|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Description | Minimum Value | Average Value (mean ± SD) | Units |
| *ks,1* | Synthesis rate constant for Tp51 | 5.50 x 102 | (6.13 ± 0.16) x 102 | Genomes/cell/h |
| *Km,1* | vDNAtot Michaelis-Menten constant for Tp51 synthesis | 9.62 x 102 | (8.76 ± 0.48) x 102 | Genomes/cell |
| *kd,1* | Degradation rate constant for Tp51 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *ks,C* | Synthesis rate constant for vDNA-loaded capsids | 6.78 x 10-7 | (1.10 ± 0.10) x 10-6 | Cell/genomes/h |
| *ks,2* | Synthesis rate constant for Tp52 | 5.14 x 102 | (6.17 ± 0.32) x 102 | Genomes/cell/h |
| *Km,2* | vDNAtot Michaelis-Menten constant for Tp52 synthesis | 6.80 x 103 | (8.56 ± 0.76) x 103 | Genomes/cell |
| *kd,2* | Degradation rate constant for Tp52 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *ks,P* | Synthesis rate constant for tegument-loaded intracytoplasmic viral particles | 2.48 x 10-5 | (3.07 ± 0.08) x 10-5 | Cell/genomes/h |
| *kex* | Rate of intracytoplasmic particle leaving infected host cell | 1.5 x 100 (fixed) | 1.5 x 100 (fixed) | 1/h |
| *SSE* | Sum of squares of errors | 0.192 | 0.196 | Unitless |
| AIC | Akaike Information Criteria | -228.4 | -227.5 | Unitless |

Model 1

Model 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Description | Minimum Value | Average Value (mean ± SD) | Units |
| *ks,1* | Synthesis rate constant for Tp51 | 3.41 x 102 | (3.61 ± 0.69) x 102 | Genomes/cell/h |
| *Km,1* | vDNAtot Michaelis-Menten constant for Tp51 synthesis | 1.94 x 102 | (2.62 ± 1.50) x 102 | Genomes/cell |
| *kd,1* | Degradation rate constant for Tp51 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,3* | Michaelis-Menten constant for vDNAtot inhibition of Tp51 degradation | 7.80 x 103 | (1.38 ± 1.72) x 104 | Genomes/cell |
| *ks,C* | Synthesis rate constant for vDNA-loaded capsids | 6.09 x 10-7 | (1.16 ± 0.11) x 10-6 | Cell/genomes/h |
| *ks,2* | Synthesis rate constant for Tp52 | 2.40 x 102 | (3.14 ± 1.39) x 102 | Genomes/cell/h |
| *Km,2* | vDNAtot Michaelis-Menten constant for Tp52 synthesis | 2.21 x 103 | (3.41 ± 2.17) x 103 | Genomes/cell |
| *kd,2* | Degradation rate constant for Tp52 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,4* | Michaelis-Menten constant for vDNAtot inhibition of Tp52 degradation | 1.09 x 104 | (4.04 ± 5.05) x 104 | Genomes/cell |
| *ks,P* | Synthesis rate constant for tegument-loaded intracytoplasmic viral particles | 3.88 x 10-5 | (3.08 ± 0.11) x 10-5 | Cell/genomes/h |
| *kex* | Rate of intracytoplasmic particle leaving infected host cell | 1.5 x 100 (fixed) | 1.5 x 100 (fixed) | 1/h |
| *SSE* | Sum of squares of errors | 0.147 | 0.182 | Unitless |
| AIC | Akaike Information Criteria | -234.5 | -224.8 | Unitless |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Description | Minimum Value | Average Value (mean ± SD) | Units |
| *ks,1* | Synthesis rate constant for Tp51 | 6.24 x 102 | (6.25 ± 0.03) x 102 | Genomes/cell/h |
| *Km,1* | vDNAtot Michaelis-Menten constant for Tp51 synthesis | 1.12 x 103 | (1.14 ± 0.08) x 103 | Genomes/cell |
| *kd,1* | Degradation rate constant for Tp51 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,3* | Michaelis-Menten constant for vDNAtot activation of Tp51 degradation | 1.45 x 102 | (1.54 ± 0.41) x 102 | Genomes/cell |
| *ks,C* | Synthesis rate constant for vDNA-loaded capsids | 1.12 x 10-6 | (1.12 ± 0.005) x 10-6 | Cell/genomes/h |
| *ks,2* | Synthesis rate constant for Tp52 | 7.58 x 102 | (7.53 ± 0.37) x 102 | Genomes/cell/h |
| *Km,2* | vDNAtot Michaelis-Menten constant for Tp52 synthesis | 1.41 x 104 | (1.40 ± 0.13) x 104 | Genomes/cell |
| *kd,2* | Degradation rate constant for Tp52 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,4* | Michaelis-Menten constant for vDNAtot activation of Tp52 degradation | 9.93 x 102 | (9.80 ± 2.11) x 102 | Genomes/cell |
| *ks,P* | Synthesis rate constant for tegument-loaded intracytoplasmic viral particles | 3.09 x 10-5 | (3.09 ± 0.0008) x 10-5 | Cell/genomes/h |
| *kex* | Rate of intracytoplasmic particle leaving infected host cell | 1.5 x 100 (fixed) | 1.5 x 100 (fixed) | 1/h |
| *SSE* | Sum of squares of errors | 0.160 | 0.160 | Unitless |
| AIC | Akaike Information Criteria | -230.5 | -230.5 | Unitless |

