

Additional file 2

>Low molecular weight heat shock protein [Malus x domestica]; N004

MSLIPNSRRGSSSVFDPFSLNLWDPFKDFPFSSSSLSAFPEFSRENSAFVNTRVDWKETPEAHVFKADVPG
LKKEEVKVEVEDDRVLKISGERNVEEEDKNDKWYRVERSSGKFLR**RFQLPENAK**VDQIK**AAMENGVLSTVP**
KAELKNVDVRAIEISG

>Glyceraldehyde-3-phosphate dehydrogenase [Nicotiana tabacum]; N005

MAKVK**IGINGFGR**IGRLVARVALQRDDVELVAVNDPFI SVEYMTYMFKYDSVHGQWKHHELVKDDKTLLFG
EKAVTVFGFRNPEEIPWGQTGADYIVESTGVFTDKDKAAAHKGGAKKVIISAPSK**DAPMFVVGVNEKEYKP**
ELNIVSNASCTTNCLAPLAKVINDR**FGIVEGLMTTVHSITATQK**TVDGPSAKDWRGGR**AASFNIIPSSTGAA**
KAVGKVLPALNGKLTGMAFR**VPTVDVSVVDLTVR**LEKEATYDEIKAAIKEESEGLKLGILGYTEDDVVSTDF
VGDNRSSIFDAKAGIALSKNFVKLVSWYDNEWGYSTRVVDLIKHMASVQ

>Low molecular weight heat shock protein [Malus x domestica]; N011

MSLIPNSRRGSSSVFDPFSLNLWDPFKDFPFSSSSLSAFPEFSRENSAFVNTRVDWK**ETPEAHVFK**ADVPG
LKKEEVKVEVEDDR**VLKISGER**NVEEEDKNDKWYRVERSSGKFLR**RFQLPENAK**VDQIK**AAMENGVLSTVP**
KAELKNVDVRAIEISG

>ADP-ribosylation factor B1C [Arabidopsis thaliana]; N012

MGQTRFKLFDTFFGNQEM**RVVMLGLDAAGKT**TILYKLHIGEVLSVPTIGFNVEKVQYKNVIFTVWDVGGQE
KLRPLWRHYFNNTDGLIYVVDSLDRERIGKAKQEFQDIIRDPFMLNSVILVFAN**KQDMRGAMSPRE**VCEGLG
LLDLKNRKWHIQGTALQGDGLYEGLDWLSATLKEVKAAGYSSVGPSF

>ADP-ribosylation factor 1 [Solanum tuberosum]; N014

MGLTISKLFSLFAKKEMRI**ILMVGLDAAGK**TILYKLKLGEIVTTIPTIGFNVETVEYK**NISFTVWDVGGQD**
KIRPLWRHY**FQNTQGLIFVVDSDNR**DRVNEAREELMRMLAEDEL**DAVLLVFANK**QDLPNAMNAEITDKLG
LHSLRQRHWYIQSTCATSGEGLYEGLDWLSNQIRNQKANCNGTMLLWLLYPEK

>PRU1_PRUAV Major allergen Pru av 1 (Pru a 1) [Prunus avium]; N021

MG**VFTYESEFTSEIPPPRL**LFK**AFVLADADNLVPK**IAPQAIK**HSEILEGDGGPGTIKK**ITTFGEQSQYGYVKHKI
DSIDKENYSYSYTLIEGDALGDTLEKISYETK**LVASPSGGSIIK**STSHYHTK**GNVEIKEEHV**KAGKEKASNL
FKLIETYLKGHDPAYN

>Small heat shock protein [Retama raetam]; N023

MSLIPSVFGTGRRNTNVFDPFSLDIWDPFQDFPLRTIAPSGFDTETA AVANTRIDWKETPEAHVFKADLPGLK
KEEVKVEVEEG**RVLQISGERT**KEKEDKNDTWHRVECSAGRFLRRFRLPENAKVEQV**KASLENGVLTVTVPKE**
EVKKPDVKPVQITG

>Peroxiredoxin [Populus tremula x Populus tremuloides]; N026

MAPIAVGDVLPDGKLAYFDEQDQLQEVSVHSLVAGKK**VILFGVPGAFTPTCSLKHVPGFIEK**AGELKSKGVT
EILCISVNDPFVMKAWAKSYENKHVKFLADGSATYTHALGLELDLQEKGLGTRSR**R**FALLVDDL**K**VKAANI
EGGGEFTVSSAEDILKDL

>Low molecular weight heat shock protein [Malus x domestica]; N027

MSLIPNSRRGSSSVFDPFSLNLWDPFKDFPFSSSSLSAFPEFSRENSAFVNTRVDWK**ETPEAHVFK**ADVPG
LKKEEVKVEVEDDR**VLKISGER**NVEEEDKNDKWYRVERSSGKFLR**RFQLPENAK**VDQIK**AAMENGVLSTVP**
KAELKNVDVRAIEISG

>Eukaryotic translation initiation factor 4D [Medicago sativa]; N028

MSDEEHQFESKADAGASK**TYPQQAGTIR**KNGYIVIKNRCKVVEVSTSKTGKHGAKCHFVAIDIFTSKKLE
EVYVPSSHNCDPVPHVNRTDYQLIDISEDGFVSLLTENGNTKDDL**K**LPTDDSL**LTQIK**DGFAEGKDLVSVMS
AMGEEQICALKDIGGKN

>Major allergen Pru p 1 [Prunus persica]; N029

MPLCSLFILLIILNLLIITMGVFTYESEFTSEIPPPRLFK**AFVLADADNLVPK**IAPQAIK**HSEILEGDGGPGTI**
KKITFGEQSQYGYVKHK**IDSIDKENHSYSYTLIEGDALGDNL**EKISYETK**LVASPSGGSIIK**STSHYHTKGD
VEIKEEHVKAGKEKASNLFKLIETYLKGHDPAYN

