPEFGVNVVAIGMVDRSHWAPGTGMEVETPDGMRP  
VTVREGFWR

>antioxidant\_59

MGEALRRSTRIAISKRMLEEEESKLAPISTPEVPKIKIKTGPKHNANQAVVQEANRSSDVN  
ELEIGDPIPDLSLLNEDNDSISLKKITENNRVVFFVYPRASTPGCTRQACGFRDNYQELKK  
YAAVFGLSADSVTSQKKFQSKQNLPHYLLSDPKREFIGLLGAKKTPLSGSIRSHFIFVDGKL  
KFKRVKISPEVSVNDAKKEVLEVAEKFKEE

>antioxidant\_60

MIQYVYLKHMRLKLSLWLGKVRSTVLRFSSTNRNASHLIKNELEQISPGIRQMLNSNSEFLEE  
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AQITEMIHIALSLHDDVIDHANVRRGSPSSNVAFGNRRSILAGNFILARASTAMARLRNPQ  
VTELLATVIADLVRGEFLQLKNTMDPSSLEIKQSNFDYIEKSFLKTASLISKSCASTILGQ  
CSPTVATAAGEYGRICIGTAFQLMDDVLDYTSKDDTLGKAAGADLKLGLATAPVLFWKK  
YPELGAMIVNRFNHPSDIQRARSLVECTDAIEQTITWAKEYIKKAKDSLLCLPDISPARKALF  
ALADKVITRKK

>antioxidant\_61

MQEKQPQPKVVGVEILEKSGLDIKKLVKLVKATAAEFTTYYYTILRMHLTGMEGEGLK  
EIAEDARLEDRLHFELMTQRIYELGGGLPRDIRQLADISACSDAYLPENWKDPKEILKVL  
EAEQCAIRTWKEVCDMTYGKDPRTYDLAQRILQEEIEHEAWFLELLYGRPSGHFRRSSPG  
NAPYSKK

>antioxidant\_62

MSFLQDPSFFTMGMWSIGAGALGAAALALLANTDVFLSKPQKAALYLEDIDLKTLEK  
EPRTFKAKELWEKNGAVIMAVRRPGCFLCREEAADLSSLKSMLDQLGVPLYAVVKEHIRTE  
VKDFQPYFKGEIFLDEKKKIFYGPQRRKMMFMGFIRLGVWYNFFRAWNGGFSGNLEGEF  
ILGGVFVVGSGKQGILLEHREKEFGDKVNLLSVLEAAKMIKPQTLASEKK

>antioxidant\_63

MSFSGKYQLQSQENFEAFMKAIGLPEELIQKGKDIKGVSEIVQNGKHFKFTITAGSKVIQN  
EFTVGECELETMTGEKVKTVVQLEGNKLVTTFKNIKSVTELNGDIITNTMTLGDIVFKR  
ISKRI

>antioxidant\_64

MAELKLGKASAEQFAPRELVELAVLAESAGMDSATVSDHFQWRHEGGHAPFSLAWMT

AVGERTKNLVLGTSVLTPTFRYNPAVIAQAFATMGCLYPGRIFLGVGTGEALNEIATGYAGE  
WPEFKERFARLRESVRLMRELWLGDVDFDGEYYRTKGASIYDVPEGGIPVYIAAGGPVV  
AKYAGRAGDGFICTSGKGEELYAEKLIPAVKEGAAAADRDADAIDRMIEIKISYDTPELA  
LENTRFWAPLSLTAEQKHSIDDPiEMEKAAADALPIEQVAKRWIVASDPDEAVEKVGQYVK  
WGLNHLVFHAPGHDQRRFLELFKRDLEPRLRKL

>antioxidant\_65

MASSLNLGSPAPPIKVQNWLRGDPLSNFQLGKIYVVEFFSIYCGYCAPELSDLAKLHKKFI  
DTRVEFIGIAASEEAATADDARAQVDASITKSLPNTNIRMGFDHSGEMDEDWLKASLSFH  
VPKTFVVD RDGSIAFIGDLVMLQDVL PKVIDGNWRASGKQRMPKRSGLLKARLMLRRLF  
HDRVSA AIEIKNWKAPLSAIEEGINLNPDSIFLRRNLYWHE

>antioxidant\_66

MVKHQPLQYYEPQLCLSLTGIYGCRWKRYQRSHDDTTKWERLWFLILTSSFFLTLVWFY  
FWWEVHNDYNEINWFLYNRMGYWSDWSIPILVTTAAGFTYITVLLILALCHIAVGQQMNL  
HWLHKIGLMTTLITTVTMSSIAQLWDDWEMVFISLQATAPFLHIGALAAVTALSWLIAG  
QFARMEKATSQMLMVTAYLAVVVALYLVPLTISSPCIMEKKALGPKPAIIGHRGAPMLAPE  
NTLMSFQKAVEQKIYGVQADVILSYDGV PFLMHDKTLRRTTNVEEVFPGRAYEHSSMFN  
WTDLEMLNAGEWFLRNDPFWTAGSLRS DYLEAANQSVCKLADM LEVIKDNTSLILNFQ  
DLPPDHPYYTSYINITLKTILASGIQQAVMWLPDTERQLVRQIAPAFQQTSGLKLDAERLR  
EKGIVKLNLR YTKVTNEDVRDYMAANLSVNLYTVNEPWLYSILWCTGVPSVTS DSSHVL  
RKVPFPIWLMPPDEYRLIWITSDLISFIIIVGVFIFQNYHNDQWRLG SIRTYNPEQIMLSAAV  
RRSSRDVKIMKEKLIFSEINNGVETDDELSCSENGYANEMVTPTDHRDTRLRMN

>antioxidant\_67

MKKKLVVLGLLAVVLVLVIVGLCLWLPSASKEPDNHVYTRAAVAADAKQCSKIGRDALR  
DGGSAVDA AIAALLCVGLMNAHSMGIGGGLFLT IYNSTTRKA EVINAREVAPRLAFATMF  
NSSEQSQKGLSVAVPGEIRGYELAHQRHGRLPWARLFQPSIQLARQGFPVKGGLAAALE  
NKRTVIEQQPVLCEVFCRDRKVLREGERLTLPQLADTYETLAIEGAQAFYNGSLTAQIVKD  
IQAAGGIVTAEDLN NYRAELIEHPLNISLGDVVLYMPSAPLSGPVLALILNILKGYNFSRES  
VESPEQKGLTYHRIVEAFRFAYAKRTLLGDPKFVDVTEVVRNMTSEFFAAQLRAQISDDTT  
HPISYYKPEFYTPDDGGTAHLSVVAEDGSAVSATSTINLYFGSKVRSPVSGILFNNEMDDFS  
SPSITNEFGVPPSPANFIQPGKQPLSSMCPTIMVGDGQVRMVVGAAGGTQITTATALAIY  
NLWFGYDVKRAVEEPRLHNQLLPNVTVERNIDQAVTAALETRHHHTQIASTFI AVVQAI  
RTAGGWAAASDSRKGGE PAGY

>antioxidant\_68

MSWRRAASVGRRLVASGRILAGRRGAAGAAGSGMGNSTSSFWGKSTTTPVNQIQETISN  
NCVVIFSKTSCSYCSMAKKIFHDMNVNYKAVELDMLEYGNQFQDALHKMTGERTVPRIF  
VNGRFIGGAADTHRLHKEGKLLPLVHQCYLKKKQEERH

>antioxidant\_69

MRSMKALQKALS RAGSHCGRGGWGHPRSPLGGGVRHHLSEAAAQGRETPHSHQPQH  
QDHDSSES GMLSR LGDLLFYTIAEGQERIPHKFTTALKATGLQTS DPRLRDCMSEMRV  
QESSSGLLDRDLFRKCVSSNIVLLTQAFRKKFVIPDFEFTGHVDRIFEDVKELTGKVA  
YIPQLAKSNPDLWGVSLCTVDGQRHSVGHTKIPFCLQSCVKPLTYAISISTLGTDYVHKFV  
GKEPSGLRYNKL SLNEEGIPHNPMVNAGAI VSSLIKMDCNKA EKFDVFLQYL NKMAGN  
EYMGFSNATFQSEKETGDRNYAIGYYLKEKKCFPKGVDMM AALDLYFQLCSVEVTCESG  
SVMAATLANGGICPITGESVLSAEAVRNTLSLMHSCGM YDFSGQFAFHVGLPAKSAVSGAI

LLVVPNVMMGMMCLSPPLDKLGNHRGTSFCQKLVSLFNHNYDNLRHCAKLDPRREGA  
EIRNKTVVNLLFAAYS GDVSALRRFALSAMDMEQKDYDSRTALHVA AAEHIEVVKFLIE  
ACKVNPFAKDRWGNIPLD DAVQFNHLEVVKLLQDYQDSYTLSETQAEAAAEALSKENLE  
SMV

>antioxidant\_70

SALYALYDFSPARKMRAYTVRAYVHGSYSRRGPWYDFEPVPGASMDGL

>antioxidant\_71

MKALILVGGFGTRLRPLTSLFPKPLVDFANKPMILHQIEALKAVGVDEVVLAINYQPEVML  
NFLKDFETKLEIKITCSQETEPLGTAGPLALARDKLLDGS GEPFFVLNSD VISEYPLKEMLE  
FHKSHGGEASIMVTKVDEPSKYGVVMEESTGRVEKFVEKPKLYVGNKINAGIYLLNPSV  
LDKIELRPTSIEKETFPKIAAAQGLYAMVLPGFWM DIGQPRDYITGLRLYLD SLRKKSPAKL  
TSGPHIVGNVLVDETATIGEGCLIGPDVAIGPGCIVESGVRLSRCTVMRGVRIKKHACISSII  
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>antioxidant\_72

MSEFYKLAPVDKKGQPPFDQLKGGVVLIVNVASKCGFTPQYKELEALYKRYKDEGFTII  
GFPCNQFGHQEPGSDEEIAQFCQLNYGVTFPIMKKIDVNGGNE DPVYKFLKSQKSGMLGL  
RGIKWNFEKFLVDKKGKVYERYSSLTKPSSLSETIEELLKEVE

>antioxidant\_73

MAASLSSRLIKGIANLKAVRSSRLTSASVYQNGMMRFSSTVPSDS DTHDDFKPTQKVPPDS  
TDSLKDIVENDVKDNPVMIYMKGVPESPQCGFSSLAVRVLQQYNVPISSRNILEDQELKNA  
VKSFSHWPTFPQIFIKGEFIGGSDIILNMHKEGELEQKLKDVSGNQD

>antioxidant\_74

MALLSQAGGSYTVVPSGVCSKAGTKAVVSGGVRNLDVLRMKEAFGSSYSRSLSTKSMML  
HSVKRSKRGHQLIVAASPPTEEAVVATEPLTREDLIAYLASGCKTKDKYRIGTEHEKFGFEV  
NTLRPMKYDQIAELLNGIAERFEWEKVMEGDKIIGLKQGKQSISLEPGGQFELSGAPLET  
HQTCAEVNSHLYQVKAVAEEMGIGFLGIGFQPKWRREDIPIMPKGRYDIMRNYMPKVGTL  
GLDMMLRTCTVQVNLD FSSEADMIRKFRAGLALQPIATALFANSPFTEGKPNGFLSMRSHI  
WTDTDKDRTGMLPFVFD DSFGFEQYVDYALDVPMYFAYRKNKYIDCTGMTFRQFLAGK  
LPCLPGELPSYNDWENHLTTIFPEVRLKRYLEM RGADGGPWRRLCALPAFWVGLLYDDD  
SLQAILDLTADWTPAEREMLRNKVPVTGLKTPFRDGLLKHVAEDVLKLA KDGLERRGYK  
EAGFLNAVDEVVRTGVTPAEKLLMYNGEWGQSVDPVFEELLY

>antioxidant\_75

MGLLSQGSPLSWEETKRHADHVRRHGILQFLHIYHAVKDRHKDVLK WGDEVEYMLVSF  
DHENKKVRLVLSGEKVLET LQEKGERTNP NHPTLWRPEYGSYMIEGTPGQPYGGTMSEF  
NTVEANMRKRKEATSILEENQALCTITSPRLGCPGFTLPEVKPNPVEGGASKSLFFPDEA  
INKHPRFSTLTRNIRHRRGEKVVINVPIFKDKNTPSPFIETFTEDDEASRASKPDHIYMDAM  
GFGMGNCC LQVTFQAC SISEARYLYDQLATICPIVMALSAASPFYRGYVSDIDCRWGVISA  
SVDDRTREERGLEPLKNNYRISKSRYDSIDSYLSKCGEKYNDIDLTIDKEIYEQLLQEGID  
HLLAQHVAHLFIRDPLTLFEEKIHLDDANESDHFENIQSTNWQTMRFKPPPPNSDIGWRVE  
FRPMEVQLTDFENSAYVVFVLLTRVILSYKLD FLIPLSKVDENMKVAQKRDAVLQGMFY  
FRKDICKGGNAVVDGCGKAQNSTELAAEYTLMSIDTIINGKEGVFPGLIPILNSYLENME  
VDVDTRCSILNYLKLIKKRASGELMTVARWMREFIANHPDYKQDSVITDEMNYSLILKCN  
QIANELCEPELLGSAFRKVKYSGSKTDSSN

>antioxidant\_76

MPGKPVLYHYFDGRGRMEPIRWLLAAAGVEFEENFLKTRDDLARLRSDGSLMFEQVPMVE  
IDGMKLVQTKAILNYIATKYNLYGKDMKERALIDMYAEGVADLELMVLYYPYMPPEGEKE  
ASLAKIKDKARNRYFPAYEKVLKSHGQDYLVGNKLSRADVSLVELLYHVEEMDPGIVDNF  
PLLKALRTRVSNLPTVKKFLQPGSQRKPFDEKCVESAKKIFS

>antioxidant\_77

MPMILGYWDIRGLAHAIRLLLEYTDNTYEERQYSVGDAPDYDRSQWLNEKFKLGLDFPN  
LPYLIDGTHKLTQSNAILRYIARKHNLCGETEEEMIRVDILENQVMDVRLAMARICYSPDF  
EKLKPGFLKEIPEKIKLFSEFLGKRPWFAGDKLTYVDFLVYDVLDMHRIFEPKCLDAFPNL  
KDFISRFEGLKKISAYMKSSRFLPGPLFMKLAVWGNK

>antioxidant\_78

MAPVYEGMASHVQVFSPTLQSSAFCSVKKLKIPESSNWDMTGYGSHSKVYSQSKNIPLS  
QPATTTVSTSLPVPNPSLPYEQTIVFPGSTGHIVVTSASSTSVTGQVLGGPHNLMRRSTVSL  
LDTYQKCGLKRKSEEIENTSSVQIEEHPPMIQNNASGATVATATTSTATSKNSGNSSEGDY  
QLVQHEVLCSMTNTYEVLEFLGRGTFGQVVKCWKRGTNEIVAIIKILKNHPSYARQGQIEV  
SILARLSTESADDYNFVRAyecfQHKNHTCLVFEMLEQNLYDFLKQNKFSPLPLKYIRPVL  
QQVATALMKLKSLGLIHADLKPENIMLVDPSRQPYRVKVIDFGSASHVSKAVCSTYLQSRV  
YRAPEIILGLPFCEAIDMWSLGCVIAELFLGWPLYPGASEYDQIRYISQTQGLPAEYLLSAG  
TKTRRFNRDTSPLYPLWRLKTPDDHEAETGIKSKEARKYIFNCLDDMAQVNMTTDLEGS  
DMLVEKADRREFIDLLKMLTIDADKRITPIETLNHPFVTMTHLLDFPHSTHVKSCFQNME  
ICKRRVNMYDTVNQSKTPFITHVAPSTSTNLMTFNNQLTTVHNQAPSSTSATISLANPEVS  
ILNYPSTLYQPSAASMAAVAQRSMPLQTGTAQICARPDFQALIVCPPGFQGLQASPSKH  
AGYSVRMENAVPIVTQAPGAQPLQIQPGLLAQQAWPSGTQQILLPPAWQQLTGVAHTSV  
QHATVIPETMAGTQQLADWRNTHAHGSHYNPIMQQPALLTGHVTLPAQPLNVGVAHV  
MRQQPTSTSSRKSQHQSSVRNVSTCEVSSQAISSPQRSKRKENTPPRCAMVHSSPAC  
STSVTCGWGDVASSTTRERQRQTIVIPDTPSPTVSVITISSDTDEEEEQKHAPTSTVSKQRK  
NVISCVTVHDSPLYSDSSNTSPYSVQQRAGHNNANAFDTKGSLENHCTGNPRTIIVPPLKT  
QASEVLVECDSLVPVNTSHHSSSYKSKSSSNVTSTSGHSSGSSSGAITYRQQRPGFHFQQQ  
QPLNLSQAQQHITTDRTGSHRRQQAYITPTMAQAPYSFPHNSPSHGTVHPHLAAAAAAAH  
LPTQPHLYTYTAPAALGSTGTVAHLVASQGSARHTVQHTAYPASIVHQVPVSMGPRVLPSP  
TIHPSQYPAQFAHQTYISASPASTVYTGYPLSPAKVNQYPYI

>antioxidant\_79

MESLLSSSSLVSAAGGFCWKKQNLKLHSLSEIRVLRCDSSKVVAKPKFRNNLVRPDGQGS  
SLLLYPKHKSRFRVNATAGQPEAFDSNSKQKSFRDSLDAFYRFSRPHTVIGTVLSILSVSFL  
AVEKVS DISPLLFTGILEAVVAALMMNIYIVGLNQLSDVEIDKVNKPYLPLASGEYSVNTGI  
AIVASFSIMSFWLGWIVGSWPLFWALFVSFMLGTAYSINLPLLRWKRFALVAAMCILAVRAI  
IVQIAFYLHIQTHVFGRPILFTRPLIFATAFMSFFSVVIALFKDIPDIEGDKIFGIRSFVTLGQ  
KRVFWTCVTLLQMAVAVAILVGATSPFIWSKVISVVGHVILATTLWARAKSVDLSSKTEITS  
CYMFIWKLFYAEYLLLPFLK

>antioxidant\_80

MSALGAVIALLLWGQLFAVDSGNDVTDIADDGCPKPEIAHGYPEHSVRYQCKNYYKLRT  
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TEGDGVYTLNNEKQWINKAVGDKLPECEAVCGKPKNPANPVQRILGGHLDAGKSFQWQA  
KMVSHHNLTTGATLINEQWLLTTAKNLFLNHSENATAKDIAPTLTLYVGKKQLVEIEKVVL  
HPNYSQVDIGLIKQKQKVSNERVMPICLPSKDYAEVGRVGYVSGWGRNANFKFTDHLK

YVMLPVADQDQCIRHYEGSTVPEKKTTPKSPVGVQPILNEHTFCAGMSKYQEDTCYGDAG  
SAFAVHDL EEDTWYATGILSFDKSCAVA EYGVYVKVTSIQDWVQKTIAEN

>antioxidant\_81

MQPDP RPSGAGACCRFLPLQSQCPEGAGDAVMYASTECKAEVTPSQHGNRTFSYTLEDHT  
KQAFGIMNELRLSQQLCDVTLQVKYQDAPAAQFMAHKVVLASSSPVFKAMFTNGLREQ  
GMEVVSIEGIHPKVMERLIEFAYTASISMGEKCVLHVMNGAVMYQIDSVVRACSDFLVQQ  
LDPSNAIGIANFAEQIGCVELHQRAREYIYMHFGEVAKQEEFFNLSHCQLVTLISRDDLNV  
RCESEVFHACINWVKYDCEQRRFYVQALLRAVRCHSLTPNFLQMQQLKCEILQSDSRCKD  
YLVKIFEELTLHKPTQVMPCRAPKVGRLIYTAGGYFRQSLSYLEAYNPSDGTWLRRLADLQ  
VPRSGLAGCVVGGLLYAVGGRNNSPDGNTDSSALDCYNPMTNQWSPCAPMSVPRNRIGV  
GVIDGHIYAVGGSHGCIHNSVERYEPERDEWHLVAPMLTRRIGVGVAVLNRLLYAVGGFD  
GTNRLNSAECYYPERNWRMITAMNTIRSGAGVCVLHNCIYAAGGYDGDQLNSVERYD  
VETETWTFVAPMKHRRSALGITVHQGRIYVLGGYDGHFTLDSVECYDPD TDTWSEVTRM  
TSGRSGVGVAVTMEPCRKQIDQQNCTC

>antioxidant\_82

MGNPENIEDAYVAVIRPKNTASLNSREYRAKSYEILLHEVPIEGQKKKRKKVLETKLQGN  
SEITQGILDYVVETTKPISPANQGIRGKRVVLMKKFPLDGEKMGREASLFIVPSVVKDNTK  
YTYTPGCPIFYCLQDIMRVCSSESSTHFATLTARMLIALDKWLDERHAQSHFIPALFRPSPLER  
IKTNVINPAYATESGQTENSLHMGYSALEIKSKMLALEKADTCIYNPLFGSDLQYTNRVDK  
VVINPYFGLGAPDYSKIQPKQEKWQRSMSSVTEDEKERQWVDDFPLHRSACEGDSELLSR  
LLSERFSVNQLDSDHWAPIHYACWYGKVEATRILLEKGCNPNLLNGQLSSPLHFAAGGG  
HAEIVQILLNHPETDRHITDQGRSPLNICEENKQNNWEEAAKLLKEAINKPYEKVRIYRM  
DGSYRSVELKHGNNTTVQQIMEGMRLSQETQQYFTIWICSENLSLQLKPYHKPLQHVRD  
WPEILAE LTNLDPQRETPQLFLRRDVRLPLEVEKQIEDPLAILILFDEARYNLLKGFYTAPD  
AKLITLASLLLQIVYGNYESKHKHKQGFLEENLKSIVPVTKLKSKAPHWTNRILHEYKNLS  
TSEGVSKEMHHLQRMFLQNCWEIPTYGAAFFTQGI FTKASPSNHKVIPVYVGVNIKGLHL  
LNMETKALLISLKYGCFMWQLGDTDTCFQIHSMENKMSFIVHTKQAGLVVKLLMKLNG  
QLMPTERN S

>antioxidant\_83

MANFQEHLSCSSSPHLPFSESKTFNGLQDELTA MG NHPSPKLLEDQKEKGMVRTELIESVH  
SPVTTT VLTSVSEDSRDQFENS VLQLREHDESETAVSQNSNTVDGESTSGTEDIKIQFSRS  
GSGSGGFLEGLFGCLRPVWNIIGKAYSTDYKLQQQDTWEVPFEEISELQWLGSGAQGAVF  
LGKFRAEEVAIKKVREQNETDIKHLRKLKHPNIIAFKGVCTQAPCYCIIMEYCAHGQLYEV  
LRAGRKITPRLLVDWSTGIASGMNYLHLHKIIHRDLKSPNVLVTHTD AVKISDFGTSKELS  
DKSTKMSFAGTVAWMAPEVIRNEPVSEKVDIWSFGVVLWELLTGEIPYKDVDSSAIIWGV  
GSNSLHLPVPSTCPDGFKILMKQTWQSKPRNRPSFRQTLMHLDIASADVLATPQETYFKSQ  
AEWREEVKKHFEKIKSEGTCIHLRDEELIRRRREELRHALDIREHYERKLERANNLYMELS  
AIMLQLEMREKELIKREQAVEKKYPGTYKRHPVRPIIHPNAMEKLMKRKGVPHKSGMQT  
KRPDLLRSEGIPTTEVAPTASPLSGSPKMSTSSSKSRYRSKPRHRRGNSRGS HSDFAAILKN  
QPAQENSPHTYLHQAQSQYPSLHHHNSLQQQYQQPPAMSQSHHPRLNMHGQDIATCA  
NNLRYFGPAAALRSPLSNHAQRQLPGSSPDLISTAMAADCWRSSEPKGQAGPWGCCQA  
DAYDPCLQCRPEQYGSLDIPSAEPVGRSPDLSKSPAHNPLENAQSSEKTEENEFSGCRSES  
SLGTSHLGTTPALPRKTRPLQKSGDSSSEEEGEVDSEVEFPRRQRPHRCISSCQSYSTFSSE  
NFSVSDGEEGNTSDHSNSPDELADKLEDR LAEKLDLLSQTPEIPIDISSHSDGLSDKECAV

RRVKTQMSLGKLCVEERGYENPMQFEESDCDSSDGECS DATVRTNKHYSSATW

>antioxidant\_84

MASELAMNSNDLPTSPLAMEYVNDFDLMKFEVKKEPVETDRIISQCGRLIAGGSLSTPMS  
TPCSSVPPSPSFSAPSPGSGSEQKAHLEDYYWMTGYPPQLNPEALGFSPEDAVEALISNSH  
QLQGGFDGYARGAQQLASAAGAGAGASLGSGEEMGPAAAVVSAVIAAAAAQSGAAPH  
YHHHHHHHHAAGHHHHPTAGAPGAAGSASASAGGAGGSGGGSGGPASAGGGGGGGGG  
GGGGAAGAGGALHPHHAAGGLHFDDRFSDEQLVTMSVRELNRQLRGVSKEEVIRLKQ  
KRRTLKNRGYAQSCRFRVQQRHVLESEKNQLLQQVDHLKQEISRLVRERDAYKEKEYEK  
LVSSGFRENGSSSDNPSSPEFFM

>antioxidant\_85

MTMQFLIASNVLLWLALIGCAVLMGLLRQVGLLHERSSPMGAMITDHGPDVGDAAPTF  
DLPDHSGAMVRIGGPSALKRPTLLMFTAPTCPVCDKLFPLIKSIARAEEKFSVVMISDGQPD  
EHQRFLAKHELDIRYVVS AEVGMFAFQVVKIPYGVLLDPEGVIRAKGLTNTREHLESLE  
ADKSGFASIQQFMTSRKHSHTAKAA

>antioxidant\_86

MTSGILIASNVLLWGAFLLAALMLGVIRQIGLLHERSAPLGAMMIDHGPDVGERSPIFNV  
NTFDGEPVLVGRSITPGRPSLLMFTGSPICQKLLPIRSVAAIEETDVLISDGTQAEHRQF  
LKDHPLDGELYVVS AEIGMRYQVSKVPYGVLLDQDGKILAKGLCNTREHVESLFETIREG  
HSTLQNYLKDENTAPKFKQVTANKVH

>antioxidant\_87

MDPETCPCPSGGSTCADSCKCEGCKCTSCKKSCCSCCPAECEKCAKDCVCKGGEEAAEA  
EAEKSCCCQ

>antioxidant\_88

MILLAVLFLCFISSYASVKGHTTGLSLNDRLYKLYSTEVLDRGKGLQDSVGYRISS  
NVDVALLWRNPDGDDDQLIQITMKDVNVENVNQQRGEKSIFKKGKSPSKIMGKENLEALQ  
RPTLLHLIHGKVKEFYQNEAVAIENIKRGLASLFQTLSSGTTNEVDISGNCKVITYQAH  
QDKVIKIKALDCKIARSGFTTPNQVLGVSSKATSVTTYKIEDSFVIAVLAETHNFGLNFL  
QTIKGVKIVSKQKLELKTTEAGPRLMSGKQAAAIKAVDSKYTAIPVGVVFQSHCKGCPSLS  
ELWRSTRKYLQPDNLSKAEAVRNFLAFIQHLRTAKKEEILQILK MENKEVLPQLVDAV TSA  
QTSDSLEAILDFLDFKSDSSIILQERFLYACGFASHPNEELLRALISKFKGSIGSSDIRETVMII  
TGTLVRKLCQNEGCKLKAVVEAKKLLGGLGKAEKKEDTRMYLLALKNALLPEGIPSLK  
YAEAGEGPISHLATTALQRYDLPFITDEVKKTLNRIYHQNRKVHEKTVRTAAAAILNNNPS  
YMDVKNILLSIGELPQEMNKYMLAIVQDILRFEMPASKIVRRVLKEMVAHNYDRFSRSGS  
SSAYTGYIERSPRSASTYSLDILYSGSGILRRSNLNFQYIGKAGLHGSQVVIEAQGLEALIA  
ATPDEGEENLDSYAGMSAILFDVQLRPVTFNNGYSDLMSKMLSASGDPISVVKGLILLIDH  
SQELQLQSGLKANIEVQGLAIDISGAMEFSLWYRESKTRVKNRVTVVITTDITVDSSFK  
AGLETSTETEAGLEFISTVQFSQYPFLVCMQMDKDEAPFRQFEKKYERLSTGRGYVSQKR  
KESVLAGCEPFLHQENSEMCKVVFAPQPDSTSSGWF

>antioxidant\_89

MAIRKLLLLLKPIDPYPFLQTEGASLIKNPQVLQYLESRCKVHKNAIKFCQEILSKKPVEW  
KPISRNDLSHPIRDVDMVITVGGDGTLLHASHFIDDSVPVLGVNSDPTQAHEVEELSDQFD  
ASRSTGHLCAATVENFEQVLDDILFGRVPAKVSRLSLKNSETLLSHALNDILIAQPCPAA  
VSRFSFKIKNKDGASSPKTVNCRSSGLRICTAAGSTAAMQSAGGFVMPMLSRDLQFMVRE  
PISPGSTASLMHSTFKPDQFMDVNWYSDHGTIYIDGCQVQHSVQLGDTIEISSDAPVLNVF

LSHGISQIRSR

>antioxidant\_90

MALRRVLLFVKPFDVYPPRPLAAAASSPPPPPPPLRVSNPKVLNYLDDRCRVHKETINLCK  
SVLQRKSIDWISVQRNDMSNPIHDVDLVISVGGDGTLLRASHFLNSSIPVLGVNSDPTCPD  
EVDELTFEFDARRSTGHLCAATAANFEQILDATLDGSRQPSELSRISVKLNGLQLPTYALN  
DILVSHPCPASVSRFSFRKRSNTGESSHLINCRSSGLRVATPAGSTAAMLSAGGFVMPISSE  
LQYMIREPISPRDADKPLLHGLVKQGQHILVVWYNEEGAVYFDGSHVMHSIQHGDTLEISS  
DAPILKVLPENLLKQGS

>antioxidant\_91

MSSTYKLNHTDSFANGDAKSLLPNPFNGFTHLTSLAQSEKAVQELLLQQTMPQATDDHLV  
EFSEALRTVAKALRGAAEGKALAQAEAAEWKRRYELERSKNVELQHKELSNVCADESN  
GQRMEHLAKSPRYAQEISSNGMETICSHEVLQDGGFNSFNKLRKASFKLSWGCKGM  
ANDQHKKEIVSFERGNISTAERSSKQISLTWESDPQTVLIITKPNSTSVRVLSDMVRWLRT  
QKGLNIYVEPRVKEELLESESSFNVTWEDDKEISLLHTKVDLLITLGGDGTVLWAASMF  
KGPVPIVPSMGLGFMTPFHSEQYRDCLEAILKGPISITLRHRLQCHIIRDKATHEYEP  
TMLVLNEVTIDRGISSYLTLNLECYCDNSFVTCVQGDGLLSTTSGSTAYSAAAGSMVHPQ  
VPGILFTPICPHSLSFRPLILPEHVTVRVQVPFNSRSSAWVSFDGKDRKQLEAGDALVCSMA  
PWPVSTACQVESTNDFLRSIHDGLHWNLRKTQSADGP

>antioxidant\_92

MEISMPPPQIYVEKTLAIKPDIVDKEEEIQDIILRSFGFTIVQRRKLRLSPEQCSNFYVEKYGK  
MFFPNLTAYMSSGPLVAMILARHKAIYWLELLGPNNSLVAKETHPDSLRAIYGTDDL RNA  
LHGSNDFAAAEREIRFMFPEVIVEPIPIGQAAKDYLNLHIMPTLLEGLTELCKQKPADPLIW  
LADWLLKNNPNKPKLCHHPIVEEY

>antioxidant\_93

MMDLELPPPGLPSQQDMDLIDILWRQDIDLGVSREVFDFSQRQKEHELEKQKKLEKERQE  
QLQKEQEKAFFAQLQLDEETGEFLPIQPAQHIPSETSGSANYSQVAPIKADDLYFDDCMQ  
LLAETFPFVDDNEVSSATFQSLVPDIPSHIESPVFTAPPQAQSPETLIVQVATAVLDDMQDIE  
QVWEELLSIPELQCLNIQNDKLAETSTVPSPETKLTEIDNYHFYSSMPSLDKEVGNCSPHFL  
NAFEDSFNSILSTEDSSQLTVNSLNSSATVNTDFGDEFYSAFIAEPSTSNGMPSATLSQSL  
ELLNGPIDLSLCKAFNQNHPESSTAEFNDSGSLNNTTSPMASPDHVSSESIYGD TLL  
GFSDEMEEIDSTPGNVKQKGPKTPSVWPPGDPVQPLSSSQGNSAAARDSQCENAPKKEV  
PVSPGHRKTPFTKDKHSSRLEAHLTRDELRAKALHIPFPVEKIINLPVEDFNEMMSKEQFN  
EAQLALIRDIRRRGKNKVAQNCRKRKLENIVELEQDL DHLKDEKEKLLKERGENDKSLH  
LLKKQLSTLYLEVFSMLRDENGKPYSPSEYSLQQTSDGNVFLVPKSKKPDTKKN

>antioxidant\_94

MAFSVQMPALGESVTEGTVTRWLKQEGDTVELDEPLVEVSTDKVDTEIPSPAAGVLT KIIA  
QEDDTVEVGGELAVIGDAKDAGEAAPAPEKVPAAQPESKPAPEPPVQPTSGAPAGGDA  
KPVLMPELGESVTEGTVIRWLKIGDSVQVDEPLVEVSTDKVDTEIPSPVAGVLVSISADE  
DATVPVGGELARIGVAADIGAAPAPKAPKVPPEPAPTPKAEPAPSPAAQPAGAAEGAPYV  
TPLVRKLA SENNIDLAGVTGTGVGGRIKQDVLAAAQKRAKAPAPAAQAAAAPAPKA  
PPAPAPALHLRGTTQKASRIRQITANKTRESLQATAQLTQTHEVDMTKIVGLRARAKAAF  
AEREGVNLTFLPFFAKAVIDALKIHPNINASYNEDTKEITYYDAEHLGFAVDTEQGLLSPVI  
HDAGDLSLAGLARAIAADIAARARSGNLKPELSSGGTFTITNIGSQGALFDTPIVPPQAAM  
LGTGAIVKRPRVVVDASGNESIGVRSVCYLPLTYDHRLIDGADAGRFLTITIKHRL EEGAFE



ADLGL

>antioxidant\_95

MENKFDHMKLENQLCFLLYASSREMTKQYKPLLDKLNITYPQYLALLLWEHETLTVKK  
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SKQSGEDLKQLKSALYTLETLHQKN

>antioxidant\_96

MTKDKNSPGLKKKSQSVINAPGFNPLAGAGKQTPQASKPPAPKTPHIEEQNNAANTQK  
HPSRRSELKRFYITIDTGQKKTLDKKGRRMSFQPKGTIEYTVESRDSLNSIALKFDTPN  
ELVQLNKLFSRAVVTGQVLYVPDPEYVSSVESSPSLSPVSPLSPTSSEAEFDKTTNPDVHPT  
EATPSSTFTGIRPARVVSSTSEEEEAFTKFLKINCKYITSGKGTVSGVLLVTPNNIMFDPHK  
NDPLVQENGCEEYGIMCPMEEVMSAAMYKEILDSKIKESLPIDIDQLSGRDFCHSKKMTG  
SNTEEIDSRIRDAGNDSASTAPRSTEESELSDEVFTESELSPIREELVSSDELRODKSSGASSES  
VQTVNQAEVESLTVKSESTGTPGHLRSDTEHSTNEVGTLCCHKTDLNNLEMAIKEDQIADN  
FQGISGPKEDSTSIIKNSDQDSFLHENSLSHQEESQKENMPCGETAEFKQKQSVNKGKQKQK  
EQNQDSQTEAEELRKLWKTHTMQQTKQQRENIQQVSQKEAKHKITSADGHIESSALLKE  
KQRHRLHKFLCLRVGKPMRKTFFVSQASATMQQYAQRDKKHEYWFAVPQERTDHLYAFFI  
QWSPEIYAEDTGEYTPREPGFIVVKKIEESETIEDSSNQAAAREWEVVSVAEYHRRIDALNT  
EELRTLCCRRLQITREDINSKQVATVKADLESESRPNLSDPSELLLPDQIEKLTKHLPPRTIG  
YPWTLVYGTGKHGTSKLTLYRTMTGLDTPVLMVIKDSQGQVFGALASEPLKVSDGFYGT  
GETFVFTFCPEFEVFKWTGDNMFFIKGDMDSLAFGGGGGEFALWLDGDLYHGRSHSCKT  
FGNRTLKSKEDFFIQDIEIWAFE

>antioxidant\_97

MTATNKQVILKDYVSGFPTESDFDFTTTTVELRVPEGTNSVLVKNLYLSCDPYMRIRMGPK  
DPSTAALAQAAYTPGQPIQGYGVSRIIESGHPDYKKGDLLWGIVAWEEYSVITPMTHAHFKI  
QHTDVPLSYTGLLGMPGMTAYAGFYEVCSPEGETVYVSAASGAVGQLVGGQLAKMMG  
CYVVGSAKSKEKVDLLKTKFGFDDAFNYKEESDLTAALKRCFPNGIDIYFENVGGKMLDA  
VLVNMNMHGRIVAVCGMISQYNLENQEGVHNLNIIYKRIRIQGFVVSDFYDKYSKFLFV  
LPHIREGKITYVEDVADGLEKAPEALVGLFHGKNVKGQVAVVARE

>antioxidant\_98

MFTLKKPLLVLLFLGTVSLSLCEQERAADDDEGEVIEEEVKRGFMDTAKNVAKNVAVTLI  
DKLRCKVTGGC

>antioxidant\_99

MSVEIESIEHELEESIASLRQAGVRITPQRQAILRYLISSHTHPTADEIYQALSPDFPNISVATI  
YNNLRVFKDIGIVKELTYGDSSSRFDNFTHNHYHIICEQCCKIVDFQYPQLNEIERLAQHM  
TDFDVTHHRMEIYGVCKECCQDK

>antioxidant\_100

MAKLTALTLLGLGLALFDGQKSSFQTRFNHREVTPVELPNCNLVKGIDNGSEDLLEILPNG  
LAFISAGLKYPGIMSFDPDKPGKILLMDLNEKDPVLELSITGSTFDLSSFNPHGISTFTDED  
NIVYLMVVNHPDSKSTVELFKFQEKEKSLHLKTIRHKLLPSVNDIVAVGPEHFYATNDHY  
FIDPYLKSWEHLGLAWSFVYTYSPNDVRVVAEGFDFANGINISPDGKYVYIAELLAHKIH  
VYEKXANWTLTPLKSLDFNTLVDNISVDPVTGDLWVGCHPNGMRIFYDPKNPPASEVLR  
IQDILSKEPKVTVAYAENGTVLQGSTVAAYKKGKMLVGTVFHKALYCELSQAN

>antioxidant\_101

MIRAANGFRISVRNTAVCLAPNFRQLKGFISIINLGSQYFRYNSVYKSKSIRLVNTLENRIVPV

YKECASPQSIGGKSNLKQLQWPKPPKNILILKKRMDERVDHCFETLVQHLQQTYPDICIITE  
TDVAKKFSYLNLYTWTEISDLEQKVDAITVGGDGTILHAASLFARSGMPPILSFSGLTGLF  
LLPFDGFSFQTAFADFYNSRSFVLMRMLRVAMKTKLYNESIYAMNEMHHRGLSPHMAV  
LKVFVNDKFLTEAVADGLIISTPTGSTAYSLSSGGPIVHPSINALLLTPICPNLSFRPVLFPDT  
FKISIETSNKSRVRPQLSIDGRPLGLTDIGQRIDITSVKDNAIPCIIRSHKEDDWVSDIVSLLR  
WNHPFHRKGW

>antioxidant\_102

MFVRVKLNKPKVWYRFYSTLDHSLKLQSGSKFVKIKPVNNLRSSSSADFVSPNSKLQS  
LIWQNPLQNVYITKKPWPSTREAMVEFITHLHESYPEVNVIVQPDVAEEISQDFKSPLEN  
DPNRPHILYTGPEQDIVNRTDLLVTLGGDGTILHGVSFMFGNTQVPPVLAALGTLGFLSPF  
DFKEHKKVFQEVSSRAKCLHRTRLECHLKKKDSNSSIVTHAMNDIFLHRGNSPHLTNLDI  
FIDGEFLTRTTADGVALATPTGSTAYSLSAGGSIVSPLVPAILMTPICPRSLSFRPLILPHSSHIR  
IKIGSKLNQKPVNSVVKLSVDGIPQQDLVDGDEIYVINEVGTIYIDGTQLPTTRKTENDFNN  
SKKPKRSGIYCVAKTENDWIRGINELLGFNSSFRLTKRQTDND

>antioxidant\_103

MAAPTAAALSTLSTASVTSGKRFITSSFSLSFSSRPLATGVRAAGARAARRSAASASTVVAT  
IAVGDKLPDATALSYFDPADGELKTVTVAELTAGRKAVLFAVPGAFTPTCSQKHLPGFIEKAG  
ELHAKGVDAIACVSVNDAFVMRAWKESLGLGDADVLLSDDGNLELALTRALGVEMDLSDK  
PMGLGVRSTRYALLADDGVVKVLNLEEGGAFTTSSAEEMLKAL

>antioxidant\_104

MAATAGRLFRASLIRHVS AIPWGISASAALRPAASRRMCLTNALWSGSDQAKFAFSTSSSY  
HAPAVTQHAPYFKGTAVVSGEFKEISLDDFKGKYLVLFFYPLDFTFVCPTEIIAFSDKASEF  
HDVNCEVVAVSVDSHFSLAWINTPRKNGGLGHMNIALLSDLTKQISRDYGVLLGPGLA  
LRGLFIIDPNGVIKHLVNDLPVGRSVEETLRLVKAFQFVEAHGEVCPANWTPESPTIKPHP  
TASREYFEKVNQ

>antioxidant\_105

MEAPPPPPPLPATTAPGRSRKLLLLPLLLFLLRAEAVRGFEAEERPRTREEECHFYAGGQV  
YPGEVSRVSAEHSLSKAKISKAPYWEGTAVINGEFKELKLTDIRGKYLVFFFYPLDFT  
FVCPTEIIAFGDRIDEFRSINTEVVACSVDSQFTHLAWINTPRRQGGLGSINIPLLADLNHQIS  
KDYGVYLEDGHTLRGLFIIDDKGILRQITLNDLPVGRSVDETLRLVQAFQYTDKHGEVCP  
AGWKPGSETIIPDPAGKLKYFDKLN

>antioxidant\_106

MRSATKLFKNLSKSVVQLKTVKPVSSLNFGYIKTRQFSTSTTDSSNLFLNNNNQFQNFTEP  
TKQQIRIRKPAPAFKQAVVNGEFKEISLDDYKGYLYLFFYPLDFTFVCPTEIIAFSNAEE  
FKKAGCELVGCSIDSPFTHLAWINTPRKEGGLGGINIPLLSDLTHQISKDYGVYIEEDGHTIR  
GSILIDKEGLVRVITMNDNPVGRSVDEAIRTLKALKFTDQFGEVCPANWSEGDKSMKADP  
KGSKEYFEAVNK

>antioxidant\_107

MRLGWLRLVLCRPGSVVSRATIVEGASTTAAGTRGCLEWTFGGVGRFSAAVAMAP  
IKVGDAIPVVEVFEKEPGNKVNLAELFKGKGVFLGFLPGAFTPGCSKTHLPGFVEQADAL  
KAKGIQVVACLTVNDVVFVTEEWARAHKAEGKVRLLADPSGTGKETDLLLDDSLFLFG  
NHRLKRFSMVIDGIVKSLNVEPDGTGLTCSLAPNLSQL

>antioxidant\_108

DFTPVCTTELGRLAPEFAKRVVIFGPKKLLKSILYPATTGRNFDEILR

>antioxidant\_109

MFSRICAQLKRTAWTLPKQAHLQSQTIKTFATAPILCKQFKQSDQPRLRINS DAPNFDADT  
TVGKINFYDYLGD SWGVLF SHPADFTPVCTTEVS AFAKLKPEFDKRN VKLIGLSVEDVES  
HEKWIQDIKEIAK VKNVGFPIIGD TFRNVAFLYDMVDAEGFKNINDGSLKTVRSVFVIDPK  
KKIRLIFTYPSTVGRNTSEVLRVIDALQLTDKEGVVTPINWQPADDVIIPPSVSNDEAKAKF  
GQFNEIKPYLRFTKSK

>antioxidant\_110

MAPIDVGFDFVPDGSISFFDDDDQLQTVSVHSLAAGKKVILFGVPGAFPPTCSMNHVNGFIE  
KAEELKSNVDEIICLSGDDPFMITACSENKHVKFVEDGSGEYIQLLGLELEVKDKGLGVR  
SRGFALLLDNLKVIVVNVGSGGDCSLFQLMKMTTTTMSNLPTDLLEEIISRVPRKYMRAV  
RLTCKRWNGMFKSQSFTKM HIGKEEAATREL RQTRMIVMMDYNVYLMGI AVNEIPS IETL  
GKLTCLDDSEQVKISQVFCCEGLLLCILKDDDTKIVVWNPYLGQTRWIQTR LICCVSGWK  
KYALGYGNSENENRSCRSPKILRVTDN FNIFSENIPLQYEIYDFSDVWTTLDVSPHWFIMSE  
RGLSLKGNTYWGAKERHAYGSIDHIICFDFTRE RFGPLLPLPFSAWGAQFASLSSVREDKIT  
ALFQNCRAYKLELWITTKIDVNNATWSKFFTMDTPYLHEILSLKTFFIDEENKIVVVS NKE  
RDTKGDLDTHDSIDIINGEARCLWKLGLGKPADKNCWPLVCPYVPSVVQIKQHKGGKTKEQ  
SDYKRH

>antioxidant\_111

MATSLSVSRFMSSSATVISVAKPLLSPTVSFTAPLSFTRSLAPNLSLKFRNRRTNSASATTRSF  
ATTPVTASISVGDKLPDSTLSYLDPSTGDVKT VTVVSSLTAGKKTILFAVPGAFTPTCSQKHV  
PGFVSKAGELRSKGIDVIACISVND AFVMEAWRKDLGINDEVMLLSDGNGEFTGKLGVEL  
DLRDKPVGLGVR SRRYAILADDGVVKVLNLEEGGAFTNSSAEDMLKAL

>antioxidant\_112

MAMSILKLRNLSALRSAANSARIGVSSRGFSKLAEGTDITSAAPGVSLQKARSWDEGVSS  
KFSTTPLSDIFKGKKVVIFGLPGAYTGVCSQQHVPSYKSHIDKFKAKGIDSVICVSVNDPFA  
INGWA EKLGAKDAIEFYGDFDGKFKSLGLDKDLSAALLGPRSERWSAYVEDGKVKAVN  
VEEAPSDFKVTGAEVILGQI

>antioxidant\_113

MAAICLPVAKHSFPSLLNTQTPKPLFSQNLHTIPLSSQSQCGLKFLISSPSSLPPPPSY SARIS  
VFAKVSKGSVPPQFTLKDQDGKNVSLTEFKGKPVVVYFYPADETPGCTKQACAFRDSYE  
KFKKAGAEVIGISGDDPSSHKAFAKKYRLPYTLLSDEGNKIRREWGPADLFGTLPGRQT  
YVLDKNGTVQLIYNNQFQPEKHIDETLKFLQSA

>antioxidant\_114

MVSVGKKAPDFEMAGFYKGEFKTFRLSEYLGKVVVLCFYPGDFTFVUATEVSAVAEKYP  
EFQKLGVEVLSVSVDSV FVHKMWNDEL SKMVEGGIPFPMLSDGGGNVGTLYGVYDPE  
AGVENRGRFLIDPDGIIQGYEVLILPVGRNVSETLRQIQAFQLVRETGAEVAPSGWKPGK  
KTLKPGPLVGNVYKEWSVKEAFED

>antioxidant\_115

MDAPRRSSRLAAKIANVLDSKGTIPEAAPVMLKKPAKDESVDSTIQVGDVIPDITLPDED  
GTSIRLRDITANKGLVIFAYPKASTPGCTKQCGFRDNYPKIQASDYEV LGLSFDTSKAQK  
AFKDKQNFPYHLLSDPKGELIKKLGAEKPGGKLF RSHWIFEKGTGKCIVKEIDISPLVSV  
DKAFAVITDSEP

>antioxidant\_116

MFRNQYDNDVTVWSPQGRIHQIEYAMEAVKQGSATVGLKSKTHAVLVALKRAQSELA AH

QKKILHVDNHIGISIAGLTADARLLCNFMRQECLDSRFVFDRLPLVSRVSLIGSKTQIPTQR  
YGRRPYGVGLLIAGYDDMGPHIFQTCPSANYFDCRAMSIGARSQSARTYLERHMSEFME  
CNLDELVKHGLRALRETLPAEQDLTTKNVSGIVGKDLLEFTIYDDDDVSPFLDGLEERPQR  
KAQPSQAAEPAEKADEPMEH

>antioxidant\_117

MSSIGTGYDLSASTFSPDGRVFQVEYAMKAVENSSTAIGIRCKDGVVFGVEKLVLSKLYEE  
GSNKRLFNVDHRVGMVAVAGLLADARSLADIAREEASNFRSNFGYNIPLKHLADRVMYV  
HAYTLYSAVRPFGCSFMLGYSVNDGAQLYMIDPSGVSYGYWGCAIGKARQAAKTEIEKL  
QMKEMTCRDIVKEVAKIIVHDEVKDKAFELELSWVGELTNGRHEIVPKDIREEAEKYA  
KESLKEEDESDDDNM

>antioxidant\_118

MALASVLQRMPVNQHGFGLGGADLLDLGPGSPGDGLSLAAPSWGVPPEPRIEMLHG  
TTTTLAFKFLHGIVVAADSRATAGAYIASQTVKKVIEINPYLLGTMAGGAADCSFWERLLAR  
QCRIYELRNKERISVAAASKLLANMVYQYKGMGLSMGMTMICGWDKRGPLYVVDSEGN  
RISGTAFSVSGSVYAYGVMDRGYSYDLKVEEAYDLARRAIYQATYRDAYSGGAVNLYH  
VREDGWIRVSSDNVADLHDKYSSVSV

>antioxidant\_119

MAAALAVRRAGSAPAFGPEALTPDWENREVSTGTTIMAVQFNGGVVLGADSRTTGSYIA  
NRVTDKLTPIHDHIFCCRSGSAADTQAVADAVTYQLGFHSIELNEPPLVHTAASLKFEMCYR  
YREDLMAGIIIAGWDPQEGGQVYSVPMGGMMVRQSFAIGGSGSSYIYGYVDATYREGMT  
KDECLQFTANALALAMERDGSSGGVIRLAAIQESGVERQVLLGDQIPKFTIATLPPP

>antioxidant\_120

MAAVSVFQPPVGGFSFDNCRNAVLEADFAKKGFKLPKARKTGTTIAGVVYKDGIVLGA  
DTRATEGMVVADKNC斯基HIFISPNYCCGAGTAADTDMTTQLISSNLELHSLTTGRLPRVVT  
ANRMLKQMLFRYQGYIGAALVLGGVDVTGPHLYSIYPHGSTDKLPYVTMGSGSLAAMA  
VFEDKFRPDMEEEEAKKLSEAIAAGIFNDLGSNSIDLVCVSKSKLDFLRPFSVPNKKGTR  
LGRYRCEKGTAVLTEKVTPLIEVLEETVQTMDS

>antioxidant\_121

MPGLTIGDTPVNELDSTHGKIRIHDYVGDGYAIIFSHPADFTPVCTTEMAAMAGYAKEFE  
KRGVKLLGISCDVESHQWTKDVEAYGGKQQQQATTTKVTFPILADPARDAIRQLNM  
VDPDEKDAAGRSMPSRALHVVGPDKAVKLSFLYPATTGRNMDEVLRVDSLTAQAKHGG  
KVATPANWKPGECAVIAPGVSDDEARKMFPQGFETADLPSKKGYLRFTKV

>antioxidant\_122

MGGGWALGDLVPDIQADSTMGHIKVRDYCKDGWTIIFSHPGDYPPVCTTELKIAAYNPE  
FEKRGVKLLGLSTDTVEDHQGWIKDIESYTPDAPVLYPILADPDRKITVALNMDPDEKD  
ANGKPLASRALHIIGPDCRLKLSLLYPGTTGRNFDEVLRVLDLQLASKHKIATPANWQKG  
EPVVISPSVSDEKAKQMFPQGWETVNLPKALRMTFVD

>antioxidant\_123

MKKNRLLFRVILLILSGAVGFTLYQGGFADKEKMQIGKEAPNFVTDLEGKKIELKDLKG  
KGVFLNFWGTWCKPCEKEMPYMNELYPKYKEKGVIEIALDADETDIAVKNFVNQYGLKF  
PVAIDKGQKIIGTYGVGPLPTSFLIDKDGKVVVEQIIGEQTKEQLEGYLKKITP

>antioxidant\_124

MDKRKRFWMRLSILAVISVALGYTFYSNFFADRSLARAGEQAVNFVLEDLEGESIELRELE

GKGVFLNFWGTYCPPCEREMPHMEKLYGEYKEQGVEIIAVNANPELTVQRFVDRYGLSF  
PIVIDKGLNVIDAYGIRPLPTTILINEHGEIVKVHTGGMTEQMVEEFMELIKPEA

>antioxidant\_125

MKKKRRLFIRTGILLVICALGYTIYNAVFAKESISEGSDAPNFVLEDTNGKRIELSDLKG  
KGVFLNFWGTWCEPCKKEFPYMANQYKHFKSQGVVEIVAVNVGESKIAVHNFMSYGVN  
FPVVLDTDRQVLDAYDVSPLPTTFLINPEGKVVKVVTGTMTESMIHDYMNLIKPGETSG

>antioxidant\_126

MKKQQLVMRTAILLVLLAAIGYTIYTNNFTEKTAVAVGSTAPDFVLTDLKGHEHRLSDYR  
GKGVFLNFWGTWCKPCEREMPYMNELYPIYKKQGVEILAVNVGEPKLSVEKFAERFGLTF  
PIVIDRQDQVLNAYNVGPLPTTFLIDKNGEVKQIITGTMTKEDIERHLESIKP

>antioxidant\_127

MDIQQNKTNKQKKKRNRFRSSILLILVAAVVFAIVSNMKDDNKIYRVGDAAPDFQLKQI  
SEEVDQSTVQLSDLEGKGVMLNFWATWCDPCKAEMPYMQDLYAEYKEKGVVEIVAVSLD  
GTELVDQFIDEYDLTFVPHDKNGEVKDLYKIGPMPTTYFIKPNGEIEIVQGALTDRLE  
GYLNDIAPQQN

>antioxidant\_128

MLTDLECAINSLIDVYHKYSLKKNYHAVYRDDLKQLLETECPKFMKKKDADTWFKELD  
INQDGGINFEEFLVLVIKVGLEAHEEIHKE

>antioxidant\_129

MPSELEKALSNLIDVYHNYSNIQGNHLYKNDFFKMMVTTECPQFVQNNIENLFRELDIN  
SDNAINFEEFLAMVIKVGVAHSHKDSHKE

>antioxidant\_130

MEDKMSQMESSIETIINFHQYSVRLGHYDTLIQKEFKQLVQKELPNFLKKQKKNEAAINEI  
MEDLDTNVDKQLSFEEFIMLVARLTVASHEEMHNTAPPQGHRHGPYGYKGGSGSCSGQ  
GSPDQGSDDLGSFHGHGSHGGHGHSHGGHGHSH

>antioxidant\_131

MANKAPSQMERSITTIIDTFHQYSRKEGHPDTLSKKEFRQMVEAQLATFMKKEKRNEALI  
NDIMEDLDTNQNQLSFEECMMLMAKLIFACHEKLHENNPRGHGSHGKGCCK

>antioxidant\_132

MERQEEALSARPALETEGLRFLHTTVGSLLATYGWYIVFSCILLYVVFQKLSARLRALRQR  
QLDRAAAAVEPDVVVKRQEALAAARLKMQEELNAQVEKHKEKQLEEEKRRQKIEM  
WDSMQEGKSYKGNACKPQEEDSPGPSTSSVLKRKSDRKPLRGGGYNPLSGEGGACSW  
RPGRRGPSSGGUG

>antioxidant\_133

MALAVRVVYCGAUGYKPKYLQLKEKLEHEFPGLDICGEGTPQVTGFFEVTVAGKLVHS  
KKRGDGYVDTESKFRKLVTAIKAALAQCQ

>antioxidant\_134

MSKTAVCVIKGEKVNKFTQENKDSPTVNYDITGLEKGEHGFHVHAFGDTTNGCVS  
AGPHFNPFKNGHAPSDEDRHVGDGNIVADGESNTKGTISDKIISLFGHEHTIVGRTMVVH  
ADQDDLKGGKPDLSLTGAAGARLGCVIGVSQ

>antioxidant\_135

MKYTILSLVAGALISCSAMAENTLTVKMNDALSSGTGENIGEITVSETPYGLLFTPHLNGLT  
PGIHGFHVHTNPSCMPGMKDGKEVPALMAGGHLDPKTKHLLGPNYNDKGHLGDLPLGLV  
VNADGTATYPLLAPRLKSLSELKGHSLMIHGGDNYSKPAPLGGGGARFACGVIEK

>antioxidant\_136

MKKLSGVLASLLISASFSQDLKAHAELINTEGEVIGKAELIETNSGVLIKLNAKGLPPNA  
ELAFHIHERGECKPPTFKSAKGHFNPYGGKHGLLNPEGPHAGDMPNIYTDDKGNVRVQV  
LNPFTLKKGEKNSLFKEGGTALVIHSGPDDYKSDPAGNAGKRIACGVIR

>antioxidant\_137

KAVAVLRGDSNVSGVVRFEQTHESEPTKIFIGQNSILALTVVVHAGTDDYGK

>antioxidant\_138

MNKLIISLLIVLSAISISADYQYGYCKFGSVGTVNQNTGYVTLTAQDGALNLVYNISSINL  
PTGSYATAIMTYGYNPSNNTDLGGVFQVDGKGTEQCQSGGSRAGDLYNLYVNDNRISSNF  
DSLTSVSIVDSPNSIIGRSIAIFQESYSCDLLKSSVGTSSVGPLTTVVASCIIGIGNSANVPATNG  
VNTTTGNANTAGAYSSLSNTQYDAMVLLANTTKSPSAAIGGSVLFRRSSNSVSVNGIVSGV  
AKSVHGFHIAFGDLTTVDGASIGGHWLSGAQVHAFPEPENTSRHFGDLGNLCIFDNDFKNA  
YYLSTSYFSFGLVGRGFAVHAARDDGNTYVGGDRVAQGVVALIPKAATTLNQVPSNW  
KYEVICSNGTYTGESTIEPSTPTPTTETSQPGTSSYLAPFFVLILSSLISVILIL

>antioxidant\_139

MSPLKAVAVLTGADVKGVVQFT

>antioxidant\_140

MEAPRGNLRAVALIAGDNNVRGCLQFVQDISGTHVTGKISGLSPGFHGFHIHSFGDTTNG  
CISTGPHFNPLNRVHGPPNEEERHAGDLGNILAGSNGVAEILIKDKHIPLSGQYSILGRAVV  
VHADPDDLKGGHKLKSTGNAGSRVGCIIQLQSSADAKL

>antioxidant\_141

MRLLSVLVFLISVISIAKADYQYAFCKFNELSIGGVEGIAHLLSTDGTTLNITFDFTTSYAQN  
TQFAAQILTYGYNPSSMTNLGSVFDPTNVKTAGCPSGTPRAGDIGNIQANGGNVEAQTISL  
NIPNIKDDANSIIGRSIAIYGGSYDCSDPSKSVIGDMISFCTIGVGNIDYSSFDKSKLTGVNTA  
SSYSNLENAIGLAVVYNTTITKGDYIEGRVLFKALNSSFIQVSAKVSGLSYQAHGFHVHGF  
GDVSSDNGTSIGGHFLKTGQEHSLPPSGTRHYGDFGNFCAFSQDMMDTGYYYYETDHVT  
AALVIGRGMVHNFTDKGNSDVGGSRCGQGVIALIQDADYSLNLPMDWKWDVICANGS  
YYGDMSTSMNSESYNDNEPGSSSTVIPFFALIIFSIIIFALL

>antioxidant\_142

MSAICVIKGDGVDGIINFKQNDNKSPVIISGVISGLKEGKHGFHVHEFGDTTNGCLSAGAH  
FNPFKKEHGSPNDENRHVGDLDGNIESNKDKKSIINITDNIITLFGQNSIIGRSIVVHDKEDDL  
GRGNSQDSKITGNAGSRLGCGIIALSKI

>antioxidant\_143

MVNAIIVIIGLGVGKVTLSQECEGSPYINGTVSGLTPGQHGMHVHEFGDTSNGCISAGD  
HYNPLHREHGSPLDVERHIGDLGNIKALSNGVATISIRDTIMSLFGDISVMGRTMVIHSDRD  
DYGRGNFPDSKTAGHSGKRVGCGIIAKI

>antioxidant\_144

MASQTLVSPSPSSPSSLLRTSFGVSVKLPQFSTLATS NFKPLTVVAAAKKAVAVLKGQSR  
VEGSSTLHQDERQQQLMFVSLAYTQGFMVFTYMSMVIPQMGVSQQDHILIQVDTWCSE  
DEIRHAGDLGNIVANAEGVAECRQSWQIRYHSLRPNSVVGRLVVHELQDDDLGKGGHEL  
SLSTGNAGGRLACGVVGLTPV

>antioxidant\_145

MAAHTILASAPSHTTFLISPFSSPTNALSSSLQSSSFNGLSFKLSPTTQSLSLSTSAASKPL  
TIVAATKKAVAVLKGTSNVEGVVTLTQEDDGPTTVNVRISGLAPGKHGFHLHEFGDTTNG

CMSTGPHFNPDKKTHGAPEDVRHAGDLGNIVANTDGVAEATIVDNQIPLTGPNSVVGRA  
LVVHELEDDLKGGHELSPPTGNAGGRLACGVVGLTPV

>antioxidant\_146

MMKSLFIASTMVLMAFPFAEAESTTVKMYEALPTGPGKEVGTVVISEAPGGLHFKVNMEK  
LTPGYHGFHVHENPSCAPGEKDGKIVPALAAGGHYDPGNTHHHLGPEGDGHMGLDLPRLS  
ANADGKVSETV VAPHLKKLAEIKQRSLMVHVGGDNYSKPEPLGGGGARFACGVIE

>antioxidant\_147

MFMNLLSQVSNAIFPQVEAAQKMSNRVAVLRGDVVS GTIWIWITQNSESDPAVIEGEIKGLT  
PGLHGFHVHQYGDSTNGCLSAGPHFNPFGKTHGGPNSETRHVGD LGNVEAGADGVAKV  
HITDKLITLYGANTVIGRSMVVHAGQDDLGGQVGDKAESAKTGNAGARAACGVIALAA  
PQ

>antioxidant\_148

MATVKAVCVLKGEDPVKEPVKGPVKEPVKGIIYFEQQNGNPVTLSGSITGLTEGKHGFHV  
HEFGDNTNGCTSAGAHFNPPGKNHGGPQDNERHVGDLGNVIANKEGVAEVCIKDSLISLT  
GSQSIIGRTMVVHEKEDDLGKGGNDESLKTGNAGSRLACGVVGIACL

>antioxidant\_149

MIRLSAAAALGLAAALAASPALAQTSATAVVKAGDGKDAGAVTVTEAPHGVLKLELKG  
LTPGWHA AHFHEKGDGCTPDFKSAGAHVHTAATT VHGLLNPDANDSGDLPNIFAAADGA  
ATAEIYSPLVSLKGAGGRPALLDADGSSIVVHANPDDHKTQPIGGAGARVACGVIK

>antioxidant\_150

MFRTLTVVPLLALGLSLSACADLGQPTVRADLLDQTGKVTGTATFSPSPIGTRVSIEVSGLK  
AGPHGLHIHENPNCNPGPDAQQQTIPFGAAGGHFDPGASHNHDGPHARNDQGHGGDLP  
MITVGEDGKGRNLNFDTNRLKMTGPTGVLGRSIVIHADADDYQTNPAGNSGGRRERCGVFQ  
AIN

>antioxidant\_151

MVVKAVCVINGDAKGTVFFEQESSETPVKVSGEVCGLAKGLHGFHVHEFGDNTNGCMSS  
GPHFNPYGKEHGAPVDENRHLGDLGNIEATGDCPTKVSITDSRITLFGADSIIGRTVVVHA  
DADDLGKGGHELKSTGNAGARIGCGVIGIAKV

>antioxidant\_152

MKRFSLAILALVVATGAQAASEKVEMNLVTSQGVGQSIGSVTITETDKGLEFSPDLKALPP  
GEHGFHIIHAKGSCQPATKDGKASAAESAGGHLDPQNTGKHEGPEGAGHLGDLPALVNN  
DGKATDAVIAPRLKSLDEIKDKALMVHVGGDNMSDQPKPLGGGGERYACGVIK

>antioxidant\_153

MTAFYKLCGMSMLSLVLADCTFLSANKPYDRDHDGELIVHMKDVNTHKEVGTITISPYIH  
DGNQEGMLITPHLYNLPANTTHGMHIHINPSCEDNGIAAGGHWDPDNTQKHLGPYNDNG  
HKGDLPLVVNADGTATEPVVAPKLNLEELAGHSLMLHAGGDNYSDKPQLGGGGAR  
MWCGVIAD

>antioxidant\_154

MKLTKVALFSLGLFGFSSMALAHGDHMHNHDTKMDTMSKDMMSMEKIVVPVQQLDPQ  
NGNKDVGTVETESAYGLVFTPKLHDLAHLHGFHIIHEKPSCEPKEKDGKLVAGLGAGGH  
WDPKQTQKHGYPWSDDAHMGDLPALFVMHDGSATTPVLAPRLKKLAEVKGHSLMIHA  
GGDNHSDHPAPLGGGGPRMACGVIK

>antioxidant\_155

MXKAVAVLTGSEGVXGTIFFTQ

>antioxidant\_156

MVNAVAVLKGDSVSGIVRFEQESDQQTAKISWEITGNDANALRGFHIHTFGDNTNGCTS  
AGPHFNPNKNHGAPEDDEERHVGDLGNIPTDAQGISKGSLTDKHIKLLGPLSIVGRTVVVH  
AGQDDLKGGDAESLKTGNAGARHACGVIGISNA

>antioxidant\_157

MNKSGIILIGTILFSSMAIADDLTAPIYTTGPKPVAIGKVTFTQTPYGVLPDLTNLPEGPHG  
FHLHKTADCGNHGMHAEGHYDPQNTNSHQGPYGNHGLGDLPLVLYVTSNGKAMITLAP  
RLKLSDMHNLAVMIHANGDTYSDNPPQGGGGDRIACGVIK

>antioxidant\_158

MPKPADHRNHA AVSTSVLSALFLGAGAALLSACSSPQHASTVPGTTPSIWTGSPAPSGLSG  
HDEESPGAQSLTSTLTAPDGTKVATAKFEFANGYATVTIATTGVGKLTGPFHGLHIHQVGKC  
EPNSVAPTGGAPGNFLSAGGHYHVPGHTGTPASGD LASLQVRGDGSAMLVTTTDAFTMD  
DLLSGAKTAMIIHAGADNFANIPPERYVQVNGTPGPDETTLLTGDAGKRVACGVIGSG

>antioxidant\_159

MKAICIVAGEASGRIYFKQGAPDEPV SITGYLLNLPRGLHGFHVHEFGDTSNGCTSAGEHF  
NPTRQRHGAPDAAERHVGDLGNVRSAGCTALTAIHMSDNVITLFGPLSILGRSLVHTDR  
DDLGLGEHPLSKTTGNSGGRLGCGIIGVCAN

>antioxidant\_160

MALKAVCVLKGAGETSGTVHFEQEDN

>antioxidant\_161

MSLLPTGTLILLVLFILVLITMTKNTSSLNVTKPVSAIAVLEGPVKGTVRVFEESKVKISVD  
ISGLKPNRKHGFHVHEAGDLTDGCTSACAHFNPFGTAHGGPDSKIRHVGD LGNILADKNG  
KAKYSFYDSMIKLRGKCNIIGRAIVVHADTDDLGLGGNAESLKTGNAGKRIGCAVIGYAK  
ENFC

>antioxidant\_162

MNKAKTLLFTALAFGLSHQALAQDLTVKMTDLQTGKPVGTIELSQNKYGVVFTPELADL  
TPGMHGFHIIHQNGSCASSEKDGKVV LGGAAAGGHYDPEHTNKHGFPWTDNHNKGDLPAL  
FVSANGLATNPVLAPRLTLKELKGHAIMIHAGGDNHSDMPKALGGGGARVACGVIQ

>antioxidant\_163

IVAVLHSSEGVAGTITFIADSQIPLTGPN SI

>antioxidant\_164

MMIASFAIFLSHIIFITYATSNQRYFKPNMHNNMTITIRRTITKTATAIAVLHSDNGNINGTIHF  
QQDKNSTTISGEIKGLTPGLHGFHVHQYGD TTNGCISAGPHFNPNKTHGDP TDEMHRVG  
DLGNIVAGADGTAHIDISDKHVQLLGPNSIIGRSLVVHADQDDLKGGVGDKKDESLKTGN  
AGGRVACGIVAISA

>antioxidant\_165

MKTRVVLILALSVCIEAASEVIRARAYIFKAEAGKIPTELIGTIDFDQSGSFLKLN GSVSGLA  
AGKHGFHIIHEKGD TNGCL SAGGHYNPHKLSHGAPDDSNRHIGDLGNIESPASGD TLISV  
SDSLASLSGQYSIIGRSVVIHEKTDDLGRGTS DQSKTTGNAGSRLACGTIGTVEERILETTT  
ASLPPVTQSQPIGSSSYYYSTFYLP IILYFLLSRIL

>antioxidant\_166

MMGSFIFLLSIIISINYINSLHTVHRSNIHRNMHNGGMPKKAVAVLKS DTVNGIIFQQN NR  
ASATTIYGTINGLTPGLHGFHIIHQYGIKANGCTSAAA HYNPFKTHGRPTNNIKHIGDLRNI  
KAGADGVANVNIISNHIQLSGPLSVIGRSLVVHANPDDLKGGNGDAREESLKTGNAGSRIV



CSIIGIAPST

>antioxidant\_167

MTMLQQILLISVIIGTVHVHEVDCANEVLKARAYIFEAVKGGNPAKTVGIIDLVTGTGLVK  
MNGSVSGLQPGLHGFHIHEKGDLDNGCLAAGAHFNPHKMMHGAPEDSNRHVGDLDGNE  
TPKTGDTPIILISDSVISLTGQHNVIIGRAIVIHADMDDLGRGTSELSKTTGNAGARVACGVIGI  
L

>antioxidant\_168

MLAFLFYGLLLAACGSVTMSNPGESSFDLADRLDPVEKIDRLDLVEKIGDTHAKVLEIWM  
ELGRRREVDAEMHAICRVQPSATLPPDQPQITGLVLFRLQPGSRLEAYFSLEGFPAEQN  
ASNRAIHVHEFGDLSQGCSTGPHYNPMEVPHQHPGDFGNFVVRNGQLWRHRVGLTAS  
LAGPHAILGRSVVHAGEDDLGKGGNQASLQNGNAGRRLACCVVGTSSSAAWESQTK  
RKKRRRESECKTT

>antioxidant\_169

MINSFIVFLSFLIFINYANLVCVEATHVYGRRSHSNGMHGNGARRAVAVLRGDAGVSGIY  
FQQSGGSITTISGSVSGLTPGLHGFHVHQYGDQTNCGTSAGDHYNPFKTHGGPNDRIK  
HIGDLGNIVAGANGVAEYINSYDIKLRGPLSVIGHSLVVHANTDDLGGTGNMREESLK  
TGNAGSRLACGVIGIAAVS

>antioxidant\_170

MTVYSYLVILFILLDNYCSAYGYGYSYHRRHFDPAIASFTKEPYIGAVWFTQHGDYMYV  
NGSVAGLPPGKLLGTHVHRYGGLNMCLEAGPHFNPFNRHGPRHGYPRHAGDLGNIRV  
GRGGVAKFDYVTIKGLGPFDFIGRALVIHANRDDLGRNRDEGSRTTGNSGPRLACATIG  
FRAP

>antioxidant\_171

MLCRAVCSASRRLAPALGILGVRQKHSPLDLPYDYGALQPHINAEIMQLHHSKHHAAAYLN  
NLNIAEEKYQEALAKGDVTAQVALQPALKFNGGGHINHSIFWTNLSNPGGGEPKGELLEA  
IKRDFGSFDKFEKLTAVSVGVQSGWGWLGFNKERGLQIAACSNQDPLQGTGLIPLL  
GIDVWEHAYYLQKNVRPDYLKAIWKVIKNS

>antioxidant\_172

MFVARKISPNCXPGVRGKHTLPKLPYDYAALEPIICREIMELHHQKHHQTYVNNLNAEE  
QLEEAKSKSDTTKLIQLAPALRFNGGGHINHTIFWQNLSPNKTQPSDDLKKAIESQWKSLE  
EFKKELTTLTVAVQSGWGWLGFNKKSGKLQLAALPNQDPLEASTGLIPLFGIDVWEHAY  
YLQYKNVRPSYVEAIWDIANWDDISCRFQEAKKLG

>antioxidant\_173

MLSRLFAPKVTVSAHCDLPCGVYDPAQARIEAESVKAVQEKMAGNDDPHFQTRATVIKE  
QRAELAKHHVSVLWSDYFKPPHFEKYPELHQLVNDTLKALSAAKGSKDPATGQKALDYI  
AQIDKIFWETKKA

>antioxidant\_174

MSKVLAIVTGASKGFGKAIQAQEVKCNPNKNQLIDLVLFARSLDGLKSTKESIETISTNAKV  
IDLQSLDMSNIPDVELKFKSVLENIKWEEYSKICFFNNHGTLYHLGRIEDFSDFKNIQKDND  
TNTTSFVVTSSLVKKLKEGSGYSSEVTIVNSSSLCAIKAFPTWSLYCSSRAYRDMFFQAL  
SLEYKLNDFKVLNYSGLVLDTDMQSQVREECSEDDKSFYVGLKNDGKLNPNRSASICS  
NLVYSHKFETGSHLDYYDLDK

>antioxidant\_175

MTSIHTGSNNNIVELDMSSELIRPIPPVLDMNKVNNSMMETMTGKTPPASCGLTSEDLEAGEL

PPVDVLTFFKKS GKPY YFAFGGCHRLRAHDEAGRKKVRC KLVNCS PNTLR LYL GASANKF  
LDSD

>antioxidant\_176

MSLQSN SVK PTEIPLSEIRRPLAPVLDPQKIDAMVATMKG IPTASKTCSLEQA EAAASAGEL  
PPVDVLGVRVKGQTLTYAFGGCHRLQAYDRRARETQNAAFPVRCRVL PATPRQIRMYLGS  
SLDIE

>antioxidant\_177

MGLRAGGT LGRAGAGRGAPEGPGPSGGAQGGSIHSGRIA AVHNVPLSVLIRPLPSVLDPA  
KVQSLVD TIREDPDSVPPIDVLWIKGAQGGDYFY SFGGCHRYAA YQQLQRETIPAKLVQST  
LSDLRVYLGASTPDLQ

>antioxidant\_178

MANLMMRLPISLR SFSVSASSSNGSPPVIGGSSGGV GPMIVELPLEKIRRPLMRTRSNDQN  
KVKELMDSIRQIGLQVPIDVIEVDGTY YGFSGCHRYEAHQKLG LPTIRCKIRKGTKETLRH  
HLR

>antioxidant\_179

MEFISHFLRATSRR TAALGPILQRNRSEIIQKQSLTNRQAFRRYR SSCSTMDTTVHSAGIDET  
HLVPM SVIQRPIPSVLDEQKVQSLMETIKNETSEDEVPPIDLLWISGSEGGDY YFSFGGCHR  
FEAYKRLQRPTIKAKLVKSTLGDLYHYMGSSAPKYLA

>antioxidant\_180

MLTKRLLTIYIMLLGLIAWFPGAAQAEEKQPAVPAVFLMKTIEGEDISIPNKGQKTILHFWT  
SWCPPCKKELPQFQSFYDAHPSDSVKLVTVNLVNSEQNQQVVEDFIKANKLTFPIVLDSKG  
ELMKEYHIITPTSFL NEKGEIEKTKIGPMTAEQLKEWTEE

>antioxidant\_181

MANEKPTEE VKTENNHNHINLKVAGQDGSVVQFKIKRQTPLSKLMKAYCEPRGLSMKQIR  
FRFGGQPISGTDKPAQLEMEDEDTIDVFQQPTGGVY

>antioxidant\_182

MFQRLNKM FVGEVSSSSNQEPEFNEKEDDEWILVDFIDTCTGFSAEEEEEEEDISEESPTHEH  
PSVFSCLPASLECLADTSDSCFLQFESCPMEESWFITPPPCFTAGGLTTIKVETSPMENLLIEH  
PSMSVYAVHNSCPGLSEATRGTDELHSPSSPRVEAQNEMGQHHCYVAALAAHTTFLEQP  
KSFRPSQWIKESHERQPLNRNSLRRLTRDCHPRQVKHNGWV VHQP CPRQYNY

>antioxidant\_183

MIRSVLASVSPLRQILASQLCTSSITLAGIRPLGPKNKAPDFSGTAVVNGDFKTISMKDYKG  
KWLILFFYPLDFTFVCPT EITAFSDRCAEFQKLNTELIACSCDSHFSLAWIQTPRSEVGG  
GDMKIPVLADFNKDIANAFGVLDHETGISYRGLFLIDPSGEIRHSLVNDLSVGRSVDEAFR  
TLKAFQFVEKHGEVCPANWSDDKPTIKPGIKESKEYFKKVDGHT

>antioxidant\_184

MKLYQKFPETQVITTKGPLDFYRDVFEKGKWLFLFAHPADFTPVCTTEFVGF SKVYEEFK  
RLNVELVGM SVDSIYSHIEWLKDIQERYGIQVPFPLIADPKRLARLLDIIDEASGV TIRAVF  
LVNPEGIIRFMAYYPIEYGRKIEELLRITKAALVNYKAKVSLPVDWEPGQEVIVPAPSTIDE  
AQIRMKLPNAKTWYLTFFK KYDEL PQDQRVV

>antioxidant\_185

MPDENKFPLIG EKFP EMTVETTHGSMKLPDQYKGRWFMLFSHPGDFTPVCTTEFY SFARR  
FEDFQKINTDLIGLSVDSTISHIEWVN WIRDNLKIEVPFPIIGDSMGRVATRLGMIQAESST  
TVRAVFIVDPNSTVRLIMYYPLEIGRNVDEL LRAIKALQMSDKYRGAMPANWPYNELIGE

KMLNPAPKNVKDATGRLKEFKGYAWWLTYKDVPDNEVQETKKIVKMREEK

>antioxidant\_186

METEAIENIPRVCLPQIGAPAPDFKANSTFGPIKLSDYRGKWVVLFSHPGDFTPVCTTEFIA  
FTQVYTSFVERNVLIGLSVDSNPSHLAWVENIYKTTGVEIPFPIIEDKDMRIAKLYGMISP  
AETSTS AVR AVFIIDDKQILRLILYYPLEIGRNIQEIRIIDLALQTVDKYKVLAPANWYPGMPV  
IVPPPKTYPELKQRLKNVEGYTCTDWYLCYKKV

>antioxidant\_187

MPGSIPLIGERFPEMEVTTDHGVIKLPDHYVSQGKWFVLFVSHPADFTPVCTTEFVSFARRY  
EDFQRLGVDLIGLSVDSVFSHIKWKEWIERHIGVRIPFPIIADPQGTVARRLGLLHAESATH  
TVRGVFIVDARGVIRTMLYYPMELGRLVDEILRIVKALKLGDLSKRAVPADWPNNIIGEG  
LIVPPPTTEDQARARMESGQYRCLDWFCWDTPASRDDVEEARRYLRRAAEKPAKLLYE  
EARTH LH

>antioxidant\_188

MEVVS L PRLGEPAPAFE AQTTFGPVKFPDDFKGQWVVLFSHPADFTPVCTTEFVAFK NY  
EEFKRNVQLIGLSVDSNFSHIAWVMNIKEKFGIEIPFPIIADHNMEVAKKYGMIPHAQSTT  
FTVRALFVIDDKGILRAMIYYPLTTGRNIREVIRLVDALQTADREGVATPADWVPEPQTWE  
FTEENTKVIVPPPTTYEDAVKRLQEGYECADWYICKKKV

>antioxidant\_189

MPLLGD D FPELKVQTTHGPMNIPGDLKGSWFVLFVSHPADFTPVCTTEFVAFQQRVEAFEKI  
GCKLIGMSVDQVFSHIKWVEWIKENLDVDITFPIVAANDRIANKLGM LHPGKGTNTVRAV  
FVGDPNGKVRVLVLYYPQEIGRNMDEILRAVKVLQISDSNKVAMPADWPNNLLIKDHVIIP  
ANNVEDAKKRKEQQYDCYDWWFCHKPLDK

>antioxidant\_190

MPLIGDDAPSFTAVTTQGIKFPDDYK GKWVILFSHPADFTPVCTTEFMTFASMQEEFRSM  
NTELIGLSIDSVFSHIAWLKRIEEKIEYKGMKNLEIKFPVIEDLKMDVAKKYGMVQPKAST  
TQAVRAVFIIDPEAKIRTIYYPQSTGRNMQEIKRIVVALQKNAAEKVATPANWQPGEDVIIP  
PPSSMEAVKERMGKEEEGKRCLDWFMCLK KDTQK

>antioxidant\_191

MVVLGQKFPEVEVQTTHGRMRLPDHYRGKWVLFVSHPADFTPVCTTEFVEFARNYDKFK  
AMNTELIGLSIDQVFSHIKWIEWIKEKFNVEIPFPIIADDDQGELARMLGMISPYKGTNTVRA  
VFIVDPEGYIRAMLYYPQETGRNIPEILRLVEALQTADKYGVATPANWHVDRIEYKFPSSIVG  
NDVIIPPASSLEEKKDREERAKKGEIECFDWWFCHKKLE

>antioxidant\_192

MPVVLGQKAPDFTVNTSKGPITLSNYRGKWVLLFSHPGDFTPVCTTEFIAFTERYEDFQKL  
GVELIGLSIDSVFSHIAWIRDIKEHFGIDIPFPIIADIDKEVAREYNLIDEKSGATVRGVFIIDPN  
QIVRWMIYYPAETGRNIEEIRVIKALQFNWDRKLATPANWQPGQEGIEPAPTTVDSSFKRD  
NEQGVKTWYLFVK

>antioxidant\_193

MFPKTLTDSKYKAFVDGEIKEISLQDYIGKYVVLAFYPLDFTFVCPTEINRFSDLKGAFRR  
NAVLLISCDSVYTHKAWASIPREQNGVLGTAWPMVWDAKRELCNQFGLYDEENGHPM  
RSTVILAKDLSVRHISSNYHAIGRSVDEIIRLIDAITFNDENGDICPAEWRSENKDN

>antioxidant\_194

MAAGKARIGHLAPGFTAKAVMPDGQFKDISMSDYRGKYV VFFFYPLDFTFVCPTEIIAFSD  
AAEEFRKIGCEVIGASVDSHFCHLAWTNTPRKHGGLGAMKIPLVADTMRSISTDYGVFEG

GMRASPTGGLFIIDDKGVLRQITINDLPVGRVCVDEILRLVQAFQFTDKHGVEVCPAGWKPGS  
DTIKPDVQKSKDFFSKQQ

>antioxidant\_195

MKIKKLLKNGLSLFLTFIVITSILDFVRRPVVPEEINKITLQDLQGNTFSLESLDQNKPTLLYF  
WGTWCGYCRYTSPAINSLAKEGYQVVSVALRSGNEADVNDYLSKNDYHFTTVNDPKGEF  
AERWQINVPTIVLLSKGKMDLVTTGLTSYWGLKVRLFFAEFFG

>antioxidant\_196

MASVEEFRNAQRAKGPATILAIQTATPDHCVYQSDYADYYFRVTKSEHMTTELKKKFNRIC  
DKSMIKKRYIHLTEEMLEEHPNIGAYMAPSLNIRQEIITA EVPRLGRDAALKALKEWGQPK  
SKITHLVFCTTSGVEMPGADYKLANLLGLETSVRRVMLYHQGCYAGGTVLRRTAKDLAEN  
NAGARVLVVCSEITVVTFRGPSEDALDSL VGQALFGDGSSAVIVGSDPDVSIERPLFQLVSA  
AQT FIPNSAGAIAGNLREVGLTFHLWPNVPTLISENIEKCLTQAFDPLGISDWNLSLFWIAHP  
GGPAILD AVEAKLNLEKKKLEATRHLVSEYGNMSSACVLFILDEMRRKSLKGEKATTGEG  
LDWGVLF GFGPGLTIETVVLH SVPTVTN

>antioxidant\_197

MAEITFKGGPVTLVGQEVKVG DQAPDFTVL TNSLEEKSLADMKGKVTIISVIPSIDTG VCD  
AQTRRFNEEA AKLGDVNVYTISADLPFAQARWCGANGIDK VETLSDHRDMSFGEAFGVY  
IKELRLLARSVFLDENGKV VYAEYVSEATNHPNYEKPIEAAKALVK

>antioxidant\_198

MSIVNFKGNPVKLGNSVEVGADAPKVN LKAKDLSVIEIGAAGKTQIILSVPSLDTPVCAT  
EAREFNKKVASYNGAEVIVVSM DLPFAMGRFCSTEGIENLSVASDFVAKEFGEKYGVLINE  
GALEGLLARAVFVIKEGKVAYKELVNEITEMPDI AKLDAFFGGSSCCGCGCH

>antioxidant\_199

MKVVKFKGKEVTLEGTEIKVGD TFPDFVAVNSSLEPVMLKNTNRVRVFLAVPSV DTPVCDL  
EVKTFNARASEIDG VSIY TISMDLPFAQSRWCGAEGIKNVTTLSDYRDR AFGKNTGTYYKE  
LGLLARAVFVVDSSNKV TYANYLEEVS GYPNYDEV LQAAQAAK

>antioxidant\_200

MATTHFDGTDTP TSGELPAVGDTLPDFTVVD TNLGEVSLSDLKGK KLVLNIFPSVDTGLCA  
ESVRRFNAEAAGLDNTTVLCVSKDLPFALGRFCGA EGLDNVTAASA FRSTFGEDYGVVLE  
GSP LKGLLARSVIVADED GKVIY TQLVDEIKTEPDYASAIKALG

>antioxidant\_201

MSQTVHFQGNPVT VANSIPQAGSKAQTFTLVAKDLS DVTLGQFAGKRKVLNIFPSIDTGVC  
AASVRKFNQLATEIDNTV VLCISADLPFAQSRFCGA EGLNNVITLSTFRNAEFLQAYGVAIA  
DGPLKGLAARAVVIDENDNVIFSQLVDEITTEPDYEAALAVLKA

>antioxidant\_202

MQKVTFKEETYQLEGKALKVGD KAPDVKLVNGDLQEVNLLKQGVR FQVVSALPSLTGS  
VCLLQAKHFNEQAGKLPSVSFSVISMDLPFSQGC GAEGIKDLRILSDFRYKAFGENYGV  
LLGKGS LQGLLARSVFLDDKGVVIYKEIVQNILEEP NYEALLKV LK

>antioxidant\_203

MTKVTLKGNPVQLEGKIPSPGD KAPDFKAIKQDLSEFSLKDYAGKV KILVAVPSLDTSVCA  
LETKAFNEKAAGISGVTTLVISGDLPFAMGRFCSTEGINSPNLVTGSQYRDFSFSKAYGTHI  
ADGPLKGLSARAVFLDKSDTVRYVEIVPEITTEPNYTA AIAAANAAL

>antioxidant\_204

MSKITLAGTEIEVSGVFPQVGDVVTDFTTVSAKLED TLANFAGKRKILNIFPSIDTGICATS

VRKFNEQAAKLANTAVLCLSTDLPFAQARFCGAEGLENVFTVSTFRNKDVHKQLGVDIVE  
GPLAGLTARAVIVLDENNRVLHSELVPEIKQEPNYDAALAVL

>antioxidant\_205

MTTFLGNSVTFTGKQLQVGDIAKDFLLIATDLSQKSLKDFEGKKKVISVVP SIDTGICSKQT  
RTFNEELSEL DNTVVITVSMDLPFAQKRWC SAEGLDNVILLSDFYDHSFGQDYALLMNEW  
HLLTRAVLILDEHNKVTYTEYVDNVNSDV DYEAAINA AKILP

>antioxidant\_206

MTVTFQNNPVSISGSF PKVGDRLPSFTLCGADLNDLNNEDFKGKKIVMSIFPSIDTPVCSKS  
VKVLQNALMTRSDTVLLCVSADLPFAMSRFCTEHAVANVTNASFFREPAFTERFGVNLNE  
GALRGLAARAVIVAEFGVITHSELVNEITNEPDYDRILMSL

>antioxidant\_207

MVKQVSDSSEFKSIVCQDKLVVVDFFATWCGPCKAIAPKFEQFSNTYS DATFIKVDVDQLS  
EIAAEAGVHAMP SFFLYKNGEKIEEIVGANPAKLEASIKANL

>antioxidant\_208

MVTQLKSASEYDSALASGD KLVVVDFFATWCGPCKMIAPMIEKFAEQYS DAAFYKLDVD  
EVS DVAQKAEVSSMPTLIFYKGGKEVTRVVGANPAAIKQAIASNV

>antioxidant\_209

MAAEEGVVIA CHNKDEFDAQMTKAKEAGKVVIIDFTASWCGPCRFIAPVFAEYAKKFPGA  
VFLKVDVDELKEVAEKYNVEAMPTFLFIKDGAEADK VVGARKDDLQNTIVKHVGATAAS  
ASA

>antioxidant\_210

MNLCNSRFSVTFVRQCSTIL TSPSAGIIQNRGSLTTKVP HWISSSLSCAHTTFQRTMNL TGQ  
RGRSDSTGATGGNAPAGSGAGAPPFQHPHCDRAAMYAQPVRKMSTKGGSYDYDLIVIG  
GGSAGLACA KEAVLNGARVACLDFVKPTPTLGTKWGVGGTCVNVGCIPK KLMHQASLL  
GEAVHEAAAYGWNVDEKIKPDWHKLVQSVQNHISVNVWVTRVDLRD KKV EYINGLGSF  
VDSHTLLAKL KSGERTITAQTFVIAVGGPRYPDIPGAVEYGITSDDLFSLDREPGKTLVVG  
AGYIGLECA GFLKGLGYEPTVMVRSIVLRGFDQQMAELVAASMEERGIPFLRKT VPLSVE  
KQDDGKLLV KYKNVETGEEAEDVYD TVLWAIGRKGLVDDL NLPNAGVTVQKDKIPVDS  
QEATNVANIYAVGDIIYGKPELTPVAVLAGRLLARRLYGGSTQRMDYKDVATTVFTPLEYA  
CVGLSEEDAVKQFGADEIEVFHGYYPTEFFIPQKSVRYCYLKAVAERHGDQRVYGLHYI  
GPVAGEVIQGF AAALKSGLTINTLINTVGIHPTTAE EFTRLAITKRSGLDPTPASCCS

>antioxidant\_211

MAPVVQQPAPSFKKTAVVDGVFEEVTLEQYK GKWVLLAFIPLAFTFVCPSEIIAYSEAVKK  
FAEKDAQVLFAS TDSEYTWLAWTNVARKDGGIGKVDFPVLADTNHSLSRDYGV LIEEEGV  
ALRGIFLIDPKGVLRQITINDLPVGRSVEESLRLLEAFQFTEKYGEVCPANWHPGDETIKPS  
PEASKEYFNKVNK

>antioxidant\_212

MVLVTPAPDFTAS AISCNNGDIINN FNFKFTNNQTSILFFWPMDFTFVCPSEIIAFNQELSK  
FKKRNVKLIGVSIDS VYVHHAWRNTLSHNGQIDKINFTMVSDLKREIQRSYGIEHPQLGVA  
LRATFLIDKNRIRHQTINDLPFGRN ISETLRMIDALHFYEKYGEVCPANWKKGDTGIKTTQ  
EGIHKYLEKISKK

>antioxidant\_213

MLVTKLAPDFKAPAVLGNNEVDEHFELSKNLGKNGVILFFWPKDFTFVCPTEIIAFDKRVK  
DFHEKGFNVIGVSIDSEQVHFAWKNTPVEKGGIGQVSFPMVADITKSISR DYDVLFEAIAL

RGAFIDKMKVRHAVINDLPLGRNADEMLRMVDALLHFEEHGEVCPAGWRKGDKGM  
KATHQGVAEYLNKENSIL

>antioxidant\_214

LCPLDVLQLSSELLDIDGNEVEASRILSDITAFGGIRCPLTVVQSRGIGTISSPYRFIAEGHPL  
SLKDMDGWFRVSDDEFNMYK

>antioxidant\_215

MSVIEIRSYQHWISTIPKSGYLAVDCYADWCGPCKAISPLFSQLASKYASPKFVFAKVNVD  
EQRQIASGLGVKAMPTFVFFENGKQIDMLTGANPQALKEKVALISSKATGTGALASSSSAP  
VKGASLQGCIEPNQLECLNQDDHDLKSAFNSNPSSFLESDVDEQLMIYIPFLEVVKVHSI  
AITPVKGETSSAPKTIKLYINQPNNSLFEDAESFTPTQVIEDIVYEQDDQPTIPLRFVKFQRV  
NSLVIFIYSNVGEEETTKISRLELFGEPVGDSSKGLQKVEA

>antioxidant\_216

MQLKPEINPEMLNKVLSRLGVAGQWRFDVVLGLEEESLGSVPAPACALLLLFPLTAQHE  
NFRKKQIEELKGQEVSPKVYFMKQTIGNSCGTIGLIHAVANNQDKLGFEDGSVLKQFLSET  
EKMSPEDRAKCFEKNEAIQAADAVAQEGQCRVDDKVNHFHILFNNVDGHLIELDGRMP  
FPVNHGASSEDTLKDAKVCREFTEREQGEVRFSAVALCKAA

>antioxidant\_217

MVNVKVEFLGGLDAIFGKQRVHKIKMDKEDPVTVDLIDHIVSTMINNPNDVSIFIEDDSI  
RPGIITLINDTDWELEGEKDYILEDGDIISFTSTLHGG

>antioxidant\_218

MSGTRPAARNTLTAQNVVRSVDAEERIAWVSKALCRTTDPDELFRGAAQRKAAVICR  
HCPVMQECAAADALDNKVEFGVWGGMTERQRRALLKQHPEVVSWSDYLEKRRRTGTA  
G

>antioxidant\_219

MSVSTAKRSLDVVSPGSLAEFEGSKSRHDEIENEHRRTGTRDGEDSEQPKKKGSKTSKKQ  
DLDPETKQKRTAQNRAAQRAFRRERKERMKELEKKVQSLESIQQQNEVEATFLRDQLITL  
VNELKKYRPETRNDSKVLEYLARRDPNLHFSKNNVNHNSSEPIDTPNDDIQENVKQKMN  
FTFQYPLDNDNDNDNSKNVGVKQLPSPNDPSHSAPMPINQTQKKLSDATDSSSATLDSLSNS  
NDVLNNTPNSSSTSMWLDNVIYTNRFVSGDDGSNSKTKNLDSNMFSNDFNFENQFDEQV  
SEFCSKMNQVCGTRQCPIPKKPIALDKEVFASSILSSNSPALTNTWESHSNITDNTPANVI  
ATDATKYENSFSGFGRGLGFDMSANHYVVNDNSTGSTDSTGSTGNKNKKNNNNSDDVLPF  
ISESPFDMNQVTNFFSPGSTGIGNNAASNTNPSLLQSSKEDIPFINANLAFPDDNSTNIQLQP  
FSESQSQNKFDYDMFFRDSSEKGNLFGFLEDDDDKKAANMSDDESSLIKNQLINEEP  
ELPKQYLQSVPGNESEISQKNGSSLQADKINNGNDNDNDNDVPSKEGSLLRCSEIWR  
ITTHPKYSDIDVDGLCSELMAKAKCSERGVVINAEDVQLALNKHMN

>antioxidant\_220

MTNFPKIGKTPPNFLTIGVYKKRLGKIRLSDYRGKKYVILFFYPANFTAISPTLMLLSDRIS  
EFRKLSTQILAISVDSPFHLQYLLCNREEGGLEDLNYPLVSDLTQTITRDYQVLTDEGLAF  
PGLFIIDKEGIIQYYTVNNLLCGRNINELLRILESIQYVKENPGYACPVNWNFGDQVFYSHP  
LKSKIYFKDLYSPKKSS

>antioxidant\_221

MIASLDELYHSELFFLPVMDENARLVGLEIIATFAAEDGAVRMPTELVAAPRLSVEEQYCLFV  
EKLALLETCQHFFIQHKLIAWLNLPPAISDLLLDSSELSRAARFPFLELAINENYPGLNQG  
KNNETLANLAMHFPLMLANFGAGEASTKAIFDGLFKRVMLDKNFIQQAEMISFEPFMH

AIVAQISSCESLMIAGIDTEAMFARAAPLGFSAFQGGLWPPVPVSQLIKLVQR

>antioxidant\_222

MAERMVVGKQAPRFEMEAVLASKEFGKVSLEENMKNDKWTVLEFFYPMDFTFVCPTTEITA  
MSDRYDEFEDLDAEVIGVSTDTIHTHLAWINTDRKENGLGQLKYPLAADTNHEVSREYG  
VLIEEEGVALRGLFIINPEGELQYQTVFHNNIGRDVDETLRVLQALQTGGLCPANWKPGQK  
TL

>antioxidant\_223

MKLRQMPPELTGEKAWLNGEVTREQLIGEKP TLIHFWISISCHLCKEAMPQVNEFRDKYQD  
QLNVVAVHMPRSEDDLDPGKIKETA AEHDITQPIFVDS DHALTDAFENEYVPAYYVFDKT  
GQLRHFQAGGSGMKMLEKRVNRVLAETE

>antioxidant\_224

MLKKWLAGILLIMLVGYTGWNLYQTYSKKEVGIQEGQQAPDFSLKTLSGEKSSLQDAKG  
KKVLLNFWATWCKPCRQEMPAMEKLQKEYADKLAVVAVNFTSAEKSEKQVRAFADTYD  
LTFPILIDKKGINADYNVMSYPTTYILDEKGVIQDIHVGTMTKKEMEQLDLD

>antioxidant\_225

SYTLPSLPYAYDALEPHFDKQTMEIHHTKHHQTYVNNANA ALESLEPEFANLPVEELITKLD  
QLPADKKTVLRN NAGGHANHSLFWKGLKKGTTLQGD LKAAIERDFGSVDNFKA FEKA  
AASRFGSGWAWLV LKGDKLAVVSTANQDSPLMGEAISGASGFPIMGLDVWEHAYYLK FQ  
NRRPDYIKEFWNVVNWDEAAARFAAKK

>antioxidant\_226

HHHHDYDIPTTENLYFQGHMTIHKKGQAHWEGDIKRGKGTVSTESGVLNQQPYGFNTRF  
EGEKGTNPEELIGAAHAACFSMALSLMLGEAGFTPTSIDTTADVSLDKVDAGFAITKIALK  
SEVAVPGIDASTFDGIIQKAKAGCPVSQVLKAEITLDYQLKS

>antioxidant\_227

MSGLAKYLPGATNLLSKSGEVSLSLVGKT VFLYFSASWCPPCRGFTPVLAEFYEKHHVA  
KNFEVVLISWDENESDFHDY YGKMPWLALPFDQRSTVSELGKTFGVESIPTLITINADTGA  
IIGTQARTRVIEDPDGANFPWPN

>antioxidant\_228

PHMSGLKKFFPYSTNV LKGAAADIALPSLAGKTVFFYFSASWCPCRAFTPQLIDFYKAH  
AEKKNFEVMLISWDESAEDFKDY YAKMPWLALPFEDRKGMEFLTTFGFDVKS IPTLVGVE  
ADSGNIITTQARTMVVKDPEAKDFPWPVVEAKK

>antioxidant\_229

MSCGEAEDLHPAPDFNETALMPNGTFKKVALTSYK GKWLVLFFYPMDFTFVCPTTEICQFS  
DRVKEFS DIGCEVLACSM DSEYSHLAWTSIERKRGGLGQMNIPILADKTKCIMKSYGV LK  
EEDGVAYRGLFIIDPKQNL RQITVNDLPVGRDVDEALRLVKA FQFVEKHGEVCPANWKPG  
DKTMKPDPEKSKEYFGAVAKLP

>antioxidant\_230

GSSGSSGTEERLKEIEAKYDEIAKDWPKKVKHVLHEEHELELTRVQVYTCDKCEEEGTIW  
SYHCDECDLHAKCALNEDTKESGPSSG

>antioxidant\_231

MGYHLGATFPNFTAKASGIDGDFELYKYIENSWAILFSHPNDFTPCTTELAELGKMHEDF  
LKLNCKLIGFSCNSKESHDKWIEDIKY YGKLNKWEIPIVCDESRELANKL KIMDEQEKDIT  
GLPLTCRCLFFISPEKKIKATVLYPATTGRNAHEILRVLKSLQLTYTTPVATPVNWNEGDKC  
CVIPTLQDDEISKHFKNEITK VEMPSKKKYLRVNL

>antioxidant\_232

MAQITLRGNAINTV GELPAVGSPAPAFTLTGGDLGVISSDQFRGKSVLLNIFPSVDTPVCAT  
SVRTFDERAAASGATVLCVSKDLPFAQKRFCGAEGTENVMPASAFRDSFGEDYGVTIADG  
PMAGLLARAIVVIGADGNVAYTELVPEIAQEPNYEAALAALGATSGSHHHHHH

>antioxidant\_233

KVPRGSHMLNVGATAPDFTLRDQNQQLVTLRGYRGAKNVLLVFFPLAFTGICQGELDQLR  
DHLPEFENDDSAALAISVGPPPTHKIWATQSGFTFPLLSDFWPHGAVSQAYGVFNEQAGIA  
NRGTFVVDRSGIIRFAEMKQPGEVRDQRLWTDALAALTA

>antioxidant\_234

MGHHHHHHHHHSSGHIEGRHMKLSLVTKKAYNFTAQGLNKNNEIINVDLSSFIGQKYC  
CLLFYPLNYTFVCPTEIIEFNKHIKDFENKNVELLGISVDSVYSHLAWKNMPIEKGIGNVE  
FTLVSDINKDISKNYNVLYDNSFALRGLFIIDKNGCVRHQTVNDLPIGRNVQEVLRITDSIIH  
VDTSGEVCPINWKKGQKAFKPTTESLIDYMNNANKNV

>antioxidant\_235

MLQYPELPLESPIDAELPDRGGRYRLSQFHEPLLA VFM CNHCPYVKGSIGELVALAER  
YRGKVA FVGINANDYEKYPEDAPEKMAAF AEHGIFFPYLLDETQEVAKAYRALRTPEVF  
LFDERRLLRYHGRVNDNPKDPSKVQSHDLEAAIEALLRGEEPLKEAPAIGCTIKWRPGNE  
PEVRIG

>antioxidant\_236

MKGLVELGEKAPDFTLPNQDFEPVNLYEVLKRGRPAVLIFFPAAAFSPVCTKELCTFRDKMA  
QLEKANA EVL AISVDS PWCLKKFKDENRLAFNLLSDYNREVIKLYNVYHEDLKGLKMVA  
KRAVFIVKPDGTVAYKWVTDNPLNEPDYDEVVREANKIAGELVA

>antioxidant\_237

QVKLLEQSGAEVKKPGASVKVSCKASGYSFTSYGLHWVRQAPGQRLEWMGWISAGTGN  
TKYSQKFRGRVTFTRDTSATTAYMGLSSLRPEDTAVYYCARDPYGGGKSEFDYWGQGTL  
VTVSSASPTSPKVFPLSLCSTQPDGNVVIACL VQGFFPQEPLSVTWSESGQGV TARNFPPSQ  
DASGDLYTTSSQLTLPATQCLAGKSVTCHVKHYTNPSQDVTVPCVPSTPPTSPSTPPTPS  
PSCCHPRLSLHRPALEDLLLGSEANLTCTLTGLRDASGVTFTWTPSSGKS AVQGP PERDLC  
GCYSVSSVLPGCAEPWNHGKTFTCTAAYPESKTPLTATLSKSGNTFRPEVHLLPPPSEELAL  
NELVTLTCLARGFSPKDVLRWLQGSQELPREKYLTWASRQEPSQGTTFFAVTSILRVA AE  
DWKKGDTFSCMVGHEALPLAFTQKTIDRLAGKPTHVNVSVVMAEVDGTCY

>antioxidant\_238

MGSSHHHHHHHSSGLVPRGSPTYVGKEAPFFKAEAVFGDNSFGEVNLTQFIGKKYVLLYFY  
PLDFTFVCPSEIIALDKALDAFHERNVELLGCSDSKYTHLAWKKTPLAKGGIGNIKHTLL  
SDITKSISKDYNVLFDDSVSLRAFVLIDMNGIVQHLLVNNLAIGRSVDEILRIIDAIQHHEKY  
GDVCPANWQKGKVSMPKSEEGVAQYLSTL

>antioxidant\_239

MGITLGEVFPNFEADSTIGKLFHDWLGNSWGVLF SHPRDFTPVSTTELGRVIQLEGDFKK  
RGVKLI ALSCDNVADHKEWSE DVKCLSGVKGDMPIIADETRELAVKLG MVDPDERTST  
GMPLTCRAVFIIGPDKKLLSILYPATTGRNFSEILRVIDSLQLTAQKKVATPADWQPGDRC  
MVPVGSAAEAKTLFPNMEVKAVPSGKGYLRYTPQPKSMGGSRSHHHHHHH

>antioxidant\_240

GHMEERVLGMPAVESNMFPLGKQAPPFALTVIDGNVVRLEDVKS DAATVIMFICNHCPF  
VKHVQHELVR LANDYMPKGV SFVAINSNDAEQYPEDSPENMKKVAEELGYPPFYLYDET



QEVAKAYDAACTPDFYIFDRDLKCVYRGQLDDSRPNNGIPVTGESIRAALDALLEGRPVP  
EKQKPSIGCSIKWKPSA

>antioxidant\_241

GHMVEIGELAPDFELPDTELKKVKSALKGKVVVLAIFYPAFTQVCTKEMCTFRDSMAK  
FNQVNAVVLGISVDPPFSNKAFKEHNKLNFTILSDYNREVVKKYNVAWEFPALPGYVLAK  
RAVFVIDKEGKVRYKWVSDDPTKEPPYDEIEKVVKSLS

>antioxidant\_242

GHMARTVNLKGNPVTLVGPELKVGDRAPEAVVVTKDLQEKIVGGAKDVVQVIITVPSLD  
TPVCETETKKFNEIMAGMEGVDVTVVSMDLPFAQKRFCESFNIQNVTVASDFRYRDMEK  
YGVLIGEGALKGILARAVFIIDKEGKVAYVQLVPEITEEPNYDEVVNKVKELI

>antioxidant\_243

MVKVGDKAPLFEGIADNGEKISLSDYIGKHNVLYFYPKDDTPGSTREASAFRDNWDLK  
DYDVVVIGVSSDDINSHKRFKEKYKLPFILVSDPKKIRELYGAKGFILPARITFVIDKKGII  
RHIYNSQMNPNANHVNEALKALKQIKEEEISLEHHHHHH

>antioxidant\_244

SNAGMKAADFTYVTVHGDNSRMSRLKAQYTMLFFYDPDCSNCRKFEKLF AEIPAFVEMV  
ENGLTRVLAIYPDENREEWATKAVYMPQGWIVGWNKAGDIRTRQLYDIRATPTIYLLDGR  
KRVILKDTSMQLIDYLATQAGK

>antioxidant\_245

SNAMKAPELQIQWFNSATDLTLADLRGKVIVIEAFQMLCPGCVMHGIPLAQKVRAAFPE  
DKVAVLGLHTVFEHHEAMTPISLKAFLHEYRIKFPVGVDPGDGAMPRTMAAYQMRGTP  
SLLLIDKAGDLRAHHFGDVSELLLGAEIATLLGEAAPS

>antioxidant\_246

SNAKVTVGKSAPYFSLPNEKGEKLSRSAERFRNRYLLLNFWASWCDPQPEANAELKRLN  
KEYKKNKNFAMLGISLDIDREAWETAIKKDTLSWDQVCDFTGLSSETAKQYAILTLPTNIL  
LSPTGKILARDIQGEALTGKCLKELLKTE

>antioxidant\_247

SNAKSEIGKYAPFFSLPNAKGEKITSRSDAFKQKSLINFWASWNDSISQKQSNSELREIYK  
KYKKNKYIGMLGISLDVDKQWKDAIKRDTLDWEQVCDFGGLNSEVAKQYSIYKIPANI  
LLSSDGKILAKNLRGEELKKKIENIVEEA

>antioxidant\_248

SNAMTDAVLELPAATFDLPLSLSGGTQTTLRAHAGHWLVIFYPKDSTPGCTTEGLDFNA  
LLPEFDKAGAKILGVSRDSVKSHDNFCAKQGFAFPLVSDGDEALCRAFDVIKKNMYGK  
QVLGIERSTFLLSPEGQVVQAWRKVKVAGHADAVLAALKAHAKQ

>antioxidant\_249

SNAPRAAGHSEEVLEREASFSLTTIDGEVISLNNVGGDVVILWFMAAWCPSCVYMADLLD  
RLTEKYREISVIAIDFWTAEALKALGLNKPGYPPPDTPEMFRKFIANYGDPSWIMVMDDGS  
LVEKFNVRSIDYIVIMDKSSNVLYAGTTPSLGELESVIKSVQGG

>antioxidant\_250

SNAPLLLGKKAPNLYMTDTTGTYRYLYDVQAKYTIFFWDSQCGHCQQETPKLYDWWL  
KNRAKGIQVYAANIERKDEEWLKFIRSKKIGGWLNVNRDSKNHTDFKITYDIYATPVLYVL  
DKNKVIIAKRIGYENLDDFLVQYEKSLKTK

>antioxidant\_251

MSLAPGKAESDAPLVRTGALAPNFKLPTLSGENKSLAQYRGKIVLVNFWASWCPYCRDE

MPSMDRLVKSFPKGDLLVAVNVEKRFPEKYRRAPVSNFLSDATGQVQQRYGANRLPD  
TFIVDRKGIIRQRVTGGIEWDAPKVVSYLKSLEGHHHHHH

>antioxidant\_252

MSLAVKPGPELPDFLLDPKGQPVTPATVSKPAVIVFWASWCTVCKAEFPGLHRVAEETGV  
PFYVISREPRDTREVVLEYMKTYPRFIPLASDRDRPHEVAARFKVLGQPWTFVVDREGK  
VVALFAGRAGREALLDALLLAGADLEGHHHHHH

>antioxidant\_253

MSLEENPAPDFTLNLTNGEVVKLSDLKGQVVIVNFWATWCPPCREEIPSMMLNAAMAG  
KPFMRMLCVSIDEKGVAVEEFFRKTGFTLPVLLDADKRVGKLYGTTGVPETFVIDRHGVIL  
KKVVGAMEWDHPEVIAFLNNELSKAREGHHHHHH

>antioxidant\_254

EKKSINECDLKGKKVLIRVDFNVPVKNKITNDYRIRRSALPTLKKVLTEGGSCVLMShLGR  
PKGIPMAQAGKIRSTGGVPGFQQKATLKPVAKRSELLLRPVTFA PDCLNAADVSKMSP  
GDVVLENVRFYKEEGSKKAKDREAMAKILASYGDVYISDAFGTAHRDSATMTGIPKILG  
NGAAGYLMEKEISYFAKVLGNPPRPLVAIVGGAKVSDKIQLLDNMLQRIDYLLIGGAMAY  
TFLKAQGSIGKSKCEESKLEFARSLKKAEDRKVQVILPIDHVCHTEFKAVDSPLITEDQN  
IPEGHMALDIGPKTIEKYVQTIGKCKSAIWNGPMGVFEMVPYSKGTFAIAKAMGRGTHEH  
GLMSIIGGDSASAAELSGEAKRMSHVSTGGGASLELLEGGKTLPGVTVLDDK

**The negative dataset** contains 1567 non-antioxidant proteins

>non-antioxidant\_1

MERPYPACPVESCDRRFRSADLTRHIRIHTGQKPFQCRICMRNFRSDHLTTHIRTHTGEKP  
FACDICGRKFARSDERKRHTKIHLRQKD

>non-antioxidant\_2

MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSNLYINVKLKAEE  
EIGIKATHIKLPRTTTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAIPEKDV  
DGLTSINAGRLARGDLNDCFIPCTPKGCLELIKETGVPIAGRHAVVVGRSKIVGAPMHDLL  
LWNNATVTTCHSKTAHLDEEVNKGDILVVATGQPEMVKGWIKPGAIVIDCGINYPDDK  
KPNGRKVVGDVAYDEAKERASFITVPPGGVGPMTVAMLMQSTVESAKRFLEKFKPG

>non-antioxidant\_3

MNLTELKNTPVSELITLGENMGLENLARMRKQDIIFAILKQHAKSGEDIFGDGVLEILQDG  
FGFLRSADSSYLAGPDDIYVSPSQIRRFNLRTGDTISGKIRPPKEGERYFALLKVNEVNFDK  
PENARNK

>non-antioxidant\_4

MKNLDCWVDNEEDIDVILKKSTILNLDINNDIISDISGFNSSVITYPDAQLVPGINGKAIHLV  
NNESEVIVHKAMDIEYNDMFNNFTVSFWLRVPKVSASHLEQYGTNEYSISSMKKHSLSI  
GSGWSVSLKGNLIWTLKDSAGEVRQITFRDLPDFNAYLANKWVFITITNDRSSANLYI  
NGVLMGSAEITGLGAIREDNITLKLDRCNNNNQYVSIDKFRIFCKALNPKEIEKLYTSYLS  
ITFLRDFWGNPLRYDTEYYLIPVASSSKDVQLKNITDYMYLTNAPS YTNGLNIYYRRLYN  
GLKFIKRYTPNNEIDSFVKS GDFIKLYVSYNNNEHIVGYPKDGNFNNLDRILRVGYNAP  
GIPLYKKMEAVKLRDLKTYSVQLKLYDDKNASLGLVGTHNGQIGNDPNRDILIASNWYFN  
HLKDKILGCDWYFVPTDEGWTND

>non-antioxidant\_5

MFKVYGYDSNIHKCGPCDNAKRLTLVKKQPFEFINIMPEKGVFDDEKIAELLTKLGRDTQI

GLTMPQVFAPDGS HIGGFDQLREYFK

>non-antioxidant\_6

WSAEDKHKEGVNSHLWIVNRAIDIMSRNTTLVKQDRVAQLNEWRTLENGIYAADYENP  
YYDNSTFASHFYDPDNGKTYIPFAKQAKETGAKYFKLAGESYKNKDMKQAFFYLGLSLH  
YLGDVNQPMHAANFTNLSYPQGFHASKYENFVDTIKDNYKVTDGNGYWNWKGNTNPEEW  
IHGA AVVAKQDYSGIVNDNTKDWVFKAAVSQEYADKWRAEVTMPMTGKRLMDAQRVTA  
GYIQLWFDTYGDR

>non-antioxidant\_7

VKDG YIVDDVNCTYFCGRNAYCNEECTKLKGESGYCQWASPYGNACYCYKLPDHVRTK  
GPGRCH

>non-antioxidant\_8

EYFTLQIRGRERFEMFRELNEALELKDAQAG

>non-antioxidant\_9

LEPRHAMLRLCRLPGGVITTKQWQAIDKFAAGENTIYGSIRLTNRQTFQFHGILKKNVKPVH  
QMLHSVGLDALATANDMNRNVLCTSNPYESQLHAEAYEWAKKISEHLLPRTRAYAEIWL  
DQEKVATTDEEPILGQTYLPRKFKTTVIPPQNDIDLHANDMNFVAIAENGKLVGFNLLVG  
GGLSIEHGNNKTYARTASEFGYLPLEHTLAVAEAVVTTQRDWGNRTDRKNAKTKYTLERV  
GVETFKAEVERRAGIKFEPYRPFYEFTGRGDRIGWVKGIDDNWHLTLFIENGRILDYPARPLK  
TGLLEIAKIHKGDFRITANQNLIAGVPESEKAKIEKIAKESGLMNAVTPQRENSMACVSFP  
TCPLAMAEAEERFLPSFIDNIDNLMKHHGVSEHIVMRVTGCPNGCGRAMLAEVLGVGKA  
PGRYNLHLGGNRIGTRIPRMYKENITEPEILASLDELIGRWAKEREAGEGFGDFTVRAGIIR  
PVLDPARDLWD

>non-antioxidant\_10

GVS GSCNIDVVCPEGDGRDIIIRAVGAYSKSGTLACTGSLVNNTANDRKMYFLTAHHCGM  
GTASTAASIVVYWNYQNSTCRAPNTPASGANGDGSMSQTQSGSTVKATYATSDFTLLELN  
NAANPAFNLFWAGWDRRDQNYPGAIAIHHPNVAEKRISNSTSPTS FVAWGGGAGTTHLNV  
QWQPSGGVTEPGSSGSPISPEKRVLGQLHGGPSSCSATGTNRSDQYGRVFTSWTGGGAA  
ASRLSDWLDPASTGAQFIDGLDSGGGTP

