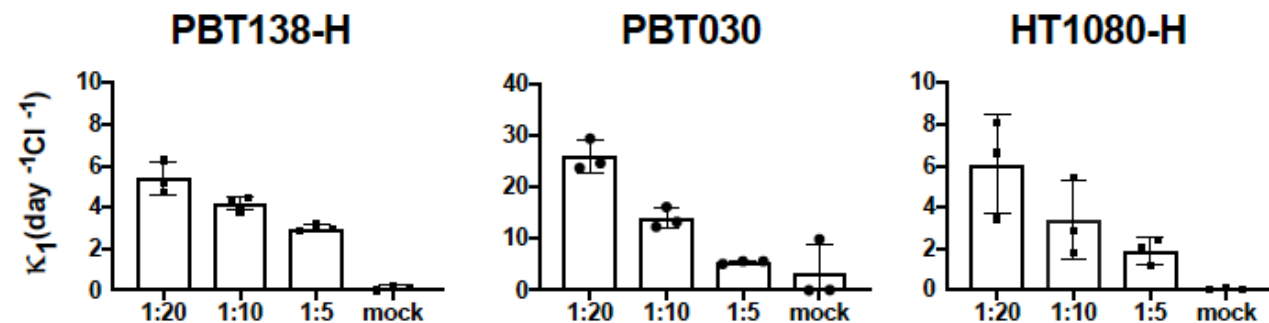
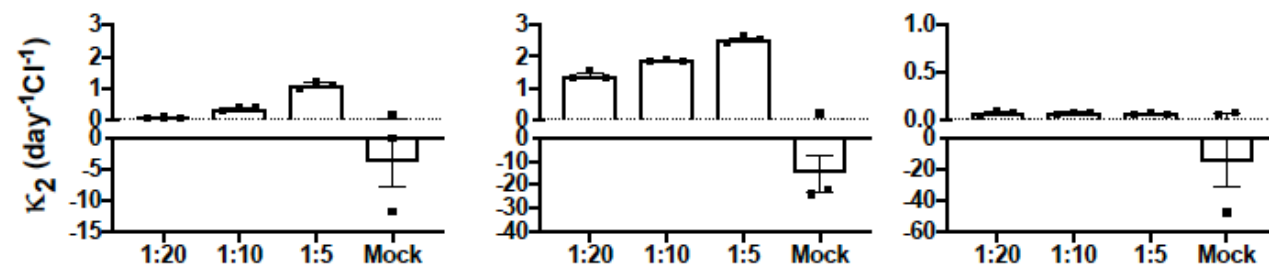


$$\begin{aligned} \text{cancer cell rate of change} \quad \frac{dX}{dt} &= \overbrace{\rho X \left(1 - \frac{X}{K}\right)}^{\text{logistic growth of cancer cells}} - \overbrace{\kappa_1 XY}^{\text{CAR T-cell induced cancer cell death}} \\ \text{CAR T-cell rate of change} \quad \frac{dY}{dt} &= \overbrace{\kappa_2 XY}^{\text{cancer cell stimulated proliferation or exhaustion of CAR T-cells}} - \overbrace{\theta Y}^{\text{CAR T-cell death}} \end{aligned}$$

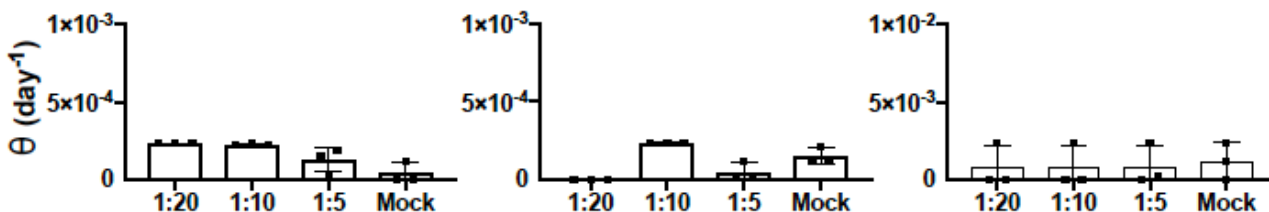
**CAR T-cell
killing rate**



**CAR T-cell
Proliferation/
Exhaustion**



**CAR T-cell
Death rate**



Effector to target ratio (E:T) →