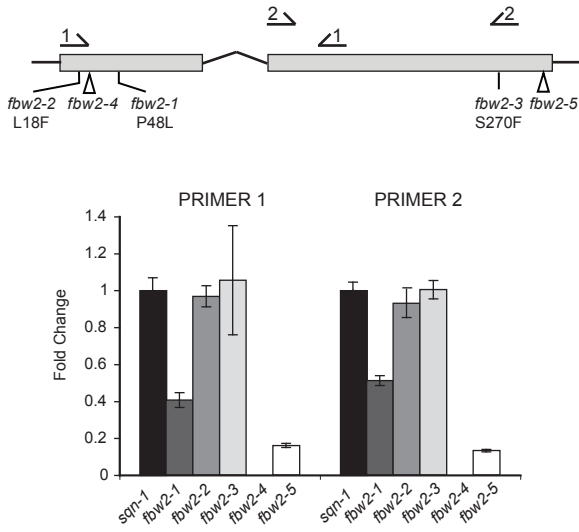


Sup. Figure 1

A



B

At4g05497 MSSSSSSPFPQAMKNGEYRNWAEPLPELTSSILRLGAIETLONAQRVCKSWRRVCQDPS
at4g05460 MASSSSP--PAAMEVGESTNWTPELPELTSAILRLGAIETLONAQRVCKSWRRVCQDPS
at4g08980 -----MEEDCEFRHWDDELIPDALGLIFSHLPLQEVLTVVPRVCKAWNRVAVTGPY
at5g57900 -----MEEDCG--SDWGGGLAPEILINILSRITIQELWAGPMFVQKSWLTVCRDPY

At4g05497 MWRKIDIR-----IKENLVNSVELFVVIETPLCCRAVDLSOGGLLEINIDYLVNTSFLNY
at4g05460 MWRKIDM-----HNLGLDDMDYNLEIMCRHAYDRSOGGLVDLGIWYFGTVDLLNY
at4g08980 CWOEIDI-----ELWSNRFHQSDHLDRMLEMLTPRSAGSLRKLSSVTCGRNDSIFSF
at5g57900 LWSIFDLEFPWFDSYPETHLWSPFPEFQKVDLMLRSVVDWSEGGTLKIRVRHCS-DHALSF

At4g05497 IADRSSNLRRLGVVDCAPVLSRGVVEAAMKLPLEELDITYKSSIREQELKVVGQSCPNL
at4g05460 IADRSSNLRRLRLIRCSQITDDGFVEAVVKLP-LEELELSY-CSFSVSESLRVVGCCCLNM
at4g08980 IAQHAGSLKTLKVPFRSG-LTNSGVVNVAEKLSSITFLDLSYCCKIGPEAIQAIQKHKCSL
at5g57900 AADRCPNLQVLAIRSSPNVTDASMTKIAFRCRSIKELDTSYCHEISDHTLVIMIGRNCPL

At4g05497 RTLLKLC-----TGDVKKCC-----DKVALAIETMPGLRHLQLFRNGLSEFGLN
at4g05460 KTLKLN-----KHPOKEN-----DDALAIETMPGLRHLQLCGNGLSDTGLN
at4g08980 REFCRNMHPLDVASVVS-----DDEAVAIANTMPKLRKEIAYHRVSTEGVL
at5g57900 RILKRNLMDSWSSRHIGSVPTTEYLDACPDQDTEADAIQKHMINLEHEIEIQSRRLSVKGLA

At4g05497 AILEGCPHFKNLCIHOCLNINIVGDIIVK-----ESVKVVRHPNDSIHDIIDIGSSEDEDPYDF
at4g05460 AILDNCSNLEHDLRRCFNVNLVGLQKRCFESVKVVRHPNDSIHDIIDIGSSEDEDPYDF
at4g08980 KILSCCVFLEFLBLRGCCWDVQLDNKFFKKEFPDMKVLGPRVIGFYDMINDWEDCCSDYFS
at5g57900 SICGCPKLELYDLDFGCVHLSRRDITSN-----VSRLKWLKEVKKPDVYVPRSGDVAQTER