>non-antioxidant\_11

ELKVVTATNFLGTLEQLAGQFAKQTGHAVVISSGSSGPVYAQIVNGAPYNNVFFSADEKSPE  
KLDNQGFALPGSRFTYAIGKLVLSAKPGLVDNQGKVLGNGWRHIAISNPQIAPYGLAG  
TQVLTHLGLLDKLT AQERIVEANSVGQAHSQTASGAADLGFVALAQIIQAAAKIPGSHWFP  
PANYYEPIVQQAVITKSTAEKANAEQFMSW MKGPKAVAIKAAGYVLPQ

>non-antioxidant\_12

PYSSDTPCCFAYIARPLPRAHIKEYFYTS GKCSNPAVV FVTRKNRQVCANPEKKWVREYI  
NSLEMS

>non-antioxidant\_13

MISDSMTVEEIRLHLGLALKEKDFVVDKTGVKTIEIIGASFVADEPFIFGALNDEYIQRELE  
WYKSKSLFVKDIPGETPKIWQQVASSKGEINSNYGWAIWSEDNYAQYDMCLAELGQNPD  
SRRGIMIYTRPSMQFDY NKDGMSDFMCTNTVQYLIRDKKINAVVNMRSNDVVFGRNDY  
AWQKYVLDKLVSDLNAGDSTRQYKAGSIIWNV GSLHVYSRHFYLV DHHWKTGETHISK  
KDYVGKYA

>non-antioxidant\_14

MNKKELIDRVAKKAGAKKKDVKLILD TILLETITEALAKGEKVQIVGFGSFEVRKAAARKG

VNPQTRKPITIPERKVPKFKPGKALKEKVK

>non-antioxidant\_15

GGSQWNQVQQLEIKFLEQVDQFYDDNFPMEIRHLLAQWIETQDWEVASNNETMATILLQ  
NLLIQLDEQLGRVSKEKNLLLIHNLKRIRKVLQGKFHGNPMHVAVVISNCLREERRILAAA  
NMPI

>non-antioxidant\_16

KKSAKDALLWCQMKTAGYPNVNIHNFTTSWRDGMFALIHKHRPDLIDFDKLLKSN  
AHYNLQNAFNLAEQHLGLTKLLDPEDISVDHPDEKSIITYVVTTYHYFSKM

>non-antioxidant\_17

TQGNTCGGETCSAAQVCLKGKVCNEVHCRIRCKYGLKKDENGCEYPCSCAKASQ

>non-antioxidant\_18

SKRYFVTGTDTEVGKTVASCALLQAAKAAGYRTAGYKPVASGSEKTPEGLRNSDALALQ  
RNSSLQLDYATVNPYTFAEPTSPHIISAEGRPIESLVMSAGLRALEQQADWVLEGGW  
FTPLSDTTFADWVTQEQLPVILVVGKLGKINHAMLTAQVIQHAGLTLAGWVANDVTPP  
GKRHAEMYMTLTRMIPAPLLGEIPWLAENPENAAATGKYINLALL

>non-antioxidant\_19

SIDSALNWDGEMTVTRFDAMTGAHFVIRLDSTQLGPAAGGTRAAQYSNLADALTDAGKL  
AGAMTLKMAVSNLPMGGGKSVIALPAPRHSIDPSTWARILRIHAENIDKLSGNYWTGPDV  
NTNSADMDTLNDTTEFVFRSLERGGAGSSAFTTAVGVFEAMKATVAHRGLGSLDGLTVL  
VQGLGAVGGSLASLAAEAGAQLLVADTDTERVAHAVALGHTAVALDVLSTPCDVFAPCA  
MGGVITTEVARTLDCSVVAGAANNVIADAASDILHARGILYAPDFVANAGGAIHLVGREV  
LGWSESVHERAVAIGDTLNQVFEISDNDGVTPDEAARTLAGRRAREASTTTATA

>non-antioxidant\_20

MIKLRMPAGGERYIDGKSVYKLYLMIKQHMNGKYDVIKYNWCMRVSDAAYQKRRDKYF  
FQKLSEKYKLELALIFISNLVANQDAWIGDISDADALVFYREYIGRLKQIKFKFEEDIRNIY  
YFSKKVEVSAFKEIFEYNPKVQSSYIFKLLQSNISFETFILLDSFLNIIDKHDEQTDNLVWN  
NYSIKLKAYRKILNIDSQKAKNVFIETVKSCKY

>non-antioxidant\_21

TPDCVTGKVEYTKYNDDDTFTVKVGDKELATNRANLQSLLLSAQITGMTVTIKTNACHN  
GGGFSEVIFR

>non-antioxidant\_22

SDPAHTATAPGGLSAKAPAMTPLMLDTSSRKLVAWDGTTDGAAVGILAVAADQTSTTLTFY  
KSGTFRYEDVLWPEAASDETKKRTAFAGTAISIV

>non-antioxidant\_23

VDAEAVVQKQCISCHGGDLTGASAPAIKAGANYSEEEILDILNGQGGMPGGIAKGAEAE  
AVAAWLAEEK

>non-antioxidant\_24

TVTPTYDPSNAPSFQQEIANAAQIWNSSVRNVQLRAGGNADFSYEGNDSRGSYAQTDG  
HGRGYIFLDYQQNQYDSTRVTAHETGHVGLPDHYQGPCSELMSGGGPGPSCCTNPYPN  
AQERSRVNALWANG

>non-antioxidant\_25

MAEIKHYQFNVMTCGCSGAVNKVLTKLEPDVSKIDISLEKQLVDVYTTLPYDFILEKIK  
KTGKEVRSKGQL

>non-antioxidant\_26

MEKKTIVLGVIGSDCHAVGNKILDHAFTNAGFNVVNIGVLSPELFIKAAIETKADAILVSS  
LYGQGEIDCKGLRQKCDEAGLEGILLYVGGNIVVGKQHWPDVEKRFKDMGYDRVYAPGT  
PPEVGIADLKKDLNIE

>non-antioxidant\_27

MELKNKKWTDEEFHKQREEVLQQWPTGKEVDLQEAVDYLLKIPAEKNFAEKLVLAKKK  
GITMAQPRAGVALLDEHIELRLYLQDEGGADFLPSTIDAYTRQNRIDECEGKIKESKAGR  
SLLNGFPGVNFVKGCRKVLAVNPLQARHGTPDSRLLAEIHHAGGWTSNEGGSISYNV  
PYAKNVTIEKSLLDWQYCDRLVGFYEEQGVHINREPFGLTGLVPPSMSNAVIGITEALLA  
AEQGVKNITVGYGECGNMIQDIAALRCLEEQTNEYLKAYGYNDVFTTVFHQWMMGGFP  
QDESKAFGVIVTATTIAALAGATKVVVKTTPHEAIGIPTKEANAAGIKATKMLNMLEGQRM  
PMSKELETEMAVIKAETKCILDKMFELGKGDLAGITVKAFTGVMDIPFGPSKYNAGKM  
MPVRDNLGCVRYLEFGNVPTFEEIKNYNRERLQERAKFEGRDVSFQMVIDDIFAVGKGRLL  
IGRPE

>non-antioxidant\_28

VLSSQNKKAIEELGNLIKANAEEAWGADALARLFELHPQTKTYFSKFSGFACNEQVKKHG  
KRVMNALADATHLNLHLHLEDLARKHGENLLVDPHNFHLFADCIVVTLAVNLQAFTP  
VTHCAVDKFLELVAYELSSCYR

>non-antioxidant\_29

PLREGRGLGPLQIWQTDFTLEPRMAPRSWLAVTVDTASSAIVVTQHGRVTSVAAQHHWAT  
AIAVLGRPKAIKTDNGSCFTSKSTREWLARWGIAHTTGIPGNSQGGQAMVERANRLLKDKI  
RVLAEGDGFMKRIPTSKQGELLAKAMYALNHFERAGENTKTNL

>non-antioxidant\_30

MDAKARNCLLQHREALEKDIKTSYIMDHMISDGFLTISEEEKVRNEPTQQQRAAMLKMI  
LKKDNDYSVSYFNALLHEGYKDLAALLHDGIPVVSSS

>non-antioxidant\_31

ATFKVTLINAEAGTKHEIEVPDDEYILDAAEEQGYDLPFSCRAGACSTCAGKLVSGTVDQS  
DQSFLDDDQIEAGYVLTVCVAYPTSDVVIQTHKEEDLY

>non-antioxidant\_32

MEISGTHTEINLDNAIDMIREANSIIITPGYGLCAAKAQYPIADLVKMLSEQGKKVRFGIHP  
VAGRMPGQLNVLLAEAGVPYDIVLEMDEINHDFPDTDLVVLVIGANDTVNSAAQEDPNSII  
AGMPVLEVWKSQVIVMKRSLGVGYAAVDNPIFYKPNTAMLLGDAKKTCDALQAKVRE  
SYQK

>non-antioxidant\_33

HHMDEEYDVIVLGTGLTECILSGIMSVNGKKVLHMDRNPYYGGESSITPLEELYKRFQLL  
EGPPETMGRGRDWNVDLIPKFLMANGQLVKMLLYTEVTRYLDFKVVVEGSFVYKGGKIYK  
VPSTETEALASNLGMFEEKRRFRKFLVFVANFDENDPKTFEGVDPQNTSMRDVYRKFDL  
GQDVIDFTGHALALYRTDDYLDQPCLETINRIKLYSESLARYGKSPYLYPLYGLGELPQGFA  
RLSAIYGGTYMLNKPVDDIIMENGKVVGVKSEGEVARCKQLICDPSYVPDRVRKAGQVIR  
IICILSHPIKNTNDANSCQIIPQNQVNRKSDIYVCMISYAHNVAAQGYIAIASTTVETDPE  
KEVEPALGLLEPIDQKFVAISDLYEPIDDGSESQVFCSCSYDATTHFETTCNDIKDIYKRMA  
GSAFDF

>non-antioxidant\_34

LNSCSMPLGMESKAISDAQITASSYFTNMFATWSPSKARLHLQGRSNAWRPQVNNPKEWL  
QVDFQKTMKVTGVTQGVKSLTSMYVKEFLISSQDGHQWTLFFQNGKVKVFQGNQD

SFTPVVNCLDPPLLTRYLRIHPQSWVHQIALRMEVLGCEAQ

>non-antioxidant\_35

GHHHHHHMTTQLEQAWELAKQRFAAVGIDVEEALRQLDRLPVSMHCWQGDDVSGFENP  
EGSLTGGIQATGNYPGKARNASELRADLEQAMRLIPGPKRLNLHAIYLES DTPVSRDQIKP  
EHFKNWVEWAKANQLGLDFNPSCFSHPLSADGFTLSHADDSIRQFWIDHCKASRRVSAYF  
GEQLGTPSVMNIWIPDGMKDITVDRLAPRQRLAALDEVISEKLNPAHHIDAVESKLF GIG  
AESYTVGSNEFYMGYATSRQTALCLDAGHFHPTEVISDKISAAMLYVPQLLLHVSRPV RW  
DSDHVVLDDDETQAIASEIVRHDLFDRVHIGLDFDASINRIA AWVIGTRNMKKALLRALL  
EPTAELRKLEAPGDYTARLALLEEQKSLPWQAVWEMYCQRHDT PAGSEWLESV RAYEKE  
ILSRRG

>non-antioxidant\_36

MRGSHHHHHGSGSMHQRQTLYQLMDGLNTFYQQSLQQPVATSARQYLEKRGLSHEVI  
ARFAIGFAPPGWDNVLKRFGGNPENRQSLIDAGMLVTNDQGRSYDRFRERVMFPIRDKRG  
RVIGFGGRV L GNDTPKYLNSPETDIFHKGRQLYGLYEAQQDNAEPNRLLVVEGYMDVVAL  
AQYGINYAVASLGTSTTADHIQLLFRATNNVICCYDGDRAGRDAAWRALETALPYMTDGR  
QLRFMFLPDGEDPDTLVRKEGKEAFEARMEQAMPLSAFLFNSLMPQVDLSTPDGRARLST  
LALPLISQVPGETLRIYLRQELGNKLGILDDS QLERLMPK

>non-antioxidant\_37

SGIVQQQNLLRAIEAQHLLQLTVWGIKQLQARSGGRGGWMEWDREINNYTSLIHSLIE  
ESQNQQEK

>non-antioxidant\_38

MKIDITDYNHADEILNPQLWKEIEETLLKMPLHV KASDQASKVGS LIFDPVGTN QYIKDEL  
VPKHWNKNIPKRFDFLGTDIDFGKRD TLVEVQFSNYPFLNNTVRSEL FHKSNMDIDEE  
GMKVAIIITKGHMFPASNSSLYEQAQNQLNSLAEYNVFDVPIRLVGLIEDFETDIDIVSTTY  
ADKRYSRITTKRDTVKGKVIDTNPNTRRRKRGTIVTY

>non-antioxidant\_39

MILRTSEETISTVQEKQQNISPLVRERGPQRVA AHITGTRGRSNTLSSPNSKNEKALGRKINS  
WESSRSGHSFLSNLHLRNGELVIHEKGFYIYSQTYFRFQEEIKENTKNDKQMVQYIYKYT  
SYPAPILLMKSARNSCWSKDAEYGLYSIYQGGIFELKENDRIFVSVTNEHLIDMDHEASFF  
GAFLVG

>non-antioxidant\_40

PPVYKIALGIEYDGSKYYGWQRQNEVRSVQEKLEKALSQVANEPITVFCAGRTDAGVHG  
TGQVVHFETTALRKDAAWTLGVNANLPGDIAVRWVKTVPDDFHARFSATARRYRYIYNH  
RLRPVLSKGVTHFYEPLDAERMHRAAQCLLGENDFTSFRAVQCQSRTPW RNVMHINVT  
RHGPVYVVDIKANAFVHHMVRNIVGSLMEVGAHNQPESWIAELLA AKDRTLAAATAKA  
EGLYLVAVDYPDRYDLPKPPMGPLFLAD

>non-antioxidant\_41

GSASPTPPYLKWAESLHSLDDQDGISLFR TFLKQEGCADLLDFWFACTGFRKLEPCDSNE  
EKRLKLARAIYRKYILDNNGIVSRQTKPATKSFIKGCIMKQLIDPAMFDQAQTEIQATMEEN  
TYP SFLKSDIYLEYTRTGSESPKV

>non-antioxidant\_42

CGUTACCAUGGTAACG

>non-antioxidant\_43

MTSVDCTAYGPELRALAARLPRTPRADLYAFLDAAHTAAASLPGALATALDTFNAEGSED

GHLLLRGLPVEADADLPTTPSSTPAPEDRSLLTMEAMLGLVGRRLGLHTGYRELRSGTVY  
HDVYPSPGAHHLSSETLLEFHTE MAYHRLQPNYVMLACSRADHERTAATLVASVRKA  
LPLLDERTRARLLDRRMPCCVDAFRGGVDDPGAIAQVKPLYGDADDPFLGYDRELLAPE  
DPADKEAVAALSKALDEVTEAVYLEPGDLLIVDNFRTHARTPFSPRWDGKDRWLHRVYI  
RTDRNGQLSGGERAGDVVAFTPRG

>non-antioxidant\_44

KETAAAKFERQHMDSSSTAASSNYCNQMMKSRNLTKDRCKPVNTFVHESLADVQAVCS  
QKNVACKDQGQNTCYQSYSTMSITDCRETGSSKYPNCAYKTTQANKHIIVACEGNPYVPVH  
FDASV

>non-antioxidant\_45

QEPQPEQDPFELSGKWITSYIGSSDLEKIGENAPFQVFMRSIEFDDKESKVYLNFFSKENGI  
CEEFSLIGTKQEGNTYDVNYAGNNKFVVSYASETALIISNINVDEEGDKTIMTGLLGKGTDI  
EDQDLEKFKEVTRENGIPEENIVNIIERDDCPA

>non-antioxidant\_46

MGKRVVIALGGNALQQRGQKGSYEEMMDNVRKTARQIAEIIARGYEVVITHGNGPQVGS  
LLLHMDAGQATYGIPAQPMQVAGAMSQGWIGYMIQQALKNELRKRGMKKVVTIITQTI  
VDKNDPAFQNPQTPVGPVGYDEETAKRLAREKGWIVKEDSGRGWRRVVPSPDPKGHVEAE  
TIKKLVERGVIVIASGGGGVPVILEEDGEIKGVEAVIDKDLAGEKLAEEVNADIFMILTDVNG  
AALYYGTEKEQWLREVKVEELRKYEEGHFKAGSMGPKVLAIRFIEWGGERAIIAHLE  
KAVEALEGKTGTQVLP

>non-antioxidant\_47

VELTESTRTIPLDEAGGTTTLTARQFTNGQKIFVDTCTQCHLQGKTKTNNNVSLGLADLAG  
AEPRRDNLALVEFLKNPKSYDGEDDYSELHPNISRPDIYEMRNYTEDDIFDVAGYTLIA  
PKLDERWGGTIYF

>non-antioxidant\_48

YPVFAQQNYANPREANGRIVCANCHLAQKAVEIEVPQAVLPDTVFEAVIELPYDKQVKQV  
LANGKKGDLNVGMVLILPEGFELAPPDRVPAEIKEKVGNYLYQPYSPQKNILVVGPPVPG  
KKYSEMVPILSPDPAKNKNVSYLYKPIYFGGNGRGRGVYDPDGKKSNTIYNASAAGKIV  
AITALSEKKGFEVSIKANGEVVVDKIPAGPDLIVKEGQTVQADQPLTNNPNVGGFGQA  
ETEIVLQNPAP

>non-antioxidant\_49

AVTKLVLRHGESQWNKENRFTGWYDVDLSEKGVSEAKAAGKLLKEEGYSFDFAYTSVL  
KRAIHTLWNVLDDELQAWLPVEKSWKLNERNHYGALQGLNKAETAEKYGDEQVKQWRR  
GFAVTPPELTKDDERYPGHDPYAKLSEKELPLTESLALTIDRVIPYWNETILPRMKSGERVI  
IAAHGNSLRALVKYLDNMSEEEILELNIPTGVPLVYEFDENFKPLKRYYLGNADIEIAAKAA  
AVANQGKAK

>non-antioxidant\_50

MNLMTTITGVVLGGKARRMGGVDKGLLELNGKPLWQHVDALMTQLSHVVVNANRH  
QEIQASGLKVIEDSLADYPGPLAGMLSVMQQEAGEWFLFCPCDTPYIPDLAARLNHQR  
KDAPVVVWHDGERDHPTIALVNRAIEPLLEYLQAGERRVMVFMRLAGGHAVDFSDHK  
DAFVNVNTPEELARWQEKRSHHHHHH

>non-antioxidant\_51

MLLTGKLYKEEKQKFYDAQNGKCLICQRELNPDVQANHLHDHDLNGPKAGKVRGLLC  
NLCDAAEQGMKHKFNRSGLKGQGVLDYLEWLENLLTYLKSDYTQNNIHPNFVGDKSKEF

SRLGKEEMMAEMLQRGFYNESDTKTQLIASFKKQLRKSJK

>non-antioxidant\_52

SGDRSMVEVLADHPGELVRTDSPNFLSSVLPHTHWRSNKTLPIAFKVVALGDVPDGTLLVTV  
MAGNDENYSaelRNATAAMKNQVARFNDLRFVGRSGRGKSFTLTITVFTNPPQVATYHR  
AIKITVDGPREPRRHRQKLDD

>non-antioxidant\_53

TEVTDCKGDAESSLTALSNAAKLANQAAEAAESGDESKFEEYFKTTDQQTRTTVAERLR  
AVAKEAGSTSGGSTTYHCNDPYGYCEPNVLAYTLPSKNEIANCDIYSELPLAQKCHAQ  
DQATTTLHEFTHAPGVYQPGTEDLGYGYDAATQLSAQDALNNADSYALYANAIELKC

>non-antioxidant\_54

LSADQISTVQASFDKVKGDPVGILYAVFKADPSIMAKFTQFAGKDLESIKGTAPFETHANRI  
VGFFSKIIGELPNIEADVNTFVASHKPRGVTHDQLNNFRAGFVSYMKAHTDFAGAEAAWG  
ATLDTFFGMIFSKM

>non-antioxidant\_55

MYDASLIPNLQIPQKNIPNNDGMNFVKGLRLGWNLGNTFADFNGTNTNELDYETSWSGI  
KTTKQMIIDAIKQKGFNTVRIPVSWHPHVSQSDYKISDVWMNRVQEVVNYCIDNKMYVIL  
NTHHDVDKVKGYFPSSQYMASSKKYITSVWAQIAARFANYDEHLIFEGMNEPRLVGHAN  
EWWPELTNSDVVDSINCINQLNQDFVNTVRATGGKNASRYLMCPGYVASPDGATNDYFR  
MPNDISGNNNKIIVSVHAYCPWNFAGLAMADGGTNAWNINDSKDQSEVTWFMNINNK  
YTSRGIPVIIGECGAVDKNNLKTREYMSYYVAQAKARGILCILWNNNFSGTGELFGFFD  
RRSCQFKFPEIIDGMVKYAFGLIN

>non-antioxidant\_56

VDGDQCESNPLNGGSCDDINSYECWCPFGFEGKNCEL

>non-antioxidant\_57

GRKKIQITRIMDERNRQVTFTRKRFGLMKKAYELSVLCDCEIALIIFNSSNKLQYASTDM  
DKVLLKYTEYNEPHES

>non-antioxidant\_58

TTCCPSIVARSNFNVCRLPGTPEALCATYTGCIIPGATCPGDYAN

>non-antioxidant\_59

MDAQSAAKCLTAVRRHSPLVHSITNNVVNTNFTANGLLALGASPMAYAKEEVADMAKIA  
GALVLNIGTLSKESVEAMIIAGKSANEHGVVPVILDVPGAGATPFRTESARDIIREVRLAAIR  
GNAAEIAHTVGVTDWLIKGV DAGEGGDIIRLAQQAQKLNTVIAITGEVDVIADTSHVY  
TLHNGHKLLTKVTGAGCLLTSVVGAFCAVEENPLFAAIAAIISSYGVAQAQLAAQQTADKGP  
GSFQIELLNKLSTVTEQDVQEWATIERVTVS

>non-antioxidant\_60

GAMGSDFLGNPFSSPVGQRIEKATDGSLSQEDWALNMEICDIINETEEGPKDALRAVKKR  
IVGNKNFHEVMLALTVLETCVKNCGHRFHVLVASQDFVESVLVRTILPKNNPPTIVHDKVL  
NLIQSWADAFRSPDLTGVTIYEDLRRKGLEFPM

>non-antioxidant\_61

MTMITPSLHQFPGLANKTYFNFGGQGILPTVALEAITAMYGYLQENGPFSIAANQHIQQLI  
AQLRQALAETFNVDPNITITITDNTTGCDIVLWGLDWHQGDDEILLTDCEHPGIIAIVQIAAA  
RFGITYRFFPVAATLNQGDAAAVLANHLGPKTRLVILSHLLWNTGQVLPLAEIMAVCRRH  
QGNYPVRVLVDGAQSAGSLPLDFSRLEVDYYAFTGHKWFAAGPAGVGGLYIHGDCLGEINP  
TYVGWRSITYGAKGEPTGWAEGGKRFEVATSAYPQYAGLLAALQLHQRQGTAEERYQAI



CQRSEFLWRGLNQLPHVHCLATSAPQAGLVSFTVDSPLGHRAIVQKLEEQRIYLRTIADPD  
CIRACCHYITDEEEEINHLLARLADFGP

>non-antioxidant\_62

MSGDENPASKPTPVQDVQGDGKWMSLHHRFVADSKDKEPEVVFIGDSLVLQMHQCEIW  
RELFSPHALNFGIGGDSTQHVLWRENGELEHIRPKIVVVVWGTNNHGHTAEQVTGGIK  
AIVQLVNERQPQARVVVLGLLPRGQHPNPLREKNRRVNELVRAALAGHPRAHFLDADPG  
FVHSDGTISHHDMYDYLHLSRLGYTPVCRALHSLLLRLLTQDQGGGAPLPEPSP

>non-antioxidant\_63

SVSEIQLMHNLGKHLNSMERVEWLRKKLQDVHNF

>non-antioxidant\_64

GSLVPELNEKDDDQVQKALASRENTQLMNRDNIETVRDFKTLAPRRWLNDTIIIEFFMKYI  
EKSTPNTVAFNSFFYTNLSERGYQGVRRWMKRKKTQIDKLDKIFTPINLNQSHWALGIIDL  
KKKTIGYVDSLNGPNAMSFALITDLQKYVMEESKHTIGEDFDLIHLDCPQQPNGYDCGIY  
VCMNTLYGSADAPLDFDYKDAIRMRRFIAHLILTALK

>non-antioxidant\_65

MMKKIDVKILDPRVGKEFPLPTYATSGSAGLDLRACLNDAVELAPGD TTLVPTGLAIHIAD  
PSLAAMMLPRSGLGHKHGIVLGNLVGLIDSDYQGQLMISVWNRGQDSFTIQPGERIAQMI  
FVPVVQAEFNLVEDFDATDRGEGGGFGHSGRQ

>non-antioxidant\_66

RDHRKIGKQLDLYHMQEEAPGMVFWHNDGWTIFRELEV FVRSKLKEYQYQEVKGPMM  
DRVLWEKTGHWDNYKDAMFTTSENREYCIKPMNCPGHVQIFNQGLKSYRDLPLRMAE  
FGSCHRNEPSGLHGLMRVRGFTQDDAHIFCTEEQIRDEVNGCIRLVYDMYSTFGFEKIVV  
KLSTRPEKRIGSDEMWDRAEADLAVALEENNIPFEYQLGEGAFYGPKIEFTLYDCLDRAW  
QCGTVQLDFSLPSRLSASYVGEDNERKVPVMIHRAILGSMERFIGILTEEFAGFFPTWLPV  
QVIMNITDSQSEYVNELTQKLSNAGIRVKADLRNEKIGFKIREHTLRRVPYMLVCGDKEV  
ESGKVAVRTRRGKDLGSM DVNEVIEKLQQEIRSRSLKQLEE

>non-antioxidant\_67

MNDSEFHRLADQLWLTIEERLDDWDGSDIDCEINGGVLITITFENGSKIINRQEPLHQVW  
LATKQGGYHFDLKGDEWICDRSGETFWDLLEQAATQQAGETVSFR

>non-antioxidant\_68

HNYSEAEIKVREATSNPDWGPSSSLMSEIADLTYNVAFSEIMSMIWKRLNDHGKNWRHV  
YKAMTLMEYLIKTSERVSQQCKENMYAVQTLKDFQYVDRDGKDQGVNVREKAKQLVA  
LLRDEDRLREERAHALKTKEKLAQTA

>non-antioxidant\_69

QCTGGADCTSCTGACTGCGNCPNAV TCTNSQHCVKANTCTGSTDCNTAQTCTNSKDCFE  
ANTCTDSTNCYKATACTNSSGCPGH

>non-antioxidant\_70

MAVELPKAAIERIFRQGIGERRLSQDAKDTIYDFVPTMAEYVANA AKSVLDASGKKTLM  
EHLKALADVLMVEGVEDYDGELFGRATVRRILKRAGIERASSDAVDLYNKLICRATEELG  
EKAAEYADEDGRKTVQGEDVEKAITYSMPKGGEL

>non-antioxidant\_71

KRKEAVIIMNVA AHGSELNGELLLNSIQQAGFIFGDMNIYHRHLS PDGSGPALFSLANMV  
KPGTFDPEMKDFTTPGV TIFMQVPSYGDELQLFKLMLQSAQHI ADEVGGVVLDDQRRM  
MTPQKLREYQDIIREVKDANA

>non-antioxidant\_72

GIYGIGLDITELKRIASMAGRQKRFAERILTRSELDQYYELSEKRKNEFLAGRFAAKEAFSK  
AFGTGIGRQLSFQDIEIRKDQNGKPYIICKLSPA AVHVSITHTKKEYAAAQVVIERLSS

>non-antioxidant\_73

CPLMVKVLDAVRGSPAINVAVHVFRKAADDTWEPFASGKTSESGELHGLTTEEEFVEGIYK  
VEIDTKSYWKALGISPFHEHAEVVFTANDSGPRRYTIAALLSPYSYSTMAVVTN

>non-antioxidant\_74

RDFNNLTKGLCTINSWHIYGKDNVAVRIGEDSDVLTREPYVSCDPDECRFYALSQGTTRIG  
KHSNGTIHDRSQYRALISWPLSSPPTVYNSRVECIGWSSTSCHDYGKTRMSICISGPNNSASA  
VIWYNRRPVTEINTWARNILRTQESECVCHNGVCPVVFTDGSATGPAETRIYYFKEGKILK  
WEPLAGTAKHIEECSCYGERAEITCTCRDNWQGSNRPVIRIDPVAMTHTSQYICSPVLTDN  
PRPNDPTVVKCNDPYPGNNNNGVKGFSYLDGVNTWLGRITISIASRSGYEMLKVPNALTD  
DKSKPTQGQTIVLNTDWSGYSGSFMDYWAEGECYRACFYVELIRGRPKEKDVWWTNSNI  
VSMCSSTEFLGQWDWPDGAKIEYFL

>non-antioxidant\_75

MECYRCGVSGHLKITCSAEETFCYKWLNKISNERWLGCAKTCTEIDTWNVYNKCCTTN  
LCNT

>non-antioxidant\_76

MRGNIRVYCRIPALKNLENSDTSLINVNEFDDNSGVQSMEVTKIQNTAQVHEFKFDKIFD  
QQDTNVDVFKEVGQLVQSSLDGYNVCIFAYGQTGSGKFTTMLNPGDGIIPSTISHIFNWIN  
KLKTKGWDYKVNCFEIEIYNENIVDLLRSDNNKEDTSIGLKHEIRHDQETKTTTTITNVTS  
CKLESEEMVEIILKKANKLRSTASTASNEHSSASHSIFIIHLSGSNAKTGAHSYGTLNLVDL  
AGSERINVSQVVGDRLETRQNKLSLCLGDVIHALGQPDSTKRHIPFRNSKLTLYLLQYSLT  
GDSKTLMFVNISPSSSHINETLNSLRFASKVNSTRLVSRK

>non-antioxidant\_77

TPDNNKTVREFNVYWNVPTFMCHKYGLRFEEVSEKYGILQNWMDKFRGEEIAILYDPGM  
FPALLKDPNGNVVARNGGVPQLGNLTKHLQVFRDHLINQIPDKSFPQVGVDFESWRPIFR  
QNWASLQPYKKLSVEVVRREHPFWDDQRVEQEAKRRFEKYGQLFMEETLKAARKMRPA  
ANWGYYAYPYCYNLTPNQPSAQCEATTMQENDKMSWLFESDVLVPSVYLRWNLTSGER  
VGLVGGRVKEALRIARQMTTSRKKVLPYYWYKYQDRRDTDLRADLEATLRKITDLGAD  
GFIIWGSDDINTKAKCLQFREYLNNELGPAVKRIALNNNANDRLTVDVSVDQV

>non-antioxidant\_78

GIGDPVTCLKSGAICHPVFCPRRYKQIGTCGLPGTKCCKKP

>non-antioxidant\_79

MQPLFTQERRIFHKLLDGNILATNNRGVVSADGSNTRSFNIAKGIADLLHSETVSRERP  
GQTSNGNAFEAICSEFVQSAFEKLQHIRPGDWNVKQVGSRNRLIARYQQYAHLTALAKAA  
EENPELAAALGSDYTITPDIIVTRNLIADAEINRNEFLVDENIATYASLRAGNGNMPLHASI  
SCKWTIRSDRAQNARSEGLNLVRNRKGRPLHIVVTAEPTPSRISSIALGTGEIDCVYHFAL  
YELEQILQSLNYEDALDLFYIMVNGKRLKDISDLPLDLAV

>non-antioxidant\_80

AISCGQVASAIAPCISYARGQSGSPSAGCCSGVRSLNNAARTTADRRAACNCLKNAAAGV  
SGLNAGNAASIPSKCGVSIPYTISTSTDCSRVN

>non-antioxidant\_81

MLPGTFFEVKNEGVVAIATQGEDGPHLVNTWNSYLKVLGDGNRIVVPVGGMHKTEANVA

RDERVLMTLGSRKVAGRNGPGTGFLIRGSAAFRTDGPEFEAIARFKWARAALVITVVS AEQ  
TL

>non-antioxidant\_82

MIKVLFFAQVRELVGTDATEVAADFPTVEALRQHMAAQSDRWALALEDGKLLAAVNQTL  
VSFDHPLTDGDEVAFFPPVTGG

>non-antioxidant\_83

MAETKIVVGPQPFSVGEEYPWLAERDEDGAVVTFTGKVRNHNLGDSVNALTLEHYPGMT  
EKALAEIVDEARNRWPLGRVTVIHRIGELWPGDEIVFVGVTS AHRSSAFEAGQFIMDYLKT  
RAPFWKREATPEGDRWVEARES DQQAARKW

>non-antioxidant\_84

LAVIPILVIACDRSTVRRCLDKLLHYRPSAELFPIIVSQDCGHEETAQVIAS YGSAVTHIRQP  
DLSNIAVQPDHRKFQGY YKIARHYRWALGQIFHNFNYPAAVVVEDDLE VAPDFFEYFQAT  
YPLLKADPSLWCVSAWNDNGKEQMVDSSKPELLYRTDFFPGLGWLLLAELWAELEPKWP  
KAFWDDWMRRPEQRKGRACVRPEISRTMTFGRKGVSHGQFFDQHLKFIKLNQQFVPFTQ  
LDLSYLQQEAYDRDFLARVYGAPQLQVEKVRTNDRKELGEVVRVQYTGRDSFKAFKALG  
VMDDLKSGVPRAGYRGIVTFLFRGRRVHLAPPQTWDGYDPSWT

>non-antioxidant\_85

GSHMASKPIEDYGK GKGRIEPMYIPDNTFY NADDFLVPPHCKPYIDKILLPGGLVKDRVEK  
LAYDIHRTYFGEELHIICILKSGRFFNLLIDYLATI QKYSGRESSVPPFFEHYVRLKSYQND  
NSTGQLTVLSDDL SIFRDKHVLIVEDIVDTGFTLTEFGERLKAVGPKSMRIATLVEKRTDRS  
NSLKGDFVGF SIEDVWIVGCCYDFNEMFRDFDHVAVLSDAARKKFEK

>non-antioxidant\_86

ADAPFEGRKKCSSCHKAQAQSWKDTAHAKAMESL KPNVKKEAKQKAKLDPKDYTQD  
KDCVGVCHVDGFGQKGGYTIESPKPMLTG VGCESCHGPNFRGDHRKSGQAFEKSGKKT  
PRKDLAKKGQDFHFEERCSACHLNYEGSPWKGA KAPYTPFTPEVDAKYTFKFDEM VKE  
VKAMHEHYKLEGVFEGEPKFKFHDEFQASAKPAKKGK

>non-antioxidant\_87

NNNRAPKEPTDPVTLIFTDIESSTALWAAHPDLMP DAVA AHRMVRSLIGRYKCYEVKTV  
GDSFMIASKSPFAAVQLAQELQLCFLHHDWGTN ALDDSYREFEEQRAEGECEYTPPTAHM  
DPEVYSRLWNGLRVRVGIHTGLCDIRHDEVTKGYDYYGRTPNMAARTESVANGGQVLMT  
HAAYMSLSAEDRKQIDVTALGDVALRGVSDPVKMYQLNTVPSRNFAALRLDREYFD

>non-antioxidant\_88

MELLLLSNSTLPGKAWLEHALPLIANQLNGRRSA VFIPFAGVTQTWDEYTDKTAEVLAPL  
GVNVTGIHRVADPLAAIEKAEIII VGGGNTFQLLKESRERGLLAPMADRVRKRGALYIGWSA  
GANLACPTIRTNDMPIVDPNGFDALDLFPLQINPHFTNALPEGHKGETREQUIRELLV VAP  
ELTVIGLPEGNWIQVSNQAVLGGPNTTWVFKAGEE AVALEAGHRF

>non-antioxidant\_89

GSHMKTRKIPLRKS VVSNEVIDKRDLLRIVKNKEGQVFIDPTGKANGRGAYIKLDNAEAL  
EAKKKKVFNR SFSMEVEESFYDELIAYVDHKVKRRELGLE

>non-antioxidant\_90

MVSKLSQLQTEMLAALLESGLSKEALIQALGE

>non-antioxidant\_91

AETVESCLAKSHTENSFTNVWKDDKTLDRYANYEGCLWNATGVVVCTGDETQCYGTWV  
PIGLAIPENEGGGSEGGGSEGGGSEGGGSKPPEYGDTPIPGYTYINPLDGTYPGTEQN PAN

PNPSLEESQPLNTFMFQNNRFRNRQGALTVYTGTVTQGTDPVKTYYYQYTPVSSKAMYDA  
YWNGKFRDCAFHSGFNEDIFVCEYQGQSSDLPQPPVNA

>non-antioxidant\_92

MGRKLELTKAEKHVHNFMMDTQLTKRVKNAANVLRETWLIYKNTKLVKKIDHAKVRK  
HQRKFLQAIHQLRSVKMEQRKLNDAQNTLVDLAKTQLEHHHHH

>non-antioxidant\_93

MTMIIRKYFSGIPTIGVLALTTEEITLLPIFLDKDDVNEVSEVLETKCLQTNIGGSSLVGSLSV  
ANKYGLLLPKIVEDEELDRIKNFLKENNLDLNVEIISKNTALGNLILTNDKGALISPELKD  
FKKDIEDSLNVEVEIGTIAELPTVGSNAVVTNKGCLTHPLVEDDELEFLKSLFKVEYIGKGT  
ANKGTTSVGACIANSKGAVVGGDTTGPELLIEDALGLI

>non-antioxidant\_94

SCPAIHVFGARETTASPGYGSSTVVNGVLSAYPGSTAEAINYPACGGQSSCGGASYSSSSVA  
QGIAAVASAVNSFNSQCPSTKIVLVGYSQGGEIMDVALCGGGDPNQGYTNTAVQLSSSAVN  
MVKAAIFMGDPMFRAGLSYEVGTCAAGGFDQRPAGFSCPSAAKIKSYCDASDPYCCNGS  
NAATHQGYGSEYGSQALAFVKSCLG

>non-antioxidant\_95

SLAALKSELQALKKEGFSPEELAALESELQALEKKLAALKSKLQALKG

>non-antioxidant\_96

RPDFCLEPPYAGACRARIIRYFYNAKAGLCQTFVYGGCRAKRNNFKSAEDCLRTCAGA

>non-antioxidant\_97

MVEVKKHKFPGVYTVIDDDGSERIATKNLVPQQRVYGERVIKWEGEEYRIWNPNRSKLG  
AAIMNGLKNFPIKPGKSVLYLGIASGTTASHVSDIVGWEGKIFGIEFSRVLRELVPIVEERR  
NIVPILGDATKPEEYRALVPKVDVIFEDVAQPTQAKILIDNAEVYLRGGYGMIAVKSRSID  
VTKEPEQVFEVERELSEYFEVIERLNLEPYEKDHALFVVRKT

>non-antioxidant\_98

FVNKDQIAKDVKQFYDQALQQAVVDDANNKAVVKTFFHETLDCCGSSTLTALTTSVLK  
NNLCPSGSNIISNLFKEDCHQKIDDLFSGKH

>non-antioxidant\_99

RTDCYGNVNRIDTTGASCKTAKPEGLSYCGVPASKTIAERDLKAMDRYKTIKKVGEKLC  
VEPAVIAGIISRESHAGKVLKNGWDRGNGFGLMQVDKRSHPQGTWNGEVHITQGTTL  
TDFIKRIQKFFPSWTKDQQLKGGISAYNAGAGNVRSYARMDIGTTHDDYANDVVARAQY  
YKQHGY

>non-antioxidant\_100

KPSSPPEELKFQCGQKTLRPRFK

>non-antioxidant\_101

GSNEKVELQELNDRFANYIDKVRFLQNKILLAELEQL

>non-antioxidant\_102

EQSSSEIKIVRDEYGMPIYANDTWHLFYGYGYVVAQDRLFQMEMARRSTQGTVAEVLG  
KDFVKFDKDIRRNYWPDAIRAQIAALSPEDMSILQGYADGMNAWIDKVNTNPETLLPKQF  
NTFGFTPKRWEPFDVAMIFVGTMANRFSSTSEIDNLALLTALKDKYGVSGMAVFNQLK  
WLVNPSAPTTIAVQESNYPLKFNQNSQTAALLPRYDLPAPMLDRPAKGADGALLALAAG  
KNRETIAAQFAQGGANGLAGY

>non-antioxidant\_103

SNMWVIGKSKAQDAKAIMVNGPQFGWYAPAYTYGIGLHGAGYDVTGNTPFAYPGLVFG

HNGVISWGSTAGFGDDVDIFAERLSAEKPGYYLHNGKWKMLMSREETITVKNQAEFTT  
VWRTVHGNILQTDQTTQTAYAKSRAWDGKEVASLLAWTHQMKAKNWQEWTOQAAKQ  
ALTINWYYADVNGNIGYVHTGAYPDRQSGHDPRLPVPPTGKWDWKGLLPFEMNPKVYN  
PQSGYIANWNNSPQKDYPASDLFAFLWGGADRVEIDRLEQKPRLTADQAWDVIRQTSR  
QDLNLRFLPTLQAATSGLTQSDPRRQLVETLTRWDGINLLNDDGKTWQQPGSAILNVWL  
TSMKRTVVAAVPMPFDKWYSASGYETTQDGPTGSLNISVGAKILYEAVQGDKSPIQAV  
DLFAGKPQQEVVLAAL EDTWETLSKRYGNNVSNWKT PAMALTFRANNFFGVPQAAAEE  
TRHQA EYQNRGTENDMIVFSPTTSDRPVLAWDVVAPGQSGFIAPDGTVDKHYEDQLKMY  
ENFGRKSLWLTQDVEAHKESQEVLVHQR

>non-antioxidant\_104

TELTLKPGTLTLAQLRAIHAAPVRLQLDASAAPIDASVACVEQIIAEDRTAYGINTGFGLL  
ASTRIASHDLENLQRSLVLSHAAGIGAPLDDDLVRLIMVLKINSLSRGFSGIRRKVIDALIAL  
VNAEVYPHIPLKGSV GASGDLAPLAHMSLVLLGEGKARYKGQWLSATEALAVAGLEPLTL  
AAKEGLALLNGTQASTAYALRGLFYAEDLYAAAIAACGGLSVEAVLGSRSFPDARIHEARGQ  
RGQIDTAACFRDLLGDSSEVSLSHKNADKVQDPYSLRCQPQVMGACLTQLRQAAEVLGIE  
ANAVSDNPLVFAAEGDVISGGNFHAEPVMAADNLALIAEIGSLSERISLMMDKHMSQ  
LPPFLVENGGVNSGFMAIQVTAALASENKALSHPHSVDSLPTSANQEDHVS MAPAAGKR  
LWEMAENTRGVLAIEWLGACQGLDLRKGLKTS AKLEKARQALRSEVAHYDRDRFFAPDI  
EKAVELLAKGSLTGLLPAGVLP SL

>non-antioxidant\_105

PLLIKNGEITADSRKADIYAEGETITRIGQNLEAPPGTEVIDATGKYVFPGFIDPHVHIYLP  
FMATFAKDTHETGSKAALMGGTTTTIEMCCPSRNDDALEGYQLWKS KAEGNSYCDYTF  
HMAVSKFDEKTEGQLREIVADGISSFKIFLSYKNFFGVDDGEMYQTLRLAKELGVIVTAHC  
ENAELVGR LQQKLLSEGKTGPEWHEPSRPEAVEAEGTARFATFLETTGATGYVVHLSCKPA  
LDAAMA AKARGVPIYIESVIPHFLLDKTYAERGGVEAMKYIMSPPLRDKRNQKVLWDAL  
AQGFIDTVGTDHCPFDTEQKLLGKEAFTAIPNGIPAIEDRVNLLYTYGVS RGRLDIHRFVDA  
ASTKAAKLFGLFPRKGTIAVGSADLVVYDPQYRGTISVKTQHVNNDYNGFEGFEIDGRP  
SVVTVRGKVAVRDGQFVGEKGGWKLLRREPMYF

>non-antioxidant\_106

MLYLTQRLEIPAAATASVTLPIDVRVKSRVKVTLNDGRDAGLLLPRGLLLRGGDVLSNEEG  
TEFVQVIAADEEVS VVRCDDPFMLAKACYALGNRHVPLQIMP GELRYHHDHVLDMLR  
QFGLTVTFGQLPFEPEAGAYASES

>non-antioxidant\_107

MDQFECINVADAHQKLEKEAVLVDIRDPQSFAMGHAVQAFHLTNDTLGAFMRDNDFDT  
PVMVMCYHGNSSKGAAQYLLQQGYD VVYSIDGGFEAWQRQFPAEVAYGA

>non-antioxidant\_108

MKSNEHDDCQVTNPSTGHFLDLSSLSGRAGFTAAYSEKGLVYMSICGENENCPPGVGACF  
GQTRISVGKANKRLRYVDQVLQLVYKDGSPCKSKGLSYKSVISFVCRPEAGPTNRPMLIS  
LDKQTCTLFFSWHTPLACEQAT

>non-antioxidant\_109

MHHHHHHGSACFAKGTNVLMADGSI ECIE NIEVGNKVMGKDGRPREVIKLRGSETMYS  
VVQKSQHRAHKSDSSREMPPELLKFTCNATHELVRTPRSVRRLSRTIKGVEYFEVITFEMG  
QKKAPDGRIVELVKEVSKSYPVSEGPERANELVESYRKASNKAYFEWTIEARDLSLLGSH  
VRKATYQTYAPIGAFARECRGFYFELQELKEDDYGITLSDDSDHQFLLANQVVVH

>non-antioxidant\_110

QDDLTISLAKGETTKAAFNQMVQGHKLPWVMKGGTYTPAQTVTLGDETYQVMSACK  
PHDCGSQRIAVMWSEKSNQMTGLFSTIDEKTSQEKLTLWLNVDALSIDGKTVLFAALTGS  
LENHPDGFNFRHHHHHH

>non-antioxidant\_111

EDGYDMWLRYQPIADQTLTKTYQKQIRHLHVAGDSPTINAAAELQRGLSGLLNKPIVAR  
DEKLDYSLVIGTPDNSPLIASLNLGERLQALGAEGYLLEQTRINKRHHVIVAANSDVGV  
YGSFHLRLRIQTQHALEKLSLSSAPRLQHRVVNHWDNLNRVVERGYAGLSLWDWGLPN  
YLAPRYTDYARINASLGINGTVINNVNADPRVLSQFLQKIAALADAFRPYGIKMYLSINF  
NSPRAFGDVDTADPLDPRVQQWWKTRAQKIYSYIPDFGGFLVKADSEGQPGPQGYGRDH  
AEGANMLAAALKPFGGVVFWRAFVYHPDIEDRFRGAYDEFMPLDGGKADNVILQIKNGP  
IDFQPREPFSALFAGMSRTNMMMEFQITQEYFGFATHLAYQGPFEEESLKTETHARGE  
STIGNILEGKVFKTRHTGMAGVINPGTDRNWTGHPFVQSSWYAFGRMAWDHQISAATA  
ADEWLRMTFSNQPAFIEPVKQMMMLVSREAGVNYRSPGLGLTHLYSQGDHYGPAPWTD  
DLPRADWTAVYYHRASKTGIGFNRTKTGSNALAQYPEPIAKAWGDLNSVPEDLILWF  
HHLSDWHRMQSGRNWQELVHKYYQGVQVVRAMQRTWDQQEAYVDAARFAQVKALLQV  
QEREAVRWRNSCVLYFQSVAGRPIPANYEQPEHDLEYKMLARTTYVPEPWHPASSSRV  
LK

>non-antioxidant\_112

EFMKVLVIGNGGREHALAWKAAQSPLVETVVFVAPGNAGTALEPALQNVAIGVTDI  
PALLDFAQNEKIDLTIVGPEAPLVKGVVDTFRAAGLKIFGPTAGAAQLEGSKAFTKDF  
LARHKIPTAEYQNFTVEPALAYLREKGAPIVIKADGLAAGKGVIVAMTLEEAEAAVH  
DMLAGNAFGDAGHRIVIEEFLDGEEASFIVMVDGEHVLPMATSQDHKRVGDKDTGP  
NTGGMGAYSPAPVVTDDVHQRTMERIHWPTVKGMAAEGNTYTGFLYAGLMIDKQGN  
PKVIEFNCRFGDLETQPIMLRMKSDELVELCLAACESKLDEKTSEWDERASLGVVMA  
AGGYPGDYRTGDVIHGLPLEEVAGGKVFHAGTKLADDEQVVTNGGRVLCVTALGHT  
VAEAQKRAYALMTDIHWDDCFCRKDIGWRAIEREQN

>non-antioxidant\_113

DVTNAEKLVYKYTNIAHSANPMYEAPSITDGKIFFNRKFKTPSGKEAACASCHTNN  
PANVGKNIVTGKEIPPLAPRVNTRKFTDIDKVEDEFTKHCNDILGADCSPSEKANFI  
AYLLTETKPTK

>non-antioxidant\_114

MSISARNQLKGKVVGLKKGVVTAEVVLEIAGGNKITSIISLDSVEELGVKEGAELT  
AVVKS TDVMILA

>non-antioxidant\_115

LIKGPWTKEEDQRLIKLVQKYGPKRWSVIAKHLKGRIGKQCRERWHNHLNPE

>non-antioxidant\_116

MNHKPKGTFKDYVRDRADLNKDKPVIPAAALAGYTGSGPIQLWQFLELLTDKSCQ  
SFISWTGDGWEFKLSDPDEVARRWGKRKNKPKMNYEKLRSRGLRYYYDKNIIHKTA  
GKRYVYRFVCDLQSLGTYTPEELHAMLVDKPDAD

>non-antioxidant\_117

MIKVEIKPSQAQFTTRSGVSRQGKPYSLNEQLCYVDLGNEYVPLVKITLDEGQPA  
YAPGLYTVHLSSFKVGGQFGSLMIDRLRLVPAK

>non-antioxidant\_118

MEHQKTTPHATGSTRQNGAPAVSDRQSLTVGSEGPIVLHDTHLLETHQHFNRMNIP  
ERRP

HAKGSGAFGEFEVTEDEVSKYTKALVFQPGTKTETLLRFSTVAGELGSPDTWRDVGRFALR  
FYTEEGNYDLVGNNTPIFFLRDPMKFTHFIRSQKRLPDSGLRDATMQWDFWTNNPESAHQ  
VTYLMGPRGLPRTWREMNGYGSHTYLWVNAQGEKHWVKYHFISQQGVHNSNDEATKI  
AGENADFHQRDLFESIAKGDHPKWDLYIQAIPEEGKTYRFNPFDLTKTISQKDYPRIKVG  
TLTLNRNPENHFAQIESAAFSPSNTVPGIGLSPDRMLLGRAFYHDAQLYRVGAHVNLQLPV  
NRPKNAVHNYAFEGQMWDHTGDRSTYVPNSNGDSWSDETGPVDDGWEADGTLTREA  
QALRADDGDFGQAGTLVREVFSDQERDDFVETVAGALKGVRQDVQARAFEYWKNVDA  
TIGQRIEDEVKRHEGDGIPGVEAGGEARI

>non-antioxidant\_119

MNVRATYTVIFKNASGLPNGYDNWGWGCTLSYYGGAMIINPQEGKYGAVSLKRNSGSFR  
GGSLRFDMKNEGKVKILVENSEADEKFEVETISPSDEYVTYILDVDFDLPFDRIDFQDAPG  
NGDRIWIKNLVHSTGSADDFVDPINLEHHHHHH

>non-antioxidant\_120

GLVPRGSHMTGRMLTLDGNPAANWLNNARTKWSASRADVVLSYQQNNGGWPKNLDYN  
SVGNNGGGNESGTIDNGATITEMVFLAEVYKSGGNTKYRDAVRKAANFLVNSQYSTGAL  
PQFYPLKGGYSDFHATFNDNGMAYALTVLDFAAANKRAPFDTDFVSDNDRTRFKTAVTKGT  
DYILKAQWKQNGVLTWCAQHGALDYQPKKARAYELESLSGSESVGLAFLMTQPQTA  
EIEQAVRAGVAWFNSPRTYLEGYTYDSSLAATNPIVPRAGSKMWYRFYDLNTNRGFFSDR  
DGSKFYDITQMSLERRTGYSWGGNYGTSIINFAQKVGYL

>non-antioxidant\_121

MAKNTSCGVQLRIRGKVQGVGFRPFVWQLAQQLNLHGDVCNDGDGVEVRLREDPEVFL  
VQLYQHCPPLARIDSVEREPFIWSALPTEFTIR

>non-antioxidant\_122

MSLDFNTLAQNFTQFYYNQFDTDRSQLGNLYRNESMLTFETSQIQGAKDIVEKLVSLPFQ  
KVQHRITTLDAQPASPYGDVLVMITGDLLIDEEQNPQRFSQVFHLIPDGNSYYVFNDIFRL  
NYS

>non-antioxidant\_123

PHIDIKCFPRELDEQKAALAADITDVIIIRHLNSKDSSISIALQQIQPESWQAIWDAEIAPQM  
EALIKKPGYSMNA

>non-antioxidant\_124

SELIVNVINGPNLGRGRREPAVYGGTTHDELVALIEREAAELGLKAVVRQSDSEAQLLDW  
IHQAADAAEPVILNAGGLTHTSVALRDACAELSAPLIEVHISNVHAREEFRHSYLSPIATG  
VIVGLGIQGYLLALRYLAEHVGT

>non-antioxidant\_125

SELNEKLATAWEGFTKGDWQNEVNVRDFIQKNYTPYEGDESFLAGATEATTTLWDKVME  
GVKLENRTHAPVDFDTAVASTITSHDAGYINKQLEKIVGLQTEAPLKRALIPFGGIKMIEGS  
CKAYNRELDPMIKKIFTEYRKTHNQGVFDVYTPDILRCRKSGVLTGLPDAYGRGRIIGDYR  
RVALYGIDYLMKDKLAQFTSLQADLENGVNLEQTIRLREEIAEQHRALGQMKEMAAKYG  
YDISGPATNAQEAIQWTFYGYLA AVKSQNGAAMSFGRTSTFLDVYIERDLKAGKITEQEA  
QEMVDHLVMKLRMVRFLRTPEYDELFSGDPIWATESIGGMGLDGRTLVTKNSFRFLNTLY  
TMGPSPEPNMTILWSEKLPLNFKKFAAKVSIDTSSLQYENDDLMRPDFNDDYAIACCVP  
MIVGKQMQFFGARANLAKTMLYAINGGVDEKLMQVGPKSEPIKGDVLNYDEVMERM  
DHFMDWLAKQYITALNIIHYMHDKYSYEASLMALHDRDVIRTMACGIAGLSVAADSLSAI  
KYAKVKPIRDEDGLAIDFEIEGEYQFGNNDPRVDDLAVDLVERFMKKIQKLHTYRDAIPT

QSVLTITSNVYVYGKKTGNTPDGRRAGAPFGPGANPMHGRDQKGAVASLTSVAKLPFAYAK  
DGISYTFISIVPNALGKDDEVKTNLAGLMDGYFHHEASIEGGQHLNVNVMNREMLLDA  
MENPEKYPQLTIRVSGYAVRFNSLTKEQQQDVITRTFTQSM

>non-antioxidant\_126

ADDTIDHASHTPGSVSSAFILEAMVNVISGPKVLMKQIPIWLPLGVADQKTYSFSTTAAI  
MLASYTITHFGKATNPLVRVNRNLGPGIPDHPLRLLRIGNQAFLQEFVLPVQLPQYFTFDLT  
ALKLITQPLPAATWTDD

>non-antioxidant\_127

MLSFQYPDVYRDETAIQDYHGHKVCOPYAWLEDPDSEQTKAFVEAQNKITVPFLEQCP  
IRGLYKERMTELYDYPKYSCHFCKGKRYFYFYNTGLQNQRVLYVQDSLEGEARVFLDPN  
ILSDDGTVALRGYAFSEDEYFAYGLSASGSDWVTIKFMKVDGAKELPDVLERVKFSCMA  
WTHDGKGMFYNAYPQQDGKSDGTETSTNLHQKLYYHVLGTDQSEDILCAEFPDEPKW  
MGGAELESDGRYVLLSIREGCDPVNRLWYCDLQQESNGITGILKWVKLIDNFEGEYDY  
VTNEGTVFTFKTNRHSPNYRLINIDFTDPEESKWKVLVPEHEKDVLEWVACVRSN  
FLVLCYLHDVKNTLQLHDLATGALLKIFPLEVGSVVGYSQKKDTEIFYQFTSFLSPG  
IYHCDLTKEELEPRVFREVTVKGIDASDYQTVQIFYPKDGTKIPMFIVHKKGIKLDG  
SHPAFLYGYGGFNISITPNYSVSRILFVRHMGVAVANIRGGGEYGETWHKGGILANK  
QNCFFDQCAAAYLIKEGYTSPKRLTINGGSNGLLVATCANQRPDFGCVIAQVGVMD  
MLKFHKYTIGHAWTTDYGCSDSKQHFEWLIKYSPLHNVKLPEADDIQYPSMLLLTAD  
HDDRVPVPLHSLKFIATLQYIVGRSRKQNNPLLIHVDTKAGHGAGKPTAKVIEEV  
SDMFARCLNIDWIP

>non-antioxidant\_128

GPDDPLVINGEIEIVTRAPTPAHLADRFDEIRSGWTFRTDDTQALEMDDFENSGM  
VVFVEEARAVWDRPEGTEGKACADCHGAVDDGMYGLRAVYPKYVESAGKVRTVEQ  
MINACRTSRMGAPEWDYIGPDMTAMVALIASVSRGMPVSAIDGPAQSTWEKGREI  
YYTRYGQLDLSCASCHEQYFDHYIRADHLSQGQINGFPSYRLKNARLNAVHDFR  
GCIRDTRGVVFAVGSPEFVALELYVASRGNGLSVEGPSVRN

>non-antioxidant\_129

GKITLYEDRGFQGRHYECSSDHPNLQPYLSRCNSARVDSGCWMLYEQPNYSGLQY  
FLHRGDYADHQQWMGLSDSVRSCRLIPHSGSHRIRLYEREDYRGQMIEFTEDCS  
CLQDRFRFNEIHSLNVLEGSWVLYELSNYRGRQYLLMPGDYRRYQDWGATNARV  
GSLRRVIDFS

>non-antioxidant\_130

EIVTDNSIGNHDGYDYEFWKDSGGSGTMILNHGGTFSAQWNNVNNILFRKGGK  
KFNETQTHQQVGNMSINYGANFQPNGNAYLCVYGWTVDPVLEYIYVDSWGNWR  
PPGATPKGTITVDGGTYDIYETLRVNQPSIKGIATFKQYWSVRRSKRTSGTISV  
SNHFRAWENLGMNMGKMYEVALTVEGYQSSGSANVYSNTRRINGNPLS

>non-antioxidant\_131

MAFQLEMVTRETVVIRLFGELDHAVEQIRAKISTAIFQGAVTTIWNFERLSFMD  
SSGVGLVLGRMRELEAVAGRTILLNPSPTMRKVQFSGLGPWMMDATEEEAIDR  
VRGIVNG

>non-antioxidant\_132

TLTKHEQDILLKELGPHVDTPAHIVETGLGAYHALFTAHPQYISHFSRLEGHTI  
ENVMQSEGIKHARTLTEAIVHMLKEISNDAEVKKIAAQYGKDHTSRKVTKDEFM  
SGEPIFTKYFQNLVKDAEGKAAVEKFLKHVFPMAAEI

>non-antioxidant\_133

GAMEKFKTLLYDIPIECMEVSEEIISYAKLQLGKKNDSIYVSLTDHINFAIQ  
RNQKGLDIKN



ALLWETKRLYKDEFAIGKEALVMVKNKTGVSLPEDEAGFIALHIVNAELNEEMPNIINITK  
VMEEILSIVKYHFKIEFNEESLHYRFBVTDLKFQAQRLFNGLHMESEDDFLDVTVEKEYHR  
AYECTKKIQTIEREYEHKLTSEDELLYLTIDIERVVKQA

>non-antioxidant\_134

IVGGYTCAANSIPYQVSLNSGSHFCGGSLINSQWVVSAAHCYKSRIQVRLGEHNIDVLEG  
NEQFINAAKIITHPNFNGLTLDNDIMLIKLSPPATLNSRVATVSLPRSCAAAGTECLISGWGN  
TKSSGSSYPSLLQCLKAPVLSDSCKSSYPGQITGNMICVGFLEGGKDSQCGDSGGPVVCN  
GQLQGIVSWGYGCAQKNKPGVYTKVCNYVNWIIQQTIAAN

>non-antioxidant\_135

ADKLFINALKKKFEESEEEKKTTFYTLGGWKQSERKTEFVNAGKEVAACKRGIPQYNPDIG  
TPLGQRVLMQYQVSTTDTYVEGDDLHFVNNAMQMQWDDIRRTVIVGLNHAHAVIEKR  
LGKEVTPETITHYLETVNHAMPGAADVQEHMVETHPALVADSYVKVFTGNDEIADEIDPA  
FVIDINKQFPEDAETLKAEVGDGIWQVVRIPITVSRCTCDGATTSRWSAMQIGMSMISAYK  
QAAGEAATGDFAYAAKHAEVIIHMGTYLPVRRARGENEPGGVPGYLADICQSSRVNYED  
PVRVSLDVVATGAMLYDQIWLGSYMSGGVGFTQYATAAYTDNILDFTYFGKEYVEDKY  
GLCEAPNNMDTVLDVATEVTFYGLEQYEEYPALLEDQFGGSQRAAVVAAAAGCSTAFATG  
NAQTGLSGWYLSMYLHKEQHSRLGFYGYDLQDQCGASNVFSIRGDEGLPLELRGPNYPN  
YAMNVGHQGEYAGISQAPHAARGDAFVFNPLVKIAFADDNLVDFDTNVRGEFAKALRE  
FEPAGERALITPAK

>non-antioxidant\_136

AKFEDKVDLYDDRGNLVEEQVPLEALSPLRNPAIKSIVQGIKRTVAVNLEGIENALKTAKV  
GGPACKIMGRELDLDIVGNAESIAAAKEMIQVTEDDDTNVELLGGGKRALVQVPSARFD  
VAAEYSAAPLVATATAFVQAIINEFDVSMYDANMVKA AVLGRYPQSVEYMGANIATMLDIP  
QKLEPGYALRNIMVNHVVAATLKNLQAAALSTILEQTAMFEMGDAVGAFERMHLLGL  
AYQGMNADNLVFDLVKANGKEGTVGSVIADLVERALEDGVIKVEKELTDYKVYGTDDL  
AMWNAYAAAAGLMAATMVNQGAARAAQGVSTLLYNDLIEFETGLPSVDFGKVEGTAV  
GFSFFSHSIYGGGGPGIFNGNHIVTRHSGFAIPCVAAMALDAGTQMFSPEATSGLIKEVF  
SQVDEFREPLKYVVEAAAEIKNEI

>non-antioxidant\_137

AQYYPGTTKVAQNRRNFCNPEYELEKLEISDEDVVKILGHRAPGEEYPSVHPLEEMDE  
PEDAIREMVEPIDGAKAGDRVRYIQFTDSMYFAPAQPYVRSRAYLCRYRGADAGTLGRQ  
IETRERDLEKISKELLETEFFDPARSGVVRGKSVHGHSRLDEDEDGMMFDMLRRQIYNKDTG  
RVEMVKNQIGDELDEPVDLGEPLDEETLMEKTTIYRVDGEAYRDDVEAVEIMQRIHVLRS  
QGGFNLE

>non-antioxidant\_138

MAVKKIAIFGATGQTGLTTLAQAVQAGYEVTVLVRDSSRLPSEGPRPAHVVGDLVQAAD  
VDKTVAGQDAVIVLLGTRNDLSPTTVMSEGARNIVAAMKAHGVDKVACTSAFLLDWPT  
KVPRLQAVTDDHIRMHKVLRESGLKYAVMPPHIGDQPLTGAYTVTLGDRGSPSRVISKH  
DLGHFMLRCLTTDEYDGHSTYPSHQYQ

>non-antioxidant\_139

MSRTVMERIEYEMHTPDPKADPKLHFVQIDEAKCIGCDTCSQYCPTAAIFGEMGEPHSIP  
HIEACINCGQCLTHCPENAIYEAQSWVPEVEKKLKDGVKVCIAMPAVRYALGDAFGMP  
VGSVTTGKMLAALQKLGFAHCWDTEFTADVITWEEGSEFVERLTKKSDMPLPQFTSCCPG  
WQKYAETYPPELLPHFSTCKSPIGMNGALAKTYGAERMKYDPKQVYTVSIMPCIAKKYE

GLRPELKSSGMRDIDATLTTRELAYMIKKA GIDFAKLPDGKRDSL MGESTGGATIFGVTGG  
VME AALRFAYEAVTGKKPDSWDFKAVRGLDGIKEATVNVGGTDVKVAVVHGAKRFKQV  
CDDVKAGKSPYHFIEYMACPGGCVC GGGQPVM PGVLEAMDRTTTRLYAGLKRLAMAS  
ANKA

>non-antioxidant\_140

GFDLND FLEQLRQMKNMGGMASLMGKLP GMGQIPDNVKSQMDDKVLVRMEAIINSMT  
MKERAKPEIIKGSRRRIAAGSGMQVQDVNRLKQFDDMQRMMKMKK

>non-antioxidant\_141

MAQGEKITVSNGLNVPNNPIPFIEGDGTGPD IWNAASKVLEAAVEKAYKGEKKITWKE  
VYAGEKAYNKTGEWLP AETLDVIREYFIAIKGPLTTPVGGGIRSLNVALRQELDLFVCLRP  
VRYFTGVSPVKRPEDTDMVIFRENTEDIYAGIEYAKGSEEVQKLISFLQNELNVNKIRFPE  
TSGIGIKPVSEEGTSRLVRAAIDY AIEHGRKSVTLVHKGNIMKFTEGAFKNWGYELAEKEY  
GDKVFTWAQYDRIAEEQ GKDAANKAQSEAE AAGKIIKDSIADIFLQQILTRPNEFDVVAT  
MNLNGDYISDALAAQVGGIGIAPGANIN YETGHAIFEATHGTAPKYAGLDKVN PSSVILSG  
VLLLEHLGWNEAADLVIKSMEKTIASKV VTYDFARLMDGATEVKCSEFGEELIKNMD

>non-antioxidant\_142

QNNTDYPFEANNPYMYHENPMEEGLSMLKLANLAE AALAFEAVCQKEPEREEAWRSLGL  
TQAENEKDGLAIIALNHARMLDPKDIAVHAALAVSHTNEHNANAALASLRAWLLSQPQY  
EQL

>non-antioxidant\_143

GSMSFIPVAEDSDFP IQNLPYGVFSTQSNPKPRIGVAIGDQILDLSVIKHLFTGPALSKHQHV  
FDETTLNNFMGLGQA AWKEARASLQNL SASQARLRDDKELRQRAFTSQASATMHLPATI  
GDYTD FYSSRQHATNVGIMFRGKENALLPNWLHLPVGYHGRASSIVVSGTPIRRPMGQM  
RPDNSKPPVYGACRLDMELEMAFFVGPGRNFGEPIPIKAHEHIFGMVLMNDWSARDIQ  
QWEYVPLGPFLGKSF GTTISPWVVPMDALMPFVVPNPKQDPKPLPYLCHSQPYTFDINLS  
VSLKGEGMSQAATICRSNFKHMYWTMLQQLTHHSVNGCNLRPGDLLASGTISGSDPESFG  
SMLELSWKGTKAIDVGQQTTRTFLLDGDEV IITGHCQGDGYRVGFGQCAGKVLPA SPA

>non-antioxidant\_144

GHEIKDIREDTMHAEFNALRAQVAINDGNPDEAERLAKLAL EELPPGWFYSRIVATSVLGE  
VLHCKGELTRSLALMQQTEQMARQH D VWHYALWSLIQQSEILFAQGFQTAWETQEKAF  
QLINEQHLEQLPMHEFLVRIRAQLLWAWARLDEAEASARSGIEVLSSYQPQQQLQCLAMLI  
QCSLARGDLNARSQNLNRENLLNGNGKYHSDWISNANKVRVIYWQMTGDKAAAANWL  
RHTAKPEFANNHFLQGQWRNIARAQILLGEFEP AEIVLEELNENARSLRLMSDLNRNLLLL  
NQLYWQAGRKSDAQRVLLDALKLANRTGFISHFVIEGEAMAQQRLRQLIQLN TLPELEQHR  
AQRILREINQHHGA

>non-antioxidant\_145

ACDYTCGSNCYSSSDVSTAQAAGYKLHEDGETVGSNSYPHKYNNYEGFDFSVSSPYEYEW  
PILSSGDVYSGGSPGADRVVFNENNQLAGVITHTGASGNNFVECT

>non-antioxidant\_146

EAAQSVDQLIKARGKVYFGVATDQNR LTTGKNAAIIQANFGQVTPENSMKWDATEPSQG  
NFNFAGADYLVNWAQQNGKLIRGHTLVWHSQLPSWVSSITDKNTLTNVMKNHITLMTR  
YKGKIRAWDVVNEAFNEDGSLRQTVFLNVIGEDYIPIAFQTARAADPNAKLYINDYNLDS  
ASYPKTQAIVNRVKKWRAAGVPIDGIGSQTHLSAGQGASVLQALPLLASAGTPEVAITEL  
DVAGASSTDYVNVVNA CLNVSSCVGITVWGVADPDSWRASTTPLLFDGNFNPKPAYNAI

VQNLQQ

>non-antioxidant\_147

MRGSHHHHHHGSRVMVIGGDGYCGWATALHLSKKNYEVCIVDNLVRRFLFDHQLGLES  
LTPIASIHDRISRWKALTGKSIELYVGDICDFEFLAESFKSFEPDSVVHFGEQRSAPYS  
MIDRSR AVYTQHNNVIGTLNVLFAIKEFGEECHLVKLGTMGEYGTPNIDIEEGYITITH  
NGRTDTLPY PKQASSFYHLSKVHDSHNI AFTCKAWGIRATDLNQG VVYGVKTD  
EEMHEELRNRLDYD AVFGTALNRFCVQA AVGHPLTVY GKGQTRGYLDIRDTVQC  
VEIAIANPAKAGEFRVFNQ FTEQFSVNELASLVTKAGSKLGLDVKKMTVPNPRVE  
AEEHYNAKHTKLMELGLEPHYL SDSLLD SLLNFAVQFKDRVDTKQIMPSVSWKKIG  
VKTKSMTT

>non-antioxidant\_148

GPLGSGDVQVTEDAVRRYLTRKPMTTKDLLKKFQTKKTGLSSEQTVNVLAQILKRLN  
PER KMINDKMHFSLKE

>non-antioxidant\_149

HRQALGERLYPRVQAMQPAFASKITGM LLELSPAQLLLLLASEDSL RARVDEAMELII  
AHG

>non-antioxidant\_150

DKIPDFVVPKGCASVDRNKLWAEQTPNRNSYAGVWYQFALTNNPYQLIEKCVRNEYS  
FD GKQFVIESTGIAYDGNLLKRNGKLYPNPFGEPLHSIDYENSFAAPLVILETDYS  
NYACLYSCI DYNFGYHSDFSFIRSANLADQYVKKCEAAFKNINVDTTFRVKT  
VQGS SCPYDTQKTL

>non-antioxidant\_151

MKLCFNEATTLENSNLKLDLELCEKHGYDYIEIRTMDKLPEYLKDHS LDDLA  
EYFQTHHI KPLALNALVFFNNRDEKGHNEIITEFKGMMETCKTLGVKYVAVPLVTE  
QKIVKEEIKKSS VDLTELSDIAEPYGVKIALEFVGHPQCTVNTFEQAYEIVNTV  
NRDNVGLVLD SFHFHAM GSNIESLKQADGKKIFIYHIDDTEDFPIGFLT  
DEDRVWPGQGAIDLDAHLSALKEIGFSDVV SVELFRPEYYKLTAE  
EAIQTAKKTTVDVVS KYFSM

>non-antioxidant\_152

DCYHGDGQSYRGSFSTTVTGRTCQSWSSMTPHWHQRTTEYYPNGGLTRNYCRNP  
DAEIR PWCYTM DPSVRWEYCNLTQCPVME

>non-antioxidant\_153

EDAKAGEAVFKQCMTCHRADKNMVG PALAGVVGRKAGTAAGFTYSPLNHNSGEAGL  
V WTADNIVPYLADPN AFLKKFLTEK GKADQAVGVTKMTFKLANEQQRKDVVAYL  
ATLK

>non-antioxidant\_154

MGSQVQKSDEITFS DYLG LMTCVYEWADSYDSKDWDR LRKVIAPTLRIDYRS  
FLDKLWE AMPAEFVGMVSSKQVLGDPTLR TQHF IGGTRWEK VSEDEVIGYH  
QLRVPHQRYKDTTM KEVTMKGHAHSANLHWYKKIDGVWKFAGL KPD  
IRWGEFDFDRIAEDGRETFGDK

>non-antioxidant\_155

DSL RPKLSEEQR IAILLDAH HKTYDPTYSDFCQFRPPVRVNDGGGSVTLELS  
QLSMLPH LADLVSYSIQKVIGFAKMIPGFRDLTSEDQIVLLKSSAIEVIMLR  
SNESFTMDDMSWTCGN QDYKYRVSDVTKAGHSLELIEPLIKFQVGLK  
KLN LHEEEHVLLMAICIVSPDRPGVQDAA LIEAIQDRLSNTLQTYIR  
CRHPPPGSHLLYAKMIQKLADLRSLNEEHSKQYRCLSFQPECSM  
KLTPLVLEVFGNEIS

>non-antioxidant\_156

GSHRTSGRVAVEEVDEEGKFVRLRNKSNEDQSMGNWQIKRQNGDDPLLT  
YRFPKFTLKA GQVVTIWAAGAGATHSPPTDLVWKAQNTWGC  
GNSLR TALINSTGEEVAMRKLVR SVTVV ED

>non-antioxidant\_157

GSASAKELACQEITVPLCKGIGYEYTYMPNQFNHDTQDEAGLEVHQFWPLVEIQSPDLK  
FFLCSMYTPICLEDYKKPLPPCRSVCERAKAGCAPLMRQYGFAPDRMRCDRLPEQGNP  
DTLCMDYERTD

>non-antioxidant\_158

MSEFLTPERTVYDSGVQFLRPKSLDEFIQENVKKKLSLALAAKMRGEVLDHVLLAGPP  
GLGKTTLAHIIASELQTNIHVTS GPVVLVKQGDMAAILTSLERGDVLFIDEIHRLNKAVEELL  
YSAIEDFQIDIMIGKGPSAKSIRIDIQPFTLVGATTRSGLLSSPLRSRFGIILELDFYTVKELKEI  
IKRAASLMDVEIEDAAAEMIAKRSRGTPRIAIRLTKRVRDMLTVVKADRINTDIVLKTMEV  
LNIDDEGLDEFDRKILKTIIEIYRGGPVGLNALAASLGVEADTLSEVYEPYLLQAGFLARTP  
RGRIVTEKAYKHLKYEPENRLF

>non-antioxidant\_159

GLNSVIKPTKYKPVPEEPNSTDVEETLKRIQNNDPDLVVNLNNIMNIPVPTLKACAEAL  
KTNTYVVKFSIVGTRSNPVAFALAEMLKVNNLTKSLNVEFNISGSGILALVEALQSNTS  
LIELRIDNQSQPLGNNVEMEIANMLEKNTTLLKFGYHFTQQGPRLRASNAMMNNNDLVR  
KRRL

>non-antioxidant\_160

MEVARGLEGVLFTESRMCYIDGQQGKLYYYGIPIQELAEKSSFEETTFLLLHGRLPRRQEL  
EEFSAALARRRALPAHLLESFKRYPVSAHPMSFLRTAVSEFGMLDPTEGDISREALYKGL  
DLIAKFATIVAANKRLKEGKEPIPPREDLSHAANFLYMANGVEPSPEQARLMDAALILHAE  
HGFNASTFTAIAAFSTETDLYSAITAAVASLKGPRHGGANEAVMRMIQEIGTPERAREWVR  
EKLAKKERIMGMGHRVYKAFDPRAGVLEKLARLVAEKHGHKEYQILKIVEEEAGKVLN  
PRGIYPNVDFYSGVVYSDLGFSLEFFTPIFAVARISGWVGHILEYQELDNRLLRPGAKYVGE  
LDVPYVPLEARE

>non-antioxidant\_161

PKYTIVDKETCIACGACGAAAPDIYDYDEDGIAYVTLDDNQGIVEVPDILIDMMDAFEG  
CPTDSIKVADEPFDDGPNKFE

>non-antioxidant\_162

MIVGNLGAQKAKRNDTPISAKKDIMGDKTVRVRADLHIIKIETAKNGGNVKEVMDQAL  
EYIRKYLPDKL

>non-antioxidant\_163

LQPATAEAADSYKIVGYYPSSWAAYGRNYNVADIDPTKVTHINYAFADICWNGIHGNPDPS  
GPNPVTWTCQNEKSQTINVPNGTIVLGDWIDTGKTFAGDTWDQPIAGNINQLNKLKQTN  
PNLKTII SVGGWTWSNRFSVAATAATREVFANSVDFLRKYNFDGVDLDWEYVPSGGLD  
GNSKRPEDKQNYTLLSKIREKLDAAAGAVDGGKYLTIASGASATYAANTELAKIAAIVD  
WINIMTYDFNGAWQKISAHNAPLNYDPAASAAGVPDANTFNVAAGAQQHLDAGVPAAK  
LVLGVFPFYGRGWDGCAQAGNGQYQTCTGGSSVGTWEAGSFDYDLEANYINKNGYTRY  
WNDTAKVPYLYNASNKRIFISYDDAESVGYKTAYIKSKGLGGAMFWELSGDRNKTLQNKL  
KADL

>non-antioxidant\_164

ASHSRKFLDVRSEEELLSICKETEAGKLPNVAAGMEELYQNYRNAVIESGNPKADEIVL  
SNMTVALDRILLDVEDPFVSSHKAIREPFDYYIFGQNYIRPLIDFGNSFVGNLSLFKDIEE  
KLQQGHNVVLISNHQTEADPAIISLLEKTNPYIAENTIFVAGDRVLADPLCKPFSIGRNLIC  
VYSKKHMFDIPELTETKRKANTRSLKEMALLLRGGSQLIWIAPSGGRDRPDPSTGEWYPA

PFDASSVDNMRRLIQHSDVPGHLFPLALLCHDIMPPPSQVEIEIGEKRVIAFNGAGLSVAPEI  
SFEIEAATHKNPEEVREAYSKALFDSVAMQYNVLKTAISGKQGLGASTADVLSQPW

>non-antioxidant\_165

AAPKAPADGLKMDKTKQPVVFNHSTHKAVKCGDCHHPVNGKEDLQKCATAGCHDNMD  
KKDKSAKGYHAMHDKGTFKFSVCGCHLETAGADAACKKELTGCKGSKCHS

>non-antioxidant\_166

GSMRILMVGLDAAGKTTILYKLLGEIVTTIPTIGFNVETVEYKNISFTVWDVGGGLDKIRPL  
WRHYFQNTQGLIFVDSNDRERVNEAREELMRMLAEDELRDVLLVFANKQDLPNAMN  
AAEITDKLGLHSLRHRNWYIQATCATSGDGLYEGLDWLSNQLRNQK

>non-antioxidant\_167

MRHDFVFSGVIMLELNAKTTALVVIDLQEGILPFAGGPHTADEVVNRAGKLAAKFRASGQ  
PVFLVRVGWSADYAEALKQPVDAPSPAKVLPENWWQHPAALGTTSDIEIIRQWGAFY  
GTDLELQLRRRGIDTIVLCGISTNIGVESTARNAWELGFNLVIAEDACSAASAEQHNSINH  
IYPRIARVRSVEEILNAL

>non-antioxidant\_168

DCPSGWSSYEGHCYKPFKLYKTWDDAERFCTEQAKGGHLVSIESAGEADFVAQLVTENIQ  
NTKSYVWIGLRVQGKEKQCSSEWSDGSSVSYENWIEAESKTCLGLEKETGFRKWWNIYC  
GQQNPFVCEA

>non-antioxidant\_169

MRIINADGLILGRLASRVAKMLLEGEEVVIVNAEKAVITGNREVIFSKYKQRTGLRRTLNP  
RGPFPYKRSDEIVRRTIRGMLPWKTDGRGRKAFRRLKVYVGPKEFQDKQLETIVEAHVSR  
LSRPKYVTVGEVAKFLGGKF

>non-antioxidant\_170

MVEPSLVLYGAPYERAVEVLEETLRETGARYALLIDRKGFLAHKEALWAPKPPPLDTLAT  
LVAGNAAATQALAKLLGEARFQEEVHQGERMGLYVDEAGEHALLVLFDETAPLGKVKL  
HGKRASEALARIAEEALANPPRLALDTEYREGAEALLDILLRN

>non-antioxidant\_171

MSETENQALTFAKRLKADTTAVHDSVDNLVMSVQPFVSKENYIKFLKLQSVFHKAVDHIY  
KDAELNKAPELEYMARYDAVTQDLKDLGEEPYPKFDKELPYEAGNKAIGWLYCAEGSNL  
GAAFLFKHAQKLDYNGEHGARHLAPHPDGRGKHWRAFVEHLNALNLTPAEAEAEAIQGA  
REAFAYKYVVLRETFGLAADAEAPEGMMPHRH

>non-antioxidant\_172

MPSVESFELDHNAVVPYVRHCGVHKVGTGVDVGNKFDIRFCQPNKQAMKPDTHLEHL  
LAFTIRSHAKEYDHFDIIDISPMGCQTGYLLVVSGETTSAEIVDLEDTMKEAVEITEIPAN  
EKQCGQAKLHDLEGAKRLMRFWLSQDKEELLKVFG

>non-antioxidant\_173

SSNAKADQASSDAQTANAKADQASNDANAARSDAQAAKDDAARANQRADNAA

>non-antioxidant\_174

MQSLANATAAQEVLEASYAMVQHIAKGIRILEARVARVEAM

>non-antioxidant\_175

MWQQWEEEEIEQHEGNLSLLLREAALQVHIAQRDARM

>non-antioxidant\_176

ADVPAQVQLADKQTLVRNNGSEVQSLDPHKIEGVPESNVSRDLFEGLLISDVEGHPSPGVA  
EKWENKDFKVWTFHLRENAKWSGTPVTAHDFVYSWQRLADPNTASPYASYLQYGHIA

NIDDIIAGKKPATDLGVKALDDHTFEVTLSEVPYFYKLLVHPSVSPVPKSAVEKFGDKWT  
QPANIVTNGAYKLKNWVVNERIVLERNPQYWDNAKTVINQVTYLPISSEVTDVNRYSRGE  
IDMTYNNMPIELFQKLLKEIPNEVRVDPYLCTYYYEINNQAQKPFNDVRVRTALKLALDRDI  
IVNKVKNQGDLPAYSYPYTDGAKLVEPEWFKWSQQKRNEEAKKLLAEAGFTADKPLT  
FDLLYNTSDLHKKLAIAVASIWKKNLGVNVNLENQEWKTFLDTRHQGTDFVARAGWCA  
DYNEPTSFLNTMLSDSSNNTAHYKSPAFDKLIADTLKVADDTQRSELYAKAEQQLDKDSAI  
VPVYYYYVNARLVKPWVGGYTGKDPDNIYVKNLYIHKH

>non-antioxidant\_177

GLSAAQRQVVASTWKDIAGSDNGAGVGKECFTKFLSAHHDMAAVFGFSGASDPGVADL  
GAKVLAQIGVAVSHLGDEGKMVAEMKAVGVRHKGYGNKHIKAEYFEPLGASLLSAMEH  
RIGGKMNAAAKDAWAAAYADISGALISGLQS

>non-antioxidant\_178

MDKKTIIYFISTGNSARSQMAEGWGKEILGEGWNVYSAGIETHGVNPKAIEAMKEVDIDIS  
NHTSDLIDNDILKQSDLVVTLCSDADNNCPILPPNVKKEHWGFDDPAGKEWSEFQVRDE  
IKLAIKFKLR

>non-antioxidant\_179

TMASGAPSPFASRASGPEPPAEFAKL RATNPVSQVKLFDGSLAWLVTKHKDVCVATSEKL  
SKVRTRQGFPELSASGKQAAKAKPTFVDMDPPEHMHQRSMVEPTFTPEAVKNLQPYIQR  
VDDLLEQMKQKGCANGPVDLVKEFALPVPSYIYTLLGVPFNDLEYLTQQNAIRTNSSSTA  
REASAANQELLDYLAILVEQRLVEPKDDIISKLCTEQVKPGNIDKSDAVQIAFLLLVAGNAT  
MVNMIALGVATLAQHPDQLAQLKANPSLAPQFVEELCRYHTASALAIKRTAKEDVMIGDK  
LVRANEGHIASNQSANRDEEVFENPDEFNMNRKWPPQDPLGFGFGDHRCIAEHLAKAELT  
TVFSTLYQKFPDLKVAVPLGKINYTPLNRDVGIVDLPVIF

>non-antioxidant\_180

SAAMAEQRHQEWLRFVDLLKNAYQNDLHPLLNMLTPDEREALGTRVRIIEELLRGEMS  
QRELKNELGAGIATITRGSNSLKAAPVELRQWLEEVLLKSD

>non-antioxidant\_181

ATPNKTPPGADPKQLERTGTVREIGSQAVWSLSSCKPGFGVDQLRDDNLETYWQSDGSQP  
HLVNIQFRRKTTVKTLCIYADYKSDESYTPSKISVRVGNNFHNLQEIRQLELVEPSGWIHVP  
LTDNHKKPTRTFMIQIAVLANHQNDRDTHMRQIKIYTPVEESSIGKFP

>non-antioxidant\_182

AANDNNVEWNGLFHDQGPLFDNAPEPTSTQSVTLKLRFTKGDITSANIKYWDTADNAFH  
WVPMVWDSNDPTGTFDYWKGTIPASPSIKYYRFQINDGTSTAWYNGNGPSSSTEPNADDF  
YIIPNFKTPDWLKNVVMYQIFPDRFYNGDSSNDVQTGSYTYNGTPTEKKAWGSSVYADP  
GYDNSLVFFGGDLGIDQKLGYYIKKTLGANILYNPIFKAPT NHKYDTQDYMAVDPAFGD  
NSTLQTLINDIHSTANGPKGYLILDGVFNHTGDSHPWFDKYNNFSSQGAYESQSSPWYNY  
YTFYTPWDSYASFLGFNSLPKLNYSNSGSAVRGVIYNNNSNSVAKTYLNPPYSVDGWRLDA  
AQYVDANGNNGSDVTNHQIWSEFRNAVKGVNSNAAIIGEYWG NANPWTAQGNQWDA  
TNFDGFTQPVSEWITGKDYQNSASISTTQFDSWLRGTRANYPTNVQQSMMNFLSNHDIT  
RFATRSGGDLWKTYLALIFQMTYVGTPIYYGDEYGMQGGADPNRRSFDWSQATPSNS  
AVALTQKLITIRNQYPALRTGSFMTLITDDTNKIYSYGRFDNVNRIAVVLNNDVSHTVNVP  
VWQLSMPNGSTVTDKITGHSYTVQNGMVTVAVDGHYGAVLAQ

>non-antioxidant\_183

SIRLPAHLRLQPIYWSRDDVAQWLKWAENEFSLRPIDSNTFEMNGKALLLLTKEDFRYRSP

HSGDELYELLQHILKQRDHHHHHHHRHD

>non-antioxidant\_184

GPVWRKHYYITYRINNYTPDMNREDVDYAIRKAFQVWSNVTPLKFSKINTGMADILVVFFAR  
GAHGDFHAFDGGKGGILAHAFGPGSGIGGDAHFEDEFWTTTHSGGTNLFLTAVHAIGHSLG  
LGHSSDPKAVMFPTYKYVDINTFRLSADDIRGIQSLYG

>non-antioxidant\_185

MIALIQRVTRASVTVEGEVTGEIGAGLLVLLGVEKDDDEQKANRLCERVLGYRIFSDAEG  
KMNLNVQQAGGSVLVVSQFTLAADTERGMRPSFSKGA SPDRAEALYDYFVERCRQQEM  
NTQTGRFAADMQVSLVNDGPVTFWLQV

>non-antioxidant\_186

MEAAHFFEGTEKLLLEVWFSRQQPDANQSGDLRTIPRSEWDILLKDVQCSIISVTKTDKQE  
AYVLSSESMFVSKRRFILKTCGTLLLLKALVPLLKLARDYSGFDSIQSFFYSRKNFMKPSH  
QGYPHRNFQEEIEFLNAIFPNGAGYCMGRMNSDCWYLYTLDFPESRVISQPDQTLEILMSE  
LDPVMDQFYMKDGVTAKDVTRESGIRDLPGSVIDATMFNPCGYSMNGMKSDGTYWTI  
AITPEPEFSYVSFETNLSQTSYDDLIRKVVVEVFKPGKFTTLFVNQSSKCRTVLASPQKIEG  
FKRLDCQSAMFNNDYNFVFTSFAKKQQQQS

>non-antioxidant\_187

MLKQVEIFTAGSALGNPGGY GAILRYRGREKTFSAGYTRTTNRMELMAAIVALEALK  
EHAEVILSTDSQYVRQGITQWIHNWKKRGWKTADKKPVKNVDLWQRDLAALGQHQIK  
WEWVKGHAGHPENERADELARAAMNPTLEDTG YQVEV

>non-antioxidant\_188

DAPAVGKDLTQAAENIPPAFHNAPRQGELPALNYVNQPPMVP HSVANYQVTKNVNQCLN  
CHSPENSRLSGATRISPTHFMDRDGKVGSSSSPRRYFCLQCHVSQANVDPIVPNDFKPMKG  
YGN

>non-antioxidant\_189

TTLSTKQKQFLKGLAHLNPVVMLGGNGLTEGVLA EIENALNHHELKVKVAGADRETK  
QLIINAVRETCAAQVQTIGHILVLYRPSEEAKIQLPRK

>non-antioxidant\_190

MKTTLLKTLPELHLVQHNDIPVLHLKHAVGTAKISLQGAQLISWKPQNAKQDVLWLSEV  
EPFKNGNAIRGGVPICYPWFGGKQPAHG TARIRLWQLSHYYISVHKVRLEFELFSDLNIIIE  
AKVSMVFTDKCHLTFTHYGEESAQAALHTYFNIGDINQVEVQGLPETCFNSLNQQQENVP  
SPRHISENVDCIYSAENMQNQILDKSFNRTIALHHNASQFVLWNPWHKKTSGMSETGYQ  
KMLCLETARIHHLLEFGESLSVEISLKG

>non-antioxidant\_191

LMGDDKVKKEVGRASWKYFHTLLARFPDEPTPEEREKLHTFIGLYAELYPCGEC SYHFVK  
LIEKYPVQTSSRTAAAMWGCHIHKNVNEYLK KDIYDCATILEDYDCGCSDSGKRVS

>non-antioxidant\_192

DTSSLIVEDAPDHVRPYVIRHYSHARAVTVD TQLYRFYVTGPSSGYAFTLMGTNAPHSDA  
LGVLPHIHQKH YENFYCNKGSFQLWAQSGNETQQTRVLSSGDYGSVPRNVTHTFQIQDPD  
TEMTGVIVPGGFEDLFY YLGTNATDTHTHTPYIPSSSDSSSTTGPDSSTISTLQSF DVYAELSF  
TPRTDTVNGTAPANTVWHTGANALASTAGDPYFIANGWGPKYLNSQYGYQIVAPFVTAT  
QAQDTNYTLSTISMSTTPSTVTVPTWSFPGACAFQVQEGRVVVQIGDYAATELGS GDVAFI  
PGGVEFKYYSEAYFSKVLVSSGSDGLDQNLVNGGEEWSSVSFPADW

>non-antioxidant\_193

VLNGYWGYYQEFLEDEFPEQRNLTNALSEAVRAQPVPLSKPTQRPIKISVVYPGQQVSDYWV  
RNIA SF EKRLYKLNINYQLNQVFTRPNADIKQQSLSLMEALKSKSDYLIFLDTTRHRKRV  
EHVLDSTNTKLILQNITTPVREWDXHQPFYVGFDAEAGSRELATEFGKFFPKHTYYSVLY  
FSEGYISDVRGDTFIHQVNRDNNFELQSAYYTKATKQSGYDAAKASLAKHPDVDFIYACS  
TDVALGAVDALAELGREDIMINGWGGGSAELDAIQKGLDITVMRMNDDTGIAMAEAIK  
WDLEDKPVPTVYSGDFEIVTKADSPERIEALKKRAF RYSDN

>non-antioxidant\_194

SACKETGWPFCSDEDWNTKCPGCRMKGLIDEVDQDFTSRINKLRDLSLFNYQK

>non-antioxidant\_195

KVERKPPDADGCLHADPDLGVLCPTGCKLQDTLVRQERPIRKSIEDLRNTVDSVSR

>non-antioxidant\_196

YVATRDNCCILDERFGSYCPTTCGIADFLNNYQTSVDKDLRTLEGILY

>non-antioxidant\_197

MGSSHHHHHHSSGLVPRGSHMKEIRVKAILAAGLGTRLRPLTENTPKALVQVNQKPLIEY  
QIEFLKEKGINDIIVGYLKEQFDYLKEKYGVRLVFNKYADYNNFYSLYLVKEELANSYV  
IDADNYL FKNMFRNDLTRSTYFVS YREDCTNEWFLVYGDDYKVQDIIVDSKAGRILSGVS  
FWDAPTAEKIVSFIDKAYVSGEFVDLYWDMVVDNIKELDVYVEELEGNSIYEIDSVQDY  
RKLEEILKNEN

>non-antioxidant\_198

GSHMLEDPVVLQRRDWENPGVTQLNRLAAHPPFASWRNSEEARTDRPSQQLRSLNGEW  
RFAWFPAPEAVPESWLECDLPEADTVVPSNWQMHGYDAPIYTNVTYPITVNPFFVPTEN  
PTGCYSLTFNVDES WLQEGQTRIIDGVNSAFHLWCNGRWVGYGQDSRLPSEFDLSAFLR  
AGENRLAVMVLRWSDGSYLEDQDMWRMSGIFRDVSLHKKPTTQISDFHVATRFNDDFSR  
AVLEAEVQMC GELRDYLRVTVSLWQGETQVASGTAPFGGEIIDERGGYADRVTLRNLVEN  
PKLWSAEIPNLYRAVVELHTADGTLIEAEACDVGFREVRIENGLLLLNGKPLLIRGVNRHE  
HHPLHGQVMDEQTMVQDILLMKQNNFN AVRCSHYPNHPLWYTLCDRYGLYVVDEANIE  
THGMVPMNRLTDDPRWLPAMSERVTRMVQRDRNHPSVIIWVSLGNESGHGANHDALYRW  
IKSVDPSPRVQYEGGGADTTATDIICPMYARVDEDQPFPAVPKWSIKKWLSLPGETRPLILC  
QYAHAMGNSLGGFAKYWQAFRQYPRLQGGFVWDWVDQSLIKYDENGPNPWSAYGGDFG  
DTPNDRQFCMGLV FADRTPHPALTEAKHQQQFFQFRLSGQTIEVTSEYLFRRHSDNELLH  
WMVALDGKPLASGEVPLDVAPQKQLIELPELPQPESAGQLWLTVRVVPNATAWSEAG  
HISAWQQWR LAENLSVTLPAASHAIPHLTTSEMDFCIELGNKRWQFNRSQGFLSQMWIGD  
KKQLLTPLRDQFTRAPLDNDIGVSEATRDPNAWVERWKAAGHYQAEALLQCTADTLA  
DAVLITTAHAWQHQGKTLFISRKTYRIDGSGQMAITVDVEVASDTPHPARIGLNCQLAQVA  
ERVNWLGLGPQENYPDRDLTAACFDRWDLPLSDMYTPYVFPSENGLRRCGTRELNYGPHQW  
RGDFQFNISRYSSQQQLMETSHRHLLHAEEGTWLNIDGFHMGIGGDDS WSPSVSAEFQLSA  
GRYHYQLVWCQK

>non-antioxidant\_199

PEGPEIRRAADNLEAAIKGKPLTDVWFAPQLKTYQSQLIGQHVTHVETR GKALLTHFSND  
LTLYSHNQLYGVWRVVD TGEEPQTTRVLRVVKLQTADK TILLYSASDIEMLRPEQLTTHPFL  
QRVGPVLDPNLTPEVVKERLLSPFRNRQFAGLLLDQAFLAGLGNYL RVEILWQVGLTG  
NHKAKDLNAAQLDALAHALLEIPRFSYATRQVDENKHHGALFRFKV FHRDGEPCERC G  
SIIKTTLSRPFYWCPCQH



>non-antioxidant\_200

MPSTDSIPKSNFDAIPDVIQAFKNGEFVVVLDDPSRENEADLIHAAESVTTEQMAFMVRHS  
SGLICAPLTPERTTALDLPQMVTNADPRGTAYTVSVD A EHPSTTTGISAHDRALACRMLA  
APDAQPSHFRRPGHVFPPLRAVAGGVRARRGHT EAGVELCRLAGKRPVAVISEIVDDGQEV  
EGRAVRAAPGMLRGDEC VAFARRWGLKVCTIEDMIAHVEKTEGKLETNGSG

>non-antioxidant\_201

GHMIMANWQSIDELQDIASDLPRFIHALDELSRRLGLNITPLTADHISLRCHQNATAERWR  
RGFEQCGELLENMINGRPICLFLKHEPVQVAHWQFSIVELPWPGEKRYPHEGWEHIEIVL  
PGDPETLNARALALLSDEGLSLPGISVKTSSPKGEHERLPNPTLAVTDGKTTIKFHPWSIEEI  
VASEQSA

>non-antioxidant\_202

SITENTSWNKEFSAEAVNGVFLCKSSSKSCATNDLARASKEYLPASTFKIPNAIIGLETGVI  
KNEHQVFKWDGKPRAMKQWERDLTLRGAIQVSAVPVFQQIAREVGEVRMOKYLKKFSY  
GNQNISGGIDKFWLEGQLRISAVNQVEFLESLYLNKLSASKENQLIVKEALVTEAAPEYLV  
HSKTGFSGVGTESNPGVAWVVGWVEKETEVYFFAFNMDIDNESKLPLRKSIPTKIMESEGI  
IGG

>non-antioxidant\_203

ATCTVKSVDDAKDIAGCSAVTLNGFTVPAGNTLVLPDKGATVTMAGDITFAKTTLDGPL  
FTIDGTGINFVGADHIFDGNALYWDGKGTNNGTHKPHPFLKIKGSGTYKKFEVLNSPAQ  
AISVGPTDAHLTLDGITVDDFAGDTKNLGHNTDGFVDSANNVTIQNCIVKNQDDCIAIND  
GNNIRFENNQC SGGHGISIGSIATGKHVSNVVIKGN TVTRSMYGVRIKAQRTATSASVSGV  
TYDANTISGI AKYGV LISQSY PDDVGNPGTGAPFS DVNFTGGATTIKVNNAATRVTVECGN  
CSGNWNWSQLT VTGGKAGTIKSDKAKITGGQYL

>non-antioxidant\_204

GSHSMRYFHTSVSRPGRGEPFITVGYVDDTLFVRFDS DAASPREEPRAPWIEQEGPEYW  
DRETQICKAKAQTDREDLRLLRYYNQSEAGSHTLQNM YGCDVGPDRLLRGYHQHAY  
DGKDYIALNEDLSSWTAADTAAQITQRKWEAARVAEQ LRAYLEGECEVWLRRLRYLENGKE  
TLQRADPPKTHVTHHPISDHEATLRCWALGFYPAEITL TWQRDGEDQTQDTELVETRPAG  
DRTFQKWA AVVVPSGEEQRYTCHVQHEGLPKPLTLR WEP

>non-antioxidant\_205

TTVYLAGDSTMAKNGGSGTNGWGEYLASYLSATVVND AVAGRSARSYTREGRFENIAD  
VVTAGDYVIVEFGHNDGGSLS TDNGR TDCSGTGA EVCYSVYDGVNETILTFPAYLENAAK  
LFTAKGAKVILSSQTPNNPWETGTFVNSPTRFVEYAE LAAEVAGVEYVDHWSYVDSIYET  
LGNATVNSYFPIDHTHTSPAGAEVVAE AFLKAVVCTGTSLKSVLTTTTSFEGTCL

>non-antioxidant\_206

MSQFFYIHPDNPQQRLINQAVEIVRKGGVIVYPTDSGYALGCKIEDKNAMERICRIRQLPD  
GHNFTLMCRDLSELSTYSFVDNVAFRLMKNNTPGNYTFILKGTKEVPRLLQEKRTIGM  
RVPSNPIAQALLEALGEPMLSTSLMLPGSEFTESDPEEIKDRLEKQVDLIHGGYLGQKPTT  
VIDLTDDTPVVVREGVGDVKPFL

>non-antioxidant\_207

TTILKHLPGQRIGIAFSGGLD TSAALLWMRQKGAVPYAYTANLGQPDEEDYDAIPRRAM  
EYGAENARLIDCRKQLVAEGIAAIQCGAFHNNTGGLTYFN TPLGRAVTGTMLVAAMKED  
GVNIWGDGSTYKGN DIERFYRYGLLTNAELQIYKPWLD TDFIDELGGRHEMSEFMIACGF  
DYKMSVEKAYSTDSNMLGATHEAKDLEYLNSSVKIVNPIMGVKFWDES VKIPAEVTVRF

EQGHPVALNGKTFSDDVEMMLEANRIGGRHGLGMSDQIENRIIEAKSRGIYEAPGMALLH  
IAYERLLTGIHNEDTIEQYHAHGRQLGRLLYQGRWFDSQALMLRDSLQRWVASQITGEVT  
LELRRGNDYSILNTVSENLTYPKPERLTMEKGDSVFSPPDRIGQLTMRNLDTDTREKLFY  
AKTGLLSSSAASGVPQVENLENKGQSVEHHHHHH

>non-antioxidant\_208

MEITSDMEEDKDLMLKLLDKNGFVLKKVEIYRSNYLAILEKRTNGIRNFEINNGNMRI  
GYKMMEHHIQKFTDIGMSCKIAKNGNVYLDIKRSAENIEAVITVASEL

>non-antioxidant\_209

AAGTAKGHNPTFPTIYDASSAPTAANTTVGIITIGGVSQTLQDLQQFTSANGLASVNTQTI  
QTGSSNGDYSDDQQQGGEWDLDSQSIVGSAGGAVQQLLFYMAQDSASGNTGLTQAFNQ  
AVSDNVAKVINVSLGWCEADANADGTLQAEDRIFATAAAQQQTFSVSSGDEGVYECNNR  
GYPDGSTYSVSWPASSPNVIAVGGTTLYTTSAGAYSNETVWNEGLDSNGKLWATGGGYS  
VYESKPSWQSVVSGTPGRLLPDISFDAAQGTGALIYNYGQLQQIGGTSASPIFVGLWAR  
LQSANSNLGFPAASFYSAISSTPSLVHDVKSNGNGYGGYGYNAGTGWDYPTGWGSLDIA  
KLSAYIRSNGF

>non-antioxidant\_210

GSHMRKTLVLLGAHGVGRRHIKNTLITKHPDRFAYPIPHTRPPKKDEENGKNYYFVSHD  
QMMQDISNNEYLEYGSHEDAMYGKLETIRKIHQGLIAILDVEPQALKVLRTAEFAPFV  
FIAAPTITPGLNEDESRLQKESDILQRTYAHYFDLTIINNEIDETIRHLEEAVELVC

>non-antioxidant\_211

TLLGTALRPAATRVMMLGSGELGKEVAIECQRLGVEVIAVDYADAPAMHVAHRSHVINM  
LDGDALRRVVELEKPHYIVPEIEAIATDMLIQLEEEGLNVVPCARATKLTMNREGIRRLAA  
EELQLPTSTYRFADSESLFREAVADIGYPCIVKPMSSSGKGQTFIRSAEQLAQAWKYAQQ  
GGRAGAGRVIVEGVVKFDFEITLLTVSAVDGVHFCAPVGHQRQEDGDYRESWQPQQMSPL  
ALERAQEIARKVVLALGGYGLFGVELFVCGDEVIFSEVSPRPHDTGMVTLISQDLSEFALH  
VRAFLGLPVGIRQYGPAAAVILPQLTSQNVTFDQNAVQAVGADLQIRLFGKPEIDGSRR  
GVALATAESVDAIERAKHAAGQVKVQG

>non-antioxidant\_212

MKIKQALFTAGYSSFYFDDQQAINGAGHDGFIYTGDPVTPGFTSVRQAGECVSVQLILE  
NGAVAVGDCAAVQYSGAGGRDPLFLAEHFIPFLNDHIKPLLEGRDVDAFLPNARFFDKLRI  
DGNLLHTAVRYGLSQALLDATALASGRKTEVVCDQEWQLPCVPEAIPLFGQSGDDRYIAV  
DKMILKGVVLPALINNVEEKLGFKGEKLEKREYVRWLSRILSLRSPRYHPTLHIDVYGT  
IGLIFDMDPVRCAEYIASLEKEAQGLPLYIEGPVDAGNKPDQIRMLTAITKELTRLGSGVKI  
VADEWCNTYQDIVDFTDAGSCHMVQIKTPDLGGIHNIVDAVLYCNKHGMEAYQGGTCNE  
TEISARTCVHVALAARPMRMLIKPGMGFDEGLNIVFNEMNRTIALLLQTKD

>non-antioxidant\_213

GAMVPNVVVVTGLTLVCSSAPGPLELDLTGDLESFKKQSFVLKEGVEYRIKISFRVNREIVSG  
MKYIQHTYRKGVKIDKTDYMGVSYGPRAAAYEFLTPVEEAPKGMLARGSYSIKSRFTDD  
DKTDHLSWEWNLTIKKDWKD

>non-antioxidant\_214

VGSLNCIVAVSQNMGIGKNGDLPWPPLRNEFRYFQRM TTTSSVEGKQNLVIMGKKTWFSI  
PEKNRPLKGRINLVLSRELKEPPQGAHFLSRSLDDALKLTEQPELANKVDMVWVWVGGSSV  
YKEAMNHPGHLKLFVTRIMQDFESD TFFPEIDLEKYKLLPEYPGVLSDVQEEKGIKYKFE  
VYEKND

>non-antioxidant\_215

DPSRIPSALIGRPAPQTALPPLEGLQADNVQVPGLDPAAFKGGKVS LVNVWASWCVPCHDE  
APLLELTKGKDRFQLVGINYKDAADNARRFLGRYGNPFGRVGV DANGRASIEWGVYGVV  
ETFVVGREGTIVYKLVGPITPDNLRVLLPQMEKALK

>non-antioxidant\_216

QPVLHLVALNTPLSGGMRGIRGADFQCFQQARAVGLSGTFRAFLSSRLQDLYSIVRRADR  
GSVPIVNLKDEVLSPSWDSLFSGSQGLQPGARIFSFDRDVL RHPAWPQKSVWHGSDPS  
GRRLMESYCETWRTETTATGQASSLLSGRLLLEQKAASCHNSYIVLCIENSF

>non-antioxidant\_217

MADEIAKAQVARPGGDTIFGKIIRKEIPAKIIFEDDRCLAFHDISPQAPTHFLVIPKKHISQISV  
AEDDDDESLGHLMIKVKCAADLGLNKGYRMVVNEGSDGGQSVYHVHLHVLGGRQMH  
WPPG

>non-antioxidant\_218

MIANENIQDKALENFKANQTEVTVFFLNFGQMKGVIEEYDKYVVS LNSQGKQHLYKHAI  
STYTVETEGQASTESEE

>non-antioxidant\_219

MGDTFIRHIALLGFEKRFVPSQHYVYMFLVKWQDLSEKVVYRRFTEIYEFHKTLEKEMFPIE  
AGAINPENRIIPLPAPKWFQDQRAAENRQGTLETCSTLMSLPTKISRCPHLLDFFKVRPD  
DLKLPTDNQTKKPETYLM

>non-antioxidant\_220

MDVSRQFFKICAGGMAGTTVAALGFAPKQALAQARNYKLLRAKEIRNTCTYCSVGCGL  
LMYSLGDGAKNAREAIYHIEGDPDHPVSRGALCPKGAGLLDYVNSENRLRYPEYRAPGS  
DKWQRISWEEAFSRIAKLMKADR DANFIEKNEQGVTVNRWLSTGMLCASGASNETGML  
TQKFARSLGMLAVDNQARVCHGPTVASLAPTFGRGAMTNHWVDIKNANVVMVMGGNA  
AEAHPVGFWRWAMEAKNNNDATLIVVDPRFTRTASVADIYAPIRSGTDITFLSGVLRylienn  
KINAEYVKHYTNASLLVRDDFAFEDGLFSGYDAEKRYDKSSWNYQLDENG YAKRDETL  
THPRCVWNLKEHVSRYTPDVVENICGTPKADFLKVEVLASTSAPDRTTTTFLYALGWTQ  
HTVGAQNIRTMAMIQLLLGNMGMAGGGVNALRGHSNIQGLTDLGLLSTSLPGYLTLPSE  
KQVDLQSYLEANTPKATLADQVNYWSNYPKFFVSLMKSFYGDAAQKENNWGYDWLPK  
WDQTYDVIKYFNMMDEGKVTGYFCQGFNPVASFDPKKNVVSCLSKLYMVIDPLVTE  
TSTFWQNHGESNDVDPASIQTEVFRLPSTCFEEDGSIANSGRWLQWHWKGDAPGEAR  
NDGEILAGIYHHLRELYQSEGGKVEPLMKMSWNYKQPHEPQSDEVAKENNGYALDLY  
DANGVLIKKGQLLSSFAHLRDDGTTASSCWIYTGSWTEQGNQMANRDN SDPSGLGNTL  
GWAWAWPLNRRVLYNRASADINGKPWDPKRMLIQWNGSKWTGNDIPDFGNAAPGTPTG  
PFIMQPEGMGR LFAINKMAEGPFPEHYEPIETPLGTNPLHPNVVSNP VVRLYEQDALRMG  
KKEQFPYVGTTYRLTEHFHTWTKHALLNAIAQPEQFVEISETLAAAKGINNGDRVTVSSK  
RGFIRAVAVVTRRLKPLNVNGQQVETVGIPIHWGFEGVARKGYIANTLTPNVGDANSQTPE  
YKAFLVNIKA

>non-antioxidant\_221

SMQEKIMRELHVKPSIDPKQEIEDRVNFKQYVKKTGAKGFVLGISGGQDSTLAGRLAQL  
AVESIREEGGDAQFIAVRLPHGTQQDEDDAQLALKFIKPKDKSWKFDIKSTVSAFSDQYQQE  
TGDQLTDFNKG NVKARTRMIAQYAIGQEGLLV LGTDHAAEAVTGFFTKYGDGGADLLP  
LTGLTKRQGRLLKELGAPERLYLKEPTADLLDEKPPQSDTELGISYDEIDDYLEGKEVS  
AKVSEALEKRYSMTEHKRQVPASMFDDWWK

>non-antioxidant\_222

GSPEFFGRENLYFQGREPVLDGPYQPTTFNPPVDYWMLLAPTAAGVVVEGTNNTDRWLA  
TILVEPNVTSETRSYTLFGTQEQTIANASQTQWKFIDVVKTTQNGSYSQYGPLQSTPKLYA  
VMKHNGKIYTYNGETPNVTTKYYSTTNYDSVNMATAFCDFYIIPREEESTCTEYINNGL

>non-antioxidant\_223

MAYDYKQVLRDSSLFYEAQRSGRLPADQKVTWRKDSALNDQGDQGQDLTGGYFDAGD  
FVKFGFPMAYTATVLAWGLIDFEAGYSSAGALDDGRKAVKWATDYFIKAHTSQNEFYGQ  
VGQGDADHAFWGRPDMTMAPPAYKIDTSRPGSDLAGETAALAAASIVFRNVDGTYSN  
NLLTHARQLDFDANNYRGKYSIDARNFYASADYRDELVWAAAWLYRATNDNTYLNT  
AESLYDEFGLQNWGGGLNWDSKVSQVQLLAKLTNKQAYKDTVQSYVNYLINNQKTP  
KGLLYIDMWGTLRHAANAFAFIMLEAAELGLSASSYRQFAQTQIDYALGDGGRSFVCGFGS  
NPPTRPHHRSSSCPPAPATCDWNTFNSPDPNYHVLGALVGGPDQNDNYVDDRSDYVHN  
EVATDYNAGFQSALAALVALGY

>non-antioxidant\_224

ERDCRVSSFRVKENFDKARFAGTWYAMAKKDPEGLFLQDNIVAEFSDENGHMSATAKG  
RVRLNNWDVCADMVGTFTDTEPAKFKMKYWGVASFLQKGNDDHWIIDTDYETFAVQ  
YSCRLNLDGTCADSYSFVFARDPSGFSPEVQKIVRQRQEELCLARQYRLIPHNGYCDGKS  
ERNIL

>non-antioxidant\_225

AGVPFNTKYYPGPTSIADNQSEVTAMLKAEWEDWKSKRITSNGAGGYKRVQRDASTNY  
DTVSQGMGYGLLLAVCFNEQALFDDLYRYVKSHFNGNGLMHHWHIDANNVTSHDGGD  
GAATDADEDIALALIFADKLWGSSGAINYGQEARTLINNLYNHCVEHGSYVLKPGDRWGG  
SSVTNPSYFAPAWYKVAQYTGDRWNQVADKCYQIVVEVKYNNGTGLVPDWCTASG  
TPASGQSYDYKYDATRYGWRTAVDYSWFGDQRAKANCDMLTKFFARDGAKGIVDGYTI  
QGSKISNNHNASFIGPVAAASMTGYDLNFAKELYRETVAVKDSEYYGYGNSLRLLLTYI  
TGNFPNPLSDL

>non-antioxidant\_226

GSPGIRLGSSDNFARFVCKNNGVLFENQLLQIGLKSEFRQNLGRMFIFYGNKTSTQFLNF  
TPTLICADDLQTNLNLQTKPVDPTVDGGAQVQQVNVIECISDFTEAPVLNIQFRYGGTFQ  
VSVKLPITLNKFFQPTEMASQDFQFRWKQLSNPQQEVQNIKAKHPMDTEITKAKIIFGS  
ALLEEVDPNPANFVGAGIIHTKTTQIGCLLRLEPNLQAQMYRLTLRTSKDTVSQRLCELLS  
EQF

>non-antioxidant\_227

MSKSESPKEPEQLRKLFIGGLSFETTDESLSRSHFEQWGTLTDCVVMRDPNTKRSRGGFV  
YATVEEVDAAMNARPHKVDGRVVEPKRAVSREDSQRPGAHLTVKKIFVGGIKEDTEHH  
LRDYFEQYKIEVIEIMTDRGSGKKRGFAFVTFDDHDSVDKIVIQKYHTVNGHNCEVRKA  
LSKQEMASASSQRGRVAGIIHTKTTQIGCLLRLEPNLQAQMYRLTLRTSKDTVSQRLCEL  
LSEQF

>non-antioxidant\_228

MQTLHALLRDIPAPDAEAMARTQQHIDGLLKPPGSLGRLETLAVQLAGMPGLNGTPQVGE  
KAVLVMCADHGVWDEGVAVSPKIVTAIQANMTRGTTGVCVLAQAQAKVHVIDVGID  
AEPIPGVVNMRVARGCGNIAVGPAMSRLQAEALLEVSRYTCDLAQRGVTLFGV GELGM  
ANTTPAAAMVSVFTGSDAKEVVGIGANLPPSRIDNKVDVVRRAIAINQPNPRDGIDVLSK  
VGGFDLVGMTGVMLGAARCGLPVLLDGFLSYSAALAACQIAPAVRPYLIPSHFSAEKGAR

I ALAHL SMEPYLHMAMRLGEGSGAALAMPIVEAACAMFHNMGELAASNIVLPEGNANA  
T

>non-antioxidant\_229

AWKGEVLANNEAGQVTSIIYNPGDVITIVAAGWASYGPTQKWGPQGDREHPDQGLICH  
D AFCGALVMKIGNSGTIPVNTGLFRWVAPNNVQGAITLIYNDVPGTYGNNSGSFSVNIGK  
D QS

>non-antioxidant\_230

GRDYRTCLTIVQKLLKMMVDKPTQRSVSNAATRVCRTGRSRWRDVCNFMRRYQSRVIQ  
G LVAGETAQQICEDLR

>non-antioxidant\_231

TKGLVLGIYSKEKEEDEPQFTSAGENFNKLVSGKREILNISGPPLKAGKTRTFYGLHED  
FP SVVVVGLGKKTAGIDEQENWHEGKENIRAAVAAGCRQIQDLEIPSVEVDPCGDAQAAAE  
GAVLGLYEYDDLKQKRKVVS AKLHGSEDQEAWQRGVLFASGQNLARRLMETPANEMT  
PTKFAEIVEENLKSASIKTDVFIRPKSWIEEQEMGSFLS VAKGSEPPVFLEIHYKGS  
PNASE PPLVFGKGITFDSGGISIKAAANMDLMRADMGGAATCSAIVSAAKLDLPINIV  
GLAPLCE NMPSGKANKPGDVVRARNGKTIQVDNTDAEGRLLADALCYAHTFNPKVI  
INAATLTGA MDIALGSGATGVFTNSSWLWNKLF EAS IETGDRVWRMPLFEHYTRQ  
VIDCQLADVNNIG KYRSAGACTAA AFLKEFVTHPKWAHLDIAGVMTNKDEV  
PYLRKGMAGRPRTRTLIEFLFR FSQ

