Time: 2024.09.25-2024.09.30

1. **Experiment:** Detection of tumor volume in small animal models
2. **Time:** 2024.09.25-2024.09.30
3. **Member:** Yinran Luo, Xinyu Zhu
4. **Materials:**

Name	Supplier or Formulation
Animal scales	Shimadzu
Digital Calipers	Hoffmann
High-throughput in vivo optical imaging system for small animals	PerkinElmer
In Situ Tumor Models in Pancreatic Cancer NCG Mice	Self-construction in Lab
In Situ Tumor Models in Liver Cancer NCG Mice	Self-construction in Lab

5. **Method:**

(1) Tumor diameters were recorded using a digital vernier caliper every 3 days.

(2) Tumor volumes (TV) were calculated according to the formula: $TV = a \times b^2/2$, where 'a' represents the longest diameter of the tumor (cm), and 'b' represents the shortest diameter (cm), yielding TV in cubic centimeters (cm^3).

6. **Result:**

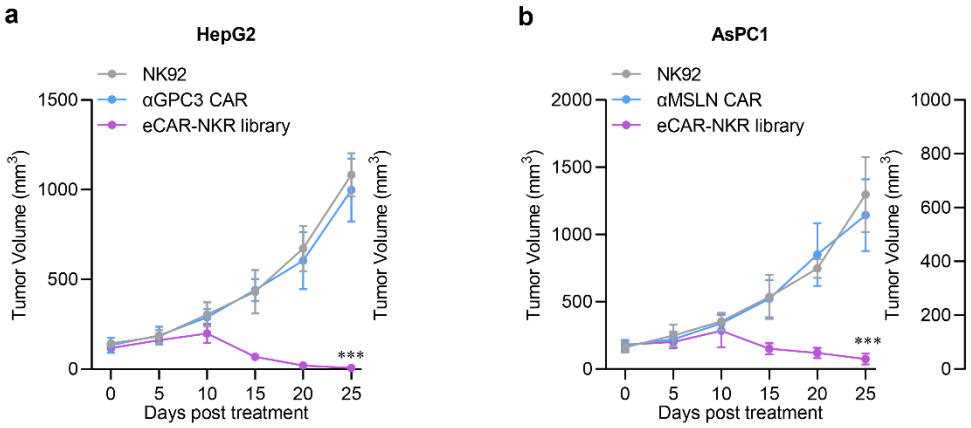

Fig.1 Change in tumor volume in NCG mice

To evaluate the impact of specific KARs/KIRs CAR-NK cells on in vivo anti-tumor activity, liver tumor and pancreatic tumor in situ tumor-bearing mouse models were established by inoculating HepG2 and AsPC1 cells into NCG mice, respectively. Effector cells were administered via intravenous injection on days 7, 14, and 21 post-inoculation, with NK92 cells serving as a blank control group. The results demonstrated that in the liver tumor-bearing mouse model, the specific KARs/KIRs NK cell therapy group derived from the eCAR-NKR library exhibited significantly inhibited tumor growth compared to the other groups (Fig1 a). Similarly, in the pancreatic tumor-bearing mouse model, the specific KARs/KIRs NK cell therapy group from the eCAR-NKR library also showed a notable suppression of tumor volumes compared to the control groups (Fig1 b).