

Abscisic acid effects on activity and expression of plastidial glucose 6 phosphate dehydrogenase isoforms in barley (*Hordeum vulgare*)

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SUPPLEMENTARY DATA

Cytosolic Cy-G6PDH

>HvCy (FJ790424)

MAGTDSSASSRQSSFNLSLAKDLELPLEQGCLTIVVLGASGDLAKKKTFFPALYHLFEQGFLQSGEVHIVGYARTNLSDDGLRGRIRA
YKLGASEEHVSEFLQLIKYVSGSYDSGEGFEKLNKEISDYEMSNNSGSSRRLFYLALPPSVYPSVCKMIRTYCMSPTSRGTWTRVI
VEKPFGRDLDSAEELSSQLGELFQEDQLYRIDHLYLGGKELVQNLVLRANRFLPLWNRDNVDNIQIVFREDFGTGDRGGYFDQYG
IIRDI IQNHLLQVFCVAMEKPVSLKPEHIRDEKVKVQLQSVNPIKDEEVVLGQYQGYKDDPTVPDDSNTPPTFASIVLRVHNERWEG
VPFILKAGKALNSRKAERIRVQFKDVPDGI FKCCKQGRNEFVIRLQPSSEAMYMKLTVKKPGLEMATEQSELDLSYGMRYQDVKIPE
AYERLILDTIRGDQQHFVRRDELKAAWQIFTPLLHNDIAGKLVAVSYKPGSRGPKEADELSEKVGVMQTHGYIWIPTLAS

>SbCy (estExt_Genewise1.C_chr_65912)

MSGGSSPSSRRNSFNLSRDLDPSEQGLSIVVLGASGDLAKKKTFFPALYHLFDQGFQISGEVHIFGYARSNLSDDGLRERIRGY
LKGDPEDLSEFLQLIKYVSGSYDTGEGFQKLNKTI SQYEASNKSGSYRRLFYLALPPSVYPSVCKMIRTYCMNPSSHPGWTRVIVE
KPFKDLDSAEELSAQLGELFEEHQLYRIDHLYLGGKELVQNLVLRANRFLPLWNRDNIDNIQIVFREDFGTGDRGGYFDQYGI
RDI IQNHLLQVFCVAMEKPVSLKPEHIRDEKVKVQLQSVNPIKPEEVVLGQYDGYKDDPTVPDDSNTPPTFASVLRVHNERWEGVP
FILKAGKALSSRKAERVQFKDVPDGI FRNKRQGRNEFVIRLQPSSEAMYMKLTVKKPGLEMATEQSELDLSYGMRYQNIKIPEAYE
RLILDITIRGDQQHFVRRDELKAAWQIFTPLLHNDIDGKLVAVSYKPGSRGPKEADELSARVGYVQTHGYIWIPTLAS

>ZmCy (NP_00115068)

MSGGSSPSSRRNSFNLSKDLDPSEQGLSIVVLGASGDLAKKKTFFPALYHLFEQGFIQSGEVHIFGYARSNLSDDGLRERIRGY
LKGAPEDLSEFLQLIKYVSGSYDTGEGFEKLNRAISEYEVSKSSGSYRRLFYLALPPSVYPSVCKMIRTYCMNPSSHPGWTRVIVE
KPFKDLDSAEELSAQLGELFEEHQLYRIDHLYLGGKELVQNLVLRANRFLPLWNRDNIDNIQIVFREDFGTGDRGGYFDQYGI
RDI IQNHLLQVFCVAMEKPVSLKPEHIRDEKVKVQLQSVNPIKPEEVVLGQYDGYKDDPTVPDDSNTPPTFASVLRVHNERWEGVP
FILKAGKALSSRKAERVQFKDVPDGI FRNKRQGRNEFVIRLQPSSEAMYMKLTVKKPGLEMATEQSELDLSYGMRYQNIKIPEAYE
RLILDITIRGDQQHFVRRDELQAAWQIFTPLLHNDIDGKLVAVSYKPGSRGPKEADELSARVGYVQTHGYIWIPTLAS

>TaCy (BAA97663.1)

MAGTDSSASSRQSSFNLSLAKDLELPLEQGCLTIVVLGASGDLAKKKTFFPALYHLFEQGFLQSGEVHIVGYARTNLSDDGLRGRIRA
YKLGASEEHVSEFLQLIKYVSGSYDSGEGFEKLNKEISDYEMSNNSGSSRRLFYLALPPSVYPSVCKMIRTYCMSPTSRAGWTRVI
VEKPFGRDLDSAEELSSQLGELFEEDQLYRIDHLYLGGKELVQNLVLRANRFLPLWNRDNVDNIQIVFREDFGTGDRGGYFDQYG
IIRDI IQNHLLQVFCVAMEKPVSLKPEHIRDEKVKVQLQSVNPIKDEEVVLGQYQGYKDDPTVPDDSNTPPTFASIVLRVHNERWEG
VPFILKAGKALNSRKAERIRVQFKDVPDGI FKCCKQGRNEFVIRLQPSSEAMYMKLTFVQVKKPGLEMATEQSELDLSYGMRYQDVK
IPEAYERLILDTIRGDQQHFVRRDELKAAWQIFTPLLHNDIAGKLVAVSYKPGSRGPKEADELSEKVGVMQTHGYIWIPTLAS

