# Supplementary File 6

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| Scheme | $$K$$ | $$\frac{k\_{ON}\left(B9\right)}{k\_{ON}(B6)}$$ | $$\frac{k\_{ON}\left(B12\right)}{k\_{ON}(B6)}$$ |
| Independent activation$$k\_{ON}\left(S\_{i}\right)=ik\_{ON}(S\_{1})$$ | $$1$$ | 1.5 | 2 |
| Formation of transient *K*-mer$$k\_{ON}\left(S\_{i}\right)=\frac{i!}{K!\left(i-K\right)!} k\_{ON}(S\_{K})$$ | $$1$$ | 1.5 | 2 |
| $$2$$ | 2.4 | 4.4 |
| $$3$$ | 4.2 | **11** |
| $$4$$ | **8.4** | **33** |
| $$5$$ | **21** | **132** |
| $$6$$ | **84** | **924** |
| Formation of stable K-mer$$k\_{ON}\left(S\_{i}\right)= k\_{ON}(S\_{K})$$ | $$0\leq K\leq 6$$ | 1 | 1 |

**Supplementary File 6.** Expected fold change in the activation rates in the anterior region (saturating Bcd concentration) $k\_{ON}(S\_{i=N})$ between B9 and B6 and between B12 and B6. The fold changes are shown for different schemes of activation and values of *K* (Figure 2-figure supplement 3). The fold changes above the value calculated from the data (~4.5) are made bold.