Model 3

Model 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Description | Minimum Value | Average Value (mean ± SD) | Units |
| *ks,1* | Synthesis rate constant for Tp51 | 2.16 x 103 | (8.91 ± 5.07) x 102 | Genomes/cell/h |
| *Km,1* | vDNAtot Michaelis-Menten constant for Tp51 synthesis | 2.76 x 103 | (1.21 ± 0.51) x 102 | Genomes/cell |
| *kd,1* | Degradation rate constant for Tp51 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,3* | Michaelis-Menten constant for Tp51 feedback inhibition | 1.27 x 103 | (4.83 ± 3.27) x 104 | Genomes/cell |
| *ks,C* | Synthesis rate constant for vDNA-loaded capsids | 3.73 x 10-7 | (1.08 ± 0.15) x 10-6 | Cell/genomes/h |
| *ks,2* | Synthesis rate constant for Tp52 | 1.05 x 104 | (4.39 ± 2.18) x 103 | Genomes/cell/h |
| *Km,2* | vDNAtot Michaelis-Menten constant for Tp52 synthesis | 8.68 x 104 | (4.38 ± 1.78) x 104 | Genomes/cell |
| *kd,2* | Degradation rate constant for Tp52 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,4* | Michaelis-Menten constant for Tp52 feedback inhibition | 9.39 x 102 | (3.18 ± 3.94) x 103 | Genomes/cell |
| *ks,P* | Synthesis rate constant for tegument-loaded intracytoplasmic viral particles | 4.43 x 10-6 | (2.95 ± 0.51) x 10-5 | Cell/genomes/h |
| *kex* | Rate of intracytoplasmic particle leaving infected host cell | 1.5 x 100 (fixed) | 1.5 x 100 (fixed) | 1/h |
| *SSE* | Sum of squares of errors | 0.136 | 0.193 | Unitless |
| AIC | Akaike Information Criteria | -237.9 | -222.2 | Unitless |

