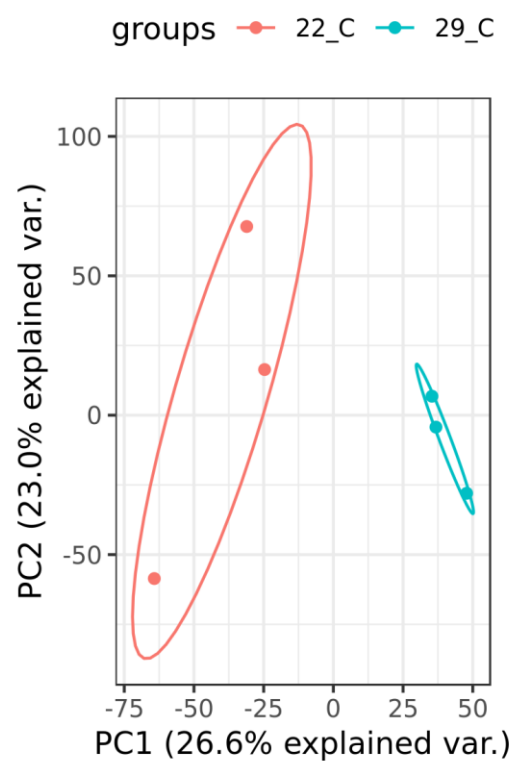
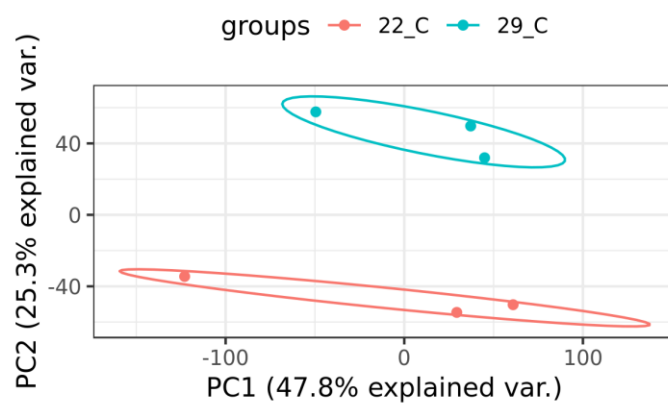


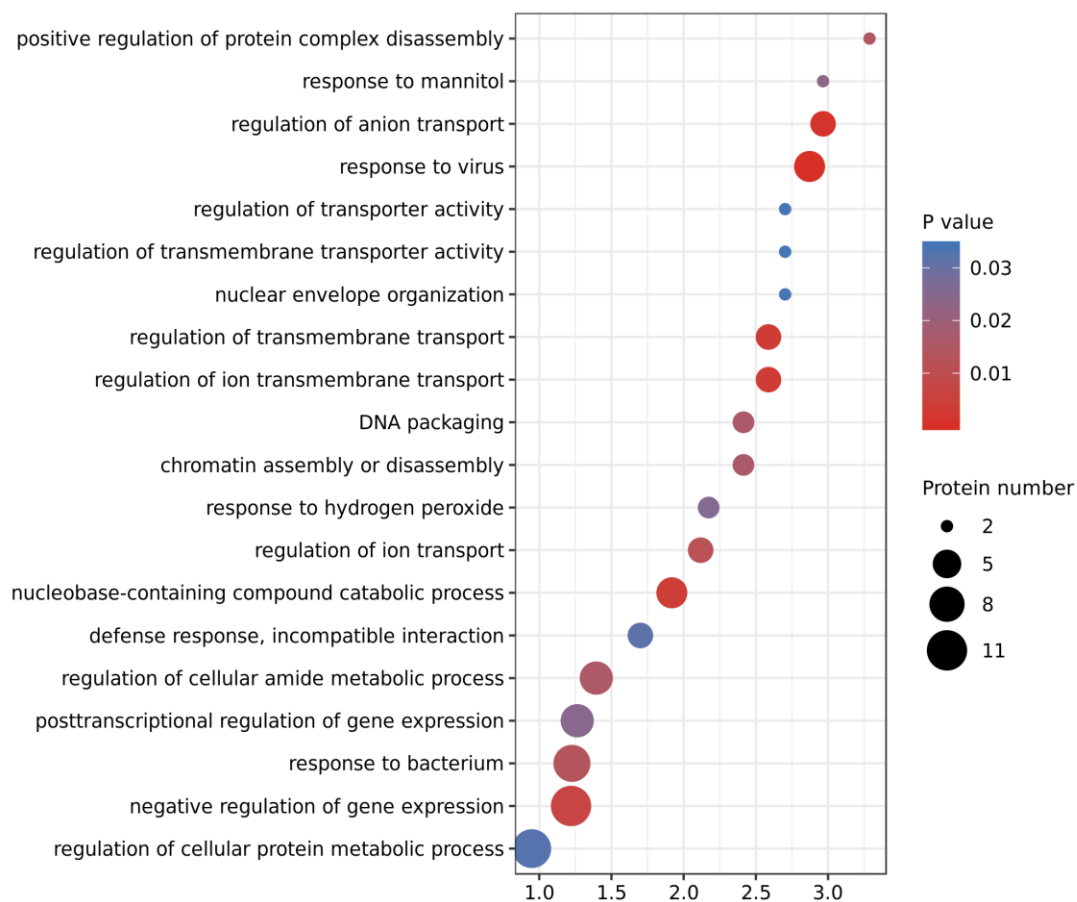
**Figure S1. Thermoresponsive hypocotyl growth in the dark.** Wild-type (WT) and *pif4* mutant (*pif4-101*) plants were grown at 22° C or 29° C in darkness for the indicated time and photographed. Bar = 5mm.



