

## Supplementary Material

### 1 Supplementary Figures

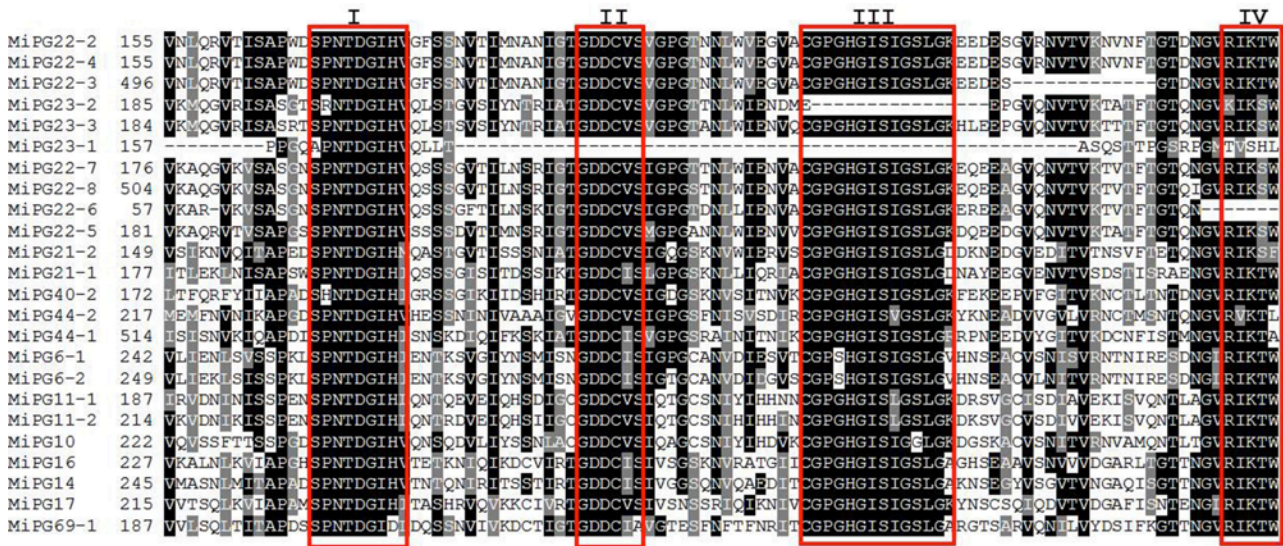
A)

		I	II
Mi PG71-1	256	SFIGQHINVGEDTRKRYFSGIGLNIGKND-----NIITTEVVFIFSAISIGMAVQQQANTLTGVHCYNKATFGGGTGIYVREPGFTQTRINCYL	
Mi PG71-2	216	SFLGCHPSVCGDKIEKDYSGTALALASND-----NAITTEVVFIFSAIAGVPLTGQANI LTGVHCYNKATFGGGVGLIKQSGQITRLDNCYL	
Mi PG46-1	210	NVLIQNLSVMAPP-ESEYTVGTVPDSSDN-----VCIEDCSIAVGHDAEALIKSGWDEYGIAMVREATDWHIRKVVHLQSSSGSNIARFGSEMMSG	
Mi PG46-2	210	NVLIQNLSVMAPP-ESEYTVGTVPDSSNN-----VCVEDCSIAVGHDAVALIKSGWDEYGIAMVREATDWHIRKVVHLQSSSGSNIARFGSEMMSG	
Mi PG46-3	260	NVLIQNLSVMAPP-ESEFTCGVTPDSEH-----VCIEKSNISMSYDAEALIKSGWDEYGISVGFATKWHIREVQLQSSSGSNIARFGSEMMSG	
Mi PG51-1	195	HVRVQNVITILAPL-TSPNTDGIIPDSSND-----VCIEFCYISVGGDLLAIKSGWDEYGISVGRPSRTRIFIRCIIGETQLGSGIATGSEMMSG	
Mi PG51-2	212	HVKVRNVITILAPL-TSPNTDGIIPDSSDD-----VCIEFCYISVGGDLLAIKSGWDEYGISVGRPSRGTIISGLIGETLLGAGIATGSEMMSG	
Mi PG49	209	NVVIRYVITILAPL-TSPNTDGIIPDSSSN-----VCIEEYSYISVGGDLLAVKSGWDEYGIAMVGRPSGGTIRRIITGSSPFAC-IAVGSETISG	
Mi PG52	257	NVLIHRCVITILAPL-TSPNTDGIIPDSSCN-----VCIEFCYIEVGGDLLAVKSGWDEYGIAMVHPSNIIIVRRVSGTPTPCSGVGTGSEMMSG	
Mi PG56-3	232	LVSTMCVITILAPV-TSPNTDGIIPDSSCN-----TRIEDCYIVSGDDCVAVKSGWDEYGIARGMPTKQIIVIRRLTCISPFSEVIALGSEMMSG	
Mi PG56-2	212	-VLIQGGTITILAPV-TSPNTDGIIPDSSCN-----TRIEDCYIVSGDDCVAVKSGWDEYGISRGMPTKQIIVIRRLTCISPTSIVIALGSEMMSG	
Mi PG56-1	224	-VLIQGGTITILAPL-TSPNTDGIIPDSSCN-----TRIEDCYIVSGDDCVAVKSGWDEYGIARGMPTKQIIVIRRLTCISPYSPITIALGSEMMSG	
Mi PG53	205	-VLIQGGTITILAPL-TSPNTDGIIPDSSCN-----TTIEDCYIVSGDDCVAVKSGWDEYGTKRGMPTKHLIIRRLTCISPDSEITIALGSEMMSG	
Mi PG58	247	-VLIKNVITILAPLEAPNTDGIIPDSCED-----MVIENCYISVGGDAAIKSGWDEYGIAMVGRPSKNIILIRNLTVRSMVSAVSHGSEMMSG	
Mi PG59	94	LVSTFQGHVIVLIMIVLLEKEEERSLSEV-----ASIVL-----QSDTRIKYAYLKNWGTSSSAVAVAFERSKRMPCQNIINLGNVHIEISG	
Mi PG71-3	301	NAAMESEFSYRDQSNVGGDSFQSYAKNSNSAEVKFSNYGNSFNEGTVVEKAYSGGARSHAVFSKTYGNNIFKNYAKTGVTFAYKNVNSSSSTS PKMATTSS	

