

Table S4 Maximum and minimum expression levels and parameters obtained from fits to the Hill function

Group	Fluorescent reporter, construction (strain) ‡	Max*	Min*	α	δ	K	n	Reduced χ^2 (R ²)
Non-clustered	CFP , PLlacO-1:: <i>cfp</i> at <i>intS</i> & PLlacO-1:: <i>yfp</i> at <i>galk</i> (HL1852)	2263 ± 253	463 ± 16	2145 ± 70	479 ± 9	24.9 ± 2.0	1.30 ± 0.09	1.34 (>0.99)
Non-clustered	YFP , PLlacO-1:: <i>cfp</i> at <i>intS</i> & PLlacO-1:: <i>yfp</i> at <i>galk</i> (HL1852)	824 ± 213	93 ± 10	771 ± 87	96 ± 8	24.8 ± 4.1	1.54 ± 0.19	0.13 (>0.99)
Non-clustered	CFP , PLlacO-1:: <i>cfp</i> at <i>galk</i> & PLlacO-1:: <i>yfp</i> at <i>intS</i> (HL3360)	1088 ± 19	132 ± 14	927 ± 47	135 ± 7	20.1 ± 2.5	1.71 ± 0.26	0.07 (>0.99)
Non-clustered	YFP , PLlacO-1:: <i>cfp</i> at <i>galk</i> & PLlacO-1:: <i>yfp</i> at <i>intS</i> (HL3360)	1180 ± 84	90 ± 12	1122 ± 89	92 ± 8	27.0 ± 3.0	1.58 ± 0.14	0.09 (>0.99)
Non-clustered	CFP , PLlacO-1:: <i>cfp</i> at <i>intS</i> & PLlacO-1:: <i>yfp</i> at <i>galk</i> (HL5086)	5622 ± 119	449 ± 23	5175 ± 88	524 ± 10	19.8 ± 0.5	1.91 ± 0.06	6.14 (>0.99)
Non-clustered	YFP , PLlacO-1:: <i>cfp</i> at <i>intS</i> & PLlacO-1:: <i>yfp</i> at <i>galk</i> (HL5086)	3901 ± 507	221 ± 66	3655 ± 86	282 ± 9	19.2 ± 0.6	2.04 ± 0.08	3.47 (>0.99)
Non-clustered	CFP , PLlacO-1:: <i>cfp</i> at <i>intS</i> & PLlacO-1:: <i>yfp</i> at <i>galk</i> (HL5087)	7721 ± 1482	1470 ± 499	6285 ± 292	1464 ± 27	18.1 ± 2.3	1.39 ± 0.12	0.19 (>0.99)
Non-clustered	YFP , PLlacO-1:: <i>cfp</i> at <i>intS</i> & PLlacO-1:: <i>yfp</i> at <i>galk</i> (HL5087)	3161 ± 512	340 ± 16	2975 ± 322	341 ± 15	31.7 ± 7.2	1.53 ± 0.32	0.10 (>0.99)
Non-coregulated, non-clustered #	CFP , PLlacO-1:: <i>cfp</i> at <i>intS</i> & PLtetO-1:: <i>yfp</i> at <i>galk</i> (HL5113)	4258 ± 223	320 ± 10	4075 ± 273	330 ± 26	19.9 ± 3.2	1.80 ± 0.27	0.25 (>0.99)
Non-coregulated, non-clustered #	YFP , PLlacO-1:: <i>yfp</i> at <i>galk</i> & PLtetO-1:: <i>cfp</i> at <i>intS</i> (HL5149)	3028 ± 230	225 ± 22	3165 ± 321	237 ± 15	31.0 ± 6.7	1.51 ± 0.30	1.11 (0.99)
Operon (1 st gene)	CFP , PLlacO-1:: <i>cfp-yfp</i> at <i>intS</i> (HL3573)	6881 ± 94	701 ± 56	6320 ± 300	713 ± 27	25.8 ± 3.0	1.51 ± 0.14	0.76 (>0.99)
Operon (1 st gene)	YFP , PLlacO-1:: <i>yfp-cfp</i> at <i>galk</i> (HL3578)	2913 ± 241	120 ± 15	2847 ± 212	123 ± 15	17.6 ± 2.7	1.67 ± 0.36	0.13 (>0.99)

*Actual values obtained at 0 and 1 mM IPTG as opposed to fit values. ‡ *lacI* is in the native position in all strains. # Hill function was fitted only to the gene under the control of PLlacO-1.