>non-antioxidant\_232

MITNSGKFGVVVVGVGRAGSVRLRDLKDPRSA AFLNLIGFVSRRELGSLDEV  
RQISLEDA LRSQEIDVAYICSESSHEDYIRQFLQAGKHVLVEYPM  
TLSFAAAQELWELAAQKGRVLHE EHV ELLMEEFELRREVLGKELLKGL  
SRFTASPLEEERFGFPAFSGISRLTWLVS LFGELSLI SATLEERKEDQYMKMT  
VQLETQNKGLLSWIEEKGPGLKRNRYVNFQFTSGSLEEVPSVG VNKNIFLKDQ  
DIFVQKLLDQVSAEDLAAEKKRIMHCLGLASDIQKLCHQKKNIVGLAPLC  
ENMPSGKANKPGDVVRARNGKTIQVDNTDAEGRLLADALCYAHTFNPKVI  
INAATLTGA MDIALGSGATGVFTNSSWLWNKLF EAS IETGDRVWRMPLFEHYTR  
QVIDCQLADVNNIG KYRSAGACTAA AFLKEFVTHPKWAHLDIAGVMTNKDEV  
PYLRKGMAGRPRTRTLIEFLFR FSQ

>non-antioxidant\_233

LEPEPWFFKNLSRKDAERQLLAPGNTHGSFLIRESESTAGSFSLSVRDFDQ  
NQGEVVKHYK IRNLDNGGFYISPRITFPGLHELVRHYTNASDGLCTRLSRPCQT

>non-antioxidant\_234

APTAKLANGDTITGLNAIINEAFLGIPFAEPPVGNLRFKDPVPYSGSLNGQKFTS  
YGPSCMQ QNPEGTFEENLGTKALDLVMQSKVFQAVLPQSEDCLTINVVRPPG  
TKAGANLPVMLWIFG GGFEIGSPTIFPPAQMVTKSVLMGKPIIHVAVNYRVA  
SWGFLAGDDIKAEGSGNAGLKDQR LGMQWVADNIAGFGDPSKVTIFGESAGS  
MSVLCHLIWNDGDNTYK GKPLFRAGIMQSG AMVSPDPVDGTYGNEIYDLFV  
SSAGCGSASDKLA CLRSASSDTLLDATNNTPGFLAYSSL RLSYLPRPDGKNIT  
DDMYKLV RDGKYASVPVIIGDQND EGTIFGLSSLNVTNAQARAYFK QSF  
IHASDAEIDTLMAAYPQDITQGS PFDTGIFNAITPQFKRISAVLGD LAFI  
HARRYFLNHF QGGTKYSFLSKQLSGLPIMGTFHANDIVWQDYLLGSGSVIY  
NNAFIAFATDLDLPNTAGLLV NWPKYTSSSQSGNNLMMINALGLYTGKDN  
FRTAGYDALMTNPSSFFV

>non-antioxidant\_235

SAYPITGKLGSELTMTDTVGQVVLGWKVS DLKSSSTAVIPGYPVAGQVWEATATV  
NAIRGS

VTPAVSQFNARTADGINYRVLWQAAGPDTISGATIPQGEQSTGKIYFDVTGPSPTIVAMNNG  
MEDLLIWEP

>non-antioxidant\_236

DVSGTVCLSALPPEATDTLNLIASDGPFYPSQDGVVFQNRESVLPTQSYGYYHEYTVITPG  
ARTRGTRRIITGEATQEDYYTGDHYATFSLIDQTC

>non-antioxidant\_237

MRPYYIAIVGSGPSAFFAAASLLKAADTTEDLDMAVDMLEMLPTPWGLVRSVAPDHPKI  
KSISKQFEKTAEDPRFRFFGNVVGHEHVQPGELSERYDAVIYAVGAQSDRMLNIPGEDLPG  
SIAAVDFVGWYNAHPHFEQVSPDLSGARAVVIGNGNVALDVARILLTDPDVLARTDIADH  
ALESRLPRGIQEVVIVGRRGPLQAFTTLELRELADLDGVDVVIDPAELDGITDEDAAAVG  
KVCKQNIKVLRGYADREPRPGHRRMVFRFLTSPIEIKGKRKVERIVLGRNELVSDGSGRVA  
AKDTGEREELPAQLVVRSVGYRGVPTPGLPFDDQSGTIPNVGGRINGS PNEYVVGWIKRG  
PTGVIGTNKKDAQDVTVDLIKNLGNAKEGAECKSFPEHDHADQVADWLAARQPKLV TSAH  
WQVIDAFERAAGEPHGRPRVKLASLAELLRIGLG

>non-antioxidant\_238

SQDASDGLQRLHMLQISYFRDPYHVWYQGNASLGGHLTHVLEGPDNTTIIQLQPLQEPE  
SWARTQSGLSYLLQFHGLVRLVHQERTLAFPLTIRCFLGCELPPEGSRAHVFEVAVNGSS  
FVSRPERALWQADTQVTSGVVTFTLQQLNAYNRTRYELREFLEDTCVQYVQKHISAENT  
KGSQTSRSYTS

>non-antioxidant\_239

MFQQLSARLQEAIGRLRGRRITEEDLKATLREIRRALMDADVNLVARDVFERVREEAL  
GKQVLESLTPAEVILATVYEALKEALGGEARLPVLKDRNLWFLVGLQGSGKTTTAAKLAL  
YYKKGRRPLLVAADTQRPAAREQLRLLGEKVGVPVLEVMDGESPE SIRRVEEKARLEA  
RDLILVDTAGRLQIDEPLMGELARLKEVLGPDEVLLVLDAMTGQEALSVARAFDEKVGVT  
GLVLTKLDGDARGGAALSARHVTGKPIYFAGVSEKPEGLEPFYPERLAGRILGMG

>non-antioxidant\_240

MNDRADVFVPDITTRKNVGLSHDANDFTLPQPLDRYSAEDHATWATLYQRQCKLLPGRA  
CDEFLEGLERLEVDADRVPDFNKLNEKLMAATGWKIVAVPGLIPDDVFFEHLANRRFPVT  
WWLREPHQLDYLQEPDVFHDLFGHVPLLINPVFADYLEAYGKGGVKAKALGALPMLAR  
LYWYTVFEGLINTPAGMRIYGAGILSSKSESIYCLDSASPNRVGFDLMRIMNTRYRIDTFQK  
TYFVIDSFKQLFDATAPDFAPLYLQLADAQPWGAGDIAPDDLVLNAGDHQGWADTEDV

>non-antioxidant\_241

RVCPRILLECKKSDCLAECVCLEHGYCG

>non-antioxidant\_242

MKFGNFLLTYQPPELSQTEVMKRLVNLGKASEGCGFDTVWLLLEHHFTEFGLLGPNPYVAA  
AHLGATETLNVGTAAIVLPTAHPVRQAEDVNLLDQMSKGRFRFGICRGLYDKDFRVFGT  
DMDNSRALMDCWYDLMKEGFNEG YIAADNEHIKFPKIQLNPSAYTQGGAPVYVVAESAS  
TTEWAAERGLPMLS WIINTHEKKAQLDLYNEVATEHG YDVTKIDHCLSYITSVDHDSNRA  
KDICRNFLGHWYDSYVNATKIFDDSDQTKGYDFNKGQWRDFVLKGHKDTNRRIDYSYEI  
NPVGTPEECIAIIQQDIDATGIDNICCGFEANGSEEEIIASMKLQSDVMPYLKEKQ

>non-antioxidant\_243

SHHWGYGKHNGPEHWHKDFPIAKGERQSPVDIDHTAKYDPSLKPLSVSYDQATSLRILN  
NGHAFNVEFDDSDQKAVLKGGPLDGT YRLIQFHFHWGSLDGQGSEHTVDKKKYAAELHL  
VHWNTKYGDFGKAVQQPDGLAVLGIFLKVGS AKPGLQKVVDVLDSIKTKGKSADFTNFD

PRGLLPESLDYWTYPGSLTTPPLLECVTWIVLKEPISVSSEQVLKFRKLNFNNGEGEPEELM  
VDNWRPAQPLKNRQIKASFK

>non-antioxidant\_244

APADKPQVLASFTQTSASSQNAWLAANRNQSAWAAAYEFDWSTDLCQAPDNPFQFPFNT  
ACARHDFGYRNYKAAGSFDANKSRIDSAFYEDMKRVCTGYTGEKNTACNSTAWTYQQA  
VKIFG

>non-antioxidant\_245

AHPELKSSVPQADSAVAPEKIQLNFSENLTVKFSGAKLTMTGMKGMSSHSPMPVAAKVA  
PGADPKSMVIIPREPLPAGTYRVDWRAVSSDTHPITGNYTFTVK

>non-antioxidant\_246

MLELLPTAVEGVSQAQITGRPEWIWLALGTALMGLTLYFLVKGMGVSDPDAKKFYAITT  
LVPAIAFTMYLSMLLGYGLTMVPGGEQNPIYWARYADWLFTTPLLDDLALLVDADQGT  
ILALVGADGIMIGTGLVGALTKVYSYRFVWVAISTAAMLYILYVLFQFTSKAESMRPEVA  
STFKVLRNVTVVLWSAYPVVWVWLGISEGAGIVPLNIETLLFMVLDVSAKVGFLILLRSRAI  
FGEAEPEPSAGDGAAATSD

>non-antioxidant\_247

MVDQATLDKLEAGFKKLQEASDCKSLKKHLTKDVFDSIKNKKTGMGATLLDVIQSGVE  
NLDSGVGIYAPDAESYRTFGPLFDPIIDDYHGGFKLTDKHPPKQWGDINTLVGLDPAGQFII  
STRVRCGRSLQGYFPNCLTAEQYKEMEEKVSSTLSSMEDELKGTYYPLTGMSKATQQQL  
IDDHFLFKEGDRFLQTANACRYWPTGRGIFHNDAKTFLVWVNEEDHLRIISMQKGGDLKT  
VYKRLVTAVDNIESKLPFSDHDFGFLTFCTNLGTTMRASVHIQLPKLAKDRKVLIDIAS  
KFNLQVRGTRGEHTESEGGVYDISNKRRLGLTEYQAVREMVDGILEMIKMEKAAA

>non-antioxidant\_248

MERGEIWLVSLDPTAGHEQQGTRPVIVTPAAFNRVTRLPVVVPVTSGGNFARTAGFAVSL  
DGVGIRTTGVVRCQDQRTIDMKARGGKRLRVPETIMNEVLGRLSTILT

>non-antioxidant\_249

TGMSREEVESLIQEVLEVYPEKARKDRNKHLAVNDPAVTQSKKCIISNKKSQPGLMTIRGC  
AYAGSKGVVWGPIKDMIHISHGPGVCGQYSRAGRNYIGTTGVNAFVTMNFSTDFQEK  
DIVFGGDKKLAKLIDEVETLFPNLKGISVQSECPIGLIGDDIESVSKVKGAELSKTIVPVRCE  
GFRGVSQSLGHHIANDAVRDWVLGKRDEDTTFASTPYDVAIIGDYNIGGDAWSSRILLEE  
MGLRCVAQWSGDGSISEIELTPKVKLNLVHCYRSMNYISRHMEEKYGIPWMEYNFFGPTK  
TIESLRAIAAKFDESIQKKCEEVIKYPKPEWEAVVAKYRPRLEGKRVMLYIGGLRPRHVI  
AYEDLGMEVVGTYEFAHNDYDRTMKEMGDSTLLYDDVTGYEFEEFVKRIKPDIGSG  
IKEKFIFQKMGPFREMHSWDYSGPYHGFDFGFAIFARDMDMTLNNPCWKKLQAPWEASE  
GAEKVAASA

>non-antioxidant\_250

SQQVDKIKASYPLFLDQDYKDMLAKKRDGFEEKYPQDKIDEVFQWTTTKEYQELNFQRE  
ALTVNPAKACQPLGAVLCALGFECTMPYVHGSQGCVAYFRSYFNRFREPVSCVSDSMTE  
DAAVFGGQQNMKDGLQNCKATYKPDMAVSTTCMAEVIIGDDLNAFINNSKKEGFIPDEF  
VPFAHTPSFVGSHTVGTWDMFEGIARYFTLKSMDDKVVGSNKKINIVPGFETYLGFRVI  
KRMLSEMVGYSLLSDPEEVLDTPADGQFRMYAGGTTQEEMKDAPNALNTVLLQPWHL  
EKTKKFVEGTWKHEVPKLNIPMGLDWTDEFLMKVSEISGQPIPASLTKERGRLVDMMTDS  
HTWLHGKRFALWGDPDFVMGLVKFLELGCPEVHILCHNGNKRWKKAVDAILAASPYG  
KNATVYIGKDLWHLRSLVFTDKPDFMIGNSYKGFQIRDTLHKGKEFEVPLIRIGFPIFDRHH

LHRSTTLGYEGAMQILTTLVNSILERLDEETRGMQATDYNHDLVR

>non-antioxidant\_251

ADQKLSDFHAESGGCESCHKDGTSPADGAFEFAQCQSCHGKLEMDAVHKPHDGNLVCADCHAVHDMNVGQKPTCESCHDDGRTSASVLKK

>non-antioxidant\_252

SRNVFPFYAETDVADLQARMTAGELDSTTLTQAYLQRIAALDRTGPRLRAVIELNPDALKEAAERDRERRDGRRLRGLHGIPLLLKDNINAAPMATSAGSLALQGFRPDDAYLVRRLRDAGAVVLGKTNLSEWANFRGNDSISGWSARGGQTRNPPYRISHSPCGSSSGSAVAVAAANLASVAIGTETDGSIVCPAAINGVVGLKPTVGLVSRDGIIPISFSQDTAGPMARSVADAAVLTAIAGRDDADPATATMPGRAVYDYTARLDPQGLRGKRIGLLQTPLLKYRGMPLIEQAATELRRAGAVVVPVELPNQGAWAEAERTLLLYEFKAGLERYFNTHRAPLRSLADLIAFNQAHSKQELGLFGQELLVEADATAGLADPAYIRARSDARLAGPEGIDAALAAHQLDALVAPTTGVAVPIRSEGDDDFPGESYSAAAVAGYPSLTVPMGQIDGLPVGLLFMGTAWSEPCLIEMAYAYEQRTRARRPPHFDTDALIDAGEP

>non-antioxidant\_253

AEFKHVFCVQDRPPGHPQGSQAQRGSREVFQAFMEKIQTDPQLFMTTVITPTGCMNASMMGPVVVVYPDGWVYGQVKPEDVDEIVEKHLKGGEPVERLVISKGKPPGMF

>non-antioxidant\_254

HPETLVKVKDAEDQLGARVGYIELDLNSGKILESFRPEERFPMMSSTFKVLLCGAVLSRVDA GQEQLGRRIHYSQNDLVEYSPVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTIGGPKELTAF LHNMGDHDVTRLDRWEPELNEAIPNDERDTPPAAMATTLRKLTLGELLTLASRQQLIDWMEADK VAGPLLRSALPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATMDERNRQIAEIGASLIKHW

>non-antioxidant\_255

MATFYEIVRVPFDVEEHLPGISDSFVDWVTGQIWELPPESDLNLTVEQPQLTVADRIRRV FLYEWNKFSKQESKFFVQFEKGSEYFHLHTLVETSGISSMVLGRYVSQIRAQLVKVVFQGI EPQINDWVAITKVKKGGANKVVDSGYIPAYLLPKVQPELQWAWTNLDEYKLAALNLEER KRLVAQFLAESSQRS

>non-antioxidant\_256

MYPVDLHMHTVASTHAYSTLSDYIAQAKQKGIKLAITDHGPDMEDAPHHWHFINMRIW PRVVDGVLGILRGIEANIKNVDGEIDCSGKMFDSLIIAGFHEPVFAPHDKATNTQAMIATI ASGNVHIISHPGNPKYEIDVKAFAEAAAKHQVALEINSSFLHSRKGSEDNCREVA AAVRDAGGWVALGSDSHTAFTMGFEFECLKILDVDFPPERILNVSPRLLNFLESRGMAPIAEFADL

>non-antioxidant\_257

ALCKFCDVRFSTCDNQKSCMSNCSITSICEKPQEVCAVWRKNDENITLETVCHDPKLPY HDFILEDAAASPTCIMKEKKKPGETFFMCSRSSDECNDNIIFSEYNTSNPD

>non-antioxidant\_258

SLFELGKMIWQETGKNPVKNYGLYGCNCGVGGGRGEPLDATDRCCFVHKCCYKKLTDCCD SKKDRYSYKWKNAIVCGKNQPCMCECDKAFAICLRENLDYINKSFRYHLKPSCKKTSEQC

>non-antioxidant\_259

CPQEDSDIAFLIDGSGSIIPHDFRRMKEFVSTVMEQLKKSCTLFSLMQYSEEFRIHFTFKEF QNNPNPRSLVKPITQLLGRTHATGIRKVVRELFNITNGARKNAFKILVVITDGEKFGDPLG



YEDVIPEADREGVIRYVIGVGDAFRSEKSRQELNTIASKPPRDHVFQVNNFEALKTIQNQL  
REKIFCIGS

>non-antioxidant\_260

GTLSEKKAKKVRFYRNGDRYFKGIVYAISPDRFRSFEALLADLTRTLSDNVNLPQGVRTI  
YTIDGLKKISSMDQLVEGESYVCGSIEPFKKLEYTKNVNPNWSVNV

>non-antioxidant\_261

MQVEANSERRVKILGIDRSENSEPVLTVMETEDDPNFRNSKLAAAPHTVHMMDSGFLAINR  
QCLVKGKAILAREPKSSNEHMIDDLPKHAHDQHTLSILRDFIDQLKLHNVYEINFYDPLDS  
SGKLAVIPMLIALWKCMASETDICDQEVLSIMNSVIAKFELQIPCKNAVIDATLSGSREE  
VHIIAEDGSLENSNGTTEHFNKKHDLVFKTDLHPEDFTPQMFPSQAKAKLLRDAFNNEE  
DEDTFPDILVPAYMTAHSKNRVRQEDYTCLEVEFDSQVALEKLMNEHEQVEGFEVQQGGI  
LVALKKDSFFDDELIEKIAIAIATESRQSVSSVSFDLLKLGPGASLVTLANSRRFEPECRVVL  
QIEVKPVSPGETSSEGISDEHHYEEYDEDDIMEEEEAPSARQDDTYDEDEE

>non-antioxidant\_262

QESTHIYTKEEVSSHTSPETGIWVTLGSEVFDVTEFVDLHPGGPSKMLLAAGGPPEPFWAL  
YAVHNQSHVRELLAQYKIGEL

>non-antioxidant\_263

MSLGAKPFGEKKFIEIKGRRMAYIDEGTGDPILFQHGNPTSSYLWRNIMPHCAGLGRLIAC  
DLIGMGDSKLDPSGPERYAYAEHRDYLDALWEALDLGDRVVLVVDHWGSALGFDWAR  
RHRERVQGIAYMEAIAMPIEWADFPEQDRDLFQAFRSQAGEELVLQDNVFEVQLPGLIL  
RPLSEAMAAYREPFLAAGEARRPTLSWPRQIPIAGTPADVVAIARDYAGWLSSEPIPKLFI  
NAEPGALTTGRMRDFCRTWPNQTEITVAGAHFIQEDSPDEIGAAIAAFVRRRLRPAHHHHH  
H

>non-antioxidant\_264

MKSGIYQIKNTLNNKVYVGSAKDFEKRWRHRHFKDLEKGCHSSIKLQRSFNKHGNVFECSI  
LEEIPYEKDLIIERANFWIKELNSKINGYNIADATFG

>non-antioxidant\_265

MVVKFMVDVYQRSYCHPIETLVDIFQEYPDEIEYIFKPCVPLMRCGGCANDEGLECVPTTE  
SNITMQIMRIKPHQGQHIGEMSFLQHNKCEARPKK

>non-antioxidant\_266

MTQFAFVFPQGGSQTVGMLADMAASYPIVEETFAEASAALGYDLWALTQQGPAEELNKT  
WQTQPALLTASVALYRVWQQQGGKAPAMMAGHSLGEYSALVCAGVIDFADAVRLVEMR  
GKFMQEAVPEGTGAMAAIIGLDDASIAKACEEAAEGQVVSPVNFNSPGQVVIAGHKEAVE  
RAGAACKAAGAKRALPLVSVPSHCALMKPAADKLAVELAKITFNAPTVPVNNVDVKC  
ETNGDAIRDALVRQLYNPVQWTKSVEYMAAQGVEHLYEVGPGKVLTLTKRIVDTLTAS  
ALNEPSAMAAALEL

>non-antioxidant\_267

AMGQTVTTPLSLTLGHWKDVERIAHNSVDVKKRRWVTFCSAEWPTFNVGWPRDGTFN  
RDLITQVKIKVFSPGPHGHPDQVPYIVTWEALAFDPPPWVKP

>non-antioxidant\_268

MNEMENTVPVLQDDLVSKEYERELSTEQEEDTPVILTQLNEDGTTSNYFDKRKLKIAPRSTL  
QFKVGPPELVDRDYCPVESHTGRTLRLIIPRIDRGFHDHIDEWVGYKRNFTLVSTFETA  
NCDLDTFLKSSFLLVEDSSVEGRLRVQYFAIKIKAKNDDDDTEINLVQHTAKRDKGPQFC  
PSVCPLVPSPLPKHQITIREASNVRNITKMKKYDSTFYLRHDHVNYEEYGVDSLLFSYPEDS

IQKVARYERVQFASSISVKKPSQQNKHFSLVILGAVVDPDTFHGENPGIPYDELALKNGS  
KGMFVYLQEMKTPPLIIRGRSPSNYASSQRITVR

>non-antioxidant\_269

SQKVEKTVIKNETGTISISQLNKNVWVHTELGSFNGEAVPSNGLVNLNTSKGLVLVDSSWD  
DKLTKELIEMVEKKFQKRVTDVIIITHAHADRIGGIKTLKERGIKAHSTALTAELAKKNGYE  
EPLGDLQTVTNLKFNGMKVETFYPGKGHTEDNIVVWLPQYNILVGGCLVKSTSADKDLGN  
VADAYVNEWSTSIENVLKRYRNINAVVPGHGEVGDKGLLLHTLDLLK

>non-antioxidant\_270

GIVEQCCTSICSLYQLENYCN

>non-antioxidant\_271

FVNQHLCGSHLVEALYLVCGERGFFYTPKT

>non-antioxidant\_272

MSGGFLRDDHLEFALHLHRRLAEAVPDGEVIWSPYSVACALGVLAAGARATTRTELTTLL  
GTDPAPLLAALDRAVTDSPDLASRTVLWVSADVPVRSSFRATMHDRPDSVRTADFRNTP  
EGVRATVNADIADATRGMIRELLPQGAVTPDLRAILTNALWAKARWTTPEAHLTREGTFR  
TPRGPKRVPFMHRTKTPMYATARGWRMVTLHAHDELAVDVLLPPGTNAAAVPTAPLLTAL  
HRRSASTSVELALPRFELTQPHQLVEVLAEAGVRTLFTASADLSGISTVPLYVDTVIHQARL  
RVDERGAEGAAATAAMMLLA

>non-antioxidant\_273

MQASQFSAQVLDWYDKYGRKTLPWQIDKTPYKVWLSEVMLQQTQVATVIPYFERFMAR  
FPTVTDLANAPLDEVHLWTGLGYYARARNLHKAQQVATLHGGKFPETFEEVAALPGV  
GRSTAGAILSLSLKGHPILNGNVKRVLARCAYAVSGWPGKKEVENKLWSLSEQVTPAVGV  
ERFNQAMMDLGAMICTRSKPKCSLCPQNGCIAAANNSWALYPGKPK

>non-antioxidant\_274

SYQPTPEDRFTFGLWTVGWQGRDPFGDATRPALDPVETVQRLAELGAHGVTFHDDDLIPF  
GSSDTERESHKFRQALDATGMTVPMATTNLFTHPVFKDGGFTANDRDVRRYALRKTIR  
NIDLAVELGAKTYVAWGGREGAESAAGKDVVALDRMKEAFDLLGEYVTSQGYDIRFAI  
EPKPNPRGDILLPTVGHALAFIERLERPELYGVNPEVGHEQMAGLNFPHGIAQALWAGKL  
FHIDLNGQSGIKYDQDLRFGAGDLRAAFWLVDLLESAGYEGPRHFDFKPPRTEDIDGVWA  
SAAGCMRNYLILKERAAAFRADPEVQEALRASRLDELAQPTAADGVQELLADRTAFEDF  
DVDAAAAARGMAFERLDQLAMDHLLGAR

>non-antioxidant\_275

GSHMYVIFAQDIPNTLEKRLAVREQHLARLKQLQAENRLLTAGPNPAIDDENPSEAGFTG  
STVIAQFENLQAAKDWAQDPYVEAGVYADVIVKPFKVF

>non-antioxidant\_276

AYTTFSQTKNDQLKEPMFFGQPVNVARYDQQKYDIFEKLIKQLSFFWRPEEVDVSRDRI  
DYQALPEHEKHIFISNLKYQTLLDSIQGRSPNVALLPLISIPELETWVETWAFSETIHSRSYT  
HIIRNIVNDPSVVFDDIVTNEQIQKRAEGISSYYDELIEMTSYWHLLEGGTHTVNGKTVTV  
SLRELKKKLYLCLMSVNALEAIRFYVSFACSFAPAERELMEGNAKIIRLIARDEALHLTGTQ  
HMLNLLRSGADDPMAEIAEAECKQECYDLFVQAAQQEKDWADYLFDRDGSIMIGLNKDILC  
QYVEYITNIRMQAVGLDLPFQTRSNIPIWINTWLVSDNVQVAPQEVEVSSYLVGQIDSEVD  
TDDL SNFQL

>non-antioxidant\_277

TAEKICRVNRRSGSCLGGDEIFLLCDKVQKEDIEVYFTGPGWEARGSFSQADVHRQVAIV

FRTPPYADPSLQAPVRVSMQLRRPSDRELSEPMEFQYLPDTDDRRHRIEEKRKR

>non-antioxidant\_278

MTVNLEEKRPEIVGPEKVQSPYPIRFEGKVVHGFGRGSKELGIPTANISEDALQELLRYRDS  
GVYFGYAMVQKRVFPMVMSVGVNPPYYKKNLRSAEVHLIERQGEDFYEEIMRVIVLGYIR  
PELNYAGLDKLIEDIHTDIRVALNSMDRPSYSSYKKDPFFKV

>non-antioxidant\_279

NGRTPHLAARNGHLEVVKLLLEAGADVNAKDKNGRTPHLAARNGHLEVVKLLLEAG  
ADVNAKDKNGRTPHLAARNGHLEVVKLLLEAGAY

>non-antioxidant\_280

MNAEINPLHAYFKLPNTVSLVAGSSEGETPLNAFDGALLNAGIGNVNLIRIS

>non-antioxidant\_281

MIMPPEAEIVPLPKLPMGALVPTAYGYIISDVPGETISAAISVAIPKDKSLCGLIMEYEGKCS  
KKEAEKTVREMAKIGFEMRGWELDRIESIAVEHTVEKLGCAFAAAALWYK

>non-antioxidant\_282

MGDAPSPEEKHLITRNLQEVLGEEKLKEILKERELKIYWGTTGKPHVAYFVPMSKIAD  
FLKAGCEVTILFADLHAYLDNMKAPWELLELRVSYENVIKAMLESIGVPLEKLFKIFKGTD  
YQLSKEYTLDVYRLSSVVTQHDSKKAGAEVVKQVEHPLLSGLLYPGLQALDEEYLVKVA  
QFGGIDQRKIFTFAEKYLPALGYSKRVHLMNPMVPGLTGSKMSSSEESKIDLLDRKEDVK  
KKLKKAFCEPGNVENNGVLSFIKHVLFPLKSEFVILRDEKWGGNKTYTAYVDLEKDFAAE  
VVHPGDLKNSVEVALNKLLDPIREKFNTPALKKLASAAYPDPKQKPKMAKGPKNSEPEE  
VILEHHHHHH

>non-antioxidant\_283

DNGGYVPAVVIGTGYGAAVSALRLGEAGVQTLMLEMGQLWNQPGPDGNIFCGMLNPK  
RSSWFKNRTEAPLGSFLWLDVVRNIDPYAGVLDVRYNDQMSVYVGRGVGGSLVNGG  
MAVEPKRSYFEEILPRVDSSEMYDRYFPRANSMLRVNHIDTKWFEDTEWYKFARVSREQA  
GKAGLGTVPVNVYDFGYMQREAAGEVPKSALATEVIYGNHKGQSLDKTYLAAALGT  
GKVTIQTTLHQVKTIRQTKDGGYALTVEQKDTDGKLLATKEISCRYLFLGAGSLGSTELLVR  
ARDTGTLPLNSEVGAGWGPNGNIMTARANHMWNPTGAHQSSIPALGIDAWDNSDSSVF  
AEIAPMPAGLETWVSLYLAITKNPQRGTFVYDAATDRAKLNWTRDQNAVNAKALFD  
RINKANGTIYRYDLFGTQLKAFADDFCYHPLGGCVLGKATDDYGRVAGYKNLYVTDGSLI  
PGSVGVNPFVTITALAERNVERIHKQDVTAS

>non-antioxidant\_284

MAKAHIELTINGHPVEALVEPRTLLIHFIREQQNLTGAHIGCDTSHCGACTVDLDGMSVKS  
CTMFAVQANGASITTIEGMAAPDGTLSALQEGFRMMHGLQCGYCTPGMIMRSHRLLQEN  
PSPTEAEIRFGIGGNLCRCTGYQNIVKAIQYAAAKINGVPFEEAAE

>non-antioxidant\_285

MNIQTTVEPTSAERAELQGMGCKRKRVEDIRFTQGGKGNVDDVKLPGMLFGDFVRSSH  
AHARIKSIDTSKAKALPGVFAVLTAADLKPLNLHYMPTLAGDVQAVLADEKVLQFQNEVA  
FVVAKDRYVAADAIELVEVDYEPLVLPVDFKAMEPDAPLLREDIKDKMTGAHGARKHH  
NHIFRWEIGDKEGTDATFAKAEVVSMDMFTYHRVHPSPLETCQCVASMDKIKGELTLWGT  
FQAPHVIRTVSLISGLPEHKIHVIAPIIDGGFGNKVGVGAYSGYVCAVVASIVLGPVVKWVE  
DRMENLSTTSFARDYHMTTELAATKDGKILAMRCHVLADHGAFDACADPSKWPAGFMN  
ICTGSYDMPVAHLAVDGVYTNKASGGVAYRCSFRVTEAVYAIERAIETLAQRLEMDSADL  
RIKNFIQPEQFPYMAPLWEYDSGNYPAMKKAMDTVGYHQLRAEQKAKQEAFFRGET

REIMGIGISFFTEIVGAGPSKNCILGVSMFDSAEIRIHPTGSVIARMGTKSQGGHETTYA  
QIIATELGIPADDIMIEEGNTDTAPYGLGTYGSRSTPTAGAATAVAARKIKAKAQMIAAHML  
EVHEGDLEWDVDRFRVKGLPEKFKTMKELAWASYNPPNLEPGLEAVNYYDPPNMTYP  
FGAYFCIMDIDVDVTGVAKTRRFYALDDCGTRINPMIIEGQVHGGLTEAFVAMGQEIRYDE  
QGNVLGASFMDFFLPTAVETPKWETDYTVTPSPHHPIGAKGVGESPHVGGVPCFSNAVND  
AYAFLNAGHIQMPHDAWRLWKVGEQLGLHV

>non-antioxidant\_286

MIPGSFDYHRPKSIADAVALLTKLGEDARPLAGGHSLIPMKTRLATPEHLVDLRDIGDLVG  
IREEGTDVVIGAMTTQHALIGSDFLAACLPIRETSLLIADPQIRYMGTTIGGNAANGDPGND  
MPALMQCLGAAYELTGPEGARIVAARDYYQGAYFTAIEPGELLTAIRIPVPPTGHGYAYEKL  
KRKIGDYATAAAAVVLTMSGGKCVTASIGLTVANTPLWAEAGKVLVGTALDKPALDKA  
VALAEAITAPASDGRGPAEYRTKMAGVMLRRAVERAKARAKN

>non-antioxidant\_287

GSNRRLQQTQAQVDEVVDIMRVNVDKVLERDQKLSLDDRADALQAGASQFETSAKL  
KRKYW

>non-antioxidant\_288

GSALSEIETRHSEIIKLENSIRELHDMFMDMAMLVESQGEMIDRIEYNVEHAVDYVERAVS  
DTKKAVK

>non-antioxidant\_289

GSMRNELEEMQRRADQLADESLESTRMLQLVEESKDAGIRTLVMLDEQGEQLDRVEEG  
MNHINQDMKEAEKNLKD LGK

>non-antioxidant\_290

GSARENEMDENLEQVSGIIGNLRHMALDMGNEIDTQNRQIDRIMEKADSNKTRIDEANQR  
ATKMLG

>non-antioxidant\_291

EDKYTDKYDNINLDEILANKRLLVAYVNCVMERGGKCSPEGKELKEHLQDAIENGCKKCT  
ENQEKGAYRVIEHLIKNEIEIWRELTAKYDPTGNWRKKYEDRAKAAGIVIPPEE

>non-antioxidant\_292

MGSMDQSIIVKSPITYAEALANTIMNTYTVVEELPPANRWHYHQGVFLCGVLRRLWEATGE  
KRYFEYAKAYADLLIDDNGNLLFRDELDAIQAGLILFPLYEQTKDERYVKAARKRLRSLYG  
TLNRTSEGGFWHKDGYQMWLDGLYMGGPFALKYANLKQETELFDQVVLQESLMRKH  
TKDAKTGLFYHAWDEAKKMPWANEETGCSPEFWARSIGWYVMSLADMIEELPKKHPNR  
HVWKNLQDMIKSICRYQDKETGLWYQIVDKGDRSDNWLESSGCLYMYAIAK GINKGY  
LDRAYETLLKAYQGLIQHKTETSEDGAFLVKDICVGTSAAGFYDYVSRERSTNDLHGAG  
AFILAMTELEPLFRSAGK

>non-antioxidant\_293

MSLLERLNQDMKLYMKNREKDKLTVVRMVKASLQNEAIKLLKDSLTEDEELTVLSRELK  
QRKDSLQEFNSANRLDLVDKVQKELDILEVYLPEQLSEEELRTIVNETIAEVGASSKADMG  
KVMGAIMPVKVKGKADGSLINKLVSSQLS

>non-antioxidant\_294

MTKQEK TALNMARFIRSQTLTLEKLNELADA ADEQADICESLHDHADELYRSCLARFGD  
DGENL

>non-antioxidant\_295

AFGITSSSAYVIDTNAPNQLKFTVSRSSCDITSIIHYGTELQYSSQGS HIGSGLGSATVTATQ

SGDYIKVTCVTDTLTQYMVVHNGDPIIHMATYITAEPSIGELRFIARLNSDLLPNEEPFGDV  
STTADGTAIEGSDVFLVGSETRSKFYSSERFIDDQRHCIAGDAHRVCMILNQYESSSGGPFH  
RDINSNNGGSYNALYWYMNSGHVQTESYRMGLHGPYSMYFSRSGTPSTSIDSFFADLDI  
KGYVAASGRGKVAGTASGADSSMDWVHVYNDAAQYWTYTSSSGSFTSPAMKPGTYT  
MVEYQGEYAVATSSVTVSAGSTTTKNISGSVKTGTTIFKIGEWGQPTGFRNAANQLRMH  
PSDSRMSSWGPLYTVGSSALTDPFMAVFKSVNNPVTIKFTATSAQTGAATLRIGTTLSFAG  
GRPQATINSYTGSAAPTNLDSRGVTRGAYRGLGEVYDVSIPSGTIVAGTNTITINVISGSS  
GDTYLSPNFIFDCVELFQ

>non-antioxidant\_296

MLTGLNHLTLAVADLPASIAFYRDLLGFRLEARWDQGAYLELGSLWLCLSREPQYGGPAA  
DYTHYAFGIAAADFARFAAQLRAHGVREWKQNRSEGDSFYFLDPDGHRLAHVGDLSR  
LAACRQAPYAGMRFAD

>non-antioxidant\_297

MGSSEQELKAIVKDLGCGPYFLGTYDKRFPGFVSPHKLACAIVNTAGRETGGVHWMFAFA  
WNPRSKTCYLFEPFGFSQRLKQVYQFEYESLLRRSAIASSPDRCTILEKSTQSVQGPNSA  
ACGLFCCMFLHAFANWPQTPMDHNPTMNLITGVPNMNSPQVQPTLRRNQEQLYSFLE  
RHSPYFRSHSAQIRSATSFCHLKNM

>non-antioxidant\_298

MAEESFYGVTLTAESDSVTWDVDEDYARGQKLVKQILLGAEAKENEFNVVEVNTPKDS  
VQIPIAVLKAGETRAVNPDVEFYESKVTFLIKGSGPVYIIGHNIKDDV

>non-antioxidant\_299

ADTIVAVELDTPNTDIGDPSYPHIGIDIKSVRSKKTAKWNMQNGKVGTAAHIIYNSVDKRL  
SAVVSYPNADSATVSYDVLNVLPEWVRVGLSASTGLYKETNTILSWSFTSKLKSNSH  
ETNALHFMFNQFSKDQKDLILQGDATTGTDGNLELTRVSSNGSPQGSSVGRALFYAPVHI  
WESSAVVASFEATFTFLIKSPDSHPADGIAFFISNIDSSIPSGSTGRLLGLFPDAN

>non-antioxidant\_300

GSHMAARRGALIVLEGVDVDRAGKSTQSRKLVEALCAAGHRAELLRFPERSTEIGKLLSSYL  
QKKSDEDHSHVLLFSANRWEQVPLIKEKLSQGVTLVVDRYAFSGVAFTGAKENFSLDW  
CKQPDVGLPKPDLVFLQLQLADAAKRGAFGHERYENGAFQERALRCFHQLMKDITLN  
WKMDVASKSIEAVHEDIRVLSEDIAIATATEKPLGELWK

>non-antioxidant\_301

DITVYNGQQKEAATAVAKAFEQETGIKVTLSNGKSEQLAGQLKEEGDKTPADVIFYTEQTA  
TFADLSEAGLLAPISEQTIQQTAKGVPLAPKKDWIALSGRSRVVVDHTKLSEKMEKS  
VLDYATPKWKKGKIGYVSTSGAFLEQVVALSKMKGDKVALNWLKGLKENGKLYAKNSVA  
LQAVENGEVPAALINNYWYNLAKEKGVENLKSRLYFVRHQDPGALVSYSGAAVLKASK  
NQAEAQKFVDFLASKKGQALVAARAAYPLRADVVSPFNLEPYEKLEAPVVSATTAQDK  
EHAIKLIEEAGLK

>non-antioxidant\_302

EQGGFSGPSATQSQAGGFQGPNGSVTTVESAKSLRDDTWVTLRGNIVERISDDLIVFKDA  
SGTINVDIDHKRWNGVTVTPKDTVEIQGEVDKDWNSVEIDVKQIRKVN

>non-antioxidant\_303

DTVKIDANVNYQIIQGGFGMSGVGVINDLTTEQINTAYGSGVGQIGLSIMRVRIDPSSKW  
NIQLPSARQAVSLGAKIMATPWSPPAYMKSNNSLINGRLLPANYSAYTSHLLDFSKYMQT  
NGAPLYAISIQNEPDWKPDIYESCEWGSDEFKSYLKSQSGKFGSLKVIVAESLGFNPALTD

VLKDS DASKYVSIIGGHLYGTPPKPYPLAQNAGKQLWMTEHYVDSKQSANNWTS AIEVG  
TELNASMVS NYSAYVWWYIRRSYGLLTEDGKVS KRGYVMSQYARFVRPGALRIQATENP  
QSNVHLTAYKNTD GKMVIVAVNTNDS DQMLSLNISANVTKF EKYSTSASLNVEYGGSSQ  
VDSSGKATVWLNPLSVTT FVSK

>non-antioxidant\_304

GGPGNEKLKEKENNDSSDKATVIPNFNTTMQGSLLGDDSRDYYSFEVKEEGEVNIELDKK  
DEFGVTWTLHPESNINDRITYGQVDGNKVS NKVKLRPGKYLLVYKYS GSGNYELRVNK

>non-antioxidant\_305

MFRKSFDCYDFYDRAKVGEKCTQDDWDLMKIPMKAMELKQKYGLDFKGEFIPTDKD  
MMEKLFKAGFEMLLECGIYCTDTHRIVKYTEDEIWDAINNVQKEFVLGTGRDAVNVKRKR  
SVGDKAKPIVQGGPTGSPISEDVFMPVHMSYALEKEVD TIVNGVMTSVRGKSPIKSPYEV  
LAAKTETRLIKNACAMAGRPGMGVKG PETSLSAQGNISADCTGGMTCTDSHEVSQLNEL  
KIDLD AISVIAHYKGNSDIIMDEQMPIFGGYAGGIEETTIVDVATHINAVLMSSASWHL DGP  
VHIRWGSTNTRETLM IAGWACATISEFTDILSGNQY YPCAGPCTEMCLLEASAQ SITDTAS  
GREILSGVASAKGVVTDKTTGMEARMMGEVARATAGVEISEVNVILDKLVSLYEK NYASA  
PAGKTFQECYDVKT VTPTEEYMQVYD GARKKLEDLGLVF

>non-antioxidant\_306

GQDRSEATLIKRFKGEVRYKAKLIGIDEVSAARGDKLCQDSMMKLKGVVAGARSKGEH  
KQKIFLTISFGGIKIFDEKTGALQH HAVHEISYIAKDITDHRAFGYVCGKEGNHRFVAIKT  
AQAAEPVILDLRDLFQLIYELKQREELEKKA

>non-antioxidant\_307

MSGTLM AFDGFKSIGVAVGQRITGTARPLPAIKAQDGTDPWNIIERLLKEWQPDEIIVGLP  
LNMDGTEQPLTARARKFANRIHGRFVGVK LHDRLSTVEARSGLFEQGGYRALNKGKV  
DSASAVIILESYMEQGY

>non-antioxidant\_308

TDQAAFDTNIVTLTRFVMEEGRKARGTGEMTQLLNSLCTAVKAISTAVRKAGIAHLYGIAG  
STNVTGDQVKKLDVLSNDLVINVLKSSFATC VLVSEEDKNAIIVEPEKRGKYVVCFDPLDG  
SSNIDCLVSIGTIFGIYRKNSTDEPSEKDALQPGRNLVAAGYALYGSATMLVLAMVNGVNC  
FMLDPAIGEFILVDRDVKIKKKGSIYSINEGYAKEFDPAITEYIQRKKFPPDNSAPYGARYV  
GSMVADVHRTL VYGGIFMYPANKKSPKGLRLLYECNPMAYVMEKAGGLATTGKEAVL  
DIVPTDIHQ RAPIILGSPEDVTELLEIYQKHA AK

>non-antioxidant\_309

MGHHHHHHHHHSSGHIEGRHMTSNQKAILAGGCFWGLQDLIRNQPGVVSTRVGYSGG  
NIPNATYRNHGTHAEAVEIIFDPTVTDYRTLLEFFFQIHDPTTKDRQGNDRGTSYRSAIFYF  
DEQQKRIALDTIADVEASGLWPGKV VTEVSPAGDFWEAEPEHQDYLRYPNGYTCHFVR  
PGWRLPRRTAESALRASLSPELGT

>non-antioxidant\_310

MTSKIEQPRWASKDSAAGAASTPDEKIVLEFMDALTSNDAAKLIEYFAEDTMYQNMPLPP  
AYGRDAVEQTLAGLFTVMSIDAVETFHIGSSNGLVYTERVDVLRALPTGKSYNLSILGVFQ  
LTEGKITGWRDYFDLREFEEAVDLPLRG

>non-antioxidant\_311

MEHVAFGSEDIENTLAKMDDGQLDGLAFGAIQLDGDGNILQYNA AEGDITGRDPKQVIG  
KNFFKDVAPCTDSPEFYGKFKEGVASGNLNTMFEYTFDYQMTPTKVKVHMKKALS GDSY  
WVFKRV

>non-antioxidant\_312

MTENFFGKTLAARPVEAIPGMLEFDIPVHGDNRGWFKENFQKEKMLPLGFPESFFAEGKL  
QNNVSFSRKNVLRGLHAEPWDKYISVADGGKVLGTWVDLREGETFGNTYQTVIDASKSI  
FVPRGVANGFQVLSDFVAYSYLVNDYWALELKPKYAFVNYADPSLDIKWENLEEAEVSEA  
DENHPFLKDVKPLRKEDL

>non-antioxidant\_313

GSMYQLQFINLVYDTTKLTHLEQTNINLFIGNWSNHQLQKSICIRHGDDTSHNQYHILFIDT  
AHQRIKFSSFDNEEIIYILDYDDTQHILMQTSSKQGIGTSRPVYERLV

>non-antioxidant\_314

METYAVFGNPIAHSKSPFIHQFAQQLNIEHPYGRVLAPINDFINTLNAFFSAGGKGANVTV  
PFKEEAFARADELTERAALAGAVNTLMRLEDGRLLGDNTDGVGLLSDLERLSFIRPGLRIL  
LIGAGGASRGVLLPLLSLDCAVTITNRTVSRAEELAKLFAHTGSIQALSMDELEGHEFDLII  
NATSSGISGDIPAIPSSLIHPGIYCYDMFYQKGKTPFLAWCEQRGSKRNADGLGMLVAQAA  
HAFLLWHGVLPDVEPVIKQLQEELS

>non-antioxidant\_315

GSTESFTRRERLRLRRDFLLIFKEGKSLQNEYFVVLFRKNGMDYSRLGIVVKKRFGKATTR  
NKLKRWVREIFRRNKGVIPKGFDIVVIPRKKLSEEFERVDFTVREKLLNLLKRIEG

>non-antioxidant\_316

MTDTQYIGRFAPSPSGELHFGSLIAALGSYLQARARQGRWLVRIEDIDPPREVPGAAETILR  
QLEHYGLHWDGDVLWQSQRHDAYREALAWLHEQGLSYYCTCTRARIQSIGGIYDGHCRCR  
VLHHPDAAVRIRQQHPVTQFTDQLRGIHHADEKLAREDFIIHRRDGLFAYNLAVVDDH  
FQGVTEIVRGADLIEPTVRQISLYQLFGWKVPDYIHLPLALNPQGAKLSKQNHAPALPKGD  
PRPVLIAALQFLGQQAEAHWQDFSVEQILQSAVKNWRLTAVPESAIVNSTFSNASC

>non-antioxidant\_317

EEDPDLKAAIQESLREAEAA

>non-antioxidant\_318

MFKAVLFDLDGVTDTAEYHFRAWKALAEIEGINGVDRQFNEQLKGVSRDSLQKILDLA  
DKKVSAAEFKELAKRKNDNYVKMIQDVSPADVYPGILQLLKDLRSNKIKIALASASKNGP  
FLLERMNLTGYFDAIADPAEVAASKPAPDIFIAAAHAVGVAPSESIGLEDSQAGIQAIDSG  
ALPIGVGRPEDLGDDIVVPDTSHYTLEFLKEVWLQKQK

>non-antioxidant\_319

MGSDKIHSHHHHMKIDILDKGFVELVDVMGNDLSAVRAARVSFDMGLKDEERDRHLIEY  
LMKHGHETPFEHIVFTFHVKAPIFVARQWFRHRIASYNELSGRYSKLSYEFYIPSPERLEGY  
KTTIPPERVTEKISEIVDKAYRTYLELIESGVPREVARIVLPLNLYTRFFWTVNARSLMNFLN  
LRADSHAQWEIQYALAIARIFKEKCPWTFEAFKAYKGDILKEVQV

>non-antioxidant\_320

MGSDKIHSHHHHVWEFYMPDVFVFGKILEKRGNIIDLLGKRALVVTGKSSSKKNGSLDD  
LKKLLDETEISYEIFDEVEENPSFDNVMKAVERYRNSDFDFVGLGGGSPMDFAKAVAVLL  
KEKDLSVEDLYDREKVKHWLPVVEIPTTAGTGSEVTPYSILTDPEGNKRKCTLMFPVYAFL  
DPRYTYSMSDELTLSTGVDALSHAVEGYLSRKSTPPSDALAIEAMKIIHRNLPKAIEGNRE  
ARKKMFVASCLAGMVAIQTGTTLAHALGYPLTTEKGKIKHGKATGMVLPFVMEVMKEEIP  
EKVDTVNHIFGGSLKFLKELGLYEKVAVSSEEEKWVEKGSRAKHLKNTPGTFTPEKIRN  
IYREALGV

>non-antioxidant\_321

MDIAQDWNIGIPVPANPGNGMTWQLQDNVSDSFNYTSSEGNRPTAFTSKWKPSYINGWTG  
PGSTIFNAPQAWTNGSQLAIQAQPAGNGKSYNGIITSKNKIQYPVYMEIKAKIMDQVLANA  
FWTLTDDDETQEIDIMEGYGSDRGGTWFQAQRMHLSHHTFIRNPFTDYQPMGDATWYYNGG  
TPWRSAYHRYGCYWKDPFTLEYIDGVKVRTVTRAEIDPNNHLGGTGLNQATNIIDCEN  
QTDWRPAATQEELADDSKNIFWVDWIRVYKPVAVSGGGNNSLEHHHHHH

>non-antioxidant\_322

MEEKVGNLKPNNMESVNVTVRVLEASERQIQTKNGVRTISEAIVGDETGRVKLTLWGKH  
AGSIKEGQVVKIENAWTTAFKQVQLNAGSKTKIAEASEDGFPESSQIPENTPTAPQQMR

>non-antioxidant\_323

ADKLPNIVILATGGTIAGSAATGTQTTGYKAGALGVDTLINAVPEVKLANVKGEQFSNM  
ASENMTGDVVLKLSQRVNELLARDDVDGCVITHGTDTVEESAYFLHLTVKSDKPVVFA  
AMRPATAISADGPMNLEAVRVAGDKQSRGRGVMVINDRIGSARYITKTNASTLDTFRA  
NEGYLGVIIIGNRIYYQNRIDKLHTRSVFDRGLTSLPKVDILYGYQDDPEYLYDAAIQH  
GVKGIVYAGMGAGSVSVRGIAGMRKALEKGVVVMRSTRTGNGIVPPDEELPGLVSDSLN  
PAHARILLMLALTRTSDPKVIQEYFHTY

>non-antioxidant\_324

MNYNNKILVSEGLSQKHLIHGDEELFQHELKTIFARNWLFLTHDSLIPAGDYVTAKMGI  
DEVIVSRQNDGSIRAFNLVCRHRGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSPFE  
KDLYGESLNKKCLGLKEVARVESFHGFYGCDFQEAAPLMDYLGDAAWYLEPMFKHSGG  
LELVGPPGKVVIKANWKAPAENFVGDAYHVGWTHASSLRSGESIFSSLAGNAALPPEGAG  
LQMTSKYSGMGVLDGYSVHSADLPELMAFGGAKQERLNKEIGDVRARIYRSHLN  
CTVFPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKDMPEDLKRRLADSVQRTFGPAGF  
WESDDNDNMETASQNGKKYQSRDSDLLSNLGFGEDEVYGDVYPGVVGKSAIGETS YRG  
FYRAYQAHVSSSNWAEFEHASSTWHTELTKTTDR

>non-antioxidant\_325

ESKLKLSDFWNPFRPEVVTMTKWKAPVWEGTYNRAVLDNYYAKQKITVGLTVFAVG  
RYIEHYLEEFLLTSANKHFMVGHVPVIFYIMVDDVSRMPLIELGPLRSFKVFKIKPEKRWQDIS  
MMRMKTIGEHVAHIQHEVDLFCMDVDQVFQDKFGVETLGESVAQLQAWWYKADPND  
FTYERRKESAAYIPFGEEDFYHAAIFGGTPTQVLNITQECFKGILKDKKNDIEAQWHDES  
HLNKYFLLNKPTKILSPEYCWYDHYHIGLPADIKLVKMSWQTKKEYNVVRNNV

>non-antioxidant\_326

MAKEFGIPAAVAGTVLNVVEAGGWTTIVSILTAVGSGGLSLLAAAGRESIKAYLKKEIKK  
KGKRAVIAW

>non-antioxidant\_327

MTQDELKKAVGWAALQYVQPGTIVGVGTGSTA AHFIDALGTMKGQIEGAVSSSDASTEK  
LKSLGIHVFDLNEVDSLGIYVDGADEINGHMQMIKGGGAALTRKIIASVAEKFICIADAS  
KQVDILGKFLPVEVIPMARS AVARQLVKLGGREYRQGVVTDNGNVILDVHGMEILDPI  
AMENAINAIPGVVTVGLFANRGADVALIGTPDGVKTIVK

>non-antioxidant\_328

MKILVAVKQTAAL EEDFEIREDGMDVDEDFMMYDLNEWDDFSLEEAMKIKESSD TDVEV  
VVVSVGPDRVDES LRKCLAKGADRVRVWDDAAEGSDAIVVGRILTEVIKKEAPDMVFA  
GVQSSDQAYASTGISVASYLNWPHA AVVADLQYKPGDNKAVIRRELEGGMLQEVEINCPA  
VLTIQLGINKPRYASLRGIKQAATKPIEEVSLADIGLSANDVGAAQSMSRVRRMYIPEKGRA  
TMIEGTISEQAAKIIINEFKGA



>non-antioxidant\_329

PTLSPEQQEMLQAFSTQSGMNLEWSQKCLQDNNWDYTRSAQAFTHLKAKGEIPEVAFMK

>non-antioxidant\_330

RVVTQNEIDRTIPVGAIMMWAADSLPSDAWRWFCHGGTVSASDCPLYASRIGTRYGGSSSNP  
GLPDMRGLFVRGSGRGSHTLNPVNGNDQFGKPRLGVGCTGGYVGEVQKQMSYHKH  
AGGFGEYDDSGAFGNTRRSNFVGTTRKGLDWDNRSYFTNDGYEIDPASQRNSRYTLNRPE  
LIGNETRPWNISLNYIIVKE

>non-antioxidant\_331

MHVVYPGSFDPLTNGHLDVIQRASRLFVKTVAVLENPSKRGQYLFSAEERLAIIREATAH  
LANVEAATFSGLLVDFVRRVGAQAIVKGLRAVSDYEYELQMAHLNRQLYPGLETFLILAA  
TRYSFVSSTMVKEIARYGGDVSKLVPPATLRALKAKLGQ

>non-antioxidant\_332

MGSVSKANVPKIDVSPLFGDDQAAKMRVAQQIDAASRDTGFFYAVNHGINVQRLSQKTK  
EFHMSITPEEKWDLAIRAYNKEHQDQVRAGYYLSIPGKKAVESFCYLNPNFTPDHPRIQAK  
TPTHEVNVWPDETKHPGFQDFAEQYYWDVFLSSALLKGYALALGKEENFFARHFKPDD  
TLASVVLIRYPYLDPEAAIKTAADGKLSFEWHEDVSLITVLYQSNVQNLQVETAAGY  
QDIEADDTGYLINCOSYMAHLTNYYKAPIHRVKWVNAERQSLPFFVNLGYDSVIDPFD  
REPNGKSDREPLSYGDYLNGLVSLINKNGQT

>non-antioxidant\_333

STGSATTPIDSLDDAYITPVQIGTPAQTNLDFDTGSSDLWVFSSETTASEVDGQTIYTPSK  
STTAKLLSGATWSISYGDGSSSSGDVYTDTVSVGGLTVTGQAVESAKKVSSSFTEDSTIDG  
LLGLAFSTLNTVSPTQKQKTFDQAKASLDSPVFTADLGYHAPGTYNFGFIDTTAYTGSITYT  
AVSTKQGFWEWTSTGYAVGSGTFKSTSIDGIADTGTTLLYLPATVVSAYWAQVSGAKSSSS  
VGGYVFPSCATLPSFTFGVGSARIVIPGDYIDFGPISTGSSSCFGGIQSSAGIGINIFGDVALK  
AAFVVFNGATTPTLGFASK

>non-antioxidant\_334

MSESPMFAANGMPKVNQGAEDVRILGYDPLASALLQVQIPATPTSLETAKRGRREAIIDII  
TGKDDRVLVIVGPCSIIHDLEAAQEYALRLKKLSDELKGDLSIIMRAYLEKPRTTVGWKGLI  
NDPDVNNTFNINKGLQSARQLFVNLTNIGLPIGSEMLDTISPQYLADLVSFGAIGARTTESQ  
LHRELASGLSFPVGFKNGTGTLNVAVDACQAAAHSHHFMGVTKHGVAAITTTKGNHC  
FVILRGGKGTNYDAKSVAEAKAQLPAGSNGLMIDYSHGNSNKDFRNQPKVNDVVCEQI  
ANGENAITGVMIESNINEGNQGIPAEGKAGLKYGVSITDACIGWETTEDVLRKLA AAVRQ  
RREVNKK

>non-antioxidant\_335

MNLPTAQEVQGLMARYIELVDVGDIEAIVQMYADDATVEDPFGQPPHGREQIAAFYRQG  
LGGGKVRACLTGPVRASHNGCGAMPFRVEMVWNGQPCALDVIDVMRFDEHGRIQTMQA  
YWSEVNLSVREPQ

>non-antioxidant\_336

GSSMKISRGLLKTILEAAKSAHPDEFIALLSGSKDVMDELIFLFPVSGSVSAVIHLDMLPIG  
MKVFGTVHSHPSPCRPSEEDLSLFRFGKYHIIVCYPYDENSWKCYNRKGEEVELEVVE  
KD

>non-antioxidant\_337

MILVNRETRVLVQGITGREGQFHTKQMLTYGTKIVAGVTPGKGGMEVLGVPVYDTVKEA  
VAHHEVDASIIIFVPAPAAADAALAAHAGIPLIVLITEGIPTLDMVRAVEEIKALGSRLIGGN

CPGIISAEETKIGIMPGHVFKRGRVGIISRSGLTYEAAAALSQAGLGTTTTVIGGGDPVIGT  
TFKDLLPLFNEDPETEAVVLIGEIGGSDEEEAAAWVKDHMKKPVVGFIGGRSAPK GKRMG  
HAGAIIMGNVGTPESKLRAFAEAGIPVADTIDEIVELVKKALG

>non-antioxidant\_338

DTTVSEPA PSCVTLYQSWRYSQADNGCAETVTVKVVYEDDTEGLCYAVAPGQITTVGDG  
YIGSHGHARYLARCL

>non-antioxidant\_339

SHMTMEQFLTSLDMIRSGCAPKFKLKTEDLDRLRVGDFNFPPSQDLMCYTKCVSLMAGT  
VNKKGEFNAPKALAQPLHVPPEMMEMSRKSVEACRDTHKQFKESCERVYQTAKCFSEN  
ADGQFMWP

>non-antioxidant\_340

GAMEDMEIAYPITCGESKAILLWKKFVCPGINVKCVKFNDQLISPKHFVHLAGKSTLKD  
WKRAIRLGGIMLRKMMDSGQIDFYQHDKVCSNTRSTK

>non-antioxidant\_341

MGSSHHHHHSSGLVPRGSHMDSQNMTKAAQSLNSIQVALTQTYRGLGNYPATADATAA  
SKLTSGLVSLGKISSDEAKNPFIGNMNIFFPRNAAANKAFAISVDGLTQAQCKTLITSVG  
DMFPYIAIKAGGAVALADLGFENSAAAETGVGVKSIAPASKNLDLTNITHVEKLCCKGT  
APFGVAFGNS

>non-antioxidant\_342

MEYKSSPKRPYLLRAYYDWLVDNSFTPYLVV DATYLG VNVVPEYVKD GQIVLNLSASAT  
GNLQLTNDFIQFNARFKGVSRELYIPMGAALAIYARENGDGV MFEPEEIIYDE

>non-antioxidant\_343

GSSHHHHHSSGLVPRGSHMKNRVVVTGYGVTSPIGNTPEEFWNSLATGKIGIGGITKFD  
HSDFDVHNAAEIQDFPFDKYFVKKDTNRFDNYSLYALYAAQEAVNHANLDVEALNRDRF  
GVIVASGIGGIKEIEDQVLRLEHEKGPKRVKPM TLPKALPNMASGNVAMRFGANGVCKSIN  
TACSSSND AIGDAFRSIFKGFQDVMLVGGTEASITPFAIAGFQALTALSTTEDPTRASIPFDK  
DRNGFVMGEGSGMLVLESLEHAEKRGATILAEVVGNTCDAYHMTSPHPEGQGAIKAI  
KLAL EEA EISPEQVAYVNAHGTSTPAN EKGESGAI VAVLGKEVPVSSTKSFTGHLLGAAGA  
VEAIVTIEAMRHNFVPM TAGTSEVSDYIEANV VYGQGLEKEIPY AISNTFGFGGHNAVLA  
F KRWENR

>non-antioxidant\_344

ASMKETNQKPYKETYGISHITRHDMLQIPEQQKNEKYQVPEFDSSTIKNISSAKGLDVWD  
SWPLQNADGTVANYHGYHIVFALAGDPKNADDTSIYMFYQKVGETSIDSWKNAGR VFKD  
SDKFDANDSILKDQTQEWSGSATFTSDGKIRLFY TDFSGKHYGKQTLTTA QVNV SASDSSL  
NINGVEDYKSIFDGDGKTYQNVQQFIDEGNYSSGDNHTLRDPHYVEDKGHKYLVFEANT  
GTEDGYQGEESLFNKAYYGKSTSFFRQESQKLLQSDKKRTAELANGALGMIELNDDYTLK  
KVMKPLIASNTVTDEIERANVFKMNGKWYLF TDSRGSKMTIDGITSNDIYMLGYVSNSLT  
GPYKPLNKTGLVLKMDLDPNDVTFTYSHFAVPQAKGNV VITSYMTNRGFYADKQSTFA  
PSFLLNKIGKKT SVVKDSILEQGQLTVNK

>non-antioxidant\_345

PATGEKKECWSWESYLEEQKAITAPVSLFQDSQAVTHNKNGFKLGMKLEGIDPQHPSMYF  
ILTVAEVCGYRLRLHFDGYSECHDFVWNANSPDIHPAGWFEKTGHKLQPPKGYKEEEFSW  
SQYLRSTRAQAAPKHLFVSQSHSPPPLGFQVGMKLEAVDRMNPSLVCVASVTDVVD SRFL  
VHFDNWDDTYDYWCDPSSPYIHPVGCQKQKQKPLTPPDYDPDNFCWEKYLEETGAS

AVPTWAFKVRPPHSFLVNMKLEAVDRRNPALIRVASVEDVEDHRIKIHFDGWSHGDFWI  
DADHPDIHPAGWCSKTGHPLQPPLGPREPSSAS

>non-antioxidant\_346

MIIGNCLILKDFSSEPFWGAVEIENGTIKRVLQGEVKVDLDSLGLVMPALFNTHTHAPMT  
LLRGVAEDLSFEEWLFVSKVLPIDRLTEKMAYYGTLAQMEMARHGIAGFVDMYFHEEWI  
AKAVRDFGMRALLTRGLVDSNGDDGGRLEENLKLYNEWNGFEGRIFVGFPHSPYLCSEE  
YLKRVFDTAKSLNAPVTIHLYESKEEYDLEDILNIGLKEVKTIAAHCVHLPERYFGVLKDI  
PFFVSHNPASNLKLGNGIAPVQRMIEHGMKVTLGTDGAASNNSLNLFFEMRLASLLQKAQ  
NPRNLDVNTCLKMVTYDGAQAMGFKSGKIEEGWNADLVVIDLDLPEMFPVQNIKNHLV  
HAFSGEVFATMVAGKWIYFDGEYPTIDSEEVKRELARIEKELYSS

>non-antioxidant\_347

HMTDLKASSLRALKLMDLTTLNDDDTDEKVIALCHQAQKTPVGNTAAICIYPRFIPIARKTL  
KEQGTPEIRIATVTNFPHGNDIDIALAETRAAIAYGADEVVFPYRALMAGNEQVGFDL  
VKACKEACAAANVLLKVIHETGELKDEALIRKASEISIKAGADFIKTSTGKVAVNATPESAR  
IMMEVIRDMGVEKTVGFKPAGGVRTAEDAQKYLAIADELFGADWADARHYRFGASSLLA  
SLLKALGHGDGKSASSY

>non-antioxidant\_348

GSHMATPPKRSCPSFSASSEGTRIKKISIEGNIAAGKSTFVNILKQLCEDWEVVPEPVARWC  
NVQSTQDEFEELTMSQKNGGNVLQMMYEKPERWSFTFQTYACLSRIRAQLASLNGKLD  
AEKPVLEFFERSVYSDRYIFASNLYESECMNETEWTIYQDWHDMNMQFGQSLELDGIIYL  
QATPETCLHRIYLRGRNEEQGIPLEYLEKLHYKHESWLLHRTLKTNFDYLQEVPIITLDVN  
EDFKDKYESLVEKVKEFLSTL

>non-antioxidant\_349

GSSMVTGGMASKWDQKGMDIAYEEAALGYKEGGVPIGGCLINNKDGSVLGRGHNMRF  
QKGSATLHGEISTLENCGRLEGKVYKDTTLYTTLSPCDMCTGAIIMYGIPRCVVGENVNFK  
SKGEKYLQTRGHEVVVDDERCKKIMKQFIDERPQDWFEDIGE

>non-antioxidant\_350

ETCASRCRPNAGLCCSIYGYCGSGAAYCGAGNCRQCRCRG

>non-antioxidant\_351

MDQLNALLASLEAENKQLKAKVEELLAKVGE

>non-antioxidant\_352

AELVSDKALESAPTVGWASQNGFTTGAAATSDNIYIVTNISEFTSALSAGAEAKIIQIKGTI  
DISGGTPYTDFADQKARSQINIPANTTVIGLGTDAKFINGSLIIDGTDGTNNVIIRNVYIQTPI  
DVEPHYEKGDGWNAEWDAMNITNGAAHVWIDHVTISDGNFTDDMYTTKDGETYVQHD  
GALDIKRGSDYVTISNSLIDQHDKTMIGHSDSNGSQDKGKLHVTLFNNVFNRVTERAPR  
VRYGSIHSFNNVFKGDAKDPVYRYQYSFGIGTSGSVLSEGENSFTIANLSASKACKVVKKF  
NGSIFSDNGSVLNGSAVDLSGCGFSAYTSKIPYIYDVQPMTTELAQSITDNAGSGKL

>non-antioxidant\_353

DLVYAAEKIIQKRVKKGVEYRVKWKGNQRYNTWEPEVNILDRRLIDIYEQTNK

>non-antioxidant\_354

MEIPVIEPLFTKVTEDIPGAEGPVFDKNGDFYIVAPEVEVNGKPAGEILRIDLKTGKKTVIC  
KPEVNGYGGIPAGCQCDRDANQLFVADMRLGLLVVQTDGTFEEIAKKDSEGRRMQGCND  
CAFDYEGNLWITAPAGEVAPADYTRSMQEKFGFSIYCFTTDGMQIQVDTAFQFPNGIAVRH  
MNDGRPYQLIVAETPTKLLWSYDIKGPAKIENKKVWGHIPGTHEGGADGMDFDEDNLL

VANWGS SHIEVFGPDGGQPKMRIRCPFEKPSNLHFKPQTKTIFVTEHENNAVWKFEWQRN  
GKKQYCETLKF GIF

>non-antioxidant\_355

ESSVNPVLD FEDGTVM SFGEAWGDSLKCIKKVSVSQDLQRPGNKYALRLDVEFNPNNG  
WDQDGLGTWIGGVVEGQFDFTGYKSVFEMFIPYDEF SKSQGGFAYKVVINDGWKELGS  
EFNITANAGKKVKINGKDYTVIHKAF AIPEDFR TKKRAQLVFQFAGQNSNYKGPIYLDNVR  
IRPEDA

>non-antioxidant\_356

MAKKTSSKGLPPGPSPLV LGNLLQMDRKGLLSFLRLREKYGDVFTVYLGSRPVVVL  
CGTDAIREALVDQAEAFSGRGKIAVVDPIFQGYGVIFANGERWRALRRFSLATMRDFGMG  
KRSVEERIQEEARCLVEELRKS KGALLDNTLLFHSITSNIICSIVFGKRFDYKDPVFLRLDL  
FFQSFLISSFSSQVFELFSGFLKHFPGTHRQIYRNLQEINTFIGQSVEKHRATLDPSNPRDFI  
DVYLLRMEKDKSDPSSEFHHQNLILTVLSLFFAGTETTSTTLRYGFLMLKYPHVTERVQK  
EIEQVIGSHRPPALDDRAKMPYTD AVIHEIQRLGDLIPFGVPHTVTKDTQFRGYVIPKNT EV  
FPVLSSALHDP RYFETPNTFNPGHFLDANGALKRNEGFMPFSLGKRICLGEGIARTELFLFF  
TTILQNF SIASPVPPEDIDLTPRESGVGNVPPSYQIRFLARHHHH

>non-antioxidant\_357

ASDDNVFQPVDQLPEDLIPSSIQVLKFS GKYLKLEQDKAYFDWPGFKTAIDNYTGEDLSFD  
KYDQSTINQQSQEVGAMVDKIAKFLHDAFAAVDLSKLAAILNTFTNLEEESSSGFLQFN  
TNNVKKNSSWEYRVLFSVPFGDNAPS YFYSLVTTILITADIEEKTGWWGLTSSTKKNFAVQ  
IDALELVVKKGFKAPN

>non-antioxidant\_358

IVGGTSASAGDFPFIVSISRNGGPWCGGSLNANTVLTAAHCVSGYAQSGFQIRAGSLSRTS  
GGITSSLSV RVHPSYSGNNNDLAILKLST SIPSGGNIGYARLAASGSDPVAGSSATVAGWG  
ATSEGGSSTPVNLLKVTVPVSRATCRAQYGTSAITNQMF CAGVSSGGKDSCQGDSSGGPIV  
DSSNTLIGAVSWGNGCARPNYSGVYASVGALRSFIDTYA

>non-antioxidant\_359

MRGSHHHHHHGLVPRGSMIRTMLQGKLHRVKVTHADLHYEGTCAIDQDFLDAAGILENE  
AIDIWNV TNGKRFSTYAIAAERGSRIISVNGAAAHCASVGDIVIIASFVTMPDEEARTWRPN  
VAYFEGDNEMKRTAKAIPVQVA

>non-antioxidant\_360

SNTQAERSIIGMIDMFHKYTRRDDKIDKPSLLTMMKENFPNFLSACDKKGTNYLADVFEK  
KDKNEDKKIDFSEFLSLLGDIATDYHKQSHGAAPCSGGSQ

>non-antioxidant\_361

GSPGIRMSLK SDEVFAKIAKRLESIDPANRQVEHVYKFRITQGGKVVKNWVMDLKNVKL  
VESDDAAEATLTMEDDIMFAIGTGALPAKEAMAQDKMEVDGQVELIFLLEPFIASLK

>non-antioxidant\_362

EKVIIIEKAAGDAEIAFDGRTYMEYHNAVTKSPDALDYPAEPSEKALQSNHFELS IKT EAT  
QGLILWSGKGLERSDYIALAIVDGFVQMMYDLGSKPVVLRSTVPINTNHWTHIKAYRVQR  
EGSLQVGN EAPITGSSPLGATQLD TDGALWLGGMERLSVAHKL PKAYSTGFIGCIRDVID  
RQELHLVEDALNNPTILHCSAK

>non-antioxidant\_363

MSERIVPSGDVELWSDDFGDPADPALLVMGGNLSALGWPDEFARRLADGGLHVIRYDH  
RDTGRSTTRDFAAHPYGF GELAADAVAVLDGWGVDR AHVVGLSMGATITQVIALDHHDR

LSSLTMLLGGGLDIDFDANIERVMRGEPTLDGLPGPQQPFLDALALMNQPAEGRAAEVAK  
RVSKWRILSGTGVPFDDAEYARWEERAIDHAGGVLAEPYAHYSLTLPSSRAAELREVTV  
PTLVIQAEHDPIAPAPHGKHLAGLIPTARLAEIPGMGHALPSSVHGPLAEVILAHTRSAA

>non-antioxidant\_364

GTQGFVLSYVYEHEKRDLASRIVSTQHHDLSVATLHVHINHDDCLEIAVLKGDMDGV  
QHFADDVIAQRGVRHGHLQCLPKED

>non-antioxidant\_365

MSLPMLQVALDNQTMDSAYETTRLIAEEVDIIEVGTILCVGEGVRAVRDLKALYPHKIVLA  
DAKIADAGKILSRMCFEANADWVTVICCADINTAKGALDVAKEFNGDVQIELTGYWTWE  
QAQQWRDAGIGQVVYHRSRDAQAAGVAWGEADITAIKRLSDMGFKVTVTGGLALEDLP  
LFGIPIHVFIAGRSIRDAASPVEAARQFKRSIAELWG

>non-antioxidant\_366

MASVHGTTYELRRQGIDTVFGNPGSNALPFLKDFPEDFRYILALQEACVVGIADGYAQA  
SRKPAFINLHSAAGTGNAMGALSNAWNSHSPLIVTAGQQTRAMIGVEALLTNVDAANLPR  
PLVKWSYEPASAAEVPHAMSRAIHMASMAPQGPVYLSVPYDDWDKDADPQSHHLFDRH  
VSSSVRLNDQDLIDLVKALNSASNPAIVLGPVDVAANANADCVMLAERLKAPVWVAPSA  
PRCPFTRHPCFRGLMPAGIAAISQLLEGHDVVLVIGAPVFRYHQYDPGQYLKPGTRLISVT  
CDPLEAARAPMGDAIVADIGAMASALANLVEESSRQLPTAAPEPAKVDQDAGRHPETVF  
DTLNDMAPENAIYLNSTSTTAQMWQRLNMRNPGSYYFCAAGGLGFALPAAIGVQLAEP  
ERQVIIVIGDGSANYSISALWTAQYNIPTIFVIMNNGTYGALRWFAGVLEAENVPGLDVP  
GIDFRALAKGYGVQALKADNLEQLKGSLEALSAGKGPVLIEVSTVSPVK

>non-antioxidant\_367

MSLSTPLQGKIVLDFTGVQSGPSCTQMLAWFGADVIERPGVGDVTRHQLRDIPDIDALY  
FTMLNSNKRSELNKTAEKKEVMEKLIREADILVENFHPGAIHMGFTWEHIQEINPRLIF  
GSIKGFDECSYVNVKAYENVAQAAGGAASTTGFWGPPVLSAAALGDSNTGMHLLIGL  
LAALLHREKTGRGQRVTMSMQDAVLNLCRVKLRDQQRDLKGLYLEEYPQYPNGTFGDA  
VPRGGNAGGGGQPGWILKCKGWETDPNAYIYFTIQEQNWENTCKAIGKPEWITDPAYSTA  
HARQPHIFDIFAEIEKYTVTIDKHEAVAYLTQFDIPCAPVLSMKEISLDPSLRQSGSVVEVEQ  
PLRGKYLTVGCPMKFSAFTPDIAAPLLGEHTAAVLQELGYSDDDEIAAMKQNHAIEGGSH  
HHHHH

>non-antioxidant\_368

MTSKGPEEEHPSVTLFRQYLRIRTVQPKPDYGA AVAFFEETARQLGLGCQKVEVAPGYVV  
TVLTWPGTNPTLSSILLNSHTDVVPVFKEHWSHDPFEAFKDSEGYIYARGAQDMKCVSIQ  
YLEAVRRLKVEGHRFPRTIHMFTFVPDEEVGGHQGMELFVQRPEFHALRAGFALDEGIANP  
TDAFTVFYSERSPWVVRV

>non-antioxidant\_369

NPWWAAFSRVCKDMNLTLEPEIMPAAGDNRYIRAVGVPALGFSPMNRTPVLLHDHDERL  
HEAVFLRGVDIYTRLLPALASVPALPSDS

>non-antioxidant\_370

QEAQTELPQARISCEPNTNAYRSYCYFNEDRETWVDADLYCQNMNSGNLVSVLTAEG  
AFVASLIKESGTDDEFNVWIGLHDPKKNRAWHWSSGSLVSYKSWGIGAPSSVNPGYCVSLT  
SSTGFQKWKDVPCEDKFSFVCKFKN

>non-antioxidant\_371

PKVSVIMTSYNKSDYVAKSISILSQTFSDFELFIMDDNSNEETLNVIRPFLNDNRVRFYQS

DISGVKERTEKTRYAALINQAIEMAEGEYITYATDDNIYMPDRLLKMOVRELDTHPEKAVIY  
SASKTYHLNENRDIVKETVRPAAQVTWNAPCAIDHCSVMHRYSVLEKVKEKFGSYWDES  
PAFYRIGDARFFWRVNHFPYPLDEELDLNYITDQSIHFQLFELEKNEFVRNLPQRNCRE  
LRESLKKLGMG

>non-antioxidant\_372

ASPDDNFSPETLQFLRNNTGLDGEQWNNIMKLINKPEQDDLNWIKYYGYCEDIEDERGYT  
IGLFGATTGGSRDTHPDGPDFKAYDAAGASNPADGALKRLGINGKMKGSILEIKDSE  
KVFCGKIKKLQNDAAWRKAMWETFYNVYIRYSVEQARQRGFTSAVTIGSFVDTALNQGA  
TGGSDTLQGLLARGSSSNEKTFMKNFHAKRTLVDVDTNKYNKPPNGKNRVKQWDTLVD  
MGKMNLNVDSEIAQVTDWEMK

>non-antioxidant\_373

MSYMLPHLHNGWQVDQAILSEEDRVVVIRFGHDWDPTCMKMDEVLYSIAEKVKNFAVIY  
LVDITEVPDFNKMYELYDPCTVMFFFRNKHIMIDLTGNNKINWAMEDKQEMVDIITV  
YRGARKGRGLVSPKDYSTKYRY

>non-antioxidant\_374

SIDNCAVGCPTGGSSKVSIVRHAYTLNNNSTTKFANWVAYHITKDTPASGKTRNWKTDPA  
LNPADTLAPADYTGANAALKVDRGHQAPLASLAGVSDWESLNYLSNITPQKSDLNQGA  
ARLEDQERKLIDRADISSVYTVTGPLYERDMGKLPGTQKAHTIPSAYWKVIFINNSPAVNH  
YAAFLFDQNTPKGADFCQFRVTVDEIEKRTGLIHWAGLPDDVQASLKSQKPGVLPPELMGCK  
N

>non-antioxidant\_375

APPPVPKTPAGPLTLGSGQSFVGGRDVTSETLSLSPKYDAHGTVTVDQMYVRYQIPQRA  
KRYPITLIHGCLTGMTWETTPDGRMGWDEYFLRKGYSTYVIDQSGRGRSATDISAINAV  
KLGKAPASSLPDLFAAGHEAAWAIFRFGPRYPDAFKDTQFPVQAQAEWQQMVPDWLGS  
MPTPNPTVANLSKLAIKLDGTVLLSHSQSGIYPFQTAAMNPKGITAIVSVEPGECPKPEDVK  
PLTSIPVLVVFGDHIEEFPRWAPRLKACHAFIDALNAAGGKGQLMSLPALGVHGNSHMMM  
QDRNNLQVADLILDWIGRNTAKPAHGR

>non-antioxidant\_376

ASSFVTISGTQFNIDGKVGYFAGTNCYWCSFLTINHADV DSTFSSSSGLKVVRVWGFND  
VNTQPSPGQIWFQKLSATGSTINTGADGLQTLDYVVQSAEQHNLKLIIPFVNNWSDYGGI  
NAYVNAFGGNATTWYTNTAAQTQYRKYVQAVVSRYANSTAIFAWELGNEPRCNGCSTDV  
IVQWATSVSQYVKSLSNHLVTLGDEGLGLSTGDGAYPYTYGEGTDFAKNVQIKSLDFGT  
FHLYPDSWGTNYTWGNGWIQTHAAACLAAGKPCVFEEYGAQQNPCTNEAPWQTTSLTT  
RGMGGDMFWQWGDTFANGAQSNSDPYTVWYNSSNWQCLVKNHVDAIN

>non-antioxidant\_377

CGEQNMIGMTPTVIAVHYLDQTEQWEKFGLEKRQEAELELIKGGYTQQLAFKQPISAYA  
AFNNRPPSTWLTAYVSRVFLAANLIAIDSQVLCGAVKWLILEKQKPDGVFQEDGPVIHQEMI  
GGFRNTKEADVSLTAFVLIALQEARDICEGQVNSLPGSINKAGEYLEASYLNLQRPYTVAI  
AGYALALMNKLEPYLTKFLNTAKDRNRWEEPGQQLYNVEATSYALLALLLLKDFDSVPP  
VVRWLNDERYYGGGYGSTQATFMVFQALAQYRADV

>non-antioxidant\_378

MMFNKQIFLILSLSLALAGSGCISEGAEDNVAQEITVDEFSNIRENPVTPWNPEPSAPVID  
PTAYIDPQASVIGEVTIGANVMVSPMASIRSDEGMPIFVGDRSNVQDGVVLHALETINEEG

EPIEDNIVEVDGKEYAVYIGNNVSLAHQSQVHGPAAVGDDTFIGMQAFVFKSKVGNNCVL  
EPRSA AIGVTIPDGRYIPAGMVVTSQAEADKLPEVTDDYAYSHTNEAVVYVNVHLAEGYK  
ETS

>non-antioxidant\_379

MKYIGAHVSAAGGLANA AIRAAEIDATAFALFTKNQRQWRAPLTTQTIDEFKAAACEKYH  
Y TSAQILPHDSYLINLGHVPTEALEKSRDAFIDEMQRCEQLGLSLLNFHPGSHLMQISEED  
CLARIAESINIALDKTQGVTA VIENTAGQGSNLGFKFEHLAAIIDGVEDKSRVGV CIDTCHA  
FAAGYDLRTPAECEKTFADFARTVGFKYL RGMHLNDAKSTFGSRVDRHHS LGEGNIGHDA  
FRWIMQDDRFDGIPLILETINPDIWAE EIAWLKAQQTEKAVA

>non-antioxidant\_380

MSKTIATENAPAAIGPYVQGV DLGNMIITSGQIPVNPKTGEVPADVAAQARQSLDNVKAIV  
EAAGLKVGDIVKTTVFVKDLNDFATVNATYEAFFTEHNATFPARSCVEVARLPKDV KIEIE  
AIAVRR

>non-antioxidant\_381

MTVAKAIFIKCGNLGTSMMMDMLLDERADREDVEFRVVGTSVKMDPECVEAAVEMALD  
IAEDFEPDFIVYGGPNPAAPGPSKAREMLADSEYPAVIIGDAPGLKVKDEMEEQGLGYILV  
KPDAMLGARREFLDPVEMAIYNADLMKVL AATGVFRVVQEAFDELIEKAKEDEISENDLP  
KLVIDRNTLLEREEFENPYAMVKAMA ALEIAENVADSVVEGCFVEQDKERYVPIVASAHE  
MMRKA AELADEARELEKSNDAVLRTPHAPDGKVL SKRKFMEDPE

>non-antioxidant\_382

NYFQGHMMQID SIEIGKVYQFFKSDLGNAPLLFIKGSKGYAMCGYLN METSNKVGDI AV  
RVMGVKTLDDMLS AKVVEASQEAQKVGINPGDVL RNVIDKLG

>non-antioxidant\_383

MATKKATMIEKDFKIAEIDKRIYGSFIEHLGRAVYGGIYEPGHPQADENGFRQDVIELVKE  
LQVPIIRYPGGNFVSGYNWEDGVGPKEQRPRRLDLAWKSVETNEIGLNEFM DWAKMVGA  
EVNMAVNLGTRGIDAARNLVEYCNHPSGSYSDLR IAHGYKEPHKIKTWCLGNAMDGP  
WQIGHKTAVEYGR IACEAAKVMKWVDPTIELV VCGSSNRNMPTFAEW EATVLDHTYDH  
VDYISLHQYYGNRDN DTANYLALSLEMDDFIRSVVAIADYVKAKKR SKKTIHLSFDEWN  
VWYHSNEADKLI EPWTVAPPLLEDIYNFEDALLVGCMLITLMKHADR VKIACLAQLV NVI  
APIMTEKNGPAWKQTIYYPFMHASVYGRGVALHPVISSPKYDSKDFTDVPY LESIAVYNEE  
KEEVTIFAVNRDMEDALLECDVRSFEDYRVIEHIVLEHDNVKQTNSAQSSPVVPHRNGD  
AQLSDRKVSATLPKLSWNVIRLGKR

>non-antioxidant\_384

MKA FEFLYEDFQRGLTVVLDKGLPPKFVEDYLKVC GDYIDFVKFGWGTS AVIDRDVVKE  
KINYKDWGIKVYPGGTLFEYAYSKGKDFEFLNECEKLGFEAVEISDGSSDISLEERNNAIK  
RAKDNGFMVLTEVGKKMPDKDKQLTIDDR IKLINFDLDAGADYV IIEGRESGKGKGLFDK  
EGKVKENELDVLAKNVDINKVIFEAPQKSQQVAFILKFGSSVNLANIAFDEVISLET LRRL  
RGDTFGKV

>non-antioxidant\_385

SAGSKSCDTV DLGYQCSPATSHLWGQYSPFFSLEDELSVSSKLPKDCRITLVQVLSRHGAR  
YPTSSKSKKYKLVTAIQANATDFKGKFAFLKTYNYTLGADDLTPFGEQQLVNSGIKFYQR  
YKALARSVVPFIRASGSDRVIASGEKFI EGFQQA KLADPGATNRAAP AISVIIPES ETFNNTL  
DHGVCTKFEASQLGDEVAANFTALFAPDIRARA EKHLPGVTLTDEDV VSLMDMCSFDTVA  
RTSDASQLSPFCQLFTHNEWKKYNYLQSLGKYGYGAGNPLGPAQGIGFTNELIARLTRS

PVQDHTSTNSTLVSNPATFPLNATMYVDFSHDNSMVSIFFALGLYNGTEPLSRTSVESAKEL  
DGYSASWVVPFGARAYFETMQCKSEKEPLVRALINDRVVPLHGCDVDKLGRCCLNDFVK  
GLSWARSGGNWGECS

>non-antioxidant\_386

AETTNTQQAHTQMSTQSQDVSYGTYTIDSNGDYHHTPDGNWNQAMFDNKEYSYTFVD  
AQGHTHYFYNCYPKNANANGSGQTYVNPATAGDNNDYTASQSQQHINQYGYQSNVGPD  
ASYYSHSNNNQAYNSHDGNGKVNYPNGTSNQNGGSASKATASGHAKDASWLTSRKQLQ  
PYGQYHGGGAHYGVYAMPENSPVYSLTDGTVVQAGWSNYGGGNQVTIKEANSNNYQ  
WYMHNRLTVSAGDKVKAGDQIAYSGSTGNSTAPHVHFQRMSGGIGNQYAVDPTSYLQS  
R

>non-antioxidant\_387

GSADSQIQFTRHASDVLLNLNRLRSRDILTDVVIVVSREQFRAHKTVLMACSGLFYSIFTD  
QLKRNLVINLDPEINPEGFNILLDFMYTSRLNLRGNIMAVMATAMYLQMEHVVDTCRK  
FIKASE

>non-antioxidant\_388

GSHMSPLLQPGLAALRRRAREAGVPLAPLPLTDSFLLRFLRARDFDLAWRLKKNYYK  
WRAECEPEISADLHPRSIIIGLLKAGYHGVLSRDPTGSKVLIYRIAHWDPKVFTAYDVFRVS  
LITSELIVQEVETQRNGIKAIFDLEGWQFSHAFQITPSVAKKIAAVLTDSFPLKVRGIHLINEP  
VIFHAVFSMIKPFLEKIKERIHMHGNNYKQSLQHFDPDILPLEYGGEEFSMEDICQEWTFN  
IMKSELYLSSISESIQ

>non-antioxidant\_389

SESNKAGEDGASTVERETQEDDTNSIDSSDDLDFGVKILKEIVKLDNIVSSTWNPLDESILA  
YGEKNSVARLARIVETDQEGKKYWKLTIAELRHPFALSASSGKTTNQTCLAWSHDGNIS  
VTGVENGELRLWNKTGALLNVLNFHRAPIVSVKWNKDGTHIISMDVENVTILWNVISGT  
VMQHFELKETGGSSINAENHSGDGLGVDVEWVDDDKFVIPGPKGAIFVYQITEKTPTGK  
LIGHHGPIVLEFNDTNKLLLSASDDGTLRIWHGGNGNSQNCIFYGHSQSIVSASWVGDDK  
VISCMSMDGSVRLWSLKQNTLLALSIVDGVPIFAGRISQDGQKYAVAFMDGQVNVYDLKKL  
NSKRSRSLYGNRDGILNPLPIPLYASYQSSQDNDYIFDLSWNCAGNKISVAYSLQEGSVVAIP  
G

>non-antioxidant\_390

GAMPDPRITMHKSDSTGHVGFIFKNGKITSIVKDSSAARNGLLTEHNICEINGQNVIGLKDS  
QIADILSTSGTVVTITIMPAF

>non-antioxidant\_391

PAPHGGILQDLIARDALKKNELLSEAQSSDILVWNLTTPRQLCDIELILNGGFSPLTGFLNEN  
DYSSVVTD SRLADGTLWTIPITLDVDEAFANQIKPDTRIALFQDDEIPIAILTVQDVYKPNK  
TIEAEKVFRGDPEHPAISYLFNVAGDYVVGGSLEAIQLPQHYDYPGLRKTPAQLRLEFQSR  
QWDRVVAFQTRNPMHRAHRELTVRAAREANAKVLIHPVVGLTKPGDIDHHTRVRVYQEII  
KRYPNGIAFLSLLPLAMRMSGDREAVWHAIIRKNYGASHFIVGRDHAGPGKNSKGVDFY  
GPYDAQELVESYKHELDIEVVPFRMVTYLPDEDYAPIDQIDTTKTRTLNISGTELRRRLRV  
GGEIPEWFSYPEVVKILRESNPPRPGSS

>non-antioxidant\_392

AKKKSLEIIQAILEACKSGSPKTRIMYGANLSYALTGRYIKMLMDLEIIRQEGKQYMLTK  
KGEELLEDIRKFNEMRKNMDQLKEKINSVLSIRQ

>non-antioxidant\_393



ADLPGKGITVNPVQSTITEETFQTLVSRALEKLGTVNKPSEVDYNVGYTSLASGDATFT  
AVNWTPLHDNMYEAAGGDKKFYREGVVFVNGAAQGYLIDKKTADQYKITNIAQLKDPKI  
AKLFDTNQDGDGKADLTGCNPGWGCEGAINHQLAAYELTNTVTHNQGNYAAMMADTISRY  
KEGKPVFYTWTPTYWVSNELKPGKDVVWLQVPFSALPGDKNADTKLPNGANYGFPVST  
MHIVANKAWAEKNPAAAKLFAIMQLPVADINAQNAIMHDGKASEGDIQGHVDGWIKAHQ  
QQFDGWVNEALAAQK

>non-antioxidant\_394

GSSMANNALQTIINARLPGEEGLWQIHLQDQKISAIDAQSGVMPITENSLDAEQGLVIPPFV  
EPHIHLDTTQTAGQPNWNQSGTLFEGIERWAERKALLTHDDVKQRAWQTLKWQIANGIQ  
HVRTHVDVSDATLTALKAMLEVKQEVAPWIDLQIVAFPQEGILSYPNGEALLEEALRLGA  
DVVGAIPHFEFTREYGVESLHKTFALAQKYDRLIDVHCDEIDDEQSRFVETVAALAHHEG  
MGARVTASHTTAMHSYNGAYTSRFLRLKMSGINFVANPLVNIHLQGRFDITYPKRRGITR  
VKEMLESGINVCFGHDGVFDPWYPLGTANMLQVLHMGLHVCQLMGYQGINDGLNLITH  
HSARTLNLQDYGIAAGNSANLILPAENGFALRRQVPVRYSVRGGKVIASSTQPAQTIVYL  
EQPEAIDYKR

>non-antioxidant\_395

MRPARALIDLQALRHNYRLAREATGARALAVIKADAYGHGAVRCAEALAAEADGFAVACI  
EEGLELREAGIRQPILLLEGFFEASELELIVAHDFWCVVHCAWQLEAIERASLARPLNVWL  
KMDSGMHRVGFPPEDFRAAHERLRASGKVAKIVMMSHFRADELDCPRTEEQLAAFSAA  
SQGLEGEISLRNSPAVLGWPKVPSDWVRPGILLYGATPFERAHPLADRLRPVMTLESKVIS  
VRDLPAGEPVGYGARYSTERRQRIGVVAMGYADGYPRHAADGTLVFIDGKPGRLVGRVS  
MDMLTVDLTDHPQAGLGSRVELWGPVNPVVGALAAQFGSIPYQLLCNLKRVPRVYSGA

>non-antioxidant\_396

GNAAAAKKGSEQESVKEFLAKAKEDFLKKWETPSQNTAQLDQFDRIKTLGTGSFGRVML  
VKHKESGNHYAMKILDQKQVVKLQIEHTLNEKRILQAVNFPFLVKLEFSFKDNSNLYMV  
MEYVAGGEMFSLRRIGRFSEPHARFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQ  
VTDFGFAKRVKGRWTWLCGTPEALAPEIILSKGYNKAVDWWALGVLIYEMAAGYPPFFAD  
QPIQIYEKIVSGKVRFPESHFSSDLKDLLRNLLQVDLTKRFGNLKNGVNDIKNHKWFATTD  
WIAIYQRKVEAPFIPKFKGPGDTSNFDDYEEEEIRVSINEKCGKEFTEF

>non-antioxidant\_397

MELEDANVTKKVELRPLIGLTRGLPPTDLETITIDAIRTHRRLVEKADELQALPETYKTGQ  
ACGGPQHIRYIEASIEMHAQMSALNTLISILGFIPKVVVN

>non-antioxidant\_398

HHHHHFNLPNGYKPKLLYCSNGGHFLRILPDGTVDGTRDRSDQHIQLQLSAESVGEV  
YIKSTETGQYLAMDTDGLLYGSQTPNEECLFLERLEENHYNTYISKKHAENWFVGLKK  
NGSCKRGPRTHYGQKAILFLPLPVSSD

>non-antioxidant\_399

HECQCQCGSCKNNEQCQKSCSCPTGCNSDDKPCPGN

>non-antioxidant\_400

MKKHIIKTIPKKEIISRDLDCIYYYYDNSVICKPIGPSKVYVSTSLLENLEKCLQLHYFKKL  
VKNIEIFDEVHNSKPNCDKCLIVEIGGVYFVRRVNGVPR

>non-antioxidant\_401

GASIVSLLGIKVLNPAKFTDPYEFEIFECLLESKHDLEWKLTYVGSSRSLDHDQELDSIL  
VGPVPVGVNKFVFSADPPSAELIPASELVSVTVILLSCSYDGRFVVRVGYVYVNNNEYDEEEL

RENPPAKVQVDHIVRNILAEKPRVTRFNIVWD

>non-antioxidant\_402

GRGSAGYDLNAFTFDPIKESIVSREMTRRYMTDMITYAETDVVVVVGAGSAGLSAAYEISK  
NPNVQVAIIEQSVSPGGGAWLGGQLFSAMIVRKPAHLFLDEIGVAYDEQDTYVVVKHAAL  
FTSTIMSKLLARPNVKLFNAVAEEDLIVKGNRVGGVVTNWALVAQNHHTQSCMDPNVME  
AKIVVSSCGHDGPFATGVKRLKSGMIDHVPGMKALDMNTAEDAIVRLTREVVPGMIVT  
GMEVAEIDGAPRMGPTFGAMMISGQKAGQLALKALGLPNAIDGTL

>non-antioxidant\_403

MPPITQQATVTAWLPQVDASQITGTISSLESFTNRFYTTTSGAQASDWIASEWQALSASLP  
NASVKQVSHSGYNQKSVVMTITGSEAPDEWIVIGGHLSTIGSHTNEQSVAPGADDDASG  
IAAVTEVIRVLSENNFPKRSIAFMAYAAEEVGLRGSQDLANQYKSEGKNVVSALQLDMT  
NYKGSAQDVVFITDYTDSNFTQYLTQLMDEYLPSTLYGFDTGCGYACSDHASWHNAGYPA  
AMPFESKFNDYNPRIHTTQDTLANS DPTGSHAKKFTQLGLAYAIEMGSATGDTPTPGNQ

>non-antioxidant\_404

MSLSDDIKVLGISGSLRSGSYNSAALQEAGLVPPGMSIELADISGIPLYNEDVYALGFPPAV  
ERFREQIRAADALLFATPEYNYSMAGVLKNAIDWASRPPEQPFSGKPAAILGASAGRFGTA  
RAQYHLRQTLVFLDVHPLNKPEVMISSAQNAFDAQGRLLDDKARELIQQQLQALQLWVR  
EGGSHHHHHH

>non-antioxidant\_405

ADCSSDLTSGISTKRIYYVAPNGNSSNNGSSFNAPMSFSAAMA AVNPGELILLKPGTYTIPY  
TQKGKNTITFNKSGKDGAPIYVAAANCGRAVDFDSFPDSQWVQASYGFYVTGDYWYFKG  
VEVTRAGYQGAYVIGSHNTFENTAFHHNRNTGLEINNGGSYNTVINS DAYRNYDPKKN  
SMADGFGPKQKQGGPNRFVGCRAWENSDDGDFLDFSPQKVVIENS WAFRNGINYWNS  
AFAGNNGFKLGGNQAVGNHRITRSVAFGNVSKGFDQNNNAGGVTVINNTSYKNGINYG  
FGSNVQSGQKHFRNNVLSASVTVSNADAKSNSWDTGPAASASDFVSLDTSLATVSRD  
NDGTLPETSFLRLSANSKLINAGTKESNISYSGSAPDLGAFERN

>non-antioxidant\_406

GSLSWKRCAGCGGKIADRFLLYAMDSYWHSRCLKCSSCQAQLGDIGTSSYTKSGMILCR  
NDYIRLFGNSGACACGQSIPASELVMRAQGNVYHLKCFTCSTCRNRLVPGDRFH YINGSL  
FCEHDRPTALINGHLNSGGSGGSGGSDVMVVGEP TLMGGEGFDEDERLITRLENTQFD  
AANGIDDE

>non-antioxidant\_407

MKTITETLNLAPKGKNFLTADWPAPANVKTLITTRNGGVSQGAYQSLNLGTHVGDNPEAV  
RRNREIVQQQVGLPVAYLNQIHSTVVVNAAEALGGTPDADASVDDTGK VACAVMTADCL  
PVLFCDRAGTAVAAA HAGWRGLAGGVLQNTIAAMKVPPVEMMAYLGP AISADAFEVGG  
DVFD AFCTPMPEAATAFEGIGSGKFLADLYALARLILKREGVGGVYGGTHCTVLERDTFFS  
YRRDGATGRMASLIWLDGNAV

>non-antioxidant\_408

TYVLYGIKACDTM KKARTWLDEHKVAYDFHDYKAVGIDREHLRRWCAEHGWQTVLNR  
AGTTRKRLDEAQKADLDEAKAIELMLAQPSMIKRPVLELGGRTL VGFKP DAYAAALA

>non-antioxidant\_409

EAEPGAAEFAALRNRWVDQITGRNVIQAGDPDFAKAITALNNKAADSLAKLDAAAGRTS  
VFTDLSLAKDAEMVTTYTRLSQLATAWATPTAAVFGDAAVLAAIKAGLADANTLCYNDR  
KEEVGNWWSWEIGVPRALADAMVLLHAELSA AERTAYCA AIDHFVPDPWLQFPKRGKI

TSVGANRVDLCQGIIRSLAGEDPTKLNHAVAGLSQVWQYVTSGDGIFRDGSFIQHSTTPY  
TGSYGVVLLTGLSKLFSLLGGTAFEVSDPTRSIFDAVEGSFAPVMINGAMADAVRGRSISR  
EANTGYDLGASAIEAILLLARAMDPATAARWRGLCAGWIARDTYRPILNSASVPRTALVK  
QLEATGVAPVAEATGHKLPAMDRTMHRGPGWALSALSSNRIAWYECNGENNRGYHT  
GSGMTYFYTSDLGQYDDAFWATANYNRLPGITVDTTPLPKVEGQWGAAVPADEWSGAT  
ALGEVAAVGQHLVGPGRGTGLTARKSWFVSGDVTVCLGADISTASGAKVETIVDHRNLHQ  
GSNTLTTAAGTIAGTAGTVEVLGDGRWVHLEGFGGYAMLDDSPHLVLRTRSGSWSGVN  
INGSATVQQRNFATLYVNHGVGPVAGSYAYMVAPGASVDLTRKLLLEGNKYSVIRNDATAQ  
SVEFKTAKTTAATFWKPGMAGDLGASGPACVVFSRHGNELSLAVSEPTQKAAGLTLTLP  
GTWSSVLEGAGTLGTDADGRSTLTLDTTGLSGKTKLIKLR

>non-antioxidant\_410

MGMIGYFAEIDSEKINQLLESTEKPLMDNIHDTLSGLRRLDIDKRWDFLHFGLTGTSAFDP  
AKNDPLSRAVLGEHSLEDGIDGFLGLTWNQELAATIDRLES�DRNELRKQFSIKRLNEMEI  
YPGVTFSELEGQLFASIMLDMEKLISAYRRMLRQGNHALTVIVG

>non-antioxidant\_411

VPDKTVRWCAVSEHEATKCQSRDHMKSVIPSDGPSVACVKKASYLDCIRAIANAADAV  
TLDAGLVYDAYLAPNNLKPVVAEFYGSKEDPQTFYAVAVVKKDSGFQMNQLRGKKSCH  
TGLGRSAGWNIPIGLLYCDLPEPRKPLEKAVANFFSGSCAPCADGTDFPQLCQLCPGCGCS  
TLNQYFGYSGAFKCLKDGAGDVAFVKHSTIFENLANKADRQYELLCLDNTRKPVDEYK  
DCHLAQVPSHTVVARSMGGKEDLIWELLNQAQEHFGKDKSKEFQLFSSPHGKDLLFKDS  
AHGFLKVPPRMDAKMYLGYEYVTAIRNLR

>non-antioxidant\_412

AHHHHHGSSEKACRHCHYITSEDRCPVCGSRDLSEEWFDLVIIVDVENSEIAKKIGAKVP  
GKYAIRVR

>non-antioxidant\_413

THNAHNWRLGQAPANWYNDTYPLSPPQRTPAGIRYRIAVIADLDTESRAQEENTWFSYLK  
KGYLTLSDSGDKVAVEWKDHGVLESHLAEKGRGMELSDLIVFNGKLYSVDVRTGVVYQ  
IEGSKAVPWVILSDGDGTVEKGFKAEWLAVKDERLYVGGGKEWTTTTGDVVNENPEW  
VKVVGKGSVDHENWVSNYNALRAAAGIQPPGYLIHESACWSDTLQRWFFLPRRASQER  
YSEKDDERKGANLLSASPDFGDIASHVAVVPTHGFSSFKFIPNTDDQIIVALKSEEDSG  
RVASYIMAFTLDGRFLLPETKIGSVKYEGIEFI

>non-antioxidant\_414

GSHMPLSSENKQKLQKQVEFYFSDVNVQRDIFLKGKMAENAEGFVSLETLLTFKRVNSVT  
TDVKEVVEAIRPSEKLVLSGDGLMVRRRDPLP

>non-antioxidant\_415

MSNITYHNPAASGTSRNTLEMIRNSGTEPTIILYENPPSRDELVKLIADMGISVRALLRKNV  
EPYEQLGLAEDKFTDDQLIDFMLQHPILINRPIVVTPLGTRLCRPSEVVLDILQDAQKGAFT  
KEDGEKVVDEAGKRLK

>non-antioxidant\_416

MSVFDSKFKGIHVYSEIGELESVLVHEPGREIDYITPARLDELLFSAILESHDARKEHKQFV  
AELKANDINVELIDLVAETYDLASQEAKDKLIEEFLEDSEPVLSEEHKVVVRNFLKAKKT  
SRELVEIMMAGITKYDLGIEADHELIVDPMPNLYFTRDPFASVGNVGTIHYMRYKVRQRE  
TLFSRFVFSNHPKLINTPWYYDPSLKLISIEGGDVFIYNNDTLVVGVSSERTDLQVTLLAKNI  
VANKECEFKRIVAINVPKWTNLMHLDTWLTMLDKDKFLYSPIANDVFKFWDYDLVNGGA

EPQPVENGLPLEGLLQSIINKKPVLIPIAGEGASQMEIERETHFDGTNYLAIRPGVVIGYSRN  
EKTNAALEAAGIKVLPFHGNQLSLGMGNARCMSPLSRKDVKW

>non-antioxidant\_417

SDAMTTFLQRDEFVARTARVLGALFYYSPESETAPLVQALLNDDWQAQWPLDAEALAPV  
AAMFKTHSEESLPQAWQRLFIGPYALPSPWGSVWLDRESVLFGDSTLALRQWMRENGI  
QFEMQQNEPEDHFGSLLLLAAWLAENDRHHECEQLLAWHLFPWSSRFLDVFIDHAGHPF  
YQALGQLARLTLAQWQAQLIIPVAVKPLFR

>non-antioxidant\_418

MPELEVKGKKLRLEDEDGFLQDWEEDWEEVAEALAKDTRFSPQPIELTEEHWKIIRYLRDY  
FIKYGVAPPVRLVKHCKKEVRPDCNLQYIYKLFPPQPAKDACRIAGLPKPTGCV

>non-antioxidant\_419

MHHHHHSSGVDLGTENLYFQSNAMARGIWGVDSAQVVTDQLFQCVRTELGYPKFWGR  
YLSEVPNVSEGLTRDEIVRIRNYGVKVLPIYNAFREAVGYANGQVAARNAVHARRLGIPK  
NKLLFANIEDFFAVDAAWIAAWVETLYPTGYRPLYADPTKGDFAAAYCEAVSRNNQVAV  
QAVIWSAAPRPGTTKEQKAPRYQPAAPPCSANVWVWQYGRDAEVCVDTNLADRLLD  
FLY

>non-antioxidant\_420

AGKKVLIVYAHQEPKSFNGSLKNVAVDELRSRQGCTVTVSDLYAMNFEPRATDKDITGTL  
NPEVFNYGVETHEAYKQRSASDITDEQKVVREADLVIFQFPLYWFSVPAILKGWMDRVL  
CQGFADFIPGFYDSGLLQGLLALLSVTTGGTAEMYTKTG VNGDSRYFLWPLQHGTLHFCG  
FKVLAPQISFAPEIASEEERKGMVAAWSQRLQTIWKEEPIPCTAHWHFGQ

>non-antioxidant\_421

GSQRVLVEPDAGAGVAVMKFKNPPVNSLSLEFLTELVISLEKLENDKSFRGVILTSRPGVF  
SAGLDLTEMCGRSPAHYAGYWKAVQELWLRLYQSNLVLVSAINGACPAGGCLVALTCDYR  
ILADNPRYCIGLNETQLGIIAPFWLKD TLENTIGHRAAERALQLGLLFPPAEALQVGIVDQV  
VPEEQVQSTALS AIAQWMAIPDHARQLTKAMMRKATASRLVTQRDADVQNFVFSISKDSI  
QKSLQMYLERLKEEKG

>non-antioxidant\_422

MSRQTEIVRRMVSAFNTGRTDDVDEYIHPDYLN PATLEHGIHTGPKAFAQLVGWVRATFS  
EEARLEEVRIEERGPVWKAYLVLYGRHVGRVGMPTDRRFSGEQVHLMRIVDVKIRDHR  
DWPDFQGTLRQLGDPWPDDEGWRP

>non-antioxidant\_423

MGKSASKQFHNEVLKAHNEYRQKHGVPLKLCKNLNREAQQYSEALASTRILKHSPSS  
RGQCGENLAWASYDQTGKEVADRWYSEIKNYNFQQPGFTSGTGHFTAMVWKN TKKMG  
VGKASASDGSSFVVARYFPAGNVVNEGFFEENVLPPKK

>non-antioxidant\_424

MYRIPSYDFADELAKLLRQAAGM

>non-antioxidant\_425

MNKIFIYAGVRNHNSKTLEYTKRLSSISSRNNVDISFRTPFNSELEISNSDSEELFKKGIDRQ  
SNADDGGVIKELLES DIIISSPVYLNQNSVDTKNFIERIGGWSHLFRLAGKFVVTLDVAE  
SNGSDNVSEYLRDIFSYMGGQILHQVSITNSLKDIAEAQLMEATYKIEDVLEGKIKYKTTD  
YQERAYQTLKLILENYDSEHFEEKMYWEKKRLEANSLEEWYYVENIKLEHHHHHH

>non-antioxidant\_426

MAKQNLKSTDRAVQQMLDKAKREGIQTVDWDRYEAMKPPQCGFGETGLCCRHCLQGPCRI

NPFGDEPKVGICGATAEVIVARGLDRSIAAGAAGHSGHAKHLAHTLKKAVQGKAASYMIK  
DRTKLHSIAKRLGIPTEGQKDEDIALEVAKAALADFHEKDTPVLWVTTVLPSSRVKVL  
GLIPAGIDHEIAEIMHRTSMGCDADAQNLLGGLRCSLADLAGCYMGTDLADILFGTPAPV  
VTESNLGVLKADAVNVAVHGHNPVLSDIIVSVSKEMENEARAAGATGINVVGICCTGNEV  
LMRHGIPACTHSVSQEMAMITGALDAMILDYQCIQPSVATIAECTGTTVITMEMSKITGA  
THVNFEEAAVENAKQILRLAIDTFKRRKGPVEIPNIKTAVVAGFSTEAINALSCLNAND  
PLKPLIDNVVNGNIRGVCLFAGCANNVQVQDQNFQTTIARKLLKQNVLVVATGCGAGALM  
RHGFMDPANVDELCDGLKAVLTAIGEANGLGGPLPPVLHMGSCVDNSRAVALVAALAN  
RLGVLDLRLPVVASAAEAMHEKAVAIGTWAVTIGLPTHIGVLPPITGSLPVTQILTSSVKDIT  
GGYFIVELDPETAADKLLAANERRAGLGLPW

>non-antioxidant\_427

TAAVALVKANENAAAILNLKNAIQKTNAAVADVQATQSLGTAVQAVQDHINSVSPAITA  
ANY

>non-antioxidant\_428

QILSIDPLDISQNLAAVNKSLSDALQHLAQSDTYLSAI

>non-antioxidant\_429

SLRSDLINALYDENQKYDVCGIISAEGKIYPLGSDTAVLSTIFELFSRPIINKIAEKHGYIVEE  
PKQQNHYPDFTLYKPSEPNKKAIDIKTTYTNKENEKIKFTLGGYTSFIRNNTKNIVYFPDQ  
YIAHWIIGYVYTRVATRKSSLKTYNINELNEIPKPYKGVKVFQDKWVIAGDLAGSGNTTN  
IGSIHAHYKDFVEGKGIFDSEDFLDYWRNYERTSCLRNDKYNINISEYRNWIYRGRK

>non-antioxidant\_430

MSHHHHHHGSSRQANRGTESKKMSSELTLYGALVTQLCKDYENDEDVNKQLDKMGF  
NIGVRLIEDFLARSNVGRCHDFRETADVIAKVAFKMYLGITPSITNWSPAGDEFSLILENNP  
LVDFVELPDNHSSLIYSNLLCGVLRGALEMVQMAVEAKFVQDTLKG DGVT EIRMR FIRRI  
EDNLPAGEEAAAWSHPPQFEK

>non-antioxidant\_431

GSSSTLTKELIKDAAEKCTRNRQECCIEIMKFGTPIRCGYDRDPKLPGYVYKCLQNVLFA  
KEPKKKINLDDSVCCSVFGNDQEDSGRRCENRCKNLMTSPSIDAATRLDSIKSCSLLDNVL  
YKCFEKCRSLRKDGKIEVLQFEEYCEATFIQKRTFRGV

>non-antioxidant\_432

ERVVINVSGLRFETQLKTLNQFPDILLGNPQKRNRYYDPLRNEYFFDRNRPSFDAILYFYQ  
SGGRLRRPVNVPLDVFSEEIKFYELGENAFERYREDEGF

>non-antioxidant\_433

PILEKAPQKMPVKASSWEELDPKLPVPPLOQTLATYLQCMQHLVPEEQFRKSQAIVKRF  
GAPGGLGETLQEKLLERQEK TANWVSEYWLNDMYLNNRLALPVNSSPAVIFARQHFQDT  
NDQLRFAACLISGVLSYKTLDDSHSLPTDWAKGQLSGQPLCMKQYRFLFSSYRPGHTQD  
TLVAQKSSIMPEPEHVIVACCNQFFVLDVVINFRRLSEGDLFTQLRKIVKMASNEDERLPI  
GLLTS DGRSEWAKARTVLLK DSTNRDSLMIERCICLVCLDGP GTGELSDTHRALQLLHG  
GGCSLNGANRWYDKSLQFVVGRDGTGCVVCEHSPFDGIVLVQCTEHLKHMMSNKKL  
VRADSVSEL PARRLRWKCS PETQGH LASSAEKLRIVKNLDFIVYKFDNYGKTFIKKQK  
YSPDGF IQVALQLAYRLYQRLVPTYESASIRRFQEGRVDNIRSATPEALAFVQAMTDHKA  
AMPASEKLQLLQTAMQAQTEYTVMAITGMAIDNHLALRELARDLCKEPPPEMFMDETYL  
MSNRFVLS TSQVPTT MEMFCCYGPVVPNGYGACYNPQPEAITFCISSFH SCKETSSVEFAE  
AVGASLVDMRDLCSSRQPADSKPPAPKEKARGPSQAKQS

>non-antioxidant\_434

MSGLRVYSTSVTGSREIKSQQSEVTRILDGKRIQYQLVDISQDNALRDEMRTLGNPKATP  
PQIVNGNHYCGDYELFVEAVEQDTLQEFLKLA

>non-antioxidant\_435

MAPKAKIVLVGSGMIGGVMATLIVQKNLGDVVLFDIVKNMPHGKALDTSHTNVMAYSN  
CKVSGSNTYDDLADVVIVTAGFTKAPGKSDKEWNRDPLLNNKIMIEIGGHIKKNCP  
NAFIIVVTNPVDVMVQLLHQHSGVPKNKIIGLGGVLDTSRLKYYISQKLNVCPRDVNAHI  
VGAHGNKMVLLKRYITVGGIPLQEFINNKLISDAELEAIFDRTVNTALEIVNLHASPYPVAPA  
AAIEMAESYLKDLKKVLCSTLLEGQYGHSDIFGGTPVVLGANGVEQVIELQLNSEEKAK  
FDEAIAETKRMKALAHHHHHH

>non-antioxidant\_436

ATKIDKEACRAAYNLVRDDGSAVIWVTFKYDGSTIVPGEQGAEYQHFIQQCTDDVRLFAF  
VRFTTGDAMSKRSKFALITWIGENVSGLQRAKTGTDKTLVKEVVQNFAKEFVISDRKELE  
EDFIKSELKKAGGANYDAQTE

>non-antioxidant\_437

MQNVGFIGWRGMVGSVLMQRMVEERDFDAIRPVFFSTSQLGQAAPSGGTTGTLQDAFD  
LEALKALDIIVTCQGGDYTNEIYPKLRESGWQGYWIDAASSLRMKDDAIILDPVNQDVIT  
DGLNNGIRTFVGGNCTVSLMLMSLGGFLFANDLVDWVSVATYQAASGGGARHMRLLTQ  
MGHLYGHVADELATPSSAILDIERKVTTLRSGELPVDNFGVPLAGSLIPWIDKQLDNGQS  
REEWKGQAETNKILNTSSVIPVDGLCVRVGALRCHSQAFTIKLKKDVS IPTVEELLAHNP  
WAKVVPNDREITMRELTPAAVTGTLTPVGRRLKLNMGPEFLSAFTVGDQLLWGAAEPLR  
RMLRQLA

>non-antioxidant\_438

SVDHGFLVTRHSQTDDPQCPPGTKILYHGYSLLYVQGNRAHGQDLGTAGSCLRKFSTM  
PFLFCNINNVCFASRNDYSYWLSTPEPMPMSMAPITGENIRPFISRCACEAPAMVMAVH  
SQTIQIPQCPTGWSSSLWIGYSFVMHTSAGAEGSGQALASPGSCLEEFRSAPFIECHGRGTCN  
YYANAYSFWLATIERSEMFKKPTPSTLKAGELRTHVSRCQVCMRRT

>non-antioxidant\_439

GSHMSLDNKPIMRVASIDIGSYSVRLTIAQIKDGKLSIILERGRITSLGTVKVKETGRLQEDRIE  
ETIQVLKEYKKLIDEFKVERVKAVATEAIRRAKNAEEFLERVKREVGLVVEVITPEQEGRYA  
YLAVAYSLKPEGEVCVVDQGGGSTEYVFGKGYKVREVISLPIGIVNLTEFFKQDPPTTEE  
VKRFFEFLEKELSKVKKPVDTIVGLGGTITTLAALEYNVYPYDPQKVHGKVLTYGQIKKW  
FDTFKEIPSEERSKRFRQVEDRRAKVILAGIGIFLKTLEIFEKDCCLIVSDWGLREGVLVSEVL  
KENHS

>non-antioxidant\_440

TLYEALKENEKLHKEIEQKDNEIARLKKENKELAEVA

>non-antioxidant\_441

GSPGISGGGGSHIEGYECQIFLNVLEAIEPGVVCAGHDNNQPDSFAALLSSLNELGERQL  
VHVVKWAKALPGFRNLHVDDQMAVIQYSWMGLMVFAMGWSFTNVNSRMLYFAPDLV  
FNEYRMHKSRMYSQCVRMRHLSQEFQWLQITPQEFCLMKALLLFSIIPVDGLKNQKFFDE  
LRMNYIKELDRIIACKRKNPTSCSRRFYQLTKLLDSVQPIARELHQFTFDLLIKSHMVSVDV  
PEMMAEISVQVPKILSGKVKPIYFHTQ

>non-antioxidant\_442

STIEERVKKIIGEQLGVKQEEVTNNASFVEDLGADSLDTVELVMALEEEFDTEIPDEEAEKI

TTVQAAIDYINGHQA

>non-antioxidant\_443

MGNKEKADRQKVVSDDLVALEGALDMYKLDNSRYPTTEQGLQALVSAPSAEPHARNYPE  
GGYIRRLPQDPWGSYQLLSPGQHGQVDIFSLGPDGVPESNDDIGNWTIGFHHHHHHK

>non-antioxidant\_444

MNTKYNKEFLLYLAGFVDGNGSIIAQIKPNQSYKFKHQLSLTFQVTQKTQRRWFLDKLVD  
EIGVGYVRDRGSVSDYILSEIKPLHNFLTQLQPFLKQKQANLVLKIIQLPSAKESPKDF  
LEVCTWVDQIAALNSKTRKTTSETVRAVLDSLSEKKKSSP