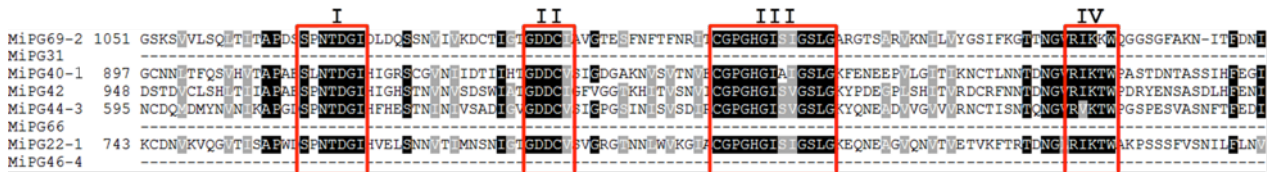
  

		IV
Mi PG71-1	343	DYTFVIAEDPVQLQITDSRFTGNAFILLKSLKGNICCVNIWNNMFTG-DYVGVVMIQLDSENEFFSNIDQVVDGNNVVRG
Mi PG71-2	303	DYTAIVIEDPVQVHVTVNGRPHGDAVVVLRSLNGKISGLNIDNNVFNESPGKNVPIVQLEGG---FSRIDQVVIDRNNVNG
Mi PG46-1	296	GISNVLVKWHLYNSFNGLERRTKGRGGYIQEIIISDVIDQNTFMEFGASSLOGSHPDEN---FDPNALPVIQDITLQD
Mi PG46-2	296	GISNVSVQKWRLYNSLNGEERTKGRGGYISEIIFISDVIDQNTFMEFGASSLSGTHPDEN---FDPNALPVIQDITLQD
Mi PG46-3	346	GISELHAENLHRSNLLIGLNKTNKGRGGYKFAIVVSDVEMENVMQLRVGDFGLHPDEK---FDPKALPVIWGTTFRN
Mi PG51-1	281	GVSEVVAENLQFFNSVTARIKTSVGRGGYVRNMYISNVTDHVDLIRFVGMQVGEHPDEF---FDPNALPVIETRIITKRD
Mi PG51-2	298	GVSEVVAENLQFFNIVTARIKTSVGRGGYVRNMYISNVTDHVDLIRFVGMQVGEHPDEL---FDSNALPVIETRIITKRD
Mi PG49	295	GVENVLAENLNLYNVGVGHVKTNIGRGGYERNTVSDVYMEGARKIKIAGDVGDHPDEN---FNPALPVIWGTTFRN
Mi PG52	343	GIFNITLHENVVNSGTGRIKTDKGRGGYIANTISNITMDKVVVPIRFRSGSNDHPDNG---WDPKALPVIWKGVIISN
Mi PG56-3	318	GIEDVRAEDTATIDSESGARIKTAVGRGGEVVKDIYVRGVMKMKVWFVWMIQNVGSHPDNN---YDPKALPVIQNIINYRD
Mi PG56-2	297	GIEDVRAEDTATIDSESGARIKTSVGRGGEVVKVYVRRMTEKMKVWFVWMIQNVGNHEDNN---YDPKALPVIQNIINYRD
Mi PG56-1	309	GIQDVRAEDTATIHTESGARIKTAVGRGAYVKDIYVRGVMKMKVWFVWMIQNVGSEHDNH---YDPNALPVIQNIINYRD
Mi PG53	290	GIKDVRAEDTATIDIQSGARIKTAVGRGGYVKDIYVRRMTEKMKVWFVWMIQNVGSHPDNG---FDPKALPVIETRIISFTG
Mi PG58	333	GVSNVTVENLWVSSRRFARIKTAVGRGGYVQCTYRNLTFDDVRFVIVIKTDVNEHPDEG---FDPKALPVIETRIISFTG
Mi PG59	176	EKQPTFSCKNVEATYFGTGFPPFCNSSLTHRSKDFEKKLILRNVIKPYSLHLQAREEFG---LHRLHKLGLIEDTA
Mi PG71-3	401	GSLVNRWVEPGKFFREMIKGNVAMPDIKDKPKRSFLPRTIVSKLPFSSKISQLKQLFHAADNSTETIHKDITSE

B)



C)



**Supplementary Figure S1.** Multiple sequence alignment analysis of the polygalacturonases (PGs) from mango (*Mangifera indica* L.). Partial sequences where the characteristic domains are located are shown, A) Shows PGs that contain motifs I, II and IV; B) and C) Show PGs that have motifs I, II, II and IV. Red boxes show the four functional motifs. Identical amino acids are shown in black, and gray shading represents conserved amino acid residues.