Table S1: **Relative intensities in different cases set production rates.**

Number of Sites (XBcd,YHb)	**Protein Concentration** (max, in molecules/nucleus)[a]	**Transcription rates** (s^{-1})
6B,2H *WT promoter*	**7000**	1st Hb: k_2=1e-1 2nd Hb: k_5=3.1e0
6B,0H hb^{14F}	**1050** (hb^{14F} is 15% of WT expression [30]; "Strong" from [34])	k_{22}, k_{25}=3.6e-1[b]
4B,0H *pThb11,13* [c]	**210** ("Intermediate" from [34]; 1/5 of "Strong"[d])	k_{19}=7.6e-2
3B,0H *pThb10,12*	**140** ("Weak" from [34])	k_{16}=5.2e-2 [e, f]
1B,0H *pThb3*	**70** ("Very Weak" from [34]; 1/3 of "Intermediate"[d])	k_{10}=3.6e-2

[a] RNA:protein ratio is set by the translation rate constant, k_{7A}=4e-1. The *hb* protein and mRNA decay constants (k_1 and k_{7B}, respectively) are 1.2e-1.
[b] Transcription rate set equal for 5 Bcd bound and 6 Bcd bound.
[c] pThb_ are the lacZ constructs from [34].
[d] Relative expression values from *in vitro* [32].
[e] Production for 2 Bcd bound was interpolated, k_{13}=4.4e-2.
[f] For the pThb15 (2 times 3B) and pThb16 (3 times 3B) constructs, k_{16} was raised to 1.8e-1, to match the stated "Strong" expression.