>non-antioxidant\_445

MGSSHHHHHSSGLVPRGSHMEEETRELQSLAAAVVPSAQTLKITDFSFSDFELSDLETAL  
CTIRMFTDLNLVQNFQMKHEVLCRWILSVKKNYRKNVAYHNWRHAFNTAQCMFAALKA  
GKIQNKLTDLEILALLIAALSHDLDPGVSQFLINTNSELALMYNDESVLEHHHFDQCLM  
ILNSPGNQILSGLSIEEYKTTLKIQAAILATDLALYIKRRGEFFELIRKNQFNLEDPHQKELF  
LAMLMTACDLSAITKPWPIQQRIAELVATEFFDQGDREKELNIEPTDLNREKKNKIPSM  
QVGFIDAICLQLYEALTHVSEDCFPLLDGCRKNRQKWQALAESEKKKSSP

>non-antioxidant\_446

LPSGSDPAFSQPKSVLDAGLTCQGASPVSKPILLVPGTGTTGPQSFDSNWIPSTQLGYTP  
CWISPPFMLNDTQVNTEYMVNAITALYAGSGNNKLPVLTWSQGGLVAQWGLTFFPSIRS  
KVDRLMAFAPDYKGTVLAGPLDALAVSAPSVWQTTGSALTTALRNAGGLTQIVPTTNY  
SATDEIVQPQVSNPLDSSYLFNGKNVQAQAVCGPLFVIDHAGSLTSQFSYVVGSRALRST  
TGQARSADYGITDCNPLPANDLTPEQKVAALLAPAAAIVAGPKQNPCEPDLMPYARPF  
AVGKRTCSGIVTP

>non-antioxidant\_447

SGGGGGILEKLGDICFSLRYVPTAGKLTVVILEAKNLKKMDVGGLSDPYVKIHLMQNGKR  
LKKKKTTIKKNTLNPYYNESFSFEVPFEQIQKVQVVVTVLDYDKIGKNDIAIGKVFVGYNS  
TGAELRHWSDMLANPRRPIAQWHTLQVEEEVDAMLAVKK

>non-antioxidant\_448

MTCAYRREIHHAHVAIRDWLAGDSRADALDALARFAEDFSMVTPHGVVLDKTALGELF  
RSKGGTRPGLRIEIDGESLLASGVDGATLAYREIQSDAAGRSERLSTVVLHRDDEGRLYWR  
HLQETFCCG

>non-antioxidant\_449

GSHMEYLGVFVDETKEYLQNLNDTLLELEKNPEDMELINEAFRALHTLKGMAGMTMGFSS  
MAKLCHTLENILDKARNSEIKITSDLLDKIFAGVDMITRMVDKIVS

>non-antioxidant\_450

SHPALTQLRALRYSKEIPALDPQLLDWLLLEDSMTRKFEQQGKTVSVTMIREGFVEQNEIP  
EELPLLKESRYWLREILLSADGEPWLAGRTVVPVSTLSGPELALQKLGKTPGRLYFTSS  
TLTRDFIEIGRDAGLWGRRSRLRLSGKPLLLTELFLPASPLY

>non-antioxidant\_451

GHMNAADRVMQSYGRCCASTGFFDDFYRHFLASSPQIRAKFATTDMTAQKHLRAGIMN  
LVMYARGMSDSLRLALGASHSRAALDIRPELYDLWLDALLMAVAEHDRDCAETRAW  
RDVMGRGIAVIKSYYS

>non-antioxidant\_452

AMKPRIYVKVPERLGAVIGPRGEVKAEMRRTGTVITVDTENSMVIVEPEAEGIPVNLN  
KAAEVVKAISLGFPEKAFRLLEEDQILVVVDLQVVGDSQNHKRIKRIIGEGGRARRT

IEEMTDYINVG EYEVAIIGDYERAMAAKQAIEMLAEGRMHSTVYRHLERIMREIKRRER  
LKMWAREEL

>non-antioxidant\_453

ACQASQLAVCASAILSGAKPSGECGNLRAQQGFCQYAKDPTYGQYIRSPHARDTLTSC  
GLAVPHC

>non-antioxidant\_454

ATPWQKITQPVPGSAQSIGSFSNGCIVGADTLPIQSEHYQVMRTDQRRYFGHPDLVMFIQR  
LSSQVSNLGMGTVLIGDMGMPAGGRFNGGHASHQTGLDVDIFLQLPKTRWTSQLLRPQ  
ALDLVSRDGKHVVSTLWKPEIFSLIKLAAQDKDVTRIFVNPAIKQQLCLDAGTDRDWLRK  
VRPWFQHRAHMHVRLRCPADSLECEDQPLPPSGDGCGAELQSWFEPKPGTTKPEKTPP  
PLPPSCQALLDEHVI

>non-antioxidant\_455

ASGPRALSRNQPPYPARAQALRIEGQVKVKFDVTPDGRVDNVQILSAKPANMFEREVKN  
AMRRWRYEPGKPGSGIVVNILFKINGTTEIQ

>non-antioxidant\_456

GSKAPPTFKVSLMDQSVREGQDVIMSIRVQGEKPVVSWLRNRQPVRPDQRRFAEEAEGG  
LCRLRILAAERGDAGFYTCKAVNEYGARQCEARLEVRGE

>non-antioxidant\_457

GHMSARVRPFLMFQGVQAEAAMNFYLSLFDDAEILQIQRYGAEGPGPEGSVLKALFRLG  
DQSVHCIDSHVRHAFDFTPAFSFFVDCESNAQIERLAEALSDGGKALMPLGDYGFQRFA  
WLADRFVSWQLNLAGS

>non-antioxidant\_458

SNAMDGQQLNRLLLEWIGAWDPFGLGKDAYDVEAASVLQAVYETEDARTLAARIQSIYE  
FAFDEPIPFPHCLKLARRLLELKQAASCPLP

>non-antioxidant\_459

MLMTAEQYIESLRKLNTRVYMFGEKIENWVDHPMIRPSINCVRMITYELAQDPQYADLMT  
TKSNLIGKTINRFANLHQSTDDLKVKMQRLLGQKTASCFQRVGMDFNAVFSTTYEI  
DQKYGTNYHKNFTEYLKYIQENDLIVDGAMTDPKGDRGLAPSAQKDPDLFLRIVEKRED  
GIVVRGAKAHQTSINSHEHIIMPTIAMTEADKDYAVSFACPSDADGLFMIYGRQSCDTRK  
MEEGADIDLGNKQFGGQEALVVFNDVFIPIVNDRIFLCQEYDFAGMMVERFAGYHRQSYGG  
CKVGVGDVVIGAAALAADYNGAQKASHVKDKLIEMTHLNETLYCCGIACSAEGYPTAA  
GNYQIDLLLANVCKQNITRFPYEVRLAEDIAGGLMVTMPSEADFKSETVVGRDGETIGDF  
CNKFFAAAPTCTTEERMVLRFLNICLGASAVGYRTESMHGAGSPQAQRIMARQGNIN  
AKKELAKAIAGIK

>non-antioxidant\_460

FENGLGRTPQMGNWSWNHFCYCGINEQIIRETADALVNTGLAKLGYQYVNIDDCWAEYSR  
DSQGNFVFNRTFSPGIKALADYVHAKGLKLGYS DAGSQTCSNKMPGSLDHEEQDVKTF  
ASWGV DYLKYDNCNDAGRSVMERYTRMSNAMKTYGKNIFFSLCEWGKENPATWAGRM  
GNSWRITGDIADN WGSMTSRADENDQWAAAYAGPGGWNDPDMLEVGNNGMSEAEYRS  
HFSIWALAKAPLLIGCDVRSMSQQTKNILSNSEVI AVNQDSLGVQGKQVQSDNGLEVWAG  
PLSNNRKAVVLWNRQSYQATITAHWSNIGLAGSVAVTARDLWAHSSFAAQGQISASVAPH  
DCKMYVLTPN

>non-antioxidant\_461



FDSFWFVQQWPPAVCSFQKSGSCPGSGLRTFTIHGLWPQQSGTSLTNCPGSPFDITKISHLQ  
SQLNTLWPNVLRANNQQFWSHEWTKHGTCSESTFNQAAYFKLAVDMRNNDIIGALRPH  
AAGPNGRTRKSRQAIKGFLLKAKFGKFPGLRCRTDPQTKVSYLVQVVACFAQDGSTLIDCTR  
DTCGANFIF

>non-antioxidant\_462

MEEAKQKVVDLNSKSGSKSKFYFNDFTDLFPDMKQREVKKILTALVNDEVLEYWSSGS  
TTMYGLKGAGKQAAAEHED

>non-antioxidant\_463

NKASVVANQLIPINTALTLIMMKAEEVTPMGIPAEIIPKLVGMQVNRAVPLGTTLMPDMV  
KNYE

>non-antioxidant\_464

MVRGIRGAITVEEDTPEAIHQATRELLKMLEANGIQSYEELAAVIFTVTEDELTSAPFAEAA  
RQIGMHRVPLLSAREVPVPGSLPRVIRVLALWNTDTPQDRVRHVYLREAVRLRPDLESAQ

>non-antioxidant\_465

MTENAEKFLWGVATSAYQIEGATQEDGRGPSIWDAFAQRPGAIRDGSGTEGACDHYRRYE  
EDIALMQSLGVRAYRFSVAWPRILPEGRGRINPKGLAFYDRLVDRLLASGITPFLTYHWD  
LPLALEERGGWRSRETAFAFAEYAEAVARALADRVPFFATLNEPWCSAFLGHWTGEHAPG  
LRNLEAALRAAHLLLGHGLAVEALRAAGARRVGIVLNFAPAYGEDPEAVDVADRYHNR  
FFLDPILGKGYPEPFRDPPPVPILSRDLELVARPLDFLGVNYYAPVRVAPGTGTLPVRYLPP  
EGPATAMGWEVYPEGLYHLLKRLGREVPWPLYVTENGAAYPDLWTGEAVVEDPERVAYL  
EAHVEAALRAREEGVDLRGYFVWSLMDNFEWAFGYTRRFGLYYVDFPSQRRIPKRSALW  
YRERIARAQT

>non-antioxidant\_466

MTNLSDIIEKETGKQLVIQESILMLPEEVEEVIGNKPEDILVHTAYDESTDENVMLLTSDAP  
EYKPWALVIQDSNGENKIKML

>non-antioxidant\_467

GKAFDDGAFGTGIREINLSYNKETAIGDFQVVYDLNGSPYVGQNHVSFITGFTPVKISLDFPS  
EYIMEVSGYTGNSVGYVVRSLTFKTNKKTYGPYGVTSGTPFNLPIENGLIVGFKGSIGY  
WLDYFSMYLSL

>non-antioxidant\_468

MTLELLQAQAQNCTACRLMEGRTRVVFEGGNPDAKLMIVGEGPGEEEDKTGRPFVKGKA  
GQLLNRILEAAGIPREEVYITNIVKCRPPQNRAPLPDEAKICTDKWLLKQIELIAPQIIVPLG  
AVAAEFFLGEKVSITKVRGKWEWHGIKVFPMFHPAYLLRNPSRAPGSPKHLTWLDIQEV  
KRALDALPPKERRPVKAVSQEPLF

>non-antioxidant\_469

MTTLEAFAKARSEGRAALIPYLTAGFPSREGFLQAVEEVLPHYADLLEIGLPYSDPLGDGPVI  
QRASELALRKGMSVQGALELVREVRALTEKPLFLMTYLNPLVLAWGPERFFGLFKQAGAT  
GVILPDLPPDEDPLVRLAQEIGLETVFLAPTSTDARIATVVRHATGFVYAVSVTGVTGM  
RERLPEEVKDLVRRIKARTALPVAVGFGVSGKATAAQAADGVVVGSALVRALEEGRSL  
APLLQEIRQGLQRLEANPGLKESKKPLP

>non-antioxidant\_470

MANLEIGKSILAAGVLTNYHDVGEQPVILIHGSGPGVSAYANWRLTIPALSKFYRVIAPD  
MVGFGFTDRPENYNYSKDSWVDHIIGIMDALEIEKAHIVGNAGGGLAIATALRYSERVD  
RMVLMGAAGTRFDVTEGLNAVWGYTPSIENMRNLLDIFAYDRSLVTDELARLRYEASIQP

GFQESFSSMFPEPRQRWIDALASSDEDIKTLPNETLIHGREDQVVPLSSSLRRLGELIDRAQL  
HVFGRCGHWTQIEQTDRFNRLVVEFFNEANTPKLVGRP

>non-antioxidant\_471

SLSDFSVASRDVNHNNICAGLSTEWLVMSDDGDAESRMDHLDYNGEGQSRGSRHQVYN  
DALRAALSNDDEAPFFTASTAVIEDAGFSLRREPKTVHASGGSAQLGQTVAHQVAQSGRK  
HLLSLRFANVQGHAIACSCGSGQFKLFDPNLGEFQSSRSAAAPQLIKGLIDHYNSLNYDVAC  
VNEFRVSV

>non-antioxidant\_472

MSMSDVAIVKEGWLHHRGEYIKTWRPRYFLLKNDGTFIGYKERPDVDQREAPLNNFSV  
AQCQLMKTERPRPNTFIIRCLQWTTVIERTFHVETPEEREWTTAIQTVADGLKKQEEEM  
DFRSG

>non-antioxidant\_473

DTCGSGYNVDQRRRTNSGCKAGNGDRHFCGCDRTGVVECKGGKWTEVQDCGSSSCKGTS  
NGGATC

>non-antioxidant\_474

MASRILLNNGAKMPILGLGTWKSPPGQVTEAVKVAIDVGYRHIDCAHVYQNENEVGVAI  
QEKLREQVVKREELFIVSKLWCTYHEKGLVKGACQKTLSDLKLDYLDLYLIHWPTGFKPG  
KEFFPLDESGNVVPSDTNILDWAAMEELVDEGLVKAIGISNFNHLQVEMILNKPLKYKP  
AVNQIECHPYLTQEKLQYQSKGIVVTAYSPLGSPDRPWAKPEDPSLLEDPRIKAIKHN  
KTTAQVLRIFPMQRNLVVIPKSVTPERIAENFKVDFELSSQDMTLLSYNRNWRVCALLS  
CTSHKDYPFHEEF

>non-antioxidant\_475

MRKPILAALTLAAGLGLAQEFITIGSGSTTGVIYFPVATGIAKLVNDANVGIRANARSTGGSVA  
NINAINAGEFEMALAQNDAIYAYQGCCIPAFEGKPKVTIRALAALYPEVVHVVARSDAGI  
RTVADLKGRVVGVDVGSQTEQNARQILEAYGLTFDDLGQAIRVSASQGIQLMQDKRAD  
ALFYTVGLGASAIQQLALTPIALVAVDLNRIQAIKKYPFYVGFNIPGGTYKGVVDTTPTV  
AVQAMLIASERLSEETVYKFMKAVFGNLEAFKKIHPNLERFFGLEKAVKGLPIPLHPGAER  
FYKEAGVLK

>non-antioxidant\_476

PSSSDYSDLQRVKQELLEEVKKELQKVKEEIIIEAFVQELRKRKRGSP

>non-antioxidant\_477

MDWEERENLKRVLKTFAPNFREALDFANRVGALAERENHHPRLTVEWGRVTVEWWTH  
SAGGVTEKDREMARLTDALLQR

>non-antioxidant\_478

TAPTPILRFVAVGDWGGVNPAPFHTAREMANAKAIATTVKTLGADFILSLGDNFYFTGVH  
DAKDKRFQETFEDVFSPLRNVPWHVLAGNHDHLGNVSAQIAYSKISKRWNFSPYYRL  
RFKIPRSNVSVAFMLDVTLCGNSDDFVSQQPERPRNLALARTQLAWIKKQLAAKEDY  
VLVAGHYVPVWSIAEHGPTHCLVKQLLPLLTTHKVTAYLCGHDHNLQYLQDENGGLGFVLS  
GAGNFMPSKKHLRKPNGYLRFHFGAENSLGGFAYVEITPKEMSVTYIEASGKSLFKTK  
LPRRARSEHQHRA

>non-antioxidant\_479

GICPRFAHVIEENLLGTPSSYETSLKEFEPDDTMKDAGMQMKKVLDSLPTTRENIMKLTE  
KIVKSPLCM

>non-antioxidant\_480

VPGPEYKVAILTVS DTVSAGAGPDRSGPRAVSVDSSSEKLGGA KVVATAVVPDEVERIKD  
ILQKWSVDVEMDLITLGGTGFTPRDVTPEATKKVIERETPGLLFVMMQESLKITPFAMLA  
RSAAGIRGSTLIINMPGNPNAVAECMEALLPALKHALKQIKGDKR

>non-antioxidant\_481

ASTQGI SEDLYNRLVEMATISQAAYADLCNIPSTIIKGEKIYNAQTDINGWILRDDTSKEIITV  
FRGTGSDTNLQLDNTYTLTPFD TLPQCNDCEVHGGYYIGWISVQDQVESLVKQASQYPD  
YALTVTGHS LGASMAALTA AQLSATYDNVRLYTFGEPRSGNQAFASYMND AFQVSSPETT  
QYFRVTHSNDGIPNLPPAEQGYAHGGVEYWSVDPYSAQNTFVCTGDEVQCCEAQGGQGV  
NDAHTTYFGMTSGACTWV

>non-antioxidant\_482

MTDNNKYRDVEIRAPRGNKLTAKSWL TEAPLRMLMNNLDPQVAENPKELVVYGGIGRAA  
RNWECYDKIVETLTRL EDDETLLVQSGKPVGVFKTHSNAPRVL IANSNLVPHWANWEHFN  
ELDAKGLAMY GQMTAGSWIYIGSQGIVQGT YETFEAGRQH YGGSLK GKWVLTAGLGG  
MGGAQPLAATLAGACSLNIESQQSRIDFRLETRYVDEQATDLDDALVRIAKYTAEGKAISI  
ALHGNAAEILPELVKRGV RPD MVTDQTS AHDPLNGYLPAGWTWEQYRDRAQTEPA AVV  
KAAKQSM AVHVQAM LDFQKQGVPTFDYGN NIRQMAKEEGVADAFDFPGFVPAYIRPLFC  
RGVGPFRWAALSGEAEDIYKTD AKVKELIPDDAHLHRWLDMARERISFQGLPARICWVGL  
GLRAKLGLAFNEMVRSGELSAPVVIGRDHLDSGSVSSPNAETEAMRDGSDAVSDWPLLN  
ALLNTAGGATWVSLHHGGGVGMGFSQHSGMVIVCDGTDEAAER IARVLTNDPGTGVMR  
HADAGYDIAIDCAKEQGLDLPMITG

>non-antioxidant\_483

MPEETQTQDQPMEEEEVETFAFQAEIAQLMSLIINTFY SNKEIFLRELISNSSDALDKIRYES  
LTDP SKLDSGKELHINLIPNKQDR TLTIVDTGIGMTKADL INNLGTIAKSGTKAFMEALQA  
GADISMIGQFGVGFYSAYLVAEKVTVITKHNDDEQYAWESSAGGSFTVRTDTGEPMGRGT  
KVILHLKEDQTEYLEERRIKEIVKKHSQFIGYPITL FVEKERDKEVSDDEAE

>non-antioxidant\_484

GSMPVWVPTLLDL SRDECKRILRKLELEAYAGVISALRAQGDLTKEKKDLLGELSKVLSIS  
TERHRAEVRRAVNDERLTTIAHNMSGPNSSSEWSIEGRRLV

>non-antioxidant\_485

AMGSDASKVVTRGPGLSQA FVGQKNSFTVDCSKAGTNMM MVGVHGP KTPCEEVYVKH  
MGNRVYNVTYTVKEKGDYILIVKWGDES VPGSPFKVKVP

>non-antioxidant\_486

ADSATPHLD AVEQTLRQVSPGLEGDV WERTSGNKLDGSAADPSDWLLQTPGCWGDDKC  
ADRVGTKRLLAKMTENIGNATRTVDISTLAPFPNGAFQDAIVAGLKESAAKGNKLV RILV  
GAAPVYHMNVIPSKYRDELTA KLGKAAENITLNVASMTTSKTA FSWNH SKILVVDGQSAL  
TGGINSWKDDYLD TTHPVSDVDLALTGPAAGSAGRYLDTLWTWTCQNKSNIASVWFAAS  
GNAGCMPTMHKDTNPKASPATGNVPVIAVGG LGVGIKDVPKSTFRPDLPTASDTKCVV  
GLHDNTNADR DYDTVNPEESALRALVASAKGHIEISQQDLNATCPPLPRYDIRLYDALAAK  
MAAGVKVRIVVSDPANRGAVGSGGYSQIKSLSEISDTLRNRLANITGGQQA AKTAMCSNL  
QLATFRSSPNGKWADGHPYAQH HKLVSVDSSTFYIGSKNLYPSWLQDFGYIVESPEAAKQ  
LDAKLLDPQWKYSQETATVDYARGICNA

>non-antioxidant\_487

GKPKTDTDFQTYNGDGFKLQIPSKWNP NKEVEYPGQVLR FEDNFDATSNVIVAITPTDKK  
SITDFGSPEQFLSQVDYLLGRQAYS GKT DSEGGFESDAVAIANVLETSTA EVGGKQYYYYLS

ILTRTADGNEGKHLVLTATVNDGKLYICKAQAGDKRWFKGAKKFVENTATSFSLA

>non-antioxidant\_488

MRERTEARRRRIIEVLRRRQPDLTVLENVHKPHNLSAILRTCDVGVLEAHAVNPTGGV  
PTFNETSGGSHKWVYLRVHVDLHEAFRFLKERGFTVYATALREDARDFREVDYTKPTAVL  
FGAEKWGVSEEALALADGAIKIPMLGMVQSLNVSVA AVILFEAQRQRLKAGLYDRPRL  
DPELYQKVLADWLRK

>non-antioxidant\_489

MYSIEVRTHSALHVVKGAVVVKVLGSEAKWYTYSTYVKGNKGV LIVKFDRKPSDEEIREIER  
LANEKVKENAPIKIYELPREEAEKMFGE DMYDLFPVPEDVRILKVVVIEDWNVNACNKE  
HTKTTGEIGPIKIRKVRFRKSKGLLEIHFELLELENPS

>non-antioxidant\_490

AQSVPYGVSQIKAPALHSQGYTGSNVKVAVIDSGIDSSHPDLKVAGGASMVPSETNPFQDN  
NSHGTHVAGTVAALNNSIGVLGVAPSASLYAVKVLGADGSGQYSWIINGIEWAIANNMDVI  
NMSLGGPSGSAALKA AVDKAVASGVVVVAAAGNEGTS GSSSTVGYPGKYPSVIAVGA VD  
SSNQRAFSSVGP ELDVMAPGVS IQSTLPGNKY GAYNGTCMASPHVAGAAALILSKHPNW  
TNTQVRSSLENTTTKLGDSFY YGKGLINVQAAAQ

>non-antioxidant\_491

MIQMVKRVHIFDWHKEHARKIEEFAGWEMPIWYSSIKEEHLAVRNAVGIFDVSHMGEIVF  
RGKDALKFLQYVTTNDISKPPAISGT YTLVLNERGAIKDETLVFNMG NNEYLMICDSDAFE  
KLYAWFTYLKRTIEQFTKLDLEIELKTYDIAMFAVQGP KARDLAKDLFGIDINEMWWFQA  
RWVELDGIKMLLSRSGYTGENGFEVYIEDANPYHPDESKRGEPEKALHVWERILEEGKK  
YGIKPCGLGARDTLRLEAGYTLYGNETKELQLLSTDIDEVTPLQANLEFAIYWDKDFIGKD  
ALLKQKERGVGRKLVHFKMIDKGIPREGYK VYANGEMIGEVTSGT LSPLLNVGIGIAFVK  
EEYAKPGIEIEVEIRGQRKKAVTVTPPFYDPKKYGLFRET

>non-antioxidant\_492

LECHNQSSQTPTTTGCSGGETNCYKKRWRDHRGYRTERGCGCPSVKNGIEINCCTTDRC  
NN

>non-antioxidant\_493

MKYGYFDNDNREYVITRPDVPAPWTNYLGTEKFCTVISHNAGGYSFYNSPEYNRVTKFRP  
NATFDRPGHYVYLRDDDSGDYWSISWQPVAKSLDEAQYQIRHGLSYSKFQCDYNGIHAR  
KTLFVPKGEDA EIWDVVIKNTSDQVRTISAFSFEVFSFSHIQSDNQNHQMSLYSAGTAYRP  
GLIEYDLYYNTDDFEGFYLASTFD PDSYDGQRDRFLGLYRDEANPLAVEQGRCSNSAQT  
CYNHCGSLHKQFTLQPGEIRFAYILGIGKNGERLREHYQDVANIDAAFAAIKAHWDER  
CAKFQVKSPNQGLDTMINAWTLYQAETCVVWSRFASFIEVGGRTGLGYRDTAQDAISVPH  
ANPEMTRKRIVDLLRGQVKAGYGLHLFPD WFDPEKEDVAPSKSPTVVPTPSDEDKIHGI  
KDTCSDDHLWLIPTICKYVMETGETSFFDQMIPYADGGEASVYEHMKAALDFSAEYVGQ  
TGICKGLRADWNDCLNLGGGESSMVSFLHFWALQEFIDLAKFLGKDQDVNTYTEMAAN  
VREACETHLWDDEGGWYIRGLTKNGDKIGTAQQEGRVHLESNTLAVLSGLASQERGEQ  
AMDAVDEHLFSPYGLHLNAPSFSSTPND DIGFVTRVYQGVKENGAI FSHPNPWAWVAETKL  
GRGDRAMKFYDALNPYNQNDIIEKRIAEPYSYVQFIMGRDHQDHGRANHPWLTGTSGWA  
YFAVTNYILGVQSFTGLSVDPCIPSDWPGFEVTRQWRGATYHIQVENPDHVS KGVKSITL  
NGAPIQGRIPPAQGS DNQVVVVLGHHHHHH

>non-antioxidant\_494

PFRTIARLNPAKPKAGEEFRLQVVAQHPNEPGTRRDAEGKLIPAKYINLVEVYFEGEKVAE

ARPGPSTSANPLYAFKFKAEKAGTFTIKLKDTDGDTGEASVKLELV

>non-antioxidant\_495

SRCQKGKSSWPQLVGSTGAAAKAVIERENPRVRAVIKVGSGATKDFRCDRVRVWVTERGIV  
ARPPTIG

>non-antioxidant\_496

MRALFYKDGKLFDTNDFLNPNVSDDNPAYEVLQHVKIPHTLTDVVVYEQTWEEALTRLIFV  
GSDSKGRRQYFYGKMHV

>non-antioxidant\_497

MTAFRQRPLRLGHRGAPLKAKENTLESFRLALEAGLDGVELDVWPTRDGVFAVRHDPDT  
PLGPVFQVDYADLKAQEPDLPRLEEV LALKEAFPQAVFNVELKSFPGLGEEAARRLAALL  
RGREGVWVSSFDPLALLALRKAAPGLPLGFLMAEDHSALLPCLGVEAVHPHHALVTEEAV  
AGWRKRGLFVVAWTVNEEGEARLLALGLDGLIGDRPEVLLPLGG

>non-antioxidant\_498

MRRFALTVALPKGRMFREAYEVLKRAGLDLPEVEGERTLLHGKEGGVALLELRNKDVPIY  
VDLGIAEIGVVGKDVLLDSGRDLFEPVDLGFACRLSLIRRPDGTGPIRRVATKYPNFTARL  
LKERGWAADVVELSGNIELAAVTGLADAVDVVQGTGATLRAAGLVEVEVLAHSTARLVV  
NRQALKLKRAVLKPLIQRLRELSGS

>non-antioxidant\_499

METRTLEDWRALLEAEKTLDSGVYNKHDLIVRGQGARVWDAEGNEYIDCVGGYGVAN  
LGHGNEPVVEAVKRQAETLMAMPQTLPTPMRGEFYRTLTAILPELNRVFPVNSGTEANE  
AALKFARAHTGRKKFVAAMRGFSGRMTGSLSVTWEPKYREPFLPLVEPVEFIPYNDVEAL  
KRAVDEETA AVILEPVQEGGGVRPATPEFLRAAREITQEKGALLILDEIQTGMGRTGKRFAF  
EHFGIVPDILTAKALGGGVPLGVAVMREEVARSMPKGGHGTTFGGNPLAMAAGVAAIRY  
LERTRLWERAELGPWFMEKLRAIPSPKIREVRGMGLMVGLELKEKAAPYIARLEKEHRV  
LALQAGPTVIRFLPPLVIEKEDLERVVEAVRAVLA

>non-antioxidant\_500

DSKTPADWIDSDACMICKKFSLLNRKHHCRSCGGVFCQEHSSNSIPLPDLGIYEPVRVCD  
SCFEDYEFIVTD

>non-antioxidant\_501

MSLIWKRKITLEALNAMGEGNMVGFDIRFEHIGDDTLEATMPVDSRTKQPFGLLHGGAS  
VVLAEISVAGYLCTEGERQKVVGLEINANHVRSAREGRVGVCKPLHLGSRHQVWQIEI  
FDEKGRLLCCSSRLTTAILEGGSHHHHHH

>non-antioxidant\_502

MAHHHHHHMSLAVEAVKDFLLKLQDDICEALEAEDGQATFVEDKWTREGGGGGRTRVM  
VDGAVIEKGGVNFVSHVYVGKGLPMSSTERHPDIAGCNFEAMGVSLVIHPKNPHVPTSHANV  
RLFVAEREGKEPVWVFGGGFDLTPYYAVEEDCRDFHQVAQDLCKPFGADVYARFKGWC  
DEYFFIPYRNEARGIGGLFFDDLNEWPFKCFEFVQAVGKGYMDAYIPIVNRKNTPTYTEQ  
QVEFQEFRGRYAENLVIDRGTKFGQLQSGGRTESILISLPPRARWGYNWQPEPGTPEARLT  
EYFLTKRQWV

>non-antioxidant\_503

MGVEKVPKYDIPVKKVEYVFIELDKMKPHEQLVQRELEDFIESVTGSGIFWKPMLLAKIP  
GTDEYLIVDGHHRWAGLQKLGAKRAPS VILDYFDEGVKVYTWYPAFKGDVNVKVIERLKA  
EGLEVIEDEKAEKAEKGEIAFALIGEKSFAIPGGLEEQKKVSKVLDEMDQAKEIELVYYG  
LKEDAKADMEKGEIDYVFIRKAPTKEEVMELVKRGEVFSPKTTRHVLPFIPDKIDVKLEDL

F

>non-antioxidant\_504

MGSDKIHHHHHHMEYKKFVEARRELNEKVLSRGTLNTRFFNLDSAVYRPGKLDVKTKE  
LMGLVASTVLRCCDCIRYHLVRCVQEGASDEEIFEALDIALVVGGSIVIPHLRRAVGFLEEL  
REMEKNGETISL

>non-antioxidant\_505

MGSDKIHHHHHHMSDSLVCVDPPELKETLRKFRFRKETNNAIIMKVDKDRQMVVLED  
ELQNISPEELKLELPERQPRFVVYSYKYVHDDGRVSYPLCFIFSSPVGCKPEQQMMYAGSK  
NRLVQTAELTKVFEIRTTDDLTTETWLKEKLAFFR

>non-antioxidant\_506

MGSDKIHHHHHHMSQLEKAQAEYAGFIQEFQSAIISTISEQGIPNGSYAPFVIDDAKNIYIY  
VSGLAHVHTKNIEANPLVNVLFVDDEAKTNQIFARRRLSFDCTATLIERESQKWNQVVDQF  
QERFGQIIEVLRGLADFRIFQLTPKEGRFVIGFGA

>non-antioxidant\_507

MGSDKIHHHHHHMAFTPFPPRQPTASARLPLTLMTLDDWALATITGADSEKYMQQQVTA  
DVSQMAEDQHLLAAHCDAGKMWNSLRLFRDGDGFAWIERSVREPQLTELKKYAVFS  
KVTIAPDDERVLLGVAGFQARAALANLFSSELPKQVVKVKEGATLLWFEHPAERFLIVTD  
EATANMLTDKLRGEAELNNSQQWLALNIEAGFPVIDAANSQFIPQATNLQALGGISFKKG  
CYTGQEMVARAKFRGANKRALWLAGSASRLPEAGEDLELKMGENWRRTGTVLA AVKL  
EDGQVVVQVVMNNDMEPDSIFRVRDDANTLHIEPLPYSLEE

>non-antioxidant\_508

MGSDKIHHHHHHMDLELKELOSKMKEMYFEKDSQRGIYATFTWLVEEVGELAEALLSNN  
LDSIQEELADVIAWTVSANLEGIDIEEALKKKYKL

>non-antioxidant\_509

MGSDKIHHHHHHMKGVIEYSLKTSNDDQFIDITNLVKKAVDESGVSDGMAVVFCPHTTA  
GITINENADPDVTRDILVNLDKVFPKVGDKHVEGN SHAHIKASLMGSSQIIIENGKLLK  
GTWQGIYFTEFDGPRDRKVFVKII

>non-antioxidant\_510

MGSDKIHHHHHHMEKKIVYFNKPGRENTEETLRLAVERAKELGIKHLVVASSYGDTAMK  
ALEMAEGLEVVVVYHTGFVREGENTMPPEVEEELRKRGAKIVRQSHLSGLERSISRKL  
GGVSRTEAIAEALRSLFGHGLKVCVEITIMAADSGAIPIEEVAVGGRSRGADTAVVIRPAH  
MNNFFDAEIKEIICMPRNKR

>non-antioxidant\_511

MGSDKIHHHHHHMFYEIRTYRLKNGAIPAYLKVVEDEGIEIQKSHLGELVGYFFSEIGPINE  
IVHIWAFSSLDDRAERRARLMADPRWLSFLPKIRD LIEVAENKIMKPARFSPLM

>non-antioxidant\_512

MGSDKIHHHHHHMKSLGRHLVAEFYECREVL DNVQLIEQEMKQAAYESGATIVTSTFH  
RFLPYGVSGVVVISESHLTIHTWPEYGYAAIDLFTCGEDVDPWKAFEHLKKALKAKRVHV  
VEHERGRYDEIGIPEDSPHKA AV

>non-antioxidant\_513

MGSDKIHHHHHHRTKDQYYELRDFALGTSVRIVVSSQKINPRTIAEAILED MKRITYKFSF  
TDERSVVKKINDHPNEWVEVDEETYSLIKAACAFaelTDGAFDPTVGRLLELWGFTGNYE  
NLRVPSREEIEEALKHTGYKNVLFDDKNMRVMVKNGVKIDLGGIAGKYALDRARQIALSF  
DENATGFVEAGGDVRIIGPKFGKYPWVIGVKDPRGDDVIDYIYLKSGAVATSGDYERYFV

VDGVRYHHILDPSTGYPARGVWSVTIIAEDATTADALSTAGFVMAGKDWRKVVLDFFNM  
GAHLLIVLEGGAIERSETFKLFERE

>non-antioxidant\_514

WSATNEEDDLSVEAEIAHQIAESFSKKYKFPSRSSGIFLYNFEQLKMNLDLDDIVKEAKNVP  
VTRLAHDGSKIPLRCVLGWVALANSKKFQLLVEADKLSKIMQDDLNRYSCT

>non-antioxidant\_515

EARPIVVGPPPLSGGLPGTENSQARDGTLPYTKDRFYLQPLPTEAAQRAKVSASEILN  
VKQFIDRKAWPSLQNDLRLRASYLRYDLKTVISAKPKDEKSLQELTSKLFSSIDNLDHAA  
KIKSPTEAEKYYGQTVSNINEVLAKLG

>non-antioxidant\_516

SAEKLFTPLKVGAVTAPNRVFMAPLTRLRSIEPGDIPTPLMGEYYRQRASAGLIISEATQISA  
QAKGYAGAPGLHSPEQIAAWKKITAGVHAEDGRIAVQLWHTGRISHSSIQPGGQAPVSAS  
ALNANTRTSLRDENGNIRVDTTTTPRALELDEIPGIVNDFRQAVANAREAGFDLVELHSAH  
GYLLHQFLSPSSNQRDQYGGSVENRARLVLEVVDVAVCNWSADRIGIRVSPIGTFQNV  
NGPNEEADALYLIEELAKRGIAYLHMSETDLAGGKPYSEAFRQKVRERFHGVIIGAGAYTA  
EKAEDLIGKGLIDAVAFGRDYIANPDLVARLQKKAELNPQRPEFYGGAEGYTDYPSL

>non-antioxidant\_517

MPERLQVYKCEVCGNIVEVLNGGIGELVCCNQDMKLMSENTVDAAKAKHVPVIEKIDGG  
YKVKVGAVAHPMEEKHYIQWIELLADDKCYTQFLKPGQAPEAVFLIEAAKVVAREYCNH  
GHWKAEN

>non-antioxidant\_518

AAKELTLAQTESLREVCETNMACDEMADAQGIVAAYQAFYGPPIF

>non-antioxidant\_519

GSHMADSYDYICIIDFEATCEEENPPEFVHEIIEFPVLLNTHLTLEIEDTFQYVRPEINTQ  
LSDFCISLTGITQDQVDRADTFPQVLKKVIDWMKLELGTKYKYSLLTDGSWDMSKFLNI  
QCQLSRLKYPPFAKKWINIRKSYGNFYKVPRSQTCLTIMLEKLGMDYDGRPHCGLDDSK  
NIARIAVRMLQDGCCELRIKEM

>non-antioxidant\_520

WQFTPNTGGNTITKVEAENMKIGGTIYAGKISAPFDGVALYANADYVVSYSQYFANSTHNS  
VRGASSNAGTAKVDLVIGGVTVGSFNFTGKTPTVQTLNITHATGDQEIKLALTSDDGTW  
DAYVDFIEFSL

>non-antioxidant\_521

VKQVFNFNAGPSALPKPALERAQKELLNFNDTQMSVMELSHRSQSYEEVHEQAQNLRE  
LLQIPNDYQILFLQGGASLQFTMLPMNLLTKGTIGNYVLTGSWSEKALKEAKLLGETHIAA  
STKANSYQSIPDFSEFQLNENDAYLHITSNNTIYGTQYQNFPEINHAPLIADMSSDILSRPLK  
VNQFGMIYAGAQNGLGPSVTVVIVKKDLLNTKVEQVPTMLQYATHIKSDSLYNTPTFSI  
YMLRNVLDWIKDLGGAEIAKQNEEKAKIYDTIDESNGFYVGHAEKGSRLMNVTFNL  
RNEELNQQFLAKAKEQGFVGLNGHRSVGGCRASIYNAPIDACIALRELMIQFKENA

>non-antioxidant\_522

HMSSGSAGLSSLHRTYSQDCSFKNSMYHVG DYVYVEPAEANLQPHIVCIERLWEDSAGE  
KWLYGCWFYRPNETFHLATRKFLEKEVFKSDYYNKVPVSKILGKCVVMFVKEYFKLCPE  
NFRDEDVYVCESTRYSAKTKSFKKIKLWTMPVSSVRFVPRDVPLPVVRVASVFANTD

>non-antioxidant\_523

MDFREVIEQRYHQLLSRYIAELTETSLEYQAQKFSRKTIEHQIPPEEIIHSIRKVLKELYPSLPE

DVFHSLDFLIEVMIGYGMAY

>non-antioxidant\_524

MSFTPANRAYPYTRLRRNRDDFSRRLVRENVLTVDLLILPVFVLDGVNQRESIPSPMPGVE  
RLSIDQLLIEAEEWVALGIPALALFPVTPVEKKSLDAAEAYNPEGIAQRATRALRERFPELGI  
ITDVCLCEFTTHGQCGLDDDGYVLNDVSIQVLRQALSHAEAGAQQVAPSDMMDGRIG  
AIREALESAGHTNVRVMAYSAKYASAYYGPFRDAVGSASNLGKGNRATYQMDPANSDEA  
LHEVAADLAEGADMVMVKPGMPYLDIVRRVKDEFRAPTFVYQVSGEYAMHMGAIQNG  
WLAESVILESHTAFKRAAGDILTYFAKQAAEQLRRGR

>non-antioxidant\_525

ESHMAMDLGGYLTRIGLDGRPRPDLGTLHAIVA AHNRSIPFENLDPLLGPVADLSAEALF  
AKLVDRRRGGYQYEHNGLLGYVLEELGFEVERLSGRVVMRADDAPLPAQTHNVLSVA  
VPGADGRYLVDFGFGGQTLTSPIRLEAGPVQQRHEPYRLTRHGDDHTLAAQVRGEWQP  
LYTFTTEPRPRIDLEVGSWYVSTHPGSHFVTGLTVAVVTDDARYNLRGRNLAVHRSGATEH  
IRFDSAAQVLDIAIVNRFIDLDGLAGRDVQARVAEVLDT

>non-antioxidant\_526

GAMAGSIRSKLSAIDVRQLGTVDYRTAWQLQRELADARVAGGADTLLLLLEHPAVYTAGRR  
TETHERPIDGTPVVDTRGGKITWHGPGQLVGYPIGLAEPLDVVNYVRRLEESLIQVCAD  
LGLHAGRDGRSGVWLPGRPARKVAAIGVRVSRATTLHGFAFNCDCLAAFTAIVPCGIS  
DAAVTSLSAELGRTVTVDEVRAVAAVCAALDGVLPVGDVPSHAVPSPL

>non-antioxidant\_527

NDKLVLSKSDDNWVMPGKNYDSNNFSDLKQINKGNVKQLRPAWTFSTGLLNHHEGAPL  
VVDGKMYIHTSFPNNTFALGLDDPGTILWQDKPKQNPAAVACCDLVNRLAYWPGDG  
KTPALILKTQLDGNVAALNAETGETVWQVENSIDIKVGSTLTIAPYVVKDKVIIGSSGAELG  
VRGYLTAYDVKTGEQVWRAYATGPKDLLLLASDFNIKNPHYGQKGLGTGTWEGDAWKI  
GGGTNWGWYAYDPGTNLIYFGTGNPAPWNETMRPGDNKWTMTIFGRDADTGEAKFGY  
QKTPHDEWDYAGVNVMMMLSEQKDKDKGKARKLLTHPDRNGIVYTLDRTDGALVSANKLD  
DTVNVFKSVDLKTGQPVDRDPEYGTMRMDHLAKDICPSAMGYHNQGHDSYDPKRELFFMG  
INHICMDWEPFMLPYKAGQFFVGATLNMYPGPKGDRQNYEGLGQIKAYNAITGDYKWE  
KMERFAVWGGTMATAGDLVIFYGTLDGYLKARDSDTGDLWKFKIPSGAIGYPMTYTHK  
GTQYVAIYYGVGGWPGVGLVFDLADPTAGLGAVGAFKKLANYTQMGGGVVVFSLDGK  
GPYDDPNVGEWKSAAK

>non-antioxidant\_528

YDGTKCKAAGNCWEPKPGFPEKIAGSKYDPKHDPKELNKQADSIKQMEERNKKRVENFK  
KTGKFEYDVAKISAN

>non-antioxidant\_529

ASAECVSNENVEIEAPKTNIWTS LAKEEVQEVL DLLHSTYNITEVTKADFFSNYVLWIETL  
KPNKTEALTYLDEDGDLPPRNARTVVYFGEGEEGYFEELKVGPLPVSDETTIEPLSFYNTN  
GKSKLPFEVGHLDRIKSAKSSFLNKNLNTTIMRDVLEGLIGVPYEDMGCHSAAPQLHDP  
ATGATVDYGT CNINTENDAENLVPTGFFFKFDMTGRDVSQWKMLEIYNNKVYTS AEEL  
YEAMQKDDFVTL PKIDVDNLDWTVIQRNDSAPVRHLDDRKSPRLVEPEGRRWAYDGDDEE  
YFSWMDWGFYTSWSRDTGISFYDITFKGERIVYELSLQELIAEYGSDDPFNQHTFYSDISY  
GVGNRFSVLPGYDCPSTAGYFTTDTFEYDEFYNRTLSYCVFENQEDYSLLRHTGASYSAIT  
QNPTLNVRFISTIGNYDYNFLYKFFLDGTLEVS VRAAGYIQAGYWNPETSA PYGLKIHDVL  
SGSFHDHVLN YKVDLDVGGTKNRASQYVMKDVDVEYPWAPGTVYNTKQIAREVFENED



FNGINWPENGQGILLIESAEETNSFGNPRAYNIMPGGGVHRIVKNSRSGPETQNWARSNL  
FLTKHKDELRSSTALNTNALYDPPVNFNAFLDDES LDGEDIVAWVNLGLHHL PNSNDLP  
NTIFSTAHASFMLTPFNYFDSSENSRD TTQQVFYTYDDETEESNWEFYGNDWSSCGVEVAE  
PNFEDYTYGRGTRINKKMTNSDEVY

>non-antioxidant\_530

MASDKFPAENPSSSFKYESA VQYRPAPDSYLNPCPQAGRIVKETYTGINGTKSLNVYLPY  
GYDPNKKYNIFYLMHGGGENENTIFSNDVKLQNILDHAIMNGELEPLIVVPTPFNGGNC T  
AQNFYQEFRQNVIPFVESKYSTYAESTTPQGIAASRMHRGFGGFAMGGLTTWYVMVNCL  
DYVAYFMPLSGDYWYGNSPQDKANSIAEAINRSGLSKREYFVFAATGSEDIAYANMNPQI  
EAMKALPHFDYTSDFSKGNFYFLVAPGATHWWGYVRHYIYDALPYFFHELEHHHHHH

>non-antioxidant\_531

MALLAEHLLRPLPADKQIETGPFLEAVSHLPPFFDCLGSPVFTPIKADISGNITKIKAVYDTN  
PTKFRTLQNI LEVEKEMYGA EWPKVGATLALMWLKRGLRFIQVFLQ SICDGERDENHPNL  
IRVNATKAYEMALKKYHG WIVQKIFQAALYAAPYKSDFLKALSKGQNVTEEECLEKVRLF  
LVNYTATIDVIYEMYTRMNAELNYKV

>non-antioxidant\_532

AMKNWKTSAESILTTGPVVPVIVVKKLEHAVPMAKALVAGGVRLNVTLRTECAVDAIRA  
IAKEVPEAIVGAGTVLNPQLAEVTEAGA QFAISPLTEPLLKAATEGTIPLIPGISTVSELM  
LGMDYGLKEFKFFPAEANGGVKALQAIAGPFSQVRF CPTGGISPANYRDYLALKS VLCIG  
GSWLVPADALEAGDYDRITKLAREAVEGAKL

>non-antioxidant\_533

NQKCSGNPRRYNGKSCASTTNYHDSHKGACGCGPASGDAQFGWNAGSFVAAASQMYFD  
SGNKGWCGQHCGQC IKLTTGGYVPGQGGPVREGLSKTFMITNLCPNIYPNQDWCNQQS  
QYGGHNKYGYELHLDLENGRSQVTGMGWNNPETTWEVVNCDSEHNHDHRTPSNSMYG  
QCQCAHQ

>non-antioxidant\_534

MRRLEEDAVRVAYAGLRRKEAFKALAEKLGFTPLLFPVQATEKVPVPEYRDQVRALAQG  
VDLFLATTGVGVRDLLEAGKALGLDLEGPLAKAFRLARGAKAARALKEAGLPPHAVGDG  
TSKSLPLLPQGRGVAALQLYGKPLPLENALAERGYRVLPLMPYRHLDPPEGILRLEEAL  
LRGEVDALAFVAAIQVEFLFEGAKDPKALREALNTRVKALAVGRVTADALREWGVPFY  
VDETERLGSLQGFKRALQKEVA

>non-antioxidant\_535

MSPQTETKASVGFKAGVKDYKLTYYTPEYETKDTDILAAFRVTPQGPVPPEEAGA AVAAE  
SSTGTWTTVWTDGLTSLDRYKGRCYHIEPVVGEDNQYIAYVAYPLDLFEESVTNMFTSI  
VGNVFGFKALRALRLEDLRIPPTYSKTFQGGPHGIQVERDKLNKYGRPLLGCTIKPKLGLS  
AKNYGRACYECLRGGLDFTKDDENVNSQPFRWRDRFVFC AEAIYKSQAETGEIKGHYL  
NATAGTCEEMIKRAVFARELGVPIVMHDYLTGGFTANTSLAHYCRDNGLLLHIHRAMHAV  
IDRQKNHGMHFRVLAKALRMSGGDHIHAGTVVGKLEGEREMTLGFVDLLRDDFIEKDRA  
RGIFFTQDWVSMPGVIPVASGGIHVWHMPALTEIFGDDSVLQFGGGTLGHPWGNAPGAA  
ANRVALEACVQARNEGRDLAREGNEIIRSACKWSPELAAACEIWKAIKFEFEPVDKLDS

>non-antioxidant\_536

ATSDSNMLLNYPVYVMLPLGVVNVDNVFE DDPGLKEQLLQLRAAGVDGVMVDVWW  
GIELKGPQYDWRAYRSLQLVQECGLTLQA IMSFHQCGGNVGDIVNIPIQWVLDIGES  
NHDIFYTNRSGTRNKEYLTVGVDNEPIFHGR TAIEIYSDYMKS FRENMSDFLESGLIIDIEVG

LGPAGELRYPSYPQSQGWEPGIGEFQCYDKYLKADFKAAVARAGHPEWELPDDAGKYN  
DVPESTGFFKSNGTYVTEKKGFFLTWYSNKLLNHGDQILDEANKAFLGCKVKLAIKVSGI  
HWWYKVENHAAELTAGYYNLNDRDGYRPIARMLSRHHAILNFTCLEMRDSEQPSDAKS  
GPQELVQQVLSGGWREDIRVAGENALPRYDATAYNQIILNARPQGVNNGPPKLSMFGVT  
YLRLSDDLQKSNFNIFKKFVLKMHADQDYCANPQKYNHAITPLKPSAPKPIEVLLLEATK  
PTLFPWLPETDMKVDG

>non-antioxidant\_537

MEKIMPEEEYSEFKELILQKELHVYALSHVCGQDRITLLASILLRIFLHEKLESLLLCTLND  
REISMEDEATTLFRATTLASTLMEQYMKATATQFVHHALKDSILKIMESKQSCELSPSKLE  
KNEDVNTNLTHLLNILSELVEKIFMASEILPPTLRYIYGCLQKSVQHKWPTNTTMRTRVVS  
GFVFLRLICPAILNPRMFNIISDPSPIAARTLILVAKSVQNLANLVEFGAKEPYMEGVNPFIK  
SNKHRMIMFLDELGNVPELPDTTEHSRTDLSRDLAALHEICVAHSDELRTLSNERGAQQH  
VLKLLAITELLQQKQNYTKTNDVR

>non-antioxidant\_538

DTASDAAAAAALTAANAKAAAELTAANAAAAAATARM

>non-antioxidant\_539

MIQQESRLKVADNSGAREVLVIKVLGGSGRRYANIGDVVVATVKDATPGGVVKKGQVVK  
AVVVRTKRGVRRPDGSYIRFDENACVIIRDDKSPRGTRIFGPVARELRDKDFMKIISLAPEV  
I

>non-antioxidant\_540

MWMPRPPEEVARKLRLRGFVERMAKGGHRLYTHPDGRIVVVPFHSGELPKGTFRILRD  
AGLTEEEFHNL

>non-antioxidant\_541

DNDSVVEEHGQLSISNGELVNERGEQVQLKGMSSHGLQWYGFVNYESMKWLRDDWGI  
NVFRAAMYTSSGGYIDDPSVKEKVEAVEAAIDLDIYVIIDWHILSDNDPNYKKEAKDFF  
DEMSELYGDYPNVIYEIANEPNGSDVTWGNQIKPYAEEVIIRNNDPNIIIIVGTGTWSQD  
VHHAADNQLADPNVMYAFHFYAGTHGQNLRDQVDYALDQGAEIFVSEWGTSAAATGDG  
GVFLDEAQVWIDFMDERNLSWANWSLTHKDESSAALMPGANPTGGWTEAELSPSGTFV  
REKIRES

>non-antioxidant\_542

GPHMATADRDLARLHKAVTSHYHAITQEFENFDTMKTNTISREEFRAICNRRVQILTDEQF  
DRLWNEMPVNAKGRLLKYPDFLSRFSSETAATPMATGDSAVAQR

>non-antioxidant\_543

GPLGSQVRVKAYYRGDIMITHFEPSSIFEGLCNEVRDMCSFDNEQLFTMKWIDEEGDPCT  
VSSQLELEEAFLRYELNKDSELLIHVFPC

>non-antioxidant\_544

GPHMSIVEVKSKFDAEFRFALPRASVSGFQEFSSRLRAVHQIPGLDVLLGYTDAHGDLLP  
LTNDDSLHRALASGPPPLRLLVQKR

>non-antioxidant\_545

MVPAPEAIRQALQERLLARLDHPDPLYRDLLQDYPRRGKMLRGLLTVYSALAHGAPLE  
AGLEAATALELFQNWVLVHDDIEDGSEERRGRPALHRLHPMPLALNAGDAMHAEMWGL  
LAEGLARGLFPPEVLLFEHEVVRRTAYGQHLDLLWTLGGTFDLRPEDYFRMVAHKAAYY  
TAVAPLRLGALLAGKTPPAAYEEGGLRLGTAFQIVDDVLNLEGGEAYGKERAGDLYEGKR  
TLILLRFLEEAPPEERARALALLALPREAKPEAEVWLLERLLASRALAWAKAEAKRLQA

EGLALLEAAFQDLPGKEALDHLRGLLAALVERRA

>non-antioxidant\_546

MIKMFKYKQVIVARADLKLSKGLAAQVAHGAVTAAFEAYKKKREWFEEAWFREGQKKV  
VVKVESEEEELFKLKAEAEKLGPNALIRDAGLTEIPP GTVTVLAVGPAPEEIVDKVTGNLKL  
LL

>non-antioxidant\_547

MVRVGMRAAPRVSLEALKAALGGLKLSEAKVYLITDWQDKRDQARYALLLHTGKKDLL  
VPDAFGPAFPGGEEALSELVGLLLAQGARRFYEA VVSPGEMTALLDLPPEELLKRVMAIAN  
PTDPGIYLRKAA

>non-antioxidant\_548

MQDPSVYVRFPLKEPKKLGLEKASLLIWTTPWTLPGNVAAAVHPEYTYAAFQVGDEALI  
LEEGLGRKLLGEGTPVLKTFPGKALEGLPYTPPYQALEKGYFVVLADYVSQEDGTGIVH  
QAPAFGAEDLETARVYGLPLLKTVDDEGKLLVEPFKGLYFREANRAILRDLRGRGLLFKEE  
SYLHS

>non-antioxidant\_549

GSHMEEDWIREYPPITSDQQRQLYKRNFD TGLQEYKSLQSELDEINKELSRLDKELDDYR  
EESSEYMAAADEYNRLKQVKGSADYKSKKNHCKQLKSKLSHIKKMVG DYDRQKT

>non-antioxidant\_550

MEKILIFGHQNPDTDTICSAIAYADLKNKLG FNAEPVRLGQVNGETQYALDYFKQESPRLV  
ETAANEVNGVILVDHNERQQSIKDIEEVQVLEVIDHHRIANFETAEP LYRAEPVCGTATIL  
NKMYKENNVKIEKEIAGLMLSIIISDSL LFKSPTCTDQDVAAAKELAEIAGVD AEEYGLN  
MLKAG

>non-antioxidant\_551

TLHKERRIGRLSVLLLLNEAEESTQVEELERD GWKVC LGKVGSM DAHKVIAAIETASKKS  
GVIQSEGYRESHALYHATMEALHGVTRGEMLLG SLLRTVGLRFAVLRGNPYESEAE GDWI  
AVSLYGTIGAPIKGLEHETFGVGINHI

>non-antioxidant\_552

AIHCPCSEEKLARCRPPVGC EELVREPGCGCCATCALGLGMPCGVYTPRCG SGLRCYPPR  
GVEKPLHTLMHGQGVCMEL

>non-antioxidant\_553

MATVHKVGDSTGWTTLPYDYAKWASSNK FHVGD SLLFN YNNKFHNVLQVDQE QFKSC  
NSSSPAASYTSGADSIPLKRP GTFYFLCGIPGHCQLGQKVEIKVDPGSSSA

>non-antioxidant\_554

GAMAEAEAEVTLRELQEAL EEEVLTRQSL SREMEAIRTDNQN FASQLREAEARNRDLEAH  
VRQLQERMELLQAEGATAVTG

>non-antioxidant\_555

MSASHADQPTQTVSYPQLIDLLRRIFV VHGTSPEVADVLAENCASAQRD GSHSHGIFRIPG  
YLSSLASGWVDGKAVPVVEDVGA AFVRVDACNGFAQPALAAARSLLIDKARSAGVAILAI  
RGS HHFAALWPDVEPF AEQGLVALSMVNSMTCV VPHGARQPLFGTNPIAFGAPRAGGEPI  
VFDLATSIAAHGDVQIAAREGRLLPAGMGVDRDGLPTQEPRAILDGGALLPFGGHKGSAL  
SMMVELLAAGLTGGNFSFEFDWSKHPGAQTPWTGQLLIVIDPDKGAGQHFAQRSEELVR  
QLHGVGQERLPGDRRYLERARSM AHGIVIAQADLERLQELAGH

>non-antioxidant\_556

GSDEAAELMQQVNVLKLTVEDLEKERDFYFGKLRNIELICQENEGENDPVLQRIVDILYAT

DEGFVIPDEGGPQEEQEEY

>non-antioxidant\_557

SSYSGPIVVDPVTRIEGHLRIEVEVENGVKVNAYSSSTLFRGLEIILKGRDPRDAQHFTQRT  
CGVCTYTHALASTRCVDNAVGVHIPKNATYIRNLVVGALQYLHDHIVHFYHLHALDFVDV  
TAALKADPAKAAKVASSISPRKTTAADLKAVQDKLKTFFVETGQLGPFTNAYFLGGHPAYY  
LDPETNLIATAHYLEALRLQVKAARAMAVFGAKNPHTQFTVVGGVTCYDALTPQRIAEFE  
ALWKETKAFVDEVYIPDLLVVAAYKDWYQYGGTDNFITFGEFPPKDEYDLNSRFFKPGV  
VFKRDFKNIKPFDKMQIEEHVRHSWYEGAEARHPWKGQTQPKYTDLHGDDDRYSWMKA  
PRYMGEPMETGPLAQVLIAYSQGHKPKVAVTDAVLAKLGVGPEALFSTLGRTAARGIETA  
VIAEYVGVMLQEYKDNIAKGDNVICAPWEMPKQAEGVGFVNAPRGGLSHWIRIEDGKIG  
NFQLVVPSTWTLGPRCDKNKLSVPEASLIGTPVADAKRPVEILRTVHSFDPACIACGVH

>non-antioxidant\_558

LMGPRRPSVVYLHNAECTGCSESVLRAFEPYIDTLILDLSLDYHETIMAAAGDAAEAAL  
EQAVNSPHGFIAVVEGGIPTAANGIYGKVANHTMLDICSRLPKAQAVIAYGTCATFGGVQ  
AAKNPTGAKGVNDALKHLGVKAINIAGCPPNPYNLVGTIVYYLKNKAAPELDSLNRPT  
MFFGQTVHEQCPRLPHFDAGEFAPSESEARKGWCLYELGCKGPVMTMNNCPKIKFNQTN  
WPVDAGHPCIGCSEPDFWDAMTPFYQN

>non-antioxidant\_559

SEQNNAVLPGKVTQGEFNKAVQKFRALLGDDNVLVESDQLVPYNKIMMPVENAAHAPSA  
AVTATTVEQVQGVVVICNEHKIPIWTISTGRNFGYGSAAAPVQRGQVILDLLKMKNKIIPKIDPE  
MCYALVEPGVTFGQMYDYIQENNLVMSLFSAPSIAIGPVGNTMDRGVGYTPYGEHFM  
MQCGMEVVLANGDVYRTGMGGVPGSNTWQIFKWGYGPTLDGMFTQANYGICTKMGF  
WLMPPKPPVFKPFVFEDEADIVEIVDALRPLRMSNTIPNSVVIASLWEAGSAHLTRAQY  
TTEPGHTPDSVIKQMQKDTGMGAWNLYAALYGTQEQVDVNWKIVTDVFKLKGGRIVT  
QEEAGDTQPFKYRAQLMSGVPNLQEFGLYNWRGGGSMWFAPVSEARGSECKKQAAM  
AKRVLHKEYGLDYVAEFIVAPRDMHHVIDVLYDRTNPEETKRADACFNELLDEFKEGYAV  
YRVNTRFQDRVAQSYGPVVKRLEHAIKRAVDPNNILAPGRSGIDLNNDF

>non-antioxidant\_560

GAACNVLFINSVEMESLTGPQAISKAVAETLVADPTPTATIVHFKVSAQGITLTDNQRKLF  
RRHYPLNTVTFCDLDPQERKWTKTGSGPAKLFVARKQGSTTDNVCHLFAELDPDQP  
AAAIVNFVSRVML

>non-antioxidant\_561

MTDMSIKFELIDVPIPQGTNVIIGQAHFIKTVEDLYEALVTSVPGVKFGIAFCEASGKRLVR  
HEANDEELRNLAIDLCKKIAAGHVFIYIRNAWPINVLNAIKNVPEVVRIFAATANPLKVIV  
AEVEPERRGVVGVVDGHSPLGVETEKDREERKKFLREVVKYKL

>non-antioxidant\_562

MLMKVAEFERLFRQAAGLDVDKNDLKRVSDFLRNKLYDLLAVAERNAKYNGRDLIFEPD  
LPIAKGLQETLQEFRRMDTALELKPVLDALAALPPLDLEVAEDVRNLLPELAGALVVAYAR  
VLKELDPALKNPQTEHHERAERVFNLLL

>non-antioxidant\_563

MTVRKNQATLTADEKRRFVAAVLELKRSGRYDEFVIRTHNEFIMSDTDSGERTGHRSPSFLP  
WHRRFLLDFEQALQSVDSSTLPYWDWSADRTVRASLWAPDFLGGTGRSTDGRVMDGPF  
AASSTGNWPINVRVDSRTYLRRSLGGSVAELPTRAEVESVLAISAYDLPPYNSASEGFRNHL  
EGWRGVNLHNRVHVWVGGQMATGVSPNDPVFWLHHAYVDKLWAEWQRRHPDSAYVP

TGGTPDVVDLNETMKPWNTVRPADLLDHTAYYTFDALEHHHHHH

>non-antioxidant\_564

MPEITRRRALTA AAAVAATASAAVTLAAPAASAAGHHEPAAPESFDEVYKGRRIQGRPARG  
AAHHHEHGGGYEVFVDGVQLHV MRNADG SWISVVS HYDPVPTPRAAARA AVDELQGA  
PLLFPANLEHHHHHH

>non-antioxidant\_565

LSDEDFKAVFGMTRSAFANLPLWLQQLKKEKGLF

>non-antioxidant\_566

MTTATAGLAVELKQSTAQAHEKAEHSTFMSDLLKGR LGVAEFTRLQE QAWLFYTALEQAV  
DAVRASGFAESLLDPALNRAEVLARDLDKLN GSSEWRSRITASPAVIDYVNRLEEIRDND  
GPALVAHHYVRYLGDLSGGQVIARMMQRHYGVDPEALGFYHFEGIAKLKVYKDEYREK  
LNNLELSDEQREHLLKEATDAFVFNHQVFADLGKGL

>non-antioxidant\_567

MVDIVKRRDWEKKEKKKIAIERIDTLFTLAERVARYSPDLAKRYVELALEIQKKAKVKIPR  
KWKRRYCKRCHTFLIPGVNARVRLRTKRMPHVVITCLECGYIMRYPYLREVKQKRKKAT

>non-antioxidant\_568

MEKKALTLAERQRLIVEGLPHVSATLARLLKHFGSVERVFTASVAELMKVEGIGEKIAKE  
IRRVITAPYIEDEE

>non-antioxidant\_569

MIEKVYCQEVKPELDGKKVRLAGWVYTNMRVGGKIFLWIRDSTGIVQAVVAKNVVGEET  
FEKAKKLGRESSVIVEGIVKADERAPGGAEVHVEKLEVIQAVSEFP IPEPQASPELLLDY  
RHLHIRTPKASAIMKVKETLIMAAREWLLKDGWHEVFPPIVLTGAVEGGATLFLKYFDK  
YAYLSQSAQLYLEAAIFGLEKVWSLTPSFRAEKSRRTRHLTEFWHLELEAAWMDLWDIMK  
VEEELVSYMVQRTLELRKKEIEMFRDDLTLKNTPEPPFRISYDEAIDILQSKGVNVEWGD  
DLGADEERVLTEEFDRPFFVYGYPKHIKAFYMKEDPNDPRKVLASDMLAPEGYGEIIGGS  
QREDDYDKLLNRILEEGMDPKDYEWYLDLRRYGSVPHSGFGLGVERLVAVVLKLDHIRW  
AALFPRTPARLYP

>non-antioxidant\_570

GSHMDINNKARIHWACRRGMRELDISIMPFHEHYDSLSDDEKRIFIRLLECDPDLFNWL  
MNHGKPADAELEMMVRLIQTRNRERGPVAI

>non-antioxidant\_571

MAHHHHHHMSDEDHDFSHQGGDNASKTYPLAAGALKKGGYVCINGRPCKVIDLSVSK  
TGKHGHAKVSIVATDIFTGNRLEDQAPSTHNVEVPFVKTYTYSVLDIQANEDPSLPAHLSL  
MDDEGESREDLDMPPDPALATQIKEQFDSGKDVLVVVVSAMGTEQVLQTKNAAEK

>non-antioxidant\_572

ALEGTEFARSEGASALASVNPLKTTVEEALSRGWSVKSGTGTE DATKKEVPLGVAADAN  
KLG TIALKPD PADGTADITLFTMGGAGPKNKGKIITLRTAADGLWKCTSDQDEQFIPKG  
CSR

>non-antioxidant\_573

ACTKNAIAQTGFNKDKYFNGDVWYVTDYLDLEPDDVPKRYCAALAAGTASGKLKEALY  
HYDPKTQDTFYDVSELQVESLGKYTANFKKVDKNGNVKVAVTAGNYTFTVMYADDSS  
ALIHTCLHKGNKDLGDLYAVLNRNKDAAAGDKVKS AVSAATLEFSKFISTKENNCAYDND  
SLKSLTK

>non-antioxidant\_574

GAMDSSEMSTICDKTLNPSFCLKFLNFKFASANLQALAKTTLDSTQARATQTLKKLQSIID  
GGVDPRSKLAYRSCVDEYESAIGNLEEAFFEHLASGDGMGMNMKVSAALDGADTCLDDV  
KRLRSVDSSVVNNSKTIKNLCGIALVISNMLPRN

>non-antioxidant\_575

EFALLTCRLDPPSQDLKDGTEQEEATKRQEAPVDPRPEGDPQRTVISWRGAVIEPEQGTLP  
RRAEVPTKPLPPARTQGTPVHLNRYRQKGVIVFLHAWKGYRKFAGHDELKPVSRSE  
WFGLGLTLIDALDTMWILGLRKEFEEARKWVSKLHFEDVDVNLFESTIRILGGLLSAY  
HLSGDSLFLRKAEDFGNRLMPAFRTPSKIPYSDVNIGTGVAHPPRWTSSTVAEVTIQLEF  
RELSRLTGDKKFQEAWEKVTQHIHGLSGKKDGLVPMFINTHSGLFTHLGVFTLGARADSY  
YEYLLKQWIQGGKQETQLLEDYVEAIEGVTRTHLLRHSEPSKLTFFVGEALHGRFSAKMDHL  
VCFLPGTLALGVYHGLPASHMELAQELMETCYQMNRQMETGLSPEIVHFNLYPQPGRD  
VEVKPADRHNLRLPETVESLFYLYRVTGDRKYQDWGWEILQSFSRFRVPSGGYSSINNV  
QDPQKPEPRDKMESFFLGETLKYLFLLFSDDPNLLSLDAYVFNTEAHPLPIWTPA

>non-antioxidant\_576

MSQLLQDYLNWENYILRRVDFPTSYYVEGEVVRIEAMPRLYISGMGGSGVVADLIRDFSL  
TWNWEVEVIAVKDYFLKARDGLLIAVSYSGNTIETLYTVEYAKRRRIPAVAITTGGRLAQM  
GVPTVIVPKASAPRAALPQLLTAALHVVAKVYGVIVKIPLEGLEPPNEALIHKLVEEFQKRPT  
IIAAESMRGVAYRVKNEFNENAKIEPSVEILPEAHNHWIEGSERAVVALTSPHIPKEHQERV  
KATVEIVGGSYAVEMHPKGVLSFLRDVGIASVKLAEIRGVNPLATPRIDALKRRLQ

>non-antioxidant\_577

GSHMAVYVKFKVPEEIQKELLDAAKAKQKIKKGANEVTKAVERGIAKLVIAEDVKPEEVV  
AHLPYLCEEKGIPYAYVASKQDLGKAAGLEVAASSVAIINEGDAEELKVLIEKVVNLKQ

>non-antioxidant\_578

MEGQRWLPLEANPEVTNQFLKQLGLHPNWQFVDVYGMPELLSMVPRPVCVAVLLFPIT  
EKYEVFRTEEEEEKIKSQGQDVTSSVYFMKQTISNACGTIGLIHAIANNKDKMHFESGSLK  
KFLEESVSMSPPEARARYLENYDAIRVTHETSAHEGQTEAPSIDEKVDLHFIALVHVDGHLY  
ELDGRKPPFINHGETSDETLEDAIEVCKKFMERDPDELRFNAIALSAA

>non-antioxidant\_579

GHMDQSDFSPIEIDLPSERISLHKSGLAAQEWVACEKVHGTNFGIYLINQGDHEVVRV  
AKRSGIMDPNENFFGYHILIDEFTAQIRILNDLLKQKYGLSRVGRVLNDELFGAKYKHPL  
VPKSEKWCTLPNGKKFPIAGVQIQREPFPQYSPELHFFAFDIKYSVSGAEEDFVLLGYDEF  
VEFSSKVPNLLYARALVRGTLDECLAFDVENFMTPLPALLGLGNYPLEGNLAEGVVIRHV  
RRGDPAVEKHNVSTIIKLRCSFMELKHPGKQKE

>non-antioxidant\_580

NMNIEEFTSGLAEKGISLSPRQLEQFELYDMLVEWNEKINLTSITEKKEVYLKHFYDSITA  
AFYVDFNQVNTICDVGAGAGFPSLPIKICPHLHVTVDSLNRITFLEKLSEALQLENTTF  
CHDRAETFGQRKDVRESYDIVTARAVARLSVLSLCLPLVKKNGLFVALKAASAEELNA  
GKKAITTLGGELENIHSFKLPIEESDRNIMVIRKIKNTPKKYPRKPGTPNKSPIEG

>non-antioxidant\_581

MLDAFSRVVTNADSKAAYVGGADLQALKKFISEGNKRLDSVNSIVSNASCIVSDAVSGMI  
CENPSLISPSGNCYTNRMAACLDRDGEILRYVSYALLSGDASVLEDRCLNGLKETYSSLG  
VPANSNARAVSIMKACAVAFVNNTASQKKLSTPQGDSCGLASEVGGYFDKVTAAS

>non-antioxidant\_582

SLHSPGKAFRAALTENPLQIVGTINANHALLAQRAGYQAIYLSGGGVAAGSLGLPDLGIS

TLDDVLTDIRRITDVCSLPLLVDADIGFGSSAFNVARTVKSMIKAGAAGLHIEDQVGA  
KRS  
GHRPNKAIVSKEEMVDRIRAAVDAKTPDFVIMARTDALAVEGLDAAIERAQAYVEAGA  
EMLFPEAITELAMYRQFADAVQVPILANITEFGATPLFTTDELRSAHVAMALYPLSAFRAM  
NRAAEHVYNVLRQEGTQKSVIDTMQTRNELYESINYQYEEKLDNLFARSQVK

>non-antioxidant\_583

MAQQKKTIAVVGATGRQGASLIRVAAAVGHHVRAQVHSLKGLIAEELQAIPNVTLFQGPL  
LNNVPLMDTLFEGAHLAFINTTSQAGDEIAIGKDLADAAKRAAGTIQHYIYSSMPDHSLYGP  
WPAVPMWAPKFTVENYVRQLGLPSTFVYAGIYNNNFTSLPYPLFQMELMPDGTFEWHAP  
FDPDIPLPWLDAEHDVGPALLQIFKDGPKWNGHRIALTFETLSPVQVCAAFSRALNRRVT  
YVQVPKVEIKVNIPVGYREQLAIEVVFGEHKAPYFPLPEFSRPAAGSPKGLGPANGKAG  
AGMMQGGPGVISQRVTDEARKLWSGWRDMEEYAREVFPIEEEANGLDWML

>non-antioxidant\_584

RTNQAGLELIGNAEGCRRDPYMCPAGVWTDGIGNTHGVTPGVRKTDQQAADWEKNILI  
AERCINQHFRGKDMPDNAFSAMTSAAFNMGCNSLRTYYSKARGMRVETSIHKWAQKGE  
WVNMCNHLPDFVNSNGVPLRGLKIRREKERQLCLTGLVNEHHHHHH

>non-antioxidant\_585

GSHMASLDMAEIKEKICDYLFNVSDSSALNLAKNIGLTKARDINAVLIDMERQGDVYRQG  
TTPPIWHLTDKKRERMQIK

>non-antioxidant\_586

SATEPPKIVWNEGKRRFETEDHEAFIEYKMRNNGKVMDLVHTYVPSFKRGLGLASHLCV  
AAFEHASSHSISIIPSCSYVSDTFLPRNPSWKPLIHSEVFKSSI

>non-antioxidant\_587

GSDDSYARVRAVVMTRDDSSGGWLQLGGGGLSSVTVSKTLQPGDSGGTEFLVHGERLRD  
KTVVLECVLRRDLVYNKVTPTFHHWRIGDKKFLTFQSPADARAFDRGIRRAIEDLSQG

>non-antioxidant\_588

GHMQRERTAESSLRVISKEKNSITVEMINYDNTLLRRTLVEEILKDDQVDEARYYIKHPVIDN  
PQIYVRVKSQKPSAIKRAVRKLSKLYEDLGTQFQKEFQRYESDHMIKAVEGS

>non-antioxidant\_589

MAAESQLKRVIETLRRLGIEEVLKLERRDPQYRAVCNVVKRHGETVGSRLAMLNALISYR  
LTGKGEEHWEYFGKYFSQLEVIDLCRDFLKYIETSPFLKIGVEARKKRALKACDYVPNLE  
DLGLTLRQLSHIVGARREQKTLVFTIKILNYAYMCSRGVNRVLPFDIPIVDYRVARLTWCA  
GLIDFPPEEALRRYEAVQKIWDVAVARETGIPPLHLDLTLWLAGRAVLYGENLHGVPKEVIA  
LFQWRGGCRPPSE

>non-antioxidant\_590

MAKLTSAPVLTARDVAEAVEFWTDRLGFSRVFVEDDFAGVVRDDVTLFISAVQDQVVPD  
NTQAWVWVRGLDELYAEWSEVVSTNFRDASGPAMTEIVEQPWGREFALRDPAGNCVHFV  
AEEQD

>non-antioxidant\_591

GASHPEIEKAQREIIEAFNAKPKNGINKIKEICEQYKISPNEEIAEFFHQQRKNLDLEAVGDY  
LSSPEAENQQVLKAFTSQMNFNQSFVEGLRFTLTKFLKPGEAQKIDRLVQSFSGAYFQQN  
PDVVSNAADAAYLLAFQTIMLNTDLHNPSIPEKNKMTVDGLKRNLRGGNNGGDFDAKFLE  
ELYSEIKAKPFELNFVKTSPGYELTSTTLNKDSTFKKLSFLHSTDVNINTVFPGIGDNVKT  
TVDQPKSWLSFFTGYKGTITLTDNKTSQAQTIQVYTPNIFSKWLFGEQPRVIIQPGQTKESID  
LAAKAAADFSSPVKNFKATYDYEVGDLIKAYDNQKKLITERNLALKA

>non-antioxidant\_592

MGSSHHHHHSSGLVPRGSHMHNYVIIDAFASVPLEGNPVAVFFDADDLPPAQMORIARE  
MNLSESTFVLKPRNGGDALIRIFTPVNELPFAGAPLLGTAIALGAHTDNHRLYLETQMGTI  
AFELERQNGSVIAASMDQPIPTWTALGRDAELLKALGISDSTFPIEYHNGPRHVFLPSI  
DALSAHPDHRALS NFHDMAINCFAGAGRRWRSRMFSPAYGVVEDAATGSAAGPLAIHL  
ARHGQIEFGQPVEILQGVEIGRPSLMFAKAEGRAEQLTRVEVSGNGVTFGRGTIVL

>non-antioxidant\_593

MVKVKFKYKGEKEVDTSKIKKVWRAGKAVSFTYDDNGKTGRGAVSEKDAPKELLDML  
ARAEREKK

>non-antioxidant\_594

EEYSSNWAGAVLIGDGYTKVTGEFTVPSVSAGSSGSSGY

>non-antioxidant\_595

QSEECASAWVGIDGDTCEAILQTGVDFCYEDGQTSYDAWYEWYPDYAYDFSDITISEG  
DSIKVTVEATSKSSGSATVENLTTGQSVTHTFSGNVEGDL CETNAEWIVEDFESGDSLVAF  
ADFGSVTFTNAEATSGGSTVGPSDATVMDIEQDGSVLTETS VSGDSVTVTYV

>non-antioxidant\_596

FNYDQPYRGQYHFSPQKNWMNDPNGLLYHNGTYHLFFQYNPGGIEWGNISWGHAISEDL  
THWEEKPVALLARGFGSDVTEMYFSGSAVADVNTSGFGKDGKTPLVAMYTSYYPVAQT  
LPSGQTVQEDQQSQSIAYSLDDGLTWTTYDAANPVPNPPSPYEAQYQNFDPFVFWHDE  
SQKWVVVTSIAELHKLAIYTSNLKDWKLVSEFGPYNAQGGVWECPLVKLPLDSGNST  
KWVITSGLNPGGPPGTVSGGTQYFVGEFDGTTFTPDADTVYPGNSTANWMDWGPDFYA  
AAGYNGLSLNDHVHIGWMNNWQYGANIPTYPWRSAMAIPRHMALKTIGSKATLVQQPQ  
EAWSSISNKRPIYSRTFKTLSEGSTNTTTTGETFKVDLSFSAKSKASTFAIALRASANFTEQT  
LVGYDFAKQQIFLDRTHSGDVSFDETFASVYHGPLTPDSTGVVKLSIFVDRSSVEVFGGQG  
ETTLTAQIFPSSDAVHARLASTGGTTEDVRADIYKIASTWN

>non-antioxidant\_597

MQQSLAVKTFEDLFAELGDRARTRPADSTTVAALDGGVHALGKKLLEEAGEVWLAAEHE  
SNDALAEIEISQLLYWTQVLMISRGLSLDDVYRKL

>non-antioxidant\_598

MGSSHHHHHSSGRENLYFQGHMFFTDWEGPWILTDFALELCMAVFNNARFFSNLSEYD  
DYLAYEVRREGYEAGYTLKLLTPFLAAAGVKNRDVERIAELSAKFVPDAEKAMATLQER  
WTPVVISTSYTQYLRRTASMIGVRGELHGTEVDFDSIAVPEGLREELLSIIDVIASLSGEELF  
RKLDELFSRSEVRKIVESVKAVGAGEKAKIMRGYCESKIDFPVVVGDSISDYKMFEEAR  
GLGGVAIAFNGNEYALKHADVVIIISPTAMSEAKVIELFMERKERA FEVLSAVSIPETEIYIME  
NSDFGEVLEKSKRMRVRLRGLAGELGGS

>non-antioxidant\_599

SSSNSEKEWHIVPVSKDYFSIPNDLLWSFNNTNKSINVYSKCISGKAVYSFNAGKFMGNFN  
VKEVDGCFMDAQAIDKLFMSMLKDGVV LKGNKINDTILIEKDGEVKLKLIRGI

>non-antioxidant\_600

AHHHHHHGSMLEKVEHELLNRIWGDIFELREELKEELKGFTVEEVSEVFNAYLYIDGWEE  
MKYPHPAFAVKPGGEVGATPQGFYFVFAFPKEELSKEFIEDVIRAFEKLFYGAENFLEDYF  
NFEHPISGDEVWDRIVNSDEEMINFEVDLGFDKKEEVKREIKRFIELARRYNLL

>non-antioxidant\_601

GSIIINETADDIVYRLTVIIDDRIESLKNLITLRADRLEMIINDNVSTILASI



>non-antioxidant\_602

MKMKEFLDLLNESRLTVTLTGAGISTPSGIPDFRGPNGIYKKYSQNVFDIDFFYSHPEEFYR  
FAKEGIFPMLQAKPNLAHVLLAKLEEKGLIEAVITQNIIDRLHQRAGSKKVIELHGNVEEYY  
CVRCEKKYTVEDVIKKLESSDVPLCDDCNLIRPNIVFFGENLPQDALREAIGLSSRASLMI  
VLGSSLVYPAELPLITVRS GGKLVIVNLGETPFDDIATLKYNDVVEFARRVMEEGGIS

>non-antioxidant\_603

MKEKIRKKILLAPEEPGVYIFKNKGVPYIYGKAKRLSNRLRSYLN PQTEKVFRIGEEADELE  
TIVVMNEREAFILEANLIKRYRPKYNVRLKDTDF

>non-antioxidant\_604

MKIITGEPGVGKTTLVKKIVERLGKRAIGFWTEEVRDPETKKRTGFRIITTEGKKKIFSSKF  
FTSKKLVGSYGVNVQYFEELAIPILERAYREAKKDRRKVIIIIDEIGKMELFSKKFRDLVRQI  
MHDPNVNVVATIPIRDVHPLVKEIRRLPGAVLIELTPENRDVILEDILSLLER

>non-antioxidant\_605

MQIVQIEQAPKDYISDIKIIPSKSLLLITSWDGS LTVYKFDIQAKNVDLLQSLRYKHPLLCCN  
FIDNTDLQIYVGT VQGEILKVDLIGSPSFQALTNNEANL GICRICKYGDDKLIASWDGLIE  
VIDPRNYGDGVIAVKNLNSNNTKVKNKIFTMDTNSRLIVGMNNSQVQWFRPLCEDDN  
GTIEESGLKYQIRDVALLPKEQEGYACSSIDGRVAVEFFDDQDDYNSSKRFAFRCHRLNL  
KDTNLAYPVNSIEFSRHKFLYTAGSDGIISCWNLQTRKKIKNFAKFNEDSVVKIACSDNIL  
CLATSDDTFKTNA AIDQTIELNASSIYIIFDYENP

>non-antioxidant\_606

MEEIKCLLCRYLKERQEKFISDWKKKVIIRERDPYKEEIKNGEHLLSAFIMYLKEEISLQEI  
EITSKKIARERIDAKVNIAEFIHNTNVAKIEIMNITLLNPD LQQYQALVKKINQFFDHLIYY  
TVHSYEQKA

>non-antioxidant\_607

SNAMEFAPRSV VIEEFIDTLEPMMEAYGLDQV GIFEHGEGRNRYVGYTINKDDEMITIHM  
PFVKNERGELALEKQEWTVRKGREKKGFHSLQEAMEEVIHS

>non-antioxidant\_608

GSSGGPNVPELILQLLQLEPEEDQVRARIVGCLQEPAKSRSDQPAPFSLLCRMADQTFISIV  
DWARRCMVFKELEVADQMTLLQNSWSELLVLDHIYRQVQY GKEDSILLVTGQEVELSTV  
AVQAGSLLHSLVLRAQELVLQLHALQLDRQEFVCLKFLILFSLDVKFLNNHSLVKDAQEK  
ANAALLDYTL SHYPHSGDKFQQLLSLVEVRALSMQAKEYLYHKHLGNEMPRNLLIEM  
LQAKQT

>non-antioxidant\_609

GSTVPYTITVNGTSQNILSNLTFNKNQNISYKDLEGKVKSVLESNRGITDVDLRLSKQAKY  
TVNFKNGTKKVIDLKS GIYTANLINSSDIKSININID

>non-antioxidant\_610

RVANCSAPCPQDWIWHGENCYLFSSGSFNWEKSQEKCLSLDAKLLKINSTADLDFIQQAIS  
YSSFPFWMGLSRRNPSYPWLWEDGSPLMPHLFRVRGAVSQTYPSTGTCAYIQRGAVYAENC  
ILAAFSICQKKANL

>non-antioxidant\_611

GAAASIQTTVNTL SERISSKLEQEANASAQTKCDIEIGNFYIRQNHGCNLTVKNMCSADAD  
AQLDAVLSAATETYSGLTPEQKAYVPAMFTAALNIQTSVNTVVRDFENYVKQTCNSSAVV  
DNKLLKIQNVIIDECY GAGSPTNLEFINTGSSKGNCAIKALMQLTTKATTQIAPKQVAGTG  
VQ

>non-antioxidant\_612

ADLPAPDDTGLQAVLHTALSQGAPGAMVRVDDNGTIHQLSEGVADRATGRAITTTDRFRV  
GSVTKSFSAVVLLQLVDEGKLDLDASVNTYLPGLLPDDRITVRQVMMSHRSGLYDYTNDMF  
AQTVPGFESVRNKVFSYQDLITLSLKHGVTNAPGAAYSYSNTNFV VAGMLIEKLTGHSVA  
TEYQNRIFTPLNLTDTFYVHPDTVIPGTHANGYLTPEAGGALVDSTEQTVSWAQSAGAVI  
SSTQDLDTFFSALMSGQLMSAAQLAQMQQWTTVNSTQGYGLGLRRRDLSCGISVYGHT  
GTVQGYTYAFASKDGKRSVTALANTSNNVNLNTMARTLES AFCGKPTT

>non-antioxidant\_613

MSTAVQFRGGTTAQHATFTGAAREITVDTDKNTVVVHDGATAGGFPLARHDLVKTAFIKA  
DKSAVAFTRTGNATASIKAGTIVEVNGKLVQFTADTAITMPALTAGTDYAIYV CDDGTVRA  
DSNFSAPTGYTSTTARKVGGFHYAPGSNAAAQAGGNTTAQINEYSLWDIKFRPAALDPRG  
MTLVAGAFWADIYLLGVNHLTDGTSKYNVTIADGSASPCKSTKFGGDGSAAYS DGAWYN  
FAEVMTHHGKRLPNYNEFQALAFGTTEATSSGGTDVPTTG VNGTGATSAWNIFTSKWGV  
VQASGCLWTWGNFEGGVNGASEYTANTGGRGSVYAQPAAALFGGAWNGTSLSGSRAAL  
WYSGPSFSFAFFGARGVCDHLILE

>non-antioxidant\_614

GSALRELKVCLLGD TGVGKSSIMWRFVEDSFDPNINPTIGASFMTKTVQYQNELHKFLIW  
DTAGLERFRALAPMYRGSAAAIIVYDITKEETFSTLKNWVREL RQHGPSSIVVAIAGNKC  
DLTDVREVMERDAKDYADSIHAIFVETS AKNAININELFIEISRRIPST

>non-antioxidant\_615

DYKLFITEGYEVGRVNGLAVIGESAGIVLPIAEVTPSMSKSEGRVIATGRLQEIAREAVMN  
VSAIIKKYTGRDISNMDVHIQFVGT YEGVEGDSASISIATAVISAIEGIPVDQSVAMTGSLSV  
KGEVLPVGGVTQKIEAAIQAGLKKVIIPKDNIDDVLLDAEHEGKIEVIPVSRINEVLEHVLE  
DGKKKNRLMSKFKELELA AV

>non-antioxidant\_616

GPLGSMTTKQTVSLFIWLPESKQKTLFISTKNHTQFELNNIIFDVTLSTELPDKEPNAIITKR  
THPVGKMADEMRYEKDHPKVL FLESSAIHDMMSREEINALLIKNNIPNPSFSVKSKEE  
VIQLLQSKQLILPFIVKPEN AQGTFNAHQMKIVLEQEGIDDIHFPCLCQHYINHNNKIVKVF  
CIGNTLKWQTRTSLPNVHRCGIKSVDFNNQHLEDILSWPEGVIDKQDIIENSANRFGSKILE  
DPILLNLTSEAEMRD LAYKVR CALGVQLCGIDFIKENEQGNPLVVDVNVFPSYGGKVDFD  
WFVEKVALCYTEVAKI

>non-antioxidant\_617

GSHMALKRIQKELQDLGRDPPAQCSAGPVGDDLFWQATIMGPPESPYQGGVFFLTIHFPT  
DYPFKPPKVAFTTRIYHPNINSNGSICLDILRSQWSPALTISKVLLSICSLLCDPNPDDPLVPEI  
ARIYKTDREYRNQLAREWTQKYAM

>non-antioxidant\_618

HMVTLYTSPSCTSCRKARAWLEEHEIPFVERNIFSEPLSIDEIKQILRMTE DGTDEIISTRSKV  
FQKLVNIVESMPLQDLYRLINEHPGLLRPIIDEKRLQVGYNEDEIRRFLPRKVRSFQLRE  
AQLAN

>non-antioxidant\_619

PEFMVTTEPALADLQEQLYNGNEKSQLAAMSTLSTAGTEGYHLLQEFLKDSATFSPPPAP  
WIRGQAYRLLFHSPEASVQAF LQQHYQPQGVIPLRSDRGVDYQELAKLLVAEKFEAADRLT  
TQKLCELAGPLAQKRRWLYFTEVEQLPIPD LQTIDQLWLAFSLGRFGYSVQRQLWLGCGQ  
NWDRLWEKIGWRQGRWPRYPNEFIWDL SAPRGHLPLTNQLRGVQVLNALLNHPAWTA

>non-antioxidant\_620

SNAMGLFDEVVGAFLKGDAGKYQAILSWVEEQGGIQVLLLEKLQSGGLGAILSTWLSNQQ  
RNQSVSGEQLSALGTNAVSDLGQKLGVDSTASSLLAEQLPKIIDALSPQGEVSAQANND  
LLSAGMELLKGLFR

>non-antioxidant\_621

SNAMDISVIDATKVNTETGLHIGESNAPVKMIEFINVRCPCYCRKWFESEELLAQSVKSGK  
VERIIKLFDKESLQRGVNMHHYIDYSAPEQALSALHKMFATQDEWGNLTLEEVATYAE  
KNLGLKEQKDATLVSAVIAEANAHHIQFVPTIIIIGEYIFDESVTTEEELRGYIEK

>non-antioxidant\_622

EANAPGPVPPERQLAHSKMVPIPAGVFTMGTDPPQIKQDGEAPARRVTIDAFYMDAYEVS  
NTEFEKFNSTGYLTEAEKFGDSFVFEGMLSEQVKTNIQQAVAAAPWWLPVKGANWRHP  
EGPDSTILHRPDHPVLHVSWNDAVAYCTWAGKRLPTEAEWEYSCRGGHLNRLFPWGNKL  
QPKGQHYANIWQGEFPVTNTGEDGFQGTAPVDAFPNGYGLYNIVGNAWEWTSWWTW  
HHSVEETLNPKGPPSGKDRVKKGGSYMCHRSYCYRRCARSQNTPDSSASNLGFRCAA  
DRLPTMDRGSHHHHHH

>non-antioxidant\_623

SNAMETQDYAFQPLTVGELLKSSQKDWQAAINHRFVKELFAGTIENKVLKDYLIQDYHF  
FDAFLSMLGACVAHADKLESKLRFAKQLGFLEADEDGYFQKAFKELKVAENDYLEVTLH  
PVTKAFQDLMYSAVASSDYAHLVMLVIAEGLYLDWGSKDLALPEVYIHSEWINLHRGPF  
FAEWVQFLVDELNRVGNREDLTELQQRWNQAVALELAFFDIGYDV

>non-antioxidant\_624

MANYWLYKSEPFKWSWEMQKAKGETGEEWTGVRNYQARNNMRAMKIGDKGFFYHSN  
EGLDVVGIVEVCALSHPDSTAEGDLKWDCVDIRAVCDMPQPVSLKDVKANPKLEKMSLV  
TSMRLSVQPVTSEEYLEVCRMGGLANPPKSPDLEHHHHHH

>non-antioxidant\_625

MSEAADVERVYAAMEEAAGLLGVACARDKIYPLLSTFQDTLVEGGSVVVFMSASGRHST  
ELDFSISVPTSHGDPYATVVEKGLFPATGHPVDDLLADTQKHLVSMFAIDGEVTGGFKKT  
YAFFPTDNMPGVAELSAIPSMPPAVAENAELFARYGLDKVQMTSMDYKKRQVNLVYFSELS  
AQTLEAESVLALVRELGLHVPNELGLKFCRFSVYPTLNWETGKIDRLCFAVISNDPTLV  
PSSDEGDIEKFHNYATKAPYAYVGEKRTLVIYGLTSLPKEEYKLGAYYHITDVQRGLLKAF  
DSLED

>non-antioxidant\_626

APRIKLKILNGSYGIARLSASEAIPAWADGGGFVSITRTDDELSIVCLIDRIPQDVRVDPGWS  
CFKFQGPFAFDETGIVLSVISPLSTNGIGIFVSTFDGDHLLVRSNDLEKTADLLANAGHSL  
LLEHHHHHH

>non-antioxidant\_627

GAMDPSQYASSSSWTSFLKSIASFNGDLSSLSAPPFILSPISLTEFSQYWAHPELFLPFSFIN  
DDNYKEHCLIDPEVESPELARMMLAVTKWFISTLKSQYCSRNESLGSEKKPLNPFLGELFVG  
KWENKEHPEFGETVLLSEQVSHHPPVTAFSIFNDKNKVKLQGYNQIKASFTKSLMLTVKQ  
FGHTMLDIKDESylvTPPLHIEGILVASPFVELEGKSYIQSSTGLLCVIEFSGRGYFSGKKN  
SFKARIYKDSKDKDKEKALYTISGQWSGSSKIIKANKKEESRLFYDAARIPAHLNVKPL  
EEQHPLESRKAWYDVAGAIKLGDFNLIAKTKTELEETQRELKKEEAKGISWQRRWFKDF  
DYSVTPEEGALVPEKDDTFLKLASALNLSTKNAPSGTLVGDKEDRKEDLSSIHWRVQREL  
WDEEKEIVL

>non-antioxidant\_628

MLTEGISIQSYDGHFTFGALVGSAPAKAPVIVIAQDIFGVNAFMRETVSWLVDQGYAAVCP  
DLYARQAPGTALDPQDERQREQAYKLVQAFDMEAGVGDLEAAIRYARHQPYNSGKVG  
VGYSLGGALAFVASKGYVDRAVGYGVLGKQLNKVPEVKHPALFHMGGQDHFVPAP  
SRQLITEFGANPLLQVHWYEEAGHSFARTGSSGYVASAAALANERTLDFLVPLQSRKP

>non-antioxidant\_629

AVSFIGSTENDVGPSQGSYSSTHAMDNLPFVYNTGHNIGYQNANVWRISGGFCVGLDGK  
VDLPVVGSLDGQSIYGLTEEVGLLIWMGDTNYSRGTAMSGNSWENVFSGWCVGNYVST  
QGLSVHVRPVILKRNSSAQYSVQKTSIGSIRMRPYNGSSAGSVQTTVNFSLNPFTLNDT

>non-antioxidant\_630

GHMFEEKIRKILADIEDSQNEIEMLLKLANLSLGDFFIEIKRGSMDMPKGVNEAFFTQLSEEV  
ERLKEINLNKIKKGLLVFGS

>non-antioxidant\_631

GHMTRSPPSDQTWQPIDGRVALIAPASAIATDVLEATLRQLEVHGVDYHLGRHVEARYRY  
LAGTVEQRLEDLHNAFDMPDITAVWCLRGGYGCGQLLPGLDWGRLQAASPRPLIGFSDIS  
VLLSAFHRHGLPAIHGPVATGLGLSPLSAPREQQERLASLASVSRLLAGIDHELPVQHLGG  
HKQRVEGALIGGNLTALACMAGTLGGLHAPAGSILVLEDVGEPPYRLERSLWQLLESIDA  
RQLGAICLGSFTDCPRKEVAHSLERIFGEYAAAIEVPLYHHLPSGHGAQNRAWPYGKTAVL  
EGNRLRWGS

>non-antioxidant\_632

CYCRIPACIAGERRYATCIYQGRLWAFCC

>non-antioxidant\_633

VCSCRLVFCRRTELRVGNCLIGGVSFTYCCTRV

>non-antioxidant\_634

EAEAEFNSINACLAADVEFHEEDSEGWDMDGTAFNLRVDYDPAIAIPRSTEDIAAAVQ  
CGLDAGVQISAKGGGHSYGSYGFGGEDGHLMLELDRMYRVSVDNNAVATIQQGARLGY  
TALELLDQGNRALSHGTCPAVGVGGHVLGGGYGFATHHGLTLDWLIGATVVLADASIVH  
VSETENADLFWALRGGGGFAIVSEFEFNTFEAPEIITTYQVTTTWNRKQHVAGLKALQD  
WAQNTMPRELSMRLEINANALNWEGNFFGNAKDLKKILQPIMKKAGGKSTISKLVETDW  
YGQINTYLYGADLNITYNYDVHEYFYANSLTAPRLSDEAIQAFVDYKFDNSSVRPGRGW  
WIQWDFHGGKNSALAAVSNDETAYAHRDQLWLWQFYDSIYDYENNTSPYPESGFEMQG  
FVATIEDTLPEDRKGYFNYADTTLTKEEAQKLYWRGNLEKLQAIKAKYDPEDVFGNVVS  
VEPIAYLEQKLISEEDLNSAVDHHHHHH

>non-antioxidant\_635

GSPLGQDVFLDYCQKLEKFRYPWELMPLMYVILKDADANIEEASRRIEEGQYVVNEYSR  
QHNLN

>non-antioxidant\_636

ALGKLQDVVNQNAQALNTLVKQLSSNFGAISSVLNDISGGRGGDISGINASVVNIQKEIDR  
LNEVAKNLNESLIDLQ

>non-antioxidant\_637

MAIGYVWNTLYGWVDTGTGSLAAANLTARMQPISHHLAHPDTKRRFHELVCASGQIEHL  
TPIAAVAATDADILRAHSAAHLENMKRVSNLPTGGDTGDGITMMGNGGLEIARLSAGGAV  
ELTRRVATGELSAGYALVNPPGHHAPHNAAMGFCIFNNTSVAAGYARAVLGMERVAILDW  
DVHHGNGTQDIWWNDPSVLTISLHQHLCFPDPSGYSTERGAGNGHGYNINVPLPPGSGNA

AYLHAMDQVVLPALRAYRPQLIIVGSGFDASMLDPLARMMVTADGFRQMARRTIDCAAD  
ICDGRIVFVQEGGYSPHYLPFCGLAVIEELTGVRSLPDPYHEFLAGMGGNTLLDAERAAIE  
EIVPLLADIR

>non-antioxidant\_638

GAMGPIITTQVTIPKDLAGSIIGKGGQRIKQIRHESGASIKIDEPLEGSEDRIITITGTQDQIQN  
AQYLLQNSVKQYSGKFF

>non-antioxidant\_639

ADLEDNMETLNDNLKVIEKADNAAQVKDALTKMRAAALDAQKATPPKLEDKSPDSPEM  
KDFRHGFDILVGQIDDALKLANEGKVKEAQAAAEQLKTRNAYHQKYR

>non-antioxidant\_640

GSHMASEELQKDLEEVKVLLEKATRKRVRDALTAEKSKIETEIKNMQKQK

>non-antioxidant\_641

MGSDKIHSHHHHMNNQEKMLGFNQDEYLTSAREIIAARQKAEQVADEIYQAGFSSLFFA  
SVGGSLAPMMAINEFAKELTTLPVYVEQAAELIHKGNKRLNKDSVVITLSKSGDTKESVAI  
AEWCKAQGIRVVAITKNADSPLAQAATWHIPMRHKNGVEYEMLLYWLFFRVLSRNNEF  
ASYDRFASQLEILPANLLKAKQKFDQPADAIASRYHNSDYMMWVGGAEWGEVYLFMS  
CILEEMQWKRTRPVSSAEFFHGALELLEKDVPLILVKGEGKCRALDERVERFASKITDNLV  
VIDPKAYALDGIDDEFRWIMAPCVVSTLLVDRLAAHFEKYTGHS�DIRRYRQFDY

>non-antioxidant\_642

GSDASKLSSDYSLPDLINTRKVPNNWQTGEQASLEEGRIVLTSNQNSKGSWLKQGFDLK  
DSFTMEWTFRSVGYSGQTDGGISFWFVQDSNIPRDKQLYNGPVNYDGLQLLDNNGPLG  
PTLRGQLNDGQKPVDKTKIYDQSFASCLMGYQDSSVPSTIRVTYDLEDDNLLKVQVDNK  
VCFQTRKVRFPSSYRIGVTAQNGAVNNAESFEIFKMQFFNGV

>non-antioxidant\_643

MGSSHHHHHSSGLVPRGSHMAVDSSNSATGPMRVFAIGNPILDLVAEVPSSFLDEFFLKR  
GDATLATPEQMRIYSTLDQFNPTSLPGGSALNSVRVVQKLLRKPGSAGYMGAIQDDPRGQ  
VLKELCDKEGLATRFMVAPGQSTGVCVLINEKERTLCTHLGACGSFRLPEDWTTFASGA  
LIFYATAYTLTATPKNALEVAGYAHGIPNAIFTLNLSAPFCVELYKDAMQSLLLHTNILFGNE  
EEFAHLAKVHNLVAAEKTALSTANKEHAVEVCTGALRLLTAGQNTSATKLVVMTRGHNP  
VIAAEQTADGTVVVHEVGVVVAEAKIVDTNGAGDAFVGGFLYALSQGKTVKQCIMCGN  
ACAQDVIQHVGFSLSFTFTSG

>non-antioxidant\_644

HHHHHHMPVNQFTGYLKLTDNVAIKCVDIVKEAQSANPMVIVNAANIHLKHGGGVAGAL  
NKATNGAMQKESDDYIKLNGPLTVGGSCLLSGHNLAKKCLHVVGPNLNAGEDIQLLKAA  
YENFNSQDILLAPLLSAGIFGAKPLQSLQVCVQTVRTQVYIAVNDKALYEQVVMYLDNL  
KPRV

>non-antioxidant\_645

MSAKSRTIGIIGAPFSKQPRGGVEEGPTVLRKAGLLEKLKEQECDVKDYGDLPFADIPND  
SPFQIVKNPRSVGKASEQLAGKVAEVKKNGRISLVLGGDHSLAIGSISGHARVHPDLGVIW  
VDAHTDINTPLTTTSGNLHGQPVSFLLKELKGIKIPDVPGFVTPCISAKDIVYIGLRDVPD  
GEHYILKTLGIKYFSMTEVDRLGIGKVMETLSYLLGRKKRPIHLSFDVDGLDPSFTPATGT  
PVVGGTYREGLYITEEYKTGLLSGLDIMEVNPSLGKTPEEVTRTVNTAVAITLACFGLAR  
EGNHKPIDYLNPPK

>non-antioxidant\_646

TKFIGCIDLHNGEVKQIVGGTLTSKKEDVPKTNFVSQHPSSYAKLYKDRDVQGCHVIKL  
GPNNDAAAREALQESPQLQVGGINDTNCLEWLKWASKVIVTSWLFTKEGHFQLKRLE  
RLTELCGKDRIVVDLSCRKTQDGRWIVAMNKWQTLTDLELNADTFRELKRYTNEFLIHAA  
DVEGLCGGIDELLVSKLFEWTKDYDDLKIVYAGGAKSVDDLKLVDELSSHGKVDLTFGSSL  
DIFGGNLVKFEDCCRWNEKQG

>non-antioxidant\_647

MWQQAIGDALGITARNLKKFGDRFPHVSDGSKYVLNDNTDWTGDFWVGILWLCYEYT  
GDEQYREGAVRTVASFRERLDRFENLDHFNIGFLYSLSAKAQWIVEKDESARKLALDAAD  
VLMRRWRADAGIIQAWGPKGDPENGGRIIDCLLNLPLLLWAGEQTGDPEYRRVAEHAL  
KSRFLVRGDDSSYHTFYFDPENGNIRGGTHQGNTDGSTWTRGQAWGIYGFALNSRYL  
GNADLLETAKRMARHFLARVPEDGVVYWFVEVPQEPSSYRDSSASAITACGLLEIASQLD  
ESDPERQRFIDAAKTTVTALRDGYAERDDGEAEGFIRRGSYHVRRGGISPDDYTIWGDYYY  
LEALLRLERGVGTGYWYERGR

>non-antioxidant\_648

SNAMFAPQGLAQFIKVNVTLENGEPVFIYTDANGQVCQGDITVTQAGTITYLLNDQTLKG  
LKFGVGVGFVTPFDGIIDAVTISSDGMLVQLVDLTKTPGTTKFQFVLSNTANTLLVLSPD

>non-antioxidant\_649

TACTATQQTAAKYTLVLSILSESSFSQCSKDSGYSMLTATALPTNAQYKLMCASTACNTMIK  
KIVALNPPDCDLTVPTSGLVLDVYTYANGFSSKCASL

>non-antioxidant\_650

VSRLEEDVRNLNAIVQKLQERLDRLEETVQAK

>non-antioxidant\_651

SIEKIWAREILDSRGNPTVEVDLYTAKGLFRAAVPSGASTGIYEALERDGDQRYLGKGV  
LKAVDHINSTIAPALISSGLSVVEQEKLNDLMLELDGTENKSKFGANAILGVSLAVCKAGA  
AERELPLYRHIAQLAGNSDLILPVPFNVINGGSHAGNKLAMQEFMILPVGAEFRDAMR  
LGAEVYHTLKGVIKDKYGKDATNVGDEGGFAPNILENSEALELVKEAIDKAGYTEKIVIG  
MDVAASEFYRDGKYDLDFKSPTDPSRYITGDQLGALYQDFVRDYPVVSIEDPFDQDDWAA  
WSKFTANVGIQIVGDDLTVTNPKRIERAEEKACNCLLLKVNQIGSVTEAIQACKLAQENG  
WGVMVSHRSGETEDTFIADLVVGLCTGQIKTGAPCRSERLAKYNQLMRIEELGDEARFA  
GHNFRNPSVLHHHHHH

>non-antioxidant\_652

AHMGIQRPTSTTTDKKEIKAYLKQVDKIKDDEEPIKTVGKKIAELDEKKKKLTEDVNSKDT  
AVRGKAVKDLIKNADDRLKEFEKEEDAIAKKSEQDFKAKSHVDNIDNDVKRKEVKQLDD  
VLKEYKYLHSDYAKAYKKAVNSEKTLFKYLNQNDATQQGVNEKSKAIEQNYKKLKEVS  
DKYTKVLNKVQKEKQDQVDQFK

>non-antioxidant\_653

MEGGSITPGEDKPEIQSPIPPNQIFILSGQSNMAGRGGVFKDHHNNRWVWDKILPPECAPN  
SSILRLSADLRWEEAHEPLHVDIDTGKVCVGPVGMFAFANAVKNRLETDSAVIGLVPCASG  
GTAIKEWERSHLYERMVKRTEESRKCNGEIKAVLWYQGESDVLDIHDAESYGNNMDRL  
IKNLRHDLNLPSLPIIQVAIASGGGYIDKVVREAQLGLKLSNVVCVDAKGLPLKSDNLHLTT  
EAQVQLGLSLAQAYLSNFC

>non-antioxidant\_654

DPLLPGYSFNAHLVAGLTPIEANGYLDFFIDRPLGMKGYILNLTIRGQGVVKNQGREFVCR  
PGDILLFPPGEIHHYGRHPEAREWYHQWVYFRPRAYWHEWLNWPSIFANTGFFRPDEAH

QPHFSDLFGQIINAGQGEGRYSELLAINLLEQLLRRMEAINES

>non-antioxidant\_655

GEFSTREGEIVAGVIQRDSRANARGLVVVRIGTETKASEGVIPAAEQVPGESYEHGNRLRC  
YVVGVTRGAREPLITLSRTHPNLVRKLFSLVEPEIADGSVEIVAVAREAGHRSKIAVRSNVA  
GLNAKGACIGPMGQVRVNVMSSELSGEKIDIIDYDDDDPARFVANALSPAKVVSVSVIDQTAR  
AARVVVPDFQLSLAIGKEGQNARLAARLTGWRIDIRGDAPPPPPGQPEPGVSRGMAHDRL  
EHHHHHH

>non-antioxidant\_656

AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDLVFRFRFCSGSCRRARSPHDLAS  
LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATAACGLG

>non-antioxidant\_657

SLLNVPAGKDLPEDIYVVIEIPANADPIKYEIDKESGALFVDQFMSTAMFYPCNYGYINHTL  
SLDGDVPDVLVPTPYPLQPGSVTRCRPVGVLKMTDEAGEDAKLVAVPHSKLSKEYDHIKD  
VNDLPELLKAQIAHFFEYKDKLEKGVVVEGWENAEAAKAEIVASFERAKNK

>non-antioxidant\_658

AELHLESRGGSGTQLRDGAKVATGRIICREAHTGFHVWMNERQVDGRAERYVVQSKDGR  
HELVRTGGDGWSPVKGEGGKGVSRPGQEEQVFFDVMADGNQDIAPGEYRFSVGGACV  
VPQEKLAALAEHHHHHH

>non-antioxidant\_659

SRIVVHTQTLFDIVNDGYRWRKYGQKSVKGSPPYRPSYYRCSSPGCPVKKHVERSSHDTKL  
LITTYEGKHDHDMPPG

>non-antioxidant\_660

EILDLTQTLINFRPGDPELRIIEKKIDGFIVSEIIMGSHLCTHIDYPKHVGLNRIPFKDGIIK  
GKGYCISLDDDFGNKLPACDILLIYTGFSKYWGRDEYFEKIPEIPFLDDIISNIKCVGIDAC  
TIGGFEEHKRLLSNNLIIENLNENLKNLVGKSFYFLGLPLKIFDIDASPIRCIAILE

>non-antioxidant\_661

GHMTWKPNVTVA AVIEQDDKYLLVEEIPRGTAIKLNQPAGHLEPGESIIQACSREVLEETG  
HSFLPEVLTGIYHWTCASNGTTYLRFTFSGQVVSFDPDRKLDTGIVRAAWFSIDEIRAKQA  
MHRTPLVMQCIEDYHAGKRYPLDILQYYDGS

>non-antioxidant\_662

GSHMVGQLSEGAIAAIMQKGDNIKPIQVINIRPITGNSPPRYRLLMSDGLNTLSSFMLA  
TQLNPLVEEEQLSSNCVCQIHRFIVNTLKDGRRVVILMELEVLKSAEAVGVKIGNPVVYNE

>non-antioxidant\_663

SPLPSQAMDDLMLSPDDIEQWFTEDPGP

>non-antioxidant\_664

MGSSHHHHHSSGLVPRGSHMRAQANEDIVVSKTSLWKEMQYNRDIRFKFASSIVKSG  
GLGYKWSEISFKPANYQYTYTRDGEEVTAHTTCSVNGMNDNFNNGGLPTDFVISRYEVI  
KENSYYVVDYWDSDQAFRNMVYVRSALANLNSVICTGGDYSFALPVGQWPVMTGGAV  
SLHSAGVTLSTQFTDFVSLNSLRFRFRLTVEEPSFSITRTRVSRLYGLPAANPNNGKEYYEV  
AGRFSLISLVPSNDD

>non-antioxidant\_665

MINEIEIKRKFGRTLKKIRTQKGVSQEELADLAGLHRTYISEVERGDRNISLINIHKICAALD  
IPASTFFRKMEEN

>non-antioxidant\_666

SPSPLNPGTNVARLAEQAPIHWVSVAQIENSLAGRPPMAVGFDDDDTVLFSSPGFWRGKKT  
FSPESDYLNPNVFWKMNNGWDEFKSIPKEVARQLIDMHVRRGDAIFFVTGRSPTKTETV  
SKTLADNFHIPATNMNPVIFAGDKPGQNTKSQWLQDKNIRIFYGDSNDITAARDVVGARGI  
RILRASNSTYKPLPQAGAFGEEVIVNSEY

>non-antioxidant\_667

AVCPTGLFSNPLCCATNVLDLIGVDCKTPTIAVDTGAIFQAHCASKGSKPLCCVAPVADQA  
LLCQKAIGTF

>non-antioxidant\_668

MKQPYAVVASCAYCEKLVRLTVLADHSAIRQLEEMLLRSLNIVCPLCTLQRQ

>non-antioxidant\_669

GSHMLCAISGKVPRRPVLSPKSRITFEKSLLEQYVKDGTGNDPITNEPLSIEEIVEIVPSAQ

>non-antioxidant\_670

MSDSKEVPSLPLRHLLEELDSHEDSLLLFLCHDAAPGCTTVTQALCSLSQQRKLTALV  
EMLYVLQRMDLLKSRFGLSKEGAEQLLGTSTFLTRYRKLMMVCVGEELDSSELRALRLFACN  
LNPSLSTALSESRFVELVLALENVGLVSPSSVSVLADMLRTRLRRLDLCQQLVEYEQQEQA  
RYRYCLEHHHHHH

>non-antioxidant\_671

MTFQASGTTGITTLTVTEECRVQVGNVTATLARSKLDKDDTAIGVIGVTALGCNGLQAALQ  
ADPDNYDATNLYMTRNHDKLVKLNKATDGGSSWTYGNVGFYKTEGGNWGGHVGISVD  
GNQTDKPTGEYTLNLTGGYWTNDNKQTFQASGTTGITTLTLEHHHHHH

>non-antioxidant\_672

MRTLMIPLTKEAFAQFGDVIETDGSDFMINNGSTMRFHKLATVETAEPEDKAISIFRAD  
AQDMPLTVRMLERHPLGSQAFIPLLGNPFLIVVAPVGDAPVSGLVRAFRSNGRQGVNYHR  
GVWHHPVLTIEKRDDFLVVDRSGSGNDCDEHYFTEEQMLILNPHQLEHHHHHH

>non-antioxidant\_673

HGYVESPASRAYQCKLQLNTQCGSVQYEPQSVEGLKGFPAQAGPADGHASADKSTFFELD  
QQTPTRWNKLNKLTGPNSTFWKLTARHSTTSWRYFITKPNWDASQPLTRASFDLTPFCQF  
NDGGAIPAAQVTHQCNIPADRSQSHVILAVWDIADTANAFYQAIDVNLK

>non-antioxidant\_674

VEGAVKTEPVDLPHPGFLNSSNYRIPALFKTKEGTLIASIDARRHGGADAPNNDIDTAVRRS  
EDGGKTWDEGQIIMDYPDKSSVIDTTLIQDDETGRIFLLVTHFPSKYGFVNAGLGSFGKNI  
DGKEYLCLYDSSGKEFTVRENVVYDKDSNKTEYTTNALGDLFKNGTKIDNINSSTAPLKA  
KGTSYINLVYSDDDGTWSEPQNIQVKKDWMKFLGIAPGRGIQIKNGEHKGRIVVPVY  
YTNEKKGKQSSAVIYSDDSGKNWTIGESPNDNRKLENGKIINSKTLSDDAPQLTECQVEM  
PNGQLKLFMRNLSGYLNIATSFDDGATWDETVEKDTNVLEPYCQLSVINYSQKVDGKDA  
VIFSNPNARSRSNGTVRIGLINQVGTYENGEPKYEFDWKYNKLVKPGYYAYSCLTELSNG  
NIGLLYEGTPSEEMS YIEMNLKYLESG

>non-antioxidant\_675

GPSQPTYPGDDAPVEDLIRFYNDLQQYLVVTRHRM

>non-antioxidant\_676

SSLDDKPQFPGASAEFIDKLEFIQPNVISGIPIYRVMRQGGQIINPSEDPHLPKEKVLKLYKS  
MTLLNTMDRILYESQRQGRISFYMTNYGEEGTHVGSAAALDNTDLVFGQAREAGVLMYR  
DYPLELFMAQCYGNISDLGKGRQMPVHYGCKERHFVTISSPLATQIPQAVGAAYAAKRAN  
ANRVVICYFGEAASEGDAHAGFNFAATLECPHIFCRNNGYAISTPTSEQYRGDGAARGP



GYGIMSIRVDGNDVFAVYNATKEARRRAVAENQPFLIEAMTYRIGHASTSDDSSAFRSVDE  
VNYWDKQDHPISRLRHYLLSQGWWDDEEQEKAWRKQSRRKVMEAFEQAERKPKPNPNL  
LFSVYQEMPAQLRKQESLARHLQTYGEHYPLDHFDK

>non-antioxidant\_677

MTQTQPVTPTPPASFQTQHDPRLRLGATPLPGGAGTRFRLWTSTARTVAVRVNGTEHVMT  
SLGGGIYELELPGPGARYLFLVDGVPDPYARFLPDGVHGEAEVDFGTFDWDADW  
HGIKLADCVFYEVHVGTFTEGTYRAAAEKLPYLKELGVTAIQVMPLAAFDGQRGWGYD  
GAAFYAPYAPYGRPEDLMALVDAHRLGLGVFLDVVYNHFGPSGNLSSYAPSYFTDRFS  
SAWGMGLDYAEPHMRRYVTGNARMWLRDYHFDGLRLDATPYMTDDSETHILTELAQEI  
HELGGTHLLLAEDHRNLPDLVTVNHLDGIWTDFFHHETRVTLTGEQEGYAGYRGGAEA  
LAYTIRRGWRYEGQFWAVKGEEHERGHPSDALEPNFVYCIQNHDQIGNRPLGERLHQSD  
GVTLHEYRGAALLLTLPMTPLLFQQQEWAASTPFQFFSDHAGELGQAVSEGRKKEFGGF  
SGFSGEDVDPQAEQTFLNSKLNWAEREGGEHARTLRLYRDLLRLRREDPVLHNRQRENL  
TTGHDGDVLRVTRVTGAGERVLLWNLGQDTRAVAEVKLPFTVPRRLLLHTEGREDLTG  
AGEAVLVG

