Table 1. Approximated parameters of individual chemical reactions within the riboregulated RNA toggle switch. Values represent rate constants for the reactions and are averaged in units of molecules/s for purposes of Gillespie stochastic modeling. Constants are calculated based on constants for *Escherichia coli* bacteria.

|  |  |  |
| --- | --- | --- |
| Reaction Constant | Chemical Equation | Parameter Value (molecules/s) |
| katc | ADNA 🡪 ARNA | 0.6897 |
| kbtc | BDNA 🡪 BRNA | 0.6897 |
| ka,deg | ARNA 🡪 Ø | 0.0033 |
| kb,deg | BRNA 🡪 Ø | 0.0033 |
| ka,on | ARNA + BRNA 🡪 ARNA:BRNA | 101.4 |
| kb,on | BRNA + ARNA 🡪 ARNA:BRNA | 101.4 |
| ka,off | ARNA:BRNA 🡪 ARNA + BRNA | 0.05 |
| kb,off | ARNA:BRNA 🡪 BRNA + ARNA | 0.05 |
| kab,deg | ARNA:BRNA 🡪 Ø | .0033 |

Place this table close to the scheme possibly underneath it

Table 2. Approximated parameters of individual chemical reactions within the riboregulated RNA repressilator. Values represent rate constants for the reactions and are averaged in units of molecules/s for purposes of Gillespie stochastic modeling. Constants are calculated based on constants for *Escherichia coli* bacteria.

|  |  |  |
| --- | --- | --- |
| Reaction Constant | Chemical Equation | Parameter Value (molecules/s) |
| katc | ADNA 🡪 ARNA | 0.6897 |
| kbtc | BDNA 🡪 BRNA | 0.6897 |
| kctc | CDNA 🡪 CRNA | 0.6897 |
| ka,deg | ARNA 🡪 Ø | 0.0033 |
| kb,deg | BRNA 🡪 Ø | 0.0033 |
| kc,deg | CRNA 🡪 Ø | 0.0033 |
| kab,on | ARNA + BRNA 🡪 ARNA:BRNA | 101.4 |
| kbc,on | BRNA + CRNA 🡪 BRNA:CRNA | 101.4 |
| kca,on | CRNA + ARNA 🡪 CRNA:ARNA | 101.4 |
| kab,off | ARNA:BRNA 🡪 ADNA + BRNA | 0.05 |
| kbc,off | BRNA:CRNA 🡪 BDNA + CRNA | 0.05 |
| kca,off | CRNA:ARNA 🡪 CDNA + ARNA | 0.05 |
| kcleave,a | ARNA:BRNA 🡪 ARNA | 0.5 |
| kcleave,b | BRNA:CRNA 🡪 BRNA | 0.5 |
| kcleave,c | CRNA:ARNA 🡪 CRNA | 0.5 |