Additional file 2 (continuation)

>Small heat shock protein [Prunus persica]; N031

MALSLFGGRRSNVFDPFSLDIWDPLEGLGTLANIPPSARETTAIAANTRIDWKETPEAHIFIADLPGLKKEEV
KVEVDDGKVLHISGERSREQEEKNDKWHRIERSTGKFSRRFRLPDNAKIDQVKASMENGVLTVTVPKKEEKR
PQVKAIDISG

>Small heat shock protein [Prunus persica]; N032

MALSLFGGRRSNVFDPFSLDIWDPLEGLGTLANIPPSARETTAIAANTRIDWKETPEAHIFIADLPGLKKEEV
KVEVDDGKVLHISGERSREQEEKNDKWHRIERSTGKFSRRFRLPDNAKIDQVKASMENGVLTVTVPKKEEKR
PQVKAIDISG

>Superoxide dismutase [Nicotiana plumbaginifolia]; N033

MVKAVAVLSSSEGVSGTIFFTQDGDAPTTVTGNVSGLKPGHLGHFVHALGDTTNGCMSTGPHYNPAGKEHGA
PEDEVRHAGDLGNITVGEDGTASFTLTDKQIPLAGPQSIIGRAVVVHADPDDLKGGHELKSTTGNAGGRVA
CGIIGLQG

>Thioredoxin H [Prunus persica]; N035

MAEENQVIGCHTTQAWEEQLHKGNENKKLVVVDFTASWCGPCRLIAPILAEAKKTPEVTFLKVDVDELRTV
SEEWGVEAMPTFLFLKEGKIVDKVVGAKKDELQIKVAKHVAAAAAASATSASATAATATATASA

>Low molecular weight heat shock protein [Malus x domestica]; N037

MSLIPNSRRGSSSVFDPFSLNLWDPFKDFPFSSSSLSAFPEFSRENSAFVNTRVDWKETPEAHVFKADVPG
LKKEEVKVEVEDDRVLKISGERNVEEEDKNDKWYRVERSSGKFLRRFQLPENAKVDQIKAAAMENGVLSTVTF
KAELKNVDVRAIEISG

>NADH dehydrogenase subunit F [Graffenrieda latifolia]; N042

LFLGSGSIIHSMENVIVGYSPDKSQNIVLMGGLKKHVPITKTAFLIGTSLSLCGIPPLACFWKDEILNDSWLY
SPVFAIIACFTAGLTA FYMFRIYLLTFEGHLNVHFQNYSGQKSGSCYSISPWGKEIQKNKFSLLSTTINEKG
ILFFFNTTYRIFDNEKKMIRPFISIPYFGIQNTFFYPPESDSTMLFMSILVLFTCLVGIIGIPYNQSGIYF
DLLSNLLNPSINLLHPNQNNSRDWYEFIINALFSVSLA

>Manganese superoxide dismutase 1 [Prunus persica]; N053

MALRTLTRKALTGSLGLGFQSIRGFQTFSLPDLPYDYSALEPAISGEIMQLHHQKHHKTYVTNYNKALEQ
LDDAMAKGDAPTTVKLQSAIKFNNGGHHINHSFWQNLPVREDGGEPKGSGLGWAIDTNFGSLEALIQMNA
EGAALRGSGWVWLGVDELKKLVVETTANQDPLVTKGPSLVPLLGLDVWEHAYYLQYKNVRPDYLNINWKVV
SWKYASEVYEKVC

>Putative quinone reductase [Vitis vinifera]; N056

MATKVYIVYYSMYGHVEKLAEEIRKGAASVEGVEAKLWQVPETLHEEALSKMSAPPKSESPIITPNELAEAD
GFVFGFPTRFGMMAAQFKAFLDATGGLWRQAALAGKPAGIFYSTGSQGGGQETTALTAITQLVHHGMLFVPI
GYTFGAGMFEMENVKGGSPYGAGTFAGDGRQPTLELQQAQFHQGYIASITKKLKGSTA

>Pectin methylesterase [Nicotiana tabacum]; N073

KRYVIRIKAGVYRENDVVPKKKTNIMFMGDGRSNTIITGSRNVKDGSTTFNSATVAAVGEKFLARDITFQNT
AGAAKHQAVALLRVGSDLSAFYRRDILAYQDSLYVHSNRQYFVQCLIAGTVDFIFGNAAAVLQNCDIHARRPG
SGQKNMVTAGQRTDPNQNTGVVIQNCRIGATSDLRPVQKSFTYLGPRWKEYSRTVIMQSSITDVINSAGWH
EWNNGFALNTLFYGEYQNTGAGAGTSGRVKWRGFKVITSATEAQAYTPGR

Additional file 2 (continuation)

>Porin [Prunus armeniaca]; N077

MVKGPGLYLDIGKKARDLLYKDYQSDHKFTVTTTYTSTGVAISSTGIRKGDLYLGDVSTQLKKNKNIITTDVKVD
TDSNLRTTITIDEPAPLKAIFSFIVPDQSRGKVELQYQHEYAGISTSIGLTANPIVNFSGVVGNNLLSLGT
DLSFDTASGNFTKCNAGLNFTHTDLIASLILNDKADTVTASYHTVSPLTNTAVGAELSHSFSSNENSLTIG
TQHALDPLTTVKGRVNNYGRASALIQHEWRPKSFFTISGEVDTRAIEKSAKIGLALALKP

>Triose phosphate isomerase cytosolic isoform [Solanum chacoense]; N083

MGRTEFFVGGNWKNCNGTSEEIKKIVATLNAGQVPSQDVVEVVVSPPYVFLPLVKNELRSDFHVAAQNCWVKKG
GAFTGEVSADMLVNLGIPWVILGHSERRAILGESNEFVGDKVAYALSQGLRVIACVGETLEQRESGSTMDVV
AAQTKAIAERVKDSNVVVAYEPVWAIGTGKVATPAQAQEVHAELRKWLQANVSAEVAASTRIIYGGSVSGA
NCKELAGQPDVDGFLVGGASLKPEFIDIIEAAEVKKA

