

strain	description	functional?	inducing conditions			non-inducing conditions		repressing conditions	
			basal [reporter] reporter only	[activator]	[reporter]	[activator]	[reporter]	[activator]	[reporter]
DDy01	LexA & 8op memory loop	yes	8	104	426	1	3	0	0
DLL	LexA & 8op double memory loop	yes	ND	114	765	1	2	0	1
DZL	ZifH memory loop	yes	226	37	258	6	253	3	50
DDy03	LexA & 8op	yes	5	118	1425	0	12	0	8
CAy058	ZifH & 3bs	yes	44	53	438	4	36	3	17
CAy059	ERG2 & 2bs	no	237	130	289	1	198	ND	ND
CAy086	Gli1 & 5bs	yes	85	111	471	1	349	0	27
CAy060	YY1 & 3bs	no	177	153	3	1	1	ND	ND

**Supplementary Table S1.** Steady-state characterization of activator cascades under inducing, non-inducing, and repressing conditions. All values are normalized, background corrected intensities as measured by flow cytometry.