

Expanded View Figures

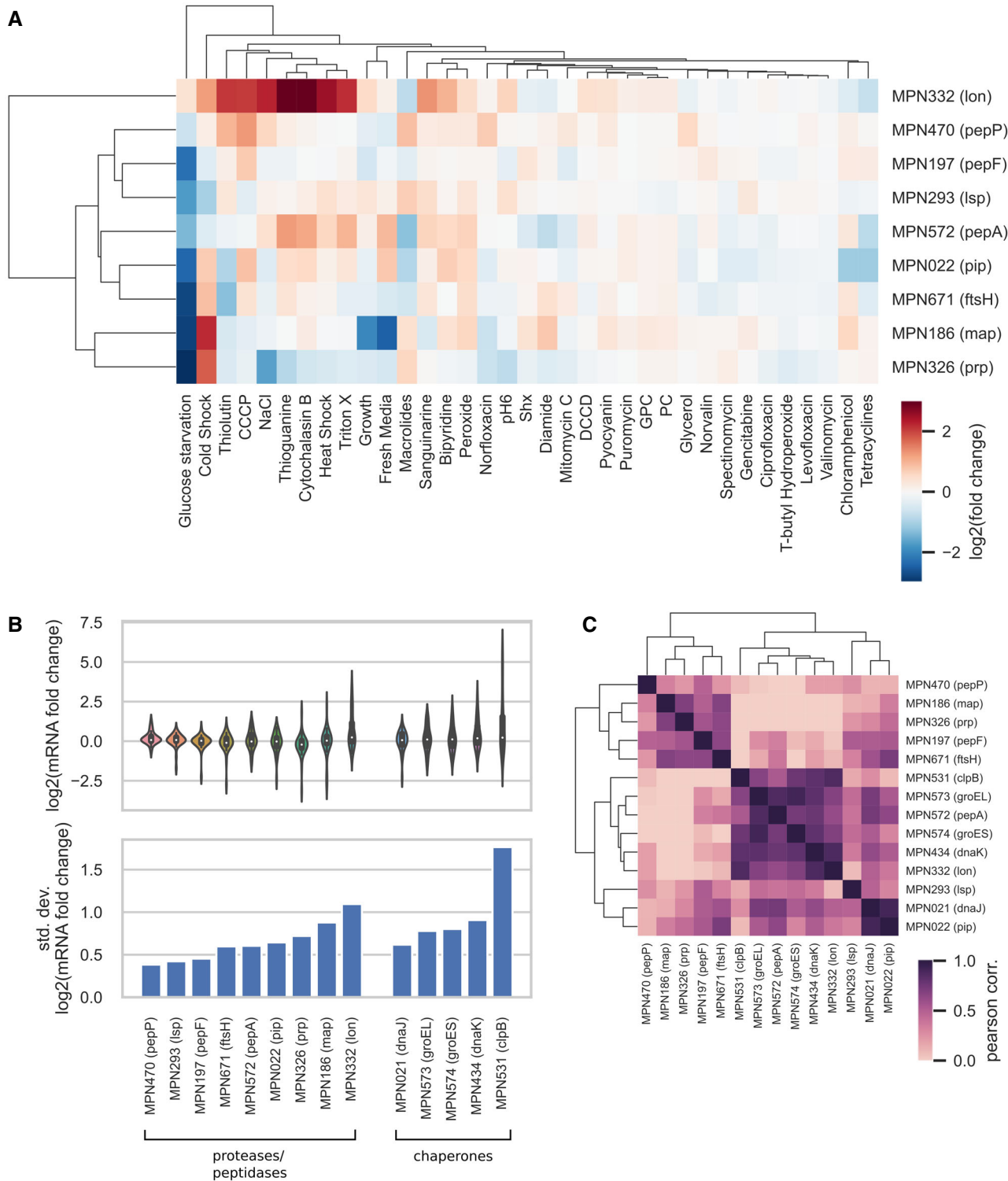


Figure EV1.

Figure EV1. Variability of transcriptional changes across perturbations for chaperones and proteases.

A–C Analysis of transcriptional changes of proteases, peptidases, and chaperones across a set of 35 environmental and genetic perturbations taken from Yus *et al* (2019). (A) Fold changes in mRNA levels for proteases and peptidases. Genes and perturbations were clustered based on the similarity of their transcriptional change pattern. (B) Distribution (upper plot) and standard deviation (lower plot) of the \log_2 of mRNA fold changes for proteases, peptidases, and chaperones. (C) Pearson correlation coefficient of mRNA fold changes between pairs of genes in the chaperones, proteases, and peptidases functional groups. Genes were clustered based on the similarity of their correlation pattern.

Figure EV2. Transcriptional responses to Lon and FtsH depletions.

