Table 1. Measurements of noise in selected strains.

Modification*	Strain†	Intensity‡	Intrinsic noise, η_{int}§¶ ($\times 10^{-2}$)	Extrinsic noise, η_{ext}§ ($\times 10^{-2}$)	Total noise, η_{tot}§ ($\times 10^{-2}$)
Constitutive (*lacI*$^-$)	M22	1	5.5 (5.1–6)	5.4 (4.8–5.9)	7.7 (7.4–8.1)
	JM22	0.88	5.0 (4.6–5.4)	6.1 (5.5–6.7)	7.9 (7.4–8.4)
	MRR	1.21	5.1 (4.7–5.4)	5.6 (5.1–6.2)	7.6 (7.2–7.9)
Wild type (*lacI*$^+$)	MG22	0.057	19 (18–21)	32 (29–35)	37 (35–40)
	RP22	0.030	25 (22–27)	33 (30–35)	41 (39–43)
Wild type (*LacI*$^+$), +IPTG	RP22	1.00	6.3 (5.8–6.9)	9.8 (9.0–11)	11.7 (11–12.3)
lacI$^-$, Repressilator	M22	0.18	12 (11–13)	42 (37–45)	43 (39–47)
	MRR	0.16	11 (9.8–12)	57 (52–62)	58 (53–63)
Δ*recA*, *lacI*$^-$	D22	0.81	10.5 (9.6–11.4)	4.6 (2.8–5.8)	11.4 (10.8–12.1)
	M22ΔA	0.99	13 (12–15)	2.4 (0–5.3)	13.6 (12.8–14.5)
	JM22ΔA	0.92	14 (11–17)	2.5 (0–7.3)	15 (12–16.4)
Δ*recA*, *lacI*$^+$ +IPTG	RP22ΔA	1.22	17 (15–20)	12 (8.8–14)	21 (20–22)

*Repressilator refers to Spect^R version of plasmid in (*16*); +IPTG indicates growth in the presence of 2 mM IPTG. †The following strain backgrounds were used: MC4100 (*22*) for M22, MRR, and M22ΔA; DY331 (*23*) for D22; JM2.300 (*E. coli* Genetic Stock Center) for JM22 and JM22ΔA; MG1655 for MG22; and RP437 (*24*) for RP22 and RP22ΔA. Each strain contains twin $P_L$lacO1 promoters (*9*), except MRR, which contains twin λP_R promoters (*25*). ‡Mean CFP value, relative to the intensity of strain M22. §95% confidence limits are in parentheses; see (*7*). ¶CFP and YFP are stable in *E. coli* (*26*); effective noise levels for unstable proteins would be greater (for example, a doubling of noise level for a protein half-life of ~0.3 cell cycle) (*8*).