At4g05497 -----SDIPLMSGDDDFEGYDFSGASDFSDYDQDF-----
at4g05460 DGSDFVLAFFFEEDGVMGFEYDEFEHGWDDNFYAENAVLDMFPHIWPFPSP
at4g08980 YGHWRLYDERFDIQAARI-----
at5g57900

C

Citrus MEGESFRHWDDELIPDALGLIFRNLSLQEVLTIVPGVCKSWRRVAVTGPYCWOEIDIEEWS
Gossypium MEEQIEFRHWDDELIPDALGLIFRNLSLQEVLTIVPGVCKSWRRVAVTGPYCWOEIDIEEWS
Glycine MEEACEFRSWDELIPDALGLIFRNLSLQEVLTIVPGVCKSWANAVTGPYCWOEIDIKDWS
Arabidopsis MEEACEFRHWDDELIPDALGLIFRNLSLQEVLTIVPGVCKAWNRVAVTGPYCWOEIDIEEWS
Oryza MEGCESFRHWDDELIPDALGLIFRNLSLQEVLTIVPGVCKSWGRVAVTGPYCWOEIDIEEWS
Asparagus MGDSSSEVRAMELIPDALGLIFRNLSLQEVLTIVPGVCKSWGRVAVTGPYCWRDIEEWS
Vitis MEEGCEFRSWDELIPDALGLIFRNLSLQEVLTIVPGVCKSWNRVAVTGPYCWOEIDIEEWS
Nicotiana MEEGCEFRHWDDELIPDALGLIFRNLSLQEVLTIVPGVCKSWNRVAVTGPYCWOEIDIEEWS
Lactuca MEAGVNVNWDDELIPDALGLIFRNLSLQEVLTIVPGVCKSWNRVAVTGPYCWOEIDIEEWS
Pinus -----LIEKKIFPFOELITIVPGVCKSWNRVAVTGPYCWOEIDIEEWS

Citrus NR-COPDHLDRMVEMLITRSSGSLRKLQVSGLHNDMMFSLIAENAGSLQTLRLPRSEMSD
Gossypium SR-COPHHLDRMLRLITRSSGSLRKLQVSGLHNDMSIFSFITENAGSLQTLRLPRSEMSD
Glycine NR-COPDHLDRMLRLITRSSGSLRKLQVSGLHNDMSIFSFITENAGSLQTLRLPRSEMSD
Arabidopsis NRRFQSDHLDRMLELIPRSAGSLRKLQVSGLHNDMSIFSFIAQHAGSLQTLRLPRSEMSD
Oryza QQQSKPDLKRMVRLVARSQGSFRRISVSGLPGLDPLTFIIGDHASLQTLRLPRSEMSD
Asparagus QR-CKPEQLDRMLRLITRSSGSLRKLQVSGLHNDMSIFSFIAQHAGSLQTLRLPRSEMSD
Vitis QR-SSPENLDRMLELIPRSAGSLRKLQVSGLHNDMSIFSFIAQHAGSLQTLRLPRSEMSD
Nicotiana KN-RCPENLDRMLRLITRSSGSLRKLQVSGLHNDMSIFSFIAQHAGSLQTLRLPRSEMSD
Lactuca YR-SNPDHIDHMLRLITRSSGSLRKLQVSGLHNDMSIFSFIAQHAGSLQTLRLPRSEMSD
Pinus RR-CKPENTDRMVRLITRSSGSLRKLQVSGLHNDMSIFSFIAQHAGSLQTLRLPRSEMSD