Table S4 continued Maximum and minimum expression levels and parameters obtained from fits to the Hill function

Group	Fluorescent reporter, construction (strain) ‡	Max*	Min*	α	δ	K	n	Reduced χ^2 (R ²)
Operon (2 nd gene)	CFP , P _{LlacO-1} :: <i>yfp-cfp</i> at <i>galk</i> (HL3578)	2671 ± 198	302 ± 39	2395 ± 260	308 ± 27	14.6 ± 4.2	1.75 ± 0.44	0.06 (>0.99)
Operon (2 nd gene)	YFP , P _{LlacO-1} :: <i>cfp-yfp</i> at <i>intS</i> (HL3573)	995 ± 48	162 ± 7	1080 ± 232	165 ± 15	29.1 ± 12.0	2.16 ± 1.26	0.19 (0.98)
Codirectional (1 st gene)	CFP , P _{LlacO-1} :: <i>cfp</i> ::T1 term::P _{LlacO-1} :: <i>yfp</i> at <i>intS</i> (HL3515)	6621 ± 326	82 ± 15	5934 ± 219	85 ± 15	45.4 ± 2.3	3.59 ± 0.54	0.74 (>0.99)
Codirectional (1 st gene)	YFP , P _{LlacO-1} :: <i>yfp</i> ::T1 term::P _{LlacO-1} :: <i>cfp</i> at <i>galk</i> (HL3546)	2913 ± 241	38 ± 6	3171 ± 176	39 ± 15	36.3 ± 3.3	4.06 ± 0.92	0.03 (>0.99)
Codirectional (2 nd gene)	CFP , P _{LlacO-1} :: <i>yfp</i> ::T1 term::P _{LlacO-1} :: <i>cfp</i> at <i>galk</i> (HL3546)	6169 ± 222	177 ± 14	6034 ± 271	180 ± 25	34.4 ± 2.2	3.97 ± 0.64	0.07 (>0.99)
Codirectional (2 nd gene)	YFP , P _{LlacO-1} :: <i>cfp</i> ::T1 term::P _{LlacO-1} :: <i>yfp</i> at <i>intS</i> (HL3515)	3138 ± 244	56 ± 0	3864 ± 60	60 ± 6	47.3 ± 0.6	3.53 ± 0.27	4.35 (>0.99)
Non-coregulated, codirectional#	CFP , P _{LlacO-1} :: <i>cfp</i> ::T1 term::P _{LtetO-1} :: <i>yfp</i> at <i>intS</i> (HL3953)	6298 ± 326	144 ± 29	5995 ± 271	154 ± 27	15.9 ± 1.9	1.63 ± 0.16	0.83 (>0.99)
Non-coregulated, codirectional#	YFP , P _{LlacO-1} :: <i>yfp</i> ::T1 term::P _{LtetO-1} :: <i>cfp</i> at <i>galk</i> (HL3954)	3425 ± 119	239 ± 20	3397 ± 213	242 ± 15	17.7 ± 2.3	1.67 ± 0.30	0.15 (>0.99)
Divergent	CFP , P _{LlacO-1} :: <i>cfp</i> & P _{LlacO-1} :: <i>yfp</i> at <i>intS</i> (HL4343)	2429 ± 76	56 ± 8	2366 ± 62	62 ± 3	61.0 ± 3.5	2.64 ± 0.12	1.95 (>0.99)
Divergent	YFP , P _{LlacO-1} :: <i>cfp</i> & P _{LlacO-1} :: <i>yfp</i> at <i>intS</i> (HL4343)	3934 ± 58	34 ± 4	3385 ± 60	46 ± 2	61.7 ± 2.4	3.11 ± 0.12	9.20 (0.99)
Divergent	CFP , P _{LlacO-1} :: <i>cfp</i> & P _{LlacO-1} :: <i>yfp</i> at <i>galk</i> (HL4348)	8316 ± 633	98 ± 13	7973 ± 61	127 ± 2	64.0 ± 1.0	3.04 ± 0.05	39.73 (0.99)
Divergent	YFP , P _{LlacO-1} :: <i>cfp</i> & P _{LlacO-1} :: <i>yfp</i> at <i>galk</i> (HL4348)	811 ± 126	-4 ± 5	750 ± 49	5.0 ± 2	48.9 ± 9.1	4.47 ± 1.25	0.73 (0.99)
Non-coregulated, divergent#	CFP , P _{LlacO-1} :: <i>cfp</i> & P _{LtetO-1} :: <i>yfp</i> at <i>intS</i> (HL4342)	1751 ± 876	342 ± 17	2027 ± 35	341 ± 4	9.6 ± 0.2	1.42 ± 0.03	10.52 (>0.99)
Non-coregulated, divergent#	YFP , P _{LlacO-1} :: <i>yfp</i> & P _{LtetO-1} :: <i>cfp</i> at <i>galk</i> (HL4302)	786 ± 132	69 ± 7	797 ± 50	69 ± 4	15.3 ± 1.4	1.24 ± 0.07	3.83 (>0.99)

*Actual values obtained at 0 and 1 mM IPTG as opposed to fit values. ‡ *lacI* is in the native position in all strains. # Hill function was fitted only to the gene under the control of P_{LlacO-1}.