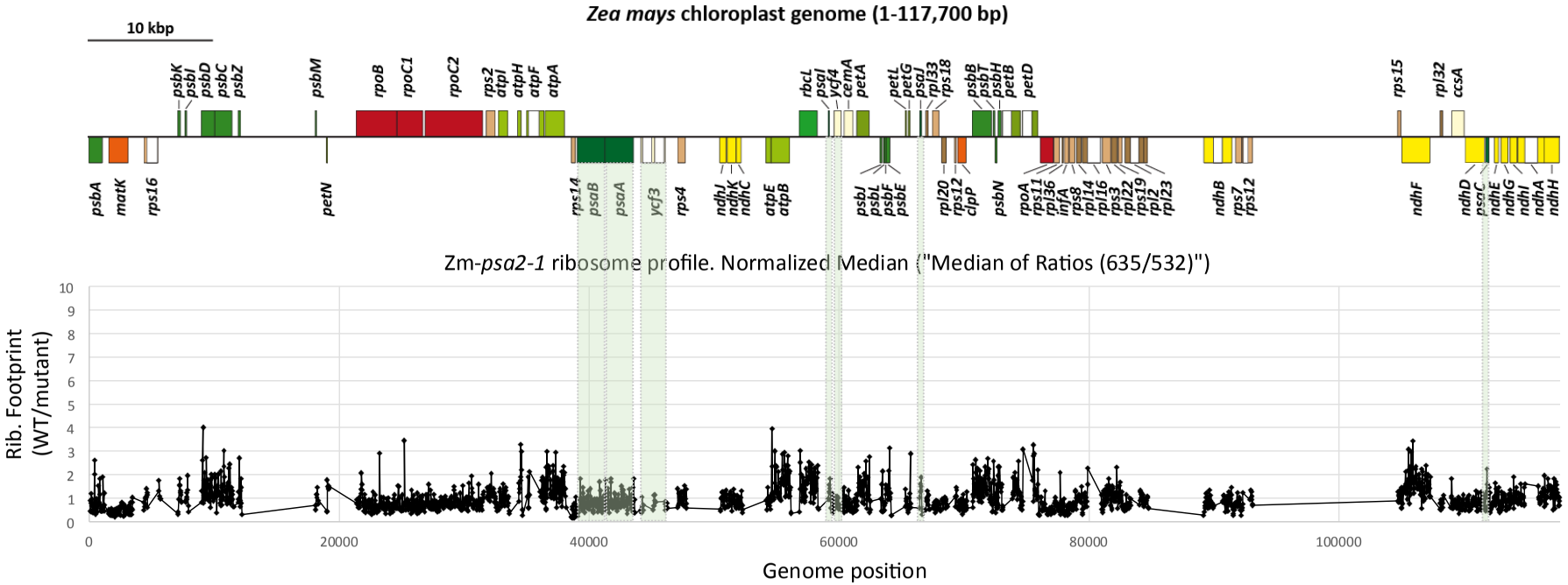
Supplemental Figure. Ribosome Profiling Assay of Chloroplast Gene Expression in the maize *psa2-1* mutant.
Ribosome footprints were purified from seedling leaf tissue and analyzed by hybridization to a high resolution tiling microarray of the maize chloroplast genome (20). Genes encoding proteins required for PSI activity are shaded. The plot shows the ratio of signal in the wild-type relative to the mutant. The peaks observed in several regions (e.g. rbcL) are secondary effects observed in many non-photosynthetic mutants (data not shown) and do not involve genes relevant to PSI activity. Substantive defects in plastid gene expression at the RNA or translation level are readily apparent in this type of assay as peaks of magnitude 5 or greater (20). The average signal intensity for all array elements in each gene encoding a PSI-related gene is shown below.



Density of ribosome footprints on Cp ORFs related to PSI biogenesis (signal per 50-nt)

	WT	*Zm-psa2*
psaA	18887	22339
psaB	20316	26636
psaC	14411	12259
psaI	10904	8702
psaJ	23633	16685
ycf3	6494	9515