>Proteasome subunit alpha type 7 [Cicer arietinum]; N084

MARYDRAITVFS PDGHLFQVEYALEAVRKGNAAVGVRGTDNVVLGVEKKSTAKLQDTRSVRKIVNLDDHIAL
ACAGLKADARVLINRARVEQCQSHRLTVEDPVTVEYITRYIAGLQQKYTQSGGVRPFGLSTLIVGFDPYTGSP
SLYQTDPSGTFSAWKANATGRNSNSIREFLEKNFKETSGQETVKLAIRALLEVVESGGKNIEVAVMTKENGL
RQLEEAIEIDAIVAEIEAEKAAAEAAKKAPPKDT

>Cytosolic ascorbate peroxidase [Fragaria x ananassa]; N086

MGKCYPTVSEEEKKAIDKAKRKLRLGLIAEKNCAPLMLRLAWHSAGTYDVKTKTGGPFGTMKQPAELAHGANN
GLDIAVRLLEPIKEQFPILSYADFYQLAGVVAVEVTGGPDVPFHPGREDKPEPPPEGRLPDAGKGS DHLREV
FGKTMGLSDQDIVALSGGHTLGR AHKERSGFEGPWTNPPLIFDNSYFTVLLSGEKEGELLQLPTDKALLSDPV
FRPLVEKYAADEDAFFADYALAHQRLSELGFAEA

>Absciscic stress ripening-like protein [Prunus persica]; N093

MSEKHHHGLFHHHKDEDRPIETSDYPQSGGYSDEGRTGSGYGGGGGYGDGGGGYGDNNTAYSSEGRPGSGYG
GGGGYGESADYSDGGRYKETAAYGTTGTHESEIDYKKEEKHHKHLEHLSEAGAAAAGVFALHEKHESKKDPE
HAHRHKIEEEIAAAAAGVSGGFAFHEHHEKKEAKEEEEEESHGKKHHHLF

>Quinone-oxidoreductase QR2 [Triphysaria versicolor]; N096

MATKVVIVYYSTYGHVERLAQEIKKGAESVGNVEVKLWQVPEILSDEVLGKMWAPPKSDVPVITPDELVEAD
GIIFGFPTFRFGMMAAQFKAFFDSTGGLWKTQALAGKPAGIFFSTGTQGGGQETTALTAITQLTHGMIYVPI
GYTFGADMFMMEKIKGGSPYGAGTFAGADGSRQPSDIELKQAFHQGMYIAGITKKIKQ TSA

>Iron-binding protein [Pyrus pyrifolia]; N111

MSTTSLRAISTFSVPSKLG DQGGAVSTLLSNSKLGSSSSALSFKPQRKLEKFAVSASSEAVALTGVVFQPF
EVKNDAFVVPSPQVSLARQRYTDESEAAATNEQINVEYNVSYVYHALFAYFDRDNVALKGLAKFFKESSEE
REHA EKLM EYQNKRGGRVKLH SVIAAPTEFDHAEKGDALYAMELALSLEKLTNEKLLNLHKVADQNNDPQLM
DFIESEFLAEQVEAIKKIADYVTQLRVGKGHGVWHFDQYLLHEGDAAN

>Annexin [Medicago sativa]; N138

SHVPSPESEQLRGAFQGWGTNEGLIISILAHRNAAQRKSIRETYTQTHGEDLLKDLDKELSSDFEKAVLL
WTLDP AERDAFLANQATKMLTSNNSIIVEIASTRSPLELLKAKQAYQVRFKKSLEEDVAYHTSGDIRKLLVP
LVGIHRYEGDEVNMTLAKSEAKLLHEKIADKAYNHDDLIRIVTTRSKAQLNATLNHYNNEFGNVIDKDLETD
SDDEYLKLLRAAIKGLTYPEKYFEELLRLAINKMGTDENALTRVVTTRA EVDLQRIAE EYQRRNSVPLDRAI
DKDTSGDYQKILLALMGHDE

>Annexin [Medicago sativa]; N139

SHVPSPESEQLRGAFQGWGTNEGLIISILAHRNAAQRKSIRETYTQTHGEDLLKDLDKELSSDFEKAVLL
WTLDP AERDAFLANQATKMLTSNNSIIVEIASTRSPLELLKAKQAYQVRFKKSLEEDVAYHTSGDIRKLLVP
LVGIHRYEGDEVNMTLAKSEAKLLHEKIADKAYNHDDLIRIVTTRSKAQLNATLNHYNNEFGNVIDKDLETD
SDDEYLKLLRAAIKGLTYPEKYFEELLRLAINKMGTDENALTRVVTTRA EVDLQRIAE EYQRRNSVPLDRAI
DKDTSGDYQKILLALMGHDE

Additional file 2 (*continuation*)

>NAD-dependent malate dehydrogenase [*Prunus persica*]; N140

MAKGPRVRLVTGAAGQIGYALVPMIARGVMLGADQPVILHLLDIPPAEALNGVKMELVDAAFPLLKGVVAT
TDVVEACTGVNIAVMVGGFPRKEGMRKDVMSKNVSIYKSQASALEKHAAANCKVLVVANPANTNALILKEF
APSIPEKNITCLTRLHDNRALGQVSERLNVQVSDVKNVI IWGNHSSSQYPDVNHATVKTSPGEKAVRELVD
DAWLTFGEFITTQQRGAAIIKARKLSRALSAASSACDHIRDWVLGTPEGTWVSMGVSDGSYNVPSGLIYSF
PVTCQNGEWKIVQGLSIDFSRKKLDATELSEEEKALAYSCLS

