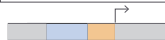


(A)

PROMOTER OCCUPANCY STATES

state

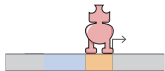
statistical weight



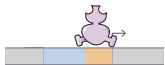
1



$$\frac{P}{N_{NS}} e^{-\beta \Delta \epsilon_P}$$



$$\frac{R_A}{N_{NS}} e^{-\beta \Delta \epsilon_{RA}}$$



$$\frac{R_I}{N_{NS}} e^{-\beta \Delta \epsilon_{RI}}$$

(B)

ALLOSTERIC STATES

state

weight

state

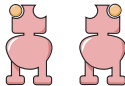
weight



1



$$e^{-\beta \Delta \epsilon_{AI}}$$



$$2 \frac{c}{K_A}$$



$$2 e^{-\beta \Delta \epsilon_{AI}} \frac{c}{K_I}$$



$$\left(\frac{c}{K_A} \right)^2$$



$$e^{-\beta \Delta \epsilon_{AI}} \left(\frac{c}{K_I} \right)^2$$

$$\sum_{i \in \text{active states}} w_i = \left(1 + \frac{c}{K_A} \right)^2$$

$$\sum_{i \in \text{inactive states}} w_i = e^{-\beta \Delta \epsilon_{AI}} \left(1 + \frac{c}{K_I} \right)^2$$