

Figure S1. Log_2 -fold changes of primary metabolite concentrations in the spikes of cold-sensitive Wyalkatchem (W) and cold-tolerant Young (Y) after one night (TP_1 vs. TP_0) and prolonged (TP_3 vs. TP_1) exposure to cold, and the day-time recoveries after each of these cold treatments (TP_2 vs. TP_1 and TP_4 vs. TP_1). $n = 3$.

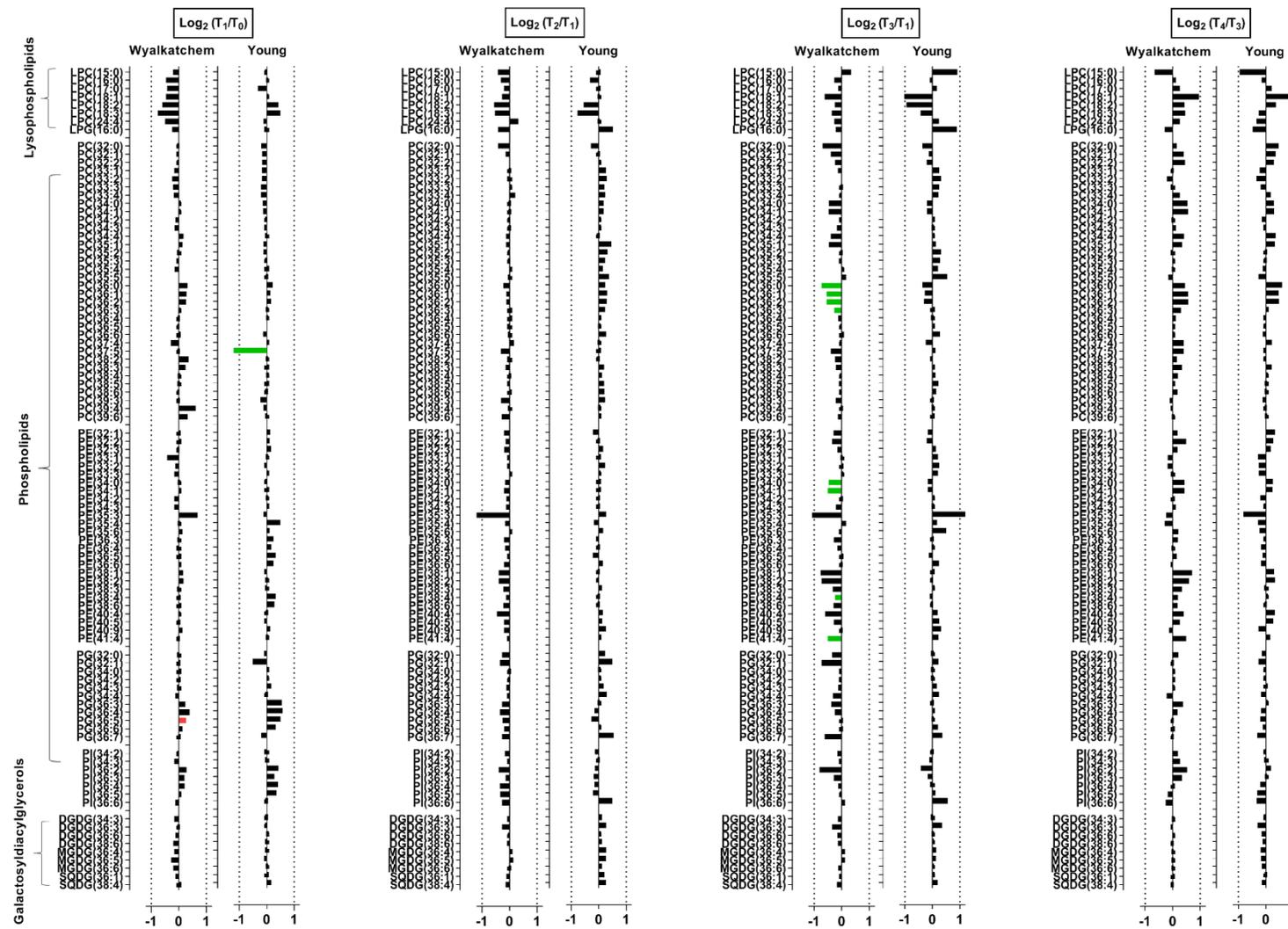
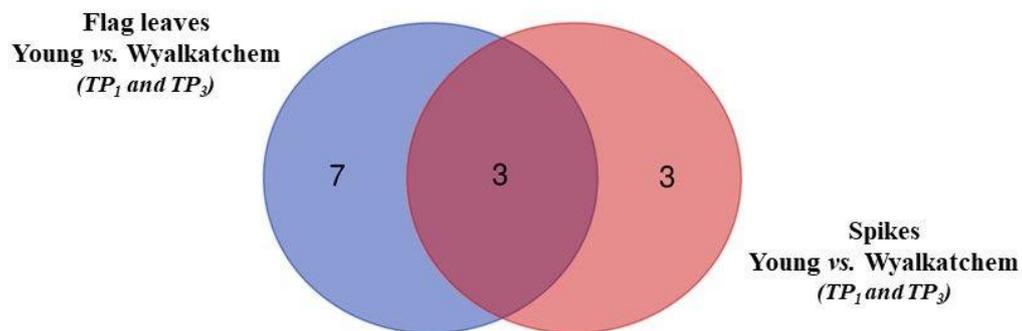


Figure S2. Log₂-fold changes of lipid concentrations in the spikes of the cold-sensitive Wyalkatchem (W) and cold-tolerant Young (Y) after one night (TP₁ vs. TP₀) and prolonged (TP₃ vs. TP₁) exposure to cold, and the day-time recoveries after each of these cold treatments (TP₂ vs. TP₁ and TP₄ vs. TP₃). n = 3.

N



Differences in expression behavior of three overlapping metabolites between flag leaves and spikes of Young and Wyalkatchem (TP ₁ and TP ₃ samples)				
Overlapped (3)	Higher in Young Flag leaves	Lower in Young Flag Leaves	Higher in Young Spikes	Lower in Young Spikes
Putrescine		✓		✓
Quinate		✓		✓
Shikimate		✓		✓

Figure S3. Differences in differentially expressed primary metabolites between flag leaves and spikes of cold-tolerant Young and cold-sensitive Wyalkatchem. The Venn diagrams show the degree of overlap between differentially expressed cold-induced metabolites in flag leaves and spikes for Young and Wyalkatchem. Three metabolites were commonly expressed in flag leaves and spikes at TP₁ and TP₃. The table below shows how these three metabolites are expressed differently in Wyalkatchem and Young flag leaves and spikes.