>non-antioxidant\_678

MADPWQECMDYAVTLAQAGEVVREALKNEMNIMVKSSPADLVTATDQKVEKMLITSIK  
EKYPHSFIGEESVAAGEKSILTDNPTWIIDPIDGTTNFVHGPFVAVSIGFVVNKKMEFGIV  
YSCLEDKMYTGRKGKGAFCNGQKLQVSHQEDITKSLLVTELGSSRTPETVRILSNIERLLC  
LPIHGIRGVGTAALNMCLVAAGAADAYYEMGIHCWDVAGAGIIVTEAGGVLLDVTGGPF  
DLMSRRVIASSNKTLAERIAKEIQIPLQRDDED

>non-antioxidant\_679

EQWQTLYEAIIGGEETVAKLVEAFYRRVAAHPDLRPIFPDDLTTETAHKQKQFLTQYLGPPPL  
YTAEHGHPMLRARHLRFEITPKRAEAWLACMRAAMDEIGLSGPAREQFYHRLVLTAAHMM  
VNTPDHLD

>non-antioxidant\_680

MKVMECQTYEELSQAARITADTIKEKPDVAVLGLATGGTPEGTYRQLRLHQTENLSFQNI  
TTVNLDEYAGLSSDDPNSYHFYMNDRFFQHIDSKPSRHFIPNGNADDLEAECRRYEQVD  
SLGDTDIQLLIGRNGHIGFNEPGTSFKSRTHVVTLNEQTRQANARYFPSIDSVPKKALTM  
GIQTILSSKRILLISGKSKAEAVRKLLEGNISEDFFASALHLHSDVTVLIDREAASLRP

>non-antioxidant\_681

MKKNKQIVHELYNDISISKDPKYS DILEVLQKVYLKLEKQKYELDPSPLINRLVNYLYFT  
AYTNKIRFTEYQEELIRNLSEIGRTAGINGLYRADYGDKSQF

>non-antioxidant\_682

MKTVVFAYHDMGCLGIEALLAAGYEISAIPTHHTDNPGEKAFYGSVARLAAERGIPVYAPD  
NVNHPLWVERIAQLSPDVIFSYYRHLYDEILQLAPAGAFNLHGSLLPKYRGRAPLNWVL  
VNGETETGVTLHRMVKRADAGAIVAQLRIAIPDDIAITLHHKLCHAARQLLEQTLPAIKH  
GNILEIAQRENEATCFGRRTPDSSFLEWHKPASVLHNMVRAVADPWPGAFSYVGNQKFTV  
WSSRVPHASKAQPGSVISVAPLLIACGDGALEIVTGQAGDGITMQGSQLAQTLGLVQGS  
RLN

>non-antioxidant\_683

MTQAKAKHADVPVNLVYRPNAPFIGKVISNEPLVKEGGIGIVQHIKFDLTGGNLKYIEGQSIG  
IIPGVKNGKPEKLRLYSIASTRHGDDVDDKTISLCVQRQLEYKHPESGETVYGVCSSTYLT  
HIEPGSEVKITGPVVKEMLLPDDPEANVIMLAGGTGITPMRTYLWRMFKDAERAANPEYQ

FKGFSWL VFGVPTTPN ILYKEELEEEIQKYPDNFRLTYAISREQKNPQGGRMYIQDRVAEH  
ADQLWQLIKNQKTHTYICGPPPMEEGIDAALSAAAAKEGVTWSDYQKDLKKAGRWHVE  
TY

>non-antioxidant\_684

SSNNFNYGAYHSLEAIYHEMDNIAADFPDLARRVKIGHSFENRPMYVLKFSTGKGVRRPA  
VWLNAGIHSREWISQATAIWTARKIVSDYQRDPAITSILEKMDIFLLPVANPDGYVYTQTQ  
NRLWRKTRSRNPGSSCIGADPNRNWNASFAGKGASDNPCSEVYHGPHANSEVEVKSVVD  
FIQKHGNFKGFIDLHSYSQLLMYPYGYSVKKAPDAEELDKVARLAAKALASVSGTEYQV  
GPTCTTVYPASGSSIDWAYDNGIKFAFTFELRDTGTYGFLLPANQIIPTAETWLGLKTIME  
HVRDONLY

>non-antioxidant\_685

NDSPFYVNPNMSSAEWVRNNPNDPRTPVIRDRIASVPQGTWFAHHNPGQITGQVDALMS  
AAQAAGKIPILVVSNA PGRDCGNHSSGGAPSHSAYRSWIDEFAAGLKNRPAYIIVEPDLISL  
MSSCMQH VQQEVLETMAYAGKALKAGSSQARIYFDAGHSAWHSPAQMASWLQQADISN  
SAHG IATNTSNYRWTAEVAYAKAVLSAIGNPSLRAVIDTSRNGNGPAGNEWCDPSGRAIG  
TPSTTNTGDPMIDAFLWIKLPGEADGCIAGAGQFVPQAAYEMAIAA

>non-antioxidant\_686

MGEVEAPGRLWLESPPGEAPP IFLPSDGQALVLRGRLTQVTD RKC SRTQVELVADPETRT  
VAVKQLGVNPSTTGTQELKPGLEGLVGD TLYLVNGLHPLTLRWEETR

>non-antioxidant\_687

MRGSHHHHHHRSPSKVQELSVYEINELDRHSPKILKNAFSLMFGLGDLVPFTNKLYTGDL  
KKRVGITAGLCVVIEHVPEKKGERFEATYSFYFGDYGHLSVQGPYLT YEDSFLAITGGAGI  
FEGAYGQVKLQQLVYPTKLFYTFYLGKLANDLPLELTGTPVPPSKDIEPAPEAKALEPSGVI  
SNYTN

>non-antioxidant\_688

MAHHHHHHMASPASTNPAHDHFETVQAQLCQDVLSSFQGLCRALGVESGGGLS QYHKI  
KAQLNYWSAKSLWAKL DKRASQPVYQQGACTNTKCLVVGAGPCGLRAAVELALLGAR  
VVLVEKRIKFSRHNVLHLWPFTI HDLRALGAKKFYGRFCTGTLDHISIRQLQLLLLK VALL  
LGVEIHWGVKFTGLQPPPRKGSWRAQLQPNPPAQLASYEFDVLISAAGGKFVPEGFTIRE  
MRGKLAIGITANFVNGRTVEETQVPEISGVARIYNQKFFQSLLKATGIDLENIVYYKDETHY  
FVMTAKKQCLLRLGVLRQDLSETDQLLGKANVVPEALQRFARAAADFATHGKLGKLEFA  
QDARGRPDVAAFDFTSMMRAESSARVQEKHGARLLLGLVGDCLVEPFWPLGTGVARGFL  
AAFDAAWMVKRWAEGAGPLEVLAERESLYQLLSQTSPENMHRNVAQYGLDPATRYPNLN  
LRAVTPNQVQDLYDMMDKE

>non-antioxidant\_689

SSVQTAATSWGTVPSIRVYTANNGKITERCWDGKGWYTGAFNEPGDNVSVTSWLVGSAI  
HIRVYASTGTTTTTEWCWDGNGWTKGAYTSTN

>non-antioxidant\_690

FCLTLRRRYTMGHHHHHHHHHSSGHIEGRHMKLEQTLT LSPNLIGFNSNEGEKLLLTSRS  
REDFP LSMQFVTQVNQAYCGVASIIMVLNSLGINAPETAQYSPYRVFTQDNFFSNEKTKA  
VIAPEVVARQGM TLDELGR LIASYGVKVKNHASDTNIEDFRKQVAENLKQDGNFVIVN  
YLRKEIGQERGGHISPLAAYNEQTDRFLIMDVSRYKYPPVWVKTTDLWKAMNTVDSVSQ  
KTRGFV FVSKTQDD

>non-antioxidant\_691

IVEGSDAEIGMSPWQVMLFRKSPQELLCGASLISDRWVLTAAHCLLYPPWDKNFTENDLL  
VRIGKHSRTRYERNIEKISMLEKIYIHPRYNWRENLDRDIALMKLKKPVAFSDYIHPVCLPD  
RETAASLLQAGYKGRVTGWGNLKEKGQPSVLQVNLPIVERPVCCKDSTRIRITDNMFCAG  
YKPDEGKRGDACEGDSGGPFVMKSPFNRRWYQMGIVSWGEGCDRDGKYGFYTHVFRLL  
KKWIKVIDQFGE

>non-antioxidant\_692

LDMSLNIHIKSGQDKWEVNVAPESTVLQFKEAINKANGIPVANQRLIYSGKILKDDQTVES  
YHIQDGHSVHLVKSQP

>non-antioxidant\_693

MQLKRVAEAKLPTPWGDFLMVGFEEELATGHDHVALVYGDISGHTPVLARVHSECLTGDA  
LFSLRCDGCFQLEAALTQIAEEGRGILLYHRQEGRNIGLLNKIRAYALQDQGYDTVEANHQ  
LGFAADERDFTLCADMFKLLGVNEVRLLTNNPKKVEILTEAGINIVERVPLIVGRNPNNEH  
YLDTKAEKMGHLLNK

>non-antioxidant\_694

RIAISNSNRTRSVPSTTIWISPTPNCISIYETQDANLFLCLTKNGAHVLGTITIKGLKGAALRE  
MHDNALSLKLPFDNQGNLLNCALESSTWRYQETNAVASNALTMPNSTVYPRNKTAHPG  
NMLIQISPNTFSVVYNEINSGYAFTFKWSAEPGKPFHPPTAVFCYTEQGSHHHHHH

>non-antioxidant\_695

ETEADNGALREEAKGVFEAIPKMTAIKQTEDNPEGVPLTAEKIELGKVLFFDPRMSSSGL  
ISCQTCHNVGLGGVDGLPTSIGHGWQKGRPNAPTMLNAIFNAAQFWDGRAADLAEQAK  
GPVQAGVEMSNTPDQVVKTINSMPYVEAFKAAFPEEADPVTDFNFAAAIEQFEATLITPN  
SAFDRFLAGDDAAMTDQEKRLQAFMETGCTACHYGVNFGGQDYHPFGLIAKPGAIEVL  
PAGDTGRFEVTRTTDDEYVFRAAPLRNVALTAPYFHSVVWELAEAVKIMSSAQIGTELT  
DQAEDITAFLGTLTGEQPVIDHPILPVRTGTTPLPTPM

>non-antioxidant\_696

MTKKSTKSEAASKTKKSGVPETGAQGVRRAGGADHADAHLGTVNNALVNHYLEEKEF  
QTVAETLQRNLATTISLYLKFKKYHWDIRGRFFRDLHLAYDEFIAEIFPSIDEQAERLVALG  
GSPLAAPADLARYSTVQPQETVRDARTQVADLVQDLSRVGKGYRDDSQACDEANDPVT  
ADMYNGYAATIDKIRWMLQAIMDDERLD

>non-antioxidant\_697

GSHMASGDATDITIYYKTGWTHPHIHYSLNQGAWTTLPVPLTKSEYEGYVKVTIEAEEG  
SQLRAAFNNGSGQWDNNQGRDYDFSSGVHTLADGRILSGTPK

>non-antioxidant\_698

MKHHHHHHPMVKEYKTITQIAGPLIFVEKTEPVGYNEIVNIKMGDGTVRRGQVLDSSADI  
VVVQVFEGTGGLDKDCGVIFTGETLKLPAVDLLGRILSGSGEPRDGGPRIVPDQLLDING  
AAMNPYARLPPKDFIQTGISTIDGTNTLVRGQKLPIFSASGLPHNEIALQIARQASVPGSESA  
FAVVFAAMGITNEEAQYFMSDFEKTGALERAVVFLNLADDPVERIVTPRMALTAAYLA  
YEHGMHVLVILTDITNYAEALRQMGAARNEVPGRRGYPGYMYTDLATLYERAGIVKGA  
GSVTQIPILSMPGDDITHPIPDLSGYITEGQIVVARELHRKGIYPPINVLPSLSRLMNSGIGAG  
KTREDHKAVSDQMYAGYAEGRDLRGLVAIVGKEALSERDTKFLEFADLFEDKFVRQGRN  
ENRTIEDTLEIGWQILTHLPENQLGRIDNKYIQKYHPAHRKAK

>non-antioxidant\_699

MPANKLVALTFDDGPDNVLTARVLDKLDKYNVKATFMVVGQRVNDSTAAIIRRMVNSGH  
EIGNHSWSYSGMANMSPDQIRKSIADTNAVIQKYAGTTPKFFRPPNLETSPTLFNNVDL

VGGLTANDWIPSTTAEQRAAAVINGVRDGTIILLHDVQPEPHPTPEALDIIIPTLKSRYEFV  
TLTEFLTLKGVPIIDPSVKRMYNSVPLEHHHHHH

>non-antioxidant\_700

AKGEFVRTKPHVNVGTIGHVDHGKTTLTAALTYVAAAENPNVEVKDYGDIDKAPEERAR  
GITINTAHVEYETAKRHYSHVDCPGHADYIKNMITGAAQMDGAILVVSAAADGMPMQTRE  
HILLARQVGVPIYVFMNKVDMVDDPELDDLVEVEVRDLLNQYEFPGDEVPVIRGSALL  
ALEQMHRNPKTRRGENEVVDKIWELDAIDEYIPTVRDVKPFLMPVEDVFTITGRGTV  
ATGRIERGKVKVGDEVEIVGLAPETRKTVVTVGVEMHRKTLQEGIAGDNVGVLLRGVSRE  
EVERGQVLAKPGSITPHTKFEASVYVLKKEEGGRHTGFFSGYRPFYFRITDVTGVVQLP  
PGVEMVMPGDVNTFTVELIKPVALEEGLRFAIREGGRTVGAGVVTKILE

>non-antioxidant\_701

MKGGAGVPDLPDLASGVRLAIVASSWHGKICDALLDGARKVAAGCGLDDPTVVRVGA  
IEIPVVAQELARNHDAVVALGVVIRGQTPHFDYVCDAVTQGLTRVSLDSSTPIANGVLTNT  
EEQALDRAGLPTS AEDKGAQATVAALATALTLRELRAHS

>non-antioxidant\_702

GSMAASLVGKKIVFVTGNAKKLEEVVQILGDKFPCTLVAQKIDLPEYQGEPDEISIQKCQE  
AVRQVQGPVLVEDTCLCFNALGGLPGPYIKWFLEKLPKPEGLHQLLAGFEDKSAYALCTFA  
LSTGDPSQPVRVLRFRGRTSGRIVAPRGCQDFGWDPCFQPDGYEQTYAEMPKAEKNAVSHRF  
RALLELQEYFGSLAA

>non-antioxidant\_703

MSQAEFEKAAEEVRHLKTKPSDEEMLFYGHYKQATVGDINTERPGMLDFTGKAKWDA  
WNELKGTSKEDAMKAYINKVEELKKKYGI

>non-antioxidant\_704

MNSITVRNATFTWARSDPPTLNGITFSIPEGALVAVVGQVCGKSSLLSALLAEMDKVEGH  
VAIKGSVAYVPQQAWIQNDSLRENILFGCQLEEPY YRSVIQACALLPDLEILPSGDRTEIGE  
KGVNLSGGQKQRVSLARAVYSNADIYLFDDPLSAVDAHVGKHIFENVIGPKGMLKNKTRI  
LVTHSMSYLPQVDVIIVMSSGKISEMGSYQELLARDGAF AEFLRTYASHHHHHH

>non-antioxidant\_705

MVFKKVLLTGTSEESFTAAADDAIDRAEDTLDNVWVAEVDQGV EIGAVEERTYQTEVQ  
VAFELDGSQ

>non-antioxidant\_706

GSASPAVAELCQNTPETFLEASKLLLYADNLRNPNDEKYRSIRIGNTAFSTRLLPVRGAVE  
CLFEMGFEEGETHLIFPKKASVEQLQKIRDLIAIER

>non-antioxidant\_707

RVQSGKIDCGDDAGWAKVPSDDPGRDNTRELAKNITFASPYCRPPVLLSITQLDVEQSQ  
NLRVIARLYSVSPSGFKASCYTWHTKVYSMSISWISIENY

>non-antioxidant\_708

AQCEATVESNDAMQYNVKEIVVDKSKQFTMHLKHVGMMAKVAMGHNLVLT KDADKQ  
AVATDGMGAGLAQDYVKAGDTRVIAHTKVIGGGESDSVTFDVS KIAAGENYAYFCSFPGH  
WAMMKGTLKLS

>non-antioxidant\_709

MTEYKLVVVGAGGVGKSALTIQLIQNHVDECDPTIEDSYRKQVVIDGETCLLDILDTAGQ  
EEYSAMRDQYMRTGEGFLCVFAINNTKSFEDIHQYREQIKRVKDSDDVPMVLVGNKSDL  
AARTVESRQAQDLARSYGIPYIETSAKTRQGVEDAFYTLVREIRQH

>non-antioxidant\_710

AEETCFDKYTGNTYRVGDTYERPKDSMIWDCTCIGAGRGRISCTIANRCHEGGQSYKIGD  
TWRRPHETGGYMLECVCLGNGKGEWTCKPI

>non-antioxidant\_711

MAQQGVFTLPANTSFGVTAFAANAANTQTIQVLVDNVVKATFTGSGTSDKLLGSQVLNSGS  
GAIKIQVSVNGKPSDLVSNQITILANKLNFAMVGSSEDGTDNDYNDGIAVLNWPLG

>non-antioxidant\_712

ATFGRATHVVVRALPESLAQQALRRTKGDEVDFAERAERQHQLYVGVLGSKLGLQVVQLP  
ADESLPDCVFVEDVAVVCEETALITRPGAPSRRKEADMMKEALEKLQLNIVEMKDENATL  
DGGDVLFTGREFFVGLSKRTNQRGAELADTFKDYAVSTVPVVDALHLKSFCSMAGPNLI  
AIGSSESAQKALKIMQQMSDHRYDKLTVPDDTAANCIYLNIPSKGHVLLHRTPEEYPESAK  
VYEKLDHMLIPVSNSELEKVDGLLTMSSVLINKK

>non-antioxidant\_713

IPEYVDWRQKGAVTPVKNQGSCGSCWAFSAVVTIEGIIKIRTGNLNQYSEQELDCDRRSY  
GCNGGYPWSALQLVAQYGIHYRNTYPYEGVQRYCRSREKGPYAAKTDGVRQVQPYNEG  
ALLYSIANQPVSVLEAAGKDFQLYRGGIFVGPCGNKVDHAAVAVGYGPNYILIKNSWGT  
GWGENGYIRIKRGTGNSYGVCGLYTSSFPYVKN

>non-antioxidant\_714

GAMGSGDTQLFNRAVSMVEKNKDIRSLQCDDGITGKERLKAYGELITNDKWTRNRPIVS  
TKKLDKEGRTHHYMRHFHVESKKIALVHLEAKESKQNYQPDFINMYVDVPGEKRYYLK  
PKLHPVSN

>non-antioxidant\_715

EEPGSGIGYPYDNNLTPYVAPGPTDSRAPCPALNALANHGYIPHDGRAISRETLQNAFLNH  
MGIANSVIELALTNAFVVCEYVTGSDCGDSLNLTLAEPHAFEHDHSFSRKDYKQGVAN  
SNDFIDNRNFDAETFQTSLDVVAGKTHFDYADMNEIRLQRESLSNELDFPGWFTESKPIQN  
VESGFIFALVSDFNLDPNDENPLVRIDWWKYWFTNESFPYHLGWHPPSPAREIEFVTSASSA  
VLAASVTSTPSSLPSGAIGPGAEEAVPLSFASTMTPFLATNAPYYAQDPTLGPND

>non-antioxidant\_716

GEEKKRTARTDYWLQPEIIVKIITKKLGEKYHKKKAIVKEVIDKYTAVVKMIDSGDKLKL  
DQTHLETVIPAPGKRILVLNGGYRGNEGTLESINEKTFSATIVIETGPLKRRVEGIQYEDIS  
KLA

>non-antioxidant\_717

GSHMKEPKLSPKQERFIEEYFINDMNATKAAIAAGYSKNSASAIGAENLQKPAIRARIDAR  
LK

>non-antioxidant\_718

MSITKTELDGILPLVARGKVRDIYEVDAGTLLFVATDRISAYDVIMENSIPEKGILLTKLSEF  
WFKFLSNDVRNHLVDIAPGKTIFDYLPKLEPKYKTQLEDRLVHKKHKLIPLEVIVRGI  
TGSAWKEYVKTGTVHGLKQPQLKESQEFPEIFTPSTKAEQGEHDENISPAQAAELVGED  
LSRRVAELAVKLYSKCKDYAKEKGIIIADTKFEFGIDEKTNEIILVDEVLTDPSSRFWNGASY  
KVGESQDSYDKQFLRDWLTANKLNGVNGVKMPQDIVDRTRAKYIEAYETLTGSKWSH

>non-antioxidant\_719

MGTEPPENCQDDFNFNYSVDQEIEVYHVDKGWSAGWNYVCLNDYCLPGNKSNGAFRKT  
FNAVLGQDYKLTFFKVEDRYGQQQIILDRNITFTTQVCNLEHHHHHH

>non-antioxidant\_720

MKKRLTITLSESVLENLEKMAREMGLSKSAMISVALENYKKGQER

>non-antioxidant\_721

QGRYTTDDGYIFNASDIIEDTGDAYIVPHGDHYHYIPKNELSASELAAAEAFLSG

>non-antioxidant\_722

MSLTLADKVVYEEIQQSRFIAKAAPVASEEEALAFLAENREPEATHNGHAYKIGLLYRFS  
DDGEPSTAGRPIHLAIEAQGLDRVAVLVVRYFGGVKLGAGGLVRAYGGVAAEALRRAPK  
VPLVERVGLAFLVPFAEVGRVYALLEARALKAETTYTPEGVRFALLLPKPEREGFLRALLD  
ATRQVVALE

>non-antioxidant\_723

MPAAAPGKNFDLSHWKQLPDANTTEISSANLGLGYTSQYFYTDTDGAMTFWAPTGGT  
TANSSYPRSELREMLDPSNSKVNWGWQGTHMTKLSGKTVQLPSSGKIIVAQIHGIMDDGT  
NAPPLVKAVFQDQQLDMQVKQNSDGTGSDVHNYFTGIKLGDLNMEIRVTDGVAYVTM  
NGDTRSVDVFGKDAGWKNLKYFFKAGNYVQDNTSTGGSIAKLYSLSVSHSNLEHHHH  
HH

>non-antioxidant\_724

MRGSHHHHHHTDPALRAMRLVQLSRHSIAFPSPEGALREPNGLLALGGDLSPARLLMAYQ  
RGIFPWFSPGDPILWSPDPRAVLWPESLHISRSMKRFHKRSPYRVTMNYAFQVIEGCAS  
DREEGTWITRGVVEAYHRLHELGHASIEVWREDELVGGMYGVAQGTFCGESMFSRME  
NASKTALLVFCEEFIGHGGKLIDCQVLNDHTASLGACEIPRRDYLNLYNQMRGLRPNNF  
WVPRCLFSPQEGLCGR

>non-antioxidant\_725

MAALTRNPQFQKLEWHRANSANLKLRELFEADPERFNNFSLNLNTNHGHILVDYSKNL  
VSKEVMQMLVELAKSRGVEAARDNMFSGSKINYTEDRAVLHVALRNRSNTPIKVDGKDV  
MPEVNRVLDKMKSFQQRVRSQDVKGYTGKSIDIINIGIGGSDLGPLMVTEALKPYSKGG  
PRVWFVSNIDGTHIAKTLASLSPETSLFIIASKTFTTQETITNAETAKEWFLEAAKDPSAVAK  
HFVALSTNTAKVKEFGIDPQNMFEFWDWVGGRYSLWSAIGLSIALHVGFDFEQLLSGAH  
WMDQHFLKTPLEKNAPVLLALLGIWYINCYGCETHALLPYDQYMHRFAAYFQQGDMES  
NGKYITKSGARVDHQTGPIVWGEPTNGQHAFYQLIHQGTKMIPCDFLIPVQTQHPIRKGL  
HHKILLANFLAQTEALMKGKLPPEARKELQAAGKSPEDLEKLLPHKVFEGNRPTNSIVFT  
KLTPFILGALIAMYEHKIFVQGIMWDINSFDQWGVELGKQLAKKIEPELEGSSAVTSHDSS  
TNGLISFIKQRDTKL

>non-antioxidant\_726

GSSGSSGEKITKVYELGNEPERKLWVDRYLTFMEERGSPVSSLPAVGKKPLDLFRLYVCVK  
EIGGLAQVNKNKKWRELATNLNVGTSSSAASSLKKQYIYQLFAFECKIERGEEPPPEVFST  
GDT

>non-antioxidant\_727

IGVCYGMLGNNLPPSEVVSLYKSNNIARMRLYDPNQAALQALRNSNIQVLLDVPRSDVQ  
SLASNPSAAGDWIRRNVAWYWPSVFRYIAVGNELIPGSDLAQYILPAMRNIYNALSSAGL  
QNQIKVSTAVDTGVLGTSYPPSAGAFSSAAQAYLSPIVQFLASNGAPLLVNVYPYFSYTN  
PGQISLPYALFTASGVVVDGRFSYQNLFDIVDAVFAALERVGGANVAVVVSESGWPSA  
GGGAEASTSNAQTYNQNLIRHVGGTTPRRPGKEIEAYIFEMFNENQKAGGIEQNFGLFYP  
NKQPVYQISF

>non-antioxidant\_728

MKIEEVRFGVLKIDGKEFDHDIVIYPSGRIERRMKEISKKKHGTSHKLDPEELEKYLVEDFD

VLLVGTGIYGMLSLLPESKKLVEDKEVIEKPTKEALKLLEELWGKKRILAIHVTC

>non-antioxidant\_729

MEALRLGFSPCNDTFIFYALVHGRVESPVLEPVLEDVETLNRWALEGRLPLTKLSYAAYA  
QVRDRYVALRSGGALGRGVGPLVVARGPLQALEGLRVAVPGRHTTAYFLLSLYAQGFVPV  
EVRYDRILPMVAQGEVEAGLIHESRFTYPRYGLVQVVDLGAWWEERTGLPLPLGAILARR  
DLGEGLRALDEAVRRSVAYALAHPEEALDYMRAHAQELSDEVIWAHVHTYVNAFSLDV  
GEEGERAVARLFAEAEARGLAAPSPRPLFV

>non-antioxidant\_730

MVSGEVRTKKVPLDTNHKRFYDAFAQGAGKLDLDRQCVECHHEKPGGIPFPKNHPVKPA  
DGPMRCLFCHKFKLEHHHHHH

>non-antioxidant\_731

MENMENDENIVVGPKPFYPIEEGSAGTQLRKYMERYAKLGAIFTNAVTVGDYSYAEYLE  
KSCCLGKALQNYGLVVDGRIALCSENCEEFFIPVIAGLFIGVGVAPTNEIYTLRELVHSLGIS  
KPTIVFSSKKGLDKVITVQKTVTTIKTIVILDSKVDYRGYQCLDTFIKRNTPPGFQASSFKT  
VEVDRKEQVALIMNSSGSTGLPKGVLTHENIVTRFSHARDPIYGNQVSPGTAVLTVVPFH  
HGFGMFTTLGYLICGFRVVMLTKFDEETFLKTLQDYKCTSVILVPTLFAILNKSELLNKYD  
LSNLVEIASGGAPLSKEVGEAVARRFNLPGVRQGYGLTETTSIIITPEGDDKPGASGKVPV  
LFKAKVIDLDTKKSGLPNRRGEVCVKGPMLMKGYVNNPEATKELIDEEGWLHTGDIGYY  
DEEKHFFIVDRLKSLIKYKGYQVPPAELESVLLQHPSIFDAGVAGVPDPVAGELPGAVVVL  
ESGKNMTEKEVMDYVASQVSNAKRLRGGVRFVDEVPKGLTGKIDGRAIREILKKPVAKM

>non-antioxidant\_732

LSSNSSMNPKSLTDPKLLKNIPMWLKSRLHLKYSDALSGTPWIELIYLDDEETLEKKGVLAL  
GARRKLLKAFGIVIDYKERDLIDRSAY

>non-antioxidant\_733

MKKSLGARTLAYPTPLFLVGTYDRDSRPNIMAAAWAGICCSQPPSIYAVSLRKATYTYRSITE  
RGAFTISIPSRAYVRHADYAGIYSGENEDKFASLGLTPVPGEHVDAPYVGEFPMIELKLIH  
QIEIGLHTQFIGEIMDVKVDDECLRDDGLPDINKVDPVIFAPVSREYYAVGEFLAKAFSAGK  
GLRS

>non-antioxidant\_734

MGPQDNSLVIGASQEPRVLAGDFLRVISNQAISEIEQYLFAPFIGFNADSQNFVPLATEVPT  
LENGRLRVTDIGGGKKRLEMDITIRPDAKWSGDRPITTEDVAFYFEVGKAKGMPVLNPDF  
WERVNVRIKDARNFTLIFEPAYYYDTYGPINTYAPKHIMGPEWERVKAARGLDPKDAE  
KLNELYRNFFLKFATPQALNRGAMVYSGPFKLKRWVPGNSIEMERNPNFPIKPEGGESKY  
VQKVYRFIQNTNSLLVAVIGGSIDATSSVSLTFDQGRSPQLVRRAPGRFDIWFVPGAIWEH  
IDINKFENCQVVKDLGLNDKRTRQAILHALNREGLVKAFFDGLQPVAHTWIAPVNPLFNP  
NVKKYEFDLKKAELLAEMGWRKGPDGILQRTVNGRTVRFEIEYVTTAGNVVRERTQQF  
FAEDLKKIGIAVKINNAPS AVVFADEFIQRASECKWTGMFEFAWVSNLQEDGSLFQYKNLN  
TGAIMVPTKENNYQGQNI GGWRNDEFDRLTSQAVLEFDPERRKQLFWRAQEIWAEELPAL  
PLYFRANPYVVRKGLVNYVASAYSGGYGYPGWNAWEIGWESRGAVKKWDQAKYALSTR

>non-antioxidant\_735

KTPLVNESLKKFLNTKDGRLVASLVAEFLQFFNLDFTLAVFQPETSTLQGLEGRENLARDL  
GIIAEGTVGGPLLEVIRRW

>non-antioxidant\_736

MDERIQALRKEVDRVNREILRLLSERGRLVQEIGRLQTELGLPHYDPKREEEMLAYLTAEN

PGFPDETIRKLFKEIFKASLDLEERQDQ

>non-antioxidant\_737

MNARSTGQHPARYPGAAGEPTLDSWQEPPHNRWAF AHLGEMVPSAAVSRRPVNAPGH  
ALARLGAIAAQLPDLEQRLEQTYTDAFLVLRGTEVVAEYYRAGFAPDDRHLLMAVSKSLC  
GTVVGALVDEGRIDPAQPVTEYVPELAGSVYDGPSVLQVLDMQISIDYNEDYVDPASEVQ  
THDRSAGWRTRRHGDPADTYEFLTTLRGDGTGEFQYCSANTDVLAWIVERVTGLRYVE  
ALSTYLWAKLDADR DATITVDTTGFGFANGGVSC TARDLARVGRMMLDGGVAPGGRVVS  
EDWVRRVLAGGSHEAMTDKGFTNTFPDGSYTRQWWCTGNERGNVSGIGIHGQNLWLDP  
LTDSVIVKLSWPDPDTEHWHRLQNGILLDVSRALDAV

>non-antioxidant\_738

EVSTTQNDTLKVMTHNVYMLSTNLYPNWGQTERADLIGAADYIKNQDVVILNEVFDNSA  
SDRLLGNLKKEYPNQTAVLGRSSGSEWDKTLGNYSSSTPEDGGVAIVSKWP IAEKIQYVFA  
KGC GPDNLSNKG FVYTKIKKNDRFVHVIGTHLQAEDSMCGKTS PASVR TNQLKEIQDFIK  
NKNIPNNEYVLIGGDMNVNKINAENNDSEYASMFKTLNASVPSYTGHTATWDATTNSIA  
KYNFPDSPA EYLDYIIASKDHANPSYIENKVLQPKSPQWTVTSWFQKYTYNDYSDHYPVE  
ATISMK

>non-antioxidant\_739

LDGVLVPESGILVSVGQDVDSVNDYASALGTIPAGVTNYVGIVNLDGLNSDADAGAGRN  
NIAELANAYPTSALVVGVS MNGEVD AVASGRYANIDTLLN TLAGYDRPVYLRWAYEVD  
GPWNGHSPSGIVTSFQYVHDRIALGHQAKISLVWQVASYCPTPGGQLDQWWPGSEYVD  
WVGLSYFAPQDCNWD RVNEAAQFARSKGKPLFLNESTPQRYQVADLTYSADPAKGTNRQ  
SKTSQQLWDEWFAPYFQFMSDNSDIVKGFTYINADWDSQWRWAAPYNEGYWGDSRVQA  
NALIKSNWQQEIAKGGQYINHSETLFETLGYGSTHHHHH

>non-antioxidant\_740

MTSRVDPANPGSELDSAIRDTLTYSNPVPNALLTASESGFLDAAGIELDVLSGQQGTVHFT  
YDQPAYTRFGGEIPPLSEGLRAPGRTRLLGITPLLGRQGFFVRDDSPITAAADLAGRRIGV  
SASAIRILRGQLGDYLELDPWRQTLVALGSWEARALLHTLEHGELGVDDVELVPISSPGVD  
VPAEQLEESATVKGADLFPDVARGQA AVLASGDVDALYSWLPWAGELQATGARPVVDLG  
LDERNAYASVWTVSSGLVRQRPGLVQRLVDA AVDAGLWARDHSDAVTSLHAANLGVSTG  
AVGQGGFAD FQQRLVPRLDHDALALLERTQQFLLTNLLQEPVALDQWAAPEFLNNSLNR  
HR

>non-antioxidant\_741

MIKVKSPGRVNLIGEHTDYTYGYVMPMAINLYTKIEAEKHGEVILYSEHFGEERKFSLNDL  
RKENSWIDYVKGIFWVLKESDYEVGGIKGRVSGNLPLGAGLSSSASFV GILETLDKLYNL  
KLDLSKVL LAKKAENEFVGVPCGILDQFAV VFGREGNVIFLDTHTLDYEYIPFPKDV SILV  
FYTGVRRELASSEYAERKHIAEESLKILGKGSKEVREGELSKLPPLHRKFFGYIVRENARV  
LEVRDALKEGNVEEVGKILTTAHWDLAKNYEVSKELDF FVERALKLGAYGARLTGAGF  
GGS AIALVDKEDAETIGEEILREYLKRFPWKARHFIVEPSDGVGI

>non-antioxidant\_742

AAPPAPPVSYGVEEDVFHPVRAKQGMVASVDATATQVGVDILKEGGNAVDA AVAVGYAL  
AVTHPQAGNLGGGFMLIRSKNGNTTAIDFREM APAKATRDMFLDDQGNPDSKKS L TSHL  
ASGTPGTVAGFSLALDKYGT MPLNKVVQPAFKLARDGFIVNDALADDLKTYGSEVLPNH  
ENSKAIFWKEGEPLKKGDTLVQANLAKSLEMIAENGPDEFYKGTIAEQIAQEMQKNGGLI  
TKEDLAAYKAVERTPISGDYRGYQVYSMPPPSSGGIHI VQILNILENFDMKKYGFGSADAM



QIMAEAEKYAYADRSEYLGDPDFVKVPWQALTNKAYAKSIADQIDINKAKPSSEIRPGKLA  
PYESNQ

>non-antioxidant\_743

MGHHHHHHMPEINTNHLDKQQVQLLAEMCILIDENDNKIGAETKKNCHLNENIEKGLLH  
RAFSVFLFNTENKLLLQQRSDAKITFPGCFTNTCCSHPLSNPAELEESDALGVRRAAQRR  
KAELGIPLEEVPEEINYLTRIHYKAQSDGIWGEHEIDYILLVRMNVTLNPDNEIKSYCYV  
SKEELKELLKKAASGEIKITPWFKIIAATFLFKWWDNLNHLNQFVDHEKIYRM

>non-antioxidant\_744

MVSTLKRDEALFELIALEEKRQREGLELIASENFVSKQVREAVGSVLTNKYAEGYPGARY  
YGGCEVIDRVESLAIERAKALFGAAWANVQPHSGSQANMAVYMALMEPGDTLMGMDLA  
AGGHLTHGSRVNFSGKLYKVVSYGVRPDELIDLEEVRRLALEHRPKVIVAGASAYPRFW  
DFKAFREIADEVGAYLVVDMAHFAGLVAAGLHPNPLPYAHVVTSTTHKTLRGPRGGLILS  
NDPELGKRIDKLIFPGIQGGPLEHVIAGKAVAFFEALQPEFKEYSRLVVENAKRLAEELARR  
GYRIVTGGTDNHLFLVDLRPKGLTGKEAERLDAVGITVNKNAIPFDPKPPRVTSGIRIGTP  
AITTRGFTPEEMPLVAELIDRALLEGPSEALREEVRRALALHPMP

>non-antioxidant\_745

SGISLDNSYKMDYPEMGLCIINNKNFNHKSTGMTSRSGTDVDAANLRETFRNLYEVRNK  
NDLTREEIVELMRDVSKEDHSKRSSFVVCVLLSHGEEGIIFGTNGPVDLKKITNFFRGDRCRS  
LTGKPKLFIIQACRGTELDGCIET

>non-antioxidant\_746

ASGVDDDMACHKIPVEADFLYAYSTAPGYYSWRNSKDGSWFIQSLCAMLKQYADKLEFM  
HILTRVNRKVATEFESFSFDATFHAKKQIPCIVSMLTKELYFYH

>non-antioxidant\_747

MAGYLNIALNLEIVLKNKADSPEVSETLVTRICENLLSKEVSFLKADGSVENFKLSDME  
YEITNTEELPELEHHHHHHH

>non-antioxidant\_748

MDNVLLSGQTLHADHSLQAGAYTLTIQNKCNLVKYQNGRQIWASNTDRRGSGCRLTLLS  
DGNLVIYDHNNDVWGSACWGDNGKYALVLQKDGRFVIYGPVLWSLGPNGCRRVNG

>non-antioxidant\_749

SFAPGMVVSQKCLLCMCKLES GGCKPIGCRMDVGSLS CGYFQIKQPYWIDCGKPGKDWKS  
CSNDINCSSKCVQQYMKRYATHYRCPLNCEGFAREHNGGPNCHSSRTLKYWELLQKIPG  
CKGVK

>non-antioxidant\_750

PPGPPGPPGPPGLPGPPGPPGPPGPPG

>non-antioxidant\_751

TDKRKDGSGKLLYCSFCGKSQHEVRKLIAGPSVYICDECVDLCNDIIREEI

>non-antioxidant\_752

MDIYVCTVCGYEYDPAKGDPSGIKPGTKFEDLPDDWACPVCGASKDAFEKQ

>non-antioxidant\_753

MRITLVTDSTSDLPQDLRGR LGVRVPLYVNLSGAIYRDWEEITPTEIFQKVREGAAFPTTS  
QPSPEDFARVYREAL EADHVL SLHISGKLSGTVQSAELAAQEFPGRVTVVDTQAASLGV  
GMMVLRAKELLEEGQSLEAVLAELERLR RDHFVRF SVATLEFLKRGRIGGAQAFLGTLL  
NLKPVLT LKEGRVEAAGRARGEKKAREEILKAFRAWAEGRK RIRAYFLYSGDEDVAALR  
QEVLASGLPVEEALVNELGAVIASHTGPGTYGFYAYSL

>non-antioxidant\_754

MEEAVLTGVATDKSEAKVTVLGISDKPGEAAKVFRALADAEINIDMVLQNVSSVEDGTTD  
ITFTCPRSDGRAMEILKKLQVQGNWNTNVLVYDDQVGVKSLVGAGMKSHPGVTAEFMEA  
LRDVNVNIELISTSEIRISVLIREDDLDAARALHEQFQLGGEDEAVVYAGTGRHHHHHH

>non-antioxidant\_755

MSVCHKHSVIGVLDVSGVGGTLVASEIIRQLPKESICYIGDNERCPYGPRSVVEVQSFVEMV  
EFLKQFPLKALVVACNTAAAATLAALQEALSIPVIGVIHPGARAAIKVTKKKGKIGVIGTVGT  
IQSNMYEKALHELDTYLKVHSHACPTLATVVENRLEDTAYVTQQVKQALLPLTKEDIDTL  
ILGCTHYPLLESYIKKELGEDVTIISAEETAIELSTILQHKGILADNLNPKHRFFTTGSVSSF  
EHIAERWLGYSVDCVDLPVKARICN

>non-antioxidant\_756

GSSGSSGMTPAVKLLEKNKISFQIHTYEHPAETNFGDEVVKLGLNPDQVYKTLVAVN  
GDMKHLAVAVTPVAGQLDLKKVAKALGAKKVEADMPVAQRSTGYLVGGISPLGQKKR  
LPTIIDAPAQEFATYVSGGKRGLDIELAAGDLAKILDAKFADIARRD

>non-antioxidant\_757

MLGLKTSIIGRRVIYFQEITSTNEFAKTSYLEEGTVIVADKQTMGHGALNRKWESPEGLW  
LSIVLSPKVPQKDLPKIVFLGAVGVVETLKEFSIDGRIKWPNDVLVNYKKIAGVLVEGKGD  
KIVLGIGLVNKNKVPNGATSMKLELGSEVPLLSVFRSLITNLDRLYLNFLKNPMDILNLVR  
DNMILGVRVKILGDGSFEGIAEDIDDFGRLIIRLDSGEVKKVIYGDVSLRFL

>non-antioxidant\_758

GSSGSSGMTATAQQLEYLKNISIQDYKPGILFRDVTSLLEDPKAYALSIDLLVERYKNA  
GITKVVGTEARGFLFGAPVALGLGVGFVVRKPKGLPRETISETYDLEYGTDQLEIHVDAI  
KPGDKVLVDDLLATGGTIEATVKLIRRLGGEVADAAFIINLFDLGGEQRLEKQGITSYSLV  
PFPGH

>non-antioxidant\_759

ELKIGDRVLVGGTKAGVVRFLGETDFAKGEWCGVELDEPLGKNDGAVAGTRYFQCQPKY  
GLFAPVHKVTKIGFPSTTPAKAKANAVRRVM

>non-antioxidant\_760

SNSLHWPTSLPSGDAFSSVGTHRFVQKVEEMVQNHMTYSLQDVGGDANWQLVVEEGEM  
KVYRREVEENGIVLDPLKATHAVKGVGTGHEVCNYFWNVDRNDWETTIENFHVVETLA  
DNAIIYQTHKRVWPASQRDVLYLSVIRKIPALTENDPETWIVCNFSVDHDSAPLNNRCVRA  
KINVAMICQTLVSPPEGNQEISRDNILCKITYVANVNPGGWAPASVLRVAKREYPKFLKRF  
TSYVQEKTAGKPILF

>non-antioxidant\_761

GSRSEPAKVVDIRIDTSAERKPISPYIYGSNQELDATVTAKRFGGNRTTGYNWENNFSNAG  
SDWLHYSPTYLLEDGGVPGKEWSTPASVVTTFHDKALSKNVPTYTLITLQAAGYVSADGN  
GPVSQEETAPSSRWKEVKFEKGAPFSLTPDTEDDYVYMDEFVNYLVNKGYNASTPTGKIG  
YSIDNEPALWSHTHPRIHPDNVTAKELIEKSVALSKAVKKVDPYAEIFGPALYGFAAYETLQ  
SAPDWGTEGEGYRWFIDYLDKMKKASDEEGKRLLDVLDVHWYPEARGGGERICFGAD  
PRNIETNKARLQAPRTLWDPTYIEDSWIGQWKKDFLPILPNLLDSIEKYYPGTKLAITEYDY  
GGGNHITGGIAQADVLGIFGKYGVYLATFWGDASNNTYEAAGINLYTNYDGKGGKFGDTS  
VKCETSDIEVSSAYASIVGEDDSKLHILLNKNYDQPTTFNFSIDSSKNYITIGNVWAFDRGSS  
NITQRTPIVNIKDNTFTYTVPALTACHIVLEAAEP

>non-antioxidant\_762

MMCLKLNLLDHVFANPFMNAAGVLCSTEEDLRCMTASSSGALVSKSCTSAPRDGNPEPR  
YMAFPLGSINSMGLPNLGFDFYLYASDLHDYSKKPLFLSISGLSVEENVAMVRRRLAPVA  
QKEGVLELNLSCPVPKQVAYDFEAMRTYLQQVSLAYGLPFGVKMPFYFDIAHFDTA  
AAVLNEFPLVKFVTCVNSVGNGLVIDAESESVVIKPKQGGFLGGKYILPTALANVNAFYR  
RCPDKLVFGCGGVYSGEDAFLHILAGASMVQVGTALQEEGPGIFTRLEDELLEIMARKGY  
RTLEEFRGRVKTIE

>non-antioxidant\_763

KKHVVCQSCDINCVVEAEVKADGKIQTKSISEPHPTTPPNSICMKS VNADTIRTHKDRVLY  
PLKNVGSKRGEQRWERISWDQALDEIAEKLKKIIAKYGPESLGVSQTEINQQSEYGTLLRRF  
MNLGSPNWTSAMMYMCIGNTAGVHRVTHGSYSFASFADSNCLLFIGKNLSNHNWVSQFN  
DLKAALKRGCKLIVLDPRTKVAEMADIWLPLRYGTDAALFLGMINVIINEQLYDKEFVE  
NWCVGFEELKERVQEYPLDKVAEITGCDAGEIRKAAVMFATESPASIPWAVSTDMQKNSCS  
AIRAQCILRAIVGSFVNGAEILGAPHSDLVPISKIQMHEALPEEKKKLQLGTETYPTLYTG  
MSALEEPSERVYGVKYFHNMGAFMANPTALFTAMATEKPYVPKAFALASNALMGYAN  
QQNALKGLMNQDLVVCYDQFMTPTAQLADYVLPGDHWLERPVVQPNWEGIPFGNTSQQ  
VVEPAGEAKDEYYFIRELAVRMGLEEHFPWKDRLELINYRISPTGMEWEEYQKQYTYMS  
KLPDYFGPEGVGVATPSGKVELYSSVFEKLGVDPLPYHEPLQTEISDPELAKEYPLILFAG  
LREDSNFQSCYHQPGILRDAEPDPVALLHPKTAQSLGLPSGEWIWVETTHGRLKLLKHD  
GAQPEGTIRIPHGRWCPEQEQQPETGFGSAMLHNDAMVLSDDDWNLDPEQGLPNLRGGI  
LAKAYKC

>non-antioxidant\_764

MVIASVEDGGDGTSKDDWLWYKQPASQTDATATAGGNYGNPDNNRWQQTTLPFGNGK  
IGGTVWGEVSRERVTFNEETLWTGGPGSSTSYNGGNETKGQNGATLRALNKQLANGAE  
TVNPGNLTGGENAAEQGNYNLWGDYLDYGFNDTTVTEYRRDLNLSKGGKADVTFKHG  
VTYTREYFASNPDNVMVARLTASKAGKLNFNVSMTNTNYSKTGETTTVKGDTLTVKGA  
LGNNGLLYNSQIKVVLNNGEGTLSEGS DGASLKVSDAKAVTLYIAAATDYKQKYPYRTG  
ETAAEVNTRVAKVVQDAANKGYTAVKKAHIDDHSAIYDRVKIDLQSGHSSDGAVATDAL  
LKAYQRGSATTAQKRELETLVYKYGRYLTIGSSRENSQLPSNLQGIWVSTAGDNAHGNTP  
WGSDFHMNVNLQMNYWPTYSANMGELAEPLIEYVEGLVKPGRVTAKVYAGAETNPET  
TPIGEGEGYMAHTENTAYGWTAPGQSFSWGWSPAAPWILQNVYEAYEYSGDPALLDRV  
YALLKEESHFYVNYMLHKAGSSSGDRLTTGVAYSPEQGGLTDGNTYESSLVWQMLNDA  
IEAAKAKGDPDGLVGNNTDCSADNWAKNDSGNFTDANANRSWSCAKSLLKPIEVGDSGQ  
IKEWYFEGALGKKKDGSTISGYQADNQHRHMSHLLGLFPGDLITIDNSEYMDAAKTSRLY  
RCFKGNVLQSNTGWAIGQRINSWARTGDGNTTYQLVELQLKNAMYANLFDYHAPFQIDG  
NFGNTSGVDEMLLQSNSTFTDTAGKKYVNYTNILPALPDWAGGSVSGLVARGNFTVGT  
WKNKGATEVRLTSNKGKQAAVKITAGGAQNYEVKNGDTAVNAKVVTNADGASLLVFD  
TAGTTYTITKKAS

>non-antioxidant\_765

MFDKHTHTLIAQRDQAEKQREQIRAI SLDYPEITIEDAYAVQREWVRLKIAEGRTLKGHKI  
GLTSKAMQASSQISEPDY GALLDDMFFHDGSDIPTDRFIVPRIEVELAFVLAKPLRGNL  
FDVYNATDYVIPALELIDARCHNIDPETQRPRKVFDTISDANAANAGVILGGRPIKPELDR  
WISALMYRNGVIEETGVAAGVLNHPANGVAWLANKLAPYDVQLEAGQIILGGSFTRPVA  
RKGDTFHVDYGNMGSISCRFV

>non-antioxidant\_766

MHV FYSEERRGNLLILREGEV KHFRVRRIEKDEEFGVIHEGKIYVCKVRREDKREISCEIVE  
ELETKLPPKDITLYQSVTVDLKTM D TIVRQATELGVLTFVPIISERSFQKEEAILKKTEKWK  
RIVIEAMKQSRPIPMEIKKPVRLSDLIPES EENILDNFYEGVKPKDVNLEAKTYSVVVGP  
EGGFSKRESQILREKGFKSVLLEPYTLRTETAVVSIVSILMNF

>non-antioxidant\_767

MPAIFTHEGKVEGVPGNYPLTAENLFRIGLALCTLWILDKEIEEPTLSIPETNFVTLALSVGF  
MNAGGSVNVGKGGDIKFLQKGEIYVLEFQPLSETDIKKLESILFGRAPIPKKTGEDIGSFK  
C

>non-antioxidant\_768

MSKQAAVIELGYMGISVKDPDAWKSFATDMLGLQVLDEGEKDRFYLRMDYWHHRIVVH  
HNGQDDLEYL GWRVAGKPEFEALGQKLIDAGYKIRICDKVEAQERMVLGLMKTEDPGG  
NPTEIFWGRIDMSNPFHPGRPLHGK FVTGDQGLGHCIVRQTDVAE AHKFYSLLGFRGDV  
EYRIPLPNGMTAELSMHCNARDHSIAFGAMPAAKRLNHLMLEYTHMEDLGYTHQQFVK  
NEIDIALQLGIHANDKALTFYGATPSGWLIEPGWRGATAIDEAEYYVGDIFGHGVEATGYG  
LDVKLS

>non-antioxidant\_769

MQIKAGLIWMNGAFVPQEEAKTSVLSHALHYGTSVFEGIRAYETAKGPAIFRLKEHVKRF  
YNSAKVLRMEIPFAPEELEEAIKEV VRRNGYRSCYIRPLAWMGAKALGVNPLPNNPAEVM  
VAWEWGAYLGEEAVRKGARLITSSWARFPANVMPGKAKVGGNYVNSALAKMEAVAA  
GADEALLLDEEGYVAEGSGENLFFVRDGV IYALEHSVNLEGITRDSVIRIAKDLGYEVQVV  
RATRDQLYMADEVFMTGTAAE VTPVSMIDWRPIGKGTAGPVALRLREVYLEAVTGRRPE  
YEGWLTYVNGQ

>non-antioxidant\_770

MDAVKKAILGEVLEEEEEAYEVMRALMAGEVSPVRAAGLLVALSLRGERPHEIAAMARAM  
REARPLRVHRRPLLDIVGTGGDGKGLMNLSTLAALVAAAGGVAVAKHGNRAASSRAGS  
ADLLEALGVDLEAPPERVGEAIEELGFGFLFARVFHPAMRHVAPVRAELGVRTVFNLLGPL  
TNPAGADAYVLGVFSPEWLAPMAEALERLGARGLV VHGEGADELVLGENRVVEVGKGA  
YALTP EEVGLKRAPLEALKGGGPEENAALARLLKGEEKGPLADAVALAAGAGFYAAGK  
TPSLKEGVALAREVLASGEAYLLLERYVAFLRA

>non-antioxidant\_771

MTRINLTLVSELADQHLMAEYRELPRVFGAVRKHVANGKRV RDFKISPTFILGAGHVTFY  
DKLEFLRKRQIELIAECLKRGFN IKDTTVQDISDIPQEFRGDYIPHEASIAISQARLDEKIAQ  
RPTWYKYYGKAIYA

>non-antioxidant\_772

ADGRSTRYWDCKPSCGWAKKAPVNPV FSCNANFQRITDFDAKSGCEPGGVAYSCADQ  
TPWAVNDDFALGFAATSIAGSNEAGWCCACYELTFTSGPVAGKKMVVQSTSTGGDLGSN  
HFDLNIPGGGVGIFDGCTPQFGGLPGQRYGGISSRNECDRFPDALKPGCYWRFDWFKNAD  
NPSFSFRQVQCPAELVARTGCRRNDDGNFPAV

>non-antioxidant\_773

MATFLGLSSKQEKALVRLDKYLN LGEIAVSLVTD SATSIKVEGRQGYVQVSYKQPHQLYR  
ALALLSAALRSGQDEVQIEEEAAYEDL AYMADCSRNAVNLSSAKKMIEVLALMGYSTFE  
LYMEDTYEIQPYFGYFRGRYTV AELQEIEDYAADFMSFVPCIQTLAHLSAFVKWGIKE  
VQELRDVEDILLIGEEKVYDLIEGMFQ TMAHLHTRKINIGMDEAHLVGLGRYLIKHFQNF

RSLLMCQHLEVRDLADIADKYGFNCQMWSMFFKLMSADGQYDRDVEIPEETRVYLDRLK  
ERVTLVYWDYYQDSEEKYNRNFNHKKISQDIAFAGGAWKWIGFTPHNHFSRLVAIEANK  
ACRKNQVKEVIVTGWGDNGGETSQFSVLPALQIWAELAYRNDLKKVSEHFLVSTGLDFD  
DFMKIDLANLLPDLPDNLGINPNRYVLYQDVLCPLEQHIRPEKDKQHFASSAQLGEIS  
KRAGEYAYIFETQAQLNALLALKISITSGIQKAYRNGDKEHLSALAEKDFPQLYQMVEDFS  
DQFSRQWQQENKIFGLDTIDIRFGGLLKRIKRAQERLEQFISGQIDCVEELEQEILPFNDFY  
KDQGLTATTANQWHLIATASTIYTT

>non-antioxidant\_774

GGDNSVFDIFELTGAARKGSGRRLVKGPDSPAFRIEDANLIPPVPDDKFQDLVDAVRTEK  
GFLLLASLRQMKKTRGTLLALERKDHSGQVFSVVSNGKAGTLDLSLTVQGKQHVVSVEE  
ALLATGQWKSITLQVQEDRAQLYIDCEKMENAELDVPIQSVFTRDLASIALRLRIAKGGVND  
NFQGVLQNVRFVFGTTPEDILRNKGC

>non-antioxidant\_775

DACEQAAIQCVESACESLCTEGEDRTGCYMYIYSNCPYV

>non-antioxidant\_776

TDPDPLQDFCVADLDGKAVSVNGHTCKPMSEAGDDFLFSSKLTKAGNTSTPNGSAVTELD  
VAEWPGTNTLGVSMNRVDFAPGGTNPPIHPRATEIGMVMKCELLVILGSLDSGNKLYS  
RVVRAGETFVIPRGLMHFQFNVGKTEAYMVVSFNSQNPQIVFVPLTLFGSDPPIPTVLTKA  
LRVEAGVVELLKSKFAGGS

>non-antioxidant\_777

GHMTKLNQESTAPKVLFTGVVDARGERAVLALGGSLAGSAAEASHLVTDRIRRTVKFLC  
ALGRGIPILSLDWLHQSRKAGFFLPPDEYVVTDPQEKNGFSLQDALSRARERRLLEGYE  
IYVTPGVQPPPPQMGEIISCCGGTYLPSMPRSYKQQRVVITCPQDFPHCSIPLRVGLPLLSPE  
FLLTGVLKQEAKPEAFVLSPLEMSST

>non-antioxidant\_778

VEDDKEGHLVCRIGDWLQERYEIVGNLGEFTGKVVVECLDHARGKSQVALKIIRNVGKY  
REARLEINVLLKIKEKDKENKFLCVLMSDWFNFHGHMCIAFELLGKNTFEFLKENNFQP  
YPLPHVRHMAYQLCHALRFLHENQLTHTDLKPENILFVNSEFETLYNEHKSCEEKSVKNTS  
IRVADFGSATFDHEHHTTIVATRHYRPPEVILELQWVPCDQVWSIGCILFEYYRGFTLFQTH  
ENREHLVMMKILGPIPSHMIHRTRKQKYFYKGLVWDENSSDGRYVKENCKPLKSYML  
QDSLEHVQLFDLMRRMLEFPAQRITLAEALLHPFFAGLTPEERSFHTSRNPSR

>non-antioxidant\_779

MKTLVHVASVEKGRSYEDFQKVYNAIALKLREDDEYDNYIGYGPVLVRLAWHISGTWDK  
HDNTGGSYGGTYRFKKEFNPNAGLQNGFKLEPIHKEFPWISSGDLFSLGGVTAVQEM  
QGPKIPWRCGRVDTPEDTTPDNGRLPDADKAGYVRTFFQRLNMNDREVVALMGAHAL  
GKTHLKNSGYEGPGAANNVFTNEFYLNLLNEDWKLEKNDANNEQWDSKSGYMLPT  
DYSLIQDPKYSIVKEYANDQDKFFKDFSKAFEKLENGITFPKDAPSPFIFKTLEEQGL

>non-antioxidant\_780

MRGSHHHHHHGSMTDHSVREADDANIDDLGDLGGTARAERA KLVEWLL EQGITPDEIRA  
TNPPLLLATRHLVGDDGTYVSAREISENYGVDELLQRVQRAVGLARVDDPDVAVHMRA  
DGEAAARAQRVELGLNPDQVVLVVRVLAEGLSHAAEAMRYTALEAIMRPGATELDIAK  
GSQALVSQIVPLLGPMIQDMLFMQLRHMMETEAVNAGERAAAGSSP

>non-antioxidant\_781

MVVSENVVSAPMPGKVLRLVVRVGDRVRVQGGLLVLEAMKMENEIPSPRDGVVKRILVK

EGEAVDTGQPLIELG

>non-antioxidant\_782

MTKQYLTHRCLIAPEMADDDFFANTVIYLARHDEEGAQGIINRPAGIQIKELLNDLDIDAD  
NVNPHEVLQGGPLRPEAGFVLHTGQPTWHSSIAVGENVCITTSKDILDAIAHNEGVGRYQI  
ALGYASWGNQLEDEIARGDWLICDADMDLIFNLPYDDRWDAAAYKKIGVDRTWLASEIG  
HALEHHHHHH

>non-antioxidant\_783

MANVDEYITQLPAGANLALMVQKVGASAPAYDHSQQMALPASTQKVITALAALIQLGPD  
FRFTTTLETKGNVENGVKGDVLRFGADPTLKRQDIRNMVATLKKSGVNQIDGNVLIDT  
SIFASHDKAPGWPWDMTQCFSAPPAAIIVDRNCFSVSLYSAPKPGDMAFIRVASYYPVT  
MFSQVRTLPRGSAEAQYCELDVVPGDVLRNFTLTGCLPQRSEPLPLAFVQDGASYAGAILK  
YELKQAGITWSGTLLRQTQVNEPGTVVASKQSAPLHDLKIMLKKSDNMIADTVFRMIGH  
ARFNVPGTWRAGSDAVRQILRQQAGVDIGNTIADGSGLSRHNLIAPATMMQVLQYIAQH  
DNELNFISMLPLAGYDGLQYRAGLHQAGVDGKVS AKTGS LQGVYNLAGFITTASGQRM  
AFVQYLSGYAVEPADQRNRRIPVRFESRLYKDIYQNN

>non-antioxidant\_784

AEAGITGTWYNQLGSTFIVTAGADGALTGTYESAVGNAESRYVLTGRYDSAPATDGS GTA  
LGWTVAWKNNYRNAHSATTWSGQYVGGAEARINTQWLLTSGTTEANAWKSTLVGHDTF  
TKVKPSAAS

>non-antioxidant\_785

GMDTNGVLYAANMTNALAKEIPESKWDIQLIPELGTLRKLFHIVRVRDVYRDGLKTGSIK  
FPGRLASDEHRLLELERSMEELVFEFKQTTFN SIKMGENYLSIMELLGTVIQHEGIHQGQ  
YYVALKQSGINLPKQWVQDWHM

>non-antioxidant\_786

MAREVKLTKAGYERLMQQLERERERLQEATKILQELMESSDDYDDSGLEAAKQEKARIE  
ARIDSLEDILSRAVILEEGSGEVIGLGSVVELEDPLSGERLSVQVSPAENVLDTPMKISD  
ASPMGKALLGHRVGDVLSLDTPK GKREFRVVAIHG

>non-antioxidant\_787

ADQLTEEQIAEFKEAFSLFDKDGDTITTKELGTVMRSLGQNPTEAELQDMINEVDADGN  
GTIDFPEFLTMMARKMKD TDSEEEIREAFRVFDKDGNGYISAAELRHVMTNLGEKLTDEE  
VDEMIREADIDGDGQVNYEEFVQMMTAK

>non-antioxidant\_788

KFYATFLAAEYFRKFKKRKEQ

>non-antioxidant\_789

GMPSEKQPQSKGNKMAILKLDEHLYISPQLTKADAEQIAQLGIKTIICNRPDREESQPDFA  
QIKQWLEQAGVTGFHHQPVTARDIQKHDVETFRQLIGQAEYPVLAYCRTGTRCSLLWGFR  
RAAEGMPVDEIIRRAQAAGVNLENFRERLDNARV

>non-antioxidant\_790

AIWRSRSFDEAIEMFRESLYSAKNEVIVVTPSEFFETIREDLIKTLERGVTVS LYIDKIPDLSE  
FKGKGNFFVRQFYKLNHLIGMTDGKEVVTIQNATFDSIGPPSFKSTYPEIIFSQYSLIIEIFKE  
STLEKEIIGNPKDIRFFAMFHAVDFVKNHLKRNRIYAEITGKNLESGRLETLTGRVVG YTLS  
LREAVNNIHLETENGVVKVGGMFAVIEDYESTEIKFIMGGSRS

>non-antioxidant\_791

GEHIPGTLRFRLSPAARNILEKHSLDASQGTATGPRGIFTKEDALKLVQLKQTGKILEHHHH

HH

>non-antioxidant\_792

MAHHHHHHMRKIYIAGPAVFNPDMGASYYNKVRELLKKENVMPLIPTDNEATEALDIRQ  
KNIQMIKDCDAVIADLSPFRGHEPDCGTAFEVGC AAALNKMVLTFTSDRRNMREKYGSG  
VDKDNLRVEGFGLPFNLMLYDGVVEVDFSFAFKYFLANFPSK

>non-antioxidant\_793

GSHMRWRKWRHITKLPDRTNTDEIHKAVADSGTDAVMISGTQNVTYEKARTLIEKVSQY  
GLPIVVPEPSDPSNVVYDVDYLFVPTVLNSADGDWITGKHAQWVRMHYENLQKFTEIIESE  
FIQIEGYIVLNPDSAVARVTKALCNIDKELAASYALVGEKLFNLPIIYIEYSGTYGNPELVAE  
VKKVLDKARLFYGGGIDSREKAREMLRYADTIIVGNVIYEKIDAFLETLP

>non-antioxidant\_794

IVGGTDATLGEFPYQLSFQETFIGFSFHFCGASIYNENYAITAGHCVYGDDYENPSGLQIVA  
GELDMSVNEGSEQIITVSKIILHENFDYNLLDNDISLLKLSGSLTFNDNVAPIALPEQGHTAT  
GDVIVTGWGTTSEGGNTPDVLQKVTVPLVSDVDEDCRADYGADEILDSMICAGVPEGGKDS  
CQGDSGGPLAASDTGSTYLAGIVSWGYG CARPGYPGVYTEVSYHVDWIKANAV

>non-antioxidant\_795

SNAMGWKMQATVTEIGKHAIDDSEKMIILFGETATDTLKQHAVIQSFPEKDQVTLAEGDH  
LKIGDTNYTITKVGSFANSNLQSIHSTLIFADAPTEDDVIRNGVYLTPHQLPKITIGTTID  
YLVNGA

>non-antioxidant\_796

MGARKASAGASRAATAGVRISHPQRLIDPSIQASKLELAEFHARYADLLLRDLRERPVS LV  
RGPDGIGGELFFQKHAARLKIPGIVQLDPALDPGHPPLLQIRSAEALVGAVQMGSIEFHTW  
NASLANLERPDRFVLDLDPDPALPWKRMLEATQLSLTLLDELGLRAFLKTSGGKGMHLLV  
PLERRHGWDEVKDFQAISQHLARLMPERFSAVSGPRNRV GKIFVDYLRNSRGASTVAAY  
SVRAREGLPVSVPVFREELESLQGANQWNLRLSLPQRLDEL AGDDPWADYAGTRQRISAA  
MRRQLGRG

>non-antioxidant\_797

SNAMSANDKLTILWTTDNKDTVFNMLAMYALNSKNRGWWKHINIILWGASVKLVANDT  
QVQTEILEMLQSGITIEACQDCCENFGVASIITNLGITVRYMGIPLTEYLKNGEKILSI

>non-antioxidant\_798

AYPSFEAYSNYKVDRTDLETFLDKQKEVSLYLLQNIAYPEGQFNNGVPGTVIASPSTSNP  
DYYYQWTRDSAITFLTVLSELEDNNFNNTLAKAVEYYINTSYNLQRTSNPSGSFDDENHK  
GLGEPKFNTDGSAYTGAWGRPQNDGPALRAYAISRYLNDVNSLNEGKLVLTDSGDINFSST  
EDIYKNIIPDLEYVIGYWDSTGFDLWEENQGRHFFTSLVQQKALAYAVDIAKSFDDGDFA  
NTLSSTASTLESYLSGSDGGFVNTDVNHIVENPDLLQNSRQGLDSATYIGPLLTHDIGESS  
STPFDVDNEYVLQSYLLLEDNKDRYSVNSAYSAGAAIGRYPEDVYNGDGSSEGNPWFL  
ATAYAAQVPYKLAYDAKSASNDITINKINYDFFNKYIVDLSTINSAYQSSDSVTIKSGSDEF  
NTVADNLVTFGDSFLQVILDHINDDGSLEQLNRYTGYSTGAYSLTWSSGALLEAIRLRNK  
VKALA

>non-antioxidant\_799

MRRVEKVIIVEGRSDKQKVAAVLNPEVVIVCTNGTISDARLEELADELEGYDVYLLADAD  
EAGEKLRRQFRMFPEAEHLYIDRAYREVAAAPIWHLAQVLLRARFDVRIESLMRGRGE

>non-antioxidant\_800

MGSDKIHSHHHHMIRPEYLRVLRKIYDRLKNEKVNWVVTGSLSFALQGVPEVHDIDIQT

DEEGAYEIERIFSEFVSKKVRFSSTEKICSHFGELIIDGIKVEIMGDIRKRLEDGTWEDPVDL  
NKYKRFVETHGMKIPVLSLEYEYQAYLKLGRVEKAETLRKWLNERK

>non-antioxidant\_801

MALKYPSGKEYRGNKPNAARRPAADYANRGMTEDDLNATNEYRERGIAVIHKKPTPV  
QIVRVDYPKRSAAVITEAYFRQASTTDYNGVYRGKYIDFEAKETKNKTAFFPLKNFHAHQIR  
HMEQVVAHGGICFAILRFSLLNETYLLDASHLIAWWNKQEAGGRKSIPKQEIERHGHSIPL  
GYQPRIDYISVVDNVYFTR

>non-antioxidant\_802

GSHMSKKFALTAEQRASFEKNGFIGPFDAYSPEEMKETWKRTRLRLLLDRSAAAYQDLDAI  
SGGTNIANYDRHLDDDFLASHICRPEICDRVESILGPNVLCWRTEFFPKYPGDEGTDWHQA  
DTFANASGKPQIWPENEEFGGTITVWTAFTDANIANGCLQFIPGTQNSMNYDETKRMTY  
EPDANNSVVKDGVRRGFFGYDYRQLQIDENWKPDEASAVPMQMKAGQFIIFWSTLMHA  
SYPHSGESQEMRMGFASRYVPSFVHVYPDSDHIEEYGGRISLEKYGAVQVIGDETPEYNRL  
VTHTTRGKKFEAV

>non-antioxidant\_803

GAEFEEPRVIDLWDLAQSANLTDKELEAFREELKHFEAKIEKHNHYQKQLEIAHEKLRHA  
ESVGDGERVRSREKHALLEGRTELGYTVKKHLQDLSGRISRARHNEL

>non-antioxidant\_804

KTCSQAEFRCHDGKICISRQFVCDSDRDCLDGSDEASCPVLTCGPASFQCNSSTCIPQLWAC  
DNDPDCEDGSDEWPQRCRG

>non-antioxidant\_805

AYVINEACISCGACEPECPVNAISSGDDRYVIDADTCIDCGACAGVCPVDAPVQA

>non-antioxidant\_806

SNAMEILYIKGDATAPIGSGVKVITHICNDIGGWGKGFVLALSCKWKMPPEAYRQWYKSQ  
EEFTLGAVQFVNVENKLYVANMIGQHGIYKDSKGLPIRYDAVRQCLKEVALFTIAHKASV  
HMPRIGCGLAGGKWELMEQIIEELITKEIAVTVYDL

>non-antioxidant\_807

QSSVTLFGIVDTNVAYVNKDAAGDSRYGLGTSGASTSRLGLRGTEDLGGGLKAGFWLEG  
EIFGDDGNASGFNFKRRSTVSLSGNFGEVRLGRDLVPTSQKLTSYDLFSATGIGPFMGFRN  
WAAGQGADDNGIRANNLISYYTPNFGGFNAGFGYAFDEKQTIGTADSVGRYIGGYVAYD  
NGPLSASLGLAQKTAVGGLATDRDEITLGASYNFGVAKLSGLLQQTQKFRDIGGDIKTNS  
YMLGASAPVGGVGEVKLQYALYDQKAIDSKAHQITLGYVHNLSKRTALYGNLAFLKNKD  
ASTLGLQAKGVYAGGVQAGESQTGVQVGIRHAF

>non-antioxidant\_808

MDDDGTGQKQIWRIEGSNKVPVDPATYGGFYGGDSYIILYNRYRHGGRQGQIYNWQGAQ  
STQDEVAASAILTAQLDEELGGTPVQSRVVQGKEPAHLMSLFGGKPMIYKGGTSREGGQT  
APASTRLFQVRANSAGATRAVEVLPKAGALNSNDAFVLKTPSAAYLWVGTGASEAEKTG  
AQELLRVLRAQPVQVAEGSEPDGFWEALGGKAAARTSPRLKDKKMDAHPRLFACSNKI  
GRFVIEEVPGELMQEDLATDDVMLLDTWDQVFWVWGKDSQEEKTEALTSAKRYIETDP  
ANRDRRTPITVVKQGFEPSPFVGWFLGWDDDYWSVDPLDRAMAEALAA

>non-antioxidant\_809

MTNKLFEHTVLYDSGDAFFELKGNASMKLSPKAAIEVCNEAAKKGLWILGIDGGHWLNP  
GFRIDSSASWTYDMPEEYKSKIPENNRLAIENIKDDIENGYTAFIITLKM

>non-antioxidant\_810



MLAKNKGKIPGLKIDQKIRGQMPERGWTEDDIKNTVSNNGATGTSFDKRSPKKTTPDYLG  
NDPATVYGSPGKYVVVNDRTGEVTQISDKTDPGWVDDSRIQWGNKNDQ

>non-antioxidant\_811

AGKKRPWKCCDEAVCTRSIPPICTCMDEVFECPKTCKSCGPSMGDPSRRICQDQYVGD  
PGPICRPWECCDKAICTRSNPPTCRCVDEVKKCAPTCKTCLPSRSRPSRRVCIDSYFGVPP  
RC TPR

>non-antioxidant\_812

DEIIDETDONLYVSQGGVDISGDVNLTDGKIGWPNVEAVQSYQREFNAVSNIFDTIYPIGT  
IYENAVNPNPVTYMGFGSWKLFQGGKVLVGNEDISDPNFALNNNDLDSGGNPSHTAG  
GTGGSTSVTLENTNLPATETDEEVLDVDENGSVVGGCQYDPDESGPIYTKYREAKASTNS  
THTPPTSITNIQPYITVYRWIRIA

>non-antioxidant\_813

MVKEFNTQTELSVRLEALWAVLSKDFITVVPKVLPHIVKDVQLIEGDGGVGTILIFNFLPEV  
SPSYQREEITEFDESSHEIGLQVIEGGYLSQGLSYYKTTFKLSEIEEDKTLVNVKISYDHDSD  
IEEKVTPKTSQSTLMYLRRLERYLSNGSA

>non-antioxidant\_814

MKEFAYSEPCLDKEDKKAVLEVLNSKQLTQGKRSLLFEEALCEFLGVKHALVFNSATSALL  
TLYRNFSEFSADRNEIITTPISFVATANMLLESYTPVFAGIKNDGNIDELALEKLINERTKAI  
VSVDYAGKSVEVESVQKLCKKHSLSFSDSSHALGSEYQNKKVGGFALASVFSFHAIKPIT  
TAEGGAVVTNDELHEKMKLFRSHGMLKKDFEVEGKVSIGHNFRLNEIQSALGLSQLKKA  
PFLMQKREEAALTYDRIFKDNPHYFTPLHPLLKDKSSNHLYPILMHQKFFTCCKLILESLHK  
RGILAQVHYKPIYQYQLYQQLFNTAPLKSADFYHAEISLPCHANLNLESVQNIASHVLKT  
FESFKIE

>non-antioxidant\_815

GSHMLEADLELERAADVRWEEQAEISGSSPILSITISEDGMSIKNEEEEEQTLGGGGSGGG  
G

>non-antioxidant\_816

AGVLWDVPSPPVKGAELEDGAYRIKQKILGYSQIGAGVYKEGTFHTMWHVTRGAVLM  
HKGKRIEPSWADVKKDLISYGGGWKLEGEWKEGEEVQVLALEPGKNPRAVQTKPGLFKT  
NTGTIGAVSLDFSPGTSGPSIVDKKGGKVVGLYGNVGVTRSGAYVSAIANTEKSIEDNPEIED  
DIFRK

>non-antioxidant\_817

MASLSRFRGCLAGALLGDCVGSFYEAHDTVDLTSVLRHVQSLEPDPGTPGSERTEALYYT  
DDTAMARALVQSLLAKEAFDEVDMAHRFAQEYKKDPDRGYGAGVVTVFKKLLNPKCR  
DVFEPARAQFNGKGSYGNNGAMRVAGISLAYSSVQDVQKFARLSAQLTHASSLGYNGAIL  
QALAVHLALQGESSEHFLKQLLGHMEDLEGDAQSVLDARELGMEERPYSRLKKIGELL  
DQASVTREEVVSELGNIAAFESVPTAIYCFLRCMEPDPEIPSAFNSLQRTLISISLGGDTD  
TIATMAGAIAGAYYGMDQVPESWQQSCEGYEETDILAQSLHRVFQKS

>non-antioxidant\_818

MRGSHHHHHHGMMASSYSKWFNLEKIHSEVQSLPEFFTNRIPSKTPEVYMRYRNFMVNSY  
RLNPNEYFSVTTARRNVSGDAAALFRLHKFLTKWGLINYQVDSK

>non-antioxidant\_819

MAQERPSCAVEPEHVQRLLLSSREAKKSAYCPYSRFPVGAALLTGDGRIFSGCNIENACYP  
LGVCAERTAIQKAISEGYKDFRAIAISSDLQEEFISPCGACRQVMREFGTDWAVYMTKPDG

TFVVRTVQELLPASFGPEDLQKIQ

>non-antioxidant\_820

GHHMhapLVSKDLdyiSTANhdQPPRHlGSRFSAEgeFLPEPGNTVVChLVEGSQTESAIvS  
TRQRFLDMPEASQLAFTPVSSlHMTVfQGVIESRRALPYWPQTLPLDTPIDAVTDYYRDRL  
STFPTLPAFNMRVTGLRPVGMVMKGAEDAEDDSIVALWRDTFADFFGYRHPDHDTYEFHIT  
LSYIVSWFEPECLPRWQAMLDEELEKLRVAAPVIQMRPPAFCEFKDMNHFKELVVFDKRG  
S

>non-antioxidant\_821

MGSSHHHHHHSSGRENlyfQGHMNHSIptLRterLTLRPLAMADFPAYRDFMASPRSTGV  
GGPYDLPSTWGVfCHDLANWHFFGHGALMIDLGETGECIGQIGINHGPLFPEKELGWLLY  
EGHEGRGYAAEAVALRDWAFETLNLPTLVSYVSPQNRKSAAVAERIGGTLDPAPRSDE  
DLVYRYHQVKTAGS

>non-antioxidant\_822

GSKVEDPKDFPSELLSFLSHAVFSNRTLACFAIYTTKEKAALLYKKIMEKYSVTFISRHNsy  
NHNILFFLTPHRHRVSAINNYAQKLCTFSFLICKGVNKEYLMYSALTRDPFSVIEESLPGGL  
KEHDFNPESS

>non-antioxidant\_823

GSPEFVNSELTQLDEYGEWILEQAGEDKENLPSDVELYKKAELDVLNDPKIGCVLAQCL  
FDEDIVNEIAEHNAFFTKILVTPEYEKNFMGGIERFLGLEHKDLIPLLPKILVQLYNNDIIEE  
EIMRFGTKSSKKFVPKEVSKKVRRAAKPFITWLETAESDDDEEDDELERPHRD

>non-antioxidant\_824

GMPDSPTLLDLFAEDIGHANQLLQLVDEEFQALERRELPVLQQLLGAKQPLMQQLERNGR  
ARAEILREAGVSLDREGLARYARERADGAELLARGDELGELLERCQQANLRNGRIIRANQ  
ASTGSLNLRGQDAPSLYDSRGGTASSSRQRPLSQA

>non-antioxidant\_825

ADTRIGVTIYKYDDNFMSVVRKAIEQDAKAAPDVQLLMNDSQNDQSKQNDQIDVLLAK  
GVKALAINLVDPAAGTVIEKARGQNPVFFNKEPSRKALDSYDKAYYVGTDSKESGII  
QGDLIAKHWAANQGWDLNKDGQIQFVLLKGEPGHPDAEARTTYVIKELNDKGIKTEQLQ  
LDTAMWDTAQAKDKMDAWLSGPNANKIEVVIANNdamAMGAVEALKAHNKSSIPVFG  
VDALPEALALVKS GALAGTVLNDANNQAKATFDLAKNLADGKGAADGTNWKIDNKVV  
RVPYVGVDKDNLAEFSSK

>non-antioxidant\_826

ATHTAQTQTHLNFTQIKTVDELNqALVEAKGKPVMLDLYADWCVACKEFEKYTFSDPQV  
QKALADTVLLQANVTANDAQDVALLKHLNVLGLPTILFFDGQGEHPQARVTGFMDAET  
FSAHLRDRQPHHHHHH

>non-antioxidant\_827

MAHHHHHHHDDDDKAPPTLWSRVTKFGSGWGFVVSPTVFITTHVPTGVKEFFGEPLSSI  
AIHQAGEFTQFRFSKKMRPDLTGMVLEEGCPEGTVCSVLIKRDSGELLPLAVRMGAIASM  
RIQGRLVHGQSGMLLTGANAKGMDLGTIPGDCGAPYVHKRGNDWVVCVHAAATKSG  
NTVVCVAVQAGEGETALE

>non-antioxidant\_828

MGSSHHHHHHSSGLVPRGSHMGMAPGGYVAPKAVWLPVAKAGLEISGTFTHRQGHIIYM  
EMNFTNKALQHMTDFAIQFNKNSFGVIPSTPLAIHTPLMPNQSIDVSLPLNTLGPVMKMEP  
LNNLQVAVKNNIDVFYFSLIPLNVLFVEDGKMERQVFLATWKDIPNENELQFQIKECHLN

ADTVSSKLQNNNVYTIAKRNVEGQDMLYQSLKLTNGIWILAEELRIQPGNPNYTLCLKRA  
PEVSQYIYQVYDSILKN

>non-antioxidant\_829

GHMNSFVGLRVVAKWSSNGYFYSGKITRDVGAGKYKLLFDDGYECDVLGKDILLCDPIP  
LDTEVTALSEDEYFSAGVVKGHRKESGELYYSIEKEGQRKWKYKRMVILSLEQGNRLREQ  
YGLG

>non-antioxidant\_830

PNFSGNWKIIRSENFEELLKVLGVNVMLRKAIVAAASKPAVEIKQEGDTFYIKTSTTVRTE  
INFKVGEEFEEQTVDGRPCKSLVKWESENKMVCEQKLLKGEGPKTSWTLELTNDGELIET  
MTADDVVCTKVYVRE

>non-antioxidant\_831

ESAFNQTEFNKLLLECVVKTQSSVAKILGIESLSPHVSGNSKFEYANMVEDIREKVSSEME  
RFFPKNDDE

>non-antioxidant\_832

GAMAPATVNVEVLQDKLDHPWALAFDPDNHGLITLRGGELRHWQAGKGLSAPLSGVP  
DVWAHQGGLLDVVLAPDFAQSRRIWLSYSEVGDDGKAGTAVGYGRLSDDLKVTDFRT  
VFRQMPKLSGTNHFGGRLVFDGKGYLFIALGENNQRPTAQDLKLGKLVRLTDQGEIPD  
DNPFIKESGVRAEISYGIRNPQGMAMNPWSNALWLNHGGPRGGDEINIPQKGNKYGWP  
LATWGINYSGFKIPEAKGEIVAGTEQPVFYWKDSPAUSGMAFYNSDKFPQWQQKLFICAL  
KDKDVIVMSVNGDKVTEDEGRILTDRGQRIRDVRTGPDGYLYVLTDESSGELLKVSPPR

>non-antioxidant\_833

MGSDKIHSHHHHMSLDMKEHPDAEVQKNQVLTLEDWKEKWVTRHISFHQEQGHQLLK  
KHLDTFLKGGQGLRVFFPLCGKAIEMKWFADRGHVTVGVEISEIGIREFFAEQNLSYTEEPL  
AEIAGAKVFKSSSGSISLYCCSIFDLPRANIGKFDRIWDRGALVAINPGDHDYADIIISLLR  
KEFQYLVAVLSYDPTKHAGPPFYVPSAELKRLFGTKCSMQCLEEVDALERHKAWGLDY  
LFEKLYLLTEK

>non-antioxidant\_834

AISIKTPEDIEKMRVAGRLAAEVLEMIPEYVKPGVSTGELDRICNDYIVNEQHAVSACLGY  
HGYPKSVCISINEVVCHGIPDDAKLLKDGDIVNIDVTVIKDGFGHGDTSKMFIVGKPTIMGE  
RLCRITQESLYLALRMVKPGINLREIGAAIQKFVEAEGFSVVREYCGHGIGRGFHEEPQVL  
HYDSRETNVVLKPGMTFTIEPMVNAGKKEIRTMKDGWTVKTKDRSLSAQYEHTIVVTDN  
GCEILTLRKDDTIPAIISHDE

>non-antioxidant\_835

ELLPEIFRQTVEHAPIAISITDLKANILYANRAFRTITGYGSEEVLGKNESILSNGTTPRLVYQ  
ALWGRLAQKKPWSGVLVNRKDKTLYLAELTVAPVLNEAGETIYYLGMHRDTSSELH

>non-antioxidant\_836

QISVRGLAGVENVTELKKNFNRHLHFTLVKDRNVATPRDYFALAHTVRDHLVGRWIRTQ  
QHYYEKDPKRIYYLSLEFYMGRTLQNTMVNLALENACDEATYQLGLDMEELEEIEEDAG  
LNGGGLGRLAACFLDSMATLGLAAYGYGIRYEFYGFQKICGGWQMEEADDWLRVGNP  
WEKARPEFTLPVHFYGRVEHTSQGAKWVDTQVVLAMPYDTPVPGYRNNVNTMRLWS  
AKAPNDFNLKDFNVGGYIQAVLDRNLAENISRVLVNDNFFEGKELRLKQYFVVAATLQ  
DIIRRFKSSKFGCRDPVRTNFDAFPDKVAIQLNTHPSLAPELMRVLVDLERLDWDKAWE  
VTVKTCAVTNHTVLPALERWPVHLETLPRHLQIIEINQRFLNRVAAAFPGDVDRLRR  
MSLVEEGAVKRINMAHLCIAGSHAVNGVARIHSEILKKTIFKDFYELEPHKFQNKTNGITPR

RWLVLCNPGLAEIIAERIGEEYISDLQDLRKLKLSYVDDEAFIRDVAKVKQENKLFKFAAYLE  
REYKVHINPNSLFDVQVKRIHEYKRQLLNCLHVITLYNRIKKEPNKFVVPRTVMIGGKAAP  
GYHMAKMIKILITAIGDVVNHDPVVGDRLRVIFLENYRVSLAEKVIPAADLSEQISTAGTEA  
SGTGNMKFMLNGALTIGTMDGANVEMAEAGEENFFIFGMRVEDVDRLDQRGYNAQEY  
YDRIPELRQIIEQLSSGFFSPKQPDFKDIVNMLMHDRFKVFADYEEYVKCQERVSALYK  
NPREWTRMVIRNIATSGKFSSDRITIAQYAREIWGVVPSRQRLP

>non-antioxidant\_837

MQFSKMHGLGNDVVDGVTQNVFFTPETIRRLANRHCGIGFDQLLIVEAPYDPELDFHY  
RIFNADGSEVSQCGNGARCFARFVTLKGLTNKKDISVSTQKGNMVLTVKDDNQIRVNMG  
EPIWEPAKIPFTANKFEKNYILRTDIQTVLCGAVSMGNPHCVVQVDDIQTANVEQLGPLLE  
SHERFPERVNAGFMQIINKEHIKLRVYERGAQACGSGACAAVAVGIMQGLLNNNVQV  
DLPGGSLMIEWNGVGHPLYMTGEATHIYDGFITL

>non-antioxidant\_838

GSHMSKKILIVESDTALSATLRSALGRGFTVDETTDGGKGSVEQIRDRPDLVVLAVDLSA  
GQNGYLICGKLLKDDDLKNVPIVIGNPDGFAQHRKLLKAHADEYVAKPVDADQLVERAG  
ALIGFPE

>non-antioxidant\_839

SNAMTFNQEQDYWAGYKANERALLIQTWSGFGRYAPDHLYPHILPLDTDNETLGTTLVQ  
ALANSRTFVYDSPEDQDFDTEKIRQRYEDWVAKLCGNLGYKTRRALFKNMMSVDIWLH  
NGCLKISPSRHVKLEAWDAIDADDVILSLDNSPEEIGAGLKLALSRCR

>non-antioxidant\_840

GMCVEKTPWELVIDFHGHTCPDIALGYRIAQLAQREMGIRPAPDSECLVKAYTQSCALDAI  
QVLNKATIGRHALLIEETHRYMYQFHFTGTQDIHQFTVSPAVLDHLETLRHPDLSPRERQN  
KVLEGVQYVLTLEESAFCHYDKIPGQLSKIV

>non-antioxidant\_841

IKKEQKLIQAQNLVREFEKTHTVSAHRKAQKAVNLVSFEYKVKKMVLQERIDNVLKQGL  
VR

>non-antioxidant\_842

GMNQSIIFTEQLTWDVQLSAIHFTAQQQGMVIDCYIGQKVLEHLAAEKINNSEQALSLEFQ  
FRFDIEEQAELIEQEAQFDVQGHQVERVD

>non-antioxidant\_843

MEFMRVERVLLKDYTTLVGGPAELWTVETREELKRATEAPYRVLGNGSNLLVLDEGVP  
ERVIRLAGEFQTYDLKGVGAGTLLPLLQEAARAGLSGLEGLLGIQVGGAVKMNAG  
TRFGEMADALEAVEVFHDGAFHVYCPEELGFGYRKSHPGGIVTRVRLKLERPKKEIL  
RRMAEVDRARKGQPKRKSAGCAFKNPPGQSAGRLIDERGLKGLRVGDAMISLEHGNFIV  
NLGQARAKDVLELVRRVQEELPLELEWEVWP

>non-antioxidant\_844

GSHMSGIALSRLAQERKAWRKDHPFGFVAVPTKNPDGTMNLMNWECAIPGKKGTPWEG  
GLFKLRMLFKDDYPSPPKCKFEPPLFHPNVYPSGTVCLSILEEDKDWRPAITIKQILLGIQE  
LLNEPNIQSPAQAEAYTIYCNQNRVEYEKRVRAQAKKFAPS

>non-antioxidant\_845

MFADRLFNAMERNEPAPGMVLVAAPSMESDFARSVILIEHSEYATFGVNLASRSDVAVF  
NVIPEWVPCVTKPQALYIGGPLNQSVVGVGVTAAQGVDAARVDNLTRLANRLVMVNLG  
ADPEEIKPLVSGMRLFAGHAEWAPGQLAQEIENGDFWVAPALPSDVTAPGSVDVWGDVM

RRQPMPLPLYSTFPVNVGEN

>non-antioxidant\_846

SNAMDPNVITVTSYANIAIKYWGKENQAKMIPSTSSISLTLENMFTTTSVSFLPDTATSDQF  
YINGILQNDEEHTKISAIIDQFRQPGQAFVKMETQNNMPTAAGLSSSSSSGLSALVKACDQL  
FDTQLDQKALAKKAFASGSSSRFFGPVAAWDKDSGAIYKVETDLKMAMIMLVLNAAK  
KPISSREGMKLCRDTSTTFDQWVEQSAIDYQHMLTYLKTNNFEKVGQLTEANALAMHAT  
TKTANPPFSYLTKESYQAMEAVKELRQEGFACYFTMDAGPNVKVLCLEKDLAQLAERLG  
KNYRIIVSKTKDLDPDV

>non-antioxidant\_847

ASASTPHALLISIDGLRADMLDRGITPNLSHLAREGVRARWMAPSYPSLTFPNHYTLVTG  
LRPDHHGIVHNSMRDPTLGGFWLSKSEAVGDARWWGGEPVWVGVENTGQHAATWSWP  
GSEAAIKGVRPSQWRHYQKGVRLDTRVDAVRGWLATDGAQRNRLVTLYFEHVDEAGHD  
HGPESRQYADAVRAVDAAIGRLLAGMQRDGTRARTNIIVVSDHGMAEVAPGHASVEDIA  
PPQIATAITDGQVIGFEPLPGQAAAEASVLGAHDHYDCWRKAELPARWQYGSHPRIPSLV  
CQMHEGWDALFPDKLAKRAQRGTRGSHGYDPALPSMRAVFLAQQPDLAQQGKTLPGFDN  
VDVYALMSRLLGIPAAPNDGNPATLLPALRMPPAPDAR

>non-antioxidant\_848

MSLTHRKFSGSGSPFSGLSIAVRSYLDIAIIDGVHHGGSGGNLSPTFTFGSGEYISNM  
TIRSGDYIDNISFETNMGRRFPGYGGSGGSANTLSNVKVIQINGSAGDYLDSDLIYYEQY

>non-antioxidant\_849

SIEFSTAITRQIVLDTETTGMNQIGAHYEGHKIIEIGAVEVVNRRLTGNNFHVYLKPDRLVD  
PEAFGVHGIADFLDKPTFAEVADEFMDYIRGAELVIHNAAFDIGFMDYEFSLKRDIPKT  
NTFCKVTDLSAVARKMFPGKRNSLDALCARYEIDNSKRTLHGALLDAQILAEVYLAMTG  
GQTSMATRESG

>non-antioxidant\_850

GMNPFQNSFGGHIPQDVAGKQGENVIFIVYNLTDSPDVTVDKVKDVCANFSAMIRSMRNRF  
PDMQFSCTMGFGADAWTRLFPDKGKPKELSTFSEIKGEKYTAVSTPGDLLFHIRAKQMGL  
CFEFASILDEKLGAVVSVDETHGFRYMDGKAIIGFVDGTENPAVDENPYHFVIGEEDAD  
FAGGSYVVFVQKYIHDMAVWALPVEQQEKVIGRHKFNDVELSDEEKPGNAHNAVTNIGD  
DLKIVRANMPFANTSKGEYGTIFYGYASTFSTRMLENMFISPAAGNTDRLLDFSTAITGT  
LFFVPSYDLLGELGE

>non-antioxidant\_851

ESKQIQALRYSSAQGYSVINKYLRGDDYPETQAKETLLSRDYLTNEPSDEEFKNAMSVY  
INDIAEGLSSLPETDHRVVYRGLKLDKPALSDVLKEYTTIGNIIDKAFMSTSPDKAWINDTI  
LNIYLEKGHKGRILGDVAHFKEAEMLFPPNTKLKIESIVNCGSQDFASQLSKLRLSDDAT  
ADTNRKRIINMRVLN

>non-antioxidant\_852

MEFKDFPLKPEILEALHGRGLTTPPIQAAALPLALEGKDLIGQARTGTGKTLAFALPIAER  
LAPSQERGRKPRALVLTPTRELALQVASELTAVAPHLKVAVYGGTGYGKQKEALLRGAD  
AVVATPGRALDYLRQGVLDLSRVEVAVLDEADEMLSMGFEEVEALLSATPPSRQTLLFSA  
TLPSWAKRLAERYMKNPVLINVIK

>non-antioxidant\_853

GHMGGFSRDIQTMEDLLLHGLRDIYYAEQQITKALPKMIEQATNRDLSQGLTSHLEETQKQ  
IERLDQVFKKLGQKPSGVNCPAIDGLIKEADETAGEIADKTVLDAAIVANAQAVEHYEIAR

YGTLIAWAEELGHDDIVRFLTTNLNEEKAANTKLNTVALRKGVNRKAASGS

>non-antioxidant\_854

MAHHHHHHMGGPPTIEELKREKIIPHVFPDENVDLTVDMYISFKSGKEVNHGNILDLAGT  
GSVPRNIKFSEPPEDYCYILFMIDPDFPSRRRPDGRDYVHWAVSGIKSKELVKGTDKNCIT  
LLPYVGPSIKKGTGLHRISFILSLVKEENKGNVTGVPLYRGEHYITRVKFNQCQSAYNVIQ  
MNDMKIVGFNWCQMRRK

>non-antioxidant\_855

MSRKKMGLLVMAYGTPYKEEDIERYYYTHIRGRKPEPEMLQDLKDRYEAIGGISPLAQITE  
QQAHNLEQHLNEIQDEITFKAYIGLAHIEPFIEDAVAEMHKDGITEAVSIVLAPHFSTFSVQS  
YNKRAKEEAELKGLTITSVESWYDEPKFVTYWVDRVKETYASMPEDERENAMLIVSAH  
SLPEKIKEFGDPYDQLHESAKLIAEGAGVSEYAVGWQSEGNTDPDWPVLPDQDLTRDLF  
EQKGYQAFVYVPVGFVADHLEVLYDNDYECKVVTDDIGASYRPEMPNAKPEFIDALAT  
VVLKKLGR

>non-antioxidant\_856

SGFRKMAFPSGKVEGCMVQVTCGTTTLNGLWLDDTVYCPRHVICTAEDMLNPNYEDLLI  
RKSNSHSLVQAGNVQLRVIGHSMQNCLRLKVDTSNPKTPKYKRVRIQPGQTFSVLACYN  
GSPSGVYQCAMRPNHTIKSFLNGSCGSGVFNIDYDCVSFCYMHHMELPTGVHAGTDLE  
GKFYGPVDRQTAQAAGTDTTITLNLVLAWLAAVINGDRWFLNRFTTTLNDFNLVAMKY  
NYEPLTQDHVDILGPLSAQTGIAVLDMCAALKELLQNGMNGRTILGSTILEDEFTPFDVVR  
QCSGVTFQ

>non-antioxidant\_857

ANIVGGIEYSINNASLCSVGFSVTRGATKGFVTAGHCGTVNATARIGGAVVGTFAARVFPG  
NDRAWVSLTSAQTLLPRVANGSSFVTVRGSTEAAVGAACRSRGRITTYGQCGTITAKNVTA  
NYAEGAVRGLTQGNACMGRGDSGGSWITSAGQAQGVMSGGNVQSNGNCGIPASQRSS  
LFERLQPILSQYGLSLVTG

>non-antioxidant\_858

MVSKGEENNMAIIEKFMRFKVRMEGSVNGHEFEIEGEGEGRPYEGFQAKLKVTKGGPLP  
FAWDILSPQFGYGSKAYVKHPADIPDYFKLSFPEGFKWERVMNFDGGVVTVTQDSSLQD  
GEFIYKVKLRGTNFPDGPVMQKKTMGWEASSERMYPEDGALKGEIKMRLKLDGGHY  
TSEVKTYYKAKKPVQLPGAYIVGIKLDITSHNEDYTIVEQYERAEGRHSTGGMDELYK

>non-antioxidant\_859

MAATEGVGEAAQGGEPGQPAQPPPQPHPPPQQQHKEEMAAEAGEAVASPMDDGFVSLD  
SPSYVLYRDRAEWADIDPVPQNDGPNPVVQIYSDKFRDVIDYFRAVLQRDERSERAFKLT  
RDAIELNAANYTVWHFRRVLLKSLQKDLHEEMNYITAIIEEQPKNYQVWHHRRVLVEWL  
RDPSQELEFIADILNQDAKNYHAWQHRQWVIEFKLWDNELQYVDQLLKEDVRNNSVW  
NQRYFVISNTTGYNDRAVLEREVQYTLEMIKLVPHNESAWNYLKGILQDRGLSKYPNLLN  
QLLDLQPSHSSPYLIAFLVDIYEDMLENQCDNKEDILNKALELCEILAKEKDTIRKEYWRYI  
GRSLQSKHSTENDSPTNVQEEF

>non-antioxidant\_860

MASPSSTYYCPSPPVWSEPLYSLRPEHARERLQDDSVETVTSIEQAKVEEKIQEVFSSY  
KFNHLVPRVLVQREKHFHYLKRGLRQLTDAYECLDASRPWLCYWILHSLELLDEPIQIVA  
TDVCQFLELCQSPEGFGGGPGQYPHLAPTYAAVNALCIIGTEEAYDIINREKLLQYLYSLK  
QPDGSFLMHVGGVDRSAYCAASVASLTNIITPDLFEGTAEWIARCQNWEGGIGGVPGM  
EAHGGYTFCGLAALVILKRERSLNLKSLQWVTSRQMRFEFGGFQGRCNKLVDCYSFWQ

AGLLPLLHRALHAQGDPALSMHWMFHQQALQEYILMCCQCPAGLLDKPGKSRDFYH  
TCYCLSGLSIAQHFGSGAMLHDVVLGVPENALQPTHPVYNIGPDKVIQATTYFLQKPVPG  
FEELKDETSAEPATD

>non-antioxidant\_861

DDPTASACVLS

>non-antioxidant\_862

QAVGPPYTLCFECNRMTSSDCSTALRCYRGSCYTLYRPDENCELKWAVKGCAETCPTAGP  
NERVKCCRSRPNDD

>non-antioxidant\_863

MNTYSITLPWPPSNNRYYRHNRRGRTHVSAEGQAYRDNVARIKNAMLDIGLAMPVKIRIE  
CHMPDRRRRNLDNLQKAADFALTKAGFWLDDAQVVDYRVVKMPVTKGGRLELTITEM  
GNE

>non-antioxidant\_864

MAPHGDGLSDIEEPEVDAQSEILRPISVVVFIAMQAEALPLVNKFGLSETTDSPLGKGLP  
WVLYHGVHKDLRINVVCPRDAALGIDSVGTVPASLITFASIQALKPDIINAGTCGGFKV  
KGANIGDVFLVSDVVFHDRRIPIPMFDLYGVGLRQAFSTPNLLKELNLKIGRLSTGDSLDM  
STQDETIIANDATLKDMEGA AVAYVADLLKIPVVFLKAVTDLVDGDKPTAEFLQNLTVV  
TAALEGTATKVINFINRNLSDL

>non-antioxidant\_865

SMSYTWGALITPCAAEESKLPINALSNSLLRHHNMVYATTSRSAGQRQKKTDFDRLQVL  
DDHYRDVLKEMKAKASTVKAKLLSVEEACKLTPPHSAKSKYGYGAKDVRNLSSRAVNI  
HSVWKDLLEDTVTPIDTTIMAKNEVFCVQPEKGRKPARLIVFPDLGVRVCEKMALYDV  
VSTLPQVVMGSSYGFQYSPGQRVEFLVNTWKSCKNPMGFSYDTRCFDSTVTENDIRVEES  
IYQCCDLAPEARQAIKSLTERLYIGGPLTNSKGQNCGYRRCRASGLTTSCGNTLTCYLKA  
SAACRAAKLQDCTMLVNGDDL VICESAGTQEDAASLRVFTEAMTRYSAPPGDPPQPEY  
DLELITSCSSNVSAHDASGKRVYYLTRDPTPLARA AWETARHTPVNSWLGNIMYAPTL  
WARMILMTHFFSILLAQEQLKALDCQIYGACYSIEPLDLPQIIERLHGLSAFSLHSYSPGEI  
NRVASCLRKLGVPPLRVWRHRARSVRARLLSQGGRAATCGKYLFNWAVKTKLKLTPIPAA  
SQLDLSGWVAVAGYSGGDIYHSLSRARPRHHHHHH

>non-antioxidant\_866

STLEIAGLVRKNLVQFGVGEKNGSVRWVMNALGVKDDWLLVPSHAYKFEKDYEMMEFY  
FNRGGTYYSISAGNVVIQSLDVGFQDVVLMKVPTIPKFRDITQHFIIKGDVPRALNRLATL  
VTTVNGTPMLISEGPLKMEEKATYVHKKNDGTTVDLTVDQAWRGKGEGLPGMCGGALV  
SSNQSIQNAILGIHVAGGNSILVAKLVTQEMFQNI

>non-antioxidant\_867

MKVIFLKDVKGMGKKGEIKNVADGYANNFLFKQGLAIEATPANLKALEAQKQ

>non-antioxidant\_868

MAHHHHHHLPALKLALAYIVPCMKNKHGICVDDDFLGKETGQQIGDEVRLHDTGKFTDG  
QLVSQKSDSSKDIRGDKITWIEGKEPGCETIGLLMSSMDDLIRHCNGKLGSYKINGRTKAM  
VACYPGNGTGYVRHVDNPNGDGRCVTCIYYLNKDWDKAVSGGILRIFPEGKAQFADIEP  
KFDRLFFWSDRRNPHEVQPAYATRYAITVWYFDADERARAKVKYLTGEKGVRELKPS  
DSVGKDV

>non-antioxidant\_869

GMLSNLESSIQSPKSGEYQCLAALNLYDSPECTSLATQAAVGRHLQVTSNQQGAAVEVCL

CEDDYPGWLSLGDGLLLKPATVLYQAKSFSESEIKKLLPGAIAFTQKAMQQSNYYLWGGT  
VGPNYDCSGLMQAAFVSVGIWLPDAYQQEAFTQAITIDELAPGDLVFFGTPVKATHVGL  
YLGDCGYIHSSGKAQGRDGIGIDILSEQGDVVSRSYQQQLRGAGRUVKSYKQRH

>non-antioxidant\_870

SNRKTSCPIKINQFEGHFMKLQADSNYLLSKEYEELKDVGRNQSCDIALLPENRGKNRYN  
NILPYDATRVKLSGGSDYINASYIPGNNFRREYIVTQGPLPGTKDDFWKMVWEQNVHNIV  
MVTQCVEKGRVKCDHYWPADQDSLYYGDLILQMLSESVLPEWTIREFKICGEEQLDAHR  
LIRHFHYTVWPDHGVPETTQSLIQFVRTVRDYINRSPGAGPTVVHCSAGVGRGTGTFIALDR  
ILQQLDSKDSVDIYGAVHDLRLHRVHMVQTECQYVYLHQCVRDVLARKLR

>non-antioxidant\_871

MHHHHHHLEVLFGQPSSTVTIEYFNQKEMTKTLEEITRDFEKENPKIKVKVNVNPNAGE  
VLKTRVLAGDVPDVVNIYPOQSIELQEWAKAGVFEDLSNKDYLRVKNKYAEKYAVNEKV  
YNVPFTANAYGIYYNKDKFEELGLKVPETWDEFEQLVKDIVAKGQTPFGIAGADAWTLNG  
YNQLAFATATGGGKEANQYLRYSQPNAIKLSDPIMKDDIKVMDILRINGSKQKNWEGAGY  
TDVIGAFARGDVLMTPNGSWAITAINEQKPNFKIGTFMIPGKEKGQSLTVGAGDLAWSISA  
TTKHPKEANAFVEYMTRPEVMQKYDVGDSPTAIEGVKQAGEDSPLAGMTEYAFTDRHL  
VWLQQYWTSEADFHTLTMNYVLTGDKQGMVNDLNAFFNPMKM

>non-antioxidant\_872

GSHMSSSPAKDPPIQRLRGAVTRCEDGQLFISSYKNEYQTMEVQNNSVVIKCDGLYIIYLK  
GSFFQEYKIDLHFREDHNPISIPMLNDGRRIVFTVVASLAFKDKVYLTVNAPDTLCEHLQIN  
DGELIVVQLTPGYCAPEGSYHSTVNQVPL

>non-antioxidant\_873

MTKERFVISRRRTGFGDCLWSLASAWSYAQRTGRTLVIDWRGSCYVEQPFSNAFFAFPEPV  
EDIAGVPVICDDRNVNLSFPGPFFPRWWNRPSIDCINRPDEQIFRERDELTELFQAREDSEA  
NTIVCDACLMWRCSSEAERLIFRNIKLRSEIRARIDALYEEHFSGHSIIGVHVRHNGEDIM  
EHAPYWADSELALHQVCMAIRKAKALSYPKPVKVFLECTDSAQVLDQVSGLFPDVFAVPK  
RFQADRAGPLHSAEMGIEGGASALIDMYLLARCATVIRFPPTSFAFTRYARLLVPRIIEFDLS  
NPGHLMIDNPYEHFAASHHHHHH

>non-antioxidant\_874

KKMAFTLADRVTEMLADKAALVVEVVEENYHDAPIVGIAVVNEHGRFFLRPETALADP  
QFVAWLGDETKKKSMFDSKRAAVALKWKGIELCGVSFDLLLAAYLLDPAQGVDDVAAA  
AKMKQYEAVRPDEAVYGGKAKRAVPDEPVLAEHLVRKAAAIWELERPFLDELRRNEQDR  
LLVELEQPLSSILAEMEFAGVKVDTKRLEQMKGELAEQLGTVEQRIYELAGQEFNINSPKQ  
LGVILFEKLQLPVLKKTGTGYSTSADVLEKLAPYHEIVENILHYRQLGKLQSTYIEGLLKV  
VRPDTKKVHTIFNQALTQTGRLSSTEPNLQNIPIRLEEGRKIRQAFVPSESDWLIFAADYSQI  
ELRVLAHIAEDDNLMEAFRRDLDIHTKTAMDIFQVSEDEVTPNMRRQAKAVNFGIVYGIS  
DYGLAQNLNISRKEAAEFIERFYFESFPGVKRYMENIVQEAKQKGYVTLLHRRRYLPDITS  
RNFNVRSAERMAMNTPIQGSAAIDIIKKAMIDLNARLKEERLQAHLQLVHDELILEAPK  
EEMERLCRLVPEVMEQAVTLRVPLKVDYHYGSTWYDAK

>non-antioxidant\_875

MKPEELVRHFGDVEKAAVGVGVTPGAVYQWLQAGEIPPLRQSDIEVRTAYKLSDFTSQR  
MGKEGHNSGTK

>non-antioxidant\_876

SNAMTRYALLVRGINVGGKNKVVMAELRQELTNLGLEKVESYINSGNIFFTSIDSKAQLVE



KLETFFAVHYPFIQSFLLSLEDFEAELENLPAWWSRDLARKDFLFYTEGLDVDQVIATVES  
LELKDEVLYFGKLGIFWGWKFSEESYSKTAYHKYLLKVPFYRHITIRNAKTFDKIGQMLKK

>non-antioxidant\_877

ALCAFKDPYQQDLGIGESRISHENGITILCSKGSTCYGLWEKSKGDINLVKQGCWSHIGDPQ  
ECHYEECVVTTTPPSIQNGTYRFCCCSTDLCNVNFTENF

>non-antioxidant\_878

GYFEGMLIKQTDYFRIYRVINSLLISQNADPASASMYFSTFGAFILQQHYKVKAVPKGGLA  
AYNLGGTVLLFADHREDGYVTGAGENFHCWVEADGWAIIDFMAPAFSEGTDALAVPAKM  
FQRPLSAMAASINDLGQSGDFFYRSEPEATARRFADWHKQAMIGDMASVAANWFRKSPK  
QMAASLSVTDRDGKARTVPLTGEMLTGAW

>non-antioxidant\_879

GSDLPAGWMRVQDTSQTYYYWHIPTGTTQWEPPGRASPS

>non-antioxidant\_880

KMTWTMKAEEAEAVANINCSEHGRAFLDGIISEGSPKCECNTCYTGPDCSEKIQGCSAD  
VASGDGLFLEEWKQHKESAVLVSPWHRMSYFFNPVSNFISFELEKTIKELHEVVGNA  
AKDRYIVFGVGTQLIHGLVISLSPNMTATPDAPESKVAHAPFYPVFREQTKYFDKKG  
YVWAGNAANYVNVSNPEQYIEMVTSNPNPEGLLRHAVIKGCKSIYDMVYYWPHYTPIK  
YKADEDILLFTMSKFTGHSRFGWALIKDESVYNNLLNYMTKNTEGTPRETQLRSLKVL  
KEVAMVKTQKGTMRDLNTFGFKLRERWVNITALLDQSDRFSYQELPQSEYCNFRMRPP  
SPSYAWVKCEWEEDKDCYQTFQNGRINTQNGVGFEEASSRYVRLSLIKTQDDFDQLMY  
YLKDMVKAKRK

>non-antioxidant\_881

MGSSHHHHHSSGLVPRGSHMFTTKLAEKVVSAAWKAKISQPALKAAQDGVITVAAALG  
GVTEHSVQVALKYVAATGGSGDSKLWGVNQRSNMFDAAFVNGMAAHAIIDFDDSFV  
MRGHPSSSLVPAIFAVGEHVGANGHNCLKSYVLGIEVVATLGRAVGKGHYLAGWHPTSTL  
GVFGATTAALLLGADEEQLRNAWGIAASNSCGIKNFGTMTKPMHTGSAARNGVLSAWL  
SMQSFTGCQTVFDDAEGILAMYGAQPGPELFNAMQKFGTPWAIIPGLYKKSWSPCYAN  
HKPLAGLFAIMKEHGLTGQDISHVDVGFLPGVEKPLLYMDPRTTEEAKFSIEANIGAAL  
LDG EVSLASFEIEHLDRPAMRAAMKKVTRFDMPSETTFSGTTGYTDIVVHTADGKIER  
RIEATP GSLEDPMDDAHLERKFKDCTAWMPFGESGLLFDRLRSLTADQGIKTVPQ

>non-antioxidant\_882

MGSSHHHHHGGSMNHYTRWLELKEQNPGKYARDIAGLMNIREAELAFARVTHDAWRM  
HGDIREILAALESVGETKICRNEYAVHEQVGTFTNQHLNGHAGLILNPRALDLRLFLNQ  
WASVFIKENTARGERQSIQFFDHQGDALLKVYATDNTDMAAWSELLARFITDENTPLEL  
KAVDAPVVQTRADATVVEQEWRAMTDVHQFFTLKRHNLTRQQAFNLVADDLACKVSN  
SALAQILESAQQDGNEIMVFGNRGCVQIFTGVVEKVVPKMGWLNIFNPTFTLHLL  
EESIAEAWVTRKPTSDGYVTSLELFAHDGTQIAQLYGQRTEGEQEQAQWRKQIASLI  
PEGVAA

>non-antioxidant\_883

MVRIVIDSGVDSGRPIGVVVFQWAGPGAAPEDIGGIVAADLRNSGKFNPLDRARLPQ  
QPGSAQEVQPAAWSALGIDAVVVGQVTPNPDGSYNVAYQLVDTGGAPGTVLAQNSYK  
VKNQW LRYAGHTASDEVFEKLTGKGFARTRIAVYVQTNGGQFPYELRVSDYDGY  
NQFVVHRSPQ PLMSPAWSPDGSKLAYVTFESGRSALVIQTLANGAVRQVASFPRH  
NGAPAFSPDGSKLAFALSKTGSLNLYVMDLASGQIRQVTDGRSNTEPTWFPDSQNL  
AFTSDQAGRPPQVYKVNIN GGAPQRITWEGSQNQDADVSSDGKFMVMVSSNGGQ  
QHIAKQDLATGGVQVLSSTFLDE

TPSLAPNGTMVIYSSSQMGSVLNLVSTDGRFKARLPATDGQVKFPAWSPYLHHHHHH

>non-antioxidant\_884

PVEEVMPVLEEKERSASYKPVFVTEITDDLHFYVQDVETGTQFQKLMENMRNDIASHPV  
EGSYAPRRGEFCIAKFVDGEWYRARVEKVESPAKIHVFYIDYGNREVL PSTRLGTLSPA  
TRVLP AQATEYAFAFIQVPQDD DARTDAVDSVVRDIQNTQCLLNVEHLSAGCPHVT  
LQFA  
DSKGDVGLGLVKEGLVMVEVRKEKQFQKVITEYLNAQESAKSARLNLWRYGDFR  
ADDA  
DEFGYSR

>non-antioxidant\_885

PQITLWKRPLVTIKIGGQLKEALLDTGADDTIIEMSLPGRWKPKMIGGIGGFIKVRQYDQII  
IEIAGHKAIGTVLVGPTPVNIIGNLLTQIGATLNF

>non-antioxidant\_886

RQPEVRGGDTLNVFLAYVPEDAKAMMTTPFEAYLVNDSNYLYTYLSAEGKAWNNRS  
HGLVEPNTKLLLEFTKDLNEMERVAVQLIAFKD GKPAAIKPAVSVELRIDTVKFKYK  
LHT  
FSASDFFEEPALIYDIVKDDVPAKQVYV

>non-antioxidant\_887

MVANPPKPFVHESGAYLHGTKAELKVGDR LVPGRESNFEAGRIMNHIYITQTLDA  
AVWG  
AELAAGEGRGRIFIVEPEGAIEDDPNVTDK KLPGNPTRSYRTREP VWIVGELTD  
WVGH  
PPE  
QLAAMRQGLEELRRKGLAVIYD

>non-antioxidant\_888

MSHIQIPPGTELLQGYTVEVLRQQPPDLVDFAVEYFTRLREARR

>non-antioxidant\_889

MAGDPNSMTVSHHNASTARFYALRLLPGQEVFSQLHAFVQQNQLRAAWIAGCTGSL  
TDV  
ALRYAGQEATTSLTGTFEVISLNGTLELTGEHLHLAVSDPYGVMLGGHMMPGCT  
VRTT  
LE  
LVIGELPALTF SRQPC AISGYDELHISSRLEHHHH

>non-antioxidant\_890

GMNPENWLLRRVVRFGDTDAAGVMHFHQLFRWCHESWEESLESYGLNPADIFPGSRKS  
EVTPEVALPIIHCQADFRRIHTGDALAMELRPERLNPN SFQVHFEFRCEEQIAA  
HALIRHL  
AINAQTRHRCALPEGIDRWLEASGVGKIGSI

>non-antioxidant\_891

GHMAGNPPDPNAASTGTNPSPQAAGDISPEMMPETANIKLGYIPIVEAAPLIIAQEK  
GFFAK  
YGMTGVEVSKQANWASARDNVTIGSQGGGIDGGQWQMPMPHLITEGII TNGNK  
VPMYV  
LAQLITQGNIAVAPMHEGKGVNLDITKAADYIKGFNKTNGRKFKA AHTFPNVN  
QDFWIR  
YWFAAGGVDPD TDIDLLAVPPAETVQGM RNGTMDAFSTGDPWPYRIVTENIGY  
MAGLTA  
QIWPHYPEEYLAI RADWVDKNPKATKALLKGIMEAQQWIDDPKNRPEVVQIVS  
GRNYFN  
VPTTILESPFKGQYTMGDGQPAIDDFQKGPLYWKDGIGNVSYPYKSHDLWFLTES  
IRWGF  
HKNAIPDLDTAQKIIDKVNREDLWREAATEAGFTADIPSSTSRGVETFFDGIT  
FDPANPSAY  
LQSLAIKKV

>non-antioxidant\_892

GMSLAPWRGAIHALHRNRSLVYARYLQLATVQPNGR PANRTL VFRGFLED TNQLR  
FITD  
TRSAKADQIQQPWAEICWYFPNTREQFRMAGDLTLISSDDSHQDLQPARIAMWQEL  
SDA  
ARLQFGWPYPGKPRIKESGAFEPSPPDPIEPVPNFCLLLDPVQVDHLELRGEPQ  
NRWLYH  
RNDQQEWSSEAINP