>Cytosolic aldolase [*Fragaria x ananassa*]; N155

MTAYRGKYADELIKNAAYIGTPGKGILAADESTGTIGKRFDSIKVENVEENRRALRELLFTAPGVLQYLSGV
ILFEETLYQKTAEGKPFVDVLNEGGLVPGIKVDKGVVELKGTGGETTTQGLDGLGARCAKYYEAGARFAKWR
AVLKIGPNESQSLINENANGLARYAIIQENGLVPIVEPEILVDGPHSIDKCADVTERVLAACYKALNDHH
VLEGLTLLKPNMVT PGSEAKKASPEVIAEYTVRALQRTTPAAVPAVVFLSGGQSEEEATLNLNAMNQLKGKK
PWTLSFSFGRALQASTLKAWSGKKENVKAAQEALLTRAKANSEATLGTYKGDALKEGEGAAESLHVVDYKY

>1-aminocyclopropane-1-carboxylate oxidase [*Prunus persica*]; N162

MENFPIINLEGLNGEGRKATMEKIKDACENWGFFELVSHGIPTEFLDTVERLTKEHYRQCLEQRFKELVASK
GLEAVKTEVNDMDWESTFYLRHLPKSNISEVPDLEDQYRNVNMEFALKLEKLAEQLLDLLCENLGLEQGYLK
KAFYGTNGPTFGTKVSNYPPCPNPELIKGLRAHTDAGGLILLFQDDKVSGLQLLKDGQWIDVPPMRHSIVIN
LGDQLEVITNGKYKSVEHRVIAQTDGTRMSIASFYNPGSDAVIYPAPTLVEKEAEEKNQVYPKFVFEDYMKL
YAGLKFQPKPRFEAMKAVETNISLGPIATA

>1-aminocyclopropane-1-carboxylate oxidase [*Prunus persica*]; N163

MENFPIINLEGLNGEGRKATMEKIKDACENWGFFELVSHGIPTEFLDTVERLTKEHYRQCLEQRFKELVASK
GLEAVKTEVNDMDWESTFYLRHLPKSNISEVPDLEDQYRNVNMEFALKLEKLAEQLLDLLCENLGLEQGYLK
KAFYGTNGPTFGTKVSNYPPCPNPELIKGLRAHTDAGGLILLFQDDKVSGLQLLKDGQWIDVPPMRHSIVIN
LGDQLEVITNGKYKSVEHRVIAQTDGTRMSIASFYNPGSDAVIYPAPTLVEKEAEEKNQVYPKFVFEDYMKL
YAGLKFQPKPRFEAMKAVETNISLGPIATA

>1-aminocyclopropane-1-carboxylate oxidase [*Prunus persica*]; N164

MENFPIINLEGLNGEGRKATMEKIKDACENWGFFELVSHGIPTEFLDTVERLTKEHYRQCLEQRFKELVASK
GLEAVKTEVNDMDWESTFYLRHLPKSNISEVPDLEDQYRNVNMEFALKLEKLAEQLLDLLCENLGLEQGYLK
KAFYGTNGPTFGTKVSNYPPCPNPELIKGLRAHTDAGGLILLFQDDKVSGLQLLKDGQWIDVPPMRHSIVIN
LGDQLEVITNGKYKSVEHRVIAQTDGTRMSIASFYNPGSDAVIYPAPTLVEKEAEEKNQVYPKFVFEDYMKL
YAGLKFQPKPRFEAMKAVETNISLGPIATA

>Oxidoreductase [*Arabidopsis thaliana*]; N165

MKAWVYSYGGVDVLKLESNIIVPEIKEDQVLIKVVAAALNPVDAKRRQGKFKATDSPLPTVPGYDVAGVVV
KVGSAVKDLKEGDEVYANVSEKALEGPKQFGSLAEYTAVEEKLALPKNIDFAQAAGLPLAIETADEGLVR
TEFSAGKSILVLNGAGGVGSLVIQLAKHVGASKVAATASTEKLELVRLGADLAIDYTKENIEDLPDKYDV
VFDAIGMCDKAVKVIKEGGKVVALTGAVTPPGFRFVVTSGNDVLKKNPYIESGKVKPVVDPKGPFPFSRVA
DAFSYLETNHATGKVVPYPIIP

>Actin [*Helianthus annuus*]; N170

MAHEGEIQPLVCDNGTGMVKAAGFAGDDAPRAVFPISIVGRPRHTGVMVGMGQKDAYVGDEAQSRRGILTLKYP
IEHGIVSNWDDMEKIWHHTFYNELRVAPEEHPVLLTEAPLNPKANREKMTQIMFETFNVPAMYVAIQAVLSL
YASGRTTGIVLDSDGVSHTVPIYKGYALPHAILRLDLAARDLTDLSMKILTERGYMFTTTAEREIVRDMKE
KLAYVALDYEQELETAKSSSSVEKNYELPDGQVITIGAERFRCPEVLFQPSLIGMEAAGIHETTYNSIMKCD
VDIRKDLYGNIVLSGGSTMFPGIADRMSEITALAPSSMKIKVVAPPERKYSVWIGGSILASLSTFQQMWIS
KGEYDESGPSIVHRKCF

Additional file 2 (continuation)

>Actin [*Helianthus annuus*]; N172

MADAEDIQPLVCDNGTGMVKAGFAGDDAPRAVFPSIVGRPRHTGVMVGMGQKDAYVGDEAQS^KRGILTTLKYP
IEHGIVSNWDDMEKIWHHTFYNELRVAPEEHPVLLTEAPLNPKANREKMTQIMFETFNVPAMYVAIQAVLSL
YASGRTTGIVLDSDGDVSHTPVIYEGYALPHAIRLRLDLAGRDLDALMKILTERGYSFTTTAEREIVRDVKE
KLAYVALDYEQELETAKSSSSIDKSYELPDGQVITIGAERFRCPEVLFPQSLIGMEAAGIHETTYNSIMKCD
VDIRKDLYGNIVLSGGSTMFPGIADRMSKEITALAPSSMKIKVVAPPERKYSVWIGGSILASLSTFQQMWIA
KAEYDESGPSIVHRKCF

