

Operon Promoter Landscape

Operon	Strand	Operon start	Operon end
cspH	-	1050398	1050186

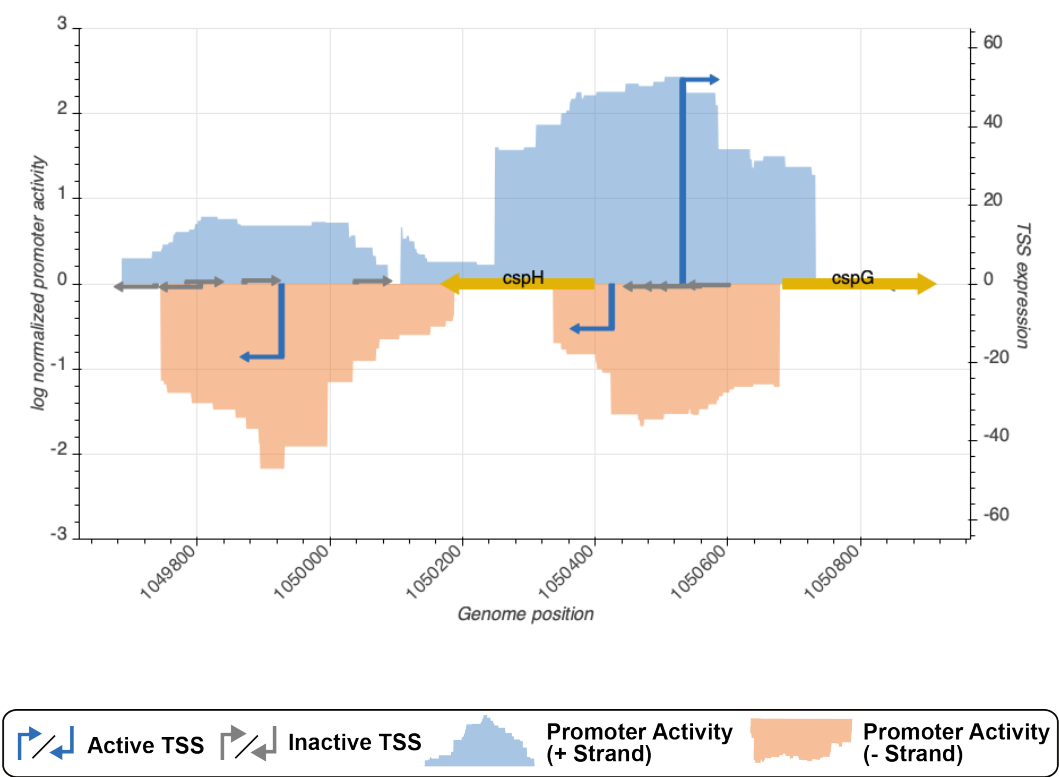


Figure 1: **Promoter activity in rich media (LB) surrounding query operon.** 17,767 previously reported TSSs were evaluated by measuring the promoter activity (right Y-axis) of the 150 bp surrounding the TSS (-120 to +30) to determine which were active or inactive. The genome-wide promoter activity (left Y-axis) was determined by measuring expression of over 300,000 genomic fragments spanning the *E. coli* genome and averaging promoter activity at all nucleotide positions in a strand-specific fashion. Genome coordinates corresponds to *E. coli* genome version U00096.2.

TSS Summary

TSS name	TSS position	Strand	TSS activity	Category
TSS_4080_storz	1050897	-	0.6004767	inactive
TSS_4079_storz	1050721	+	0.7203846	inactive
TSS_4074_regulondb	1050501	-	0.6831295	inactive
TSS_4075_storz_regulondb	1050528	+	52.0026239	active
TSS_4076_regulondb	1050530	-	0.6224460	inactive
TSS_4073_storz	1050421	-	11.4139455	active
TSS_4077_regulondb	1050553	-	0.6444824	inactive
TSS_4078_regulondb	1050596	-	0.3275196	inactive

TSS Scanning Mutagenesis

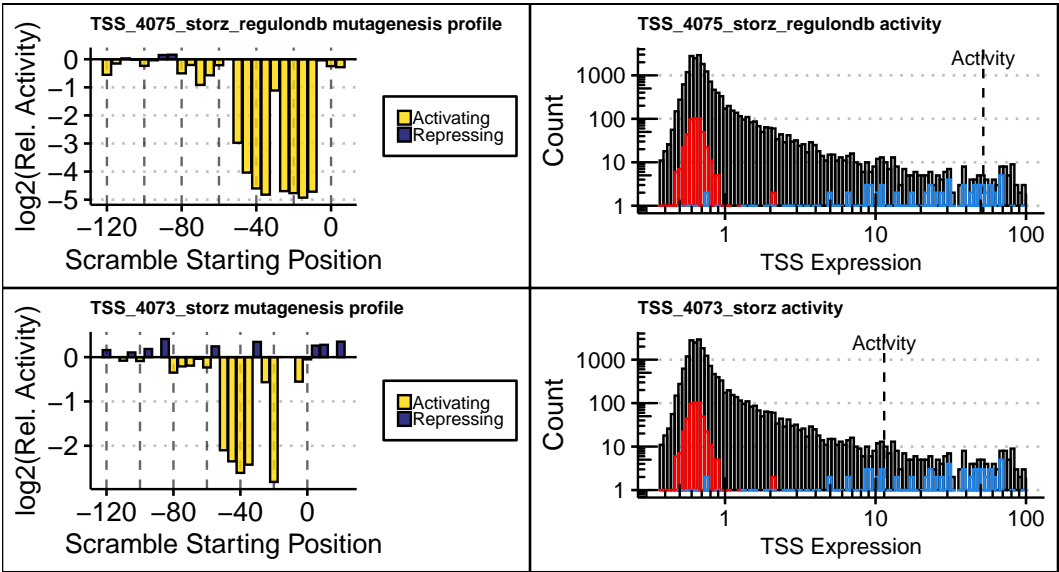


Figure 2: **(Left)** Mutagenesis profile(s) of active TSS(s). Sequences surrounding active TSSs were systematically mutated to identify regions controlling expression. Bar height indicates the relative change in promoter activity as a result of scrambling nucleotides within 10 bp regions at 5 bp intervals spanning the promoter. Bar color identifies the region as a putative activator (yellow) or repressor (purple). **(Right)** Dashed line indicates the expression of the indicated TSS relative to all tested TSS sequences. The distributions of expression is shown for all tested TSSs (black), 500 negative controls (red), and a set of constitutive promoters from the BioBrick registry (blue).