>non-antioxidant\_893

GSVTSANLDHTKPCWYWDKDLAHTPSQLEGLDPATEARYRREGARFIFDVGTRLGLHY

DTLATGIIYFHRFYMFHSFKQFPRYVTGACCLFLAGKVEETPKKCKDIIKTARSLNDVQF  
GQFGDDPKKEEVMVLERILLQTIKFDLQVEHPYQFLLKYAKQLKGDKNKIQKLVQMAWTF  
VNDSLCTTSLQWEPEIIAVAVMYLAGRLCKFEIQEWTSKPMYRRWWEQFVQDVPVDVL  
EDICHQILDLYSQGKQMPH

>non-antioxidant\_894

SNAIRSIWENNGFGLMSSKTMDFDYWISDFEKIGASQKEAEQLIVKAIEIAIDANARNYN  
YINAILKDWEQRGFKSVEEERA

>non-antioxidant\_895

GSHMKNVSVDLPGSMKVLVSKSSNADGKYDLIATVDALELSGTSDKNNGSGVLEGVKA  
DASKVKLTISDDLQTTLEVFKSDGSTLVSKKVTSKDKIIIIKFNEKGEVSEKIITRADGTRL  
EYTGIKSDGSGKAKEVLKGYVLEGLTAEKTTLVVKEGTVTLSKNISKSGEVSVELNDTDS  
SAATKKTAAWNSGTSTLTITVNSKKTKDLVFTSSNTITVQQYDSNGTSLEGS AVEITKLDEI  
KNALK

>non-antioxidant\_896

RSVRVLVDMDGVLADFEAGLLRGFRRRFPPEPHVPLEQRRGFLAREQYRALRPDLADKV  
ASVYEAPGFFLDLEPIPGALDAVREMNDLPDTQVFICTSPLLKYHHCVGEKYRWVEQHLG  
PQFVERIILTRDKTVVLGDLIDDKDTRVGRQEETPSWEHILFTCCHNRHLVLPTRRRLLSW  
SDNWREILDSKR

>non-antioxidant\_897

MMFLRQEDFATVVRSTPLVSLDFIVENSERGEFLGKRTNRPAQGYWVFPVGGGRVQKDETL  
AAFERLTMAELGLRPLITAGQFYGVWQHFDNDFSGTDFTHYVVLGFRFRVAEEELLP  
DEQHDDYRWLTPDALLASENVHANSRVYFNNDPRAIIGLNKKEVKNV

>non-antioxidant\_898

SLEKQIESYYQEIAQLIIDMIPEEWAQEVRFYAQEDHDGWKIFFFHYSASSDEWTKDIDIRD  
VIKVPQDEFMEKYNELSFCSIDFRKDYAEAFGEPMWMSFQMTFYASGKFNIDFYDKNPFD  
TFLTRLAWQYEHFGTIPEDSFYKETLNEYLEEKAAQGKRYPFLEPLKEEEGHHHHHH

>non-antioxidant\_899

GMTKAREFLGTGWKFPVAAGADGAMVLSSAEEDIAESIRIILGTARGERVMRPFDCGIH  
DRVFSVINTTTLGLIENEVKEALILWEPRIELLSVTASPREAAEGRLLIDIEYRVRSTNTRFNL  
VYPFYLKESA

>non-antioxidant\_900

GMAYTTTVKLDGDTKTYTSLPTVKKYTLMDLGFVKGRSGAFSFRSLDPTSPYQAAFKL  
KMTVNADLTGFKMTTGTGNVQRANIFKNDAAHPEAVEQLRYILANFIERDILTDD

>non-antioxidant\_901

MSAVKAARYGKDNVRVYKVKHDEKTVQTVYEMTVCVLLEGEIETSYTKADNSVIVATD  
SIKNTIYITAKQNPVTPPELFGSILGTHFIEKYNHIIAAHVNIWCHRWTRMDIDGKPHPHSFI  
RDSEEKRNQVDVVEGKIDIKSSLSGLTVLKTNSQFWGFLRDEYTTLKETWDRILSTD  
VDATWQWKNFSGLQEVRSHPKFDATWATAREVTLKTF AEDNSASVQATMYKMAEQIL  
ARQQLIETVEYSLPNKHIFEIDLSWHKGLQNTGKNAEVFAPQSDPNGLIKCTVGRSSLKS  
KL

>non-antioxidant\_902

MGHHHHHHGSGTDIVLNDLPFVDGPPAEGQSRISWIKNGEELGADTQYGSEGS MNRPV  
SVLRNVEVLDKNIGILKTSLETANS DIKTIQEAGYIPEAPRDGQAYVRKDGEVWLLSTFLG  
SSGSLVPR

>non-antioxidant\_903

SMDRVFTTYKLMHHTQTVDFVRSKHAQFGGFSYKKMTVMEAVDLLDGLVDESDPDVDF  
PNSFHAFQTAEGIRKAHPDKDFHVLVGLLHDLGKVLALFGEPQWAVVGDTFPVGCRPQA  
SVVFCSTFQDNPDLDQPRYSELGMYQPHCGLDRLMSWGHDEYMYQVMKFNKFSLP  
PEAFYMIRFHSFYWPWHTGRDYQQLCSQQDLAMPLPWVREFNKFELYTKCPDLPDVKLRP  
YYQGLIDKYCPGILSW

>non-antioxidant\_904

GSTYPPTPPNVTRLSDSEVMLRWMVPRNDGLPIVIFKVQYRMVVGKRKNWQTTNDNIPYG  
KPKWNSLGSFTASVTDLKPQHTYRFRILAVYSNNDNKNESNTSAKFYLQPGAALD

>non-antioxidant\_905

GSHMSTLKEVQDNITLHEQRLVTTRQKLKDAERAVELDPDDVNKSTLQSRRAAVSALETK  
LGELKRELADLIAAQKLA

>non-antioxidant\_906

GSSGSSGMCGRFAQSQTREYDLALLAEDIERDIPYDPEPIGRYNVAPGTKVLLLSEDEHL  
HLDPVFWGYAPGWWDKPLINARVETAATSRMFKPLWQHGRAICFADGWFEWKKEGDK  
KQPFYIRADGQPIFMAAIGSTPFERGDAAEGFLIVTAAADQGLVDIHDRRPLVLSPEAARE  
WMRQEISGKEASEIAASGCVPANQFSWHPVSRVGNVKNQGAELIQPV

>non-antioxidant\_907

GPLGSYGDAIPEVKAILEAKNEEELVTFTSRWSAEERKELRTQFQDTTGLEFIAFLKCKIKN  
GPYEDVMALGWDCNISARVNVIKKAMKNVNDFRAIHDVVLIAATPDERLKLAAQAYKEKTG  
NDLLQDFVDQIPLTSAASYLCHLAIRENRTPRGSVASDAEVLKHNLDADDEPDHEAVRLII  
TSTADEYKEINHRFEVLTGKSVQEAIE TRYADKENARGLCIAHYYNLAPARAVAYAFHSV  
ETQNDDMAYEQAARITGLFHDLHKFAVWHYACWGVMRDDILSRFQSKANKVNFRDAC  
LMFWKLAK

>non-antioxidant\_908

TIKEMPQPKTFGELKNLPLLNTDKPVQALMKIADELGEIFKFEAPGRVTRYLSSQRLIKEAC  
DESRFDKNLSQALKFVRDFAGDGLFTSWTHEKNWKAHNILLPSFSQQAMKGYHAMMV  
DIAVQLVQKWERLNADEHIEVPEDMTRLTLDITGLCGFNRYRNSFYRDQPHPFITSMVRAL  
DEAMNKLQRANPDDPAYDENKRQFQEDIKVMNDLVDKIIADRKASGEQSDDLTHMLNG  
KDPETGEPLDDENIRYQIITFLIAGHETTSGLLSFALYFLVKNPHVLQKAAEEAARVLVDPV  
PSYKQVKQLKYVGMVLNEALRLWPTAPAFSLYAKEDTVLGGEYPLEKGDMLVLPQLH  
RDKTIWGDDVEEFRPERFENPSAIPQHAFKPFNGQRACIGQQFALHEATLVLMMLKHF  
DFEDHTNYELDIKETLTKPEGFVVKAKSKKIPLGGIPSPSTEQSACKV

>non-antioxidant\_909

SPGQGTQSENSCTHFPGNLPMMLRDLRDAFSRVKTFQMKDQLDNLLLKESLLEDFKGYL  
GCQALSEMIQFYLEEVMQAENQDPDIKAHVNSLGENLTLRLRLRRCHRFLPCENKSKA  
VEQVKNAFNKLQEKGIYKAMSEFDIFINYIEAYMTMKIRN

>non-antioxidant\_910

MIVDFYFDLSPFSYLANQRLSKLAQDYGLTIRYNAIDLARVKIAIGNVGPSNRDLKVKLD  
YLKVDLQRWAQLYGIPLVFPANYSRRMNIGFYYSGAEAAAYVNVVFNNAVWGEIAP  
DLESPLAVSEKLGWDRSAFEHFLSSNAATERYDEQTHAAIERKVFGVPTMFLGDEMWW  
GNDRLFMLESAMGRLCRQNADLSS

>non-antioxidant\_911

MSLTFSILAHDPETGAIGGAAATGSLCVGGWVLRGDLNAGMSASQGAAPSTFWGEEVLQ

HLRDGSHPEDAVNHVTSQDSGRAYRQLAAMDLLGNAAAFTGSENQDIKGSVTFASGIAS  
GNMLGDNSVLGAMTEAFVASDLTFERRLLAALIAAEGAGSDFRGLLSAAMLVLHPDRPP  
VTLRIDYHPDNPIGALEQLYQKATTGDYADWARQVPVLSDKERILDEGHHHHHH

>non-antioxidant\_912

MSSNAQVRPPLPPFTRESAIEKIRLAEDGWNSRDPERSLAYTLDTQWRNRAEFAHNREE  
AKAFLTRKWAKELDYRLIKELWAFTDNRIAVRYAYEWHDDSGNWFRSYGNENWEFDEQ  
GLMARRFACINDMPIKAQERKFHWPLGRRPDDHPGLSELGLEHHHHHH

>non-antioxidant\_913

GSPPAQLSVHTVSWNSGHERAPTNEELLGLNSGETPDVIAVAVQGGFQTDKPPQGPAC  
VKNFQSLTSSKGYTKLNTITETMGLTVYCLEKHLDDQNTLKNETIIVTVDDQKKS GGIVTS  
FTIYNKRFSFTTSRMSDEDVTSTNTKYAYDTRLDYSKKDDPSDFLWIGDLNVRVETNATH  
AKSLVDQNNIDGLMAFDQLKKAKEQKLFDGWTEPQVTFKPTYKFKPNTDEYDLSATPSW  
TDRALYKSGTGKTIQPLSYNSLTNYKQTEHRPVLAKFRVTL

>non-antioxidant\_914

EPALPSASEEQVAQDTEEVFRSYVYRHHQEQEAEGVAAPADPEMVTLPLQPSSTMGQVG  
RQLAIIGDDINRRYDSEFQTMLQHLQPTAENAYEYFTKIATSLFESGINWGRVVALLGFGYR  
LALHVYQHGLTGFLGQVTRFVDFMLHHCIARWIAQRGGWVAALNLGNG

>non-antioxidant\_915

CLAEGTRIFDPVTGTTTHRIEDVVDGRKPIHVVA AAKDGT LHARPVVS WFDQGTRDVI GLR  
IAGGAILWATPDHKVLTEYGWRAAGELRKGDRAVRDVETGELRYSVIREVLPTRRARTF  
DLEVEELHTLVAEGVVVHN

>non-antioxidant\_916

MSDTLPGTTPDDNHDRPWWGLPCTVTPCFGARLVQEGNRLHYLADRAGIRGRFSDVDA  
YHLDQAFPLMKQLELMLTGGELNPRHQHTVTLYAKGLTCEADTLGSCGYVYLAVYPTP  
AAPATTVLEHHHHHH

>non-antioxidant\_917

MNKTKSEHIKQQALDLFTRLQFLLQKHDTIEPYQYVLDILETGISKTKHNQQTPERQARVV  
YNKIASQALVDKHLHFTAENKVLAAINELAHSQKGWGEFNMLDTTNTWPSQ

>non-antioxidant\_918

MLLYMRFTENFERAKKEALMSLEIALRKGEVDEDIPLKINSIENYFTTSSCSGRISVME  
MPHFGDKVNAKWLKGWHREVSLEYVLEAIKKHRSQQLWFLVRSPIHVGAKTLEDAVKL  
VNLAVSCGFKYSNIKSISNKKLIVEIRSTERMDVLLGENGEIFVGEEYLNKIVEIANDQMRR  
FKEKLRLESKINALNR

>non-antioxidant\_919

MSAFFLNMEKSITQKIIAKAFKDLMQSNAYHQISVSDIMQTAKIRRQTFYNYFQNQEELLS  
WIFENDFAELINDNSDYWGQNELLLLLRYLDENQIFYQKIFVIDKNFEHFFLIQWENLLD  
KVIFDQEKKSDYHWSLEKSFICRYNAAAICAITRESIIRGNSLEKLYSQIVNLLLAQIKIFES  
LEHHHHHH

>non-antioxidant\_920

GAMLYLIFYDITDDNLRNRVAEFLKKKGLDRIQYSVFMGDLNSSRLKDVEAGLKIIGNRK  
KLQEDERFFILIVPITENQFRERIVIGYSGSEREEKSNVWW

>non-antioxidant\_921

MIVAFCLYKYFPFGGLQRDFMRIASTVAARGHHVRVYTSWEGDCPKAFELIQVPVKSHT  
NHGRNAEYYAWVQNHLEKHPADRVVGFNKMPGLDVYFAADV CYAEKVAQEKGFYRLT

SRYRHYA AFERATFEQGKSTKLMMLTDKQIADFQKH YQTEPERFQILPPGIYPDRKYSEQI  
PNSREIYRQKNGIKEQQLNLLQVGSDFGRKGVDRSIEALASLPESLRHNTLLFVVVGQDKPR  
KFEALAEKLGVR SNVHFFSGRNDVSELMAAADLLLHPAYQEAAGIVLLEAITAGLPVLT TA  
VCGYAHYIADANCGTVIAEPFSQEQLNEVLRKALTQSPLRMAWAENARHYADTQDLYSLP  
EKAADIITGGLDG

>non-antioxidant\_922

RPSSRVYIVEVLNEFPHPDYAFTQGLVYAENDTLFESTGLYGRSSVRQVALQTGKVENIHK  
MDDS YFG EGLTLLNEKLYQV VWLKNIGFIYDRRTLSNIKNFTHQMKD GWGLATDGKILY  
GSDGTSILYEIDPHTFKLIKHNVKYNGHRVIRLNELEYINGEVWANIWQTDCIARISAKDG  
TLLGWILLPNLRKKLIDEGFRDIDVLNGIAWDQENKRIFVTGKLWPKLFEIKLHLVRHRIPD  
GYIERHCLNLRDNTLSLKT DID

>non-antioxidant\_923

TQNFII PKKEIHTVPDMGKWKRSQAYADYIGFILTLNEG VKGKLT FEYRVSEAIEKLLALL  
NTLDRWIDETPPVDQPSRFGNKAYRTWYAKLDEEAENLVATVVP THLAAAVPEVAVYLKE  
SVGNSTRIDYGTGHEAFAAFLCCLCKIGVLRVDDQIAIVFKVFNRYLEV MRKLQKTYRM  
EPAGSQGVWGLDDFQFLPFIWGSSQLIDHPYLEPRHFVDEKAVNENHKDYMFLECILFITE  
MKTGPF AEHSNQLWNISAVPSWSKV NQGLIRMYKAECLEKFPVIQHFKFGSLLPIHPVTS

>non-antioxidant\_924

MAPKAVLVGLPGSGKSTIGRRLAKALGVGLLDTDVAIEQRTGRSIADIFATDGEQEFRIIEE  
DVVRAALADHDGVL SLGGGAVTSPGVRAALAGHTVVYLEISAAEGVRR TGGNTVRPLLA  
GPDRAEKYRALMAKRAPLYRRVATMRVDTNRRNPGAVVRHILSRLQVPS PSEAATLEHHH  
HHH

>non-antioxidant\_925

HHHHHHGCM SGRKPIIGVMGPGKADTAENQLVMANELGKQIATHGWILLTGGRSLGVM  
HEAMKGAKEAGGTTIGVLP GPD TSEISDAVDIPIVTGLGSARDNINALSSNVLVAVGMGPG  
TAAEVALALKAKKPVVLLGTQPEAEKFFTS LDAGLVHVAADVAGAI AAVKQLLAKLN

>non-antioxidant\_926

VGALAVVWVWLWLWLM

>non-antioxidant\_927

GSHMRRRVRAILPYTKVPDTDEISFLKGD MFIVHNELEDGWMWVTNLRTDEQGLIVEDLV  
EEVGR

>non-antioxidant\_928

GSHMASTPDKFNDGNLNIA YAKPTTQSSVDYNGDPNRAVDG NRNGNFNSGSVTHTRADN  
PSWWEVDLKKMDKVGLV KIYNRTDAETQRLSNFDVILYDNNRNEVAKKHVNNLSGESVS  
LDFKEKGARYIKVKLLTSGVPLSLAEVEVFRES

>non-antioxidant\_929

ASHHLRMHFKTL PAGESLGSGLVWVG DVDPQPSKDWPNGAITMTKAKKDDYGY YLDV  
PLAAKHRQQVSYLINNKAGENLSKDQHISLLTPKMNEVWIDENYHAHAYRPLKEGYLRIN  
YHNQSGHYDNLAVWTFKDVKTPTTDWPNGLDLSHKGHYGAYVDVPLKEGANEIGFLIL  
DKSKTGDAIKVQPKDYLFKELDNHTQVFVKDTPK VYNNPYYID

>non-antioxidant\_930

MGSSHHHHHMTLNQPEYFTKYENLHFHRDENGILEVRMHTNGSSLVFTGKTHREFPDA  
FYDISRDRDNRVILT GSGDAWMAEIDFPSLGDVTNPREWDKTYWEGKKVLQNLLDIEVP  
VISAVNGAALLHSEYILTTDIILASENTVFQDMPHLNAGIVPGDGVHILWPLALGLYRGRYF

LFTQEKLTAQQAYELNVVHEVLPQSKLMERAWEIARTLAKQPTLNRLRYTRVALTQRLKRL  
VNEGIGYGLALEGITATDLRNT

>non-antioxidant\_931

LVPRGSHMTIDQWLLKNAKEDAIAELKKAGITSDFYFNAINKAKTVEEVNALKNEILKAH  
A

>non-antioxidant\_932

MLYILNSAILPLKPGEEYTVKAKEITIQEAKELVTKEQFTSAIGHQATAELLSSILGVNVPM  
NRVQIKVTHGDRILAFMLKQRLPEGVVVKTTEELEKIGYELWLFEIQ

>non-antioxidant\_933

MDRSWMTGDFNGSVDIGGSITADDYRQKWVGTGLNGFGNVLNDLTNGGTKLTITV  
TGNKPILLGRTEAFATPVTGGVDGPHIAFTDYEGASVVLKPKDGETNKNGLAYFVLPKM  
NAGGTVKGSVKVNASYAGVLGRGGVTSADGELLSLADGLSSIFYGGLPRGSELSAGSAA  
AARTKLFGLSRDDILGQIQRVNANVTSLVDVAGSYRENMEYTDGNVVSAAAYALGIANGQ  
TIEATFNQAVTTSTQWSAPLNVAITYY

>non-antioxidant\_934

SMSTLLINQPQYAWLKEGLREENEGVYNGSWGGRGEVITTYCPANNEPIARVRQASVAD  
YEETVKKAREAWKIWADIPAPKRGEIVRQIGDALREKIQVLGSLVSLEMKGILVEGVGEVQ  
EYVDICDYAVGLSRMIGGPILPSERSGHALIEQWNPVGLVGIITAFNFPVAVYGWNNAIAMI  
CGNVCLWKGAPTTSLISVAVTKIIAKVLEDNKLPGAICSLTCGGADIGTAMAKDERVNLLS  
FTGSTQVGKQVGLMVQERFGRSLELGGNNAIIFEDADLSLVVPSALFAAVGTAGQRCT  
TARRLFIHESIHEVVNRLKKAYAQIRVGNPWPDPNVLYGPLHTKQAVSMFLGAVEEAKKE  
GGTVVYGGKVMDRPGNYVEPTIVTGLGHDASIAHTETFAPILYVFKFQNEEEVFAWNNNEV  
KQGLSSSIFTKDLGRIFRWLGPKGSDCGIVNVNIPTSGAEIGGAFGGEKHTGGGRESGSDA  
WKQYMRRSTCTINYS

>non-antioxidant\_935

MGHHHHHHHHHSSGHIEGRHMIRLGYPCENLTGATTNRTLRLAHLTEERVREKAAEN  
LRDLERILRFNADHGFALFRIGQHLIPFASHPLFPYDWEWAYEEELARLGALARAFGQRLS  
MHPGQYVNPSPDPEVVERSLAELRYSARLLSLLGAEDGVLVHLGGAYGEKKGALRRF  
VENLRGEEVRLRYLALENDERLWNVEEVKAAEALGVPVVVDLHHLNPGRLPLEEAL  
RLAFPTWRGRPKVHLASQDPKKRPGAHAFRVTREDWERLLSALPGPADVMVEAKGKEQ  
GLATP

>non-antioxidant\_936

FTETTIVVHYHRYDGKYDGNLWIWPVEPVSQEGKAYQFTGEDDFGKVAVVKLPMDLTK  
VGIIVRLNEWQAKDVAKDRFIEIKDGKAEVWILQGVVEIFYEKP

>non-antioxidant\_937

MLQCYNCPNPTADCKTAVNCSSDFDACLITKAGLQVYNKCWKFEHCNFNDVTTRLRENE  
LTYCYCKKDLNCFNEQLENG

>non-antioxidant\_938

MGSSHHHHHHSSGLVPRGSHMDVEKLRQLYAAGERDFSIVDLRGAVLENINLSGAILHGA  
MLDEANLQQANLSRADLSGATLNGADLRGANLSKADLSAILDNAILEGAILDEAVLNQA  
NLKAANLEQAILSHANIREADLSEANLEAADLSGADLAIADLHQAANLHQAALERANLTG  
ANLEDANLEGTILEGGNNLAT

>non-antioxidant\_939

QFQKPGDAIEYRQSAFTLIANHFGRVAAMAQGGKAPFDAKVAENIALVSTLSKLPLTAFGP

GTDKGGHTEAKPAVWSDAAGFKAAADKFAAAVDKLDAAAGKTGDFAQIKA AVGETGGAC  
KGCHDKFKEK

>non-antioxidant\_940

GSMKKVEAIRPEKLEIVKKALSDAGYVGMTVSEVKGRGVQGGIVERYRGREYIVDLIPK  
VKIELVVKEEDVDNVIDIICENARTGNPGDGKIFVIPVERVVRVRTKEEGKEALLEHHH

>non-antioxidant\_941

HHMGNLNRCIADIVSLFITVMDKLRLEIRAMDEIQPDLRELMETMNRMSHLPPDFEGREK  
VSQWLQKLSSMSASDELDDSQVRQMLFDLESAYNAFNRLHS

>non-antioxidant\_942

MGSSHHHHHSSGLVPRGSMSTSWSDRLQNAADMPANMDKHALKKYRREAYHRVFN  
RSLAMEKIKCFGDMDYTLAVYKSPEYESLGFELTVERLVSIGYPQELLSFAYDSTFPTRGL  
VFDTLYGNLLKVDAYGNLLVCAHGFNFIRGPETREQYPNKFIQRDDTERFYILNTLFLNPE  
TYLLACLVDFFTNCPRYTSCETGFKDGDLFMSYRSMFQDVRDAVDWVWHYKGSLSKEKTVE  
NLEKYVVKDGLPLLLSRMKEVGKVFLATNSDYKYTDKIMTYLDFPHGPKPGSSHRPW  
QSYFDLILVDARKPLFFGEGTVLRQVDTKTGKLGTYTGPLQHGIVYSGSSDTICDLLG  
AKGKDILYIGDHIFGDILKSKKRQGWRTFLVIPELAQELHVWTDKSSLFEELQSLDIFLAEL  
YKHLDSSSNERPDISSIQRRIKKVTHDMDMCYGMMGSLFRSGSRQTLFASQVMRYADLYA  
ASFINLLYPFSYLFRAAHVLMPESTVEHTHVDINEMESPLATRNRSTSVDKDDTDYKRH  
QLTRSISEIKPPNL

>non-antioxidant\_943

MAHHHHHHVREEKLRLRKQIIEHMNSLSKERYTTLSEQIVFSLYEQKEWAEAKTIGITLSM  
ENEVNTYPIIEKAWKEGKRVVVPCNKETRTMSFRQISNFDQLETVYMNLREPALTEEV  
NADEIDLQIVPGVAYTERGERIGYGGGYDRYLVHYKGKTLSSLAYSFQMVEHIPVEPFDK  
NVEKIITEKGTMVKNGLV

>non-antioxidant\_944

MNQIDLNVTCRYAGVFHVEKNGRYSISRTEAADLCQAFNSTLPTMDQMKLALSKEGFETC  
RYGFIEGNVVIPRIHPNAICAAANTGVYILVTSNTSHYDTYCFNASAPPEEDCTSVTDL PNS  
FDGPVTITIVNRDGTTRYSKKGEYRTHQEDIDAS

>non-antioxidant\_945

GHMSSTPSNQNIPIIKKESIVSLFEKGIRQDGRKLTDIRPLSITLDYAKKADGSALVKGTT  
MVLAGTKLEIDKPYEDTPNQGNLIVNVELLPLAYETFEPPDENAIELARVVDRSLRDSK  
ALDLTKLVIEPGKSVWTVWLDVYVLDYGGNVLDACTLASVAALYNTKVYKVEQHSNGIS  
VNKNEVVGKLPNYPVVTISVAKVDKYLVDLDEESIMDAKISFSYTPDLKIVGIQKSG  
KGSMSLQDIDQAENTARSTAVKLEELKKHLGI

>non-antioxidant\_946

GHMREMLQVERPKLILDDGKRTDGRKPDELRSIKIELGVLKNADGSAIFEMGNTKAIAAV  
YGPKEMHPRHLSLPDRAVLRVRYHMTFSTDERKNPAPSRREIELSKVIREALESVLELVEF  
PRTAIDVFTEILQADAGSRLVSLMAASLALADAGIPMRDLIAGVAVGKADGVIIIDLNETE  
AMWGEADMPIAMMPSLNQVTLFQLNGSMTPEFRQAFDLAVKGINIYNLEREALSKSY  
VEFKEEGV

>non-antioxidant\_947

MKSASDPFDLKRFBVYAQAPVYRSVVEELRAGRKRGHMMWFVFPQLRGLGSSPLAVRYGI  
SSLEEAQAYLQHDLLGPRLHECTGLVNQVQGRSIEEIFGPPDDLKLCSSMTLFARATDANQ  
DFVALLAKYYGGGEDRRTVALLAVT



>non-antioxidant\_948

GMASVLSAATATDQGPVRENNQDAACLADGILYAVADGFGARGHHASATALKTLSAGFAA  
APDRDGLLEAVQQANLRVFEELGDEPTVSGTTLTAVAVFEPGQGGPLVVNIGDSPLYRIRDG  
HMEQLTDDHSVAGELVRMGEITRHEARWHPQRHLLTRALGIGPHIGPDVFGIDCGPGDRL  
LISSDGLFAAADEALIVDAATSPDPQVAVRRLVEVANDAGGSDNTTVVVIDLG

>non-antioxidant\_949

EETPVTPQPPDILLGPLFNDVQNAKLFPDQKTFADAVPNSDPLMILADYRMQQNQSGFDL  
RHFVNVNFTLPKEGEKYVPPEGQSLREHIDGLWPVLTRSTENTEKWDSLLPLPEPYVVP  
GRFREYYWDSYFTMLGLAESGHWDKVADMVANFAHEIDTYGHIPNGNRSYYLSRSQPP  
FFALMVELLAQHEGDAALKQYLPQMKEYAYWMDGVENLQAGQQEKRVVKLQDGTLL  
NRYWDDRDTPRPESWVEDIATAKSNPNRPATEIYRDLRSAAASGWDFSSRWMDNPQQLN  
TLRTTSIVPVDLNSLMFKMEKILARASKAAGDNAMANQYETLANARQKGIEKYLWNDQ  
QGUYADYDLKSHKVRNQLTAAALPLYVNAAAKDRANKMATATKTHLLQPGGLNTTSV  
KSGQQWDAPNGWAPLQWVATEGLQNYGQKEVAMDISWHFLTNVQHTYDREKKLVEKY  
DVSTTGTGGGGGEYPLQDGFGWVTVTKMLDLICPKEQPCDNVPATRPVKSATTQPST  
KEAQPTP

>non-antioxidant\_950

STAGKVIKCKAAVLWEEKKPFSEIEVEVAPPKAHEVRIKMOVATGICRSDDHVVSGLVTPLP  
VIAGHEAAGIVESIGEGVTTVRPGDKVIPLFTPQCCKCRVCKHPEGNFCLKNDLSMPRGT  
MQDGTSRFTCRGKPIHFLGTSTFSQYTVVDEISVAKIDAASPLEKVCLIGCGFSTGYGSAV  
KVAVTQGSTCAVFLGGVGLSVIMGCKAAGAARIIGVDINKDKFAKAKEVGATECVNP  
QDYKKPIQEVLEMSNGGVDFSFEVIGRLDTMVTALSCCQEAYGVSIVVGVPPDSQNLMS  
NPMLLSGRTWKGAIFGGFKSKDSVPKLVADFMAKKFALDPLITHVLPFEKINEGFDLLRS  
GESIRTILTF

>non-antioxidant\_951

IVGGQECKDGECPWQALLINEENEGFCGGTILSEFYILTAHCLYQAKRFKVRVGDNRTEQ  
EEGGEAVHEVEVVIKHNRFKETYDFDIAVLRKTPITFRMNVAPAACLPERDWAESTLMTQ  
KTGIVSGFGRTHEKGEQSTRKMLEVPYVDRNSCKLSSSFIITQNMFCAGYDTKQEDACQ  
GDSGGPHVTRFKDITYFVTGIVSWGEGCARKGKYGIYTKVTAFLKWIDRSMKTRGLPKAK

>non-antioxidant\_952

EIKREYKEMEGSPEIKSKRRQFHQEIQSRNMRENVKRSSVVVANPHTHIAIGILYKRGETPLP  
LVTFKYTDAQVQTVRKIAEEEGVPILQRIPLARALYWDALVDHYIPAEQIEATAEVLRWLE

>non-antioxidant\_953

RSWHYVEPKFLNKAFEVALKVQIIAGFDRGLVKWLRVHGRTLSTVQKKALYFVNRRYMQ  
THWANYMLWINKKIDALGRTPVVGDYTRLGAEIGRRIDMAYFYDFLKDKNMIPKYLPLYM  
EEINRMRPADVPVKYMGK

>non-antioxidant\_954

APGVTVTPATGLSNGQTVTVSATGLTPGTVYHVGQCAVVEPGVIGCDATTSTDVTADAAG  
KITAQLKVHSSFQAVVGADGTPWGTVNCKVVSCSAGLGSDSGEGAAQAITFA

>non-antioxidant\_955

GWEIPEPYVWDESRVIFYEQLDEEHKKIFKGIFDCIRDNSAPNLATLVKVTNHFTHHEAM  
MDAAKYSEVVPKMKMHKDFLEKIGGLSAPVDAKNVDYCKEVLVNHKGTDFKYKGL

>non-antioxidant\_956

EDDLYRQSLEIISRYLREQATGSKDSKPLGEAGAAGRRALETLLRVGDGVQRNHETAFAQG

MLRKLDIKNEDDVKSLSRVMIHVFSDBGVTNWGRIVTLISFGAFVAKHLKTINQESCIEPLA  
ESITDVLVVRTKRDWLKQRGWDGFVEFFHVEDLEGG

>non-antioxidant\_957

DTTICEPFGTTTTIQGRYVVQNNRWGSTAPQCVTATDTGFRVTQADGSAPTNGAPKSYPSVF  
NGCHYTNCSPGTDLPVRLDTVSAAPSSISYGFVDGAVYNASYDIWLDPTARTDGVNQTEI  
MIWFNRVGP IQPIGSPVGTASVGGRTWEVWSSGNGSNDVLSFVAPSAISGWSFDVMDVFR  
ATVARGLAENDWYLTSVQAGFEPWQNGAGLAVNSFSSTVETGTPGGTDPGDPG

>non-antioxidant\_958

DHYNCVSSGGQCLYSACPIFTKIQTGYRGEAKCCK

>non-antioxidant\_959

GMDKLVKYQELVKKLLTNYASDDVSDQDVEVQLILDTERNHYQWMNVGWQGLNRIYR  
CVIHFDIKDGKIWLQQLTDRNPAEELVMMGVPREDIVLGLQAPYKRQYTDYGVA

>non-antioxidant\_960

MSHTILLVQPTKRPEGRTYADYESVNECMEGVCKMYEEHLKRMNPNSPSITYDISQLDFDI  
DDLADLSCLVYRADTQTYQPYNKDWIKEKIYVLLRRQAQQAGK

>non-antioxidant\_961

GS GSMETLCQRLNVCQDKILTHYENDSTDLRDHIDYWKHMRLCAIYYKAREMGFKHIN  
HQVVP TLAVSKNKALQAIELQLTLETIYNSQYSNEKWTLQDVSLEVYLTAPTGCIKKHGYT  
VEVQFDGDICNTMHYTNWTHIYICEEASVTVEGQVDYYGLYYVHEGIRTYFVQFKDDA  
EKYSKNKVWEVHAGGQVILCPTS VFS

>non-antioxidant\_962

GSATIDMNFQSDLLSIFEENLF

>non-antioxidant\_963

MQNRQVANATKVAVAGASGYAGGEILRLLLGHYPAYADGRLRIGALTAATSAGSTLGEHHP  
HLTPLAHRVVEPTEAAVLGGHDAVFLALPHGHS AVLAQQLSPETLIIDCGADFRLTDAAVW  
ERFYGSSHAGSWPYGLPELPGARDQLRGTRIAVPGCYPTAALLALFPALAADLIEPAVTV  
VAVSGTSGAGRAATDLLGAEVIGSARAYNIAGVHRHTPEIAQGLRAVTD RDVSVSFTPV L  
IPASRGILATCTARTRSPLSQLRAAYEKAYHAEPFIYLMPEGQLPRTGAVIGSNAAHIAVAVD  
EDAQTFVAIAAIDNLVKGTAGAAVQSMNLALGWPETDGLSVVGVAP

>non-antioxidant\_964

SNAEEELPFKVLGDGSYLFEGKTSLS DVRHYLDLPENAFGELGDEVD TSLGLFLEIKQELP  
HVGDTAVYEPFRFQVTQMDKRRRIIEIKIFPFE

>non-antioxidant\_965

SNAMANVKLLL PYILK WEGGFVHDPADAGGATNKGVTIATWKRVGYDKDGDGDIDVED  
LKLLTDDDVLNRVLKPFYWDRWKADLIESQKVANILVDVWVGSGKYGIVIPQRILGVQA  
DGIVGNKTLQAVNSADPDEL FESIFDARREFLEDTARS IKKYEDSIGR KATERELLRHTNK  
RFLRGWLNRLDIRKL

>non-antioxidant\_966

MEALEELMKLLNMKDFPYRIEGIDISHLQGKYTVASLVVFEDGF PKKGDYRRYKIEQDHP  
DDYESIRTVVKRRYSKHPLPNLLFVDGGIGQVNAAIEALKEIGKDCPVVGLAKKEETV VFE  
NREIHLPHDHPVLRLLVQIRDETHRFVSYHRKRREKE

>non-antioxidant\_967

QPVNHLVKEIDMLLKEYLLSGDISEAEHCLKELEVPHFHHELVYEAIMVLESTGESAFK  
MILDLLKSLWKSSTITIDQMKRGYERIYNEIPDINLDVPHSYSVLERFVEECFQAGIISKQLR

DLCPSR

>non-antioxidant\_968

MASDVYLIFSTCPDLPSAEIISRVLVQERLAACVTQLPGAVSTYRWQGGKIETTQEIQLLIKTN  
AVHVNAAITRLCALHPYRLPEAIAVQVSVGLPEYLTWINTTEIDEEYSLPHHHHHH

>non-antioxidant\_969

APVRSNLNCTLRDSQQKSLVMSGPYELKALHLQGQDMEQQVVFSSMSFVQGEESNDKIPVA  
LGLKEKNLYLSCVLKDDKPTLQLESVDPKNYPKKKMEKRFVFNKIEINNKLEFESAQFPN  
WYISTSQAENMPVFLGGTKGGQDITDFTMQFVSS

>non-antioxidant\_970

MPVDKNLRDLEPGIHTDLEGRITYGGYLRDLQLLSAQQPLSEPAHHDEMLFIIQHQTSEL  
WLKLLAHELRAAIVHLQRDEVWQCRKVLARSKQVLRQLTEQWSVLETLPSEYMGFRD  
VLGPSSGFQSLQYRYIEFLLGNKNPQMLQVFAYDPAGQARLREVLEAPSLYEEFLRYLARF  
GHAIPQQYQARDWTAAHVADDTLRPVFERIYENTDRYWREYSLCEDLVDVETQFQLWRF  
RHMRTVMRVIGFKRGTGGSSGVGFLQQALALTFPELFDVVRTSVGVDRPPQGSADAGK  
RLEHHHHHH

>non-antioxidant\_971

LASIFVDVSSVEPGVQLTVKFLGKPIFIRRRTEADIELGRSVQLGQLVDTNARNANIDAGAE  
ATDQNRTLDEAGEWLVMWGVCTHLGCVPIGGVSGDFGGWFCPCCHGSHWDSAGRIRKGP  
APENLPIPLAKFIDETTIQLG

>non-antioxidant\_972

MKPVPTYVQDKDESTLMFVCSLVRDQAKYDRLLLESFERFGFTPDKAEFLAADNREGNQ  
FHGFSWHKQMLPRCKGRYVIFCHEDVELVDRGYDDLVAIEALEEADPKWLVAAGVAGSP  
WRPLNHSVTAQALHISDVFGNDRRRGNVPCRVESLDECFLLMRRLKPVLSYDMQGFHY  
YGADLCLQAEFLGGRAYAIDFHLHHYGRAIADENFHRLRQEMAQKYRRWFPGRILHCVT  
GRVALGGGWYEAR

>non-antioxidant\_973

MDKNELVQKAKLAEQAERYDDMAACMKSVEQGAELSNEERNLLSVAYKNVVGARRSS  
WRVSSIEQKTEGAEEKQQMAREYREKIETELRDICNDVLSLEKFLIPNASQAESKVFYL  
KMKGDYYRYLAEVAAGDDKKGIVDQSQQAYQEAFFEISKKEMQPTHPIRLGLALNFSVFY  
YEILNSPEKACSLAKTAFDEAIAELDTLSEESYKDSTLIMQLLRDNLTWTS

>non-antioxidant\_974

GASTVEKELLRSRRENSIIEQKGTMRCYAYVMEQNLPENLLFDYENGVITQGLSEHVYK  
FNRVIPHLKVSEDKFFTQEYSVYHDMCLNQKKNFNLSLSTTPHGSLRESLIKFLAEKDTIY  
QKQYVITLQFVFLSDDEFSQDMLLDYSHNDKDSIKLKFEKHSISLDSKLVIIENGLEDPLN  
FSCDEHPNLPHSGMGIKVQFFPRDSKSDGNNDPVPVDFYFIELNLSKIEQFDKSIFKES  
CETPIALVLKKLISDTKSFFLLNLNDSKNVNKLLTISEEVQTQLCKRKKKLT

>non-antioxidant\_975

MKTWPAPTAPTVPVRATVTPGSKSQTNRALVLAALAAQGRGASTISGALRSRDTEMLLD  
ALQTLGLRVDGVGSELTVSGRIEPPGARVDCGLAGTVLRFVPPLAALGSVPVTFDGDQQ  
ARGRPIAPLLDALRELGVAVDGTGLPFRVRGNGSLAGGTVAIDASASSQFVSGLLLSAASF  
TDGLTVQHTGSSLPSAPHIAMTAAMLQAGVDIDDSTPNRWQVRPGPVAARRWDIEPDLT  
NAVAFLSAAVVSGGTVRITGWPRVSVPADHILAILRQLNAVVIHADSSLEVRGPTGYDGF  
DVDLRAVGELTPSVAALALASPGSVSRLSGIAHLRGHETDRLAALSTEINRLGGTCRETP  
DGLVITATPLRPGIWRAYADHRMAMAGAIIGLRVAGVEVDDIAATTKTLPEFPRLWAEMVG

PGQGWGYPQPRSGQRARRATGQGSGG

>non-antioxidant\_976

GMLKSKIKEEYVQMDQVDWKPFAAFSTGGIRWKLHVSPMGSWTAIFDCPAGSSFAA  
HVHVGPGEYFLTKGKMDVRGGKAAGGDTAIPGYGYESANARHDKTEFPVASEFYMSFL  
GPLTFVKPDGSPIAVIGWEDAQGAWAA

>non-antioxidant\_977

MKERRYLPLSQARKSGFQMDWLSEPHVVKPTFIGTQVFEEYDLQKLVDYIDWKPFDDVW  
QLRGKYPNRGFPKIFNDKTVGGEARVYDDAHNMLNTLISQKLRARGVVGFWPAQSIQ  
DDIHLAEAAVPQAAEPIATFYGLRQQAENDSASTEPYYCLSDFIAPLHSGIRDYLGFAVA  
CFGVEELSKAYEDDGDYSSIMVKALGDRLAEFAEELHERVRRELWAYCGSEQLDVAD  
LRLRYKIRPAPGYPSQPDHTEKLTMWRLADIEQSTGIRLTESLAMAPASAVSGLYFSNLK  
SKYFAVGKISKDQVEDYALRKNISVAEVEKWLGPILOGYDTDKLAALAEHHHHHH

>non-antioxidant\_978

GMADKTGTPHPLTEPGVWIERIGGRVFPPLPALFLDRDGTINVDTDYPSDPAEIVLRPQM  
LPAIATANRAGIPVVVVVTNQSGIARGYFGWSAFAAVNGRVLELLREEGVFVDMVLACAYH  
EAGVGPLAIPDHMRKPNPGMLVEAGKRLALDLQRSLIVGDKLADMQAGKRAQLAQGW  
LVDGEAAVQPGFAIRPLRDSSELGDLLAAIETLGRDNRS

>non-antioxidant\_979

MAEIEQAKKEIAYLIKKAKEEILEEIKKAKQEIAM

>non-antioxidant\_980

GSDSGTLNVEVYKYNTNDTSIANDYFNKPAKYIKKNGKLYVQITVNHSHWITGMSIEGHK  
ENIISKNTAKDERTSEFEVSKLNGKIDGKIDVYIDEKVNKPKFYDHHYNITYKFNGPTDV  
AGANAPGKDDKNSASGSDKSGDGTGQSESNSSNKDKVE

>non-antioxidant\_981

CPSRCSGTTVECYSGRTSVPTGIPAQTTYLDLETNSLKSLPNGVFDELTSLTQLYLGGN  
KLQSLPNGVFNKLTSLTYLNLSTNQLQSLPNGVFDKLTQLKELALNTNQLQSLPDGVFDKL  
TQLKDLRLYQNQLKSVPDGVFDRLTSLQYIWLHDNPWDCTCPGIRYLSEWINKHSGVVR  
NSAGSVAPDSAKCSGSGKPVRSIICP

>non-antioxidant\_982

MKDEAEKLFNQDVDAAVRGILRNAKLKPVYDSLDAVRRRAALINMVFQMGETGVAGFTN  
SLRMLQQKRWDEAAVNLAKSRYNQTTPNRAKRVITTFRTGTWDAYKNLSGGGGAMDIF  
EMLRIDEG

>non-antioxidant\_983

MDIVFIEQLSVITTIGVYDWEQTIEQKLVFDIEMAWDNRKAAKSDDVADCLSYADIAETVV  
SHVEGARFALVERVAEEVAELLARFNSPWVRIKLSKPGAVARAANVGVIIERGNNLKENN

>non-antioxidant\_984

MALSMTGGQQMGRGMSRDPLPFFPLYLGGPEITTENCEREPIHIPGSIQPHGALLTADGH  
SGEVLQMSLNAATFLGQEPTVLRGQTLAALLPEQWPALQAALPPGCPDALQYRATLDWP  
AAGHLSLTVHRVGELLILEFEPTAWDSTGPHALRNAMFALESAPNLRALAEVATQTVREL  
TGFDRVMLYKFAPDATGEVIAEARREGLHAFGLHRFPASDIPAQARALYTRHLLRLTADTR  
AAAVPLDPVLNPQTNAPTPLGGAVLRATSPMHMQYLRNMGVGSLSVSVVVGGLWGLI  
ACHHQTPYVLPDLRRTTLESGLRLLSLQVQVKEAHHHHHH

>non-antioxidant\_985

GIDPFTGEAIAKFNFGDTQVEMSFRRKGERITLLRQVDENWYEGRIPGTSRQGIFPITYVD

VIKRPL

>non-antioxidant\_986

MGWEIIDIGPFTQNLGKFAVDEENKIGQYGRITFNKVIRPCMKKTIYENEGFREIKGYEY  
QLYVYASDKLFRADISEDYKTRGRKLLRFNGPVPPP

>non-antioxidant\_987

GSLHEEADHRVTDHGPRPFVVNIEDETKRNRAFRRALWTGDHLQVTLMSIQVGEDIGLEI  
HPHLDQFLRVEEGRGLVQMGHRQDNLHFQEEVFDDYAILIPAGTWHNVRNTGNRPLKLY  
SIYAPPQHPHGTVHETKAIAMAAEEHHHL

>non-antioxidant\_988

DRINTVRGPITISEAGFTLTHEHICGSSAGFLRAWPEFFGSRKALAEKAVRGLRRARAAGVR  
TIVDVSTFDIGRDVSLLAEVSRAADVHIVAATGLWFDPPPLSMRLRSVEELTQFFLREIQYGI  
EDTGIRAGIHKVATTGKATPFQELVLKAAARASLATGVPVTTHTAASQRDGEQQAIFESEG  
LSPSRVCIGHSDDTDDLSTALAAARGYLGLDHPYSAIGLEDNASASALLGIRSWQTRAL  
LIKALIDQGYMKQILVSNWTFGFSSYVTNIMDMRVNPDGMAFIPLRVIPFLREKGVPPQ  
ETLAGITVTNPARFLSPTLRA

>non-antioxidant\_989

YFQGMLKNIDPALNADVLHALRAMGHGDTLVISDTNFPSDSVARQTTVGKVLHIDNVSA  
ARAMKAILSPLDTPPLQPSVGRMEVMGAPDQLEPVQVEVQQEIDAAEGKSAPMYGIER  
FAFYEKAKQAYCVITGETRFYGCFLTKGVIPPK

>non-antioxidant\_990

MMSGAPSATQPATAETQHIADQVRSQLEEKYNKKFPVFKAVSFKSQVVAGTNYFIKVHVG  
DEDFVHLRVFQSLPHENKSLTSLSNYQTNKAKHDELTYP

>non-antioxidant\_991

MKIWSKEEVVNKLHEIKNGYLSVPTDMFRITDDGVVQILERQFGVQENNITLGDGGEFE  
LKGMRNRKAKSNLTLFHKKPVAGQTVIQIFNRFQYVKPSSRNPEVMKKLFTTIKGGRLN  
NLGLTLNAKHASEINLYYQDEYLSTWDLNLSKIEKLVVFAETIGRANSPEEQHFHTKAYM  
LTEINDITSLINDGVLVMDLDCIDQDLSKSKGPHDRGPHLRIPISKLDKLYRNIERLL

>non-antioxidant\_992

GHHMVWPVQDAKARFSEFLDACITEGPQIVSRRGAEAEAVLVPIGEWRRLQAAARPSLKQL  
LLSDSARTEMLVPERGKARRRQVEPLRGS

>non-antioxidant\_993

MTYKITVRVYQTNPNAFFHPVEKTVWKYANGGTWTITDDQHVLTMGGSGTSGTLRFHA  
DNGESFTATFGVHNYKRWCDIVTNLAADETGMVINQQYYSQKNREEARERQLSNYEVKN  
AKGRNFEIVYTEAEGNDLHANLIIG

>non-antioxidant\_994

MQRCDWVSQDPLYIAYHDNEWGVPETDSRKLFEMLCQAGLSWITVLKKRENYRAC  
FHQFDPIRIAAMQEEDVERLLQNTGIIRHRGKIQAISNARAWLAMEQNGESFADFVWSFV  
DGQPQITQAASLDKIPTSTPASDALAKALKKRGFKFVGTTCYSFMQACGLVNDHITGCFC  
HP

>non-antioxidant\_995

MGSDKIHHTHHHTASWFTALTQHGKEELRFPRGQGVINTNSGPDDQIGYYRRATRVR  
GGDGKMKELSPRWYFYLLGTGPEASLPYGANKEGIVWVATEGALNTPKDHIGTRNPNNN  
AATVLQLPQGTTLPGFYA

>non-antioxidant\_996

SLSEDKMDLYLQQGMYGPLETKPDERHLFLGSLRERVVLALTKGQVLRSKPYKEAEHEL  
KNSHNVTLINGELQYQSYSSYIQMASRYGVPFKIVSDLQFHTPLGIVIAADIAVNRELIYIQ  
DDIYNRSVLKS

>non-antioxidant\_997

REVLTTGGHVSAPQENRIYVMDSVFMHLTESRVHVYDYTNGKFLGMVPTAFNGHVQVSN  
DGKKIYTMTTYHERITRGRSDVVEVWDADKLTFEKEISLPPKRVQGLNYDGLFRQTTDG  
KFIVLQNASPATSIGIVDVAKGDYVEDVTAAGCWSVIPQPNRPRSFMTICGDGGLLTINLG  
EDGKVASQSRSKQMFVSKDDPIFIAPALDKDKAHFVSYYGNVYSADFSGDEVKVDGPWS  
LLNDEDKAKNWVPGGYNLVGLHRASGRMYVFMHPDGKEGTHKFPAAEIWVMDTKTKQ  
RVARIPGRDALSMITDQQRNMLTLDDGGNVNVYDISQPEPKLLRTIEGAAEASLQVQFHPV  
GGT

>non-antioxidant\_998

GMSARDVFHEVVKTALKKDGWQITDDPLTISVGGVNLSIDLAAQKLIAAERQGQKIAVEV  
KSFLKQSSAISEFHTALGQFINYRGALRKVEPDRVLYLAVPLTTYKTFQDLDFPKEIINQV  
KMLVYDVEQEVIFQWIN

>non-antioxidant\_999

SLKLTALHFYKYSEPFKSQIVTPKVTLTHRDCLFIELIDDKGNAYFGECNAFQTDWYDHETI  
ASVKHVIEQWFEDNRNKSFETYEAALKLVDSLENTPAARATIVMALYQMFHVLPSFSVAY  
GATASGLSNKQLESKATKPTRIKLKWTPQIMHQIRVLRDLDFHFQLVIDANESLDRQDFT  
QLQLLAREQVLYIEEPFKDISMLDEVADGTIPPIALDEKATSLLDIINLIELYNVKKVVVLKPF  
RLGGIDKVQTAIDTLKSHGAKVVIGGMYEYGLSRYFTAMLARKGDYPGDVTAGYFFEQ  
DVVAHSGILKEGRLEFRPPLVDITQLQPYEGHHHHH

>non-antioxidant\_1000

GSSAKRKQEEKHLKMLRDMTGLPHNRKCFDCDQRGPTYVNMTVGSFVCTSCSGSLRGL  
NPPHRVKSISMTTFTQOEIEFLQKHGNEVCKQIWLGLFDDRSSAIPDFRDPQKVKEFLQEK  
YEKKRWYVPPEQAKVVASVHA

>non-antioxidant\_1001

MRVNNGLTPQELEAYGISDVHDIVYNPSYDLLEYEELDPSLTGYERGVLTNLGAVAVDTGI  
FTGRSPKDKYIVRDDTTRDTFWWADKGGKNDNKPLSPETWQHLKGLVTRQLSGKRLF  
VVDAFCGANPDTRLVRFITEVAWQAHFVKNMFIRPSDEELAGFKPDFIVMNGAKCTNPQ  
WKEQGLNSENFAFNLTERMQLIGGTWYGGEMKKGMFMMNYLLPLKGIASMHCSAN  
VGEKGDVAVFFGLSGTGKTTLSTDPKRRLIGDDEHGWDDDGVFNFEGGCYAKTIKLSKEA  
EPEIYNAIRRDALLENVTVREDGTIDFDDGSKTENTRVSYPIYHIDNIVKPVSKAGHATKVI  
FLTADAFGVLPVSRILTADQTQYHFLSGFTAKLAGTERGITEPTPTFSACFGAAFLSLHPTQ  
YAEVLVKRMQAAGAQAAYLVNTGWNGTGKRISIKDTRAIIDAILNGSLDNAETFTLPMFNL  
AIPTELPGVDTKILDPRNTYASPEQWQEKAETLAKLFIDNFDKYTDTPAGAALVAAGPKL

>non-antioxidant\_1002

STRKRPENQPTRVILFNKPYDVLPQFTDEAGRKTLKEFIPVQGVYAAGRLLDRDSEGLLVLT  
NNGALQARLTQPGKRTGKIYYVQVEGIPTQDALEALRNGVTLNDGPTLPAGAELVDEPAW  
LWPRNPIRERKSIPTSWLKITLYEGRNRQVRRMTAHVGFPTLRLIRYAMGDYSLDNLANG  
EWREVTD

>non-antioxidant\_1003

PLGSATITQDTPINQIFDTALAEKMKTVLGKTNVTDTVSQTDLQVTTLQADRLGIKSID  
GVEYLNLTQINFNNQLTDITPLKNLTKLVDILMNNNQIADITPLANLTLGLTLFNNQIT

DIDPLKNLTNLRLELSSNTISDISALSGLTSLQQLSFGNQVTDLKPLANLTTLERLDISSNK  
VSDISVLAKLTNLES LIATNNQISDITPLGILTNLDELSLNGNQLKDIGTLASLTNLTDLDA  
NNQISNLAPLSGLTKLTELKLGANQISNISPLAGLTALTNLELNENQLEDISPISNLKNLTYLT  
LYFNNISDISPVSSLTKLQRLFFANNKVS DVSSLANLTNINWLSAGHNQISDLTPLANLTRIT  
QLGLNDQAWTNAPVNYKANVSIPNTVKNVTGALIPATISDGGSYTEPDITWNLPSYTNE  
VSYTFSQPVTIGKGTTFSGTQPLKGG

>non-antioxidant\_1004

GS GP EAALENVDAKIAKLMGEGYAFEEVKRALEIAQNNVEVAR SILREFAFP

>non-antioxidant\_1005

MEHVPAELTRVSEGYTRFYRSPTASVILSGLVKVKWDNEQMTMPLFKWIGGEQAEELHFC  
VHIAHSSGPKLNRARSLGTVNSNM DQHWAAQRNSGATRRTIEGFHLFENDIPNFPDYIKI  
KLVPKT

>non-antioxidant\_1006

GMSQTTVVNGVNVDQLMATIEQIKAKPEIAQFKFRATNQWMGGTHNQATIKDFYGACAE  
DDTRKPMVFDLDEPPVLLGENRGANPVEYLLVALSGCLTTSLVAAHAAARGIALRGVKSRY  
EGDIDLRGFLGLSEEVPVGYREIRVFFSIDADLTGQKEELIRMAQKYS PVYNTVAKPVPVA  
VLLDRG

>non-antioxidant\_1007

AASAAPARPAHPLDPLSTAEIKAATNTVKS YFAGKKISFNTVTLREPARKAYIQWKEQGGP  
LPPRLAYYVILEAGKPGVKEGLVDLASLSVIETRALETVQPILTVEDLCSTEEVIRNDPAVIE  
QCVLSGIPANEMHKVYCDPWTIGYDERWGTGKRLQQALVYRSDEDDSQYSHPLDFCPI  
VDTEEKKVIFIDIPNRRRKVSKHKHANFY PKHMIEKVGAMRPEAPPINVTQPEGVSFKMT  
GNVMEWSNFKFHIGFNYREGIVLSDVSYNDHGNVRPIFHRISLSEMIVPYGSPEFPHQKX  
ALDIGEYGAGYMTNPLSLGCDCKGVIHYLDAHFSDRAGDPITVKNAVCIHEEDDGLLFKH  
SDFRDNFATSLVTRATKLVVSQIFTAANYEYCLYWVFMQDGAIRLDIRLTGILNTYILGDDE  
EAGPWGTRVYPNVNAHNHQHLFSLRIDPRIDGDGNSAAACDAKSSPYPLGSPENMYGNA  
FYSEKTTFKTVKDSLTYNESATGRSWDIFNPNKVN PYSGKPPSYKLVSTQCPPLLAKEGSL  
VAKRAPWASHSVNVVPYKDNRLYPSGDHVPQWSGDGV RGMREWIGDGS ENIDNTDILFF  
HTFGITHFPAPEDFPLMPAEPITLMLRPRHFFTENPGLDIQPSYAMTTSEAKRAV

>non-antioxidant\_1008

SNAIFMDYYENRKVMAEAQNIYEKSPMEEQS QDGEVRKQFKALQQINQEIVGWITMDDT  
QINYPIVQAKDNDYYLFRNYKGEDMRAGSIFMDYRNDVKSQNRNTILYGHMRKDGSMF  
GSLKMLDEEFFMSHRKLYDITLFEGYDLEVF SVYTTTTDFYIETDFSSDTEYTSFLEKI  
QEKSLYKTDTTVTAGDQIVTLSTCDYALDPEAGRLVVHAKLVKRQ

>non-antioxidant\_1009

MSGKLTVITGPMYSGKTTELLSFVEIYKLGKKK VAVFKPKIDSRYHSTMIVSHSGNGVEAH  
VIERPEEMRKYIEEDTRGVFIDEVQFFNPSLFEVVKDLLDRGIDVFCAGLDLTHKQNP FETT  
ALLLSLADTVIKKAVCHRCGEYNATLTLK VAGGEEEEIDVGGQEKYIAVCRDCYNTLKKR  
V

>non-antioxidant\_1010

MITMKDIIREGNPTLRVAEEVPVPI TEEDRQLGEDMLTFLKNSQDPVKA EELQLRGDVGL  
AAPQLDISKR IIAVHVPSNDPENETPSLSTVMY NPKILSHSVQDVCLGEGEGCLSVD RDVP  
GYVVRHNKITVSYFDMAGEKHKVRLKNYE AIVVQHEIDHINGIMFYDHINKENPFALKEG  
VLVIEL

>non-antioxidant\_1011

MGSSHHHHHSSGLVPRGSHMSGSGSGSGTALTPSYLKDDDGRSLILRGFNTASSAKSAP  
DGMPQFTEADLAREYADMGTNFRFLISWRSVEPAPGVYDQQYLDRVEDRVGWYAERG  
YKVMLDMHQDVYSGAITPEGNSGNGAGAIGNGAPAWATYMDGLPVEPQPRWELYIYQP  
GVMRAFDNFWNTTGKHPELVEHYAKAWRAVADRFDNDAVVAYDLMNEPFGGSLQGPA  
FEAGPLAAMYQRTTDAIRQVDQDTWVCVAPQAIGVNVQGLPSGLTKIDDPRAGQQRIAYCP  
HLYPLPLDIGDGHEGLARTLTDVTIDAWRANTAHTARVLGDVPHILGSFGLDTTLPGARDYI  
ERVYGTAREMGAGVSYWSSDPGPWGPYLPDGTQTLLVDTLNKPYPRAVAGTPTEWSSTS  
DRLQLTIEPDAAITAPTEIYLPEAGFPGDVHVEGADVVGWDRQSRLLTVRTPADSGNVTVT  
VTPAA

>non-antioxidant\_1012

DKATIPSESPFAAAEVADGAIVVDIKMKYETPELHVKVGDTVTWINREAMPNHFVAG  
VLGEAALKGPMKKEQAYSILTFTEAGTYDYHCTPHPFMRGKVVVE

>non-antioxidant\_1013

MEQRITLKDYAMRFGQTKTAKDLGVYPSSINQAIHAGRKIFLTINADGSVYAEVVKPFPSN  
KKTTA

>non-antioxidant\_1014

SMEGMLADFVSQTSMPISIVVHCVNEIEQRGLTETGLYRISGCDRTVKELKEKFLRVKTV  
PLLSKVDDIHAICSLKDFLRNLKEPLLTFRNLRAFMEAAEITDEDNSIAAMYQAVGELPQ  
ANRDTLAFMLIHLQRVAQSPHTKMDVANLAKVFGPTIVAHAVPNPDPVTMLQDIKRQPKV  
VERLLSLPLEYWSQFMMVE

>non-antioxidant\_1015

ADDAKPRVKVPSSAKAGETVTVKALISHKMESGQRKDADGKLIPRSIINRFTCELNGVNV  
VDVAIDPAVSTNPFYEFDAKVDAAGEFKFTWYDDDGSVYEDVKPIAVA

>non-antioxidant\_1016

MSLKTTLPISLDWSTEEVIDVVHFFQAIEQAYDQGIAREDLLGKYRRFKEIVPSKSEEKQLF  
RAYEQENDVSCYQTIKKAREEMEEHIQMEGHHHHHH

>non-antioxidant\_1017

GMTTTQPEAKDRISLVPDPATQVPEGVRKLWAKAEANIGFVNPVFRAQAVNGEQFLAW  
WNYFNLLNKEGYLTNAERELVAVVSGVNRCLYCAVSHGAALREFLGDQPQKADAVAVN  
WRHADLTEREQALAAAYAEKLTRHPAEVTAADLEPLRAVGLDDHQIMELVQVIGMFNLNTR  
VSSALGFVPNPEYYRQAR

>non-antioxidant\_1018

GMPHVHVSTDNSLLDIGLIHRTLSQDWDWAKDIPLALVQRAIDHSLCFGGFVDGRQVAFAR  
VISDYATFAYLGDVFLPEHRGRGYSKALMDAVMAHPDLQGLRRFSLATSDAHGLYARYG  
FTPPLFPQSLMERYVPGLYST

>non-antioxidant\_1019

GMTVAAKSEIQIDNDEVVTEWRLPPGSATGHHTHGMDYVVVPMADGEMTIVAPDGTRS  
LAQLKTGRS YARKAGVQHDVRNESTAEIVFLEIELKAGS

>non-antioxidant\_1020

MGSSHHHHHSSGLVPRGSHMASKLKENAEVTGSVSLEALEEVQVGENLEVGVGIDELV  
NAEAFAYDFTLNYDENAFEYVEAISDDGVFVNAKKIEDGKVRVLVSSLTGEPLPAKEVLA  
KVVLRAEAKAEGSNLSVTNSSVGDGEGLVHEIAGTEKTVNIIEGTS

>non-antioxidant\_1021



SMNGQLNGFHEAFIEEGTFLFTSESVGEGHPDKICDQISDAVLDAHLQQDPDAKVACETVA  
KTGMILLAGEITSRAAVDYQKVVREAVKHIGYDDSSKGFYKTCNVLVALEQQSPDIAQG  
VHLDRNEEDIGAGDQGLMFGYATDETEECMPLTIVLAHKLNAKLAELRRNGTLPWLRPD  
SKTQVTVQYMQDRGAVLPIRVHTIVISVQHDEEVCLDEMARDALKEKVIKAVVPAKYLDED  
TIYHLQPSGRFVIGGPQGDAGLTGRKIIVDTYGGWGAHGGGAFSGKDYTKVDRSAAYAA  
RWVAKSLVKGGLCRRVLVQVSYAIGVSHPLSISIFHYGTSQKSERELLEIVKKNFDLRPGVI  
VRDLDLKKPIYQRTAAYGHFGRDSFPWEVPPKLLKY

>non-antioxidant\_1022

SNAMNPFETKSVTFAEPIEMLYACHGKVRRFCGQVAMLSDYAENGCNQIVLQTIHQIAQY  
FNVAAPLHHEDEEENFFPLLLQYAPQAQESVDELLRQHIGLHDNWAASAEFAKLEADNA  
YVPDEEAFKRFVAGYDVHLAIEEPLFDMGNTFIPKEKLTEIGEIMAARRK

>non-antioxidant\_1023

SNAQLGGDMKTIAIADRTGEYEQLFKENDEFRFVHAEKTAEEYRKMADKSGIDAVLEIR  
QDLEDPNVAIYGYKQLPASVSNHISRILSDYLSDKKIASYNIPDIKQILADSKIELSVHTY  
KWSEDTNERTSGELASGIS

>non-antioxidant\_1024

MQDILDYEEVEKTINPPNYFEWNTYRVFKKLSYKNLVPNFKLDDSGHPIGNAIPGVEDI  
LVEYEHFSILIECSLTIGEKQLDYEGDSVVRHLQEYKKKGIEAYTLFLGKSIDLSFARHIGFN  
KESEPIPLTVDQFKKLVTKLKGDEHFNPKNLKEILIKLLRSDLGYDQAEEWLTFIEYNL  
KHHHHHH

>non-antioxidant\_1025

MAIQRRIRRVKTVQMTTNSPIHRSGSVLEPGNWQEYDPFLLLMEDIFERGTDFVHPHARGIE  
TVTYVISGELEHFDKAGHSTLGPQDVQWMTAGRGVVHKEDPASGSTVHSLQLWVNLPS  
AYKMTEPRYQNLRSKDMPVRKEEGATIRVFSGSSKGVKAPTKNIVPVTMVEMIVEPGTTV  
VQDLPGHYNGFLYILEGSGVFGADNIEGKAGQALFFSRHNRGEETELNVTAREKLRLLLY  
AGEPVNEPVVAYGPFVMNTPEQIREAIRDYQEGFRGR

>non-antioxidant\_1026

GMKKIRFAAIGLAHNHIYDMCQQLIDAGAELAGVFESDSNRAKFTSLFSPVFAASAEQL  
ITDASIDLIACAVIPCRAELALRTLDAKDFFTAKPPLTTLEQLDAVQRRVAETGRKFAVYF  
NERINVDSALFAGELVQRGEIGRVIQTMGVGPHRERGARPDWYQKRQYGGILCDIGIHQI  
EQFLYFTGNTNARVVTSQTANYHHPHPEFEDFGDAMLLGDNGATGYFRCDWFTPDGLS  
VWGDGRLTILGTEGYIEIRKYVDLTRGESNVVYLVNGKGEQRFTPAGSVERAFFPDFLRDC  
RERTENAMSQSHIFKATELSILAQAANKIA

>non-antioxidant\_1027

MGSSHHHHHHSSGEDRYKEKLLQKAKAEGVESIEELKKRLADQIEKKKELNKIDPLREL  
EQHLNAGSRIHTNKEHKTTKMSNKSNEKSGNVLPKDKPYKTLDDYLKLDKIKDLSKQEV  
EFLWRKWSNRDDSLVAVVPYVKTFQGMKYAVKNPLFVLPRENAADGNKADKDSV  
PVELQYVQWQFAGPNTVHCLITSLAEYKLHQDFAKPHTTIQFHLDLANDKDMVLMNGQ  
VESDSNVSLQDAQLLLLNVQRFYGAMGSETSIAKERIQLEDFNKGSQNFINKLIQLAQS  
MEN

>non-antioxidant\_1028

KGRVCVTGGTGFLGSWIIKSLENGYSVNTTIRADPERKRDVSFLTNLPGASEKLHFFNAD  
LSNPDSFAAAIEGCVGIFHTASPIDFAVSEPEEIVTKRTVDGALGILKACVNSKTVKRFIYTS  
SGSAVSFNGKDKDVLDES DWSVDLLRSVKPFGWNYAVSKTLAEKAVLEFGEQNGIDVV

TLILPFIVGRFVCPKLPDSIEKALVVLGKKEQIGVTRFHMVHVDDVARAHYLLENSVPGG  
RYNCSPFIVPIEEMSQLLSAKYPEYQILTVDELKEIKGARLPDLNKKLVDAGDFDKYTIED  
MFDDAIQCCKEKGYL

>non-antioxidant\_1029

GMNSNFSYPALGVGDISSQISPIRDVWSTNLQEMNLIMSLIERYPVVSMDFEFGVVARP  
LGVFKSSDDYHYQTLRANVDSLKIIQIGLALSDEEGNAPVEACTWQFNFTFNLQDDMYAP  
ESIELLTKSGIDFKKHQEVGIEPADFAELLIGSGLVLQEEVTWITFHSGYDFAYLLKAMTQIP  
LPAEYEEFYKILCIYFPKNYDIKYIMKSVLNNKGLQDIADDLQIHRIGPQHQAQSDALLTA  
RIFFEIRSRYFDGSIDSRMLNQLYGLGSTGSLVWHNNSSTPQIQFRDLPGAHPSPTPSNAGIP  
TTLTNTSSAPNFANSTFRFPPRVV

>non-antioxidant\_1030

MNKGQRHIKIREIITSNEIETQDELVDMLKQDGYKVTQATVSRDIKELHLVKVPTNNGSYK  
YSL

>non-antioxidant\_1031

ASMTTPCITILSGHFPKETIYARKTKELVEEYCSIHGYNFYEESEPLETEEHALHFRRSWII  
QQAEEKFPSTEWFLWLDSDVYVNPKNKNKPKITSFIDLSDPNILYHTFHEAPWGSYPINTGV  
KFVHKDALEIEKIVWSLRNEAPWNTFPYEQKTVYEYVFPRIPGRYIVHDPYTLNCIVKAYP  
EHVKDALFVHMCGETSRAERDEHMEMVAT

>non-antioxidant\_1032

GMENFIGSHMIYTYENGWEYEIYIKNDHTIDYRIHSGMVAGRWVRDQEVNIVKLTEGVYK  
VSWTEPTGTDVSLNFMNEKRMHGIIFFPKWVHEHPEITVCYQNDHIDLMKESREKYETY  
PKYVVPFAEITFLKNEGVDNEEVISYAPYEGMTDDIRAGRL

>non-antioxidant\_1033

GMTFRDTSIAISWHAHVYFDASSRDAAWTLREQIEAHWSGKLQLGRFHERPVGPHPMW  
SYQLAFTQEQFADLVGWLTLNHGALDIFLHPNTGDALRDHRDAAVWIGHSHLVLSALN

>non-antioxidant\_1034

ALPDQIDVKVKNLTPEDTIYDRTRQVFYQSNLYKGRIEVYNPKTQSHFNVVIDGASSNGD  
GEQQMSGLSLLTHDNSKRLFAVMKNAKSFNFADQSSHGASSFHSFNLPLSENSKPVWSVN  
FEKVQDEFEKKAGKRPFVQSAQDRDGNSYVAFALGMPAIARVSADGKTVSTFAWESG  
NGGQRPGYSGITFDPHSNKLIAFGGPRALTAFDVSKPYAWPEPVKINGDFGTLTGTEKIVTV  
PVGNESVLVGARAPYAISFRSWDNWKSANIKKTKRSELQNSGFTAVADYYQGSEQGLYAV  
SAFFDNGAHGGRSDYPLYKLDNSIQNFHHHHH

>non-antioxidant\_1035

GHMENKVINFKKIIDSRGSLVAIEENKNIPFSIKRVYYIFDTKGEEPRGFHAHKKLEQVLVC  
LNGSCRVLDDGNIIQEITLDSPAVGLYVGPVWHEMHDFSSDCVMMVLASDYYDETDIR  
QYDNFKKYIAKINLEKEG

>non-antioxidant\_1036

LEEVIQLREANEPVPVPLELPDEDQLVEIEEQLFINIPFVFKEFLLTVSDVVYGSLEPVTVT  
DPQSHTYLPEVCATAWDLGVPRELIPICQDGEDYYCVEEDGTVLLWSAEEELVTEESWES  
VWHWARDVWLES

>non-antioxidant\_1037

MCDEDETTALVCDNGSGLVKAGFAGDDAPRAVFPISVGRPRHQGVMVGMGQKDSYVGD  
EAQSKRGILTLYPIEHGIITNWDDMEKIWHHTFYNELRVAPEEHPTLLTEAPLNPKANRE  
KMTQIMFETFNVPAMYVAIQAVLSLYASGRTTGIVLDSGDGVTHNVPIYEGYALPHAIMRL

DLAGRDLTDYLMKILTERGYSFVTTAEREIVRDIKEKLCYVALDFENEMATAASSSSLEKS  
YELPDGQVITIGNERFRCPETLFQPSFIGMESAGIHETTYNSIMKCDIDIRKDLYANNVMSG  
GTTMYPGIADRMQKEITALAPSTMKIKIIPPERKYSVWIGGSILASLSTFQQMWITKQEY  
DEAGPSIVHRKCF

>non-antioxidant\_1038

AGWNAYIDNLMADGTCQDAAIVGYKDSPSVWAAVPGKTFVNITPAEVGVLVGKDRSSFY  
VNGLTLGGQKCSVIRDSLLQDGEFSMDLRTKSTGGAPTFNVTVTKTDKTLVLLMGKEGV  
HGGLINKKCYEMASHLRRSQY

>non-antioxidant\_1039

GPPPAPPLPAAQGGGGAGAPGLAAAIAAGAKLRKVKSQEEAS

>non-antioxidant\_1040

MGSDKIHSHHHHENLYFQGMQIRLAFPNEIDQIMLLIEEARAEIAKTGSDQWQKEDGYPN  
RNDIIDDILNGYAWVGIEDGMLATYAAVIDGHEEVYDAIYEGKWLHDNHRYLTFHRIAISN  
QFRGRGLAQTFLQGLIEGHKGPDFRCDTHEKNVTMQHILNKLGYQYCGKVPLDGVRLAY  
QKIKEKGETSIYREIDERNPM

>non-antioxidant\_1041

PRILGRNIGSHHVRVEHFMNHSITTLAKDTPLEEVVKKVVTSTDVTEYPLVESTESQILVGIV  
QRAQLVQALQAEPSPRAPGHQQCLQDILARGCPTEPVTTLTFSETTLHQAQNLFKLLNLQS  
LFVTSRGRAVGCVSWVEMKKAISNLNPPAPKEFLEVLVFG

>non-antioxidant\_1042

QGHMRVEVFPVEGLPLIKEGDDLAEISSRVRFEDGDVLVVCSTVISKAEGRIRRLLEEFNPS  
ERAKEIAARIGKPAEFVQAVLEESEEVLDFPFLVKAKFGNVCVNAGIDASNVEEGSLLL  
PPLDPDGSAAKLRRLRILELTGKRVGVIITDTNGRCFRRGVVGFAIGISGVKAMKDWIGRKD  
LYGRELEVTVECVADEIAAFANLLMGEAGDGPVAVVRGLNVAGEGSMEEIYRSEEDVIR  
RCLKRCLGS

>non-antioxidant\_1043

GAHMAGGRSWCLRRVGMASAGWLLLEDGCEVTVGRGFGVTYQLVSKICPLMISRNHCVL  
KQNPEGQWTIMDNKSLNGVWLNRRARLEPLRVYSIHQGDYIQLGVPLENKENAEYEYEV  
EEDWETIYPCLSPKNDQMIEK

>non-antioxidant\_1044

GTEDLYFQSHMTIAVTGSIATDHLMRFPGRFSEQLLPEHLHKVSLVFLVDDLVMRGGVAG  
NMAFAIGVLGGEVALVGAAGADFADYRDWLKARGVNCDHVLISETAHTARFTCTTDVD  
MAQIASFYPGAMSEARNIKLADVSAIGKPELVIIGANDPEAMFLHTEECRKLGLAFAADP  
SQQLARLSGEEIRRLVNGAAYLFTNDYEWDLSSKTGWSEADVMAQIDLRVTTLGPKGV  
DLVEPDGTTIHVGVVPETSQTDPTGVGDAFRAGFLTGRSAGLGLERSAQLGSLVAVLVLES  
TGTQEWQWDYEAASRLAGAYGEHAAAEIVAVLA

>non-antioxidant\_1045

MSLDCRERIEKDLELLEKNLMMKSIKLSDDEEAVVERALNYRDDSYYLEKGDHITSFG  
CITYAHGLLDSLRLHRIIEGHHHHHH

>non-antioxidant\_1046

MDEIDLRLKILQYNAKYSLEIAREIRIPKATLSYRIKLEKDGVIKGYAYINPASLNDY  
IVITSVKAKYGKNYHVELGNKLAQIPGVWGVYFVLGDNDFIVMARYKTREEFMEKFLER  
VMSIPEVERTSTQVVVKIKESPNIIVIF

>non-antioxidant\_1047

GHPTLKTPEsvTGTWKGdVkiQciYdPlRGYRQVLVkwLVRHGSDsvTIFLRDSTGDHIQ  
QAKYRGRLKvSHKvPGDvSLQINTLQMDDRNHYTCEVTWQTPDGNQVIRDKIIElRVRK

>non-antioxidant\_1048

CKGADGAHGvNGCPGTAGAAGsvGGPGCDGGHGGNGGNPGCAGGVGGAGGASGG  
TGVGGRGGKGGSGTPKGADGAPGAP

>non-antioxidant\_1049

SLTGEESDtlRkivLEeclPNQQNQNpSPCAEVkPNAGYvVLKDLNGPLQYLLMPTYRI  
NGTESPLLTDPSTPNFFWLAWQARDFMSKkYgQVPDRAVSLAINsRTGRTQNHfFHIHISCI  
RPDVREQLDNNLANISSRWLPLPGGLRGHEYLARRVTESELVQRSPFMMLAEEVPEAREH  
MGSYGLAMVRQSDNSFVLLATQRNLLTLNRASAEeIQDHQCEILR

>non-antioxidant\_1050

GVQVETISPGDGRtFPKRGQTCVVHYTGmLEDGKKFDSSRDRNKPFkFMLGKQEVIRGW  
EEGVAQMSVgQRAKLTISPDYAYGATGHpGIIPPHATLVFDVELLKLE

>non-antioxidant\_1051

GMNLTElMERiPhlREILNivREAFkDYDDPAHDISHtFRvMENASEIASREKCDLQKAIIA  
ALLHDIKRPHEALtGVdHAESGAeYASGLLPTMGFDISFVAEVSkAIRSHRYSGGLTPTSlt  
GKILQDADRLDAIGAVAIARVFSYSGKTGTPLHSLQFSPRSSYSGNSRSSINHFHEKILKIRP  
ETFWTETARKMAEDRYSFVVEFVQRFLAEWGQI

>non-antioxidant\_1052

GSTKVkYVDKIHiGNYEIDAWYfSPfPEDYgKQPKLWLCEYCLkYMKYEkSYRFHLGQC  
QWRQPPGKEiYRKSNIsvHEVDGKDHIYcQNLCLLAKLFLDHRTLYFDVepFVFYILTEV  
DRQGAHIVGYfSKEKESPDGNNVACILTLPPYQRRGYGkFLIAFSYELSKLESTVGSPEKPL  
SDLGKLSYRSYWSvLLENLRDFRGTLSIKDLSQMTSITQNDIISTLQSLNMVKYWKgQH  
VICVTPKLVEEHLKSAQYKkPPITVDSVCLKWAPPK

>non-antioxidant\_1053

GMRGLIVDYAGvLDGTDEDQRRWRNLLAAAKNGVGTvILSNDPGGLGAAPiRELETNG  
VVDKvLLSGELGVEKPEEAfQAAADAIDLPMRDCVLVDDSilNVRGAVEAGLVGVYYQ  
QFDRAVVEIVGLFGLEGEF

>non-antioxidant\_1054

GMIYskVENFINENKQNAIFTEGASHENIGRIEENLQCDLPNSYkWFLEKYGAGGLFGVLV  
LGYNFdHASvVNRTNEYKEHYGLTDGLVvIEDVDYfAYCLDTNKMKGdECPVVEWDRVI  
GYQDTVADSFIEFFYNKIQEAKDDWDEDWDD

>non-antioxidant\_1055

GMQGIAFQDAYPDDLShCYGCGRNNEQGHQLkSYWRGEQTIAHFMPKPFHTAIPGFVYG  
GLIASLIDCHGTGSASAAAQRALeQAGEQLDEPPRFVTAALNIDYLAPTPMGVELELVGEI  
KEVKPRKVVVEIALSADGKLCARGHMVAVKMPETMAATSA

>non-antioxidant\_1056

TIKLIVGLANPGAeYAATRHNAGAWFVDLLAERLRAPLREEAKFFGYTSRvTLGGEDVRL  
LVPTTFMNLsgKAVAAMASFFRINPDEILVAHDELdLPPGVAKFKLGGGHGGHNGLKDIIS  
KLGNNPNFHRLRIGIGHPGDKNKVVGFVLGKPPVSEQKLIDEAIDEAARCTEMWFTDGLT  
KATNRLHAFKAQ

>non-antioxidant\_1057

APPSSFSKAKKEAVKIYLDYPTSFYCGCDITWKNKKKGiPELESCGYQVRKQEKRASRIEW  
EHVVPawQFGHQRCWQKGGRKNCTRNDKQFKSMeadLHNLVPAIGEvnGDRSNFRFS

QWNGSKGAFYQCAFKVDFKGRVAEPPAQSRGAIARTYLYMNNEYKFNL SKAQRQLME  
AWNKQYPVSTWECTRDERIAKIQGNHNQFVYKAC

>non-antioxidant\_1058

HMIHEDFCSVCRKSGQLLMCDTCSR VYHLDCLDPLKTI PKGMWICPRCQDQMLKKEEAI

>non-antioxidant\_1059

TELNL SHILIPENPTSDQVNEAESQARAIVDQARNGADFGKLAIAHSADQQALNGGQM  
GWGRIQELPGIFAQALSTAKKGDIVGPIRSGVGFHILKVNDLR

>non-antioxidant\_1060

MSFAGLKDADVAAALAACSAADSFKHKEFFAKVGLASKSLDDVKKAFYVIDQDKSGFIE  
EDELKLFQNFSPSARALDAETKAFLADGDKDGMIGVDEFAAMIKA

>non-antioxidant\_1061

MSNKLFPPOQIKVAATYMRGGTSKGVFFRLQDLPEAAQVPGPARDALLLRVIGSPDPYAKQI  
DGMGGATSSTSKTVILSHSSKANHDVDYLFQV SIDKPFVDWSGNCGNLTA AVGAF AISN  
GLIDAARIPRNGVCTVRIWQANIGKTIIAHVPITDGAVQETGDFELDGVTFPAAEVQIEFMN  
PAADDGEGGCMFPTGNLVDVLEVPGIGRFNATMINAGIPTIFINAEDLGYTGTELQDDIN  
SDNAALAKFETIRAHGALRMGLIKHIDEAASRQHTPKIAFVAPPKSYASSSGKTVAEDVD  
LLVRALSMGKLHAMMGTA AVAIGTAAAIPGTLVNLAAGGGEKEAVRFGHPSGTLRVGA  
QAVQENGEWTVIKAIMSR SARVLMEGFVRV PKP

>non-antioxidant\_1062

GSYREVEYWDQRYQGAADSAPYDWF GDFSSFRALLEPEL RPEDRILVLGCGNSALS YEL  
FLGGFPNVTSVDYSSVVAAMQAC YAHVPQLRWETMDVRKLD FPSASFV VLEKGTLD  
ALLAGERDPWTVSSEG VHTVDQV LSEVSRVLP GGRFISMTSAAPHFRTRHYA QAYYGW  
SLRHATYGS GFHFLYLMHKGGKLSVAQLALGAQILSP

>non-antioxidant\_1063

MKHMPRKMYS CAFETTTKVEDCRVWAYGYMNIEDHSEYKIGNSLDEFMAWVLKVQADL  
YFHNLKFAGAFIINWLERNGFKWSADGLPNTYNTIISRMGQWY MIDICLG YKGRKIHTV  
IYDSLK KLPFPVKKIAKDFKLTVLKGDIDYHKERPVG YKITPEEYAYIKNDIQIIAEALLIQF  
KQGLDRMTAGSDSLKGF KDIIITTKFKKVFPTLSLGLDKEVRYAYRGGFTWL NDRFKEKE  
IGEGMVFDVNSLYPAQMYSRLLPYGEP IVFEGKYVWDEDYPLHIQHIRCE FELKEGYIPTIQ  
IKRSRFYKGN EYLKSSGGEIADLWLSNV DLELMKEHYDLYNVEYISGLKFKATTGLFKDFI  
DKWTYIKTTSEGAIKQLAKLMLNSLYGKFASNP DVTGKVPYLKENGALGFRLGEEETKDP  
VYTPMGV FITAWARYTTITAAQAC YDRIIYCDTDSIHLTGTEIPDVIKDIVDPK KLYWAHE  
STFKRAKYLRQKTYIQDIYMKEVDGKLVEGSPDDYTDIKFSVKCAGMTDKIKKEVTFENF  
KVGFSRKM KPKPVQVPGGVVLVDDTFTIK

>non-antioxidant\_1064

GMGKRDDLIAQYADDLRNKCGMEPDMALLEKVTKGCGPAIYNRDASTVAGSDTAELETI  
KKNFLMKKLG LADSESLMGGIQSVIETYGRSERNKYRAVVYYMLTKHFGKESVYG

>non-antioxidant\_1065

GMMQKPITEIII VGGGTAGWITAGLLAAEHNVDKGVLAHSPKLNITLIESPDVATIGV GEGT  
WPSMRSTLSKIGIDENDFIRQCDASFKQGSRFINWCKDPQSNVADSYLHPFSLPHGHQELD  
LCPYWLPHAEQVSFAEAVCSQQVLTQLGLAPKSIVTAQYHFQNNYGYHLNAAKFSQLLTE  
HCTQKLG VTHIRDHVSQIINNQHGDIEKLITKQNGEISGQLFIDCTGAKSLLLGEHLQVPFL  
SQKS VLFNDRALAIQVPYSDANSPIASCTHSTAQPNGWIWDIGLPTRKGVGYVYSSSHTN  
DIDAQKTLFN YLGVDGAAADKLEPRQLAINPGYRAKCWQNNCIAIGMAAGFIEPLEASAL

ALIEWTASTLAQQLPPNRMVMDTISARVNERYQQHWQQIIDFLKLHYVISQRQEDRYWR  
DHRESNSIPDSLQAMLELWRYQTPSQQDISYKEALFPAASFQYVLYGMSFNTQLPTHVKPS  
MQQLAQLRFNDNQRTQALSKNLPTNRELLDKVAQYGFPKL

>non-antioxidant\_1066

SELRPSGDSGSSDVDAEISDGFSPLDTSHRDVADEGSLLRRAEMYQDYMKQVPIPTNRGSL  
IPFTSWVGLSISMKQLYGQPLHYLTNVLQRWDQSRFGTDSEEQRLLDSIIHPTKAEATIWL  
EEIHRLTPSHLMALLWRSDPMYHSFIDPIFPEK

>non-antioxidant\_1067

SNQLQQLQNPGESPPVHPFVAPLSYLLGTWRGQGEYPTIPSFYRGGEEIRFSHSGKPVIA  
Y TQKTWKLESGAPMHAESGYFRPRPDGSIEVVIAQSTGLVEVQKGTYNVDEQSIKLS  
DLV GNASKVKEISREFELVDGKLSYVVRMSTTTNPLQPHLKAILDKL

>non-antioxidant\_1068

MSLSLKIALISQENLLNLFPKLALAKNFIPITKTASLTRASKIAFGLQDEVDAAISRGATSDY  
IKKSVSIPSISIKVTRFDTMRAVYNAKRFGNELALAIYKHSIVDKHEIEAMLGVKIKEFLFSS  
EDEITTLISKVKTENIKIVVSGKTVTDEAIKQGLYGETINSGEESLRAIEEALNLIEVRNEG  
HHHHHH

>non-antioxidant\_1069

MQHNLIAFLSDVGSADAEHALCKGVMYGVAPAATIVDITHDVAPFDVREGALFLADVPHS  
FPAHTVICAYVYPETGTATHIAVRNEKGQLLVGPNNGLLSFALDASPAVECHEVLSPDVM  
NQPVTPWYGKDIVAACAHLAAGTDLAAGVPRIDPKQIVRLPYASASEVEGGIRGEVVRI  
DRAFGNVWNTNIPHTLIGSMLQDGERLEVKIEALSDTVLELFPCKTFGEVDEGQPLLYLSR  
GRLALGLNQSNFIEKWPVVPGDSITVSPRVPDSNLGPVLG

>non-antioxidant\_1070

MFENITAAPADPILGLADLFRADERPGKINLIGVYKDETGKTPVLTSVKKAEQYLLENET  
TKNYLIGIDGPIEFGRCTQELLFGKGSALINDKRARTAQTPGGTGALRVAADFLAKNTSVKR  
VWVSNPSWPNHKS VFNSAGLEVREYAYYDAENHTLDFDALINSLNEAQAGDVVLFHGCC  
HNPTGIDPTLEQWQTLAQLSVEKGWLP LDFAYQGFARGLEEDAEG LRAFAAMHKELIVA  
SSYSKNFGLYNERVGACTLVAADSETVDRAFSQMKA AIRANYSNPPAHGASVVATILSND  
ALRAIWEQELTDMRQRIQRM RQLFVNTLQEKGANRDFSFIKQNGMFSFSGLTKEQVLR  
L REEFGVYAVASGRVNVAGMTPDNMAPLCEAIVAVL

>non-antioxidant\_1071

GMANKVEHRLSEQQMKALTDLPLVFLITHDQSKSWPITHAISWVYAKDETTIRFAIEADSL  
LVKTLADHPVFTLIFFADQSTYSLTCTDVAAWETTARLPLKVALYEGQIKEVRDILFYGAAV  
SDRPRVYKTYDEAAAMQLDQQIQDILKG

>non-antioxidant\_1072

EPTCNTPSNRACWSDGFDINTDYEVSTPDTGVTQSYVFNLTVDNWMGPDGVVKEKVM  
LINGNIMGPNIVANWGD TVEVTVINNLVTNGTSIHWGHIHQKDTNLHDGANGVTECPIPP  
KGGQRTYRWRARQYGT SWYHSHFSAQYGNVVG TIQINGPASLPYDIDLGVFPITDY  
Y RAADDLVHFTQNNAPPFS DNVLINGTAVNPNTGEGQYANVT LTPGKRHRLRILNTSTENHF  
QVSLVNHTMTVIAADMVPV NAMTVDSLFLAVGQRYDVVIDASRAPDNYWFNVTFGGQA  
ACGGSLNPHPA AIFHYAGAPGGLPTDEGTPPV DHQCLD TLVVRPVVPRSPVNSFVKRPD  
NTPVALDLTGTPLFVWKVNGSDINVDWGKPIIDYILTGNTSYPVSDNIVQVDAVDQW  
TY WLIENDPEGPFSLPHMHLHG HDFLVLGRSPDVPAASQQR FVFDPAVDLARLNGDNPPRR  
DTTMLPAGGWLLLAFRTDNPGAWLFHCHIAWHVSGGLSVDFLERPADLRQRISQEDED  
DF

NRVCDEWRAYWPTNPYPKIDSGL

>non-antioxidant\_1073

MEAQPPVISATGVVKGIDLESKKITIHHDPIAAVNWPPEMTMRFTITPQTKMSEIKTGDKVA  
FNFVQQGNLSLLQDIKVSQ

>non-antioxidant\_1074

GMENLGDRLEVVAELSLAPGNITLTPDGRLFLSLHQFYQPEMQVAELTQDGLIPFPQSGN  
AHTFDTVLGIKSDGNGIVWMLDNGNQSKSVPKLVAWDTLNNQLSRVIYLPPTLSNSFVN  
DLAVDLIHNFBVYISDPAPDDKAALIRVDLQTGLAARVLQGYPGIAPEDIDLVIDGVPVQIGQ  
PDGTVIRPHLGVNGIVLDAENEWLYLSPMHSTSMYRIKSADLSNLQLTDAELGSKIERYSE  
KPICDGISIDKDHNIVGDLAHSAGVITSADRAYKLLVTDEKLSWTDSENFNGSDGYLYFDC  
NQLHHSAPLNAGENISAPPYYIFRLKPLAAGIVGR

>non-antioxidant\_1075

SKLQATKTLAADVIMRSPVSWKQELTLDAGRSKGASENMLAIANGGLIGSVSKVEENSTI  
VNLLTNTENADKISVKIQHGSTTIYGIHGYDKENDVLKISQLNSNSDISAGDKVTTGGLGN  
FNVADIPVGEVVATTHSTDYLTREVTVKLSADTHNVDVIELVGNSKLVPR

>non-antioxidant\_1076

MGAPTLPPAWQPFLKDHRIKSTFKNWPFLGCACTPERMAEAGFIHCPTENEPDLAQCF  
KELEGWEPDDDDPIEHHKHSAGCAFLSVKKQFEELTLGEFLKDRERAKNKIAKETNNKK  
KEFEETAKKVRRAIEQLAAMD

>non-antioxidant\_1077

SLRRRKLASFLKDFDREVEIRIKQIESDRQNLLKEVDNLYNIEILRLPKALREMNWLDYFAL

>non-antioxidant\_1078

MGTAPGPIHLELQKLMFLCNMDNKDLVWLEEIQEEAERMFTR

>non-antioxidant\_1079

MGSSHHHHHSSGLVPRGSPYTLKSRINGKWSGQSAGGCGNFQETHKNNPIYQFHIEKTG  
PLLIELRGRQYSVGFVVTVSTLGDGPHGFLRKSSGDYRCGFCYLELENIPSGIFNIIPST  
FLPKQEGPFFLDFNSIPIKITQLQ

>non-antioxidant\_1080

MFKLLHSLVAGLTFVAAVAAPAHAEADAQATVKTAVDDVLATIKGDPDLRGGNLQKV  
FQLVDQKIVPRADFKRTTQIAMGRFWSQATPEQQQIQDGFKSLIRTYAGALANVRNQT  
VAYKPFRAAADDTDVVVRSTVNNNGEPVALDYRVEKSPNGWKVYDINISGLWLSEYKN  
QFADVISKRGGVGLVQFLDERNAQLAKGPAK

>non-antioxidant\_1081

MNSLLFVYGTLRKHENHLLAQSAACINEQARTKGSFAAKEGPTVVFNDEDEGYIYGE  
VYEADELCHIKLDQFFQGYHKQTVFVETDVGIKIALIYFMNKDGCAGFTKISSGDWKEHQ  
MISKSKNPIYYFAYGSCMDNARFQKAGVDHYFQDPVGRAVLKGYTTTRFTLKREDGSRAD  
MLEGGTTEGVLYRIPYSALSYLYKREGVESLTYRPAFVDVEAGGRHYKDCLTFLVLQKE  
AEIAPPQHYQIEIERGAELYLSPEFTEKLRHMNSLPKGLEHHHHHH

>non-antioxidant\_1082

SNAMQSDHKEKIAILVDVQNVYYTCREAYRSNFDYNQFWYVATQEKEVVSAKAYAIASN  
DPKQRQFHILRGVGFVMLKPYIQRDGSAGKGDWDVGITLDAIEIAPDVRVILVSGDG  
DFSLLVERIQQRYNKKVTYGVPRLTSQTLIDCADNFVAIDDDFLL

>non-antioxidant\_1083

GMSRGHCILAHGFESGPDALKVTALAEVAERLGTWHTHERPDFTDLDARRDLGQLGDVRGR

LQRLLEIARAATEKGPVVLGSSLSYIAAQVSLQVPTRALFLMVPPTKMGPLPALDAAA  
VPISIVHAWHDELIPAADVIAWAQARSARLLLVDGHRLLGAHVQAASRAFAELLQSL

>non-antioxidant\_1084

GSDNLSRHDMLAWINESLQLNLTKEQLCSGAAYCQFMDMLFPGSIALKKVKFQAKLEHE  
YIQNFKILQAGFKRMGVDKIIPVDKLVKGFQDNFEFVQWFKKFFDANYDGKDYDPVAA  
RQGQ

>non-antioxidant\_1085

GIPRNSLEKFNVDLMKKAGKELGLSLSPNEIGCTIADLIQQQYPEIDSKLQRGDIITKFNGB  
ALEGLPFQVS YALFKGANGKVSMEVTRPKPAAAS

>non-antioxidant\_1086

MRGSHHHHHHGMASMTGGQQMGRDLYDDDDKDRWGSMDTLEKHAFKMQLNPGME  
AEYRKRHDEIWPELVDLLHQSGASDYSIHLDRNTLFGVLTRPKDHTMASLPDHPVMKK  
WWAHMADIMATNPDNSPVQSDLVTLFHM

>non-antioxidant\_1087

MGSSHHHHHHSSGLVPRGSHMASAASYPPKNTKVGLALSSHPLASEIGQKVLEEGNAI  
DAVAIGFALAVVHPAAGNIGGGGFAVIHLANGENVALDFREKAPLKATKNMFLDKQGNV  
VPKLSGDGYLAAGVPGTVAGMEAMLKKYGTKKLSQLIDPAIKLAENGYAISQRQAETLKE  
ARERFLKYSSSKKYFFKKGHLDYQEGDLFVQKDLAKTLNQIKTLGAKGFYQGQVAELIEK  
DMKKNGGIITKEDLASYNVWWRKPVVGSYRGYKIISMSPPSSGGTHLIQILNVMENADLS  
ALGYGASKNIHIAAEAMRQAYADRSVYMGDADFVSPVDKLINKAYAKKIFDTIQPDTVT  
PSSQIKPGMGQLHEGSN

>non-antioxidant\_1088

GMKCNDKLAPFEVFDHVVNKLSFRHVTMDDVDMLHSWMHEEHVIPYWKLNIPVDY  
KKHLQTFLNDDHQTLMVGAINGVPMSYWESYWVKEDIANYYPFEEHDQGIHLLIGPQE  
YLGQGLIYPLLLAIMQQKFQEPDNTIVAEPDRRNKKMIHVFKKCGFQPVKEVELPDKIGL  
LMKCEQNVFEKRWSDWKMNKF

>non-antioxidant\_1089

MGSSHHHHHHSSGRENLYFQGHMNLNKGIRKVELAVKWDPSPPGDPATDLDIVAATFLA  
GDAYGKPAYVVHFDSRSPDGTIYLNKDSKDGKGFVWDEVMTLELNRLDSRYARVVGV  
VIQQRDAHRTFVGLNPLRMREGYTVLAEDDFGGVLGSTAATVGEFVRDDSGEWFTHP  
GIHGYDSDPATFARVMGGRQDS

>non-antioxidant\_1090

SERRLGVRAWVKENRGSFQPPVCNKLHQEQKVMFIGGPNTRKDYHIEEGEEVFYQLE  
GDMVLRVLEQKHRDVVIRQGEIFLLPARVPHSPQRFANTVGLVVERRRLETEL DGLRYY  
VGDTMDVLFKWFYCKDLGTQLAPIIQEFSSEQYRTGKPIPDQLLKEPPFPLSTRSIMEPM  
SLDAWLDSHHRELQAGTPLSLFGDTYETQVIAYGQGSSEGLRQNVVWLWQLEGSSVVT  
MGGRRSLAPDDSLVLVAGTSYAWERTQGSVALSVTQDPACKKPLG

>non-antioxidant\_1091

GMHTQEALFVRLALDAWNTQSSRTDKLIQSLSNEALAVETAPGRNSGTYLLGHILTAVHDA  
MLPPELGDITLYPQLAPVFIQNPDKSGLEKPEINDLRLYWSLVQERLANQFNQLQPADWF  
NKHAAISREDFLKEPHRNKLSVLINRTNHMAYHLGQLAYLKK

>non-antioxidant\_1092

GSDEKRLHFGNGHLKPLGLRTFVDPHTFEDPTQTVHEFAKELDATNISIDKVVGAGEFGEV  
CSGRLKLPSSKEISVAIKTLKVGYTEKQRRDFLGEASIMGQFDHPNIIRLEGVVTKSKPVM



VTEYMENGLSDSFLRKHDAQFTVIQLVGMLRGIASGMKYLSDMGYVHRDLAARNILINS  
NLVCKVSDDFGLGRVLEDDPEAAYTTRGGKIPRWTSPEAIAYRKFTSASDVWSYGIVLWEV  
MSYGERPYWEMSNQDVIKAVDEGYRLPPMDCPAALYQLMLDCWQKDRNNRPKFEQIV  
SILDKLIRNPGSLKIITSAARPSNLLDQSNVDITFRRTTGDWLNQVWTAHCKEIFTGVEY  
SSCDTIAKIS

>non-antioxidant\_1093

GMDDLSEFVDQVPLLDHCHFLIDGKVPNRDDRLAQVSTEADKDYPLADTKNRLAYHGF  
LALAKEFALDANNPLAAMNDPGYATYNHRIFGHFHKELLIDTGFVPPDDPILDLQTAELV  
GIPVKAIYRLETHAEDFMLEHDNFAAWWQAFSNDVKQAKAHGFVGFKSIAAYRVGLHLE  
PVNVIEAAAGFDTWKHSGEKRLTSKPLIDYMLYHVAFPIAQDMPLQFHVGYGDADTDM  
YLGNPLLMRDYLKAFKKGLKVLLHCYPYHREAGYLASVFPNLYFDISLLDNLGSPGAS  
RVFNEAVELAPYTRILFASDASTYPEMYGLAARQFKQALVAHFNQLPFVDLAQKKAWINA  
ICWQTSAKLYHQERELRV

>non-antioxidant\_1094

MGSDKIHHHHHHENLYFQGMRDHVEIGIGREARRTYSLDDISVSSRRTRSSKDVDTTWH  
IDAYKFDLPFMNHPSDALASPEFVIEMGKQGGLGVINAEGWGRHADLDEAIAKVIAAYE  
EGDQAAATRTLQELHAAPLDTELLSERIAQVRDSGEIVAVRVSPQNVREIAPIVIKAGADLL  
VIQGTLSIAEHVNTGGEALNLKEFIGSLDVPVIAGGVNDYTTALHMMRTGAVGIIVGGGEN  
TNSLALGMEVSMATAIADVAAARRDYLDDETGGRYVHIIADGSIENSGDVVKAIACGADAV  
VLGSPLARAEAAAGKGYFWPAVAHPRFPRGVVTVESVDLDEAAPSLEQILHGPSTMPWGV  
ENFEGGLKRALAKCGYTDLKSFKVSLHVN

>non-antioxidant\_1095

MGHHHHHHHHHSSGHIEGRHMAAVTLHLRAETKPLEARAALPTTVKKLIAKGFKIYV  
EDSPQSTFNINEYRQAGAIIVPAGSWKTAPRDRIIIGLKEMPETDTFPLVHEHIQFAHCYKDQ  
AGWQNVLMRFIKGHGTLYDLEFLENDQRRVAAFGFYAGFAGAALGVRDWAFKQTHSD  
DEDLPAVSPYPNEKALVKDVTVDYKEALATGARKPTVLIIGALGRCGSGAIDLLHKVGPD  
ANILKWDIKETSRRGGPFDEIPQADIFINCIYLSKPIAPFTNMEKLNPNRRLRTVVDVSADT  
TNPHNPIPIYTVATVFNKPTVLVPTTAGPKLSVISIDHLPSLLPREASEFFSHDLLPSLELLPQ  
RKTAPVWVRAKFLDRHRCARVKRSSRL

>non-antioxidant\_1096

SNAMVRVDQNLNFEVMYLLDELSQDITVPKNVRKVAQDSKAKLSQENESLDLRCATVLS  
MLDEMANDPNVPAHGRTDLYTIISKLEALS

>non-antioxidant\_1097

GSQPTYCWNEANNPGGPNRCSNNKQCDGARTCSSSGFCQGTSRKPDGPKGPTYCWDEA  
KNPGGPNRCSNSKQCDGARTCSSSGFCQGTAGHAAA

>non-antioxidant\_1098

SNAKNIEETELVVEEMLEQYPNGKIVRLLFHGEQAKLPIISHIVQEYQVEVSIIQGNIIQQT  
QGAVGSLYIQLLGEEQNILAAIEGLRKLRVETEVEIGNE

>non-antioxidant\_1099

MGSSHHHHHHSSGLVPRGSKTFIIGISGVTNSGKTTLAKNLQKHLNCSVISQDDFFKPESE  
IETDKNGFLQYDVLEALNMEKMMSAISCWME SARHSVVSTDQESAEEIPILIEGFLLFNY  
KPLDTIWNRSYFLTIPYEECKRRRSTRVYQPPDSPGYFDGHVWPMYLYRQEMQDITWE  
VVYLDGKSEEDLFLQVYEDLIQEL

>non-antioxidant\_1100

AEEYGYIVTDQKPLSLAAGVKLLEILAEHVMSSGSFINISVVGPAITFRIRHNEQNLAD  
VTQQAGLVKSELEAQTGLQILQTGVGQRE

>non-antioxidant\_1101

GGSMKTIIVLSVGEATRTLTEIQSTADRQIFEEKVGPLVGRRLRTASLRQNGAKTAYRVNLK  
LDQADVVDVSGLPKVRYTQVWVSHDVTIVANSTEASRKSPLYDLTKSLVATSQVEDLVVNLVP  
LGR

>non-antioxidant\_1102

MMNDGKQQSTFLFHDYETFGTHPALDRPAQFAAIRTDSEFNVIPEPEVYCKPADDYLPQP  
GAVLITGITPQEARAKGENEAFAARIHSLFTVPKTCILGYNNVRFDDEVTRNIFYRNFDYDP  
YAWSWQHDSNRWDLDDVMRACYALRPEGINWPENDDGLPSFRLEHLTKANGIEHNSAH  
DAMADVATIAMAHLVKTRQPRFLDYLFTHRNKHKLMALIDVPQMKPLVHVSVMFGAW  
RGNTSWVAPLAWHPENRNAVIMVDLAGDISPILLELSDTLRERLYTAKTDLGDNAAVPVK  
LVHINKCPVLAQANTLRPEDADRLGINRQHCLDNLILRENQVREKVVAIFAEAEFPTPS  
DNVDAQLYNGFFSDADRAAMKIVLETEPRNLPALDITFVDKRIEKLLFNRYRARNFPGTLDY  
AEQQRWLEHRRQVFTPEFLQGYADELQMLVQQYADDKEKVALLKALWQYADEIVEHHH  
HHH

>non-antioxidant\_1103

GMSIVGNVENLINGVDELWVYKHEFILKMRDGSPLDIFRYYLIQDGKYVEDMLRALL  
IASSKGPIDKVTKILNLVSSRDKGLETHGKLYSKLDIRDVIVKTGYNLINYAYTRHLYYY  
ANLDWNKFLVAWTPCMFGYSIVGDYVIDSPNEVYKTWASFYASTEYKKRIEAILYALDEV  
SITEDLLNIFINSVRFEIGFWDASLRKDPTVY

>non-antioxidant\_1104

GMEGSLSRGVEIMKLRELVARSRIRRFDEHVAVNDATLRDLVELVCYTPSAANRQLRFL  
PVTGADMSDKVFPCLKWAGYLEDWPGPEPGERPAAALVMLCRNEDLPGAACDSGIAAQ  
IMLGAAEKELGGCIVAAIDRERLMASLGIPDAWTVLLVIALGKPAETVVIDQIKPGDDIRY  
WRDKHGIHHVPKRQVDELLVTAEQLRERG

>non-antioxidant\_1105

GMVEVSQFKDAMAQLASAVHIVTTSGETGQHGFASAVCSVTDSPTLLVCINSNARAYE  
HFVKNRVLVNTLTAEQSSLSNIFASPLSQEERFSNASWTTLTTGSPMLQDALINFDCETEI  
KHVGTHDILICKIVDIHQSNALVYRNRVYHSV

>non-antioxidant\_1106

GSREATVLSYDGSFMFKIQLPVVMHTEAEDVSLRFRSQRAYGILMATTSRDSADTLRLEL  
DAGRVLKTVNLGKGPETLFAGYNLNDNEWHTVRVVRGKSLKLTVDQDQAMTGQAMAG  
DHTRLEFHNIETGIITERRYLSSVPSNFIGHLQSLTFNGMAYIDLCKNGDIDYCELNARFGFR  
NI

>non-antioxidant\_1107

TATTTAAGATATCTTAAATG

>non-antioxidant\_1108

SNADEVENLYTQVADNEYLVQGRMLIDEFNEVFETDLHMSDVDTMAGYLITALGTIPDEG  
EKPSFEVGNIKLTAEMEGRLLVLRVHFYDEE

>non-antioxidant\_1109

GSHMSEWKARFWASVGIHKEEGGWAVLLDERPLRTPGKQPLRLPTEALALAIAEWQA  
VQEVIDPNAMPLTRSANSAIEKVAPQFDAVAAMLGDYGGTDLLSYRADAPEALVRAQAE  
GWDPLIDWAATELRAPLRITHGVIPVQDPVLLKLRAEVASLDPFGLTALHDLVTLPGSLI

LGLAVIRGRIDAPTAHALSRIDEEFQAERWGRDEEAEAQAASRLAAMRDSERFWHLTRG

>non-antioxidant\_1110

SNAKILAVTACPTGIAHTFMAADALKEKAKELGVEIKVETNGSSGIKHKLTAQEIEDAPAI  
VAADKQVEMERFKGKRVLQVPVTAGIRRPQELIEKAMNQDAPIY

>non-antioxidant\_1111

MHHHHHHHHHHISSASGESQMSLDEIEDVYHTRPGYRPEEYRWGQGGAKIIDYHIQSAG  
VDFPPSLTGNQQTDFLMKVVFEYDFDCVVPILIKTLTGFLYGTNSFLASEGRENISVSRG  
DVRVFKFSLPVDLNSGDYLLSFGISAGNPQTDMTPLDRRYDSIILHVTKSMDFWGVIDLKS  
SFTSYQ

>non-antioxidant\_1112

MEEFVNPKIKVIGVGGGGSNAVNRMYEDGIEGVELYAINTDVQHLSTLKVPNKIQIGEKV  
TRGLGAGAKPEVGEEAALEDIDKIKEILRDTDMVFISAGLGGGTGTGAAPVIAKTAKEMGI  
LTVAVATLPRFEGPRKMEKALKGLEKLKSSDAYIVIHNDKIKELSNRTLTIKDAFKEVDS  
VLSKAVRGITSIVVTPAVINVDVADVRTTLEEGLSIIGMGEGRGDEKADIAVEKAVTSPLLE  
GNTIEGARLLVTIWTSEDIPYDIVDEVMERIHSKVHPEAEIIFGAVLEPQEQDFIRVAIVATD  
FPPEKFQVGEKEVKFKVIKLLHHHHHH

>non-antioxidant\_1113

MGLGRHENAIKYLQDYENLRARCLQNGVLFQDDAFPPVSHSLGFKELGPNSSKTYGIK  
WKRPTLLSNPQFIVDGATRTDICQGALGDCWLLAAIASLTLNETILHRVVPYQSFQEGY  
AGIFHFQLWQFGEWVDVVDDLLPTKDGKLVFVHSAQNEFWWSALLEKAYAKVNGSYE  
ALSGGCTSEAFEDFTGGVTEWYDLQKAPSDLYQIILKALERGSLLGCSINISDIRDLEAITFK  
NLVRGHAYSVTDAKQVTYQGQRVNLIRMRNPWGEVEWKGPWSDNSYEWNKVDPYERE  
QLRVKMEDGEFWMSFRDFIREFTKLEICNLTPDLEHHHHHH

>non-antioxidant\_1114

GQHTLKQFAADSALTTTPLCSEVPLFDINALGDWTYLGTSLPAKFAKLFASILHCIDDEYF  
LITPVEKVRVQVEDAPLLIVDFERAQPHSLLNVSTSIGTLHHNVDIKQMKLTDDSVYLPLE  
RGLWGKLGRACYYNFVNEFNLSDLNEQ

>non-antioxidant\_1115

GMGILSGNPQDEPLHYGEVFSTWTYLSTNGLINGYRSFINHTGDEDLKNLIDEAIQAMQ  
DENHQLLELLRSNGVGLPPAPPDRPAARLDDIPVGARFNDPEISATISMDVAKGLVTCSEQII  
GQSIREVALMFSQFHMAKVQFGGKMLKLNKNKGWLIPPLHSDRPIKE

>non-antioxidant\_1116

MTKALFFDIDGTLVSFETHRIPSSTIEALEAAHAKGLKIFIATGRPKAIINLSELQDRNLIDG  
YITMNGAYCFVGEEVIYKSAIPQEEVKAMAAFCEKKGVCIFVEEHNISVCQPNEVMKKIF  
YDFLHVNVIPVTSFEEASNKEVIQMPFITEEEEKEVLPSIPTCEIGRWYPAFADVTAKGDT  
KQKGIDEIIRHFGIKLEETMSFGDGGNDISMLRHAAIGVAMGQAKEDVCAAADYVTAPID  
EDGISKAMKHFII

>non-antioxidant\_1117

LGNFSQACYNSAIQGSVLTSTCIRTNGGYNTSSIDLNSVIENVDSGLKWQGSNFIETCRNTQ  
LAGSSELAECKTRAQQFVSTKINLDDHIAAIDGTLKYELEHHHHHH

>non-antioxidant\_1118

GSHMTNVTGDYTDCTPLLGDRAALDSFYEEHGYLFLRNVLDRDLVKTVAEQMREGLVAL  
GAADPHATLEELTIDSFESVDEVAMHDYVKYDAFWNNPSTIKVFEQVFGEVPVFLSTTIR  
YYPQAGSEEPSFHLYLTPFHQDGFYIGPNQDFRTFWIPLIRTTRESGGVALADGSHRRGKR

DHVLNESFRRFGHPVRGIPPTVESEDEHLLHSPMEPGDILLFHAHMCHK SIPNLSKDPRLM  
RMSMDTRVQPAKSHRGNAMTPWTESAKDASKGIMAKITGTPTDVE

>non-antioxidant\_1119

GMGKGKSAIESQIRMLKLAKEIVVEVASSFPNLEEVYIFGSRARGDYLDTSIDILFVFKGI  
KEMNVFDRMYMVSRFIRGNVDYIVLDEGEKDRVKDKVLFWKREKGFVLL

>non-antioxidant\_1120

VFPSNATFGMGDRVRKKSGAAWQQQIVGWYCTNLTPEGYAVESEAHPGSVQIYPVAALER  
IN

>non-antioxidant\_1121

GSHNADLSEALRELRLMKETGYSAFVVFTNATLEALAAARQPRTLAEVPLGGEKRI  
EAYGERILD AINTVLDG

>non-antioxidant\_1122

GMSAPVTLINPFKVPADKLEAAIEYWEAHRDFMAQQPGYLSTQLHQSIDEGATYQLINVAI  
WQSEADFYQAAQKMRQALGHVQVEGLCGNPALYRVIRT

>non-antioxidant\_1123

SQPNATLYKMSSINADFAFNLYRRFTVETPDKNIFFSPVSISAALVMLSFGACCSTQTEIVET  
LGFNLDTTPMVEIQHGFQHLICSLNFPKKELELQIGNALFIGKHLKPLAKFLNDVKTLYETE  
VFSTDFSNISAAKQEINSHVEMQTKGKVVGLIQDLKPNTIMVLVNYIHFKAQWANPFDPS  
KTEDSSSFLIDKTTTVQVPMMHQMEQYYHLVDMELNCTVLQMDYSKNALALFVLPKEG  
QMESVEAAMSSKTLKKWNRLLQKGWVDLFPKFSISATYDLGATLLKMGIQHAYSENAD  
FSGLTEDNGLKLSNAAHKAVLHIGEKGTEAAGAMFLEAIPR

>non-antioxidant\_1124

SENTFLHPHIIQIDRSFMLLILERSTRSILFLGKVVPTEA

>non-antioxidant\_1125

MASKRALVILAKGAEEMETVIPVDVMRRAGIKVTVAGLAGKDPVQCSRDVVICPDASLE  
DAKKEGPDYDVVVLPGGNLGAQNLSESAAVKEILKEQENRKGLIATICAGPTALLAHEIGFG  
SKVTTHPLAKDKMMNGGHYTYSEN RV EKDGLILTSRGPPTSFEFALAIVEALNGKEVAAQ  
VKAPLVLDLEHHHHHHH

>non-antioxidant\_1126

GSTKDELTKIMDRASKIEQIQKLAKY AISALNYEDLPTAKDELTKALDLLNSI

>non-antioxidant\_1127

AIDLCGMSQDELNECKPAVSKENPTSPSQPCCTALQHADFACL CGYKNSPWLGSFGVDPE  
LASALPKQCGLANAPTC

>non-antioxidant\_1128

EVPIVTRAEWNAKPPNGAIDSMVTPLPRAVIAHTAGGACADDVTCSQHMRNLQNFQMSK  
QKFSDIGYHYLIGGNGKVYEGRSPSQRGAFAFPNNDGSLGIAFIGNFEERAPNKEALDAA  
KELLEQAVKQAQLVEGYKLLGHRQVSATKSPGEALYALIQQWPNWSEML

>non-antioxidant\_1129

MAFKIQDLDTLGLPGLLSIYTQISLLYPVSDSSQYPTIVSTFEQGLKRFSEAVPWWAGQVKA  
EGISEGNTGTSFIVPFEDVPRVVVKDLRDDPSAPTIEGMRKAGYPMAMFDENIAPRKTLP  
GPGTGPDDPKPVILLQLNFIKGGILITVNGQHGMADMVGGQDAVIRLLSKACRNDPFTEEE  
MTAMNLD RKTIVPYLENYTIGPEVDHQIVKADVAGGDAVLTPVSASWAFFTFSPKAMSEL  
KDAATKTLDASTKFVSTDDALS AFIWKSASRVRLERIDGSAPTEFCRAVDARPAMGVSNN  
YPGLLQNM TYHNSTIGEIANESLGATASRLRSELDPASMRQRTRGLATYLHNNPDKSNVSL

TADADPSTSVMLSSWAKVGLWDYDFGLGLGKPETVRRPIFEPVESLMYFMPKKPDGEFC  
AALSLRDEDMDRLKADKEWTKYAQYVG

>non-antioxidant\_1130

HHGIRMTRISREMMKELLSVYFIMGSNNTKADPVTVVQKALKGGATLYQFREKGGDALT  
GEARIKFAEKAQAACREAGVPFIVNDDVELALNLKADGIHIGQEDANAKEVRAAIGDMIL  
GWSAHTMSEVKQAEEDGADYVGLGPIYPTETKKDTRAVQGVSLIEAVRRQGISIPIVGIGGI  
TIDNAAPVIQAGADGVSMISAIQAEDPESAARKFREEIQTYKTGR