>Alpha-1,4-glucan-protein synthase [UDP-forming]; N183

MASLPKPTPLLKDEL^DDIVIPTIRNLD^FLEMWRPF^FFEQYHLII^VQDGDPSKVIK^VPEGFDYELYN^RNDINRIL
GPKASCIS^FKDSACRCFGY^MVS^KKKYI^YTIDDDCFVAKDPTGHEINALEQH^IKNLLSPSTP^FFFNTLYDPY^R
EGTDFVRGYPFSLREGVPTAVSHGLWLNIPDYDAPTQLVKPHERNTRFVDAVLTIPKGS^LFPMCGMNLAFNR
ELIGPAMYFGLMGD^GQPIGRYDDMWAGWCIKVICDHLGYGVKTGLPYI^WHSKASNPFVNLK^KKEYKGI^FWQEE
IIPFFQAATLSK^DCTSVQKCYIELSKQVKEKLG^TIDPYFIKLADAMVTWVEAWDEINNNKSEETTSTKASEV
AATK

>Anthocyanidin synthase [*Prunus persica*]; N187

DEGPQVPTIDLKEIDSENENVRERCREELKKA^AVDWGV^MHLVNHGISDELMDRVRKAGKAFFDLPIEQ^KEKY
ANDQASGKIQGYGSKLANNASGQLEWEDYFFHLVYPEDKR^DLSIW^PQTPADYIEATAEYAKELRALATKVL^R
VLSLGLGLEEGRLEKEVGGLEELLQMKINYYPLCPQPELALGVEAHTDVSALTFILHNMV^PGLQLFYEGKW
VTAKCVPNSIIMHIGDTIEILSNGKYKSILHRGMVNKEKVRISWAVFCEPPKEKIILK

>Endopolygalacturonase [*Prunus persica*]; N193

MANRRSLFSLSLIFVFMINSATPVTYNVASLGAKADGKT^DSTKAFLSAWAKACASMNPGVIYVPAGTFFL
RDVVFSGPCKNNAITFRIAGTLVAPSDYRVIGNAANWIFFHHVNGVTISGGILDGQGTALWACKASHGESCP
SGATTLGFSDSNNIVVSGLASLNSQMFHIVINDCQNVQM^QGV^RVSASGNSPNTDGIHVQMSSGV^TILNSKIA
TGDDCVSIGPGT^SNLWIEGVACGPGHG^ISIGSLGKEQEEAGVQNVTVKTVTFTGTQNGLR^IKSWGRPSTGFA
RNILFQHATMVNVENPIVIDQHYCPDNKGC^PQVSGVQISDV^TYEDIHGT^SATEVAVK^FDCSPKHPCSEIKL
EDVKLT^YKNQA^ESSCSHADGTTEGVVQPTSCL

>NADP-dependent isocitrate dehydrogenase [*Prunus persica*]; N201

MAFQKIKVANPIVEMDGD^EMT^RVFWKSIKDKLILPFL^ELDIKYFDLGLPHRDATDDKVTVESAEATLKYNVA
IKCATITPDEGRVKEFN^LKSMWRSPNGTIRNINLNGTVFREPILCKNIPRLIPGWT^KPICIGRHAFGDQYRAT
DAVIKGPGLKL^VFVPDGKDEKTELEVYNFTGEGGVALAMYNTDESIRAF^AEASMTTAYEK^KWPLYLSTKNT
ILKKYDGRFKDIFQEVYEAKWKSQYEAAGIWEHRLIDDMVAYALKSDGGYVWACKNYDGDVQSDFLAQGF^G
SLGLMTSVLVCPDGKTIEAEAAHGT^VTRHYRVHQKGETSTNSIASIFAWTRGLA^HRAKLDDNAKLLDFTQK
LEEACIGTVESGKMTKDLALI^IHGPKLARNHYLNTEEFIEAVAEELRARLSLKE

>Glutamate Dehydrogenase 1; oxidoreductase [*Arabidopsis thaliana*]; N208

MNALAATNRNFKLAARLLGLDSKLEKSL^LIPFREIKVECTIPKDDGTLASFVGFRVQHDNARGPMKGGIRYH
PEVDPDEVNALAQLMTWKTAVAKIPYGGAKGGIGCDPSKLSISELERLTRVFTQKI^HDLIGIHTDVPAPDMG
TGPQTMAWILDEYSKFHGYSPAVVTGKPIDLGGSLGRDAATGRGVMFGTEALLNEHGK^TISGQRFV^IQGF^GN
VGSWAAKLISEKGGKIVAVSDITGAIK^NKDGIDIPALLKHTKEHRGVKGF^DGADPIDNSILVEDCDILVPA
ALGGVINRENANEIKAKFIEAANHPTDPDADEILSKKGVVILPDIYANSGGVTVSYFEWQNIQGF^MWEEE
KVND^ELKTYMTRSFKDLKEMCKTHSCDLRMGAFTLG^VNRVAQATILRGWGA

>Phosphoserine aminotransferase, chloroplast precursor [*Spinacia oleracea*]; N209