>AtCy1 (At3g27300.1)

MGSGQWHMEKRSTLKNDSFVKEYNPVETETGSLIIVLGSAGDLAKKKTFFPALFNLFHQGFLNPDEVHIFGYARSKIITDEELRDKIR
GYLVDEKNAEQAEALSFKFLQLIKYVSGPYDAEFGFRLDKAISEHEISKNSTEGSSRRLFYLALPPSVYPSVCKMIKAWCTNKSD
LGGWTRIVVEKPFKDLDESALSSQIGALFEFPQIYRIDHLYLGGKELVQNLVLRANRFLPLWNRDNIANVQIVFREDFGTGTEGR
GGYFDEYGIIRDI IQNHLLQVLCVAMEKPI SLKPEHIRDEKVKVQLQSVPIKDEEVVLGQYEGYRDDPTVPNDNTPPTFATILR
INNERWEGVPFILKAGKAMSSKKADIRIQFKDVPDGI FKCQNQGRNEFVIRLQPSSEAMYMKLTVKQPGLEMQTVQSELDLSYKQRY
QDVISPEAYERLILDTIRGDQQHFVRRDELKAAWQIFTPLLHNDIDGKLVAVSYKPGSRGPKEADELQLLKAGYMQTHGYIWIPTLAS

>AtCy1.1 (At5g40760.1)

MGSGQWHVEKRSTFRNDSFVREYIVPETGCLSIIVLGSAGDLAKKKTFFPALFNLYRQGFNLNPDEVHIFGYARTKISDEELRDRIR
GYLVDEKNAEQAEALSFKFLQLIKYVSGPYDAEFGFRLDKAISEHEISKNSTEGSSRRLFYLALPPSVYPSVCKMIKAWCTNKSD
LGGWTRIVVEKPFKDLDESALSSQIGELFDESQIYRIDHLYLGGKELVQNLVLRANRFFLPLWNRDNIANVQIVFREDFGTGTEGR
GYFDEYGIIRDI IQNHLLQVLCVAMEKPI SLKPEHIRDEKVKVQLQSVVPI SDDEVVLGQYEGYRDDPTVPNDNTPPTFATILR
HNERWEGVPFILKAGKALNSRKAERIRIQFKDVPDGI FRCQKQGRNEFVIRLQPSSEAMYMKLTVKQPGLEMDMNTVQSELDLSYQRYQ
GVAIPEAYERLILDTIKGDQQHFVRRDELKVAWEI FTPLLHRIDKGEVKSIPYKPGSRGPKEADQLEKAGYLQTHGYIWIPTLAS

>PtCy1 (estExt_Genewise1_v1.C_LG_XVII0625)

MGSGQWVMEKRSSFRSDSFSKEYETVPETGCLSIIVLGSAGDLAKKKTFFPALYNLYRRGFLQSNVYIFGYARTKISDDDLRNRIR
GYFGKDAESEHSEVSKFLQLIKYVSGYDTEGFRLLDKEISEHEVSKNSAEGSSRRLFYLALPPSVYPPVCRMIRKCCMNRSDLG
GWTRIVIEKPFKDLDESALSSQIGELFEEQYIYRIDHLYLGGKELVQNLVLRANRFFLPLWNRDNIDNVQIVFREDFGTGTEGRG
YFDEYGIIRDI IQNHLLQVLCVAMEKPVSLKPEHIRDEKVKVQLQSVLP I KDEEVVLGQYEGYRDDPTVPNDNTPPTFATVLRIR
NERWEGVPFILKAGKALNSRKAERIRVQFKDVPDGI FKCQKQGRNEFVIRLQPSSEAMYMKLTVKQPGLEMSTVQSELDLSYKQRYQ
VAIPEAYERLILDTIRGDQQHFVRRDELKAAWQIFTPLLHRIDGEMKPLQYQPGSRGPVEADELLAKAGYVQTHGYIWIPTLAS

>PtCy1.1 (grail3.0054015801)

MGSGQWMEKRSGLENDSFLKEHETAPESGCLSIIVLGASGDLAKKKTFFPALYHLYRQGFLHPDEVHIFGYARTRISDDELDRIR
GYLGKEAEVVSFLQLIKYVSGSYDTEGDFQLLDEKISQHEVSKNSAEGSSRRLFYFALPPSVYPTVCRMIRKCCMNKSDHGGWTR
IVIEKPFPGKDLASAENLSAHIGELFEEAQLFRIDHLYLGGKELVQNLLVLRANRFFLPLWNRDNI SNVQIVFRENFGTEGRGGYFDE
YGIIRDI IQNHLLQVLCVAMEKPVSLKPEYIRDEKVKVLSVLPIDDEDVVLGQYDGYRDDPTVPDQSNPTPTFATVVLRIHNERW
EGVPPFILKAGKALNSSKAEIRVQFKDVPDGI FKCKQQRNEFVIRLQPSSEAMYMKLTVKQPGLEMSTVQSELDLSYQRYQGVPI P
EAYERLILDTIRGDQQHFVRRDELKAWEIFTPLLRIDNGEMKPKKEYQPGSRGPVEADELLAKAGYVQTHGYIWIPTTL