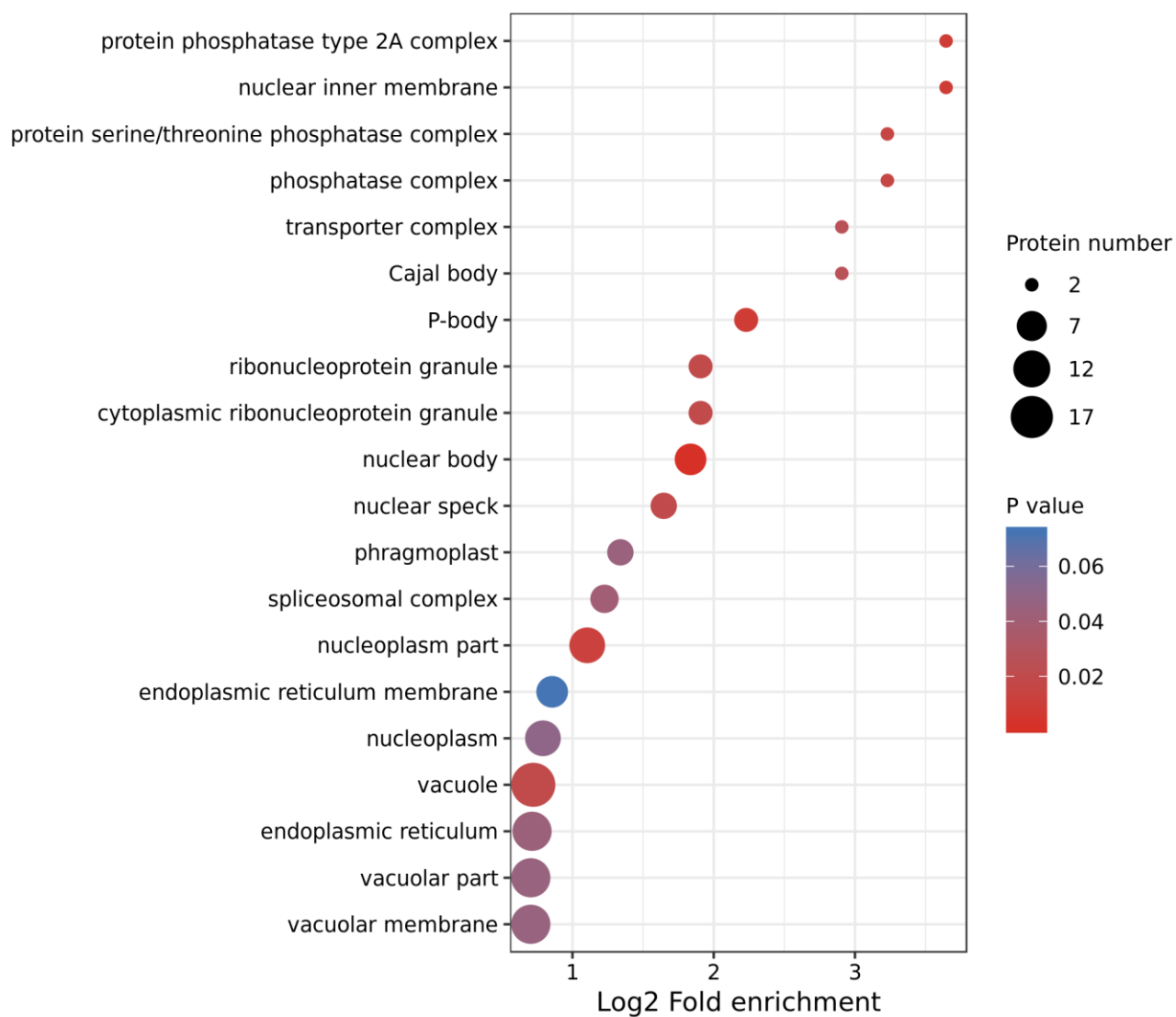
**Figure S2. Principle Component Analysis (PCA) of samples for quantitative proteomics.**



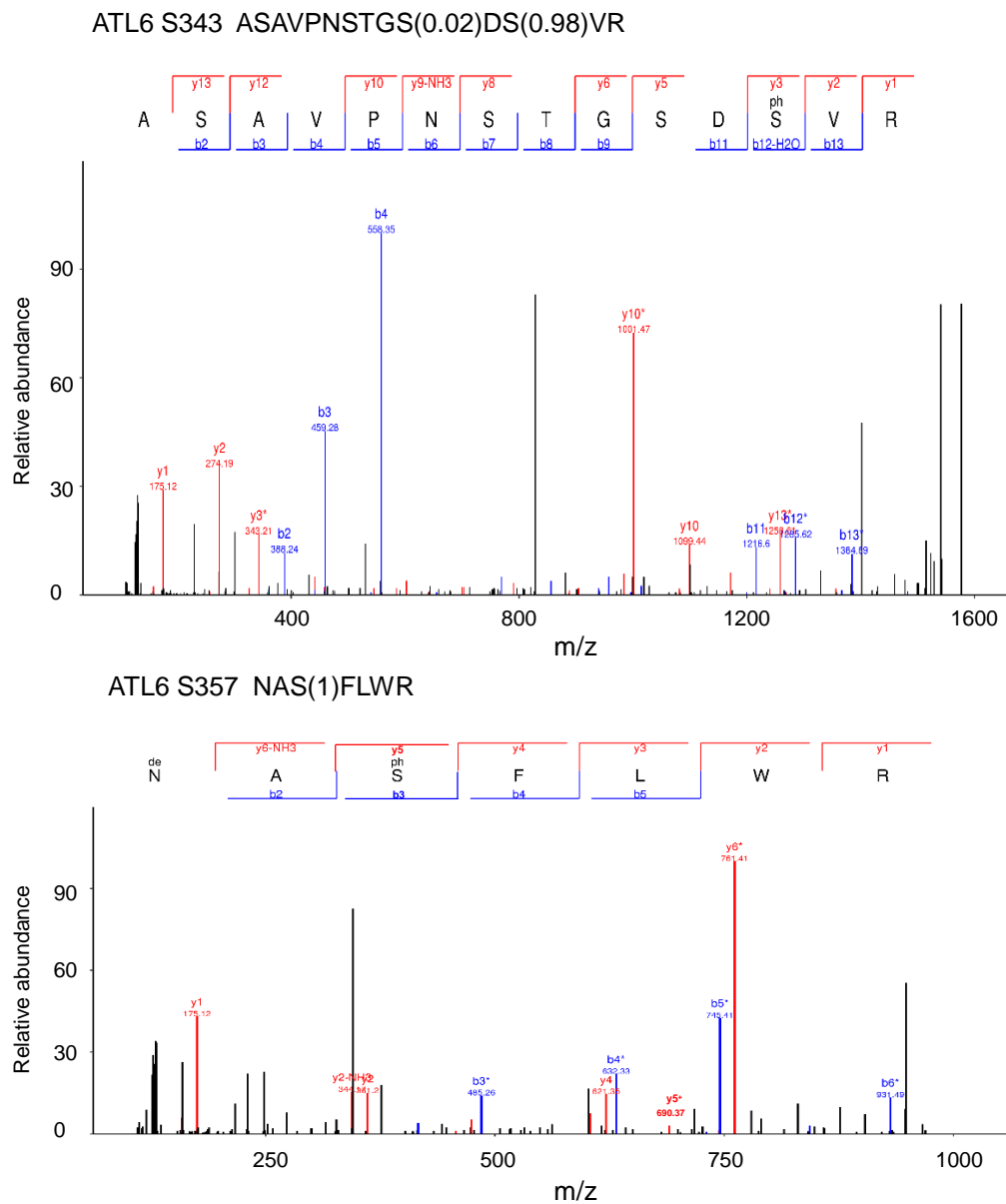
**Figure S3. Principle Component Analysis (PCA) of samples for phosphoproteomics.**



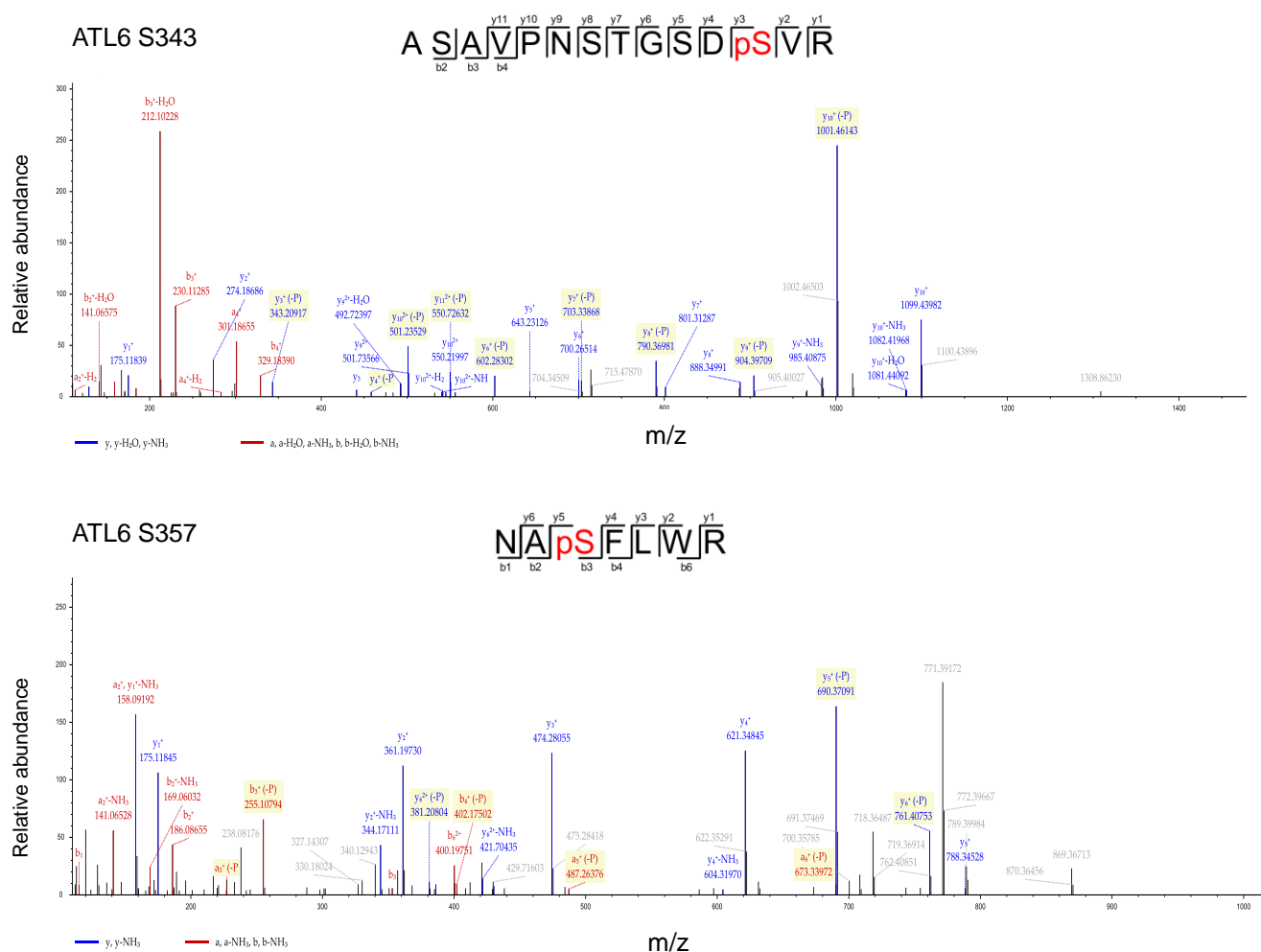