MAMAATSSTQTNLFLKAPFNPQQNCQQT^HFLPLNFKIRNPISRITCSATPTATAVSTTTKIDQRSEERVFN^F
AAGPAVL^PENVLQKAQSELLNWRSGMSVMEMSHRGKEFTSII^DKAEADLRTLLNIPSDYTVLFLQGGASTQ
FSAIPLNLCTPDSAVDYIVTGSWGDKAAKEAAKYAAVSSIWSGKSDNYVRI^PNFDGSEFVQNSQARYLHICA
NETIYGVEFKYPVPANPDGFLVADMSSNFCSKPVDTVKEGLIYAGA^QKNVGP^SGV^TIVIVRNDLIGNAQKM
TPVMLDYKIHADNKS^LYNTPPCYGIYMCGLVFEDLLNQGGLVEVEKKNKAKAQVLYDAIDESNGFYKCPVEK
SVRS^LMNV^PFTLEKSELEGDFIKEAAKEKMVALKGHRSVGGMRA^SIYNAMPLAGVEKLVAFMKEFQAKHA

Additional file 2 (continuation)

>Quinone-oxidoreductase QR1 [Triphysaria versicolor]; N222

MAGKLMRAVQYDGYGGGAAGLKHVEVPIPSPGKGEVLKLEAISLNQLDWKLQNGMVRPFLPRKFPFIPATD
VAGEVVRIGQDVKNFKPGDKVAMLGSGGGGLAEYGVASEKLTVHRPPEVSAAESSGLPIAGLTAHMALTO
HIGLNLDSKSGPHK**NILITAASGGVGQYAVQLAK**LGNTHTVATCGSRNFDLVK**SLGADEVIDYK**TPEGAALKS
PSGKKYDAVIHCASPLPWSVFKPNLSKHGKVIDITPGPRVMLTSAMTKLTCSKKRLVTLLVVIKGEHLSYLV
ELMREGKLKTVIDSKFSLSKAEAWAKSIDGHATGKIVVEP

>Catalase [Prunus persica]; N228

MDPYKHRPSSAFDSPYWTNAGAPVWNNSSSLTVGPR**GPVLLLEDYHLVEK**LATFDRERIPERVVHARGASAK
GFFEVTHTDISQLTCADFLR**APGVQTPVIVRFSTVIHER**GSPETLRDPRGFAVKFYTR**EGNFDLVGNNFPVFF**
VRDAMKFPDAIRAFKPNPK**SHIQETWRILDFFSHLPESLHTFAFFYDDLGV PQDYRHEGSSVHAYTLISKA**
GKVHYVKFHWKPTCGVKCLEDEAIKVGGANHSHATK**DLYDSIAAGNYPEWKLYIQTMDPDHEDRFDFDPLD**
LTKTWPEDILPLQPVGRLVLNKN**IDNFFAENEQLAFNPAHVVP**GIYSDDKVLQTR**IFAYS**DTQ**RHRLGPNY**
LQLPVNAPKCPHHNNHHEGFMNFMHR**DEEVNYFPSR**HDPVRHAER**YPIPSNILSGK**REKCVIEKENNFKQPG
ERYRSWAPDRQERFIRRWVDALSDPRVT**HEIRSIWISYWSQADK**SLGQKLLSR**LNVRPSI**

>Catalase [Prunus persica]; N229

MDPYKHRPSSAFDSPYWTNAGAPVWNNSSSLTVGPR**GPVLLLEDYHLVEK**LATFDRERIPERVVHARGASAK
GFFEVTHTDISQLTCADFLR**APGVQTPVIVRFSTVIHER**GSPETLRDPRGFAVKFYTR**EGNFDLVGNNFPVFF**
VRDAMKFPDAIRAFKPNPK**SHIQETWR**ILDFFSHLPESLHTFAFFYDDLGV PQDYRHEGSSVHAYTLISKA
GKVHYVKFHWKPTCGVKCLEDEAIKVGGANHSHATK**DLYDSIAAGNYPEWKLYIQTMDPDHEDRFDFDPLD**
LTKTWPEDILPLQPVGRLVLNKN**IDNFFAENEQLAFNPAHVVP**GIYSDDKVLQTR**IFAYS**DTQ**RHRLGPNY**
LQLPVNAPKCPHHNNHHEGFMNFMHR**DEEVNYFPSR**HDPVRHAER**YPIPSNILSGK**REKCVIEKENNFKQPG
ERYRSWAPDRQERFIRRWVDALSDPRVT**HEIRSIWISYWSQADK**SLGQKLLSR**LNVRPSI**

>Dehydrin-like protein [Prunus persica]; N231

KTDEYGNPVHHTTTGTGRTDEFGNPVQHGVADTGYGTGAGYGIHTKPGVVEHHGVPAVLHSHKDDQYSRDTQT
TTGGYGGDGYTGGEHQEKKGLLGQLQDKLPGGNK**DGQYSHDTQTTTGAYGGAGYTGGGEHHEK**KGVIGQVKDK
LPGGQKDDQYCR**DTHPTTGAYGGAGYTGGEDHEKKGIIIGQVK**DKLPGGQKDDQYCRDTHPTTGAYGGAGYT
GEHQEKKGIIIGQVKDKLPGGQKDDQYCHDTHPTTGAYGGAGYTGGDTREKKGIIIGQVKDKLPGGQK**DDHYSH**
DTHPTTGAYGGAGYTGGDTREKKGIIIDQVKDKLPGGQKDDHYSETHPTTGAYGGAGYTGGDTREKKGIVVEK
VKE**KLPGGQNVHPTTGPYGGGAAGIGETR**ERKGVGEKVKEKLPGGHKDDQYLHDTHPTKPTSAHGGVGHT
GGEPQLHEKKGLIEKIKDKLPGHNN

