

Table S2. Bacterial strains and plasmids used in this study.

Strains		
Name	Properties	Origin
MG1655	F-, <i>ilvG</i> , <i>rph1</i>	[1]
CF10237	MG1655 Δ <i>relA256</i> Δ <i>spoT212</i>	[2]
CF17960	MG1655 Δ <i>relA256</i> <i>spoT202</i> (<i>spoT</i> T78I)	[3]
CF17961	MG1655 Δ <i>relA256</i> <i>spoT203</i> (<i>spoT</i> R140C)	[3]
CF11760	CF10237 <i>btuB::Tn10 rpoB</i> A532 Δ	[3]
CF11768	CF10237 <i>btuB::Tn10 rpoB</i> T563P	[3]
SQ171	MG1655 Δ <i>rrnGADEHBC</i> pKK3535 ptRNA67	[4]
CF19181	CCE071 <i>relA::Km SpoT207</i> (Cm)	This work
CF16762	MG1655 Δ <i>relA</i> pUM9 (RelSeq 79-385H) pUM76 (GppA)	[5]
CF16760	MG1655 Δ <i>relA</i> Δ <i>gppA</i> pUM66 (pRelSeq1-385H)	[5]
CF2306	MG1655 <i>fadR13::tn10</i>	[6]
CF14065	MG1655 <i>pgi::Cm</i>	Cashel lab
CF18029	MG1655 <i>tktB::Km</i>	Cashel lab
LFC1303	MG1655 <i>pta::Km</i>	[7]

- Jin DJ, Gross CA. Mapping and sequencing of mutations in the *Escherichia coli rpoB* gene that lead to rifampicin resistance. *J Mol Biol.* 1988;202: 45–58. doi:10.1016/0022-2836(88)90517-7
- Jishage M, Kvint K, Shingler V, Nyström T. Regulation of sigma factor competition by the alarmone ppGpp. *Genes Dev.* 2002;16: 1260–70. doi:10.1101/gad.227902
- Potrykus K, Murphy H, Philippe N, Cashel M. ppGpp is the major source of growth rate control in *E. coli*. *Environ Microbiol.* 2011;13: 563–75. doi:10.1111/j.1462-2920.2010.02357.x
- Quan S, Skovgaard O, McLaughlin RE, Buurman ET, Squires CL. Markerless *Escherichia coli rrn* deletion strains for genetic determination of ribosomal binding sites. *G3 Genes, Genomes, Genet.* 2015;5: 2555–2557. doi:10.1534/g3.115.022301
- Mechold U, Potrykus K, Murphy H, Murakami KS, Cashel M. Differential regulation by ppGpp versus pppGpp in *Escherichia coli*. *Nucleic Acids Res.* 2013;41: 6175–89. doi:10.1093/nar/gkt302
- Singer M, Baker TA, Schnitzler G, Deischel SM, Goel M, Dove W, et al. A collection of strains containing genetically linked alternating antibiotic resistance elements for genetic mapping of *Escherichia coli*. *Microbiol Rev.* 1989;53: 1–24.
- Fernández-Coll L, Cashel M. Contributions of SpoT Hydrolase, SpoT Synthetase, and RelA Synthetase to Carbon Source Diauxic Growth Transitions in *Escherichia coli*. *Front Microbiol.* 2018;9: 1802. doi:10.3389/fmicb.2018.01802