**Fig. 2S.** RT-PCR analyses confirm results obtained from chip hybridization experiments.

RT-PCR was performed using guard cell and mesophyll cell RNA with primers for selected genes from guard cell preferential genes showing no ABA modulation (Glycosyl hydrolase (At4g24024), Serine-threonine protein kinase (At2g32850)), from mesophyll cell preferential genes showing no ABA modulation (Protein kinase (At1g14000) and from Figure 5-derived group I (Transcription factor (At2g46680), Cold acclimation protein (At2g15970)), group II (MAP Kinase (At1g05100), 14-3-3 protein (At5g10450), Unknown protein (At4g24130), Aconitate hydratase (At4g35830)), group III (Chlorophyll a/b binding protein (At3g47470), Plasma membrane intrinsic protein (At3g61430), DNA-binding protein), group IV (GASA4 (At5g15230), group V (Chloride Channel (At5g40890), Membrane channel protein (At2g28900), 2 Transcription factors (At2g21650; At1g08810) and group VI (Rubisco binding protein ((At2g28000), PEP carboxylase (At2g42600), brassinosteroid receptor kinase (At3g13380)). Results are from 27 RT-PCR cycles. Actin2 gene was used as control. GC; guard cells, GC + ABA; guard cells treated with ABA, MC; mesophyll cells, MC + ABA; mesophyll cells treated with ABA.