>Dehydrin-like protein [Prunus persica]; N232

K**TDEYGNPVHHTTTGTGRT**DEFGNPVQHGVADTGYGTGAGYGIHTKPGVVEHHGVPAVLHSHKDDQYSRDTQT
TTGGYGGDGYTGGEHQEKKG**LLGQLQDKLPGGNKDGQYSHDTQTTTGAYGGAGYTGGGEHHEK**KGVIGQVKDK
LPGGQKDDQYCR**DTHPTTGAYGGAGYTGGEDHEKKGIIIGQVK**DKLPGGQKDDQYCRDTHPTTGAYGGAGYT
GEHQEKKGIIIGQVKDKLPGGQKDDQYCHDTHPTTGAYGGAGYTGGDTREKKGIIIGQVKDKLPGGQK**DDHYSH**
DTHPTTGAYGGAGYTGGDTREKKGIIIDQVKDKLPGGQKDDHYSETHPTTGAYGGAGYTGGDTREKKGIVVEK
VKE**KLPGGQNVHPTTGPYGGGAAGIGETR**ERKGVGEKVKEKLPGGHKDDQYLHDTHPTKPTSAHGGVGHT
GGEPQLHEKKGLIEKIKDKLPGHNN

>UTP-glucose-1-phosphate uridylyltransferase [Pyrus pyrifolia]; N246

MAAVATGNVDK**LSDVASLSQISENEKNGFINLVS**RYVSGEEAQHVESKIQTPTEDEVVVPYDGLAPTPEDP
EEIKKLLDKLVVLK**LNGLGTTMGCTGPKSVIEVRNGLTFLDLIVIQIENLNNKYGSCVPLLLMNSFNTHDD**
TQKIVEKYSK**SNVQIHTFNQSQYPR**LVVEDFSPLPSK**GQTGKDGWYPPGHGDVFP**SLKNSGK**LDLLLSQ**GKE
YVFIANSNDNLGAVVDLKILHHLIQKKNEYCMEVTPKTLADVKGGTLISYEGRVQLLEIAQVPDQHVNEFKSI
EKFKIFNTNNLWVNLNAIKR**LVEADALKMEIIPNPKEVDG**VK**VLQLETAAGAAIRFFNHAIGIN**VPRSRFLP
VKATSDLLLVQSDLYTLQDGFVTRNSARKNPENPTIELGPEFKKVGSYLSRFSIPSILELESKLVSGDVWF
GAGVVLKGKVTITAKSGVKLEIPDNAVIANKDINGPEDL

Additional file 2 (continuation)

>ATPase subunit [Beta vulgaris subsp. vulgaris]; N251

MEFSPRAAELTNLLESRTITNFYTNFQVDEIGRVSVSGDGIARVYGLNEIQAGEMVEFASGVKGIALNLENEN
VGIVVFGSDTAIKEGDLVKRTGSIVDVPAGKAMLGRVVDALGVPIDGRGALSDHERRRVEVKAPGIIERKSV
HEPMQTGLKAVDSLVPFGRGQRELIIGDRQTGKTAIAIDTILNQKQLNSKATSESETLYCVYDAVGQKRSTV
AQLVQILSEANALEYSILVAATASDPAPLQFLAPYSGCAMGEYFRDNGMHALIIYDDLKSKQAVAYRQMSLLL
RRPPGREAFPGDVLYLHSRLLEAAKRSDQTGAGSLTALPVIETQAGDVSAYIPTNVISITDGQICLETELF
YRGIRPAINVGLSVSRVGSAAQLKAMKQVCGSPKLELAQYREVAFAQFGSDLDAAATQALLNRGARLTEVPK
QPQYAPLPIEKQILVLYGAVNDFCDRMLDKISQYERTIPNSVKPELLQSLKGGLTNEKKMELDSFLKECAL
NY

>Pyruvate decarboxylase [Fragaria x ananassa]; N255

MDTKIGSIDVCKTENHDVGLPNSTTSTVQDSVPSTCLSSADATLGRHLARRLVQIGITDVFTVPGDFNLTL
LDHLIAEPGLTNIGCCNELNAGYAADGYARSRGVGACVVTFTVGGLSVLNAIAGAYSENLPVICIVGGPNSN
DYG TNIRILHHTIGSPDFSQELRCFQTVTCFQAVVNNLEDAHELIDTAISTALKESKPVYISIGCNLAGIPHP
TFSREPVPFSLSPKLSNKGLEAAVEAAAEFLNKAVKPVMMVGGPKLRSAGHAGDAFVKLADASGFALAVMPSA
KGQVPEHHPHFIGTYWGA VSTAFCAEIVESADAYLFAGPIFN DYSSVGYSLLLKKEKAIIVQPDRTVIGNGP
TFGCVLMDKDFLVGLAKKLKHNNTAYENYRRIFVPDGHPLKAAPKEPLRVNVLFKHIQKMLSAETAVIAETGD
SWFNCQK LKLPPGCGYEFQM QYGSIGWSVGATLGAYA QAVPEKRVIAFIGDGSFQVTAQDVSTMIRNGQRTII
FLINNGGYTIEVEIHDGPYNVIKNWNYTGLVDAIHNGEGKCWTTKVRCEEELIEA IETANGPKKDRLCFIEV
IVHKDDTSKELLEWGSRVSAANSRPPNPQ

>NADP-dependent malic enzyme (NADP-ME) [Vitis vinifera]; N303

MESTLKDIRDGASVLDLDPKATVGGGVEDLYGEDFATEDQLVTPWTVSVASGYSLLRDPRHNKGLAFNDKER
DAHLYCGLLPV VSTQELQERKLMNSIRQYQVPLQKYMAMMDLQERNERLFYKLLIDNVEELLPVVYPTVG
EACQKYGSIFRRPQGLYISLKEKGKILEVLKNWPERRIQVIVVTDGERILGLGDLGCQGMGIPVGKLSLYTA
LGGVRPSACL PITIDVGTNNEKLLANEFYIGLKQRRATGKEYSEFLQEFMSPVKQNYGEKVLIQFEDFANHN
AFDLLAKYGTTHLAFNDDIQGTASVVLGIVSALRLLGGTLADHKFLFLGAGEAGTGIAELIALEMSKQTKC
PIEETRKKIWLVD SKGLIVGSRKDSLQQFKKPWAHEHEPVKD LLDVAVKVIKPTVLIGSSGVGKAFTKEVIEA
MASCNEKPLILALS NPTSQSECTAEEAYTWTQGRAIFASGSPFDPVEYNGKTFVPGQANNAYIFPGLGMGLV
ISGAIRVHDEM LLAASEALARQVTQENFDKGLIYPPFSNIRKISAHIAANVA AKAYELGLATRLPQPENLVK
YAESCMYSPVYRSYR

