Day 0: Day 9: Atezo group given first dose\* 1 M FaDu-PDL1 s.c. 0.25 or 0.1 M CAR-T i.t. BLI twice a week BLI twice a week \*High dose of atezolizumab by *i.v.* injection: 10 mg/kg at first dose and 5 mg/kg twice a week throughout the duration of the experiment

Day 7: Average tumor size: ~130 mm<sup>3</sup>

n=6

## **B** Experimental cohorts **PBS**

A Intratumoral study design

HER2 CAR (0.25 M CAR-T cells) HER2 CAR (0.1 M CAR-T cells) HER2 CAR plus Atezo (0.1 M CAR-T cells)	n=5 n=5 n=5
cRB-340-1 (0.25 M CAR-T cells) cRB-340-1 plus Atezo (0.25 M CAR-T cells) cRB-340-1 (0.1 M CAR-T cells) cRB-340-1 plus Atezo (0.1 M CAR-T cells)	n=6 n=5 n=6 n=6
RB-340-1 (0.25 M CAR-T cells) RB-340-1 (0.1 M CAR-T cells)	n=6 n=6

## Figure S4, related to Figure 4C-H.

(A) Intratumoral administration model and study design.

**(B) Experimental set up** – All treatment groups included 5 or 6 mice receiving subcutaneous implantation of 1 million FaDu cells followed by adoptive transfer of CAR-T cells at day 9. Atezolizumab (10 mg/kg) was administered intravenously in the relevant groups the day before adoptive transfer (day 8) and subsequently dosed at 5 mg/kg twice a week.