Model 5

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Description | Minimum Value | Average Value (mean ± SD) | Units |
| *ks,1* | Synthesis rate constant for Tp51 | 2.69 x 103 | (7.07 ± 7.52) x 102 | Genomes/cell/h |
| *Km,1* | vDNAtot Michaelis-Menten constant for Tp51 synthesis | 1.14 x 103 | (3.69 ± 3.48) x 102 | Genomes/cell |
| *kd,1* | Degradation rate constant for Tp51 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,3* | Michaelis-Menten constant for Tp51 feedback inhibition | 6.65 x 102 | (1.90 ± 1.47) x 104 | Genomes/cell |
| *Km,5* | Michaelis-Menten constant for vDNAtot inhibition of Tp51 degradation | 5.90 x 103 | (6.97 ± 1.05) x 103 | Genomes/cell |
| *ks,C* | Synthesis rate constant for vDNA-loaded capsids | 1.15 x 10-6 | (1.16 ± 0.09) x 10-6 | Cell/genomes/h |
| *ks,2* | Synthesis rate constant for Tp52 | 4.72 x 104 | (2.13 ± 1.42) x 104 | Genomes/cell/h |
| *Km,2* | vDNAtot Michaelis-Menten constant for Tp52 synthesis | 1.27 x 105 | (8.36 ± 4.79) x 104 | Genomes/cell |
| *kd,2* | Degradation rate constant for Tp52 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,4* | Michaelis-Menten constant for Tp52 feedback inhibition | 1.37 x 102 | (2.71 ± 6.05) x 103 | Genomes/cell |
| *Km,6* | Michaelis-Menten constant for vDNAtot inhibition of Tp52 degradation | 5.13 x 103 | (2.06 ± 2.16) x 104 | Genomes/cell |
| *ks,P* | Synthesis rate constant for tegument-loaded intracytoplasmic viral particles | 3.10 x 10-5 | (3.11 ± 0.08) x 10-5 | Cell/genomes/h |
| *kex* | Rate of intracytoplasmic particle leaving infected host cell | 1.5 x 100 (fixed) | 1.5 x 100 (fixed) | 1/h |
| *SSE* | Sum of squares of errors | 0.123 | 0.165 | Unitless |
| AIC | Akaike Information Criteria | -235.6 | -222.4 | Unitless |

Model 6

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Description | Minimum Value | Average Value (mean ± SD) | Units |
| *ks,1* | Synthesis rate constant for Tp51 | 6.53 x 102 | (6.55 ± 0.17) x 102 | Genomes/cell/h |
| *Km,1* | vDNAtot Michaelis-Menten constant for Tp51 synthesis | 1.25 x 103 | (1.24 ± 0.11) x 103 | Genomes/cell |
| *kd,1* | Degradation rate constant for Tp51 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,3* | Michaelis-Menten constant for Tp51 feedback inhibition | 1.52 x 105 | (1.74 ± 0.94) x 105 | Genomes/cell |
| *Km,5* | Michaelis-Menten constant for vDNAtot activation of Tp51 degradation | 1.55 x 102 | (1.64 ± 0.47) x 102 | Genomes/cell |
| *ks,C* | Synthesis rate constant for vDNA-loaded capsids | 1.12 x 10-6 | (1.12 ± 0.006) x 10-6 | Cell/genomes/h |
| *ks,2* | Synthesis rate constant for Tp52 | 4.32 x 104 | (1.53 ± 1.60) x 104 | Genomes/cell/h |
| *Km,2* | vDNAtot Michaelis-Menten constant for Tp52 synthesis | 6.40 x 105 | (2.37 ± 2.44) x 105 | Genomes/cell |
| *kd,2* | Degradation rate constant for Tp52 | 1.0 x 10-1 (fixed) | 1.0 x 10-1 (fixed) | 1/h |
| *Km,4* | Michaelis-Menten constant for Tp52 feedback inhibition | 2.42 x 103 | (6.06 ± 6.46) x 103 | Genomes/cell |
| *Km,6* | Michaelis-Menten constant for vDNAtot activation of Tp52 degradation | 8.14 x 102 | (7.09 ± 4.14) x 102 | Genomes/cell |
| *ks,P* | Synthesis rate constant for tegument-loaded intracytoplasmic viral particles | 3.09 x 10-5 | (3.09 ± 0.009) x 10-5 | Cell/genomes/h |
| *kex* | Rate of intracytoplasmic particle leaving infected host cell | 1.5 x 100 (fixed) | 1.5 x 100 (fixed) | 1/h |
| *SSE* | Sum of squares of errors | 0.151 | 0.163 | Unitless |
| AIC | Akaike Information Criteria | -226.5 | -223.0 | Unitless |