**Table S5. Estimated parameters (fixed effect) for SARS-CoV-2 infection in nose and throat by fitting the viral dynamics with multiple target cell**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter Name | Symbol (Unit) | Nose | Throat | BAL |
| Maximum rate constant for viral replication for first target cell  | $γ\_{1}$(day-1) | $$18.9$$ | $$4.17$$ | $$22.1$$ |
| Maximum rate constant for viral replication for second target cell  | $γ\_{2}$(day-1) | $$0.128$$ |
| Rate constant for virus infection for first target cell | $β\_{1}$$(($copies/ml)-1 day-1) | $$1.22×10^{-6}$$ | $$9.67×10^{-6}$$ | $$1.07×10^{-7}$$ |
| Rate constant for virus infection for second target cell  | $β\_{2}$$(($copies/ml)-1 day-1) | $$2.81×10^{-6}$$ |
| Death rate of infected cells | $δ$(day-1) | $$1.26$$ |
| Efficacy of blocking virus production by RDV | $$ε$$ | $$0.584$$ |
| Viral load at virus inoculation | $V(0)$ (copies/ml) | $$2.06×10^{3}$$ |
| Relative fraction of first uninfected target cell population at virus inoculation | $$ f\_{1}\left(0\right)$$ | $$0.613$$ |
| Relative fraction of second uninfected target cell population at virus inoculation | $$ f\_{2}\left(0\right)$$ | $$0.387$$ |