>StCy (CAA52442.1)

MAASWCIEKRSIRNDSFRDNDNI PETGCLSIIVLGASGDLAKKKTFFPALFNLYRQGFLQSNEVHIFGYARTKISDDDLRSRIRGY
LSQKGENEVESEFLQLIKYVSGSYDSAEGFTSLDKAISEHEFSKNSTEGSSRRLFYFALPPSVYPSVCRMIKSYCMNKSDLGGWT
RTVVEKPFPGKDLASSEQLSSQIGELFDEPQIYRIDHLYLGGKELVQNLLVLRANRFFLPLWNRDNI DNIQIVFREDFGTEGRGGYFD
EYGIIRDI IQNHLLQVLCVAMEKPVSKPEHIRDEKVKVLSMLPIEDEEVVLGQYEGYKDDPTVPNNSNTPTFATMVLRIHNER
WEGVPPILKAGKALNSKAEIRVQFKDVPDGI FRCKQQRNEFVIRLQPSSEAMYMKLTVKQPGLEMSTVQSELDLSYQRYQGVVI
PEAYERLILDTIRGDQQHFVRRDELKAWEIFTPLLRIDNGEVKPIPYKPGSRGPAEDELQAGYVQTHGYIWIPTTL

>MtCy1 (Q42919)

MGTNEWHVERRDSIGTESPVAREVLETGTLISIVLGASGDLAKKKTFFPALFHLKQELLPPDEVHIFGYARSKISDDELNRKLSY
LVPEKASPKQLDDVSKFLQLVKYVSGPYDSEDGFRLLDKEISEHEYLKNSKEGSSRRLFYFALPPSVYPSVCKMIKTCCMNKSDL
GGWTRVVEKPFGRDLESAEELSTQIGELFEEPIYRIDHLYLGGKELVQNMLVLRANRFFLPLWNNHIDNVQIVFREDFGTDGRG
GYFDQYGIIRDI IPNHLLQVLCIAMEKPVSLKPEHIRDEKVKVLESVLPIDDEDVVLGQYEGYTDPTVPDSDNTPTFATTILRI
HNERWEGVPPILKAGKALNSKAEIRVQFKDVPDGI FRSKKQQRNEFVIRLQPSSEAMYMKLTVKQPGLEMSAVQSELDLSYQRYQ
GITIPEAYERLILDTIRGDQQHFVRRDELKASWQIFTPLLHKIDRGLKPVYPNPGSRGPAEDELLEKAGYVQTPGYIWIPTTL

>MtCy2 (ACJ85742)

MATKDCWQCVQRSSIENDSPLVDNNGPENGSLISIVLGASGDLAKKKTFFPALFNLYKQGFLLANEVCI FGYARTKISDEELNRRL
RGYLKKEKASPEKLETVSKFLHLIKYVSGSYDSENDFRLLDKEISKHESTNTAEGSSRRLFYFALPPSVYPSVSKMIKTACMNK
SDHGGWTRIVVEKPFPGKDLASAELSTQIGGLFEEPIYRIDHLYLGGKELVQNMLVLRANRFFLPLWNRDNIANVQIVKEDFGTD
GRGGYFDQYGIIRDI IQNHLLQIFCLVAMEKPVSMRPEHIRDEKVKVLESVLPIDDEDVVLGQYEGYRDDPTVPDSDNTPTFASVI
LRVHNERWEGVPPILKAGKALNSKAEIRVQFKDVPDGI FKCKQQRNEFVMRLRSEAMYMKLTVKQPGLEMSTVQSELDLSYRQ
RYHDVTIPEAYERLILDTIRGDQQHFVRRDELKAFWEIFT
PLLRIDKGEFKSIPYKFGSRGPKQADELLEKAGYVQTHGYIWIPTTL

>NtCy (CAA04992)

MAASWCIEKRSRLRDSFRENNDNI PETGCLSIIVLGASGDLAKKKTFFPALFNLYRQGFLQSNEVHIFGYARTKISDDDLRSRIRGY
LSKGKEYEVESEFLQLIKYVSGSYDSGEGFSLDKAIAEHEFAKNSTEGSSRRLFYFALPPSVYPSVCRMINKNYCMNKSDLGGWTR
IVVEKPFPGKDLASAELSSQIGELFNEPQIYRIDHLYLGGKELVQNMLVLRANRFFLPLWNRDNI DNIQIVFREDFGTEGRGGYFDE
YGIIRDI IQNQLLQVLCVAMEKPVSKPEHVRDEKVKVLSMLPIKDEEVVLEQYEGYKDDPTVPGNSNTPTFATMVLRIHNERW
EGVPPIMKAGKALNSKAEIRVQFKDVPDGI FRCKKQQRNEFVIRLQPSSEAMYMKLTVKQPGLEMSTVQSELDLSYQRYQGVPI P
EAYERLILDTIRGDQQHFVRRDELKAWEIFTPLLRIDDDGEIKPIPYKPGSRGPAEDELQNVGYVQTHGYIWIPTTL