>non-antioxidant\_1131

MAHHHHHHEFPKPEFMSKSLEELQIGTYANIAMVRTTTPVYVALGIFVQHRVSALPVVDE  
KGRVVDIYSKFDVINLAAEKTYNNLDVSVTKALQHRSHYFEGVLKCYLHETLETIINRLVE  
AEVHRLVVVDENDVVKGIVSLSDILQALVLT

>non-antioxidant\_1132

SVLPETPVPFKSGTGAIENDTVYIGLGSAGTAWYKLDTQAKDKKWTALAAFPGGPRDQA  
TSAFIDGNLYVFGGIGKNSEGLTQVFNDVHKYNPKTNSWVKLMSHAPMGGMAGHVTFVH  
NGKAYVTGGVNQNIFNGYFEDLNEAGKDDSTAIKINAHYFDKKAEDYFFNKFLLSFDPST  
QQWSYAGESPWYGTAGAAVVNKGDKTWLNGEAKPGLRTDAVFELDFGTGNLKWNLKLA  
PVSSPDGVAGGFAGISNDSLIFAGGAGFKGSRENYQNGKNYAHEGLKKSYSTDIHLWHNG  
KWDKSGELSQGRAYGVSLPWNNLLIIGGETAGGKAVTDSVLITVKDNKVTVQNLEHHH  
HHH

>non-antioxidant\_1133

ERCGEQGSNMECPNNLCCSQYGYCGMGGDYCGKGCQNGACWTSKRCSQAGGATCTN  
NQCCSQYGYCGFGAEYCGAGCQGGPCRADIKCSQAGGKLCPPNNLCCSQWGFCLGSE  
FCGGGCQSGACSTDKPCGKDAGGRVCTNNYCCSKWGSCGIGPGYCGAGCQSGGCDG

>non-antioxidant\_1134

MRHGDISSNDTVGVAVVNYKMPRLHTAAEVLDNARKIAEMIVGMKQGLPGMDLVVFPPE  
YSLQGIMYDPAEMMETAVAIPEETEIFSACRKRANVWGVFSLTGERHEEHPKAPYNTL  
VLIDNNGEIVQKYRKIIPWCPIEGWYPGGQTYVSEGPKGMKISLIICDDGNYPEIWRDCAM  
KGAELIVRCQGYMYPKQVMMAMAWANNCYVAVANAAGFDGVYSYFGHSAIIG  
FDGRTLGECEEMGIQYAQLSLSQIRDARANDQSQNHFKILHRGYSGLQASGDGDRGL  
AECPFEFYRTWVTDAEKARENVERLTRSTTGVAQCPVGRLPYEG

>non-antioxidant\_1135

MFRNCVAVDLGASSGRVMLARYERECRSLTLREIHRFNGLHSQNGYVTWDVDSLESAI  
RLGLNKVCAAGIAIDSIGIDTWGVDFVLLDQQGQRVGLPVAYRDSRTNGLMAQAQQQLG  
KRDIYQRSIGIQLFPNTLYQLRALTEQQPELIPHIAHALLMPDYFSYRLTGKMNWEYTNAT  
TTQLVNINSDDWDESLLAWSGANKAWFGRPTHGPNVIGHWICPQGNEIPVVAVASHDTAS  
AVIASPLNGSRAAYLSSGTWLSMGFESQTPFTNDTALAANITNEGGAEGRYRVLKNIMGL  
WLLQRVLQERQINDLPALIAATQALPACRFIINPNDDRFINPDEMCEIQAACREMAQPIES  
DAELARCIFDSLALLYADVLHELAQLRGEDFSQLHIVGGGCQNTLLNQLCADACGIRVIAG  
PVEASTLGNIGIQLMTLDELNNVDDFRQVVSTTANLTTFTPNPDSEIAHYVALIHSTRQTKE  
LCA

>non-antioxidant\_1136

MSTLEQTIGNTPLVKLQRMGPDNGSEVWLKLEGNNPAGSVKDRAALSMIVEAEKRGEIKP  
GDVLEATSGNTGIALAMIAALKGYRMKLLMPDNMSQERRAAMRAYGAELILVTKEQGM  
EGARDLALEMANRGEKLLDQFNNPDNPYAHYTTTGPEIWQQTGGRITHFVSSMGTGTI

TGVSFRMREQSKPVTIVGLQPEEGSSIPGIRRWPT EYLPGIFNASLVDEVLDIHQRDAENTM  
RELAVREGIFCGVSSGGAVAGALRVAAANPD AVVVAIICDRGDRYLSTGVFGEEHFSQGAG  
I

>non-antioxidant\_1137

MSSSHKSWNSIYEFTVKDINGVDVSLEKYRGHVCLIVNVACKCGATDKNYRQLQEMHTR  
LVGKGLRILAFPCNQFGGQEPWAEAEIKKFVTEKYGVQFDMFSKIKVNGSDADDLYKFLK  
SRQHGTLTNNIKWNFSKFLVDRQGQPVKRYSPPTTAPYDIEGDIMELLEKK

>non-antioxidant\_1138

GMERGIVQYDFMAESQDELTIKSGDKVYILDDKKS KDWWMCQLVDSGKSGLVPAQFIEP  
V

>non-antioxidant\_1139

SSQIRQNYSTEVEAAVNRLVNLYLRASYTYLSLGFYFDRDDVALEGVCHFFRQLAQQKMQ  
GAERLLKMQNRGGRALFQDLQKPSQDEWGTTPDAMKAAIVLEKSLNQUALDLHALGS  
AQADPHLCDFLESHFLDEEVKLIKMGDHLTNIQRLVGSQAGLGEYLFERLTLKHD

>non-antioxidant\_1140

EAPTIIDLTCTVATCTHSSDFGGVLTLYKTNKNGDCSVHSHSNVATLQEATAKVKTAGKV  
TLHFSTASASPSFVVSLCSARATCSASCEP

>non-antioxidant\_1141

MASNYSGLKIGAWVGTQPSESAIKSFQELQGRKLDIVHQFINWSTDFSWVRPYADAVYN  
NGSILMITWEPWEYNTVDIKNGKADAYITRMAQDMKAYGKEIWLRLPLHEANGDWYPWA  
IGYSSRVNTNETYIAAFRHIVDIFRANGATNVKWFVFNVCNDVNGGTSYLGHPGDNYV  
DYTSIDGYNWGTTSQSWGSQWQSFQVFSRAYQALASINKPIIIAEFASAEIGGNKARWITE  
AYNSIRTSYNKVIAAVWFHENKETDWRINSSPEALAAAYREAIGAG

>non-antioxidant\_1142

ESACTLQSETHPPLTWQKCSSGGTCTQQTGSVIDANWRWTHATNSSTNCYDGNWTSST  
LCPDNETCAKNCCLDGAAYASTYGVTTSGNSLSIGFVTQSAQKNV GARLYLMASDTTYQ  
EFTLLGNEFSFDVDVSQLPCGLNGALYFVSMADGGVSKYPTNTAGAKYGTGYCDSQCP  
RDLKFINGQANVEGWEPSSNANTGIGGHGSCCSEMDIWEANSISEALTPHPCTTVGQEIC  
EGDGCGGTYSDNRYGGTCDPDGCDWNPYRLGNTSFYGPSSFTLDTTKKLTVVVTQFETS  
GAINRYVQNGVTFQQPNAELGSYSGNELNDDYCTAEAEFGSSFSKGGLTQFKKATS  
GGMVLVMSLWDDYYANMLWLDSTYPTNETSSTPGAVRGSCSTSSGVPQVESQSPNAKV  
TFSNIKFGPIGSTGNPSG

>non-antioxidant\_1143

PVFENNNQRYYESLPFKQLKELKIACSQYGPTAPFTIAM IENLGTQALPPNDWKQTARACL  
SGGDYLLWKSEFFEQCARIADVNRQQGIQTSYEMLIGEPYQATDTQLNFLPGAYA QISNA  
ARQAWKRLPSLEHHHHHH

>non-antioxidant\_1144

PLGSQFVWTVQRTEAAERCGLHGSYVLRVEAERLTL LTVGAQSQILEPLLSWPYTLLRRY  
GRDKVMFSFEAGRRCPSGPGTFTFQTAQGNDIFQAVETA IHRQKAQG

>non-antioxidant\_1145

MATVYDVPDGLLVERVAQRLKEIPEIKPPEWAPFVK TGRHKERLPEQEDWWYYRVASILR  
RVYLDGPVGIERLRITYYGGRKNRGHAPERFYKAGGSIIRKALQ QLEAAGFVEKVPKGGRV  
ITPKGRSFLDKIATELKKELEEIIPELKKY

>non-antioxidant\_1146

GPLGSPEFGYWITCCPTCDVDINTWVPFYSTELNKPAMIYCSHGDGHVHAQCMDLEER  
TLIHLSEGSNKYYCNEHVQIARA

>non-antioxidant\_1147

DRLTVVKQYVDNVLNKASDTYHGDKPSPLLADGVDPRGTGQLEWIFPDGRRVLSNFSA  
QQNLMRVMSGLSQLSGDPYQKRAEDIVRYHFQNYQDPSGLLYWGGHRFVLDLKTLP  
GPSEKEMVHELKNAYPYDLMFVSDSDATARFIRGFVNAHVYDWRILETSRHGEYKPM  
GALWESKFEQPPFFATKGLSFLNAGNDLIYSASLLYKHQQDQGALTWAKRLADQYVLP  
DAKTGLGVYQFTQALKREEPTDDADTHSKFGDRAQRQFGPEFGPTALEGNMMLKGRST  
LYSENALMQLQLGKDLGPQGQDLLKWTVDGLKAFAYAYNDQDNTFRPMIANGQDLN  
YTLPRDGYGKKGTVLKPYKAGNEFLISYARAYAIDNDPLLWKVARGIANDQGLDIGTA  
PGKEVKVNMDTTNSDPYALFALLDLYHASQVADYRKLAEKIGDNIKIRYIDGFFMASSDR  
QYADVDAIEPYALLALEASLRNKPQAVAPFLNGAGFTEGAYRMDDGSARVSTRDNELFLL  
NVGEKLQPN

>non-antioxidant\_1148

MFLRIDRLQIELPMPKEQDPNAAAQALLGGRFGEMSTLMNYMYQSFNFRGKKALKPY  
YDLIANIATEELGHIELVAATINSLAKNPGKDLEEGVDPASTPLGFAKDVRNAAHFIAGGA  
NSLVMGAMGEHWNGEYVFTSGNLILDLLHNFLEVAARTHKLRYEMTDNPVAREMIGY  
LLVRGGVHAAAYGKALESITGVEMTKMLPIPKIDNSKIPEAKKYMMDLGFHRNLYRFSPED  
YRDLGLIWKGASPEDGTEVVVDGPPTGGPVFDAGHDAAEFAPEFHPGELYEIAKKLYEK  
AK

>non-antioxidant\_1149

MQNITYSWFVQGMIKATTDAWLKGWDERNNGNLTLLRLDDADIAPYHDNFHQPPRYIPLS  
QPMPLANTPFIVTGSQKFFRNVDLPAANLQIVKVDSDGAGYHILWGLTNEAVPTSELPA  
HFLSHCERIKATNGKDRVIMHCHATNLIATYVLENDTAVFTRQLWEGSTECLVFPDGVG  
ILPVMVPGTDAIGQATAQEMQKHSVLVWPFHGVFGSGPTLDETFLIDTAEKSAQVLVKV  
YSMGGMKQTISREELIALGKRFGVTPLASALAL

>non-antioxidant\_1150

GSPEKILAQIIQEHREGLDWQEAATRASLSLEETRKLQSMAGQVTLRLVENDLYAIST  
ERYQAWWQAVTRALEEFHSRYPLRPLAREELRSRYFSRLPARVYQALLEEWSREGRLQL  
AANTVALAGFTPSF

>non-antioxidant\_1151

KVFGRCELAAAMKRHGLDNYRGYSLGNWVCAAKFESNFNTQATNRNTDGSTDYGILQI  
NSRWWCNDGRTPGSRNLCNIPCSALLSSDITASVNCACKIVSDGNGMNAWVAWRNRCKG  
TDVQAWIRGCRL

>non-antioxidant\_1152

DPDQFGPDIEQLAQSGKYSQDNTKGDAMIGVKQPLPKAVLRTQHDKNKEAISILDFGVID  
DGVTDNYQAIQNAIDAVASLPSGGELFIPASNQAVGYIVGSTLLIPGGVNIRGVGKASQLRA  
KSGLTGSVLRSLYSDTIGRYLRNIRVTGNNTCNGIDTNITAEDSVIRQVYGVVFDNVMV  
NEVETAYLMQGLWHSKFIACQAGTCRVGLHFLGQCVSVSVSSCHFSRGNYSADESFGIRI  
QPQTYAWSSEAVRSEAILDSETMCIGFKNVYVHDCLDLHMEQLDLDYCGSTGVVIENV  
NGGFSFSNSWIAADADGTEQFTGIYFRTPSTQSHKIVSGVHINTANKNTAANNQSIIEQS  
AIFVFSVSGCTLTGDEWAVNIVDINECVSFDKCFNKPLRYLRSGGVSVTDCYLAGITEVQKP  
EGRYNTYRGC SGVPSVNGIINVPVAVGATSGSAAIPNPGNLTYRVRSLFGDPASSGDKVSVS  
GVTINVTRPSPVGVALPSMVEYLAI

>non-antioxidant\_1153

GAMATDWLGSIVSINCGDSLGVYQGRVSAVDQVSQTISLTRPFHNGVKCLVPEVTFRAGDI  
TELKILEIPGPGDNQHFGDLHQT

>non-antioxidant\_1154

GSGESEDDPLYDEAVRFVTESRRASISAVQRKLGYNRAARMIEAMEMAGVVTPMNT  
NGSREVIAPAPVRD

>non-antioxidant\_1155

MSVEKIPGYTYGETENRAPFNLEDLKLKEAVMFTAEDDEEYIQKAGEVLEDQVEEILDWTW  
YGFVGSHPHLLYYFTSPDGTPEKYLAAVRKRFSRWILDTSNRSYDQAWLDYQYEIGLRH  
HRTKKNQTDNVESVPNIGYRYLVAFIYPITATMKPFLARKGHTPEEVEKMYQAWFKATL  
QVALWSYPYVKYGDF

>non-antioxidant\_1156

YQPNYFLSIPITNKKITAGIKVLQNSILRQDNRLTKAMVGDGSFHITLLVMQLLNEDEVNIG  
TDALLELKPFVEEILEGKHLTLPFHGIGTFQGQVGFVKLADGDHVSALLEIAETAKRTFQE  
KGILAGESRTFKPHLTFMKLSKAPMLWKKGVRKIEPGLYEQFIDHRFGEEILYQIDLCSML  
KKKQSNNGYYHCESSIVIGEKD

>non-antioxidant\_1157

MDPDQYSIEADKKFKYSLKLSDYPTLQDAASAAMDGLLIDRDYNFYGGGETVDFGGKVLTI  
ECKAKFIGDGNLIFTKLKGSRIAGVFMESTTTPWVIKPWTDNQLWTDAAAVVATLKQS  
KTDGYQPTVSDYVKFPGIETLLPNAKGNITSTLEIRECIGVEVHRASGLMAGFLFRGCH  
FCKMVDANNPSGGKDGITFENLSGDWKGKGYVIGGRTSYGSVSSAQFLRNNGGFERDG  
GVIGFTSYRAGESGVKTWQGTVGSTTSRNYNLQFRDSVVIYPVWDGFDLGADTDMNPEL  
DRPGDYPTQYPLHLPLNHLIDNLLVRGALGVGFGMDGKGMYSNITVEDCAGSGAYL  
LTHESVFTNIAIIDTNTKDFQANQIYISGACRVNGLRLIGIRSTDGQSLTIDAPNSTVSGITGM  
VDPSRINVANLAEGLGNIRANSFGYDSAAIKLRIHKLSKTLDSGALYSHINGGAGSGSAY  
TQLTAISGSTPDAVSLKVNHKDCRGAEIFVPIASDDFIKSSCFLPYWENNSTSLKALVK  
KPNGELVRLTLATL

>non-antioxidant\_1158

AFACSFPPSEIPGSKECLAELQKHQGFKKSYALICAYLNYKEDAENYERAAEDFDSAVK  
CTGCKEGVDLHEGNPELIEEGFEKFLASLKIDRKALGSLCTLFQKLYAIPHN

>non-antioxidant\_1159

DAAPAAGSTLDKIAKNGVIVVGHRESSVPFSYYDNQQKVVGYSDYSNAIVEAVKKKLN  
KPDQVVKLIPITSQNRIPLLQNGTFDFECGSTTNNVERQKQAAFSDTIFVVGTRLLTKKGG  
DIKDFADLKKGKAVVVTSGTTSEVLLNKLNEEQKMNMRIISAKDHGDSFRTLESGRAVAFM  
MDDALLAGERAKAKKPDNWDIVGKPKSQEAYGCMLRKDDPQFKKLMDDTIAQVQTSG  
EAEKWFDKWFKNPIPPKNLNMNLFELSDMKALFKEPNDKALNLEHHHHHHH

>non-antioxidant\_1160

ATFEIVNRCSYTVWAAASKGDAALDAGGRQLNSGESWTINVEPGTNGGKIWARTDCYFD  
DSGSGICKTGDCGLLRCKRFRPPTTLAEFSLNQYKDYIDISNIKGFNVPMNFSPTTRG  
CRGVCAADIVGQCPAKLKAPGGCNDACTVFQTSYCYCCTTGKCGPTEYSRFFKRLCPD  
AFSYVLDKPTTVTCPGSSNYRVTFCT

>non-antioxidant\_1161

DPDQFRAIIESPEGAGHVGYQYRRNTGSTMRMVSVDLDERVSLWDFHCDPSGNVIQPGPN  
VDSRQYLQAAIDYVSSNGGGTITIPAGYTWYLSYGVGGIAGHSGIQLRSNVNLEIENRI



HLSPFFDLKPFQVFGVDFNGDPASSGNLENCHIYGHGVVDFGGYEFGASSQLRNGVAFGR  
SYNCSVTGITFQNGDVTWAITLGWNGYGSNCYVRKCRFINLVNSSVNADHSTVYVNCY  
SGVESCYFSMSSSFARNIACSVELHQHDTFYRGSTVNGYCRGAYVVMHAAEAAGAGSYA  
YMQVENNIAVIYQGQFVILGSDVTATVSGHLNDVIVSGNIVSIGERA AFSAPFGAFIDIGPD  
NSGASNVQDIQRVLVTGNSFYAPANITDSA AITLRANLNGCTFIANNFDCRYMVYNAPGTT  
SPVVQNLVWDKSNVIGGTHANQRAGQNLFDMQFASVVNSTIEVQLSCEDLSMFSCILFPA  
SCQLSYSKITVDSA WTKSMSNTAVFEGNQAGANVYVSPATVNLTSYNTQGAVPFFSTD  
TNYAWVTSAYSLSINENLDFSPPATYTNKANGQLVGVGYNEIGGVRSVSVRLMLQRQV

>non-antioxidant\_1162

MSEITLGKYLFERLKVNVNTVFGLPGDFNLSLLDKIYEVEGMRWAGNANELNAAYAAD  
GYARIKGMSCIITTFVGVGELSALNGIAGSYAEHVGVLHVVGVPSSISAQAKQLLHHTLNG  
DFTVFHRMSANISSETTAMITDIATAPAEIDRCIRTTYVTQRPVYLGLPANLVDLNVPAKLLQ  
TPIDMSLKPNDAESEKEVIDTILVLDKDAKNPVILADACCSRHDVKAETKKLIDLTQFPFAFV  
TPMGKGSIDEQHPRYGGVYVGTLSKPEVKEAVESADLILSVGALLSDFNTGSFSYSYKTK  
NIVEFHSDHMKIRNATFPGVQMKFVLQKLLTTIADAAGYKPVAVPARTPANA AAVPASTPL  
KQEW MWNQLGNFLQEGDVVIAETGTSAFGINQTTFPNNTYGISQVLWGSIGFTTGATLGA  
AFAAEEIDPKKRVLFIGDGLQTLVQEISTMIRWGLKPYL FVLNNDGYTIQKLIHGPKAQY  
NEIQGWDHLSLLPTFGAKDYETHRVATTGEWDKLTQDKSFNDNSKIRMIEVMLPVFDAPQ  
NLVEQAKLTAATNAKQ

>non-antioxidant\_1163

MNYNPEEQFRCTIIRGKAKNMLDNLLPAYANIIDDICPCDKASFVKDFNNRLIEILGEETTK  
KTLDNHRTEIAGKLFGMFYEDDEVIFPSGRTNKYIEDSDQPAFFKDFKFPNGMDKLD  
KVIEKVGAKIQIRQFPYILQVLLTADNNNIQLSKDDIAYV LNSLQVLQGGKIKPIEVIEKIID  
RSNDITKKVRHPGKETSYSMQHIREQLNYLELANLIRIDGNLVKLN YREAENINYIAQFWG  
NKPEFNAYKYDFTSEDDKKSFFKDWQQYYSNVNSHKS

>non-antioxidant\_1164

MELKHSISDYTEAEFLQLVTTICNADTSSEEELV KLVTHFEEMTEHPSGSDLIYYPKEGDDD  
SPSGIVNTVKQWRAANGKSGFKQG

>non-antioxidant\_1165

MESKRKNPGKATGKGPVGDKWLD DAGKDSGAPIPDRIADKLRDKEFKSFDDFRKAVW  
EEVSKDPELSKNL NPSNKSSVSKGYSPATPKNQVGGGRKVYELHHDK PISQGGEVYDMD  
NIRVTTPKRHIDIHRGK

>non-antioxidant\_1166

TVLPKDIPGDSLKVTVGTANGKPGDTVTPVTFADVAKMKNVGT CNFYLG YDASLLEV  
SVDAGPIVKNAAVNFSSASNGTISFLDNTITDELITADGVFANIKFKLKS VTAKTTPVT  
FKDGGAFGDGTMSKIASVTKTNGSVTIDP

>non-antioxidant\_1167

VIVYGDYNN DGNVDSTDFAGLKKYIMAADHAYVKNL DNVNLDNEVNAFDLAILKKYLLG  
MVSKLE

>non-antioxidant\_1168

EVYALEESRDVYLSDDLWLNATHGDDTKSKIVQKNHPFTPGNNNQSTKISLKMEDG SISE  
FEKGLGTIAGSPSTITYDISGAGVTKFFSYLGIDRSANPINEQYAKVDKIEVVVDGKVIYSTI  
NQFPNGLTYETPAIKVDLNIPENAKRLQLKSYAGEKTWGDDEVYADAKFTAKGDFVN

>non-antioxidant\_1169

AHHHHHMHVHITLDRNTANSWLIISKDRRQVRMGDTHQNVSDNKERFSNYPMVLGAQR  
FSSGKMYWEVDVTQKEAWDLGVCRDSVQRKGQFSLSPENGFWTIWLWQDSYEAGTSPQ  
TTLHIQVPPCQIGIFVDYEAGVVSFYNNITDHGSLIYTFSECVFAGPLRPFNFVGFNYSSGNA  
APLKLCPMKM

>non-antioxidant\_1170

GLDTLDRDGDGSTADADCNDFAPIHPGAAEATLDGVDSNCDGRDSGVAEVEVTFKNPG  
TYSSPVINFKIASPPPGPTPIYGPPRDFSGYNSYSLSAIGKTSYYDPTTGTKWNDDTITPVS  
DGQDIWRGMTHHTGKWSFFNGKAGDKITLSVQRDAQEASLKGHPGFILFWRPEGGPLFW  
AGTQDLDEGQTALPADSDTVIGHVIVQHADWTLQGLPPKADHTAPAGVDTELYPMKPDS  
YTMYYVDSGYDADKYVASKKLIMHPTAFKGLALNDGTAGAFKTSITLPKTGYYMLYVAN  
VLEVDDWSVDADGKLTGTEVWEVPAKGCWVNITISKPAEDLDLGFISPDQYTTDPDIVCH  
KNAAPGAISATAAAGSNIVFQWGPVWPHPYGPVIVTYVVECSGSCTTVNKNLRWVKIQ  
EAGINYNTQVWAQQDLINQGNKWTVKIPSSLRPGNYVFRHELLAAHGASSANGMQNYP  
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>non-antioxidant\_1171

MSYYHHHHHLESTSLYKKAGMSDFYDPRERDPSVSRRPQNRQSDEWIRELLLRGTIARV  
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SNSPLELSVQYRSVMVFGTARVLAGEDARAALTTLSERVPGLKVGGETTRPISEDDLKRTS  
VYLSIDRWSGKENWAEQAIQEEDWPALGPEWLG

>non-antioxidant\_1172

GHSSDPVYPCGICTNEVNDDQDAILCEASCQKWFHRICTGMTETAYGLLTAEASAVWGC  
DTCMA

>non-antioxidant\_1173

AMAAKVYVVFSTEMANKAAEAVLKGQVETIVSFHI

>non-antioxidant\_1174

AEKANQVSNIKTQLAMEYMRGQDYRQATASIEDALKSDPKNELAWLVRAEIQYLKVND  
KAQESFRQALSIPKPSAEINNNYGWFLCGRLNRPAESMAYFDKALADPTYPTPIANLNK  
GICSAKQGGFGLAEAYLKRSLAAQPQFPFAFKELARTKMLAGQLGDADYYFKKYQSRVE  
VLQADDLLLGWKIAKALGNAQAAYEYEAQLQANFPYSEELQTVLTGQ

>non-antioxidant\_1175

ASIPSSASVQLDSYNYDGSTFSGKIYVKNIAYSKKVTVVYADGSDNWNNGNIIAASFSGP  
ISGSNYEYWTFSASVKGIFEYIKYEVSGKTYDNNNSANYQVST

>non-antioxidant\_1176

EMETYVNKLHEGSTYTAQYNVLEKDDDPASLTIWVPMFQSSMPADLLIKELANVNILV  
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SKNMLTTVKDLTMKTLNPTHDIALCEFENIVTSKKVIIPTYLRSISVRNKDLNLTLENITTE  
FKNAITNAKIIPYSGLLLIVITVDNKGAFKYIKPQSQFIVDLGAYLEKESIYYVTNWKHTA  
TRFAIKPRED

>non-antioxidant\_1177

MAMIKMSPEEIRAKSQSYGQSDQIRQILSDLTRAQGEIAANWEGQAFSRFEEQFQQLSPK  
VEKFAQLLEEIKQQLNSTADAVQEQQQLSNNFGLQ

>non-antioxidant\_1178

MNALLSNPFKERLRKGEVQIGLWLSSTTAYMAEIAATSGYDWLLIDGEHAPNTIQDLYHQ  
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VGASVARAARWGRIENYMAQVNDLCLLVQVESKTALDNLDEILDVEGIDGVFIGPADLS  
ASLGYPDNAGHPEVQRIIETSIRRIIRAAGKAAGFLAVAPDMAQQCLAWGANFVAVGVDTM  
LYSDALDQRLAMFKSGKNGPRIKGSY

>non-antioxidant\_1179

MSAKPQPIAAANWKCNGTTASIEKLVQVFNEHTISHDVQCVVAPTFFVHIPLVQAKLRNPK  
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FMVIACIGETLQQREANQTAKVVLSTSAIAAKLTKDAWNQVVLAYEPVWAIGTGKVATP  
EQAQEVHLLLRKWVSENIGTDVAAKLRLYGGSVNAANAATLYAKPDINGFLVGGASLKP  
EFRDIIDATR

>non-antioxidant\_1180

GEINGPESVLVNTYQWIIRNWETVKIQWSQNPTMLYNKMEFEPFQSLVPKPAIRGQYSGFVR  
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NKTTRKRLTILGKDAGTLIEDPDESTSGVESAVLRG

>non-antioxidant\_1181

SGRHERDAFDTLFDHAPDKLNVVKKTLITFVNKHLNKLNLEVTELETQFADGVYLVLLM  
GLLEGYFVPLHSFFLTPDSFEQKVLNVSFAFELMQDGGLEKPKPRPEDIVNCDLKSTLRVL  
YNLFTKYRNV

>non-antioxidant\_1182

SDPVDYQAEDATIVQGAVESNHAGYTGTFVNYDNVAGSSVEWTVTVPSAGTYDVVVRY  
ANGTTTSRPLDFSVNGSISASGVAFGSTGTWPAWTTKTVRVTLAAGVNIKIKAVATTANGGP  
NVDKITL

>non-antioxidant\_1183

ERFSPRYIELAVVADHGIFTKYNSNLNTIRTRVHEMLNTVNGFYRSVDVHAPLANLEVWS  
KQDLIKVQKSSKTLKSGGEWRERDLLPRISHDHAQLLTAUVFDGNTIGRAYTGGMCDPR  
HSVGVVRDHSKNNLWVAVTMAHELGHNLGIHHDGTGSCSCGAKSCIMASVLSKVLSYEFS  
DCSQNQYETYLTNHNPCILNKP

>non-antioxidant\_1184

ESNQIADFDKEKATLDEADIDERMKLAQAFNDSLNNVSGDPWSEEMKKKGRAEYAR  
MLEIHERMGHVEIPVIDVDLPVYAGTAEVQLQQGAGHLEGTSLPIGGNSTHAVITAHTGLP  
TAKMFTDLTKLVGDKFYVHNIKEVMAYQVDQVKVIEPTNFDDLIVPGHDYVTLTCTP  
YMINTHRLLRGHRIPYVAEVEEFIAANKLSH

>non-antioxidant\_1185

GDFKEYADALYDSLGHSLICDRDVYIAVSGSSKKDYLNKSISEMLERTMDQRSSVLESD  
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EQ

>non-antioxidant\_1186

MPDIENQAADGQAEIKPEDAPYITNAYKPAYARWFGSDSVRNHFIAMSGEFVGTFLFLW  
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RAIPFRGILMAFTQIVAGMAAAGAASAMTPGEIAFANALGGGASRTRGLFLEAFGTAILC  
LTVLMLAVEKHRATWFAPFVIGIALLIAHLICIYYTGAGLNPARSFPAVAARSFPNYHWIY  
WLGPILAGFLAYSIWQMWKWLNQTTNPGQSDA

>non-antioxidant\_1187

ATYHLEDNHWVGS AFLSTFTHEAIADPTHGRVNYVDQATALAKNLTYASGDTLILRADHTT  
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GVNDQSPNAMTLHTGANCAMPASRTMTGHATNNNCDVNTDGNTGCGVQAPTANSYGPS  
FNANGGGWYAMERTNSFIKVVFFPRNAGNVPNDIASGPATINTDNWGTPTAFFPNTNCDI  
GSHFDANNIIINLTFCGDWAGQASIFNGAGCPGSCVDYVNNNPSAFANAYWDIASVRVYQ  
>non-antioxidant\_1188

GAMDPDLEATLRAIVHSATSLVDARYGAMEVHQRVLRVLFVYEGIDEETVRRIGHLPKG  
LGVIGLLIEDPKPLRLDDVSAHPASIGFPPYHPPMRTFLGVPVVRVDESFGLTYLTDKTNGQ  
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>non-antioxidant\_1189

PLGSMPFHAEPLKPSDEIDMDLGHSVAAQKFKEIREVLEGNRYWARKVTSEEPEFMAEQV  
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VTHVMVVGHTGCGGCIAAFQPLPTEENPGGTPLVRYLEPIIRLKHSLPEGSDVNDLIKEN  
VKMAVKNVNSPTIQGAWEQARKGEFREVFVHGWLYDLSTGNIVDLNVTQGPFPFVDD  
RVPRA

>non-antioxidant\_1190

GSMNVILSIDQSTQSTKVFFYDEELNIVHSNNLNHEQKCLKPGWYEHDPPIEMTNLYNLM  
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NNDIQKKTGTFFNTYFSAFKILWLIQNNPEIKQKIDDGTAVIGNINTWLFNLTGKNCYTDV  
TNASRTLLMDINTLQWDEKMCKIFNITNMSVLPEIKSNCSNFGLVKSEHVPDYLNIPITGCI  
GDQQSACIGQAFDEGEAKCTYGTGVFLLINTGEKVVYSTCGLITTICYKFNNDNDKPKYAL  
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GMTFNTERSIVRALLEGIAFQLNEIVDSLTSDMGIEMLHVLRCDDGGMTKNKPFMQFNSD  
IINTKIEVSKYKEVTSLGAAVLAGLEVKIWDSLDSVKSLLRRSDAVFHSKMDDKRRKKKT  
SEWNKAVERTLIQL

>non-antioxidant\_1191

RPGADCEVCKEFLNRFYKSLIDRGVNFSLDTIEKELISFCLDTKGKENRLCYLGGATKDA  
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>non-antioxidant\_1192

SEDDLTKVLNYTKQRQTEPNPEYYGVAKKKNIIKIHLESFQTFLINKKVNGKEVTPFLNKL  
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GYKSDVMHGDYKTFWNRDQVYKHFIDKFYDATYDMSDKNVVNLGLKDKIFFKDSA  
NYQAKMKSPFYSHLITLTHYPFTLDEKDATIEKSNTGDATVDGYIQTARYLDEALEEYIN  
DLKKKGLYDNSVIMIIYGDHYGISENHNNAMEKLLGEKITPAKFTDLNRTGFWIKIPGKSG  
GINNEYAGQVDVMPITLHLAAGIDTKNYLMFGTDLFSKGHNVVPPFRNGDFITKDYKYVN  
GKIYSNKNNELITTQPADFEKNKKQVEKDLEMSDNVNLGDLFRFYKNPDFKKVNPSKYK  
YETGPK

>non-antioxidant\_1193

GPLGSSDGAATLQEYLELKKALATSEAKVQQLMKVNSSLDELRLKQREIHKLQAENLQL  
RQP

>non-antioxidant\_1194

GAMGNLRLIGVPESDVENGTKLENTLQDIIQENFPNLRQANVQIQEIQRTPQRYSSRRATP  
RHIIVRFTKIVEMKEKMLRAAREKGRVTLKGPRLTVD

>non-antioxidant\_1195

GSHMKITYPLPPNLPEQLPLLTNCQLEDEAILENHLYQQIDLPNQEVNRLVFRDAVFDHLSL  
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DYASFRFANFNLVHFNQTRLVESEFFEVTWKKLLLEACDLTESNWLNTSLKGLDFSQNTFE  
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>non-antioxidant\_1196

FNCNKREGPCSQRSLCECDPNLQLGRHSDQLWHYNLRTNRCERGGYRDNCNSHSSSGAC  
VMACERIHSHHHH

>non-antioxidant\_1197

GSHMKTLPKPEIKFNSWEELLKWEPGAREDDAINRGSVVLASRRTGHLVNEKASKEAKV  
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YGTLLFFNWSNSIADQERFAEALKQDADGSFPIARKLVDMAYYGYDGYFINQETTGDV  
KPLGKMRQFMLSKEYAAKVNHPKYSWYDAMTYNYGRYHQDGLGEYNYQFMQPEG  
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DENGKLRSLGLFAPDTITSLGKTGEDYHKNEIDIFFTYQGDPTGQKPGDKDWYGIANLV  
ADRTPAVGNTFTTSFNTGHGKKWFVDGKVKSDSEWNYRSVSGVLPTWRWWQTSTGEKL  
RAEYDFTDAYNGGNSLKFSGDVAGKTDQDVRLYSTKLEVTEKTKLRVAHKGKGSKVY  
MAFSTTPDYKFDDADAWKELTSDNWTNEEFDLSSLAGKTIYAVKLFFEHEGAVKDYQFN  
LGQLTISDNHQEPQSPTSFSVVKQSLKNAQEAQVQFKGNKDADFYEVEYKDGDSWKL  
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LAENIVP

>non-antioxidant\_1198

MGSSHHHHHHMDRYEIKGVDVASYQGDIDWRELEKQNMKFAFIKATEGSAFVDKYFSKN  
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REDVTKELSVMIEMLEKHYGKKVILYATQEAYDLYIKDAYPQCDIWIRSVLTKPSLSDERK  
WTFWQYTNRGKLSGYNGKEKYIDLNVFYGNEEEFENYGMKD

>non-antioxidant\_1199

GTMGKSKGTRFERDLLVELWKAGFAAIRVAGAGVSPFPCPDIVAGNGRTYLAIEVKMRKE  
LPLYLSADEVEQLVTFARGFGAEAYVALKLPRAAWRFFPVQMLERTEKNFKIDESVYPLGL  
EIAEVAGKFFQERFGEKV

>non-antioxidant\_1200

GAMGIKVQRPRCFDIAINNQPAGRVVFELFSDVCPKTCENFRCLCTGEKGTGKSTQKPLH  
YKSLFHRVVKDFMVQGGDFSEGNGRGGESIYGGFFEDESFAVKHNKEFLLSMANRGKD  
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>non-antioxidant\_1201

MGSSHHHHHHSSGLVPRGSHNAVNIVMRQPTTPNFSSALNITSANEGGSAMQIRGVEKAL  
GTLKITHENPSVDKEYDKNAAALSIDIVKKQKGGKGTAAQGIYINSTSGTTGKLLRIRNLN  
DDKFYVVPDGGFYAKETSQIDGNLKLKDPIANDHAATKAYVDGEVEKLLALLAAKQM

>non-antioxidant\_1202

MGSKNESTASKASGTASEKKIEYLDKTYEVTVPTDKIAITGSVESMEDAKLLDVHPQGAI  
SFGSKFPDMFKDITDKAEPTGKMEPNIEKILEMKPDVILASTKFPEKTLQKISTAGTTIPVS  
HISSNWKENMMLLAQLTGKEKKAKKIIADYEQDLKETKTKINDKAKDSKALVIRIRQGN  
YIYPEQVYFNSTLYGDLGLKAPNEVKAQAQELISLEKLSMNPDHIFVQFSDDENADKP  
DALKDLEKNPIWKSLLKAVKEDHVYVNSVDPLAQGGTAWSKVRFLKAAAELTQNKLAA  
ALEHHHHHH

>non-antioxidant\_1203

GAMAQVPTDPGYFSVLLDVKHFSPEEISVKVVGVDHVEVHARHEERPDEHGFIAREFHRRY

RLPPGVDPAAVTSALSPEGVLSIQATPASAQASLPSPPAAK

>non-antioxidant\_1204

MGSSHHHHHSSGLVPRGSHMAPIVETAKETNSDSSLYLDLMIKVLAGTVYEDPAHRENF  
SHRDSTYREEVRNEGRDWPANAHTMIGIKRLENIRQCVEDVIGNNVPGDLVETGVWRGG  
ACILMRGILRAHDVDRDRTVWVADSFQGPVGDGAGDRKMALHRRNSVLAVSEEEVR  
RNFRNYDLLDEQVRFLPGWFKDTLPTAPIDTLAVLRMDGDLYESTWDTLTNLYPKVSVGG  
YVIVDDYMMCPCCKDAVDEYRAKFDIADELITIDRDGVYWQRTR

>non-antioxidant\_1205

PVQHVGGTYTHIPLSPRTLNAWVKLVEEKKFGAEVVPGFQALSEGCTPYDINQMLNCVG  
DHQAAMQIIREINEEAAEWDVQHPIPGPLPAGQLREPRGSDIAGTTSTVEEQIQWMFRPQ  
NPVPVGNIRRWIQIGLQKCVRMV

>non-antioxidant\_1206

MGSSHHHHHSSGLVPRGSHMAADNRVQMRTTINNESPLLSPLYGNDNGNGLWWGNT  
LKGAWAIPEDVKPYAAIELHPAKVCKPTSCIPRDTKELREWYVKMLEEAQSLNIPVFLVI  
MSAGERNTVPPEWLDEQFQKYSVLKGVLNIEYWIYNNQLAPHSKYLEVCAKYGAHFI  
WHDHEKWFWETIMNDPTFFEASQKYHKNLVLATKNTPIRDDAGTDSIVSGFWLSGLCDN  
WGSSTDTWKWWEKHYTNTFETGRARDMRSYASEPESMIAMEMMNVTGGGTVYNFEC  
AAYTFMTNDVPTPAFTKGIIPFRHAIQNPAPSKEEVNRTKAVFWNGEGRISLNGFYQGL  
YSNDETMPLYNNGRYHILPVIHEKIDKEKISSIFPNAKILTKNSEELSSKVNYLNSLYPKLYE  
GDGYAQRVGNISWYIYNSNANINKNQVMLPMTNNTKSLSLDLTPHTYAVVKENPNNLH  
ILLNNYRTDKTAMWALSGNFDASKSWKKEEELANWISKNYINPVDNDFRTTTLTSLGH  
TGHKQPINISGDKNHYYTYTENWDENTHVYTTITVNHNGMVEMSI

>non-antioxidant\_1207

ELSENFKKLMKYPYRPTCTRCIEEQRVSAWFDERFNRSMQPLLTAKNAHLEEDTYKWW  
LRLQREKQPNNLNDTIRELFQVVPGNVDPLLEKRLVSCRRCAVVGNSGNLKESYYGPQID  
SHDFVLRMNKAPTEGFEADVGSKTTHHFVYPEFRELAEVSMILVPFKTTDLEWVISATT  
TGRISHTYVPVPAKIKVKEKILYHPAFIKYVFDRWLQGHGRYPSTGILSVIFSLHCDEVD  
LYGFGADSKGNWHHYWENNPSAGAFRKTGVHDGDFESNVTTILASINKIRIFKGR

>non-antioxidant\_1208

SCATGPRNCKDLLDRGYFLSGWHTIYLPDCRPLTVLCDMDTDGGGWTVFQRRMDGSVD  
FYRDWAAYKQGFQSGQLGEFWLGNNDIHALTAQGSSELRVLDLDFEGNHQFAKYKSKVA  
DEAEKYKLVLGAFVGGAGNSLTGHNNNFFSTKDQDNDVSSSNCAEFQGAWWYADCH  
ASNLNGLYLMGPHESFANGINWSAAKGYKYSYKVSSEMKVPA

>non-antioxidant\_1209

MDPSQTPDANASISVSYKCGVKDGTNTIRATINIKNTGTTTPVNLSDIKVRYWFTSDGNEQ  
NNFVCDYAAFQTDKVKGIVKKIENSVPADTYCEISFTEDAGRLAPGGSTGTIPFRIEGAA  
EYDQTDYDYSNSEMDDFGDNTKITAYIKDKLKYGVEAAALEHHHHHH

>non-antioxidant\_1210

RMKQLEDKIEENTSKIYHNTNEIARNTKLVGER

>non-antioxidant\_1211

MPTFLLVNDGDFSPGINALREALKSLGRVVVVAPDRNLSGVGHSLTFTEPLKMRKIDTDF  
YTVIDGTPADCVHLGYRVILEEKKPDLVLSGINEGPNLGEDITYSGTVSGAMEGRILGIPSIA  
FSAFGRENIMFEEIAKVCVDIVKVLNEGIPEDTYLNVNIPNLRYEEIKGIKIVTRQGKRAYK  
ERVFKYIDPYGKPFYWIAAEFGWHAEEGTDYWAVLNGYVSVTPLHLDLTNYKVMKSIK

YLEDSP

>non-antioxidant\_1212

APLVHHHHHHALANPAICRYPLGMSGGQIPDEDITASSQWSESTAAKYGRLDSEEGDGAW  
CPEIPVEPDDLKEFLQIDLHLHFITLVGTQGRHAGGGHIEFAPMYKINYSRDGTRWISWR  
NRHGKQVLGDNSNPYDIFLKDLEPPIVARFVRFIPVTDHSMNVCMRVELYGCVWLDG

>non-antioxidant\_1213

MSRNPSNSDAAHAFWSTQPVPQTEDETEKIVFAGPMDEPKTVADIPEEPYPIASTFEWWTP  
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KLLAFIAGVPVTLRMGTPKYMKVKAQEKQEEEEAAKYDAPRHICEINFLCVHKQLREKR  
LAPILIKEVTRRVNRTNVWQAVYTAGVLLPTPYASGQYFHRSLNPEKLVEIRFSGIPAQYQK  
FQNPMAMLKRNYPQPNAPKNSGLREMKPSDVPQVRRILMNYLDNFDVGPVFSDAEISHY  
LLPRDGVVFTYVVENDKKVTDFFSFYRIPSTVIGNSNYNILNAAYVHYAATSMPLHQLIL  
DLLIVAHSRGFDVCNMVEILDNRSFVEQLKFGAGDGHRLRYFYFNWAYPKIKPSQVALVML

>non-antioxidant\_1214

MNPEYDYLFKLLLIGDSGVGKSCLLRFADDTYTESYISTIGVDFKIRTIELDGKTIKLQIW  
DTAGQERFRTITSSYRGAHGIIVVYDVTQESFNNVKQWLQEIDRYASENVNKLIVGKIC  
DLTTKVVVDYTTAKEFADSLGIPFLETSAKNATNVEQSFMTMAAEIKKRMGP

>non-antioxidant\_1215

AMAEAYQIQSNGDPQSKPLLELYVKASGIDARRIGADLFCQEFWMELYALYEIGVARVEV  
KTVNVNSEAFKKNFLGAQPPIMIEEEKELTYTDNREIEGRIFHLAKEFNVPLFEKDPSAEKR  
IENLYRNFKLFLRAKVEFDKGGKEPSRVEDLPAQIKVHYNRVCEQLSNIDQLLSERKSRYL  
LGNSMTEYDCELMPRLHHIRIIGLSLLGFDIPHNFTHLWAYILTAYRTAAFIESCPADQDIIH  
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>non-antioxidant\_1216

MRTSKKEMILRTAIDYIGEYSLETLSYDSLAEATGLSKSGLIYHFPSRHALLGMHELLADD  
WDKELRDITRDPEDPLERLRAVVVTLAENVSRPELLLLIDAPSHPDFLNAWRTVNHQWIP  
DTDDLENDAAHKRAVYLVQLAADGLFVHDYIHDDVLSKSKRQAMLETILELIPSQTELHHH  
HHH

>non-antioxidant\_1217

MGIMPRKVLAIKNFKERFDLLPKLKGVIAEKQPDILVVGNILKNEALEKEYERAHLARR  
EPNRKVIHENEHYIETLDKFFREIGELGVKTFVVPKNDAPLKIFLRAAYEAETAYPNIRVL  
HEGFAGWRGEFEVIGFGGLLTHEFEEDFVLKYPRWYVEYILKFNELKPRRLVTIFYTPPI  
GEFVDRTPEPKHHGS AVVNTIIKSLNPEVAIVGHVGGKHELVGNTIVVNPGEFEEGRYAF  
LDLTQHKIKLEQFS

>non-antioxidant\_1218

SLGLAQAQAEILDRVEKNLSTPWQATVQGRIQPGGEEELLARVYALPQARLFRVEFLKPG  
SLEGNFTVITEKEVWNYLYLTNQLVISPREKAKIQGLGFAPQGLGDLKALSEQVDLRLEGE  
VRLPEGMAWKLVGRSKENQGFAAMELYILKADPRPLRFVFLDEKGVVLADLKVVEFKRT  
NLTEAQLKRYPKDAQVRR

>non-antioxidant\_1219

MRLRVDVIPGEHLAYPDVVLVVDVIRATTTAAAFLEAGAEALYWTPSLESALAFKDEDVV  
LAGETGGLKPPRFDLGNPREALSAQVAGR VVMSTTNGTKAAHAAARTAKHVLLASLY  
NAHAAARLARELATEEVAILCAGKEGRAGLDDLYTAGVLAEYLGFLGEVEPEDGARVALA  
VKRAYPDPLEALSLSAAALALKQVGLEADVPFCAQVAKSAAVPVLGRVGEALIFKRA

>non-antioxidant\_1220

TAPSQVLKIRRPDDWHLHLRDGDMLKTVVPYTSEIYGRAIVMPNLAPPVTTVEAAVAYRQ  
RILDAVPAGHDFPLMTCYLTDSLDPNELERGFNEGVFTAACKLYPANATANSSHGVTSDA  
IMPVLERMEKIGMPLLVHGEVTHADIDIFDREARFIESVMEPLRQRLTALKVVFHITTKDA  
ADYVRDGNERLAATITPQHLMFNRNHMLVGGVVRPHLYCLPILKRNIHQALRELVASGFN  
RVFLGTDSAPHARHRKESSCGCAGCFNAPTALGSYATVFEEMNALQHFEAFCSVNGPQFY  
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>non-antioxidant\_1221

MVPLTEENVESVLDEIRPYLMSDGGNVALHEIDGNVVRVKLQGACGSCPSSTMTMKMGI  
ERRLMEKIPEIVAVEALPDEETGLELNEENIEKVLEEIRPYLIGTADGSLDLVEIEDPIVKIRIT  
GPAAGVMTVRVAVTQKLREKIPSIAAVQLI

>non-antioxidant\_1222

GLGLPAGLYAFNSGGISLDLGINDPVPFNTVGSKFGTAISQLDADTFVISETGIFYKITVIANT  
ATASVLGGLTIQVNGVPPVPGTGSSLSLGAPIVIQAITQITTTPSLVEVIVTGLGLSLALG TSA  
SIIIEKVAL

>non-antioxidant\_1223

GPLGSMADATRRVSEIPVLKTNAGPRDRELWVQRLKEEYQSLIRYVENNKNADNDWF  
RLESNKEGTRWFGKCWYIHDLLKYEFDIEFDIPITYPTTAPEIAVPELDGKTAKMYRGGKIC  
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>non-antioxidant\_1224

MVLYFIGLGLYDERDITVKGLEIAKKCDYVFAEYFTSLMAGTTLGRIQRLIGKEIRVLSRED  
VELNFENIVLPLAKENDVAFLTPGDPLVATTHAELRIRAKRAGVESYVIHAPSIYSAVGITGL  
HIYKFGKSATVAYPEGNWFPSTSYDVIKENAERGLHTLLFLDIKAEKRMVMTANEAMELL  
LKVEDMKKGGVFTDDTLVVVLARAGSLNPTIRAGYVKDLIREDFGDPPHILIVPGKLHIVE  
AEYLVEIAGAPREILRVNV

>non-antioxidant\_1225

MGNTATEFDGPYVITPISGQSTAYWICDNRLKTTTSIEKLQVNRPEHCGDLPETKLSSEIKQI  
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VNEVLWFMVQLDQQARDAGGMVHLLMGNHEQMVLGGDLRYVHQRYDIATTLINRPYN  
KLYSADTEIGQWLRSKNTIHKINDVLYMHGGISSEWISRELTLDKANALYRANVDASKKSL  
KADDLLNFLFFGNGPTWYRGYFSETFTEAELDTILQHFNVNHIVVGHTSQERVLGLFHNK  
VIAVDSSIKVGKSGELLLLENNRLIRGLYDGTRETLQENSLNQ

>non-antioxidant\_1226

AQVINTFDGVADYLQTYHKLDPNYITKSEAQALGWVASKGNLADVAPGKSIGGDIFSNRE  
GKLPGKSGRTWREADINYTSGFRNSDRILYSSDWLIYATTDDHYQTFTKIR

>non-antioxidant\_1227

MKWFNTLSHNRWLEQETDRIFNFGKNAVVPPTGFGWLGNKGQIKEEMGTHLWITARMLH  
VYSVAASMGRPGAYDLVDHGKAMNGALRDKKYGGWYACVNDQGVVDASKQGYQHFF  
ALLGAASAVTTGHPEARKLLDYTIEVIEKYFWSEEEQMCLESWDEAFSQTEDYRGGNAN  
MHAVEAFLIVYDVTHDKKWLDRALRIASVIIHDVARNGDYRVNEHFDSQWNPIRDYNDK  
NPAHRFRAYGGTPGAWIEWGRLMLHLHALEARFETPPAWLLEDAKGLFHATIRDAWAP  
DGADGFVYSVDWDGKPIVRERVRWPIVEAMGTAYALYTLTDDSQYEEWYQKWWDYCIK  
YLMDYENGSWWQELDADNKVTTKVWDGKQDIYHLLHCLVIPRLPLAPGLAPAVAAGLL  
DINAKLEHHHHHH



>non-antioxidant\_1228

MHHHHHMKDKIIDNAITLSEKGYDGTLLDDISKS VNIKKASLYYHYDNKEEIYRKSVE  
NCFNYFIDFMMRNHDDNYSIDGLYQFLFKFIFVDERYIKLYVQLSSAPEALNSEIKHHLQ  
EINTTLHDELIKYYDPHTIALDKEDFINMILMFLETWYFRASFSQKFGIIEDSKNRFKDQVY  
SLLNVFLKK

>non-antioxidant\_1229

AAAAAAMTMMDMNFKYCHKIMKKHKSFSYAFDLLPEDQRKAVWAIYAVCRKIDDSIDV  
YGDIQFLNQIKEDIQSIEKYPYEHFQSDRRIMMALQHVAQHKNIAFQSFYNLIDTVYKD  
QHFTMFETDAELFGYCYGVAGTVGEVLTPI LSDHETHQTYDVARRLGESLQLINILRDVGE  
DFENERIYFSKQRLKQYEV DIAEVYQNGVNNHYIDLWEY YAAIAEKDFRDVMDQIKVFSI  
EAQPIIELAARIYIEILDEV RQANYTLHERVFVEKRKKAKLFHEINSKYHRI

>non-antioxidant\_1230

MTQVRET VSFKAGDVILYPGVPGPRDRAYRVLEGLVRLEAVDEEGNALT LRLVRPGGFFG  
EEALFGQERIYFAEAATDVRL EPLPENPDPPELLKDLAQHLSQGLAEAYRRIERLATQRLKN  
RMAAALLELSETPLAHEEEGKVVLKATHDELA AVGSVRET VTKVIGELAREGYIRSGYG  
KIQLLDLKGKELAESRGQGR

>non-antioxidant\_1231

AHMFMAENRLQLQKGS AEETIERFYNRQGIETIEGFQQMFVTKLNTEDTDEVKILTIWES  
EDSFNNWLNSDVFKEAHKNVRLKSDDDGQQSPILSNKVFKYDIGYHYQK

>non-antioxidant\_1232

GAHMVNMVSNPGFEDGLDSWQDWQQDMSAVPEAAHNGALGLKIGGGKAAGGGQDIPL  
KPNTTYILGAWAKFDSKPA GTFDVVVQYHLKDANNTYVQHILNFNETDWTYKQLLFTTP  
DVFGSTPQLALWKGDTSKANLYVDDVYLVEV

>non-antioxidant\_1233

MSQCVDGIKHLCTSVLGCFDLDLYKQSGGLGDPPELLARDTVFSVSEIEALYELFKKISSAVI  
DDGLINKEEFQLALFKTNK KESLFADRVFDLFDTKHNGILGFEEFARALSVFHPNAPIDDKI  
HFSFQLYDLKQQGFIERQEVKQMVVATLAESGMNLKDTVIEDIIDKTFEEADTKHDGKIDK  
EEWRSLVLRHPSLLKNM TLQYLKDITTTFPSFVFHSQVEDT

>non-antioxidant\_1234

AEIYNKDG NKVDLYGKAVGLHYFSKNGENSYGGNGDMTYARLGFKGETQINSDLTGY  
GQWEYNFQGNNSEGADAQTGNKTRLAFAGLKYADVGSFDYGRNYGVVYDALGYTDML  
PEFGGDTAYSDDFFVGRVGGVATYRNSNFFGLVDGLNFAVQYLGKNERDTARRSNGDGV  
GGSISYEYEGFGIVGAYGAADR TNLQEAQPLGNGKKA EQWATGLKYDANNIYLAANYGE  
TRNATPITNKFTNTSGFANKTQDVLLVAQYQFDFGLRPSIAYTKSKAKDVEGIGDVLVNY  
FEVGATYYFNKNMSTYVDYIINQIDSDNKLGVGSDDTVAVGIVYQF

>non-antioxidant\_1235

GIPMETKGGTVKAASGFNATEDAQVLRKAMKGLGTDED AIGVLACRNTAQRQEIRTAYK  
STIGRDILLEDKSELSSNFEQVILGMMTPTVLYDVQELRRAMKGAGTDEGCLIEILASRNP  
EEIRRINQTYQQYGRSLEEDICS DTSFMFQRVLVSLTAGGRDEGNYLDDALVKQDAQDL  
YEAGEKRWGTDEVKFLSILCSRNRNHLHVFEYKRISQKDIEQSIKSETSGSFEDALLAIV  
KCMRNKPAYFAERLYKSMKGLGTDDSTLIRVMVSRAEIDMLDIRANFKRLYGKSLYSFIK  
DTSGDYRKVLLILCGGDD

>non-antioxidant\_1236

MAFSGSQAPYLSPAVPFSGTIQGGQLDGLQITVNGTVLSSSGTRFAVNFQTFGSGNDIAHFH

NPRFEDGGYVVCNTRQNGSWGPEERKTHMPFQKGMPPDLCFLVQSSDFKVMVNGILFVQ  
YFHRVPFHRVDTISVNGSVQLSYISFQ

>non-antioxidant\_1237

LASVIPDVATLNSLNFNQIKNESCGTSTASSPCITFRYPVDGCYARAHKMRQILMNNGYDCE  
KQFVYGNLKASTGTCCVAWSYHVAILVSYKNASGVTEKRIIDPSLFSSGPVTDTAWRNAC  
VNTSCGSASVSSYANTAGNVYYRSPSNSYLYDNNLINTNCVLTKFSLLSGCSPSPAPDVSSC  
GF

>non-antioxidant\_1238

EQKTRPFTLPNLPLSSLSNSRAPLPISSMGISPDNVQSVQFQNGRCTLDGRLVGTTPVLSH  
VAKIRGTSNGTVINLTELDTGTPFHPFEGPAPIGFPDLGGCDWHINMTQFGHSSQTQYDVDT  
TPDTFVPHLGSIQANGIGSGNYVGVLSWISPPSHPSGSQVDLWKIPNYGSSITEATHLAPSV  
YPPGFGEVLVFFMSKMPGPGAYNLPCLLPQEYISHLASEQAPTVEAALLHYVDPDTGRN  
LGEFKAYPDGFLTCVPNGASSGPQQLPINGVVFVSVWVSRFYQLKPVGTA

>non-antioxidant\_1239

GPGHMEGLRCVVLPEDLCHKFLQLAESNTVRGIETCGILCGKLTHNEFTTITHVIVPKQSAG  
PDYCDMENVEELFNVQDQHDLTLGWIHHTPTQTAFLSSVDLHTHCSYQLMLPEAIAIVC  
SPKHKDTGIFRLTNAGMLEVSACKKKGFHPHTKEPRLFSICKHVLVKDIKIIVDLDR

>non-antioxidant\_1240

GSSEGYCSRILRAQGTTRREGYTEFSLRVEGDPDFYKPGTSYRVTLAAPPYFRGFTLIALR  
ENREGDKEDHAGTFQIIDEETQFMSNCPVAVTESTPRRRTRIQVFWIAPPAGTGCVILKA  
SIVQKRIIYFQDEGSLTKKLCEQDS

>non-antioxidant\_1241

GIPIEPVLENVQPNASAASKAGLQAGDRIVKVDGQPLTQWVTFVMLVRDNPNGKSLALEIER  
QGSPLSLTLIPESKPGNGKAIGFVGIEPKVI

>non-antioxidant\_1242

MDNKLDVFRRELVDVEGIPLFWSIAEHWSQVESFEARPDDILISTYPKSGTTWVSEILDLIY  
NNGDAEKCKRDAIYKRVPFMELIIPGITNGVEMLNMPSPRIVKTHLPVQLLPSSFWKNDC  
KIIYVARNAKDVVVSYYYFYQMAKIHPEPGTWEEFLEKFMAGQVSFGPWYDHVKSWE  
KRKEYRILYLFYEDMKENPKCEIQILKFLEKDIPEEILNKILYHSSFSVMKENPSANYTTM  
MKEEMDHSVSPFMRKGISGDWKNQFTVAQYEEKFEEDYVKKMEDSTLKRSEI

>non-antioxidant\_1243

MGSSHHHHHSSGLVPRGSHMQKLTSPDNNLVMTFQVDSKGAPTYELTYKNKVVIKPS  
TLGLELKKEDNTRTDFDWVDRRDLTKLDSKTNLYDGFVVKDTQTATFDETWQPVWGEEK  
EIRNHYNELAVTLYQPMNDRSIVIRFRLFNDGLGFRYEFPPQKSLNYFVIKEEHSQFGMNG  
DHIAFWIPGDYDTQEYDYTISRLSEIRGLMKEAITPNSSQTPFSQTGVQTALMMKTDDGLY  
INLHEAALVDYSCMHLNLDDKNMVFESWLTDAKGDKGYMQTPCNTPWRTIIVSDDARN  
ILASRITLNLNEPCKIADAASWVKPVKYIGVWWDMITGKGSWAYTDELTSVKLGETDYSK  
TKPNGKHSANTANVKRYIDFAAAHGFDVAVLEGVNEGWEWDFGNSKDYVDFVTPYPD  
FDVKEIHRYAARKGIKMMMHHETSASVRNYERHMDKAYQFMADNGYNSVKSQYVGNII  
PRGEHHYGQWMNNHYLYAVKKAADYKIMVNAHEATRPTGICRTYPNLIGNESARGTEYE  
SFGGNKVYHTTILPFTRLVGGPMDYTPGIFETHCNKMNPNANSQVRSTIARQLALYVTMY  
SPLQMAADIPENYERFMDAFQFIKDVALDWDETNYLEAEPGEYITIARKAKDTDDWYVG  
CTAGENGHTSKLVDFLTPGKQYIATVYADAKDADWKENPQAYTIKKGILTNSKSLNLHA  
ANGGGYAIKIKVVDKSEAKGLKRL

>non-antioxidant\_1244

AARQMEALNRGLVAVKTDGGIFVSWRFLGTENASVLFNVYRDGQKLNAAPVKTTNYVD  
KNGSAGSTYTVRAVNGTEQPASEKASVWAQPYHSVPLDKPAGGTPKGESYTYSANDA  
SVGDVDGDGQYELILKWDPNSKDNSQDGYTGDVLIDAYKLDGTKLWRINLGKNIRAGA  
HYTQFMVYDLGDGKAEVAMKTADGTDGDKVIGNANADYRNEQGRVLSGPEYLTVF  
QGSTGKELVTANFEPARGNVSDWGD SYGNRVDRFLAGIAYLDGQRPSLIMTRGYAKTM  
LVAYNFRDGLSKLWTL DSSKSGNEAFAGQGNHNSIADVDGDGKDEIFGSMVDHDGK  
GMYSTGLGHGDALHTGDLDPGRPGLEVFQVHEDKNAKYGLSFRDAATGKILWGVYAGK  
DVGRGMAADIDPRYPGQEVWANGSLYSAKGVKIGSGVPSSTNFGIWWGDLLREQLDSN  
RIDKWDYQNGVSKNMLTASGAAANNNGTKATPTLQADLLGDWREEVWRTEDSSALRIY  
TTTIPTEHRLYTLMHDPVYRLGIAWQNIAYNQPPHTSFFLGDGMAEQPKPNMYTPLEHHH  
HHH

>non-antioxidant\_1245

MSKMLYRVELIITNKEGVRDPEGETIQRYVVSFRSDKIIETRAGKYLVFRVNSSSQEATEL  
VKKLADMRLYNPVHKIEIRANRIEDSSN

>non-antioxidant\_1246

DDLPHYRFLGKADITGEAAEVGMMGYSSLEQKTAGIHMQRWARAFVIEEAASGRRLVYV  
NTDLGMIFQAVHLKVLARLKAKYPGVYDENNVMLAATHTHSGPGGFSHYAMYNLSVLG  
FQEKTFNAIVDGIVRSIERA QARLQPGRLFYSGGELRNASRNRSLLSHLKNPDIAGYEDGI  
DPQMSVLSFVDANGELAGAISWFPVHSTSMTNANHLISPDNKGYSYHWEHDVSRKSGF  
VAFAQTNAGNLSPNLNLKPGSGPFDNEFDNTREIGLRQFAKAYEIAGQAQEEVLGELDSR  
FRFVDFTRLPIRPEFTDGQPRQLCTAAIGTSLAAGSTEDGPGPLGLEEGNNPFLSALGGLT  
GVPPQELVQCQAEKILADTGNKKPYPWTPTVLP IQMFRIGQLELLGAPAEFTVMAGVRIR  
RAVQAASEAAGIRHVVFNGYANAYASYVTTREEYAAQEYEGGSTLYGPWTQAAYQQLFV  
DMAVALRERLPVETSAIAPDLSCCQMNFTQGVVADDPYIGKSFGDVLQPPRESYRIGDKV  
TVAFVTGHPKNDLRTEKTFLEVVNIGKDGKQTPVTVATDNDWDTQYRWERVGISASKATI  
SWSIPPGTEPGHYIYIRHYGNAKNFWTQKISEIGGSTRSFEVLGTTTP

>non-antioxidant\_1247

ADGKAIFQQKGC SCHQANVDTVGPSLKKIAQAYAGKEDQLIKFLKGEAPAIVDPAKEAI  
MKPQLTMLKGLSDAELKALADFILSHK

>non-antioxidant\_1248

MKRVSRR AFLRRLGVGVAATAAFSPLAVAQARRYRWRIQTAWDAGTVGYSLFQKFTE RV  
KELTDGQLEVPFPAGAVVGTDFMFDVKTGVLDGMNPFTLYWAGRMPVTAFLSSYALG  
LDRPDQWETWFYSLGGLDIARRAF AEQGLFYVGPVQHDLNIIH SKKPIRRFEDFKGVKLR  
VPGGMIAEVFAAAGASTVLLPGGEVYPALERGVIDAADFVGPVAVNYNLGFHQVAKYIIMG  
PPETPAIHQPVDLMDFTINLNRWRS LPKPLQERFIAAVHEYSWIHYAGIQKANLEAWPKYR  
QAGVEVIRLSNEDVRKFRRLAIPWFKWAKMDKYSREAFASQLEYMKGIGYVTDEELKG  
LSL

>non-antioxidant\_1249

SAQFASVTIRNAQTGRLLDSNYNGNVYTL PANGGNYQRWTGPGDGTVRNAQTGRCLDS  
NYDGAVYTLPCNGGSYQKWL FYSNGYIQNVETGRVLD SNYNGNVYTL PANGGNYQKW  
YTG

>non-antioxidant\_1250

MEFTEFNLNELIREVYVLFEEKIRKMNIDFCFETDNEDLRVEADRTRIKQVLINLVQNAIEA

TGENGKIKITSEDMYTKVRVSVWNSGPPPIPEELKEKIFSPFFTTKTQGTGLGLSICRKIIEDE  
HGGKIWTENRENGVVFIFEIPKTPEKR

>non-antioxidant\_1251

MFKGIVQGAGIHKISKNDTQRHGITFPKDILESVEKGTVMVNGCSLTVVRISGDVVYF  
DIDQAINTTTFRELEVGNKVNLEVRPEFGSLLGKGALTGNIKGVATVDNITEEEDRLKVYIK  
IPKDLIENILSEDHIGINGVSHSIEEISDDIIFINYPKNLSITTNLGTLEKGSVDVNVETLNVSN  
WD

>non-antioxidant\_1252

AAPANAVTADDPTAIALKYNQDATKSERVAARPGLPPEEQHCANCQFMQANVGEGDWK  
GCQLFPGKLINVNGWCASWTLKAG

>non-antioxidant\_1253

MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQLIFAGKQLEDGRTLSDYNIQ  
RETLHLVLRGG

>non-antioxidant\_1254

MGSSHHHHHSSGENLYFQGHMTQQPQAKYRHDYRAPDYQITDIDLTFDLDAQTVVTA  
VSQAVRHGASDAPLRLNGEDLKLVSVINDEPWTAWKEEEGALVISNLPERFTLKIINEISP  
AANTALEGLYQSGDALCTQCEAEGFRHITYYLDPRPDVLARFTTKIADKIKYPFLSNGNR  
VAQGELENGRHVWVQWQDPPFKPCYLFALVAGDFDVLDRDTFTTRSGREVALELYVDRGNL  
DRAPWAMTSLKNSMKWDEERFGLDYLDIYMIVAVDFNMGAMENKGLNIFNSKYVLA  
RTDTATDKDYLDIERVIGHEYFHNWTGNRVTCRDWFQLSLKEGLTVFRDQEFSSDLGSRA  
VNRINNVRTMRGLQFAEDASPMAPIRPDMVIEMNNFYTLTVYEKGAEVIRMIHTLLGEE  
NFQKGMQLYFERHDGSAATCDDFVQAMEDASNVDSLHFRRWYSQSGTPIVTVKDDYNP  
ETEYTLTISQRTPATPDQAEKQPLHIPFAIELYDNEGKVIPLQKGGHPVNSVLNVTQAEQT  
FVFDNVYFQVPVALLCEFSAPVKLEYKWSQQLTFLMRHARNDFSRWDAQAQSLATYIKL  
NVARHQQGQPLSLPVHVADAFRAVLLDEKIDPALAAEILTLPVSNEMAELFDIIDPIAIAEVR  
EALTRTLATELADELLAIYNANYQSEYRVEHEDIAKRTLNRNACLRFALFGETHLADVLVSK  
QFHEANNMTDALAALSAAVAAQLPCRDALMQEYDDKWHQNGLVMDKWFILQATSPAA  
NVLETVRGLLQHRSFMSNPNRIRSLIGAFAGSNPAAFHAEDGSGYLFLVEMLTDLNSRNP  
QVASRLIEPLIRLKRYDAKRQEKMRAALEQLKGLNLSGDLYEKITKALA

>non-antioxidant\_1255

SNAMTEKKIDFKKEEKFYAPKRKPERIFVPEMNFMLMVDGKGDGPDGEEYQKAVQSLYAIA  
YTIKMSKMGETRLDGYSDVFPVPLEGFVWSEGKFDLKDRAWLWTSILRQPDFVTEEV  
EWAKEVARKKKPDVDTSRVKLVRFEEGECVQMMHVGPFSSEVHTVAEMHQFMETEGLR  
NDTGAIKHEIYLSDPKANKPEKMKTLRPLVS

>non-antioxidant\_1256

MFKYVIPLCALTLAAPSFAAQTTMLLSQKSDVNYLWSTDESKVARQEVYRGTTSNPDLR  
ERIAVLDAETRTFKDADTNSGLNYWYVVDVSENQAQVVSNAVTTAPNAGPLRAAKASS  
ECKPGATFENRTVDCGGVTIGTSCPNDSKQKPLIILKNATVKNLRISASGGADGIHCDSG  
NCTIENVIWEDICEDAATNNGKMTIVGGIAHNAKDGYGGKPKVLQHNSKNSTTVVKG  
NFTLTGEHGKLRSCGDCSNNGGPRFLTPTSATVNGTIDSIAGVNRNYGDVATISGLKIKN  
YKEGKPPVCEEFGVVKGGQGSTKEYGEKWDTTNCKVSRSGVSKL

>non-antioxidant\_1257

SNALNSAPTPRDVVANAPAPVQAAVAGAQEYAAQAGLNTEELAVDALYNAIKVRLAGTG  
LGIPQIEAFYQANRTNFNGFYMANRGAIDFIFSM

>non-antioxidant\_1258

MTQKFGLSAALTTPFKTDGTVDIDAMIAHARRCLSNCGDSVTLFGTTGEGCSVGSRRERQA  
ILSSFIAAGIAPSRIVTGVLVDSIEDAADQSAEALNAGARNILLAPPSYFKNVSDDGLFAWFS  
AVFSKIGKDARDILVYNIPSVTMVTLVELVGRLLKAAFPGIVTGVDSSGNWSHTERLLKE  
HGDLAILIGDERDLARGVRLGGQGAISGVANFLTQEVRAVAVDGKDDPRIVDLVVELLKF  
PVTPAVKVLVSHTTGETIWSVDRAPLVAISPEDRRQIEGAFDALFRRQAA

>non-antioxidant\_1259

ADYDLKFGMNAGTSSNEYKAAEMFAKEVKEKSQGKIEISLYPSSQLGDDRAMLKQLKDG  
SLDFTFAESARFQLFYPEAAVFALPYVISNYNVAQKALFDTEFGKDLIKKMDKDLGVTTLS  
QAYNGTRQTTSNRAINSIADMKGLKLRVPNAATNLAYAKYVGASPTPMAFSEVYLALQT  
NAVDGQENPLAAVQAQKFYEVQKFLAMTNHILNDQLYLVSNETYKELPEDLQKVVKDA  
ENAAKYHTKLFVDGEKDLVTFEKGQGVKITHPDLVPFKESMKPYAAEFVKQTGQKGES  
LQIEAINPKGEA

>non-antioxidant\_1260

MSLILES�VTTLDEQGRINLAPLGPVLPQSPGGLPQFLLRPYEGSTTCDNLLASGNAVIHV  
IDDALLIAKTAIGKVDASDLVPIPGLEDTHVRLKRCHRWFVAVRVTQRAGTPPRHILTARC  
LASGLVDPFFGFNRAKHAVIEAAVAATRLHLLPPEEIEEELERARIAIEKTGGEPEREALQLI  
RRHVRESSISEGHHHHHH

>non-antioxidant\_1261

GMEFNHLTKQLNQLLAQDYVAFSITENPVVQMLSQASFAQIAYVMQQYSIFPKELVGFTEL  
ARRKALGAGWNGVAQELQENIDEEMGSTTGGISHYTLLADGLEEGLGVAVKNTMPSVAT  
SKLLRTVLSLFDQRQVDYVLGATYAIEATSIPELTLIVKLVEWLHEGAIPKDLQYFFSKHLDE  
WEIEHEAGLRTSVAAYIQPEEFGFAAGFRAMIDAMQVWWQELAQEASSEVVLSTAIAQ  
HH

>non-antioxidant\_1262

PVIQTFVSTPLDHHKRENLAQVYRAVTRDVLGKPEDLVMMTFHDSTPMHFFGSTDPVACV  
RVEALGGYGPSEPEKVTISIVTAAITKECGIVADRIFVLYFSPLHCGWNGTNF

>non-antioxidant\_1263

SNAMKDPLLNSLIYVSRYYGLANSPEALVNGPLPSDGKLTPLLPRAAERAGLVAKENRAE  
LEKISSLILPAILVLKGGDSCVLNSINMETREAEVTTLESGMVPISIPLEDLLEQYTGRYFLV  
KKQFR

>non-antioxidant\_1264

GMSDHVCQEGCRHHSHGEDSPEIQQEFQEGRRDFMRDFAVGGVLSAASLGISSAFGQT  
MPKTGLTSGHATHYYIPASDKTVSWGFFSKSLKPVVELESGDFATIELTHHSNDDASLMV  
KGDPGAESVIFYWDSKRKNVDRRGMGPMDHKLGAGGGMGVHILTGPVAIKGAEPGDVLE  
VRIVDVALRPSANPEFKGKTFGSNVAANWGFHYNELIEPKKREVVTIYELDATGERNWA  
RAFYNRWTPQKDPFGVVHPIVDYGPVPVDHSTISKNYNVLKNIRVVRPHFGTMGLAPK  
EADLVNSVPPSHFGGNIDNWRIGKATMYYPVSVAGGLFSVGDPHASQGDSEMCGTAIEC  
SLTGTFQFILHKKADLPGTPLADLQYPLLETQDEWVLHGFSYANYLAELGPDAQNSIFS  
SLDLALKDAFRKMRHFLMQTQNLTEDEAVSLMSIGVDFGITQVVVDGNWGVHAVVKKGIF  
PGRDV

>non-antioxidant\_1265

SAVAPAEINEARLVAQYNYSINILAMLLVGFGLMVFVRRYGFSAATTGTYLVVATGLPLYIL  
LRANGIFGHALTPHSVDAVIYAFAVATGLIAMGAVLGRLRVVFQYALLALFIVPVYLLNEWL

VLDNASGLTEGFQDSAGSIAIHAFGAYFGLGVSIALTTAAQRAQPIESDATSDRFSMLGSM  
VLWLFWPSFATAIVPFEQMPQTIVNTLLALCGATLATYFLSALFHKGKASIVDMANAALAG  
GVAIGSVCNIVGPVGAFFVIGLLGGAISVVGFFVIQPMLESKAKTIDTCGVHNLHGLPGLLG  
GFSAILVPGIAVAQLTGIGITLALALIGGVIAGALIKLTGTTKQAYEDSHEFIHLAGPEDEHK  
AERLVLEAKTEIQGLKNRIDA AVL SAKSEGH HHHHHH

>non-antioxidant\_1266

MGSSHHHHHSSGLVPRGSHMEAIGVLMCMPMSTYLEQELDKRFKLFYWTQPAQRDFL  
ALQAESIRAVVGN S NAGADAELIDALPKLEIVSSFSVGLDKVDLIKCEEKGV RVTNTPDVL  
TDDVADLAIGLILAVLRRICECDKYVRRGAWKFGDFKLTTFSGKRVGIIGLGRIGLAVAER  
AEAFDCPISYFSRSKKPNTNYTY YGSVVELASNSDILVVACPLTPETTHIINREVIDALGPKG  
VLINIGRPHVDEPELV SALVEGRLGGAGLDVFEREPEVPEKLFGLENVLLPHVGS GTVE  
TRKVMADLVVGNLEAHFSGKPLLTPVV

>non-antioxidant\_1267

GMDISLLKQVVQSTNKIALSTAVNNEADV KIVNFVWYEAQPDTLYFSSVKTSPALKVYDQ  
NPDIAFITIPNDGTAGNPYLRAQHVKLQRSTKTMTDLLPQYLETVPNYQQVWDAIGSTLV  
VFELKLTDLFVDAGVGG EKQTLTFN

>non-antioxidant\_1268

MGSVTPIPLPKIDEPEEYNTNYILFWNHVGLLELRVTHTVGGPLTGPPLSARALGMLHLAI  
HDAYFSICPPTDFTTFLSPDTENAAYRLPSPNGANDARQAVAGAALKMLSSLYMKPVEQP  
NPNPGANISDNAYAQLGLVLD RSVLEAPGGVDRESASF MFGEDVADVFFALLNDPRGASQ  
EGYHPTPGRYKFDDEPTHPVVLIPVD PNNPNGP KMPFRQYHAPFYGKTTKRFATQSEHFL  
ADPPGLRSNADETA EYDDAVRVAIAMGGAQALNSTKRSPWQTAQGLYWAYDGSNLIGTP  
PRFYNQIVRRIA VTYKKEEDLANSEVNNAD FARLFALVDVACTDAGIFSWKEKWEFEFWR  
PLSGVRDDGRPDHGD PFWLTLGAPATNTNDIPFKPPFPAYPSGHATFGGAVFQM VRRYYN  
GRVGTWKDDEPDNIAIDMMISEELNGVNRDLRQPYDPTAPIEDQPGIVRTRIVRHFDS AWE  
LMFENAI SRIFLGVHWRFDAAAARDILIP TTTKDVYAVDNNGATVFQNVEDIRY TTRGTRE  
DREGLFPIGGVPLGIEIADEIFNGLKPTPEIQMPQETPVQKPVGQQPVKGMWEEEQAP  
VVKEAP

>non-antioxidant\_1269

ANQLRELKQTHTYTVFGYTDGGFAVISADDLAPELLGVSESNFVETDNPSFKWWLKAIDE  
VITNAVKSNKPLNVIKPDPSKYAAEVSTLLTTTWGQQMPYNKLLPKTKKGR LITGAVATAT  
AQVLNYFKYPVRGIGSHTVHYPANDPSGVAISADFGNTTYD WANMKDNYS GNYTEAEA  
NAVATLMLHCGVASEMQYGGPNEGSGAYMTDCAAGLRTYFGFTDAEYITRANYTDEQW  
MDIVFSELTKGHPLIYGGVSPGSMGQDAGHAFVIDGYNKAGLVS VNWGWNGDVDGYYK  
IDLLNPGNMYSFTA EQDMVRGVY GKP

>non-antioxidant\_1270

ANLERTFIAIKPDGVQRGLVGEIIRKFEQKGFRLVAMKFLRASEEHLKQHYIDLKDRPFFPG  
LVKYMNSGPVVAMVWEGLNVVKTGRV MLGETNPADSKPGTIRGDFCIQVGRNIIHGSDS  
VKS AEKEISLWFKPEELVDYKSCAHDWVYE

>non-antioxidant\_1271

GCSNISEDVNNPNRSLFLIESEPSTGASVSKNLTEIILIFSNDINKVSQ LALD LITDSDIQGD  
YNI EGNKVIINNFSLEPTCNYRLSYEVIDIYDNHLQGYIEFLVNQSNYPQIPDQEVNHTILQA  
FYWEMNTGEYATEHP EEANLWNLLAERAPELAEAGFTAVWLPPANKGMAGIHDVGYGT  
YDLWDLGEFDQKGTVRTKYGTGGELENAIDALHNNDIKVYF DAVLNHRMGADYAETVL

LDENSRDKPGQYIKAWTGFNFPGRNGEYSNFTWNGQCFDGTDWDDYSKESGKYLDFDEK  
SWDWTYNWDEDYLMGADVYENEAVQNDVIDWGWQWIINNIDFDGFRLDAVKHIDYRFI  
DKWMSAVQNSSNRDVFFVGEAWVEDVDDLKGFLLDTVGNPDLRVFDFPLRSFFVDMNLG  
AYMADLRNAGLVNSPGYENRAVTFVDNHDTDRDEGSYTVSIYSRKYQAYAYILTRAEGVP  
TVYWKDYIYWEMKEGLDKLLTARRYAYGPGYEVDNNDADIYSYVRSGFDPVAGDGLV  
LMISDGTSGNVAGKWINSRQPDTEFYDLTGHIKEHVTTDSEGYGNFKVIKSEDKGWSI WV  
PVE

>non-antioxidant\_1272

GMPQHDKSRLVRIDTGPMPINPVAGKPSRPIAGDASFRTVTAFEGGQKVESGVWESTSGSF  
QSNNTGYIEYCHIEGEARLVDPDGTVHAVKAGDAFIMPEGYTGRWEVDHRHVKKIYFVTH  
LA

>non-antioxidant\_1273

DDLNIKTMPGVPQIDAESYILIDYNSGKVLAEQNADVRRDPASLTKMMSYVIGQAMKA  
GKFKETDLVTIGNDAWATGNPVFKGSSLMFLKPGMQVPVSQLIRGINLQSGNDACVAMA  
DFAAGSQDAFVGLMNSYVNALGLKNTHFQTVHGLDADGQYSSARDMALIGQALIRDVP  
NEYSIYKEKEFTFNGIRQLNRNGLLWDNSLVNDGIKTGHTDKAGYNLVAATEGQMRLIS  
AVMGGRTFKGREAESKLLTWGFRFFETVNPLKVGKEFASEPWFVFGSDRASLGVDKDV  
YLTIPRGRMKDLKASYVLNSSELHAPLQKNQVVGTFINFLDQKTIEQRPLVVLQEIPEGNF  
GDPVID

>non-antioxidant\_1274

SNAMKPKLILMSHGRMAEETLASTQMIVGELADAAIVSMTAEDGLSGTQAKLAAILKEA  
GNVPTLVLADLKGTPCNVAMMAMGTYPQLRVVAGLNLAMAIEAAVSPVENVDELAAY  
LTQIGQSAVTTIDLPELTDEEEFEE

>non-antioxidant\_1275

MDPMYLLVDVGNTHSVFSITEDGKTFRRWRLSTGVFQTEDELFSHLHPLLGDAMREIKGI  
GVASVVPTQNTVIERFSQKYFHISPIWVKAKNGCVKWNVKNPSEVGADRVANVVAFVKE  
YGKNGIIMDMGTATTVDLVVNGSYEGGAILPGFFMMVHSLFRGTAKLPLVEVKPADFVVG  
KDTEENIRLGVVNGSVYALEGIIGRIKEVYGDLPVVLTTGGQSKIVKDMIKHEIFDEDLTIKG  
VYHFCFGD

>non-antioxidant\_1276

GSKLQICVEPTSQKLMPGSTLVLQCVAVGSPIPHYQWFKNELPLTHETKKLYMVPYVDLE  
HQGTYWCHVYNDRDSQDSKKVEIIDELENNL

>non-antioxidant\_1277

ADSTITIRGYVRDNR

>non-antioxidant\_1278

MGSSHHHHHSSGLVPRGSMAQGLIEVERKFLPGPGTEERLQELGGTLEYRVTFRDYTD  
TPELSLMQADHWLRRREDSGWELKCPGAAGVLGPHTYKELTAEPTIVAQLCKVLRADG  
LGAGDVAAVLGPLGLQEVASFVTKRSAWKLVLGGADEEPPQLRVDLDTADFGYAVGEVE  
ALVHEEAEPVTALEKIHRLSSMLGVPAQETAPAKLIVYLQRFQDYQRLLVNSS

>non-antioxidant\_1279

MSLAEPYKADIGGSLKLPESRIIAGLLLEGVTEQWRHAIEVENVLQRRSPGTAKRQSS  
LMRNRETMGPELWQMVRDGSTQVAIQAVFAAAIKHSTLLGDFLDLVVRDQFRMFRPDL  
PRKMWDQYLEQCRNRDPLMPVWQDSTANKLADCVYRILVEVGYITDSKTYRLKSVRISG  
EVMSYLRENNEQYVIRCIQVSIEGHHHHH

>non-antioxidant\_1280

MAHHHHHHMAASANGSTKGETDLPIGKDGTTLHLKCKSDELADRIIFVGDPRVDVISG  
YFDKDSIRASRDHREIRFATGTYKGPVTVISTGMGVNDNIEIVLNEIHALKEYDMERQWR  
HRKGDADAPSAGPFFDPSTMKIIRLGTGCGSPAESVPPLALAVTRHAIGMDNTSLYYASGTR  
ETSKDQQEIRRVREQTGLRAIDIYTSMAHPNITKSICAACDAHNAATGSEADKQQYVIGTT  
ATASGFYGCQGRRVGRFMKHLTVPNMVEELGSLKFNLNNGVEVVTNIEMETSAICYLSDM  
LGYQAGAACVVVSKRVGEKKMFLGDQLDAAMKRCIKIILEALVSA

>non-antioxidant\_1281

MVEATAQETDRPRFSFSIAAREGKARTGTIEMKRGVIRTPAFMPVGTAAATVKALKPETVRA  
TGADIILGNTYHMLLRPGAERIAKLGGLHSFMGWDRPILTDSSGGFQVMSLSSLTQSEEGV  
TFKSHLDGSRHMLSPERSIEIQHLLGSDIVMAFDECTPYPATPSRAASSMERSMRWAKRSR  
DAFDSRKEQAENAALFGIQQGSVFENLRQQSADALAEIGFDGYAVGGLAGGEGQDEMFR  
VLDVSPMLPDDKPHYLMGVGKPDIVGAVERGIDMFDCVLPTRSGRNGQAFWTDGPINI  
RNARFSEDLKPLDSECHCAVCQKWSRAYIHHLIRAGEILGAMLMTEHNIAFYQQLMQKIR  
DSISEGRFSQFAQDFRARYFARNS

>non-antioxidant\_1282

MRPVFPLILSAVLFLSCFFGARQTEASASKRAIDANQIVNRMSLDEKLGQMLMPDFRNWQ  
KEGESSPQALTKMNDEVASLVKKYQFGGILFAENVKTTKQTVQLTDDYQKASPKIPLMLS  
IDQEGGIVTRLGEGTNFPGNMALGAARSINAYQTGSIIGKELSALGINTDFSPVVDINNNP  
DNPVIGVRSFSSNRELTSRLGLYTMKGLQRQDIASALKHFPGHGD TDVDSHYGLPLVSHG  
QERLREVELYPFQKAIDAGADMVMTAHVQFPFDDTTYKSKLDGSDILVPATLSKKVMTG  
LLRQEMGFNGVIVTDALNMKAIADHFGQEEAVVMAVKAGVDIALMPASVTSLKEEQKFA  
RVIQALKEAVKNGDIPEQQINNSVERIISLKIKRGMYPARNSDSTKEKIAKAKKIVGSKQHL  
KAEEKLAEKAVTVLKNEQHTLFPKPKKGSRLIVAPYEEQTASIEQTIHDLIKRKKIKPVSL  
KMNFAVQVFKTEHEKQVKEADYIITGSYVVKNDPVVNDGVIDDTISDSSKWATVFPRAVM  
KAALQHNPVFLMSLRNPYDAANFEEAKALIAVYGFKGYANGRYLQPNIPAGVMAIFGQ  
AKPKGTLVDIPSVTKPGNTLYPLGYGLNIKTGRPL

>non-antioxidant\_1283

MENREPLLPARWSSAYVSYWSPMLPDDQLTSGYCWFDYERDICRIDGLFNPWSERDTGY  
RLWMSEVGNAAASGRWTKQKVAYGRERTALGEQLCERPLDDETGPFAELFLPRDVLRLG  
ARHIGRRVVLGREADGWRYQRPKGKGPSTLYLDAASGTPLRMVTGDEASRASLRDFPNVS  
EAEIPDAVFAAKRLEHHHHHH

>non-antioxidant\_1284

MFSAGHKIKGTVVLMPKNELEVNPDGSAVDNLNAFLGRSVSLQLISATKADAHGKGVG  
KDTFLEGINTSLPTLGAGESAFNIHFWDGSMGIPGAFYIKNYMQVEFFLKSLTLEAISNQG  
TIRFVCNSWVYNTKLYKSVRIFANHTYVPSETPAPLVEYREEELKSLRNGTGERKEYDR  
IYDYDVYNDLGNPDKSEKLARPVLGGSSTFPYPRRGRTGRGPTVTDPNTEKQGEVFYVPR  
DENLGHLSKSDALEIGTKSLSQIVQPAFESAFDLKSTPIEFHSFQDVHDLYEGGIKLPRDVIS  
TIPLPVIKELYRTDGQHILKFPQPHVVQVSQSAWMTDEEFAREMIAGVNPCVIRGLEEFPP  
KSNLDPAYIGDQSSKITADSLDLGTYMDEALGSRRLFMLDYHDIFMPYVRQINQLNSAK  
TYATRILFLREDGTLKPVAIELSLPHSAGDLSAAVSQVVLPAKEGVESTIWLLAKAYVIVN  
DSCYHQLMSHWLNTHAAMEPFVIATHRHLSVLHPIYKLLTPHYRNNMNINALARQSLINA  
NGIAETTFLPSKYSVEMSSAVYKNWVFTDQALPADLIKRGVAIKDPSTPHGVRLIEDYPY  
AADGLEIWAIAIKTWVQYVPLYYARDDDVKNDSELQHWWEAVEKGGHDLKDKPWWP



KLQTLLEDLVEVCLIIIWIASALHAAVNFGQYPYGGIMNRPTASRLLPEKGTPEYEEMINN  
HEKAYLRTITSKLPTLISLSVIEILSTHASDEVYLGQRDNPHWTSDSKALQAFQKFGNKLKE  
IEEKLVRNNDPSLQGNRLGPVQLPYTLLYPSSEEGLTFRGIPNSISI

>non-antioxidant\_1285

GPPQMSATNEDLKTNFHSLHNQMRQMPMSHFREALDAPDYSGMRQSGFFAMSQGFQLE  
SHGGDVFMHAHREN PQCKGDFAGDKFHISVQREQVPQAFQALSGLLFSVDSPIDKWKVT  
DMERVDQQSRVAVGAQFTLYVKPDQENSQYSASSLHNTRQFIECLESRLSEGLMPGQYP  
ESDVHPENWKYVSYRNELRSGRDGGEMQSQUALREEPFYRLMAE

>non-antioxidant\_1286

SISPAQIAEALQGRGWDAEIVTDAS MAGQLVDVRPEGILKCV DGRGSDNTRMGGPKMPG  
GIYAI AHNRGVT SIEGLKQITKEVASKGHLPSVHGDHSSDMLGCGFFKLWVTGRFDDMGY  
PRPQFDADQGANAVKDAGGIEMHHGSHTTEKVVYINLLANKTLEPNENDQRFIVDGWAA  
DKFGLDVPKFLIAAAATVEMLGPKNAKIVVP

>non-antioxidant\_1287

MQFVNKQFNKDPVNGVDIAYIKIPNVGQMOPVKAFKIHNKIWWIPERDTFTNPEEGDLN  
PPPEAKQVPVSYDYDSTYLSTDNEKDNLYLKGVTKLFERIYSTD LGRMLLTSIVRGIPFWGGS  
TIDTELKVIDTNCINVIQPDGSYRSEELNLVIIGPSADIIQFECKSFGHEVLNLRNGYGSTQY  
IRFSPDFTFGFEESLEVDTNPLL GAGKFATDPAVTLAHELHAGHRLYGIAINPNRVFKVNTN  
AYYEMSGLEVSFEELRTFGGHDAKFIDSLQENEFRLYYYNKFKDIAS TLNKAKSIVGTTAS  
LQYMKNVFKKEYLLSEDTSGKFSVDKLFKFKLYKMLTEIYTEDNFVFKFKVLNRKTYLN  
FDKAVFKINIVPKVNYTIYDGFNLRNTNLAANFNGQNT EINNMFNFTKLKNFTGLFEF

>non-antioxidant\_1288

SNAMNRLKNMSKYSDAKELASLT LGKKTEYANQYDPSLLQPVRSLNRNDLHLSATLPFQ  
GCDIWTLYELSWLNQKGLPQVAIGEVSIPATSANLIESKSFKLYLNSYNQTRFASWDEVQT  
RLVHDL SACAGETVT VNVKSLNEYTAEP IVTMQGE CIDDQDIEIAN YEFDDALLQGAAQG  
EEVSEVLHSHLLKSNCLITNQP DWGSVEIAYHGAKMNREAL RYLVSF REHNEFHQCVE  
RIFTDIMRYCQPQSLTVYARYTRRGGLDINPFRSSHQSAPNHNQRMARQ

>non-antioxidant\_1289

MTDAAEEVLLGKKGCTGVITLNRPKFLNALT LNMIRQIYPQLKKWEQDPETFLIIKGAGG  
KAF CAGGDIRVISEAEKAKQKIAPVFFREEYMLNNAV GSCQKPYVALIHGITMGGGVGLS  
VHGQFRVATEKCLFAMPETAIGLFPDVG GGYFLPRLQGKLG YFLALTGFRLKGRDVYRAG  
IATHFVDSEKLAMLEEDLLALKSPSKENIASVLENYHTESKIDRDKSFIL EEHMDKINSCFS  
ANTVEEIIENLQQDGS SFALEQLKVINKMSPTSLKITLRQLMEGSSKTLQEVLTMEYRLSQ  
ACMRGHDFHEGVRAVLIDKDQSPKWKPADLKEVTEEDLNNHFKSLGSSDLKFAENLYFQ

>non-antioxidant\_1290

DGGFCEVCKKLVGYLDRNLEKNSTKQEILAALEK GCSFLPDPYQKQCDQFVAEYEPVLEI  
LVEVMDPSFVCLKIGACPS

>non-antioxidant\_1291

MSLANLSELPNIGKVLEQDLIKAGIKTPVELKDVGSKEAFLRIWENDSSVCMSELYALEGA  
VQGIRWHGLDEAKKIELKKFHQSLEGHHHHHH

>non-antioxidant\_1292

MLEDLIGKAYLESAEDRRRGDRSEEVEAIRKYIRSARRTVVPNWN A EKVD AINDVLR SFN  
LREAEHLQFNTNWADLTRMPAVTKALMALDISGADLVIARGRLGVPGSGSLLVIMDSRGR  
LLSAAMSPPHVIHSMEVREAVRSEMTHALERIGFKR

>non-antioxidant\_1293

MDNSVETIELKRGNSVYVQYDDIMFFESSTKSHRLIAHLDNRQIEFYGNLKELSQLDDRF  
FRCHNSFVVNRHNIESIDSKERIVYFKNKEHCYASVRNVKKI

>non-antioxidant\_1294

MQQQCDTVSAWQSLRGP GTGGYYL FKTTEGGKTDCTYVKGSNFNDAAQTATYTYGNLG  
SGNQLTQQTASASISGNAIVVGTDHSEVLVSDGSTCDVVRLNGQIELWIHSSATSNTGNLN  
SCCTDKFNQEKGSRPEHVYRSTCPNLPA

>non-antioxidant\_1295

MSLSWEIEELDREIGKIKKHSLIHEEDASSRGKDILFYILSRKLKSDNLVGMFSISYPLQLI  
IRILSRFGVDVIKYLENHLAIVDTFGSFHGKATMPGVWYLEGMLSSETLPIKYAKAVEDH  
KKVWMDLNLFE GRELYGFAISMSGYLEVFTPEETLRYLETSAEVRYGHPAYKKYPRGTNF  
WLWEGVKDKRVLLSVYRRADYVLKTRSSLGENGIKRELLVIKTPKPIEELVRFEYEFKGNE  
PKLRREGHHHHHH

>non-antioxidant\_1296

SLRPPLPPATPQEVQFVQHMLQHHAQALDLAAPMLERSQQRTVRSALDIQLSQREQMRQ  
MEAMLGRWGQPPGEPISPEHARMMGMASEAEVAGLSTLPVEQAERQFLRLMIRHHQGA  
AMTLPMLDAAARPEVERLARQIVVTQRGEIRTMEGVLGRLDGEVPAAPMRPVEHGHGH

>non-antioxidant\_1297

SNAKSAVTAQSILEKADEIRFPQDSFQVNVAIRTAAPDHAEDLYRYQVLSKGNENSIVMITE  
PASERGQAILMKGRDLWVFMPSVSQPIRLSLSQRLTGQVANGDIARANFTGDYHPQLLRN  
ESIDDEDYVLELTGIDRSVTYQKVVLLWVNQSNFRPYKAEFYSVSGRLLKTSRYENFDNIL  
GEMRPTRIIMEDALKSGEVSVDYSDMKLRDLDPDKIFTKDYLKRLE

>non-antioxidant\_1298

SNESVDYRATFPE

>non-antioxidant\_1299

MGSSHHHHHHSQDPMLSKDIKLLNEQVNKEMNSSNLYMSMSSWCYTHSLDGAGLFLFD  
HAAEEYEHAKKLIIFLNENNVPVQLTSSAPEHKFEGLTQIFQKAYEHEQHISESINNIVDHA  
IKSKDHATFNFLQWYVAEQHEEEVLFKDILDKIELIGNENHGLYLADQYVKGIKSRKS

>non-antioxidant\_1300

RSSHHHHHHGFEFDDPIRPPLKVARSPRPGQCQDVVQDVPNVDVQMLELYDRMSFKDIDG  
GVWKQGWNIKYDPLKYNAHHKLKV FV VPHSHNDPGWIQT FEEYYQHDTKHILSNALRH  
LHDNPEMKFIWAEISYFARFYHDLGENKKLQMK SIVKNGQLEFVTGGWVMPDEANSHW  
RNVLLQLTEGQTWLKQFMNVTPTASWAIAPFGHSPTMPYILQKSGFKNMLIQRTHYSVKK  
ELAQQRQLEFLWRQIWDNKGDTALFTHMMPFYSYDIPHTCGPDPK VCCQDFKRMGSFG  
LSCPWKVPPRTISDQNVAAARSDLLVDQWKKKAELYRTNVLLIPLGDDFRFKQNT EWDVQR  
VNYERLFEHINSQAHFNVQAQFGTLQEYF DAVHQAERAGQAEFPTLSGDFFTYADRSDNY  
WSGYYSRPHYKRM DRVLMHYVRAAEMLSAWHSWDGMARIEERLEQARRELSLFQHH  
DGITGTAKTHVVVDYEQRMQEALKACQMVMQSVYRLLTKPSIYSPDFSESYFTLDDSR  
WPGSGVEDSRTTIILGEDILPSKHVVMHNTLPHWREQLVDFYVSSPFVSVTDLANNPVEA  
QVSPVWSWHHDTLTKTIHPQGSTTKYRIIFKARVPPMGLATYVLTISDSKPEHTSYASNLLL  
RKNPTSLPLGQYPEDVKFGDPREISLRVGN GPTLAFSEQGLLKS IQLTQDSPHVPVHFKFLK  
YGVRSHGDRSGAYLFLPNGPASPVELGQP VVLVTKGKLESSVSVGLPSVVHQTIMRGGAP  
EIRNLVDIGSLDNTEIVMRLETHIDSGDIFYTDLNGLQFIKRRRLDKLPLQANYYPISGMFI  
EDANTRLLTLTGQPLGGSSLASGELEIMQDRRLASDDERGLGQGVLDNKPV LHIYRLVLE

KVNNCVRPSKLHPAGYLTSAAHKASQSLLDPLDKFIFAENEWIGAQQQFGGDHPSAREDL  
DVSVMRRLTKSSAKTQRVGYVLHRTNLMQCGTPEEHTQKLDVCHLLPNVARCERTTLTFL  
QNLEHLDGMVAPEVCPMETAAYVSSHSS

>non-antioxidant\_1301

NVRFDLSSATSSSYKTFIKNLREALPKDGKVYDIPVLLSTVMDSRRFILIDLVNYDGQSITA  
AIDVLNVYIVAYSTGTVSYFFQQVPAQAPKLLFKGTQQRTPYTGNENLQTAACKLRENI  
ELGLPALDSAITTLFHYNAAAASALLVLIQTTSEARFRYIELQIANNVGTGKFKPSQTIISL  
ENNWSALSQIQIAKNKNGQFETPVILIDPQGNRVQITNVTSNVVTQNIQLLLIGATA

>non-antioxidant\_1302

MAPTSSIEIVLDKTTASVGEIVTASINIKNITNFSGCQLNMKYDPAVLQPVTSSTGVAITKST  
MPGAGTILNSDFNLRQVADNDLEKILNFSKAYVSLDDYRTAAAPEQTGTAVVVKFKVLK  
EETSSISFEDTTSVPNAIDGTVLFDWNGDRIQSGYSVIQPAVINLDMIKASLEHHHHHH

>non-antioxidant\_1303

ADTMTFTAANGNVTFDHHKHQTIVPDCAVCHGKTPGKIEGFGKEMAHGKSCCKGCHEEM  
KKGPTKCGECHKK

>non-antioxidant\_1304

MKRVLKSTEMSIGSGENVLSVHPVLDDNSCLFHAIAYGIFKQDSVRDLREMVSKVLNN  
PVKFNDAILDKPNKYAQWILKMESWGGAEIIGIISDALAVAIYVVDIDAVKIEKFNEKDFD  
NYILILFNHGIHYDSLTMNEFKTVFNKNQPESDDVLTAALQLASNLKQTGYSFNTHKAQIKC  
NTCQMTFVGEREVARHAESTGHVDFGQNR

>non-antioxidant\_1305

GSSQISDMTRDGLANKALAVARTLADSPEIRQGLQKKPQESGIQAIAEAVRKRNDLLFIVV  
TDMQSLRYSHPEAQRIGQPFKGDILKALNGEENVAINRGFLAQLRVFTPIYDENHKQIG  
VVAIGLELSRVTQQINDSRW

>non-antioxidant\_1306

GSPLPWCPLHVAVCPIPAAGLDVTQPCGDCGTIQENWVCLSCYQVYCGRYINGHMLQHH  
GNSGHPLVLSYIDLSAWCYQCAYVHHQALLDVKNIAHQNKFGEDMPHPH

>non-antioxidant\_1307

ANADNYKNVINRTGAPQYMKDYDYDDHQRFNPFDDLGAWHGHLLPDGPNTMGGFFGV  
ALLTEEYINFMASNFDRLTWVQDGGKVDFTLEAYSIPGALVQKLTAKDVQVEMTLRFATP  
RTSLETKITSNKPLDLVWDGELLEKLEAKEGKPLSDKTIAGEYDPYQRKISATRDGLKVT  
FGKVRATWDLTSGESEYQVHKSLPVQTEINGNRFTSKAHINGSTTLYTTYSHLLTAQEV  
KEQMQRDILARPAFYLTASQQRWEEYLKKGLTNPDPATPEQTRVAVKAIETLNGNWRSPGG  
AVKFNTVTPSVTGRWFSGNQTPWPDWTKQAFAMAHFNPDIAKENIRAVFSWQIQPGDSV  
RPQDVGFVPDLIAWNLSPERGGDGGNWNERNTPKPSLAAWSVMEVYNVTQDKTWVAEM  
YPKLVAYHDWWLRNRDHNGNGVPEYGATRDKAHNTESGEMLFTVKKGDKEETQSGLN  
NYARVVEKGYDSLEIPAQVAASWESGRDDAAVFGFIDKEQLDKYVANGGKRSDWTVKF  
AENRSQDGTLLGYSLLQESVDQASYMYSNDHYLAEMATILGKPEEAKRYRQLAQQAD  
YINTCMFDPTTQFYVDRIEDKPLANGCAGKPIVERGKGPEGWSPLFNGAATQANADAV  
VKVMLDPKEFNTFVPLGTAALTNPAFGADIYWRGRVWVDQFWFGLKGMERYGYRDDAL  
KLADTFFRHAKGLTADGPIQENYNPLTGAQQGAPNFSWSAAHLYMLYNDFFRQK

>non-antioxidant\_1308

MGSSHHHHHHSSGLVPRGSHMLEDPMGTLIRATTLRSLSFIDVVNDNGFYQFEKPKGRK  
YVATLDCSEGRGQDYHALQIIDITEFPYKQVAVYHSNTTSHFILPDIVFKYLMYNECPVYI

ELNSTGVSIAKSLAMDLEYDNIICDSFIDLGMKQSKRSKAMGCSALKDLIEKDKLIINHKG  
TIQELRTFSEKGVSWAAEEGFHDDLVMISLVIFGWLTTEKFAEYAGKDE

>non-antioxidant\_1309

MAFAHFVLIHTICHGAWIWHKLKPLLEALGHKVTALDLAASGVDPRQIEEIGSFDEYSEPL  
LTFLEALPPGEKVILVGESCGGLNIAIAADKYCEKIAAAVFHNSVLPDTEHCPSYVVDKLM  
EVFPDWKDTTYFTYTKDGKEITGLKLGFTLLRENLYTLCGPPEYELAKMLTRKGSLSFNIL  
AKRPFFTKEGYGSIKKIYVWTDQDEIFLPEFQLWQIENYKPKDKVYKVEGGDHKLQLTKTK  
EIAEILQEVDADTYN

>non-antioxidant\_1310

SLRSMVSDSVDEIVDGVSKTTAEVINGRKSIAQYATSLIENNPEPDNVRTIISQPLIKNTFLLV  
GFGLEKDGSNINNDPSWNPWPVPRVPRWYKDAKNAGKLVITAPYADSASGEILVSVAT  
PVKDSATGQFLGSIFYDVSLAELAELVNEVKLFDAGYVFIVSEDGTTIAHPKKEFNKPKMS  
EFLGESKINVDTHQVIINGKPYAVSFSVDEGEDWYVGVVIDEEIAYAALDELRRS

>non-antioxidant\_1311

GMARKRLIEMGMGIDQHGQEPTIAASRAVRNAIAHNALPGVWEVAGLSHPNEMIIEVQV  
AVPYPEQVREEEVLAVLPPFGRKTLTVESGGMIVQGRAIPELNDKNDDEMLIAIAAVTVLIENE

>non-antioxidant\_1312

GMDKYLANSLEGVIDNEFSMPAPRWLNTYPAGPYRFINREFFIAYETDPDLLQAILPPDM  
ELLEPVVKFEFIRMPDSTGFGDYTESGQVVPVRYKGEEGGFTISMFLDCHAPIAGGREIWG  
FPKKLAKPKLFEEDTLIGILKYGSIDIAIATMGYKHRPLDAEKVLESVKKPVFLLKNIPNV  
DGTPLVNQLTKTYLTDITVKGAWTGPGLSLELPHALAPISNLYIKKIVSVSHFITDLTLPYG  
KVVADYLA

>non-antioxidant\_1313

RSIIGGKHGDRDVRILYQVGDSEEDLPVCAPNAVCSKIDLYETPWIERQCRCPCDGRTPSSSL  
GVEDGHTIADKTRHYKMCQPVHKLVPCKHFRDYTWLTLTAAELNVTEQIVHCRCPRNSV  
TYLTKREPIGNDSPGYRYLFACSPLTRLRCQKQPKLFTVRKRQEFLDEVNINSLCQCPK  
GHRCPSHHTQSGVIAGESFLEDNIQTYSGYCMANDHHHHHHH

>non-antioxidant\_1314

SENGGPAAVHYQPASPPRDACVYSSCYCEENVWKLCEYIKNHDQYPLEECYAVFISNERK  
MIPIWKQARPGDGPVIWDYHVVLLHVSSGGQSFYIDLDTVLPFCLFDTYVEDAIKSD  
DIHPQFRKFRVICADSYLKNFASDRSHMKDSSGNWREPPPPYPCIETGDSKMNLNDFISM  
DPKVGWGAVYTLSEFTHRFGSKNC

>non-antioxidant\_1315

MGSHHHHHHDITSLYKKAGSAAVLEENLYFQGSFTMRLKELGEFGLIDLIKKTLESKVI  
DDTAPVEYCSKLLLTDDLNEGVHFLRSYIPEAVGWKAISVNVSDVIANGGLPKWALISL  
NLPEDLEVS YVERFYIGVKRACEFYKCEVVGGNISKSEKIGISVFLVGETERFVGRDGARL  
GDSVFSVSGTLGDSRAGLELLMEKEEYEPFELALIQRHLRPTARIDYVKHIQKYANASMDI  
SDGLVADANHLAQRSGVKIEILSEKLPLSNELKMYCEKYGKNPIEYALFGGEDYQLLFTHP  
KERWNPFLDMTEIGRVEEGEGVFVDGKKVEPKGWKHF

>non-antioxidant\_1316

TFPTYKCPETFDAWYCLNDAHCFVAVKIADLPVYSCECAIGFMGQRCEYKEID

>non-antioxidant\_1317

MAMAEAAEKAAYAAEAAEKAAMAM

>non-antioxidant\_1318

MFEQEVITITAPNGLDTRPAAQFVKEAKGFTSEITVTSNGKSASAKSLFKLQTLGLTQGTVV  
TISAEGEDEQKAVEHLVKLMAELE

>non-antioxidant\_1319

MTPQNITDLCAEYHNTQIHTLNDKIFSYTESLAGKREMAITFKNGATFQVEVPGSQHIDSQ  
KKAIERMKDTRLRIAYLTEAKVEKLCVWNNKTPRAIAAISMAN

>non-antioxidant\_1320

GDIEQKQAEIIDQLVKRASTCKSEALGPLIIEATSHPSLFAFSEILALPNVAQLEGTTDSDVYLD  
LLRLFAHGTWGDYKCNATRLPHLSPDQILKQTLVTLAESNKVLPYDTLMVELDVSNNV  
RELEDFLINECMYAGIVRGKLDQLKRCFEVPFAAGRDLRPGQLGN

>non-antioxidant\_1321

GMDTPANKPCICVAITGSVPTKADNPAVPITVSEQVESTQEAFEAGAAIAHCHVRNDDGT  
PSSDPDRFARLTEGLHTHCPGMIVQFSTGGRSGAGQARGGMLPLKPDMAASLSVGSNNFPS  
RVYENPPDLVDWLAAQMRSYRVTPPEIAFDLSHILRAIDMHGRGLLYGKLYVQFVMGVK  
NAMPADREVFDFYVRMMRTRAPQAEWCAAGIGANQLTVNEWAIAAGGHTRTGLEDNIR  
LDRQTLAPSNAALVRRSVELCDKYQRPVASWQQAREILGLPAAARN

>non-antioxidant\_1322

GASAPMVKIYTKNGDKGQTRIIGKQILYKNDPRVAAYGEVDELNSWVGTYTKSLINSHTQV  
LSNELEEIQQLLFDGCHDLATPADDERRHSFKFKQEPTVWLEEKIDNYTQVVPVAVKKFILP  
GGTQLASALHVARTITTRAERQIVQLMREEQINQDVLIFINRLSDYFFAAARYANYLEQQP  
DMLYRNSKDVFR

>non-antioxidant\_1323

GHMNVKLVFVHAGSLTEPMKAFKRAFEEKHPNVEVQTEAAGSAATIRKVTTELGRKADVI  
ATADYTLIQKMMYPEFANWTIMFAKNQIVLAYRNDSTRYADEINSQNWYEILKRPDVRFGF  
SNPNDDPCGYRSLMAIQLAELYNDPTIFDELVAKNSNLRFSEDNGSYVLRMPSSERIEINK  
SKMIRSMEMELIHLVESGELDYFFIYKSVAKQHGFNFVELPVEIDLSSPDYAELYSKVKVV  
LANGKEVTGKPIVYGITIPKNAENRELAVEFVKLVISEEGQEILRELQGEPL

>non-antioxidant\_1324

MSIAVGMIESTRGFPVVEAADSMVKAARVTLVGYEKIGSGRVTVIVRGDVSEVQASVSAG  
IEAANRVNGGEVLSTHIIARPENLEYVLPILHEHHHHH

>non-antioxidant\_1325

MWVYRLKGTLEALDPILPGLFDGGARGLWEREGEVWAFFPAPVDLPYEGVWEEVGDED  
W

>non-antioxidant\_1326

MKKVVAVVKLQLPAGKATPAPPVGPALGQHGANIMEFVKAFNAATANMGDAIVPVEITY  
ADRSFTFVTKTP

>non-antioxidant\_1327

GINDLDISPDPQTGGSFDQQGVFVKGYAMLGVTGQKIDGSPDLGQDEGESGFYRTTF  
NCNELPTDECLWAWQKNQDIPQLTSISWSPSSQRTEWVYVRLGYDITQYNFFLDQTEGMT  
DAETLRQRAEIRFLRALHYWYFLDLFGKAPFKEHFSNDLPVEKKGTELYTYIQNELNEIEA  
DMYEPRQAPFGRADKAANWLLRARLYLNAGVYTGQTDYAKAEYASKVIGSAYKLCNTN  
YSELFMADNDENENAMQEILPIRQDGVKTRNYGGSTYLVCGTRVAGMPRMGTTNGWSC  
IFARAAMVQKFFSNLEDVPMLPADVEIPTKGLDTDEQIDAFDAEHGIRTEDMIKAAGDDR  
ALLYSGVGGRRKIQTDAISGFTDGLSIVKWQNYRSDGKPVSHATYPDTPDIPLFRLAEAYL

TRAEAIFRQGGDATGDINELRKRANCTRKVQTVTEQELIDEWAREFYLEGRRRSDLVRFG  
MFTTNKYLWDWKGGAMNGTSVASYYNKYPIPVSDINNNRNMSQNEGYK

>non-antioxidant\_1328

MVSQIGLLLPLSGDGQILGTTIQSGFNDAKGNSTIPVQVFDTSMNSVQDIIAQAKQAGIKTL  
VGPLLKQNLVDLADPAQIQGMDVLALNATPNSRAIPQLCYGLSPEDEAESAANKMWN  
DGVRNPLVAMPQNDLGQRVGNFNRWQQLAGTDANIRYYNLPADVTFVQENNSNTT  
ALYAVASPTELAEMKGYLTNIVPNLAIYASSRASASATNTNTDFIAQMNGVQFSDIPFFKDT  
NSPQYQKLAKSTGGEYQLMRLYAMGADAWLLINQFNELRQVPGYRLSGLTGILSADTNC  
NVERDMTWYQYQDGAIVPVVDHHHHHH

>non-antioxidant\_1329

GMTILSDVKALGQQIWLNDLSRSLVQSGELAQMLKQGVCGVTSNPAIFQKAFAGDALYA  
DEVAALKRQNLSPKQRYETMAVADVRAACDVCLAEHESTGGKTGFVSLEVSPELAKDAQ  
GTVEEARRLHAAIARKNAMIKVPATDAGIDALETLVSDGISVNLTLFSRAQTLKAYAYA  
RGIKRLAAGQSVAHIQVVASFFISRVSALDATLPDRLKKGKTAIALAKAAAYQDWEQYFTA  
PEFAALEAQGANRVQLLWASTGVKNPAYPDTLYVDSLIGVHTVNTVPDATLKAFIDHGTA  
KATLTESADEARARLAEIAALGIDVETLAARLQEDGLKQFEEAFEKLLAPLV

>non-antioxidant\_1330

GPEIRMDKKSPLYKYLRLRSTGDMHKAKSPTIMTRVTNNVYLGNYKNAMDAPSEVVKFKY  
VLNLTMDKYTL PNSNINIIHPLVDDTTT DISKYFDDVTAFLSKCDQRNEPVLVHSAAGVNR  
SGAMILAYLMSKNKESLPMFLYVYHSMRDLRGAFVENPSFKRQIIEKYVIDKN

>non-antioxidant\_1331

AMAIPAFHPGELNVYSAPGDVADVSRALRLTGRRVMLVPTMGALHEGHLALVRAAKRVP  
GSVVVVV SIFV NPMQFGAGGDL DAYPRTPDDDLAQLRAEGVEIAFTPTTAAMY PDGLRTTV  
QPGPLAAELEGPRPTHFAGVLT VVLKLLQIVRPDRVFFGEKDYQQLVLIRQLVADFNLDV  
AVGVPTVREADGLAMSSRNRYLDPAQRAAVALSAALTA AHAATAGAQAALDAARA  
VLDAAPGVAVDYLELRDIGLGPMLNGSGRLLVAARLGTTRLLDNIAIEIGTFAGTDRPDG  
YR

>non-antioxidant\_1332

QNPADSPHIGKVFFSTNQGDFVCSANIVASANQSTVATAGHCLHDGNGGQFARNFVFAPAY  
DYGESEHG VWAEEELVTSAEWANRGDFEHDYAFVLET KGGTTVQQVGTASPIAFNQP  
RGQYY SAYGYPAAPFNGQELHSCHGTATNDPMGSSTQGIPC NMTGGSSGGPWFLNGT  
GGAQNSTNSYGYTFLPNVMFGPYFGSGAQQNYNYASTTN

>non-antioxidant\_1333

GIEKIISRMFDQMLKHRNNPACPAKGFYTYDAFIAAAKSFP SFGTTGSTDVRKREIAAFLG  
QTSHETTGGWPSAPDGPYAWGYCFLKERNPSSNYCAPSPRYPCAPGKSYYGRGPIQLSWN  
YNYGPCGEALRVNLLGNPDLVATDRVISFKTALWFWMTPQAPKPSCHDVITGRWQPSAAD  
TAAGRLPGYGVITNIINGGLECGKGNPQVADRIGFFRRYCGILGVGTGNNLDCYNQRPFG