A–D Correlation analysis of transcriptional changes comparing different mutant backgrounds. Data are reported as \log_2 of mRNA fold changes observed after Lon and/or FtsH depletion (48 and 72 h of depletion, respectively). (A) ΔIndLon vs. $\Delta\text{IndFtsH}$, (B) ΔIndLon vs. $\Delta\text{IndLon_FtsH}$, (C) $\Delta\text{IndFtsH}$ vs. $\Delta\text{IndLon_FtsH}$, (D) $\Delta\text{IndLon_FtsH_predicted}$ vs. $\Delta\text{IndLon_FtsH}$. The predicted changes in the double mutant (referred to as $\Delta\text{IndLon_FtsH_predicted}$) were computed as the sum of the $\log_2(\text{mRNA_FC})$ in the two individual mutant experiments. Insets indicate Pearson correlation coefficients.

E–G Examples illustrating combination of regulatory changes in response to the simultaneous depletion of Lon and FtsH: (E) synergic effect when genes are transcriptionally upregulated ($\log_2(\text{mRNA_FC}) > 1$), or (F) downregulated in both individual mutants ($\log_2(\text{mRNA_FC}) < -0.6$). (G) Ribosomal operons containing genes *mpn164* to *mpn196*, showing opposite transcriptional responses in both individual mutants that are neutralized after the simultaneous depletion of both proteases.

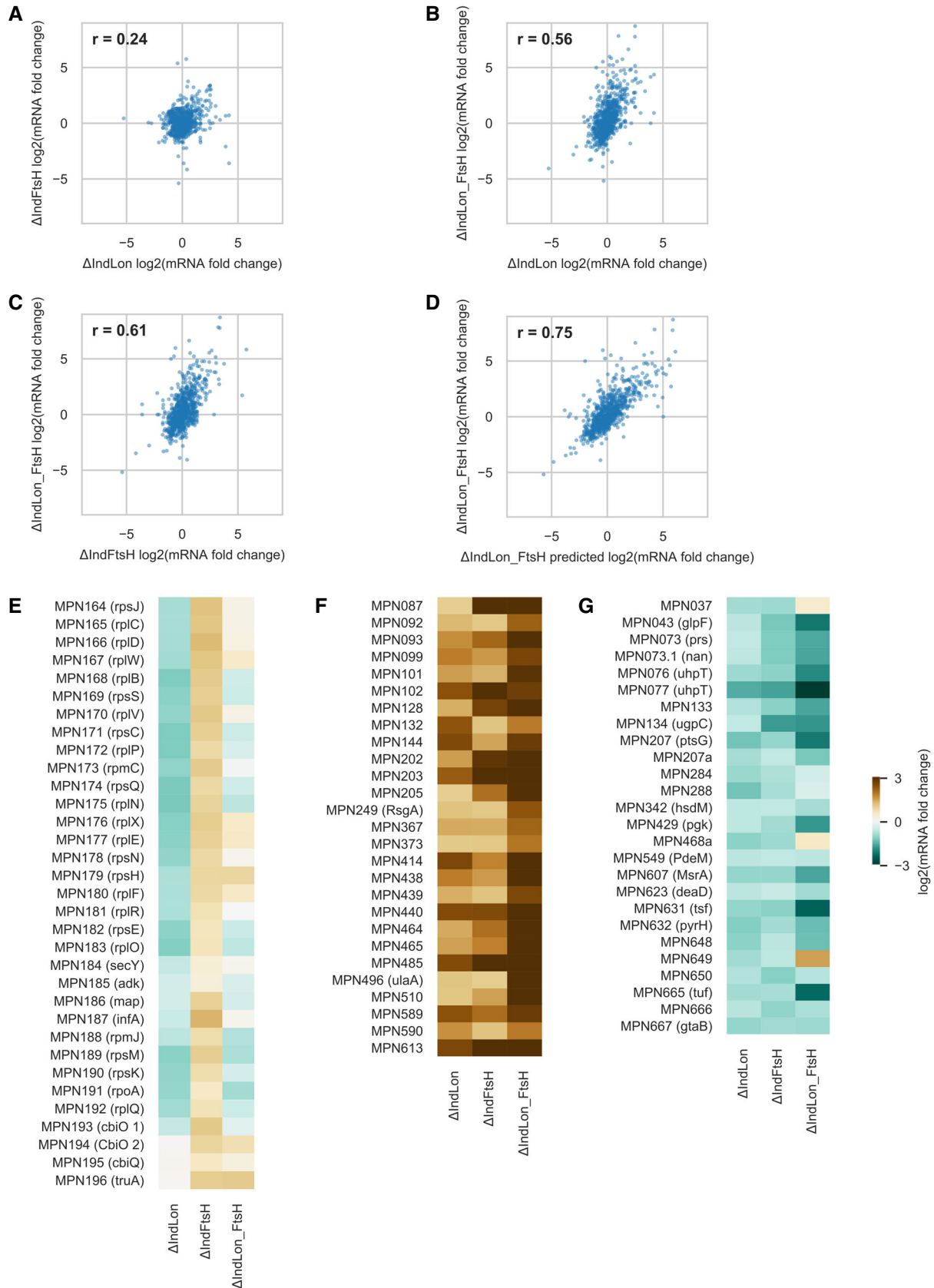


Figure EV2.