>OsCy (LOC_Os02g38840.1)

MSGGSSPRSRSSFNLSRDLPEQGLSIVIVLGASGDLAKKKTFFPALFHLFAQGFIQSGEVHIFGYARSNLSDDGLRERIRGY
LKGASEEHLSDFLQHIKYVSGSYDSGEGFEKLNKEISEYEKSNKSESPRRLFYFALPPSVYPSVCKMIRTYCMNPSGWTRVIVEK
FGKDLDSSEELSAQLGELFDENQLYRIDHLYLGGKELVQNMLVLRANRFLPLWNRDNI DNIQIVFREDFGTDGRGGYFDQYGI IRD
IIQNHLQVFLVAMEKPVSLKPEHIRDEKVKVLSVNP I KHDEVVLGQYEGYKDDPTVPDSDNTPTFASVVRVHNERWEGVPPFI
LKAGKALSSRKAIEVRVQFKDVPDGI FKCKRQQRNEFVIRLQPSSEAMYMKLTVKQPGLEMATEQSELDLSYGMRYQNVKIP EACERL
ILDTIRGDQQHFVRRDELKAAWQIFTPLLDHIDEGKVKSIPIYQPGSRGPKAEDELSEFVGYMQTHGYIWIPTTLA

Plastidial P1-G6PDH

>NtP1 (CAA04994)

MGGQLQLNPCSSTVATTFHNGAHKFCRNFNLPFKAHSLESSVASTFHNGIYSRIQPRKHFEIMSSNGFHLNAVSLDGSASKSM
PEQVPLTELENAETTIVSITVIGASGDLAKKKIFTALFALFYEDCLPENFIVFGYSRTKMSDEELRNMI SKTLTCRIDDQRENCEAKM
DHFLERCFYHSGQYHSEDDFAELDYKLAKEGSRVSNRLFYLSIPPNI FVDVVRASLKASSTSGWTRVIVEKPFGRDLESSSELT
RCLKKYLTEEQIFRIDHYLKGKELVENLSVLRFSNLVFEPLWSRNYIRNVQFIFSEDFGTEGRGGYFDNYGIIRDIMQNHLQLIAL
FAMETPVSMDAEDIRNEKVKVLRSMRPLQLEDVVLGQYKGHSGGKLYPAYTDDPTVPNGSVTPTFSAALFINNARWDGVPFLMK
AGKALHTRRAEIRVQFRHVPGNLYKRNFGTDLDKATNELVLRVQDEAIYKINNKVPGLGMRLDRSDLNLLYKAKYRGEIPDAYE
RLLLDAIEGERRLFI RSDDELDAAWALFTPLLKELEEKKIAPELYPYGSRGPVGAHYLAAKHNVRWGDLSGDD

>OsP1 (LOC_Os03g29950)

MAGTGLRFRQGAIFFSGAHAAHPRTTRPHHHCSPQRTHDARGRCRLTAKSANGRPQISASFRDVAIDGAQSEDGAPEQGGSTVSI
TVVGASGDLAKKKIFPALFALFYEDCLPEHFTVFGYARSKMSDEELRNMI SLTLTCRIDDQRENCSDKMEQFLKRCFYQSGQYNS
GFSELDRLKKEKEAGKVPNRLFYLSIPPNI FVDVVRASRTASSQDGTWTRFIVEKPFGRDSESSGELTRNLKYLAEQIFRIDHY
LKGKELVENLSVLRFSNLVFEPLWSRNYIRNVQLIFSEDFGTEGRGGYFDNYGIIRDIMQNHLQLIALFAMETPVSLDAEDIRNEK
VKVLRSMRQLRLEDVVVQYKGHSGGKTYPAYVDDPTVPSGSITPTFAAALFIDNARWDGVPFLMKAGKALHTRRAEIRVQFRR
VPGNLYGRRSRVGGGTTATRELEKATNELVLRVQDEAIYKINNKVPGLGMRLDSDLNLLYSERYPAEIPDAYERLLLDIAIE
GERRLFI RSDDELDAAWAIFTPVLADLEANKVAPELYPYGSRGPVGAHYLAANHNVRWGDIS

>SbP1 (fgenes1_pg.C_chr_1003339)

MAATAALSFHPAAFSVAHPREAAAAATKQPLRHCSPLRSVVPRTCLLRARSSNGRPQISASFGNSNEVLDMPTGDGPPAPGQG
GSTVSI TVVGASGDLAKKKIFPALFALFYEDCLPEHFTVFGYARSKMSDEELRNMI STTLTCRIDDKRENCQDKMEQFLKRCFYQSG
QYNSEEGFAELDRKKEKEAGRLPNRLFYLSIPPNI FVDVVRASRTASSSSGWTRFIVEKPFGRDSESSGELTRSLKIIDHYLKG
KELVENLSVLRFSNLVFEPLWSRNYIRNVQFIFSEDFGTEGRGGYFDNYGIIRDIMQNHLVQI LALFAMETPVSLDAEDIRNEKVKV
LRSMRQLKLEDVVVQYKGHSGGGRSYPGYADDPTVPKGSVPTFAAALFIDNARWDGVPFLMKAGKALHTRRAEIRVQFRVPG
NLYRRNIGTDLDKATNELVLRVQDEAIYKINNKVPGLGMRLDRSNLNLLYSERYRREIPDAYERLLLDAMEGERRLFI RSDDEL
AAWAIFTPVLELEDKVAPELYPYGSRGPVGAHYLAANYNVRWGDITSDDAAF