>NADP-dependent malic enzyme (NADP-ME) [Vitis vinifera]; N304

MESTLKDIRDGASVLDLDPKATVGGGVEDLYGEDFATEDQLVTPWTVSVASGYSLLRDPRHNKGLAFNDKER
DAHLYCGLLPV VSTQELQERKLMNSIRQYQVPLQKYMAMMDLQERNERLFYKLLIDNVEELLPVVYPTVG
EACQKYGSIFRRPQGLYISLKEKGKILEVLKNWPERRIQVIVVTDGERILGLGDLGCQGMGIPVGKLSLYTA
LGGVRPSACL PITIDVGTNNEKLLANEFYIGLKQRRATGKEYSEFLQEFMSPVKQNYGEKVLIQFEDFANHN
AFDLLAKYGTTHLAFNDDIQGTASVVLGIVSALRLLGGTLADHKFLFLGAGEAGTGIAELIALEMSKQTKC
PIEETRKKIWLVD SKGLIVGSRKDSLQQFKKPWAHEHEPVKD LLDVAVKVIKPTVLIGSSGVGKAFTKEVIEA
MASCNEKPLILALS NPTSQSECTAEEAYTWTQGRAIFASGSPFDPVEYNGKTFVPGQANNAYIFPGLGMGLV
ISGAIRVHDEM LLAASEALARQVTQENFDKGLIYPPFSNIRKISAHIAANVA AKAYELGLATRLPQPENLVK
YAESCMYSPVYRSYR

>Pyruvate decarboxylase [Fragaria x ananassa]; N305

MDTKIGSIDVCKTENHDVGLPNSTTSTVQDSVPSTCLSSADATLGRHLARRLVQIGITDVFTVPGDFNLTL
LDHLIAEPGLTNIGCCNELNAGYAADGYARSRGVGACVVTFTVGGLSVLNAIAGAYSENLPVICIVGGPNSN
DYG TNIRILHHTIGSPDFSQELRCFQTVTCFQAVVNNLEDAHELIDTAISTALKESKPVYISIGCNLAGIPHP
TFSREPVPFSLSPKLSNKGLEAAVEAAAEFLNKAVKPVMMVGGPKLRSAGHAGDAFVKLADASGFALAVMPSA
KGQVPEHHPHFIGTYWGA VSTAFCAEIVESADAYLFAGPIFN DYSSVGYSLLLKKEKAIIVQPDRTVIGNGP
TFGCVLMDKDFLVGLAKKLKHNNTAYENYRRIFVPDGHPLKAAPKEPLRVNVLFKHIQKMLSAETAVIAETGD
SWFNCQK LKLPPGCGYEFQM QYGSIGWSVGATLGAYA QAVPEKRVIAFIGDGSFQVTAQDVSTMIRNGQRTII
FLINNGGYTIEVEIHDGPYNVIKNWNYTGLVDAIHNGEGKCWTTKVRCEEELIEA IETANGPKKDRLCFIEV
IVHKDDTSKELLEWGSRVSAANSRPPNPQ

Additional file 2 (*continuation*)

>Thaumatococcus-like protein [Prunus persica]; N310

MMKSQAALLGLTTLAILFFSGAHAAKITFTNKCSYTVWPGTLTGDKPQLSLTGFEATGISR
SVDAPSPWS
GRFFGRTRCSTDASGKFTCATADCGSGQVSCNNGAAPPATLVEITIASNGGQDFYDVSLVDGFNLPMSVAP
QGGTGKCKASTCPADINKVCPAPLQVKGSQDGSVIACK
SACLA FNQPKYCCTPPNDKPETCPPPDYSKLFKTQ
CPQAYSAYDDKSSTFTCSGRPAYLITFCP

>Glutathione S-transferase [Cucurbita maxima]; N313

MADEVKLLDFWPSMFGIRVRIALAEKGVRIEYMEQDLRNKSPLLLQMNPFVHKKIPVLVHNGRPICESSIIVQ
YIDEVWK
DKAPLLP SDFYQRAQARFWVDFIDKKLYDAGRKVWTGKGEEVEAGKELIGVLKQLEEV LGEKGFF
GGERLG FVDIALIGFHSWFYTYEAFGKLSIEAEC PKIMGWAKRCLEKESVSKSLPDSKKVYDFAVQMKKALG
LE

>Putative glycine-rich RNA binding protein 1 [Catharanthus roseus]; N322

MASADVEFRFCFVGGLAWATTDQSLSEAFS QYGEVLESKIINDRETGRSRGFGFVTFGDEKSMKDAIEGMNGQ
TLDGRNVTVNEAQS
RGS GGGGGGGGFRGPRREGGGCYGGGGRRNGGYGGNGGGYGGGRRDGGRRW

>Hypothetical protein [Oryza sativa (japonica cultivar-group)]; N323

M
PATRAS
RCTSDPCHPGWIWTAGVCRRWLATVAADNGGWTVVAGWGCPWRWRWRWRWWLTVVAGDGGGCG
SGGGGCRRWYLGRRWLKAIIRLTVRHRRRRRYVEAGKSGRGEGGVWVRARRRRREQLWAGIAGESLAEPF
GQLMASFP SLEALF