**Figure S4. Gene Ontology (GO) analysis of differentially phosphorylated proteins by warm temperature (Biological Process).**



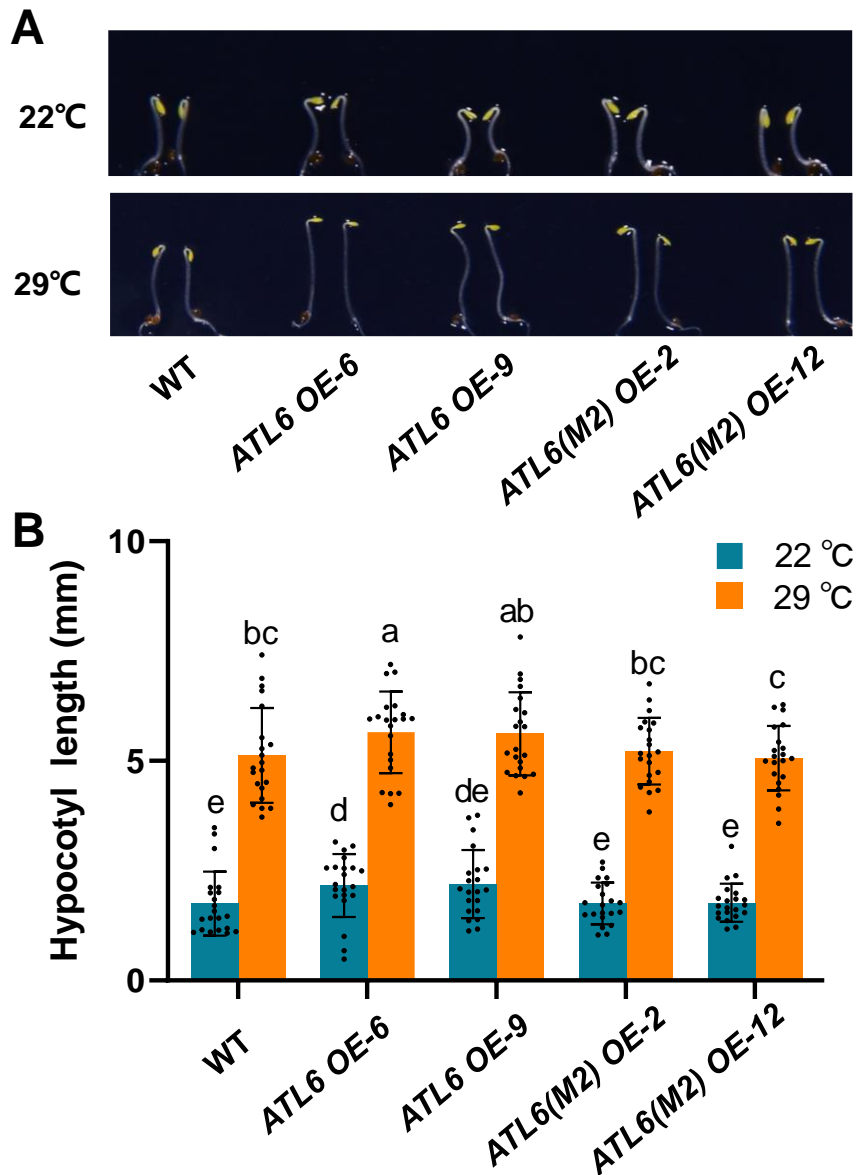
**Figure S5. Gene Ontology (GO) analysis of differentially phosphorylated proteins by warm temperature (Cellular Component).**



**Figure S6. Mass spectrums for the phosphorylated peptides of ATL6 identified by LC-MS/MS.**



**Figure S7. Mass Spectrums for the phosphorylated peptides of ATL6 identified by IP-MS/MS.**



**Figure S8. Thermo-responsive hypocotyl growth of *ATL6* overexpression plants in the dark.** Wild-type (WT), *ATL6*-FLAG or *ATL6*(M2)-FLAG overexpression plants were grown at 22° C or 29° C in darkness for 2 days and photographed (A), and the hypocotyl length of each plant was subsequently measured (B). The bars depict the SD (n=18). Letters above the bars indicate significant differences as determined by HSD test ( $P < 0.05$ ). Bar = 5mm. The native form *ATL6*-FLAG and the mutated form *ATL6*(M2)-FLAG (S343A S357A) were overexpressed in *Arabidopsis* wild-type (WT) background.