>AtP1 (At5g35790.1)

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GESTLSITVVGASGDLAKKKIFPALFALFYEGCLPQDFSVFGYARTKLTHEELRDMISSTLTCRIDDQREKCGDKMEQFLKRCFYHS
GQYNSEEDFAELNKKLKEKEAGKISNRLYYLSIPPNI FVDVVRASLRASSENGWTRVIVEKPFGRDSESSGELTRCLKQYLTEEQ
IFRIDHYLKGKELVENLSVLRFSNLVFEPLWSRNYIRNVQLIFSEDFGTEGRGGYFDQYGIIRDIMQNHLQLIALFAMETPVSLDA
EDIRSEKVKVLRSMKPLRLEDVVVQYKGHNKGGKTYPGYDDPTVPNHSLTPTFAAAMFINNARWDGVPFLMKAGKALHTRGAE
IRVQFRHVPGNLYKKS FATNLNATNELVIRVQDEGIYLRINNKVPGLGMRLDRSDLNLLYSRYPREIPDAYERLLLDIAIEGER
RLFIRSDDELDAAWDLFTPALKELEEKKIIPELYPYGSRGPVGAHYLASKYNVRWGDLSGAA

>PtP1 (fgenes4_pm.C_LG_XIV000487)

MATHFSPCSSSTNFLPSSCFKNETTVLFSRFAVTVPRKSTWVTQNHRSRIQGRKHFHIKSSNGHPLNAVSLQDQKAEKEESTLSI
TVVGASGDLAKKKIFPALFALFYEDWLPENFTVFGYARTKLTDEELRNMI SGTLTCRIDDQRENCEDKMDQFLKRCFYHAGQYDSEG
DFSELNKLKEKEAGKVS NRLFYLSIPPNI FVDVVRASLRASSLNGWTRVIVEKPFGRDSESSGELTRCLKQYLTEDQIFRIDHY
LKGKELVENLSVLRFSNLVFEPLWSRDYIRNVQLIFSEDFGTEGRGGYFDNYGIIRDIMQNHLQLIALFAMETPVSLDAEDVRNEK
VKVLRSMKPLQLEDVIVGQYKGHSGKGRSYPAYTDDPTVPKDSRTPTFAAALFINNARWDGVPFLMKAGKALHTRRAEVRVQFRH
VPGNLYKRNFGTDLDKATNELVLRVQDEAIYKINNKVPGLGMRLDRSDLNLLYSARYPREIPDAYERLLLDIAIAGERRLFI RSD
ELDAAWALFTPMLKELELKKIVPELYPHGSRGPVGAHYLAAKYNVRWGDLSDDSDS

>StP1 (CAA58775.1)

MGVQLRLNPCSSTSAATSPSTFHNGTYPYFCKKNFLPFTQPLNWNVSGIYSRIQPRKHFEVFSNGFPLNAVSVQDVQVPLTELGS
GDTTIVSITVIGASGDLAKKKILPALFALFYEDCLPENFVVFYGSRTKLSDEELRNMI STTLTCRIDDKRENCDAKMEHFLERCIFYHS
GQYNSEDDFAELDYKLAKEGCRVSNRLFYLSIPPNI FVDVVRASLKASSTSGWTRVIVEKPFGRDLESSSELTRSLKYLTEEQ
IFRIDHYLKGKELVENLSVLRFSNLVFEPLWSRNYIRNVQFIFSEDFGTEGRGGYFDHYGIIRDIMQNHLQLIALFAMETPVSLDA
EDIRNEKVKVLRSMRPLQLEDVVLGQYKGHSGAKSYPAYTDDPTVPNGSITPTFSAALFIDNARWDGVPFLMKAGKALHTKRAE
IRVQFRHVPGNLYKRNFGTDMDKATNELVLRVQDEAIYKINNKVPGLGMRLDRSDLNLLYKAKYRGEIPDAYERLLLDIAIEGER
RLFIRSDDELDAAWALFTPLLKELEEKKIAPELYPYGSRGPVGAHYLAAKHNVRWGDLSGDD

Plastidial P2-G6PDH

>HvP2 (CAL44728)

