

Supplementary Table 1. Comparison of Properties of DksA, GreA, and GreB

Attribute	DksA	GreA	GreB
Binds in RNAP secondary channel ^a	+	+	+
Acidic tip near RNAP active site ^b	+	+	+
Relative apparent affinity for RNAP ^c	1	0.13	1
Relative ability to decrease RNAP-promoter complex half-life ^d	1	0.3	1
Inhibits <i>rrnB</i> P1 transcription <i>in vitro</i> ^e	+	+/-	+
Enhances effects of ppGpp and iNTP on <i>rrnB</i> P1 transcription <i>in vitro</i> ^f	+	+/-	+
Required for control of rRNA promoters <i>in vivo</i> ^g	+	–	–
Relative concentration <i>in vivo</i> ^h	1	0.4	0.1
Complements $\Delta dksA$ strain for regulation of rRNA (when expressed to appropriate level) ⁱ	+	–	+
Facilitates activation by ppGpp of amino acid biosynthesis gene promoters ^j	+	–	–
Rescues ability of RNAP lacking ω to respond to ppGpp <i>in vitro</i> and <i>in vivo</i> ^k	+	–	–
Activates RNA cleavage activity of RNAP ^l	–	+	+
Prevents formation of arrested elongation complexes ^m	+	+	+
Rescues arrested elongation complexes ⁿ	–	–	+

^a – References 19, 20, 21, 22, and I. Touloukhonov, J. Mukhopadhyay J., R.H. Ebright, and R.L.G., unpublished data.

^b – References 19, 20, 21, 22, and I. Touloukhonov, J. Mukhopadhyay J., R.H. Ebright, and R.L.G., unpublished data.

^c – Apparent affinities for RNAP relative to affinity of DksA for RNAP (Figure 2).

^d – Relative to effect of DksA at saturation. See Figure 2 and reference 14.

^e – +/- indicates GreA decreased *rrnB* P1 transcription < 2-fold, whereas GreB and DksA edcreased transcription 30 to 50-fold (Figure 1).

^f – +/- indicates GreA minimally enhanced the effect of ppGpp (even at increased concentration) and had no effect on iNTP concentration-dependence. See Figure 1 and reference 14.

^g – See Figure 3 and reference 14.

^h – See Figure 4.

ⁱ – See Figure 5.

- ^j – See Figure 6.
- ^k – See Figure 7 and reference 17.
- ^l – References 19, 20.
- ^m – References 19, 20.
- ⁿ – References 19, 20.