>non-antioxidant\_1334

MVYVSNKYLT MSEMKVNAQYILNYLSSNGWTKQAICGMLGNMQSESTINPGLWQNLDE  
GNTSLGFLVQWTPASNYINWANSQGLPYKNM DSELKRIIWEVNNNAQWINLRDMTFKE  
YIKSTKTPRELAMIFLAS YERPANPNQPERGDQAEYWK NLS

>non-antioxidant\_1335

MTYGIVIVSHSPEIASGLKKLIREVAKNISLTAIGGLENGEIGTSFDRVMNAIEENEADNLLT  
FFDLGSARMNLDLVSEMTDKELTIFNVPLIEGAYTASALLEAGATFEAIKEQLEKMLIEKRS

HHHHHH

>non-antioxidant\_1336

SLANIREIAKRAGISIASRHLNNTGYVSEDAREKIQKVDELNYTPNALARAMFTKNSK  
TIGLMVNPISNPFNQMASVIEEYAKNKGYTFLCNTDDDKEKEKTYLEVLSHRVAGIIA  
SRSQCEDEYANIDIPVVAFENHILDNIITISSDNYNGGRMAFDHLYEKGCRKILHIKGPVFE  
ATELRYKGFLDGARAKDLEIDFIEFQHDFQVKMLEEDINSMKDIVNYDGFVFNDAATV  
MRALKKRGVSIPQEVQIIGFDNSFIGELLYPSLTINQPIEALAYTIIELLIKIINGEVLIEDYI  
MEVKLIERETTISLKDEG

>non-antioxidant\_1337

VHFHPFGNVNFYEMDWSLKGDLWAHDPVIAKEGSRWYVFHTGSGIQIKTSEDGVHWEN  
MGWVFPSPDWYKQYVPEKDEDHLWAPDICFYNGIYYLYYSVSTFGKNTSVIGLATNQT  
DPRDPDYEWKDMGPVIHSTASDNYNAIDPNVFDQEGQPWLSFGSFWSGIQLIQLDTETM  
KPAQAELLTIASRGEENAIAPFIVCRNGYYYLFVSDFDCCRGIESTYKIAVGRSKDITGP  
YVDKNGVSMQGGGTILDEGNDRWIGPGHCAVYFSGVSAILVNHAYDALKNGEPTLQIR  
PLYWDDEGWPLYSV

>non-antioxidant\_1338

TEQATTTDELAFTRPYGEQEKQILTAEAVEFLTELVTHTFPQRNKLLAARIQQQDIDNGTL  
PDFISETASIRDADWKIRGIPADLEDRRVEITGPVERKMVINANANVKVFMADFEDSLAP  
DWNKVIDGQINLRDAVNGTISYTNEAGKIYQLKPNPAVLICRVRGLHLPEKHVTWRGEAIP  
GSLFDFALYFFHNYQALLAKGSGPYFYLPKTSWQEAAWWSEVFSYAEDRFNLPRGTIKA  
LLIETLPAVFQMDLHALRDHIVGLNCGRWDYIFS YIKTLKNYPDRVLPDRQAVTMDKP  
FLNAYSRLIKTCHKRGAFAMGGMAAFIPSKDEEHNNQVLNKVKADKSLEANNGHDGT  
WIAHPGLADTAMAVFNDILGSRKNQLEVMREQDAPITADQLLAPCDGERTEEGMRANIRV  
AVQYIEAWISNGCVPIYGLMEDAATAEISRTSIWQWIHHQKTLNKGKPVTKALFRQMLG  
EEMKVIASELGEERFSQGRFDDAARLMEQITTSDELIDFLTLPGYRLLA

>non-antioxidant\_1339

MGSSHHHHHSSGLVPRGSHMDKKGKSVKSTEKSVGMPPKTPKTDNNAHVDNEFLILQVN  
DAVFIGSYTHSFGLETYIQQKKVTNKESALEYLKANLSSQFLYTEMLSLKLTYESALQQD  
LKKILGVEEVIMLSTSPMELRLANQKLGNRFIKTLQAMNELDMGEFFNAYAQKTKDPHTA  
TSYGVFAASLGIELKKALRHLYLAQTSNMVINC VKSVP L SQNDGQKILLSLQSPFNQLIEK  
TLELDESHLCTASVQNDIKAMQHESLYSRLYMS

>non-antioxidant\_1340

APDWVPEVFDLVAEDKARCMSEHGTTQAQIDDVDKGNLVNEPSITCYMYCLLEAFSLVD  
DEANVDEDIMLGLLPDQLQERAQSVMGKCLPTSGSDNCNKIYNLAKCVQESAPDVWFVI

>non-antioxidant\_1341

AMSKIICLTAGHSNTDPGAVNGSDREADLAQDMRNIVASILRNDYGLTVKTDGTGKGNMP  
LRDAVKLIRGSDVAIEFHTNAAANKTATGIEALSTPKNKRWCQVLGKAVAKKTGWKLRGE  
DGFKPDNAGQHSRLAYAQAGGIVFEPFFISNDTDLALFKTTKWGICRAIADAIAMELGAA  
KV

>non-antioxidant\_1342

SSSVPSQKTYQGSYGFRLGFLHSGTAKSVTCTYSPALNKMFCQLAKTCPVQLWVDSTPPP  
GTRVRAMAIYKQSQHMTEVVRRCPHHERCSDSDGLAPPQHILIRVEGNLRVEYLDDRNTF  
RHSVVVPYEPPEVGSDCCTTIHYNMCMNSSCMGGMNRSPIITITLEDSSGNLLGRNSFEVR  
VCACPGRDRRTEENLRKKG

>non-antioxidant\_1343

SNAMKPDYIENNREGILCVYKNEKWLVCIKNWKPDNDIEGIAHLEIHHSTDEQFILSAGKA  
ILITAEKENDKFNIELTLMKKGKVVYNVPAECWFYSITQKDTKMMYVQDSNCSMDNSDFC  
DLSKEEIEYIQTNARKLFEK

>non-antioxidant\_1344

MWKAVMNAWNGTESQSKNVSNIQSYFEDMKRIVGKHDPNVVLVDVREPSEYSIVHIPA  
SINVPIYRSHPDFAFALDPLEFEKQIGIPKPSAKELIFYCASGKRGGEAQKVASSHGYSNTSL  
YPGSMNDWVSHGGDKLDL

>non-antioxidant\_1345

SRTDRLEVCREYQRGNCNRGENDCRFAHPADSTMIDTNDNTVTVCMYDIKGRCSREKCK  
YFHPPAHLQAK

>non-antioxidant\_1346

GSMKFVYKEEHPFEKRRSEGEKIRKKYPDRVPVIVEKAPKARIGDLDKKKYLVPSDLTVG  
QFYFLIRKRIHLRAEDALFFFVNNVIPPTSATMGQLYQEHHEEDFFLYIAYSDESUYGL

>non-antioxidant\_1347

GAMEPAARRRARECAVQALYSWQLSQNDIADVEYQFLAEQDVKDVDVLYFRELLAGVAT  
NTAYLDGLMKPYLSRLLEELGQVEKAVLRALYELSKRSDVPYKVAINEAIELAKSFGAED  
SHKRVNGVLDKAAPVIRPNKK

>non-antioxidant\_1348

GPLGSMQNQRIRIRLKAFDHRLIDQATAEIVETAKRTGAQVRGPIPLPTRSRTHLRLVDIVEP  
TEKTVDALMRLDLAAGVDVQISLG

>non-antioxidant\_1349

GEDKKGGTKPSNEAALTKTENLDFRLSFNKIKVTTDQNHFSGGTSIEQLKQWFGDPNKSE  
QRNAGNITLDSYTWVKDGAVINAQLYKNSTVARSISNFSFSREAKIGKEDYDELKIGESYK  
KIVEKLGEPDVLQSMSSDKEEMQTVWSSGIKTKSSSATELYFENGLLKNKTQKDLE

>non-antioxidant\_1350

AAASFGQTKIPRGNPYSVGCTDLMFDHTNKGTFRLRYPSQDNDRLDTLWIPNKEYFW  
GLSKFLGTHWLMGNILRLLFGSMTTPANWNSPLRPGEKYPLVVFSHGLGAFRTLYSAIGID  
LASHGFIVA AVEHRDRSASATYYFKDQSAAEIGDKSWLYLRTLKQEEETHIRNEQVRQRA  
KECSQALSILIDIDHGKPVKNALDLKFDMEQLKDSIDREKIAVIGHSGGATVIQTLSEDQR  
FRCGIALDAWMFPLGDEVYSRIPQPLFFINSEYFYQY PANIIMKKCYSPDKERKMITIRGSV  
HQNFADFTFATGKIIGHMLKLGKDIDSNVAIDL SNKASLAFLQKHLGLHKDFDQWDCLIEG  
DDENLIPGTNINTTNQHI

>non-antioxidant\_1351

MGSSHHHHHSSGLVPRGSHMFSITVRDHIMIAHSFRGDVFGPAQRLHGATFLVDATFRRE  
QLDEDNIVVDIGLATQELGAVVGALNYRNLDPDFAGVNTSTEF LAKVIADRLAERVHK  
GALGEGARGLAGLTVTLHESHVAWASYERAL

>non-antioxidant\_1352

MEAVKTFNSELYSLNDYKPPISKAKMTQITKAAIKAIKFYKHVVQSVEKFIQCKPEYKVP  
GLYVIDSIVRQSRHQFGQEKDVFAPRFSNNIISTFQNLRYRCPGDDKSKIVRVLNLWQKNNV  
FKSEIIQPLLDMAAALEHHHHHHH

>non-antioxidant\_1353

MKALRGMISEKGGWNLTVNNDNNTVSSGGALDLSSGSKNLKIVKDGKKNVTFDVAR  
DLTLKSIKLDGVTLNETGLFIANGPQITASGINAGSQKITGVAEGTDANDAVNFGQLKKIET



EVKEQVAASGFVKQSDTKYLTIGKDTDGDGTINIANNKSDKRT

>non-antioxidant\_1354

GADDDKPIQVTQMPQLAQQFIKQHFSDSKVALAKMESDFLYKSYEVIFTNGNKVEFDKKG  
NWEEVDCKHTSPVAIIPAAIQKYVTTNYPDAKVLKIERDKKDYEVKLSNRTELKFDLKF  
NLIDIDN

>non-antioxidant\_1355

MPHDPGATRLLAISPHLDDAVLSFGAGLAQAAQDGANVLVYTVFAGAAQPPYSPAAQRM  
HTIWGLAPDDDAVLYRRKEDIAALDHLRVAHRHGRFLDSIYRKLDPGRWLTAHVEGRQKL  
AVNDHSPDSHDLVGEVADDIRSIIDEFPTLVVTCAAIGEHPDHEATRDAALFATHEKNVP  
VRLWEDLPYAVFKSGAVELPQGFRLGSADVSSVKPEMRSQKFQAVERYSSQMVLNNGSEN  
NLFDRLEHARQNAPHGGYGETTWPVVRSDDS

>non-antioxidant\_1356

MSEQAPAPKRGRRFKEQTPVQRALGLLVHREHKKELNRKLQARGIEPEAAQAVERLA  
GEGWQDDVRFVAAVVRNRASSGYGPLHIRAELGTHGLSDAVSAAMATFEGDWTENAL  
DLIRRRFGEDGPVDLAQRRKAADLLARRGFDGNSIRLATRFDLED

>non-antioxidant\_1357

MQQASTPTIGMIVPPAAGLVPADGARLYPDLPIASGLGLGSVTPEGYDAVIESVVDHARR  
LQKQGAADVSLMGTSLSFYRGAAFNAALTVAMREATGLPCTTMSTAVLNGLRALGVRRV  
ALATAYIDDVNERLAAFLAEESLVPTGCRSLGITGVEAMARVDTATLVDLCVRAFEAAPDS  
DGILLSCGGLLTDAIPEVERRLGVPVSSSPAGFWDVRLAGGGAKARPGYGRFLFDESLE  
HHHHHH

>non-antioxidant\_1358

GRISMTVKKLYFIPAGRCMLDHSSVNSALTPGKLLNLPVWCYLLETEELPILVDTGMPESA  
VNNEGLFNGTFVEGQILPKMTEEDRIVNILKRVGYEPDDLIISSHLHFDHAGNGAFTN  
TPIVQRTEYEAAALHREEYMKECILPHLNYKIIEGDYEVVPGVQLLYTPGHSPGHQSLFIET  
EQSGSVLLTIDASYTEKNEFEDEVFAGFDPELALSSIKRLKEVVKKEKPIIFFGHDIQEKSC  
RVFPEYI

>non-antioxidant\_1359

GMTDAPADAPLDADARRAVKPVICYPNDSLPRPDLALYRAARASARKTGEVLVPPREGRC  
FEVKAGQFFRISSEVEGPQVGDNLHNLHDLTERFFSGKTRALHGTHVTTGERLWSNLPYL  
RPMATIIEDTLGWYIDQYGGSVHDVIGTRCDPYTGNLLAGGHYHHCCHSNLTRALADH  
TGLPLHEAEMLVHDVNLVFMCTGFTRDTGQYFMKASPVRPGDYLEFFAEIDLLGNLSACP  
GGDCSSEHSSDTASCHPLLVEIFAPAEGMLGDWSPSPVNGYDRSHGR

>non-antioxidant\_1360

ACRQEPQPQPPPAAGAVASYDYLVIGGGSGGLASARRAAELGARAADVESHKLGGTVCV  
NVGCVPKKVMWNTAVHSEFMHDHADYGFPSCEGKFNWRVIKEKRDAYVSRLNAIYQNN  
LTKSHIEIRGHAFTSDPKPTIEVSGKKYTAPHILATGGMPSTPHESQIPGASLGITSDGFF  
QLEELPGRSVIVGAGYIAVEMAGILSALGSKTSLMIRHDKVLRFSMISTNCTEELNAG  
VEVLKFSQVKEVKKTLGLEVSMVTAVPGRLPVMTPDCLLWAIGRVPNTKDLSLNK  
LGIQTDDKGHIIVDEFQNTNVKGIYAVGDVCGKALLTPVAIAAGRKLAHRLFYKEDSKLD  
YNNIPTVVFSSHPIGTVGLTEDEAIHKYGIENVKTYSTSTFTPMYHAVTKRKTCKVMKMCV  
ANKEEKVVGIHMQGLGCDEMLQGFVAVKMGATKADFNTVAIHPTSSEELVTLR

>non-antioxidant\_1361

GMSENKKKFDKKGAKNMDEISKTLFAPYPIIAENIINRFGITAGTCIDIGSGPGALSIALAK

QSDFSIRALDFSKHMNEIALKNIADANLNDRIQIVQGDVHNIPIEDNYADLIVSRGSVFFWE  
DVATAFREIYRILKSGGKTYIGGGFGNKELRDSISAEMIRKNPDWKEFNKRKNISQENVERF  
QNVLDEIGISSYEIILGDEGFWIIISKTDQEVI

>non-antioxidant\_1362

TQKPSLYRVLILNDDYTPMEFVVYVLERFFNKSREDATRIMLHVHQNGVGVCGVYTYEV  
AETKVAQVIDSARRHQHPLQCTMEKD

>non-antioxidant\_1363

MPKLV TWMMNNQRV GELTKLANGAHTFKYAPEWLASRYARPLSLSLPLQRGNITSDAVFNF  
FDNLLPDSPIVRDRIVKRYHAKSRQPFDLLSEIGRDSVGAVTLIPEDETVTHPIMAWEKLTE  
ARLEEVLTAYKADIPLGMIREENDFRISVAGAQEKTALLRIGNDW CIPKGITPTTHIIKLPIGE  
IRQPNATLDLSQSVDNEY YCLLLAKELGLNVPDAEIIKAGNVRALAVERFDRRWAERTV  
LLRLPQEDMCQTFGLPSSVKYESDGGPGIARIMAFLMGSSEALKDRYDFMKFQVFQWLIG  
ATQGHAKNFSVFIQAGGSYRLTPFYDIISAFPVLGGTGIHISDLKLAMGLNASKGKKT AIDK  
IYPRHFLATAKVLRFPEVQMHEILSDFARMIPAALDNVKTSLPTDFPENVTAVESNVLR LH  
GRLSREYGSK

>non-antioxidant\_1364

ITGTSTVGVGRGVLGDQKNINTTYSTYYYLQDNTRGNGIFTYDAKYRTTLPGLWADAD  
NQFFASYDAPAVDAHYYAGVTYDYKKNVHNRLSYDGNNAAIRSSVHYSQGYNNAFWNG  
SQMVYGDGDGQTFIPLSGGIDVVAHELTHAVTDYTAGLIYQNESGAINAISDIFGTLVEFY  
ANKNPDWEIGEDVYTPGISGDSLRSMSDPAKYGDPDHYSKRYTGTQDNGGVHINSIINK  
AAYLISQGGTHYGVSVVGIGRDKLGKIFYRALTQYLTPSNSFQLRAAAVQSATDLYGSTS  
QEVASVKQAFDAVGVK

>non-antioxidant\_1365

MSLQLRSRAAFKLEFLLDRYRVVRKGDVAVIEIGSSPGGWTQVLNSLARKIISIDLQEMEEIA  
GVRFIRCDIFKETIFDDIDRALREEGIEKVDDVVS DAMAKVSGIPSRDHAVSYQIGQRM EI  
AVRYLRNGGNVLLKQFQGDMTNDFAIWRKNFSSYKISKPPASRGSSSEIYIMFFGKAEG  
HHHHHH

>non-antioxidant\_1366

TWTYILRQGDLPPEGEMQRYEGGPEPVMVCNVDGEFFAVQDTC THGDWALSDGYLDGDIV  
ECTLHF GKFCVRTGKVKALPACKPIKVFPIKVEGDEVHVDLDNGELK

>non-antioxidant\_1367

GFKQDIATIRGDLRTYAQDIFLAFLNKYPDERRYFKNYVGKSDQELKSMKFGDHTEKVF  
NLMMEVADRATDCVPLASDANTLVQMKQHSSLTTGNFEKLFVALVEYMRASGQSFDSQS  
WDRFGKNLVSALSSAGMK

>non-antioxidant\_1368

SNAEELIEIREARMDDLDTIAKFNYNLAKETEGKELDMDVLTGKVKALLLDERKGKYHV  
YTVFDKVV AQIMYTYEWS DWRNGNFWIQSVYVDKEYRRKGIFNYLFNYIKNICDKDEN  
IVGMRLYVEKENINAKATYESLNMYECDYNMYEYEV IHS

>non-antioxidant\_1369

VDMSNVVKTYDLQDGSKVHVFKDGKMG MENKFGKSMNMPEGKVMETRDGT KIIMKG  
NEIFRLDEALRKGHSEGG

>non-antioxidant\_1370

GSMPPQLHNGLD FSAKVIQGS LSLPQEV RKFVEGNAQLCQPEYIHC DGSEEEYGRLLA  
HMQE EGVIRK LKKYDNCWLALTDPRDVARIESKTVIITQEQRDTP IPIKSGQS QLGRWMS

EEDFEKAFNARFPGCMKGRTMYVIPFSMGLGSPLAKIGIELTDSPLYVVASMRIMTRMGTS  
VLEALGDGEFIKCLHSVGCPLPLKKPLVNNWACNPELTIAHLPRREIISFGSGYGGNSLL  
GKKCFALRIASRLAKEEGWLAEHMLILGITNPEGKKKYLAAPFSAACGKTNLAMMNPTL  
PGWKVECVGDDIAWMKFDAQGNLRAINPENGGFFGVAPGTSVKTNPNAIKTIQKNTIFTNV  
AETSDGGVYWEGIDEPLAPGVTITSWKNKEWRPQDEEPCAHPNRSRFTPASQCPIIDPAWE  
SPEGVPIEGIIIFGRRPAGVPLVYEALSWQHGVFVGAAMRSEATAAAEHKGVIMHDPFA  
MRPFFGYNFGKYLAHWLSMAHRPAKLPKIFHVNWFRKDKNGKFLWPGFGENSRLVLEW  
MFGRIEGEDSAKLTPIGYVPKEDALNLKGLGDVNVEELFGISKEFWEKEVEEIDKYLEDQ  
VNADLPYEIERELRALKQRISQM

>non-antioxidant\_1371

MGPFDPEEMLFIFTRCMEDNLEDGANRLPMLAKWKEWINEPVDSPATQCFGKCVLVRTGL  
YDPVAQKFDASVIQEQFKAYPSLGEKSKVEAYANAVKQLPSTNNDCAAVFKAYDPVHKA  
HKDTSKNLFHGNKELTKGLYEKLGKDIRQKKQSYFEFCENKYYPAGSDKRQQLCQIRQYT  
VLDDALFKEHTDCVMKGIRYITKDNQLDVEEVKRDVFLVNDTKALEEVLNDCKSKEPS  
NAKEKSWHYKCLVESSVKDDFKEAFDYREVRSQIYAFNLPKNQAYSKPAVQSQVMEID  
GKQCPQ

>non-antioxidant\_1372

GATVAPSSRRDFTFDLYRALASAAPSQNIFFSPVVISMSLAMLSTLGLGAGSSTKMQILEGLGLN  
LQKSSEKELHRGFQQLQELNQRDGFQSLGNALFTDLVVDLQDTFVSAMKTLYLADTF  
PTNFRDSAGAMKQINDYVAKQTKGKIVDLLKNLDSNAVIMVNYIFFKAKWETSFNHKG  
TQEQDFYVTSETVVRVPMMSREDQYHYLLDRNLSCRVVGVVYQGNATALFILPSEGKMQ  
QVENGLSEKTLRKWLKMFKKRQLELYLPKFSIEGSYQLEKVLPSLGISNVFTSHADLSGIS  
NHSNIQVSEMVKAVVEVDESGTRAAAATGTIFT

>non-antioxidant\_1373

AEIKNVILMIGDGMGPQQVGLLETYANQAPNSIYKGNKTAIYQLAQEGVIGSSLTHPEDAI  
VVDSACSATMLATGIYSSSEVIGIDSQGNHVETVLEKAKKAGKATGLVSDTRLTHATPASF  
AAHQPHRSLNFIASDMLATGADVMLSGGLRHWIPKSTNDKGETYKQLEKLTQGDVYLYK  
SKRKDDRNLLTEAEKDGQYQLAFNRNMLDDAKGDKLLGLFAYSGMDDGIAYSNNKKSSE  
RTQPSLKEMTQKALNILSKDEDGFFLMVEGGQIDWAGHSNDAGTMLHELLKFDEAIQTV  
YEWAKDREDTIVIVTADHETGSFGFSYSSNDLPKPKQRSGEAFADRDYAPNFFGAFDILD  
GLYNQKQSYGMISEFQKLDKSLQTPKLAIEVKNKSEFPITAEQAKNVLASKPNPYRLAQ  
HKYLSAEEVPAINDFDAFFPYNDRGNLLAREQATGQNIWGTGTHHTPNNVFAWGPAE  
KILPVSKIMHSELGEYIKQQVN

>non-antioxidant\_1374

MSLTSTATDSPLKYDIDGLNLTDPMFHGIYNGKQYHPADYVKLLERAAQRHVKNALVTGS  
SIAESQSAIELVSSVKDLSPLKLYHTIGVHPCCVNEFADASQGDKASASIDNPSMDEAYNES  
LYAKVISNPSFAQGLKELYDLMNQAKPHDTSFRSIGEIGLDYDRFHYSKEMQKVFEE  
QLKISCLNDKLSYPLFLHMRSACDDFVQILERFVVGFTDEKDTFQLQKLGASSSSGFYKF  
HPDRKLVVHSFTGSAIDLQKLLNLSPNIFIGVNGCSLRTEENLAVVKQIPTERLLLLETDAW  
CEIKRTHASFQYLAKYQEVDRDFEYPAFKSVKKNKLADKLNAEELYMVKGRNEPCNMEQV  
AIVVSEVKDVLATLIDTTWKTTCIFGEGHHHHHH

>non-antioxidant\_1375

SFWEWLNVAFNKVDHDIRDVGPDRAASEWLLRCGAMVRYHGQQRWQKDYNHLPTGP  
LDKYKIQAIDATDSCIMSIGFDHMEGLQYVEKIRLCKCHYIEDGCLERLSQLENLQKSMLE

MEIISCGNVTDKGIIALHHFRNLKYLFLSDLPGVKEKEKIVQAFKTSLPSLELKLDLK

>non-antioxidant\_1376

GFGCNGPWDEDDMQCHNHCKSIKGYKGGYCAKGGFVCKCY

>non-antioxidant\_1377

WKDKEFQVLFVLTILTILISGTIFYSTVEGLRPIDALYFSVVTLTTVGDGNFSPQTDFGKIFTIL  
YIFIGILVFGFIHKLAVNVQLPSILSNLVPR

>non-antioxidant\_1378

GMSPQSMLTSPQHPRRTTMVISHGTLASAEHAHLRQLLVHIAQATRQEDGCLLYLVSED  
LSQPGHFLITEHWDNLGAMHHLALPGVTQAIDALKHLNVTDLKITAYEAGEAINMG

>non-antioxidant\_1379

GVLPEKCNLEDSACMTSAFQQALPTFVAGLPDHGVEVMDVLDLDDFAFDLSGLQFTLK  
EGKLGKLGAVIDNVKWDLKKKNIEVDFHLDATVKGHYTAGGRILILPITGDGQMKLKL  
KNIHILVVSYEMEKDAEGVDHVIFKKYTVTFVDKNAQFGLTNLFNGNKELSDTMLTFL  
NQNWKQVSEEFKGPVMEAAAKKIFKNIKHFLAKVPIAEIANV

>non-antioxidant\_1380

AACYSSDCRVKCVAMGFSSGKCINSKCKCYK

>non-antioxidant\_1381

QGDIGIDNLRNFYTKKDFVDLKDVKDNDTPIANQLQFSNESYDLISESKDFNKFSNFKGK  
KLDVFGISYNGQCNTKYIYGGVTATNEYLDKSRNIPINIWINGNHKTISTNKVSTNKKFVT  
AQEIDVKLRKYLQEEYNIYGHNGTKKGEYGHKSKFYSGFNIGKVTFHLNNNDTFSYDLF  
YTGDDGLPKSFLKIYEDNKTVESEKFHLDVDISYKETI

>non-antioxidant\_1382

GMAKKTLLIYYSWSGETKKMAEKINSEIKDSELKEVKVSEGTFDADMYKTSDIALDQIQG  
NKDFPEIQLDNIDYNNYDLILIGSPVWSGYPATPIKTLDDQMKNYRGEVASFFTSAGTNHK  
AYVSHFNEWADGLNVIGVARDDSEVDKWSK

>non-antioxidant\_1383

SNAMRNKNMSTIYQTSATASAGRNGVVSTEDKLELNLNSYPKEMGGSGTATNPEQLFAVG  
YAACFSNAILHVAREAKVALKEAPVTATVGIGPNGQGGFALSVALAAHIALEDEQARQLVT  
VAHQVCPYSAVRGNIDVQVSVNGLAL

>non-antioxidant\_1384

MVDFYYPGSSPCRSVIMTAKAVGVELNKKLLNLQAGEHLKPEFLKINPQHTIPTLVNDF  
ALWESRAIQVYLVEKYGKTDSLYPEKCPKKRAVINQRLYFDMGTLYQSFANYYPQVFAKA  
PADPEAFKKIEAAFEFLNTFLEGQDYAAGDSLTVADIALVATVSTFEVAKFEISKYANVNRW  
YENAKKVTPGWEENWAGCLEFKKYFE

>non-antioxidant\_1385

MPMISCDMRYGRTDEQKRALSAGLLRVICEATGEPRENIFFVIREGSGINLVQHGEHLDPY  
VPGNANDKALIAKLLK

>non-antioxidant\_1386

GGNLEEMNIDPDNATQTHPKLLLTQICMNAFKRGTDGMYATKKVIQADGESADQYYKWT  
RGSFGYYDNLNRNVQKMGEAEARNAPVYTALTKFFRAYFYELTLRFGDIPYSQALKGEK  
EEIYTPEYDAQEDVFAGILQELREADEILANDASVIDGDIYNGNSTQWRKLNLSFRLKVLML  
TLSNHTTVGNINIASEFKNIATNSPLMNSLADNGQLVYLDQQGNRYPPQFNAQWSGYMD  
DTFIQRMRRERDPRLFIFSAQTNGKTEGKPIDDFSSYEGGPAAPYSDAIKVSSEGTISPIN  
DRFRTPIVEPTMLMGYAELQQILAEAVVRGWISGNAQTYEKGIRASFSFYETHAKDYA

GYLNENAVAQYLKEPLVDFTQASGTEEQIERIIMQKYLVTIFYQGNWDSFYEQLRRTGYPDF  
RRPAGTEIPKRWMYPQGEYDNNGTNVETAITRQFGAGNDKINQATWWQKKS

>non-antioxidant\_1387

MLKKLKNFILFSSIFSPIAFAISCSNTGVVKQEDVSVSQGWKSDITFGVSEAWLNKKKGG  
EKVNKEVINTFLENFKKEFNKLNANDKTKNFDDVDFKVTPIQDFTVLLNNLSTDNPELD  
FGINASGKLVFLKNNPGIITPALETTTNSFVFDKEKDKFYVDGTDSPLVKIAKEINKIFVE  
TPYASWTDENHKWNGNVYQSVYDPTVQANFYRGMWIKGNDETLAKIKKAWNDKDWNT  
TFRNFGILHGKDNSSSKFLEETILKNHFQNKFTTLNEDRSAHPNAYKQKSADTLGLTDDF  
HIAFSEEGSFAWTHNKSATKPFETKANEMEALIVTNPIPYDVGVRKSVNQLEQNLIVQT  
FINLAKNKQDQTYGPLLGYNGYKKIDNFQKEIVEVYEKAIAK

>non-antioxidant\_1388

MPIATPEVYAEMLGQAKQNSYAFPAINCTSSETVNAAIKGFADAGSDGIIQFSTGGAEFGSG  
LGVKDMVTGAVALAEFTHVIAAKYPVNVVALHTDHCPCDKLDSYVRPLLAISAQRVSKGG  
NPLFQSHMWDGSAVPIDENLAIQELLKAAAAKIIIEIGVVGGEEDGVANEINEKLYTS  
PEDFEKTIEALGAGEHGKYLLAATFGNVHGVYKPGNVKLRPDILAQQQVAAAKLGLPA  
DAKPFDFVFHGGSGSLKSEIEEALRYGVVKNMNVDTDTQYAFTRPIAGHMFTNYDGVLVK  
DGEVGVKKVYDPRSYLKKAEMSQRVVQACNDLHCAGKSLTHHHHHH

>non-antioxidant\_1389

GPLGSPEFQSKPTPVKPNYALKFTLAGHTKAVSSVKFSPNGEWLASSADKLIKIWGAYDG  
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NPQSNLIVSGSFDESURIWDVKTGKCLKTLPAHSDPVS AVHFNRDGLIVSSSYDGLCRIW  
DTASGQCLKTLIDDDNPPVSFVKFSPNGKYILAATLDNTLKLWDYSKGKCLKTYTGHKNE  
KYCIFANFSVTGGKWIVSGSEDNLVYIWNLQTKIEVQKLQGHDTVVISTACHPTENIIASA  
ALENDKTIKLWKSDC

>non-antioxidant\_1390

GMAPDQQVPATALGKSSRISLDGRRSERSVILADGSMHSLTLLHPGVYTLSSSEVAETIRVLS  
GMAYYHAEGANDVQELHAGDSMVIPANQSYRLEVMEPLDYLLSS

>non-antioxidant\_1391

SLSRTVHHQQTAETQQAADFIRYMNAINDYLYQHPERRAAGGQLTSAQLGLPATKNVSH  
LISQQRVFWAKEKPGMLGALLEQSGDSALLARVENGRLLDTHGRRISITLPAVIPDQVIW  
MN

>non-antioxidant\_1392

ALFGTKDTTTTAHSDYEIIIEGGSSSWGQVKGRAKVNVPAAIPLLPTDCNIRIDAKPLDAQK  
GVVRFITTKIESVVDVSVKNTLNVEVDIANETKDRRIAVGEGSLSVGDVSHSFSFEGSVVNM  
YYRSDAVRRNIPNPIYMQGRQFHDILMKVPLDNDLVDTWEGFQQSISGGGANFGDWIRE  
FWFIGPAFAAINEGGQRISPIVVNSSNVEGGEKGPVGVTRWKFSHAGSGVVDVSRWTELF  
PVEQLNKPASIEGGFRSDSQGIEVKVDGNLPGVSRDAGGLRRILNHPLIPLVHHGMVGF  
NDFTVDTQLKIVLPKGYKIRYAAPQFRSQNLEEYRWSGGAYARWVEHVCKGGTGQFEVL  
YAAQ

>non-antioxidant\_1393

MRGSHHHHHHGS AKNVVLDHHDGNLDDFVAMVLLASNTEKVRLLIGALCTDADCFVENGF  
NVTGKIMCLMHNNMNLPLFPIGKSAATAVNPFKWRCLAKNMDDMPILNIPENVELWD  
KIKAEENEKYEQQLLADLVMNSEEKVTICVTGPLSNVAWCIDKYGEKFTSKVEECVIMGG  
AVDVRGNVFLPSTDGTAEWNIYWDPASAKTVFGCPGLRRIMFSLDSTNTVPVRSYPVQRF

GEQTNFLLSILVGTMWAMCTHCELLRDGDGYAWDALTAAYVVDQKVANVDPVPIDVV  
VDKQPNEGATVRTDAENYPLTFVARNPEAEFFLDMLLSARAC

>non-antioxidant\_1394

MGSSHHHHHSSGENLYFQGSHEMAVITPQGVNTWYQELEATHQALTREGYVVFVGYHGT  
NHVAAQTIVNRIAPVPRGNNTENEEKWGGLYVATHAEVAHGYARIKEGTGEYGLPTRAER  
DARGVMLRVYIPRASLERFYRTNTPLENAEEHITQVIGHSLPLRNEAFTGPESAGGEDETVI  
GWDMAIHAVAIPSTIPGNAYEELAIDEEAVAKEQSISTKPPYKERKDEL

>non-antioxidant\_1395

SNAKNRLGTKALNFTYTLDSGVKGTLYQFPAEYTLFFINNPCHACAEMIEGLKASPVING  
FTAAKCLKVLSIYPDEELDEWKKHRNDFAKEWTNGYDKELVIKKNLYDLRAIPTLYLLD  
KNKTVLLKDATLQKVEQYLAE

>non-antioxidant\_1396

GSGMRFYVKDHRNKAMINLHIQKDNPKIVHAFDMEDLGDKAVYCRCWRSKFFPCDGA  
HTKHNEETGDNVGPLIIKKKET

>non-antioxidant\_1397

GAMELSFGARAELPRIHPVASKLLRLMQKKTNLCLSADVSLARELLQLADALGPSICML  
KTHVDILNDFTLDMKELITLAKCHEFLIFEDRAFADIGNTVKKQYEGGIFKIASWADLVN  
AHVVPVSGVVKGLQEVGLPLHRGCLLIAEMSSTGSLATGDYTRAAVRMAEEHSEFVVGFI  
SGSRVSMKPEFLHLTPGVQLEAGGDNLGQQYNPQEVIGKRGSDIIIVGRGIISAADRLEAA  
EMYRKAWEAYLSRLGV

>non-antioxidant\_1398

MSLSSPNILLTRIDNRLVHGQVGVTTSTIGANLLVVVDDVVDNDIQQKLMGITAETYGF  
GIRFFTIEKTINVIGKAAPHQKIFLICRTPQTVRKLVEGGIDLKDVNVGNMHFSEGGKQISS  
KVYVDDQDLTDLRFIKQRGVNVFIQDVPGDQKEQIPDEGHHHHHH

>non-antioxidant\_1399

MAHHHHHHMGTLEAQTQPGSMDFRIGQGYDVHQLVPGRPLIIGGV TIPYERGLLGHS  
ADVLLHAITDALFGAAALGDIGRHFSDTDPRFKGADSRALLRECA SRVAQAGFAIRNVDS  
TIIAQAPKLAPHIDAMRANIAADLDLPLDRVNVKAKTNEKLGYLGRGEGIEAQAALVVR  
EAAA

>non-antioxidant\_1400

GMETTHYSIAQHFSGDFPAVYACFNDEIENIIGNQVVKGKADVIDFCNKMLPEMKGAVL  
TNDNVIQENQIVIEGKCRYFDAEGKEAFVSYCDIYRFENDTIKTITSYCI

>non-antioxidant\_1401

MHYQPKQDLLNDRIILVTGASDGIGREAAMTYARYGATVILLGRNEEKLRQVASHINEETG  
RQPQWFILDLLTCTSENCQQLAQRIAVNYPRLDGVVHAGLLGDVCPMSEQNPQVWQDV  
MQVNVNATFMLTQALLPLLLKSDAGSLVFTSSSVGRQGRANWGAYAASKFATEGMMQV  
LADEYQQRLRVNCPGGTRTAMRASAFPTEDPQKLKTPADIMPLYLWLMGDDSRRTG  
MTFDAQPGRKPGISQ

>non-antioxidant\_1402

GEFKGLDSKTFLSEHSMDMKFTYCDRITELIGYHPEELLGRSAYEFYHALDSENMTKSH  
QNLCTKGQVVSQYRMLAKHGGYVWLETQGTVIYNPRNLQPQCIMCVNYVLSEIEKN

>non-antioxidant\_1403

MGDKLSKTDWKIVSFTTEEASGEGSNNGHAKHLIDGNIETFWHSRWQGGSDPLPYEIIID  
MNRVKIAQIELLPRGRGSNNPIKVVRFEESEDGTNWESIGQFGFTNQDAALKYYVKSST

ARYIKLVIPDGVGNGTVAAIRELDVRGTVVNLEHHHHHH

>non-antioxidant\_1404

GMKTQITTRDLVLEFIHALNTENFPAACKRLNENFTFNGPMGHREGSERYMNDMEKMKF  
KYVVHKMFEEGNDVCLIIDINMNGKTIAASGLYHLEKGEITSLHVYFDPRPLFEE

>non-antioxidant\_1405

MGSDKIHSHHHMFPYKIVDDVILMPNKELNIEAHLFKKWVFEFLNKGYNKIFLVLS  
DVESIDSFSLGVIVNILKSISSSGFFALVSPNEKVERVLSLTNLDRIVKIYDTISEAMEEVRR  
K

>non-antioxidant\_1406

MGSSHHHHHSSGRENLVYFQGHMNSPSTRPLRRDPLHNALVTTNVLVLDQLEVAEPT  
RRRLVQLLTSGEQTVNNLAAHFPASRSAISQHLRVLTEAGLVTPRKDGRFRYRLDPQGLA  
QLRALFDSFWIDELDRLVADATEEAASKGDS

>non-antioxidant\_1407

KREAEAFWRQTSWGPQTTRKFPETVLARCVKYTEIHPEMRHVDCQSVWDAFKGAFISKH  
PCDITEEDYQPLMKLGTQTVPCNKILLWSRIKDLAHQFTQVQRDMFTLEDTLLGYLADDL  
TWCGEFDTSKINYQSCPDRKDCSNPVSFVWKTVSRRFAEAACDVVHVMLDGSRSKIF  
DKDSTFGSVEVHNLQPEKVQTLAWVIHGGREDSRDLCDPTIKELESISKRNIQFSCKNI  
YRPDKFLQCVKNPEDSSCTSEI

>non-antioxidant\_1408

GMSKVEQNAQHNIQQTSPNAAVQSGLQEWHRHIAEADWERLPDLLAEDVVFSSNPSTFDPY  
HGKGPLMVLPAVFSVLENFQYARHFSSKSGYVLEFNANMGDELDTGVDLIEFNDAKITD  
LVVMMRPASVVIDLSVEVGKRIAAAQS

>non-antioxidant\_1409

MGHHHHHHENLYFQGMKKEKVEQILAEFQLQEEDLKKVMRRMQKEMDRGLRLETHEE  
ASVKMLPTYVRSTPEGSEVGDFLSLDLGGTNFRVMLVKVGEEGEQQWSVKTKHQMYSIP  
EDAMTGTAEMLFDYISECISDFLDKHKMKHKKLPLGFTFSFPVRHEDIDKGILLNWTGKF  
KASGAEGNNVGLLRDAIKRRGDFEMDVVAMVNDTVATMISCYEDHQCEVGMIVGTG  
CNACYMEEMQNVELVEGDEGRMCVNTEWGAFGDSGELDEFLLDYDRLVDESSANPGQQ  
LYEKLIGGKYMGEVRLVLLRLVDENLLFHGEASEQLRTRGAFETRFVSQVESDTGDRKQI  
YNILSTLGLRPSTTDCDIVRRACESVSTRAAHMCSAGLAGVINRMRESSEDVMRITVGV  
DGSVYKHLPSFKERFHASVRRLTPSCEITFIESEEGSGRGAALVSAVACKKACMLGQ

>non-antioxidant\_1410

GAMGSRKSKAELQSEERKRIDELIESGKEEGMKIDLIDGKGRGVIATKQFSRGDFVVEYH  
GDLIEITDAKKREALYAQDPSTGCYMYFQYLSKTYCVDATRETNRLGRLINHSKCGNCQ  
TKLHDIDGVPHLILIASRDIAAGEELLFDYGDRSKASIEAHPWLKH

>non-antioxidant\_1411

MEFFGESWKKHLSGEFGKPYFIKLMGFVAERKHYTVYPPPHQVFTWTQMCDIKDVKVV  
ILGQDPYHGNQAHLGCFVQRPVPPPPSLENIYKELSTDIEDFVHPGHGDLGSGWAKQGV  
LLNAVLTVRAHQANSHKERGWEQFTDAVVSWLNQNSNGLVFLWGSYAQKKGSAIDRK  
RHHVLQTAHPSPLSVYRGFFGCRHFSKTNELLQKSGKKPIDWKEL

>non-antioxidant\_1412

GMGMEHKTYEADLFVWCQQQADGLRALSRSRDLRDDLDLEHIAEEIEDMGRSELREAT  
SLVRQICVRVIMAMSAPEAPDRARWRSEVVSWHNLLDTITPGMIDRIDIGVIWRRRAVSEA  
KAALIEINVAPQAGLSFQAPLPADHFLDEDFDYDATVARLGPTA

>non-antioxidant\_1413

MALKQISSNKCFGGLQKVFEHDSVELNCKMKFAVYLPPKAETGKCPALYWLSGLTCTEQ  
NFISKSGYHQSASEHGLVVIAPDTSRPGCNKGEDESWDFGTGAGFYVDATEDPWKTNYR  
MYSYVTEELPQLINANFPVDPQRMSIFGHSMGGHGALICALKNPGKYKSVSAFAPICNPVL  
CPWGGKAFSGYLGTQSKWKAYDATHLVKSYPGSQLDILIDQGKDDQFLLDGQLLPDNFI  
AACTEKKIPVVFRLQEDYDHSYYFIATFITDHIRHHAKYLNA

>non-antioxidant\_1414

HMPANHFPGPIGVVPGTMWRFRVQVSESGVHRPHVAGIHGRSNDGAYSLVLAGGYEDDV  
DNGNYFTYTGSGRDLSGNKRAGQSSDQKLTNNNRALALNCHSPINEKGAEAEWDRQG  
KPVVRVRNMKGGKHSKYAPAEGNRYDGIYKVVKYWPERGKSGFLVWRYLLRRDDTEPE  
PWTREGKDRTRQLGLTMQYPEGYLEALANKEKSRKR

>non-antioxidant\_1415

MSTSSSDPFFNFAKSSFRSAAAQKASASSLPPLPGPDKKVPGM DIKYDVVIVGSGPIGCTYA  
RELVGAGYKVMFDIGEIDSGLKIGAHKKNVVEYQKNIDKFNVIQGGQLMSVSVPVNTLV  
VDTLSPTSWQASTFFVRNGSNPEQDPLRNLSGQAVTRVVGGMSTHWGCATPRFDREQRP  
LLVKDDADADDAEWDRLYTKAESYFQTGTQFKESIRHNLVNLKLTTEEYKGRDFQOQIPL  
AATRRSPTFVWSSANTVFDLQNRPNTPDAPEERFNLFPVACERVVRNALNSEIESLHIHDL  
ISGDRFEIKADVYVLTAGAVHNTQLLVNSGFGQLGRPNPANPELLPSLGSYITEQSLVFCQ  
TVMSTELIDSVKSDMTIRGTPGELTYSVTYTPGASTNKHPDWWNEKVKNHMMQHQP  
LPIPFEDPEPQVTTLFQSPHWHTQIHRDAFSYGAVQQSIDSRLIVDWRFFGRTEPEKENKL  
WFSDKITDAYNMPQPTDFRFPAGRTSKEAEDMMTDMCVMSAKIGGFLPGSLPQFMKPG  
LCLHLGGTHRMGFDEKEDNCCVNTDSRVFGFKNLFLGGCGNIPTAYGANPTLTAMSLAIK  
SCEYIKQNFPTSPFTSEAQ

>non-antioxidant\_1416

GPDSASRISPGQINQVRPKLPLLKILHAAGAQQEMFTVKEVMHYLGQYIMVKQLYDQQE  
QHMVYCGDLLGELLGRQSFSVKDPSPLYDMLRKNLVTLAT

>non-antioxidant\_1417

GSSHHHHHHSSGLVPRGSRRRASSLSRDAERRAYQWCREYLGGAWRRVQPEELRVYPVS  
GGLSNLLFRCSLPDHLPSVGEEPREVLLRLYGAILQGVDSLVLVLESVMFAILAERSLGPQLYG  
VFPEGRLEQYIPSRPLKTQELREPVLSAAIATKMAQFHGMEMPFTKEPHWLFGTMERYLK  
QIQDLPTGLPEMNLLEMYSLKDEMGNLRKLESTPSPVVFCHNDIQEGNILLSEPENAD  
SLMLVDFEYSSYNYRGFIGNHFCEWVYDYTHEEWPYKARPTDYPTQEQLHFIRHYL  
AEAKKGETLSQEEQRKLEEDLLVEVSRYALASHFFWGLWSILQASMSTIEFGYLDYAQSRF  
QFYFQQKQGLTSVHSSS

>non-antioxidant\_1418

SNAMENQKMQEPLVYRRILLTVEDDNTSSERAFRYATTLAHDYDVPLGICSVLESEDINIF  
DSLTPSKIQAQRKHVEDVVAEYVQLAEQRGVNQVEPLVYEGGDVDDVILEQVIPEFKPDL  
LVTGADTEFPHSKIAGAIGPRLARKAPISVIVVR

>non-antioxidant\_1419

GKPKRPRSAYNVYVAERFQEAQKGDSPQEKLKTVKENWKNLSDSEKELYIQHAKEDETRY  
HNEMKSWA

>non-antioxidant\_1420

GMTESDRDQEQASMREVIVKSTPQRGKFNAFAELVGKLVSETRDFPGCLGAYLMLAPER  
EQVVMHIWETPDALAYLTWRADRGDFLEINEYLEVEQDFKTYQLA



>non-antioxidant\_1421

QAMFERFTDRARRVIVLAQEEARMLNHNYIGTEHILLGLIHEGEGVAAKALESMSGISLDAV  
RQEVEEIIIGQGSQPTTGHIPFTPRAKKVVLELSLREGLQMGHKYIGTEFLLLGLIREGEGVAA  
QVLVKLGADLPRVRQQVIQLLSG

>non-antioxidant\_1422

MGHHHHHHSHVAQFPTPFGGSLDTWAITVEERAKHDQQFHSLKPISGFITGDQARNFFFQS  
GLPQPVLAQIWALADMNNDGRMDQVEFSIAMKLIKLLQGYQLPSALPPVMKQQPVAISS

>non-antioxidant\_1423

MQYKLLNGKTLKGVLTIEAVDAATAEKVFKQYANDLGVGDGEWYDDATKTFTVTE

>non-antioxidant\_1424

RSTDTFNATYHTLEEIYDFLDLLVAENPHLVSKIQIGNTYEGRPIYVLKFSTGGSKRPAIWI  
DTGIHSREWVTQASGVWFAKKITQDYGQDAAFTAILDTLDIFLEIVTNPDGFAFTHSTNRM  
WRKTRSHTAGSLCIGVDPNRNWDAGFGLSGASSNPCSETYHGKFANSEVEVKSIIVDFVKD  
HGNIAFISHSYSQLLMYPYGYKTEPVPDQDELQLSKAAVTALASLYGTFKNYGSIIKAI  
YQASGSTIDWTYSQGIKYSFTFELRDTGRYGFLLPASQIIPTAKETWLALLTIMEHTLNHP

>non-antioxidant\_1425

GHMKGPDISAKDLRNIMYDHLPGFGTAFHQLVQVICKLGKDSNSLDIIHAEFQASLAEGDS  
PQCALIQTIRVPIFQDAAPPVIHIRSRGDIPRACQKSLRPVPPSPKIDRGWVCVFQLQDGKT  
LGLKI

>non-antioxidant\_1426

ATCDDGRTTANAACCILFPILDDIQENLFDGAQCGEEVHESLRLTFHDAIGFSPTLGGGGAD  
GSIIAFDTIETNFPANAGIDEIVSAQKPFVAKHNISAGDFIQFAGAVGVSNCPGGVRIPFFLGR  
PDAVAASPDHLVPEPFDSVDSILARMGDAGFSPVEVVSLLASHSIAAADKVDPSIPGTPFDS  
TPGVFDSQFFIETQLKGRLFPGTADNKGEAQSPHQEIRLQSDHLLARDPQTACEWQSMV  
NNQPKIQNRFAATMSKMALLGQDKTKLIDCSDVIPTPPALVGA AHL PAGFSLSDVEQACAA  
TPFPALTADPGPVTSVPPVPGS

>non-antioxidant\_1427

EPGENLKPVDAMQCFDCHTQIEDMHTVGKHATVNCVHCHDATEHVETASSRRMGERPV  
TRMDLEACATCHTAQFNSFVEVRHESHPRLEKATPTSRSPMFDKLIAGHGFAFEHAEPESH  
AFMLVDHFVVDRAYGGRFQFKNWQKVTDMGAVRGAWTVLTDADPESSDQRRFLSQTA  
TAANPVCLNCKTQDHILDWAYMGDEHEAAKWSRTSEVVEFARDLNHPLNCFMCHDPHS  
AGPRVVRDGLINAVVDRGLGTYPHDPVKSEQQGMTKVTFQRGREDFRAIGLLDTADSNV  
MCAQCHVEYNCNPGYQLSDGSRVGMDDRRANHFFWANVFDYKEAAQEIDFFDFRHATT  
GAALPKLQHPEAETFWGSVHERNGVACADCHMPKVQLENGKVYTSHSQRTPRDMMGQ  
ACLNCHAEWTEQALYAIDYIKNYTHGKIVKSEYWLAKMIDLFPVAKRAGVSEDVLNQA  
RELHYDAHLYWEWWTAENSVGFHNPDQARESLMSTSISKSKEAVSLLNDAIDAQVASR

>non-antioxidant\_1428

GAGAMSSRKKPSRRTRVLVGGAAALAVLGAGVVGTVAAANAADTTEATPAAAPVAARGGEL  
TQSTHLTLEAATKAARA AVEAAEKDGRHVSVA VDRNGNTLVTLRGD GAGPQSYESAER  
KAFTAVSWNAPTSELAKRLAQAPTLKDIPGTLFLAGGTPVTAKGAPVAGIGVAGAPSGDL  
DEQYARAGAAVLGH

>non-antioxidant\_1429

MVAAPPAVGAAMPSLDFDTSVFNKEKVS LAGHEEYIVRGGRNLFPLLPEAFKGIKQIGVIG  
WGSQGPAAQAQNL RDSLAEAKSDIVVKIGLRKGSKSFDEARAAGFTEESGTLGDIWETVSG

SDLVLLLISDAAQADNYEKIFSHMKPNSILGLSHGFLGHLQSAGLDFPKNISVIAVCPKGM  
GPSVRRLYVQGKEINGAGINSSFAVHQDVDGRATDVALGWSVALGSPFTFATTLEQEYKSD  
IFGERGILLGAVHGIVEALFRRYTEQGMDEEMAYKNTVEGITGIISKTKKGMLEVYNSLT  
EEGKKEFNKAYSASFYPCMDILYECYEDVASGSEIRSVVLAGRRFYEKEGLPAFPMGNIDQ  
TRMWKVGEKVRSTRPENDLGPLHPFTAGVYVALMMAQIEVLRKKGHSYSEIINESVIESV  
DSLNPFMHARGVAFMVDNCSTTARLGSRKWAPRFDYILTQQAFVTVDKDAPINQDLISNF  
MSDPVHGAIEVCAELRPTVDISVPANADVFVRPELRQSS

>non-antioxidant\_1430

YPMNINDALTSILASKKYRALCPDTVRRILTEEWGRHKSPKQTVEAARTRLHGICGAYVTP  
ESLKAAAALSAGDVKKALSLHASTERLAELDTLYDFIFSAETPRRVLDIACGLNPLALY  
ERGIASVWGCDIHQGLGDVITPFAREKDWDFTFALQDVLCAAPAEAGDLALIFKLLPLLER  
EQAGSAMALLQSLNTPRMAVSFPTRSLGGRGKGMEANYAAWFEGGLPAEFEIEDKKTIGT  
ELIYLIKNG

>non-antioxidant\_1431

GSHMRDVVSFEQPEFSVSRGDQVARIPVIRRVLDGGKSQVSYRTQDGTAAQGNRDYIPVEG  
ELLFQPGEAWKELQVKLLELQEVDSSLRGRQVRRFHVQLSNPKFGAHLGQPHSTTIIRD  
DE

>non-antioxidant\_1432

GHMSETNTIFKLEGVSVLSPLRKKLDLVFYLSNVDGSPVITLLKGNDRRELSIYQLNKNIKM  
ASFLPVPEKPNLIYLFMTYTSCEDNKFSEPVVMTLNKENTLNQFKKLGLLDSNVTD FEKC  
VEYIRKQAILTGFKISNPFVNSTLVDTDAEKINSFHLQCHRGTKEGTLYFLPDHIIIFGFKPIL  
LLDASDIESITYSSITRLTFNASLVTKDGEKYEFSMIDQTEYAKIDDYVVRK

>non-antioxidant\_1433

MQNGYTYEDYQDTAKWLLSHTEQRPQVAVICGSLGGLVNKLTQAQTFDYSEIPNFPEST  
VPGHAGRLVFGILNCRACVMMQGRFHMIEGYFPWKVTFPVRVFRLLGVETLVVTAAG  
GLNPNFEVGDIMLIRDHINLPGFSGENPLRGPNEERFGVRFPAAMSDAYDRDMRQKAHSTW  
KQMGEQRELQEGTYVMLGGPNFETVAECRLLRNLGADAVGMSTVPEVIVARHCGLRVFG  
FSLITNKVIMDYESQGANHEEVLEAGKQAAQKLEQFVSLMASIPV

>non-antioxidant\_1434

MSKLASQSVRALLERHGLFADKRFGQNFLVSEAHLRRIVEAARPFTGPVFEVGPGLGALT  
RALLEAGAETVIAIEKDLRLRPVLEETLSGLPVRLVFDALLYPWEEVPQGSLLVANLPYHI  
ATPLVTRLLKTGRFARLVFLVQKEVAERMTARPKTPAYGVLTLRVAHHAVAERLFDLPPGA  
FFPPPKVWSSLVRLTPTGALDDPGLFRLVEAAFGRKRRTLLNALAAAGYPKARVEEALRA  
LGLPPRVRAEELDLEAFRRRLREGLEGAV

>non-antioxidant\_1435

GAHMDCHLSMQLQLHSVNASKPSEGLVRQEEAEDPACIPIFWVSKWVDYSDKYGLGY  
QLCDNSVGVLFNDSTRLLILYNDGDSLQYIERDGTESYLTVSSHPNSLMKKITLLKYFRNYM  
SEHLLKAGANITPREGDELARLPYLRTWFRTRSAILHLSNGSVQINFFQDHTKLILCPLMA  
AVTYIDEKRDFRTYRLSLLEEYGCCKELASRLRYARTMVDKLLSSRSASNRLKAS

>non-antioxidant\_1436

MAKQLQARRLDGIDYNPWVEFVKLASEHDVVNLGQGFDPFPPDFAVEAFQHAVSGDFM  
LNQYTKTFGYPLTKILASFFGELLGQEIDPLRNVLVTVGGYGALFTAFQALVDEGDEVIIE  
PFFDCYEPMTMMAGGRPVFVSLKPGPIQNGELGSSSNWQLDPMELAGKFTSRTKALVLN  
TPNNPLGKVSREELELVASLCQHQHDVVCITDEVYQWMVYDGHQHISIASLPGMWERTLT

IGSAGKTFSATGWKVGWVLGPDHIMKHLRTVHQNSVFHCPTQSQA AVAESFEREQLLFRQ  
PSSYFVQFPQAMQRCRDHMIRSLQSVGLKPIIPQGSYFLITDISDFKRKMPDLPGAVDEPYD  
RRFVKWMIKNKGLVAIPVSIFYSVPHQKHFDHYIRFCFVKDEATLQAMDEKLRKWKVEL  
>non-antioxidant\_1437

GAMVMRLGDAAELCYNLTSYQLQIAAESDSIIAQTQRAINTTKSILINETFPKWSPLNGEIS  
FSYNGGKDCQVLLLLYLSCLWEYYIVKLSQSQFDGKFHRFPLTKLPTVFIDHDDTFKTLN  
FIEETSLRYSLSLYESDRDKCETMAEAFETFLQVFPETKAIVIGIRHTDPFGEHLKPIQKTD  
NWPDFYRLQPLLHWNLANIWSFLLYSNEPICELYRYGFTSLGNVEETLPNPHLRKDKNSTP  
LKLNFWEIENRYKHNEVTKAEPIPIADEDLVKIENLHEDYYPGWYLVDDKLERAGRIKK  
K

>non-antioxidant\_1438

MGHHHHHHHHHMSKQQIGVVGMAMGRNLALNIESRGYTVSIFNRSREKTEEVIAENP  
GKCLVPYYTVKEFVESLETPRRILLMVKAGAGTDAIDS LKPYLDKGDIIIDGGNTFFQDTI  
RRNRELSAEGFNFIGTGVSGGEEGALKGPSIMPGGQKEAYELVAPILT KIAAVAEDGEPCVT  
YIGADGAGHYVKMVHNGIEYGDMLIAEAYSLLKGGNLNTNEELAQTFTWNNGELSSY  
LIDITKDIFTKKDEEDGNYLVDVILDEAANKGTGKWTSQSALDLGEPLSLITESVFARYSSL  
KDQRVAASKVLSGPQAQPAGDKAEFIEKVRRALYLGKIVSYAQGFSQLRAASEEYNWDLN  
YGEIAKIFRAGCIIRAQFLQKITDAYAENPQIANLLLAPYFKQIADDYQQALRDVVAYAVQI  
GIPVPTFSAAVAYYDSYRAAVLPANLIQAQRDYFGAHTYKRIDKEGVFHTEWLD

>non-antioxidant\_1439

GSLTTISSILSLKREKPDNLAILQIDFTKLKEEDSLIVVYNSLKALTIKFARLQFCFVDRNNY  
VLDYGSVLHKIDSLDSISNLKSKSSSTQFSPIWLKNTLYPENIHEHLGIVAVSNSNMEAKKSI  
LFQDYRCFTSFGRRRPNELKIKVGYNVDYSDKIDELVEASSWTFVLETLCYSFGLSDFEH  
DDDDEEDN

>non-antioxidant\_1440

MNHKAFKFPSSASISPNPFTVSIPDEQLDDLKTLVRLSKIA PPTYESLQADGRFGITSEWLT  
TMREKWLSEFDWRPFEARLNSFPQFTTEIEGLTIHFAALFSEREDAVPIALLHGWPGSFVEF  
YPILQLFREEYTPETLPHLVVPSLPGYTFSSGPPLDKDFGLMDNARVVDQLMKDLGFGSG  
YIIQGGDIGSFVGRLLGVGFDACKAVHLNFCNMSAPPEGPSIESLSAAEKEGIARMEKFMT  
DGYAYAMEHSTRPSTIGHVLSSPIALLAWIGEKYLQWVDKPLPSETILEMVSLYWLTESFP  
RAIHTYREWVPTASAPNGATPYQKELYIHKPFGFSFFPKDLVPVPRS WIATTGNLVFFRDHA  
EGGHFAALERPRELKTDLTAFVEQVWQKGRSHHHHHH

>non-antioxidant\_1441

GMTAPTLSRAAMEKVIRTYDGCNEADEAKMIACFVPEAVHYFPAGMYGGA FRGAAQIA  
HRWRTAVETLGSYWTIDALVIDAETAEEAIEWTHFKTNQDKVLRGAECVEFDRASGLIREI  
RAFYASPQAEGIARLELGDFDYAGRGYRVTSRKP

>non-antioxidant\_1442

MSLTLTLTGTGGAQGVPAWGCECAACARARRSPQYRRQPCSGVVKFNDAITLIDAGLHDL  
ADRWSPGSFQQFLTHYHMDHVQGLFPLRWGVGDPIPVY GPPDEQGCDDLKHPGLLDF  
SHTVEPFVFDLQGLQVTPLPLNHSKLTFGYLLETAHSRVAWLSDTAGLPEKTLKFLRNNQ  
PQVMVMDCSHPPRADAPRNHCDLNTVLALNQVIRSPRVILTHISHQFDAWLMENALPSGF  
EVGFDGMEIGVAHHHHHHH

>non-antioxidant\_1443

AGPWADIMQGPSESFVDFANRLIKAVEGSDLPPSARAPVIIDCFRQKSQPDIQQLIRTAPSTL

TTPGEIHKYVLDRQ

>non-antioxidant\_1444

KVDLQSLPTRAYLDQTVVPILLQGMVLAKEPPNPIEFLASYLLKNKAQFEDRN

>non-antioxidant\_1445

GSNRSLIVTTILEEPYVLFKKS DKPLYGNDRFEGYCIDLLRELSTHLGFTYEIRLVEDGKYG  
AQDDVNGQWNGMVRELIDHKADLAVAPLAITYVREEVIDFSKPFMTLGISILYRKGTPIDS  
ADDLAKQTKIEYGAVEDGATMTFFKRSKISTYDKMWAFMSSRRQSVLVKSNEEGIQRVLT  
SDYAFLMESTTIEFVTQRNCNLQIGGLIDSKGYGVGTPMGSPYRDKITLAILKLQE QGKL  
HMMKEKWWRGNGCPE

>non-antioxidant\_1446

PSVYDAAAQLTADVKKDLRDSWKVIGSDKKGNGVALMTTLFADNQETIGYFKRLGDVSQ  
GMANDKLRGHSITLMYALQNFIDQLDNPDDLVCVVEKFAVNHITRKISAAEFGKINGPIKK  
VLASKNFGDKYANAWAKLVAVVQAAL

>non-antioxidant\_1447

SNAMANFEDFLTDLRIGTVTHAEFKEARVPAIRLEIDFGELGMKQSSAQITKRYNPEDLI  
GQQIVAVVNFPPKRVAGFKSEVLVLGGVPEAGDVVLLQPNMELPNGTKIS

>non-antioxidant\_1448

MERVNVVGAGLAGSEAAWTLLRLGVVRLFEMRPKRMPAHGTDRFAEIVCSNSLGGEG  
ETNAKGLLQAEMRRAGSLVMEAADLARVPAGGALAVDREEFSGYITERLTGHPLLEV VRE  
EVREIPPGITVLATGPLTSEALAEALKRRFGDHF LAYYDAASPIVLYESIDLTCKFRAGRYG  
QSADYLNCPMTEEEYRRFHQALLEAQRHTPHDWEKLEFFEACVPVEELARRGYQ TLLFG  
PMKPVGLVDPRTGKEPFAVVQLRQEDKAGRMWSLVGFQTGLKWPEQKRLIQMIPGLENA  
EIVRYGVMHRNTYLNAPRLLGETLEFREAEGLYAAGVLAGVEGYLESAATGFLAGL NAA  
RKALGLPPVAPPEESMLGGLVRYLATANPEGFQPMYANWGLVPPVEGRMGKKEKRQAM  
YRRGLEAFSAWLSGLNPPLPRPEAALV

>non-antioxidant\_1449

SSTFSASDFNSERYSSSRPSYPSDFYKMIDEYHDGERKLLVDVGC GPGTATLQMAQELKPF  
EQIGSDLSATMIKTAEVIKEGSPD TYKNVSFKISSDDFKFLGADSVDKQKIDMITAVECAH  
WFDFEKFQRSAYANLRKDG TIAIWGYADPIFPDYPEFDDLMIEVPY GKQGLGPYWEQPGR  
SRLRNMLKDSHLDPELFDI QVSYFCAEDVRDKVKLHQHTKKPLLIRKQVTLVEFADYVR  
TWSAYHQWKQDPKNKDKEDVADWFIKESLRRRPELSTNTKIEVVWNTFYKLGKRV

>non-antioxidant\_1450

MDINGGGATLPQALYQTSGLTAGFAQYIGVGSNGKAAFLNNDYTKFQAGVTNKNVH  
WAGSDSKLSATELSTYASAKQPTWGKLIQVPSVGT SVAIPFNKSGSAAVNLSVQELCGVFS  
GRINTWDGISGSGRTGPIVVVYRSESSGTT EFLTRFLNAKCNAETGNFAVTTTTFGTSFSGGL  
PAGAVAATGSQGVMTALAAGDGRITYMSPDFAA PTLAGLDDATKVARV GKNVATNTQGV  
SPAAANVSAAGAVPVPAAADRSNPDAWVPVFGPDNTAGVQPYPTSGYPILGFTNLIFSQC  
YADATQTTQVRDFFTKHYGASNNNDAAITANAFVPLPTAWKATVRASFLTASNALSIGNT  
NVCNGIGRPLLEAAHHHHHH

>non-antioxidant\_1451

GSSANDWQCKTCSNVNWARRSECNMCNTPKYAK

>non-antioxidant\_1452

AKHYKNNPSLITFLCKNCSVLACSGEDIHVIEKMHHVNMTP EFKELYIVRENKALQKKCA  
DYQINGEIICKCGQAWGTMMVHKGLDLPCLKIRNFVVVFKNNSTKKQYKKWVELPITFP

NLDYSELEHHHHHH

>non-antioxidant\_1453

MATASHNIDDILQLKDDTGVITVTADNYPLLSRGVPGYFNILYITMRGTNSNGMSCQLCHD  
FEKTYHAVADVIRSQAPQSLNLFFTVDVNEVPQLVKDLKLNVPPLVYPPAESNKQSQF  
EWKTSFPYQYSLVPENAENTLQFGDFLAKILNISITVPQAFNVQEEFHHHHHHHHHH

>non-antioxidant\_1454

SNAMKPENKIPVLTRLSDEMTAVVNFQQPGLPPWPADGDIETQRQYYLLERRFWNADAPS  
MTTRTCAVPTPYGDVTTTRYSPQPTSQATLYLHGGLGNLDTHDRIMRLRLARYTGCTV  
IGIDYSLSPQARYPQAIETVAVCSYFSQHADEYSLNVEKIGFAGDSAGAMLALASALWLR  
DKHIRCGNVIAILLWYGLYGLQDSVSRRLFGGAWDGLTREDLDMEKAYLRNDEDRESP  
WYCLFNNDLTRDVPPCFIASAEFDPLIDDSRLLHQTLQAHQQPCEYKMYPGTLHAFLHYS  
RMMTIADDALQDGARFFMARMKTPR

>non-antioxidant\_1455

GMKVLPVKQYLIMENYNPDTIFNGIVKINSNEKTFDDEILAQIGGALHDIDESWELLSFA  
NTIRSNWEIKTPAYDIVRLIVKCLPYSSDIKDYIEEGLGNKNITLTMLTVRILVNCFNENW  
GVKLLSNQVYKSIFETIDTEFSQASAKSQNLAIAVSTLIFNYSALVTKGNSDLELLPIVAD  
AINTKYGPLEEYQECEEAAAYRLTVAYGNLATVEPTLRQFANSVTWLANIKRSYGNVPRFK  
DIFDDL

>non-antioxidant\_1456

SLEDYSVNNRFESHGGGWGYSASHSVEAIRFSADTDILLGGLGLFGGRGEYTAKIKLFELGP  
DGGDHETDGDLLAETDVLAYDCAAREKYAMMFDEPVLLQAGWWYVAVARVSGPSSDC  
GSHGQASITDDGVIFQFKSSKSNNGTDVNAGQIPQLLYRLPTSD

>non-antioxidant\_1457

MAMHPRKDWYELTRATNWTSPSYVTEEQLFPERMSGHMGIPLEKWESYDEPYKTSYPEY  
VSIQREKDAGAYSVKAALERAKIYENS DPGWISTLKSHYGAI AVGEYAAVTGEGRMARFS  
KAPGNRNMATFGMMDEL RHGQLQLFFPHEYCKKDRQFDWAWRAYHSNEWAAIAAKHF  
FDDIITGRDAISVAIMLTFSFETGFANMQFLGLAADA AEAGDYTFANLISSIQTDES RHAQQ  
GGPALQLLIENKREEA QKKVDMAIWRARLFAVLTGPVMDYYTPLEDRSQSFKEFMYE  
WIIGQFERSLIDLGLDKPWYWDLFLKDIDELHHSYHMGVWYWRRTAWWNPAAAGVTPEE  
RDWLEEKYPGWNKRWGRCWDVITENVLNDRMDLVSPETLPSVCNMSQIPLVGVPGDDW  
NIEVFSLEHNGRLYHFGSEVDRWVFQQDPVQYQNHMNIVDRFLAGQIQPMTLEGALKYM  
GFQSIEMGKDAHDFAWADKCKPAMKSA

>non-antioxidant\_1458

MSFESKKPMRTWSHLAEMRKKPSEYDIVSRKLHYSTNNPDSPWELSPDSPMNLWYKQYR  
NASPLKHDNWD AFTDPDQLVYRTYNLMQDGQESYVQSLFDQFNEREHDQMVREGWEH  
TMARCYSPLRYLFHCLQMSSAYVQQMAPASTISNCCILQTADSLRWLTHAYRTHESLTY  
PDAGLGEHERELWEKEPGWQGLRELMEKQLTAFDWGEAFVSLNLVVKPMIVESIFKPLQ  
QQAWENNDTLLPLLIDSQLKDAERHSRWSKALVKHALENPDNHAVIEGWIEKWRPLADR  
AAEAYLSMLSSDILHAQYLERSTSLRASILTV

>non-antioxidant\_1459

MSAFPVHAAFEKDFLVQLVVVDLNDSDQVAEKVAYHCVNRRVAPREGVMRVRKHRST  
ELFPRDMTIAESGLNPTEVIDVVFEE

>non-antioxidant\_1460

MSTLADQALHNNNVGPIIRAGDLVEPVIETAEIDNPGKEITVEDRRAYVRIA AEGELILTRK

TLEEQLGRPFNMQELEINLASFAGQIQADEDQIRFYFDKTM

>non-antioxidant\_1461

MNNKTEQGNDAVSGQPSIKGQPVLGKDDAPVTVVEFGDYKCPSCVKFNSDIFPKIQKDFI  
DKGDVKFSFVNVMFHGKGSRLAALASEEVWKEDPDSFWDFHEKLFKQPDPTEQEWVTP  
GLLGD LAKSTTKIKPETLKENLDKETFASQVEKSDLNQKMNIQATPTIYVNDKVIKNFAD  
YDEIKETIEKELKGKLEHHHHHH

>non-antioxidant\_1462

SNAMHILVTGFAPFDNQNINPSWEAVTQLEDIIGTHTIDKLLKPTSFKKVDNIINKTLASNH  
YDVVLAIGQAGGRNAITPERVAINIDDARIPDNDDFQPIDQAIHLDGAPAYFSNLPVKAMT  
QSIINQGLPGALSNSAGTFVCNHTLYHLGYLQDKHYPHLRFGFIHVPYIPEQVIGKPDTPSM  
PLEKIVAGLTAAIEAISNDEDLHLALGTTE

>non-antioxidant\_1463

GMGGAALPDNGWPADRIDTESAHSARIYDYIIGGKDYYPADKEAGDAMSREWPALPVH  
MRANRDWMNRAVAHLAKEAGIRQFLDIGTGIPSPNLHEIAQSVAPESRVVYVNDPIVLT  
LSQGLLASTPEGRTAYVEADMLDPASILDAPELRTLDLTRPVALTVIAIVHFVLDDEDDAVG  
IVRRLLEPLPSGSLAMSIGTAEFAPQEVGRVAREYAARNMPMRLRTHAEAEFFEGLELV  
EPGIVQVHKWHPDAATADGIRDEDIAMYGA VARKP

>non-antioxidant\_1464

MSQNLFNVEDYRKLAKRQLPKMVYDYLEGGAEDEYGVKHNDRV FQQWRFKPKRLVDV  
SRRSLQAEVLGKRQSMPLLIGPTALNGALWPKGDLALARAATKAGIPFVLSTASNMSIEDL  
ARQCDGDLWFQLYVIHREIAQGMVLKALHTGYTTLVLTDDVAVNGYRERDLHNRFKIPPF  
LTLKNFEGIDLGKMDKANLEMQAALMSRQMDASFNWEALRWLRDLWPHKLLVKGLLS  
AEDADRCIAEGADGVILSNHGGRQLDCAISPMEVLAQSVAKTGKPV LIDSGFRRGSDIVK  
ALALGAEAVLLGRATLYGLAARGETGVDEVLTLLKADIDRTLAQIGCPDITSLSPDYLQNE  
GVTNTAPVDHLIGKGTHAHHHHHH

>non-antioxidant\_1465

SNAMARKKNTSDQSRSQAANTPIAGTYEGEYSVIELEADS YTTDGWLISINGVPSSHIVLG  
QPQALEFEYMRWIATGARAFIDAHQDASKLRITHLGGGACTMARYFADVYPQSRNTVVE  
LDAELARLSREWFIPRAPRVKIRVDDARMVAESFTPASRDVIIRDVFAGAITPQNFTTVEF  
FEHCHRGLAPGGLYVANCGDHSDLRGAKSELAGMMEVFEHVAVIADPPMLKGRRYGNIL  
MGSDTEFFSSNSTEASAITRELLGGGVPAQYKDES WVRKFASGAQARHDGVSTLQMPSDT  
PQHPAETPEHSNTQP

>non-antioxidant\_1466

GAQSCVWYGECGIAYGDKRYNCEYSGPPKPLPKDGYDLVQELCPGFFFGQVSLCCDVRQ  
LQTLKDNLQLPLQFLSRCPSCFYNLLNLFCELTCSPRQSQFLQVTATEDYVDPVTNQT KTN  
VKELQYYVQGQSFANAMYNACRDVEAPSSNDKALGLLCGKDADACQATNWIEYMFNKD  
NGQAPFTITPVFSDFPVHGMEPMNATKGCDES VDEVTAPCSCQDCSIVCGPKPQ

>non-antioxidant\_1467

MSLQASGNTDQAALSAQARLAALSILVGAVGATGPGVMITIDDPGPGVAPEVMIDVINEL  
RAAGAEAIQINDAHRSVRVGVDTWVVGVPGLTVDTKVLSPPYSILAIGDPPTLAAAMNIP  
GGAQDGVKRVGGRMVVQQADRVDTVLRQPKQHQAQPVKEGHHHHHH

>non-antioxidant\_1468

YTGFTPERYNKIQFGMDRTLWQLAGADQSCSDQVERIICYNPNPDHYGPQGHHFFNAAD  
KLIHKRQMELFPAPKPTMRLATYNKTQTGMTEAQFWAAVPSDTCSALAEQYPNWPATNG

NLREYVCPKAERFAPSAYFTFTDGLTSRSQSQLP

>non-antioxidant\_1469

TNVISTLDLNLTKGGGSWNVDGVMKKS AVTTFDGKR VVKAVYDKNSGTSANPGVGG  
FSFSAVPDGLNKNAITFAWEVFYPKGFDFARGGKHGGTFIGHGAASGYQH SKTGASNRIM  
WQEKGGVIDYIYPPSDLKQKIPGLDPEGHGIGFFQDDFKNALKYDVWNR IEIGTKMNTFK  
NGIPQLDGESYVIVNGKKEVLKRINWSRSPDLLISRFDWNTFFGGPLSPKNQVAYFTNFQ  
MKKYELEHHHHHH

>non-antioxidant\_1470

AVINHDAVPVWPQPEPADATQALAVRFKPQLDVVNGCQPYPAVDPQNTSGGLKPSGSQA  
AACRDM SKAQVYSRSGTYNGYYAIMYSWYMPKDSPSTGIGHRHDWENVVVWLDNAAS  
ANIVALSA SAHSGYKKSFPADKSYLDGITAKISYKSTWPLDHELGF TTSAGKQQLIQWEQ  
MTQAARDALESTDFGNANVPFKSNFQDKLVKAFFQ

>non-antioxidant\_1471

GMNTNLASFIVGLIIDENDRFYVQKDGQTYALAKEEGQHTVGD TVKGFAYTDMKQKLR  
LTTLEVTATQDQFGWGRVTEVRKDLGVFVD TGLPDKEIVVSLDILPEL KELWPKKGDQLYI  
RLEVDKKDRIWGLLAYQEDFQRLARPAYNNMQNQNWP AIVYRLKLSGTFVYLPENML  
GFIHPSERYAEPRLGQVLDARVIGFREVDRTLNL SLKPRSFEMLEND AQMILT YLESNGGF  
MTLNDKSSPDDIKATFGISKGQFKKALGGLMKAGKIKQDQFGTELI

>non-antioxidant\_1472

MTTVRIPAGWPATEEEARAVQDELGRVILDEPGPPP GTGRVTGVDVAYDDERDVVAAA  
VVLDAATLDVVAEATAVGEVSFPYVPGLLAFREIPTVLAALDALPCPPGLIVCDGYGVAHP  
RRFGLASHLGVLTGLPTIGVAKNPFTFSYEDPGAPRGS AAPLLAGADEVGRALRTQSGVKP  
V FVSVGHRVDLDHACAHTLALTPKYRIPETRRADSLCRRALKEATALEHHHHHHH

>non-antioxidant\_1473

MHHHHHHKLITLLLRSSKSEDLRLSIPVDFTVKDLIKRYCTEVKISFHERIRLEFEGEWLDP  
NDQVQSTELEDEDQVSVVLD

>non-antioxidant\_1474

GMEQHQVWAYQTKTHSVTLNSVDIPALAADDILVQNQAIGINPVDWKFIKANPINWSNGH  
VPGVDGAGVIVKVGAKVDSKMLGRRVAYHTSLKRHGSFAEFTVLNTDRVMTLPDNL SFE  
RAAALPCPLLTAWQAFEKIPLTKQREVLIVGFGAVNNLLTQMLN NAGYVVDLVSASLSQA  
LAAKRGVRHLYREPSQVTQKYFAIFDAVNSQNAAALVPSLKANGHIICIQRIPAPIDPAFT  
RTISYHEIALGALHDFGDRQDWQILMQQGEALLTLIAQ GKMEIAAPDIFRFEQMIEALDHS  
EQTKLKT VLT LNE

>non-antioxidant\_1475

SNAESAAPQVHLSILATTDIHANMMDYDYYS DKETADFG LARTAQLIQKHREQNPNTLLV  
DNGDLIQGNPLGEYAVKYQKDDIISGKTHPIISVMNALKYDAGTLGNHEFN YGLDFLDG  
TIKGADFPVIVNANVKTTS GENRYTPYVINEKTLIDENGNEQKVKVGYIGFVPPQIMTWDK  
KNLEGQVQVQDIVESANETIPKMAEGADVIIALAH TGI EKQAQSSGAENAVFDLATKTK  
GIDAIISGHQHGLFPSAEYAGVAQFNVEKGTINGIPVVM PSSWGKYLGVIDLKLEKADGSW  
KVADSKGSIESIAGNVTSRNETVTNTIQQTHQNTLEYVRK

>non-antioxidant\_1476

GTGRSRLLED FRNNRFPNLQLRDLIGHIVEFSQDQHGSRFIQKLERATPAERQIVFNEILQ  
AAAYQLMTDVFVGNVVIQKFFFEFGSLDQKLALATRIRGHV LPLALQMYGCRVIQKALESISSD  
QQSEMVKELDGHV LKCVKDQNGNHVVQKCI EC VQPQSLQFIIDAFKGGQV FVLSTHPYGC

RVIQRILEHCTAEQTLPILEELHQHTEQLVQDQYGNVVIQHVLEHGRPEDKSKIVSEIRGKV  
LALSQHKFASNVVEKCVTHASRAERALLIDEVCCQNDGPHSALYTMMKDQYANYVVQK  
MIDMAEPAQRKIIMHKIRPHITTLRKYTYGKHILAKLEKYLLKNSPDLG

>non-antioxidant\_1477

MIVLENHTDISGKTSERVLHSAWLNHSHYQTGLKNLLDTAVLEGTDEESARSLASRWQKID  
EIPDFERRRMSVVVAENTEHHQLVCKGALQEILNVCSQVRHNGEIVPLDDIMLRKIKRVT  
DTLNRQGLRVVAVATKYLPAREGDYQRADESLLILEGYIAFLDHHHHHH

>non-antioxidant\_1478

SNADDMILKGVNIFPIQIETILLQFKELGSDYLITLTAESNDEMTEVEVELSQLFTDDYGRL  
QALTREITRQLKDEILVTPRVKLVKPGALPKSEGKAVRVKDLRKT

>non-antioxidant\_1479

GAQQQELPVPKPHQLKWHEAEMGAVFHYDLHVFDGIRYGGNNRINPIEDYNIFNPTELN  
TDQWVQAAKAAGCKFAVLTATHETGFWLWQSDVNPYCLKAVKWRDGGKDIVRDFVNSC  
RKYGLQPGIYIGIRWNSLLGIHNFKAEGEGAFARNRQAWYKRLCEKMVTELCTRYGDLY  
MIWFDGGADDPRADGPDVEPIVNKYQPNCLFYHNIDRADFRWGGSETGTVEYPCWSTFP  
VPCSHHKRIESSIDQLELLKHGDKNGRYWVPAMADTPLRGANGRHEWFWEPDDENNIYP  
LNTLMDKYEKSVGRNATLILGLTPDPTGLIPAGDAQRLKEMGDEINRRFSSPIARISGQKKS  
LTLKLGKEQSVNYCIIQENIKNGERIRQYQIEAKVNGKWQTVCKGESVGHKRIEKFEPEVA  
TALRLTVSESIALPDIINFSAYSVK

>non-antioxidant\_1480

GEGTDAIQALIQAYFTAWNTNAPERFAEIFWPDGSWVNVVGMHWRGRDQIVFAHTAFL  
KTIFKDCKQELVTIEARTIAPGSALAVVTLIQDAYVTPDGRQMPRAHDRLTLAVEREGVW  
RFIHGHNTIVNPDAANNDPVLRMKPA

>non-antioxidant\_1481

GMNLDSYERTGLRVSLDLVNIATPGSRRGTPHTGGCVIEDLHDLLKDDPASVAQLGDDHV  
EGFVELARLLHTAIDALSNGQVATAATALNHLLRKHPATPELAQDPDGTWRLHHHPLDAE  
LVPMWTAICAEGlareIGHQNVRRFGICNAHRCDRVYFDTSRNGTRQYCSLACQNRVKA  
AAFRERRAT

>non-antioxidant\_1482

MSLKITEVKAHALSTPIPERMRVESGAGLKLNRQMILVEVRTDEGVTGVGSPSPGYDLAVL  
KRAIEDVIGPQLIGEDPANINYLWHKVFHGEVSRNLGHRVGVIAAMSGVDIALWDLKGRA  
MNQPIYQLLGGKFHTRGVRAYASSIYWDLTPDQAADELAWVEQGFTAACKLVGRAPR  
KDAANLRAMRQRVGADVEILVDANQSLGRHDALAMLRILDEAGCYWFEEPLSIDDIEGH  
RILRAQGTPVRIATGENLYTRNAFNDYIRNDAIDVLQADASRAGGITEALASASAASAH  
AWNPHTFNDIITVAANLHLVAASHPAMFEWDITHNDLMTRLASYDLKLENGLVQPPQGP  
GLGFEIDWDFVAHAHAWKGEPAIGAGHGMKKEGHHHHHH

>non-antioxidant\_1483

GAGTQTAQTQALDSDGIPTGGEWITMFDGKTLNGWRGYCRQDVPLGWVVEDGSITYKG  
SDNKADTGFGLIYDKKFKNFVFEIEWKIDKAGNSGIFYTAQEIEGTPIYYSSPEYQLLDNE  
NMPDAWEGCDGNRQAGAVYDMIMPDPQVPKPYGNWNKTRIVVYNQRVIHYMNDVKIL  
EFQFGTPVWRALVDHSHKFSKFSSTPEKCEAYDLMLQCGKQPGYIGMQDHGYGVCFRNIR  
IKEL

>non-antioxidant\_1484

MGVLITGCGSRGDTEPLVALAARLRELGADARMCLPPDYVERCAEVGVPMPVGRAVRA



GAREPGELPPGAAEVVTEVVAEWFDPVAAIEGCDVAVTTGLLPAAVAVRSMAEKLGPY  
RYTVLSPDHLPEQSQAERDMYNQGADRLFGDAVNSHRASIGLPPVEHLYDYGYTDQPW  
LAADPVLSPLRPTDLGTVQTGAWILPDQRPLSAELEGFLRAGSPPVYVGFSGPAPAEAR  
VAIEAVRAQGRVVLSSGWAGLGRIDEGDDCLVVGEVNHQVLFGRVAAVVHHGGAGTTT  
AVTRAGAPQVVVPQKADQPYYAGRVDLGVGVAHDGPTPTVESLSAALATALTPGIRARA  
AAVAGTIRTDGTTVAAKLLEAISRQRSSVPAAKLAAALEHHHHHH

>non-antioxidant\_1485

MNTYFDIPHRLVGKALYESYDHFQMDILSDGSLYLIYRRATEHVGGS DGRVVFSLKLEG  
GIWSAPTIVAQAGGQDFRDVAGGTMPSGRIVAASTVYETGEVKVYVSDDSGVTWVHKFT  
LARGGADYNFAHGKSFQVGARYVIPLYAATGVNYELKWLESSDGGETWGEGSTIYSGNT  
PYNETSYPVGDGVILAVARVGSAGGALRQFISLDDGGTWTQGNVTAQNGDSTDILVA  
PSLSYIYSEGGTPHVLLYTNRTTHFCYYRTILLARAVAGSSGWTERVPAYSAPAASGYTSQ  
VVLGRRILGNLFRETSSTTSAYQFEVYLGVPDFESDWFSVSSNSLYTLSHGLQRSPRR  
VVVEFARSSSPSTWNIVMPSYFNDGGHKGSGAQVEVGS LNIRLGTGA AVWGTGYFGGID  
NSATRLATGYRVRWI

>non-antioxidant\_1486

MSLSTMLVAEDLSAVGGISLSSALPVLTA MQYDVAALPTSLLSTHTSGYGT PAVVDLSTWL  
PQVFAHWTRAQLHFDQALIGYVGSVALCQQITTYLEQQTLLSLLVDPVLGDLGQLYQGFD  
QDYVAAMRQLIQQADVILPNTTEAALLTGAPYQVTPDLEVILPALQAQLKTGAHAVITDV  
QRADQIGCAWLDEAGHVQYCGARRLP GHYNGTGD TLA AVIAGLLGRGYPLAPTLARAN  
QWLNMAVAETIAQNRTDDRQGV ALGDLLQAILALNEGHHHHHH

>non-antioxidant\_1487

SEESRESPAEHGYMPAEWDSHAQ TWIGWPERQDNWRHNALPAQRV FAGVAKAISKFEP  
VTVCASPAQWENARKQLPEDIRV VEMSMNDSWFRDSGPTFIVRKR PVKLSLNRNIAGID  
WNFNAWGGANDGCYNDWSHDLLVSRKILALERIPRFQHSMILEGGSIHVDGEGTCLVTEE  
CLLNKNRNPMSKEQIEEELKKYLGVQ SFIWLPRGLYGDED TNGHIDNMCCFARPGVLL  
SWTDDDETDPQYERSVEALSVLSNSIDARGRKIQVIKLYIPEPLYMTEEESSGITQDGEAIPRL  
AGTRLAASYVNFYIANGGIIAPQFGDPIRDKEAIRVLSDTFP HHSVVG IENAREIVLAGGNI  
HCITQQPAEPTSVAENGH

>non-antioxidant\_1488

GAMGALETVPKDLRHLRACLCSLVKTIDQFEYDGC DNCDAYLQMKGNRE MVYDCTSS  
SFDGIIAMMSPEDSWVSKWQRVSNFKPGVYAVSVTGRLPQGIVRELKSRGVAYKSRDTAIK  
T

>non-antioxidant\_1489

MAHHHHHHVDDDDKMVTDQRWLIDKSALVRLTDS PDMEIWSNRIERGLVHITGVTRLEV  
GFSAECEGIARREFREPPLSAMPVEYLTPRIEDRALEVQTLLADRGHHRGPSIPDLLIAATA  
ELSGTLVLHVDKDFDAIAALTGQKTERLTHRPPSA

>non-antioxidant\_1490

TQVAKKILVTCALPYANGSIHLGHMLEHIQADVWVRYQRMRGHEVNFICADDAHGTPIM  
LKAQQLGITPEQMIGEMSQEHTDFAGFNISYDNYHSTHSEENRQLSELIYSRLKENGFIK  
NRTISQLYDPEKGMFLPDRFVKGTCPKCKSPDQYGDNCEVCGATYSPTELIEPKSVVSGAT  
PVMRDSEHFFFDLPSFSEMLQAWTRSGALQEQVANKMQEWFESGLQQWDISRDAPYFGF  
EIPNAPGKYFYVWLDAPIGYMG SFKNLCDKRGDSVSFDEYWKKDSTAELYHFIGKDIVYF  
HSLFWPAMLEGSNFRKPSNLVHGYVTVNGAKMSKSRGTFIKASTWLNHFADADSLRYYY

TAKLSSRIDDLNLEDFVQRVNADIVNKVVNLASRNAGFINKRFDGVLASELADPQLYKT  
FTDAAEVIGEAWESREFGKAVREIMALADLANRYVDEQAPWVVAKQEGRDADLQAICSM  
GINLFRVLMTYLKPVLPKLTERRAEAFNLTELTWDGIQQPLLGHKVNPFKALYNRIDMRQV  
EALVEASK

>non-antioxidant\_1491

MSLSFTPLHTTSEAFIEKALPWLEDRYFHAIYLNPNGYTAYPQGAFRHYLAFGSEAAIHVS  
DATRVFETWNEIKKGYTNEWIFVFASVDGKNSVEQLHTSKEAGIAFAAATFFIPEHVWEIQ  
PDGILIHKGSSSLVTEIQHAEPSTPVQQSDIFVKQVVSKESEYFNAFDELQQIIAQGDAYEIN  
YCIPFTAKGNISPAATYQRLNKKTPMPFSVYYKFNTEYILSASPERFIKKTGDTIISQPIKGT  
KRGKSKAEDEMLKQQLTSEKEQSENTMIVDLVRNDLSRTAVAGSVCVPELSGLYTFPNV  
HQLISTVQSTIDPACSSIDVIQAFPMGSMGTGAPKVNVMKFDRIESMARGPFSGTVGYMD  
PHDNFDFNVLIRSIFYNSATQELFMEAGSAITSYAKAETEYEECLLKITPMIHILNNQEGHH  
HHHH

>non-antioxidant\_1492

GASETQQWKTLEDTRSALMGVYGLTRAALADNNTHWICGDLRKGDFTVYKRSDLQAVS  
DNELNKPYDLLKKVSNWRRFYAVINAASVFMEKAPRTVELDRSYSEQLNKYDIAQVRAL  
RAFAYFYMVRIWGDVPLVTYSYDNGTFPSPMRTDAQTVLSYAKAELLTAIEDLPYQYGTQ  
TNLYYGSYGAQWQGKLFNKLSAYSVLAHICAWQGNIAEAETYSAFIIDHASEINAKYTSI  
ADLTSETGLFYNSASVKGSRIKGFNFHNDNEATQSGHLEQLTLAYPLVQKSYPEIYISKDS  
LFSIFTNFDDLRFGIIDTIKYSYYVQNLNEETPVFSKIKIQQDGSAKDNDGFGVFGSSIVFTRL  
EDITLLRAEALCALNRSTEAVSYLNMIRTNRGLREVSKKDFGNNRESLIAEIFEERRRELM  
GEGWRWYDLVRRQKLMKDNEAFLRLISSGGIYWPVSEDIITANSQIEQNEFWK

>non-antioxidant\_1493

PQFEKIEGRMIRILYLLVKPESMSHEQFRKECVVHFQMSAGMPGLHKYEVRVAGNPTDT  
HVPYLDVGRIDAIGECWFASEEQYQVYMESDIRKAWFEHGKYFIGQLKPFVTEELV

>non-antioxidant\_1494

MSRFDSGLPSVRQVQLLIKDQTPVEIKLLTGDSLFGTIRWQD TDGLGLVDDSERSTIVRLA  
AIAYITPRR

>non-antioxidant\_1495

MTIGQKNTNIDPRFPHHPRQSFWEARAKALESLLIEKGHLSSDAIERVIKHYEHELGPM  
NGAKVVAKAWTDPAFKQRLLEDSETVLRRELGYGLQGEHIRVVENTDTVHNVVCTLCS  
CYPWPLLGLPPSWYKEPAYRARVVKPRQVLKEFGLDLPDSVEIRVWDSSSEIRFMVLPQR  
PEGTEGMTEEELAKLVTRDSMIGVAKIEPPKVTVG

>non-antioxidant\_1496

MNGIHDVGGMDGFGKVMYVKEEEDIYFTHDWERLALGLVAGCMAQGLGMKAFDEFRI  
GIELMRPVDYLTSSYYGHWIATVAYNLVDTGVLDEKELDERTEVFSKKPDTKIPREDPAL  
VKLVEKALNDGLSPLREISASPRFKVGERIKTKNIHPTGHTRFPYARDKYGVIDEVYGAH  
VFPDDAAHRKGENPQYLYRVRFEAEELWGYKQKDSVYIDLWESYMEPVSH

>non-antioxidant\_1497

MGKNVVVLGTQWGDEGKGVVDLLTERAKYVVRYQGGHNAGHTLVINGEKTVLHLIPS  
GILRENVISIINGNVVLAPDALMKEMTELEARGVPVRRERLLLSEACPLILPYHVALDNARE  
KARGAKAIGTTGRGIGPAYEDKVARRGLRVSDLFNKETFAIKLKEIVEYHNFQLVHYYKEA  
AVDYQKVLDDVLAADILTAMVVDVSELNDNARKQGELIMFEGAQGTLLDIDHGTYPYV  
TSSNTTAGGVATGSGLGPRYVDYVLGIVKAYSTRVGAGPFTELNDETGEFLRKQGNEYG

ATTGRSRRTGWLDIVAVRRAVQINSLSGFCMTKLDVLDGLKEVKLCVGYRMPDGREVDT  
TPLAAEGWEGIEPIYETMPGWSETTFGVKEHSLKPQAALNYIQRVEELTGVPIDIIISTGPDR  
DETMILRDPFDA

>non-antioxidant\_1498

GMQGGKFKISPGAWFSMNYPDWNEFEDGESEFLFYNDVWTGNFRISAFKGNASYGKDA  
IRQELKENDSASLVKIGTWDCAYSKEMFQEEGTYTSHLWITGTGNIAFECSTVPKGGSA  
KEAEEVIATLEARKEGEKYPALIPVRLSEIYQINEGYEWVSTVKQELKKDFQGVVEEDLE  
KIQQVIDSGKISPKKKDEWLAIGITVCAILTNEVEGMEWKTLDGNREVPVLEYQGRITDP  
MKIAWSKVKAGQPCNIAEAYQSAIDHH

>non-antioxidant\_1499

GMSSSGIEIAKPFVTATTNVLSTMAGIQPIPGQPYVKNNVAKGDVSAVVGITGHKNGSIS  
VTFTKQCAIAVVKAMLGDDIQDIIQDTKDAVGEVTNMISGQARAALSEMGMFTQGATPSV  
IMGDGHTISHVTKSPVIAIPFKTNHGEFTVEFCLE

>non-antioxidant\_1500

SEDNGVDFNKNTALDKNYLLNNKIPSNVVEEAGSKNYVHYIIQLQGDDISYEATCNLFSK  
NPKNSIIIQRNMNESAKSYFLSDDGESILELNKYRIPERLKNKEKVKVTFIGHGKDEFNTSE  
FARLSVDSLSNEISSFLDTIKLDISPKNVEVNLLGCNMFSYDFNVEETYPGKLLLSIMDKITS  
TLPDVKNSITIGANQYEVINSEGRKELLAHSGKWINKEEAIMSDLSSKEYIFFDSIDNKL  
KAKSKNIPGLASISEDIKTL

>non-antioxidant\_1501

MDNTILILGDMLSAAYGLQEEGWVKLLQDKYDAEQSDIVLINASISGETSGGALRRLLDA  
LLEQYEPHTVLIELGANDGLRGFPVKKMQTNLTALVKKSQAANAMTALMEIYIPPNYGPR  
YSKMFTSSFTQISEDNAHLMNFFMLDIAGKSDLMQNDSLHPNKAQPLIRDEMYDSIKK  
WLNNV

>non-antioxidant\_1502

SVSVDLNVDPSLQIDIPDALSERDKVKFTVHTKTTLPTFQSPEFSVTRQHEDFVWLHDTLT  
ETTDYAGLIIPAPTKPDFDGPREKMQKLGEGEGSMTKEEFAKMKQELEAEYLAVFKKTV  
SSHEVFLQRLSSHPVLSKDRNFHVFLFYDQDLSVRRKNTK

>non-antioxidant\_1503

MQFKVYTYKRESRYRLFVDVQSDIIDTPGRRMVIPLASARLLSDKVSRELYPVVHIGDES  
WRMMTTDMASVPVSVIGEEVADLSHRENDIKNAINLMFWGI

>non-antioxidant\_1504

GPERTSIAVHALMGLPTGQPANGTKLDSIGLPKVDGMSFTLYRVNEIDLTTQAGWDAASKI  
KLEELYTNGHPTDKVTKVATKKTEGGVAKFDNLTALYLVVQELNGAEAVVRSQPFLVAA  
PQTNPTGDGWLQDVHVYPKHQALSEPVKTAVDPDATQPGFSVGENVKYRVATKIPEIASN  
TKFEGFTVADKLPALGKPDITNKITVTLGGKPINSTDVSVQTYQVGDRTVLSVQLAGATL  
QSLDQHKDQELVVEFEAPVTKQPENGQLDNQAWVLPNPTAQWDPEESGDAALRGMPS  
RVSSKFGQITIEKSFNGTNPADRTATFQLHRCEADGSLVKSDPPISLDGKQEFVTGQDGKA  
VLSGIHLGTLQLESNVMKYTDWAGKGTFCVETATASGYELLPKPVIVKLEANESTNVL  
VEQKVKIDNKKKN

>non-antioxidant\_1505

MSLGELNVATVTRRPEILLVDSQEVILQRLQQLSPLPYTLHFARDATQALQLLASREVDLV  
ISAAHLPMQMDGPTLLARIHQYQYPTTRILLTGDPDLKLIKAINEGEYRYLSKPWDDQELL  
LALRQALEHQHSERERLRLQDEGHHHHHH

>non-antioxidant\_1506

GAMGSNPAEELAAAAQRGDVIAILQQALETNSFRLLFQPVISLRGDSHENYEVLLRLLNPQ  
GQEVPPAEFLHAAKEAGLAEKIDRWVILNSIKLLAEHRAKGHQTKLFLVHLSSASLQDPGL  
LPWLGVALKAAARLPPELVFQISEADATSYLKQAKQLTQGLATLHCQAAISQFGCSLNPFN  
ALKHLTVQFIKIDGSFVQDLNQVENQEILKGLIAELHEQQKLSIVPFVESASVLATLWQAG  
ATYIQGYLQGPSQAMDYDFSSGDE

>non-antioxidant\_1507

MGDTKEQRILRYVQQNAKPGDPQSVLEAIDTYCTQKEWAMNVGDAKGQIMDAVIREYSP  
SLVLELGAYCGYSAVRMARLLQPGARLLTMEMNPDYAAITQQMLNFAGLQDKVTILNGA  
SQDLIPQLKKKYDVDTLDMVFLDHWKDRYLPDTLLLEKCGLLRKGTVLLADNVIVPGTP  
DFLAYVRGSSSEFECTHYSSYLEYMKVVVDGLEKAIYQGPSSPKS

>non-antioxidant\_1508

GQELKGYMKTPTGYLMVLRHGDNLQNLQLEQLARDEHIPSASFVGIGFMSEATFGFYDF  
GRKQFDPKTYRNVEMANMTGSIWKEGKPSIAHAGTVDGTGTFQGAGGHLLGLTVGTGSC  
EITVTVYPQRLDRFVDPEIQANVLGLPQQ

>non-antioxidant\_1509

GMSYQANANSYAFYVSEPFSESNLGNSTHDFVYYNMLRMWKGEDNSFPFND AHDKTYN  
VRDGSDWEKTLKPRHLTRLDNSKNILFLSSITANSRALREEMNYGIGTKGLPVIVIYDPYD  
KKSIVDSNGNFKKQIKDLWDKLPFRDNMSSVATLHIPCTKSVIISALNNEDFMVNTMA  
DAEKYYYYKP

>non-antioxidant\_1510

GMSSKEEILSILEAFASSTERMGSFFLDNATADFLFIRPSGNPLDAKGFENMWSSGDLVLESA  
EITKVHKFELLGSNAICVFTLGSKFTYKGTQNDLPTVTSIFKKIDEKWKVAWMQRSSG  
QSDMTLWNE

>non-antioxidant\_1511

APAAVDWRARGAVTAVKDGQCGSCWAFSAIGNVECQWFLAGHPLTNLSEQMLVSCDKT  
DSGCSGGLMNAFEWIVQENNGAVYTEDSYPYASGEGISPPCTTSGHTVGATITGHVELPQ  
DEAQIAAWLAVNGPVAVAVDASSWMTYTGGVMTSCVSEQLDHGVLLVGYNDSAAVPYW  
IKNSWTTQWGEEGYIRIAKGSNQCLVKEEASSAVVG

>non-antioxidant\_1512

MAFQLHPRLQQDCIVLGNLPLCKVLLIKEDIGPWLILVPRIEELKEIHHMTDEQQIQFIKES  
AVAQLEDNFSPDKINIGALGNLVPQLHIHHIARFTTDVAWPGPVWGNTTG VIRAQSSQTQ  
LVDLLRDKLSNISGFKRLEHHHHHH

>non-antioxidant\_1513

SHMSKIKGNVKWFNESKGFGFITPEDGSKDVVHFSAIQTNGFKTLAEGQRVEFEITNGAK  
GPSAANVTAL

>non-antioxidant\_1514

MQEPLAAGAVILRRFAFNAAEQLIRDINDVASQSPFRQMVTPGGYTMSVAMTNCGHLGW  
TTHRQGYLYSPIDPQTNKPWPAMPQSFHNLQRAATAAGYPDFQPDACLINRYAPGAKLS  
LHQDKDEPDLRAPIVSVSLGLPAIFQFGGLKRNDPLKRLLEHGDVVVWGGESRLFYHGI  
QPLKAGFHPLTIDCRYNLFRQAGKKENLYFQ

>non-antioxidant\_1515

MSLEAIRIGEINSYSQIPAFTLPYRNGWQLAVEQINAAGLLGGRPLEVISRDDGGDPGKAV  
TAAQELLTRHGVHALAGTFLSHVGLAVSDFARQRKVLFMASEPLTDALTWEKGNRYTYR

LRPSTYMQAAMLAAEAAKLPIRWATIAPNYEYGQSAVARFKELLLAARPEVTFVAEQWP  
ALYKLDAGPTVQALQQAEEPLFNVLFGADLPKFVREGRVRLFAGRQVVSMLTGEPEY  
LNPLKDEAPEGWIVTGYWPYDIDTAPHRAFVEAYRARWKEDPFVGSVLGYNTLTAMAVA  
FEKAGGTESETLVETLKDMAFSTPMGPLSFRA SDHQSTMGAWVGR TALRDGKGMVDW  
RYVDGGSVLPPEVVS AWRPAGEGHHHHHH

>non-antioxidant\_1516

GCDLERYPLTDLSEETFWNSESNAELALTSLYRGS LTDGVEYNPSDWW SYHGMIMMEHL  
SDNAFDRRGENNPFFKISSGNLTADNAFIKRYWETS YKRIGYCNRFLVGIQNSSESEKTR  
MIAEARFLRATQYFYLAS YFKNVPLVENVLTGEEANNVTKTSQADILKWCVTEFTAAAAD  
LPRFSAIPAGEAGRACKQAAL AFLGRTCMLQKDWKSGAKAFHDIMELGDNAINANYQEL  
FYPSTGTSNKENIFYIQYLENYLGTGLPQH ALSAKDGGWSLVNPAADLYESYEFKDGTPFS  
YDDPRYDPSNLGKDRDPRLDYTIYYNGAIFMGTEYKMSPDYSAAKKEKLDYTSEASRTG  
FMMRKYFEESTPINDVQSANGLTPVIRYAEVLLGYLECLVEDNQ TITQGILDETINAVRGRA  
SVNMPPVTEVTPAKLREIVRHERRIELAMEGIRYWDIMRWGIAHEVLSQKIWGAPYPGST  
QYATTTKEVDPTGNRYWYVGKRAFRNPTDYTWPIPQSEQNINPNLRD

>non-antioxidant\_1517

GHMTKLEIQQWTAQH HASMTYLSNPKTIEYLTGFGSDPIERV LALVVFPDQDPFIFAPALE  
VEVIKETGWQFPVIGYLDHENPWAMIADQVKQRHVNPEHVAIEKGQLQVARMEALAAQF  
SAPSFDL DITSFIEHMRGS

>non-antioxidant\_1518

MAVTDLSLTNSSLMPTLNPMIQQ LALAI AASWQSLPKPYQLPEDLGYVEGRLEGEKLVIE  
NRCYQTPQFRKMHELEAKV GKGLDILHCVMFPEPLYGLPLFGCDIVAGPGGVSAAIADLS  
PTQSDRQLPAAYQKSLAELGQPEFEQQRELPPWGEIFSEYCLFIRPSNVTEEERFVQRVDF  
LQIHCHQSIVAEPLSEAQTLEHRQQIHYCQQQQKNDKTRRVLEKAFGEAWAERYMSQVL  
FDVIQ

>non-antioxidant\_1519

MPAFDKPKVELHVHLDGSIKPETILYYGRRRGIALPANTAEGLLNVIGMDKPLTLPDFLAK  
FDYYMPAIAAGCREAIKRIAYEFVEMKAKEGVVYVEVRYS PHELLANSKVEPIPWNQAEGDL  
TPDEVVALVGQGLQEGERDFGVKARSILCCMRHQPNWSPKVVELCKKYQQQTVVAIDLA  
GDETIPGSSLLPGHVQAYQEAVKSGIHRTVHAGEVGS AEVVKEAVDILKTERLGHGHTL  
EDQALYNRLRQENMHFEICPWSSYL TGAWKPDTEHAVIRLKN DQANYSLNTDDPLIFKST  
LDTDYQMTKRDMGFTEEEFKRLNINA AKSSFLPEDEKRELLD LLYKAYGMPPSASAGQNL  
AENLYFQ

>non-antioxidant\_1520

GESSKSGYQTTGENNSSDYQGIIEDGEYKTSKSRGVGISQNSDNLLNLKSFEAGLTTISKDH  
FSTKSYIFQEGQYLNKATI QDWLGRKSSSNPEGLNPSDNGKKEANKRNPIYVQQIEEQDY  
MKQNNGKLELAGMTIGIMNQKDYYQKEQY GATYSTTISKEKRIEKGIAAKKVLARVR  
QKVGNNVPIVIAMFAQAPNDSL VGGYFYSYTVSKSGTDIGSWTETNIKSYVLPATEDNKLP  
NDNDSTSFDNFQKEVKNFFPNISNVTGQGQYKDKTLQGLHITITTQFYSETEITSFTQYVAQ  
AAKSYLPSGIPVDIKINGS DGETQSFVSTTGGNGGYTHVFGSY

>non-antioxidant\_1521

YEVPAKIDVFYPKGFEVSIPDEEGITLFAFHGKLN EEMEGLEAGTWARDIVKAKNGRWT  
FRDRITALKPGD TLYYWTYVIYNGLYREDDGSFV VNGYSGNNASPH

>non-antioxidant\_1522

MSLIYTITLNP AIDRLLFIRGELEKRKTNRVIKTEFDCGGKGLHVSGVLSKFGIKNEALGIAG  
SDNLDKLYAILKEKHINHDFLVEAGTSTRECFVVLSDDTNGSTMPEAGFTVSQTNKDNLL  
KQIAKKVKKEDMVVIAGSPPPHYTSLDFKELLRTVKATGAFLGCDNSGEYLNLA VEMGV  
DFIKPNEDEVIAILDEKTN SLEENIRTLAEKIPYLVVSLGAKGSICAHNGKLYQVIPPKVQER  
NDTGAGDV FVGAFIAGLAMNMPITETLKVATGCSASKVMQQDSSSF DLEAAGKLNQVS  
IIQLEEREGHHHHHH

>non-antioxidant\_1523

QVTLKESGPGILKPSQTL SLTCSFSGFSLSTSGMSVGVWIRQPSGKGLEWLAHIWWD DDKY  
YNPSLKSRLTISKDTSRNQVFLKITSVDTADTATYYCARRTTTADYFAYWGQGTTLTVSSA  
KTPPSVYPLAPGSAAQTNSMVTLGCLVKGYFPEPVTVTWNSGSLSSGVHTFP AVLQSDL  
YTLSSSVTVPSSTWPSETVTCNVAHPASSTKVDKKIVPRDC

>non-antioxidant\_1524

SNAMSLLEQLDKNIAASGGLIVSCQPVP GSPLDKPEIVAAMALAAEQAGAVAVRIEGIDNL  
RMTRSLVSVPIIGIIRDLDESPVRITPFLDDVDALAQAGAAIIAVDGTARQRPVAVEALLAR  
IH HHHLLTMADCSSVDDGLACQRLGADIIGTTMSGYTPDTPPEPDLPLVKALHDAGCRVI  
AEGRYNSPALAAEAIRYGAWAVTVGSAITRLEHICGWYNDALKKAAS

>non-antioxidant\_1525

ADEIGDAAKKG DASYAFAKEVDWNNGIFLQAPGKLQPLEALK AIDKMIVMGAAADPKL  
LKAAAEAHHKAIGSVSGPNGVTSRADWDSVNAALGRVIASVPENMVMDVYDSVSKITDP  
KVPAYMKS LVNGADA EKAYEGFLAFKDVVKKSQ

>non-antioxidant\_1526

MTGREILEKLERREFTREVLKEALSINDRGFNEALFKLADEIRRYVGVDEVHIRAII EFSNV  
CRKNCLYCGLRRDNKNL KRYRMTPEEIVERARLAVQFGAKTIVLQSGEDPY YMPDVISDI  
VKEIKKMGVAVTSLGEPREY YEKWKEAGADRYLLRHETANPVLHRKLRPDT SFENRL  
NCLLTLKELGYETGAGSMVGLPGQTIDDLVDDLLFLKEHDFDMVGIGPFIPHPDT PLANEK  
KGDFTLTLKMVALTRILLPDSNIPATTAMGTIVPGGREITLRCGANVIMP NWTPSPYRQLYQ  
LYPGKICVFEKDTACIPCVMKMIELLGRKPGRDWGGKRKFETV

>non-antioxidant\_1527

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QGSSRDYEF SVYIPSSLDSNVSTIFAQWHGMPDRTL VQTPQGEVKKLT VDEFVELEKTTFF  
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ANSDRKWLTDKDDRCNANPGKTPVMKPLTSEYKASTIAYKLPFADFPKDCWITFRVHIDW  
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DSTVPVCYNLAGYSER

>non-antioxidant\_1528

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VDFIPNYDGRVQEPTVLPSRFPNLLANGSGGI AVGMATNIPPHNLRELADAVFWALENHDA  
DEEETLAAVMGRVKGPDPFPTAGLIVGSQGTADAYKTGRGSIRMRGVVEVEEDSRGRTSLV  
ITELPYQVNHDNFITSIAEQVRDGKLAGISNIEDQSSDRVGLRIVIEIKRDAVAKV VINNLYK  
HTQLQTSFGANMLAIVDGVPRTLRLDQLIRYYVDHQLDVIVRRTTYRLR KANERAHILRG  
LVKALDALDEVIALIRASETVDIARAGLIELLDIDEIQAQA ILDMQLRRLAALERQRIIDDL  
AKIEAEIADLEDILAKPERQRGIVRDELA EIVDRHGDDRRTRIIA

>non-antioxidant\_1529

GMDEKPAITKIISGGQTGADRAALDFAIKHHIPYGGWVPGRLAEGGRVPETYQLQEMPT  
SDYSKRTEKNVLDSDGTLIISHGILKGGSSALTEFFAEQYKKPCLHIDLDRISIEDAATLINSW  
TVSHHIQVLNIAGPRAGKDPEIYQATMDLLEVFLA

>non-antioxidant\_1530

TVAYIAIGSNLASPLeQVNAALKALGDIPESHILTVSSFYRTPPLGPQDQPDYLNAAVALET  
LAPEELLNHTQRIELQQGRVRKAERWGPRTLDDIMLFGNEVINTERLTVPHYDMKNRGRF  
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>non-antioxidant\_1531

SNANKYNKIANELIKIIGEDNIISITHCATRLRVMVKDREIINDKKVEKVDEVKGVFFTSQG  
YQIILGTGIVNKVYAEVEKMGLKTLKKEQDEL

>non-antioxidant\_1532

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TTEERQENVRKLSFDKLFIDIGANSREEAQKMCPIGSFGVYDSGFVEVSGKYVSKAMDDR  
IGCAVIVEVFKRIKPAVTLYGVFSVQEEVGLVGASVAGYGVPADEAIAIDVTDSADTPKAIK  
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IPSATVSIPTRYVHSPSEMIAPDDVEATVDLLIRYLGA

>non-antioxidant\_1533

MVGYSSKLIFVSMITRHGDRAPFANIENANYSWGTESELTPIGMNQEYNLGLQLRKRYID  
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LSADSRLIQFPYEQYLAVLKKYVYNSPEWQNKTKEAAPNFAKWQQILGNRISGLNDVITV  
GDVLIVAQAHGKPLPKGLSQEDADQIIALTDWGLAQQFKSQKVSYIMGGKLTNRMIEDLN  
NAVNGKSKYKMTYYSGHALTLLEVMTLGVPLDTAPGYASNLEMELYKDGDIYTVKLRY  
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>non-antioxidant\_1534

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KAHYDYFAEHSRSAANNRISTLVMYLN DVEEGGETFFPKLNLSVHPRKGMVYFEYFYQ  
DQSLNELTLHGGAPVTKGEKWIATQWVRRGTYK

>non-antioxidant\_1535

ENEIERPEDMRVRTLANKSKMKVSIVQQIDRKVALDDIAVSHGLDFPELLSEVETIVYSGTR  
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>non-antioxidant\_1536

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EVIYITDYAQREGYVVLGIELH

>non-antioxidant\_1537

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>non-antioxidant\_1538

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>non-antioxidant\_1539

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>non-antioxidant\_1540

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>non-antioxidant\_1541

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WGDVVLYLDYTEGQNLDSLNTKGVSPATEVMEQIKKDIQASENAFGSDYSFKLGRHFWS  
AAATQMLKGEAYLWSGRQMNGGNSDYTIKNAFENVKKADVGLVTSSFKDIFSFENKKN  
KEMIFTIHNGKDEYEMWGGYYRMLIPAQDKMVKIYCDENGNSFVGTTPDAQLNGLTQLQ  
VRREFYFKGFRNNDTRWTTSLKAVYKKAQGVVSYFGPITYKFQGTMLEGGSTRSFLDD  
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NKWMKPDNAGALEAILKERLREFMFEGKRWYDIRLLGWDYVHQYSSAEQSRLWPIDA  
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>non-antioxidant\_1542

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>non-antioxidant\_1543

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>non-antioxidant\_1544

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EE

>non-antioxidant\_1545

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>non-antioxidant\_1546

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>non-antioxidant\_1547

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>non-antioxidant\_1548

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>non-antioxidant\_1549

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>non-antioxidant\_1550

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EEAPFH TPVYVLTHERRNPWVRPGGTTFYFVNDGPEQALALAREAAGERDIRISGGANVI  
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>non-antioxidant\_1551

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>non-antioxidant\_1552

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>non-antioxidant\_1553

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>non-antioxidant\_1554

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>non-antioxidant\_1555

HLEGEV NKIKSALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQLLPV NK

>non-antioxidant\_1556

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>non-antioxidant\_1557

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>non-antioxidant\_1558

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>non-antioxidant\_1559

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>non-antioxidant\_1560

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>non-antioxidant\_1561

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>non-antioxidant\_1562

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GVE

>non-antioxidant\_1563

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AMGRAGEMVLRTWQTADKMKKQRGPLAEKNGSDNFRLKRYVSKYTINPAIAQGIAHE  
VGSIEEGKFADLVLWEPKFFGVKADRVIKGGIIAYAQIGDPSASIPTPQPVMGRRMYGTVG  
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>non-antioxidant\_1564

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>non-antioxidant\_1565

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>non-antioxidant\_1566

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REKIRE

>non-antioxidant\_1567

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CGEL

**Supporting Information S2.** The independent dataset consists of 20 antioxidant proteins which are independent from training set.

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>Q7RTV5

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>Q9D1A0

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>P0AE08

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VGKI

>Q7BHK8

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>P0A251

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>P0A5N4

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>P23529

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>P30041

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>O19097

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>O65198

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