MALSCMRCPSVAAGPAVRRPSSVALSLARCGRPAAVASGGWRIHAVAGKGVVKGPMDTAVENTVAPAAPSPVENGTSSAITVEE
YEDLASLAKDDEASVSI TVVGASGDLAKKKI F PALFALY YEGCLPKHFTIFGYARSKMTDAELRHMVSKTLTCRDKRENCSEKME
EFLKRCFYHSGQYDSEEDFRELGKKIELHQGPRVSNHLFYLSIPPNI FLDVVKCASKSASSASGWTRVIVEKPFGRDSESSAALTR
GLKEFLAEDQIFRI **DHYLGKE**LVENLSVLRFSNLVFEPLWSRQYIRNVQLIFSEDFGTEGRGGYFDSYGIIRDIMQNHLQLLALF
AMETPISLEAEDIRNEKVKVLRSMKPLRLEDVVIGQYKSHTKGGITYPGYTEDKTVPKGSLTPTFAAAALFINNARWDGVPFLMKA
GKALHTKQAEIRVQFRHVPGNLYKGSFGTDLDRATNELVIRVQPDGGIYKINNKIPGLGMRLDRSNLNLHYAARYKEIPDAYER
LLDAIEGERRLFI RSDELDAAWELFTPLLKELEQKRMAPELYPYGSRGPVGAHYLAAKYNVRWGD LGGSEH

>NtP2 (AAF87216.1)

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LPVAPPKQKDTIDFDSNKA KSTVSI TVVGASGDLAKKKI F PALFALY YEGCLPEHFTIFGYARSKMTDAELRNMVSKTLTCRDK
RENCGEKMEQFLERCFYHSGQYDSEENFAELDKLKEHEAGRFSNRLFYLSIPPNI FINAVRCASLSASSAHGWTRVIVEKPFGRD
SESSAALTRSLKQYLNEDQIFRI **DHYLGKE**LVENLSVLRFSNLIFEPLWSRQYIRNVQIFSEDFGTEGRGGYFDHYGIIRDIMQN
HLLQILALFAMETPVSLDAEDIRNEKVKVLRSMRPLQLDDVIGQYKSHTKGDVTPYGYTDDKTVPKDSLTPTFAAAALFINNARW
DGVPFLMKAGKALHTRS A EIRVQFRHVPGNLYKNKFGSDLDQATNELVIRVQ PNEAIYKINNKV PGLGMRLDRSNLNL LYSARYS
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>OsP2 (LOC_Os07g22350)

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FLKRCFYHSGQYDSEEHFMDLKKLQHEGSRVSNRLFYLSIPPNI FLDVVKCASKSASSSGNWTRVIVEKPFGRDSDSSALTRG
LKQYLVEDQIFRI **DHYLGKE**LVENLSVLRFSNLVFEPLWSRQYIRNVQLIFSEDFGTEGRGGYFDYGIIRDIMQNHLQLLALFA
METPVSLAEDIRNEKVKVLRSMKPLQLEDVVIGQYKSHTKGGTTYPGYTEDKTVPKDSVTPPTFAAAALFINNARWDGVPFLMKAG
KALHTKQAEIRVQFRHVPGNLYKRSFGTDLDTATNELVIRVQ PDEAIYKINNKIPGLGMRLDRSNLNLHYAARYSKEIPDAYERL
LLDAIEGERRLFI RSDELDAAWELFTPLLKELEEKRIAPELYPYGSRGPVGAHYLAAKYNVRWGD LTT EQKA

>SbP2 (estExt_Genewise1Plus.C_chr_60876)

MALSCMRCPAGATGSARRAPFATAAAVSVFARCGGLGRSASAAAAACWRIHAVAPQGA KAPMTADV KHVVT PPA SPKVENGSPSEI
TLDEFEDLSALCKNGNDSTVSI TVVGASGDLAKKKI F PALFALY YEDCLPKHFTIFGYARSKMTDAELRNMVSKTLTCRDKREN
CSEKMEFLKRCFYHSGQYDSEEHFLDLKKLQHEGPRVSNRLFYLSIPPNI FLDVVKCASKSASSVNGWTRVIVEKPFGRDSES
SAALTRGLKQYLVEDQIFRI **DHYLGKE**LVENLSVLRFSNLVFEPLWSRQYIRNVQLIFSEDFGTEGRGGYFDYGIIRDIMQNHL
QILALFAMETPISLEAEDIRNEKVKVLRSMKPLQLEDVVIGQYKSHTKGGTTYPGYTDKTVPKDSVTPPTFAAAALFINNARWDG
VPFLMKAGKALHTKRAEIRVQFRHVPGNLYKGSFGTDLDRATNELVIRVQ PDEAIYKINNKIPGLGMRLDRSNLNLHYAARYSKEI
PDAYERLLLDAIEGERRLFI RSDELDAAWSLFTPLLKELEEKRIAPELYPYGSRGPVGAHYLAAKYNVRWGDLSAEHYKA

>AtP2 (At5g13110.1)

MAALSSSVTTRSYHSGYLASFSPVNGDRHRSLSFSLAS PQGLNPLDL CVRFQRKSGRASVFMQDGAIVTNSNSSES KTS LKGLKDE
VLSALSQBAAKVGVESDGQSSTVSI TVVGASGDLAKKKI F PALFALY YEGCLPEHFTIFGYARSKMTDVELRNMVSKTLTCRDK
RANCGEKMEFLKRCFYHSGQYDSEEHFTELDKLKEHEAGRI SNRLFYLSIPPNI FVDVAVKCASTSASSVNGWTRVIVEKPFGRD
SETSAALTKSLKQYLEEDQIFRI **DHYLGKE**LVENLSVLRFSNLIFEPLWSRQYIRNVQIFSEDFGTEGRGGYFDNYGIIRDIMQN
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DGVPFLMKAGKALHTRS A EIRVQFRHVPGNLYNRNTGSDLDQATNELVIRVQ PDEAIYKINNKV PGLGMRLDRSNLNL LYSARYS
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>PtP2 (estExt_Genewise1_v1.C_LG_I7789)