Citrus SIVDQIACRLSAVTHLDDSYCSKIGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Gossypium SIVERTACRLSTITFLDYSYCKIKGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Glycine SIVEQIACRLSAVTHLDDSYCKIKGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Arabidopsis SGVNVNVAEKLSSITFLDYSYCKIKGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Oryza SIVENVNAPRLSNVTHLDDSYCSKIGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Asparagus AIVEQVSESLSNITFLDYSYCKIKGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Vitis BIVEEVAWKLSTITFLDYSYCKIKGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Nicotiana SIVEQVAGTFSNITFLDYSYCKIKGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Lactuca TIVEQISTKLAFTFLDYSYCKIKGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE
Pinus TVTIOVAPKLAFTFLDYSYCKIKGAPALEAIGKHKCKLTVVTCRNMHPLDTADKLSQDDE

Citrus ANAIASTMPKLRLEMAVHVTSTRIVLKILSSCTLEFLDLRGCDVVKLDDKFMKGN-FP
Gossypium ANAIASTMPKLRLEMAVHVTSTGSMVNLILSCPOLEFLDLRGCDVVKLDDKFMKGN-FP
Glycine AYAIASSTMPKLRLEMAVHVTSTGVLQILANCPKLEFLDLRGCDVVKLDDHMFLLKQK-FP
Arabidopsis AYAIASSTMPKLRLEMAVHVTSTGVLKILSSCCVPLEFLDLRGCDVVKLDDHMFLLKQK-FP
Oryza ARAIACNMPKLRLEMAVHVTSTGVLKILSSCCVPLEFLDLRGCDVVKLDDHMFLLKQK-FP
Asparagus AFAIACNMPKLRLEMAVHVTSTGVLKILSSCCVPLEFLDLRGCDVVKLDDHMFLLKQK-FP
Vitis ALVIAATMPKLRLEMAVHVTSTGVLKILSSCCVPLEFLDLRGCDVVKLDDHMFLLKQK-FP
Nicotiana ALVIAATMPKLRLEMAVHVTSTGVLKILSSCCVPLEFLDLRGCDVVKLDDHMFLLKQK-FP
Lactuca AVAIAATMPKLRLEMAVHVTSTGVLKILSSCCVPLEFLDLRGCDVVKLDDHMFLLKQK-FP
Pinus AFAIABHMSHLKNLEMAVHVTSTGVLKILSSCCVPLEFLDLRGCDVVKLDDHMFLLKQK-FP

Citrus NLKVLG-PFVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Gossypium KLKVLG-PFVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Glycine KLKVLG-PLVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Arabidopsis DMKVLG-PRVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Oryza GLKVLG-PYVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Asparagus GLKVLG-POVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Vitis GLKVLG-PLVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Nicotiana KLKVLG-PLVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Lactuca MVKVLG-PLVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--
Pinus KLKVLG-PLVMDYIEI--NDWDD-CSDYS---DGESEYLAWEFLA-----GEMGDY--

Citrus DDDDEIYEGMND--EGRLEELELRFYDQIEEDA---GIYGWPPSP
Gossypium DDDDEIYEGMND--EGRLEELELRFYDQIEEDA---GIYGWPPSP
Glycine DDDDEIYEGMND--EGRLEELELRFYDQIEEDA---GIYGWPPSP
Arabidopsis DEFHGWDDNFYA-ENAVLDMF-----HIWPPSP
Oryza ---SDDEGIWDDG-OGLEGLEVRFYGGGFSSES---HAGFDWPPSP
Asparagus ---SDDEGIWDDG-OGLEGLEVRFYGGGFSSES---HAGFDWPPSP
Vitis ELYA---AWEDE-ES-MDDLELRFYDQIEEDA---AGFDWPPSP
Nicotiana EMSDGYWEDDWD-DQVVEDVEMWYDLDNAVD---SGYDWRQSP
Lactuca ---DGEWDDDDIDDDDDDED-----
Pinus -DYDVCVSDVGVDE--DLDGVQLRVYDCTNTDDSSDWPDTWPPAS