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LTCRDKRENCDEKMDQFLKRCFYHSGQYGSQENFAELDKLKEHEGARVSNRLFYLSIPPNI FIEAVKCASTSASSSGIGWTRVIV
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FINNARWDGVPFLMKAGKALHNKSAEIRVQFRHVPGNLYNRNFGTDLDRATNELVIRVQ PDEAIYKINNKV PGLGMRLDRSNLHL
HYAARYSKEIPDAYERLLLDAIEGERRLFI RSDELDAAWALFTPVLKELEEKKI IPEYYPYGSRGPVGAHYLAARYKVRWGD LGIE
Q

>PtP2.1 (eugene3.00031378)

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RIDKRENCGEKMDQFLKRCFYHSGQYDSLENFAELDKKLEHEGGRVSNRLFYLSIPPNI FIDAVKCTSSSASSSIGWTRVIVEKP
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ENCSEKMEEFKRCFYHSGQYDSEEHFIDLKLLKQHEGSRVSNRLFYLSIPPNI FLDVVKCASKSASSVNGWTRVIVEKPFGRDS
ESSAALTSGLKQYLVEDQIFRI **DHYLGKE**LVENLSVLRFSNLVFEPLWSRQYIRNVQLIFSEDFGTEGRGGYFDGYGIIRDIMQNH
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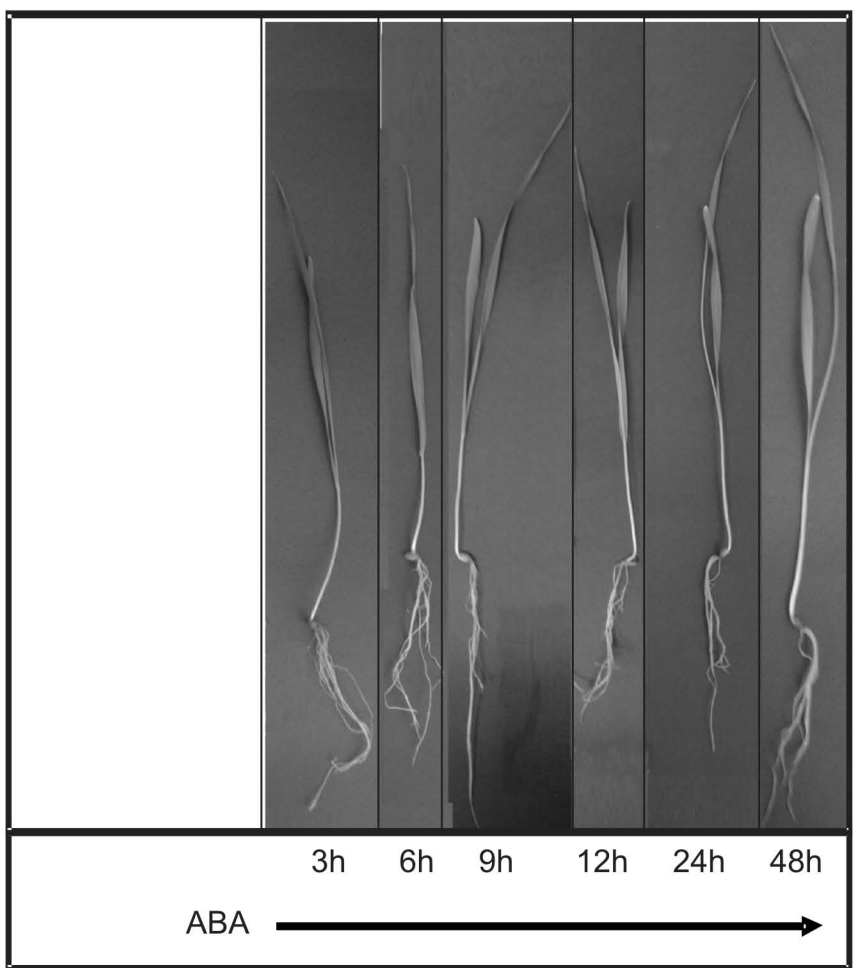
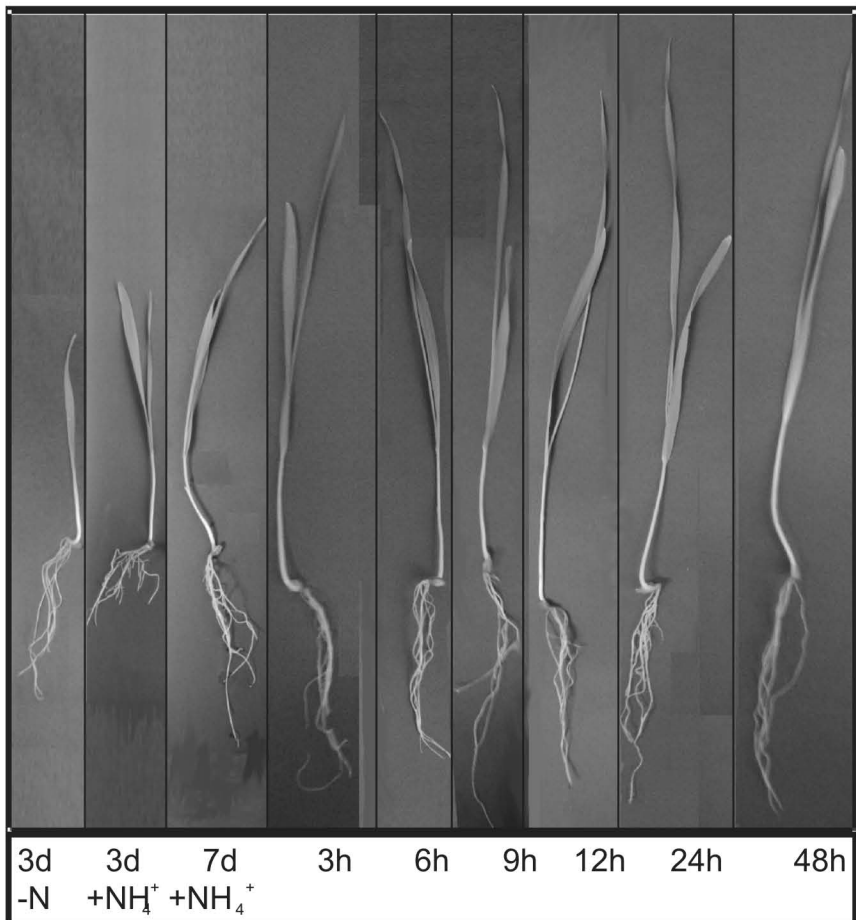
Legends to Supplementary Figures

Figure S1: Relative growth rate of barley seedlings upon 0.1 mM ABA. Barley seedlings were grown for 3 days in hydroculture without any nitrogen source, then grown under 5 mM ammonium phosphate for 7 days; then seedlings were supplied with 0.1 mM of ABA and representative samples collected at given times. Appearance of control plants is shown above in comparison with ABA treated plants (below).


Figure S2: Western blots of P1- and Cy-G6PDH isoforms from crude extracts of roots (A) and leaves (B) of barley plants subjected to an ABA treatment. The seedlings were grown on a medium supplied with 0.1 mM of ABA and samples collected at given times. Detection of Cy- and P1-G6PDH isoforms was made using antibodies raised against potato proteins (Wendt *et al.*, 2000).

Figure S3: G6PDH transcript expression profiles after ABA treatment. Semi-quantitative RT-PCR were performed with RNA extracted from roots (A) and leaves (B) of samples collected at given times from seedlings supplied with 0.1 mM of ABA.

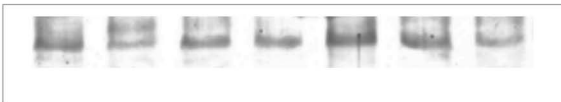
The graphs show the quantification of transcript obtained using Image J software (NIH – USA) indicated by bars. Data shown are average \pm standard error of five different determinations. A statistical one- way ANOVA analysis was performed using Jandel SigmaPlot 11.0 Software; other details in the text.




A - ROOTS

ABA 
0 3h 6h 9h 12h 24h 48h

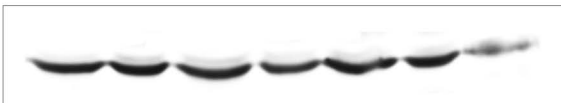
Cyt



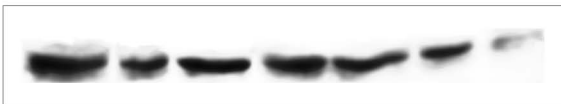
B - LEAVES

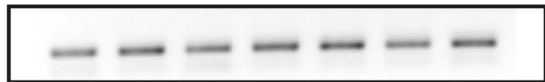
ABA 
0 3h 6h 9h 12h 24h 48h

Cyt

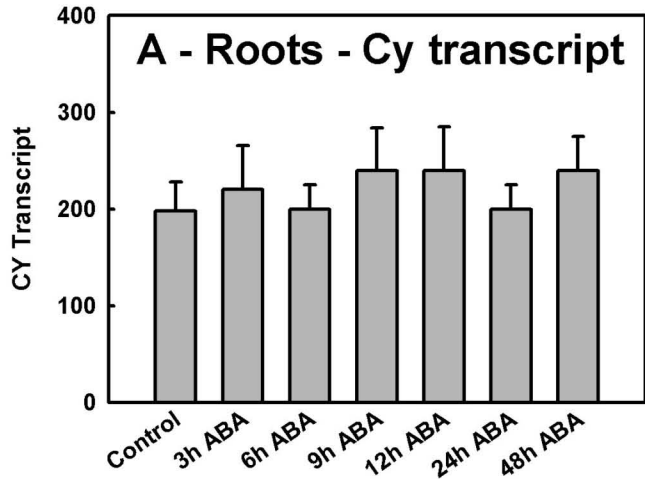


P1





A - Roots - Cy transcript



B - Leaves - Cy transcript

