

NMG

□□□	NOD.Cg- <i>Prkdc</i> ^{scid} <i>Il2rg</i> ^{em1Smoc}
□□□□	NM-NSG-001
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Gene Symbol Il2rg	Synonyms	gc p64 [g]c CD132 gamma(c)
	NCBI ID	16186
	MGI ID	96551
	Ensembl ID	ENSMUSG00000031304
	Human Ortholog	IL2RG

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Prkdc and Il2rg genes were both knocked-out in NOD mice.

- Lacking mature T, B and NK cells
- Low immune rejection against human cells and tissues
- Good tumorigenicity so that a small number of cells can form tumors.
- Significant improvement in the survival of transplanted human cells and tissues
- Suitable for the transplantation of human hematopoietic stem cells and the preparation of humanized mouse models
- Suitable as the carrier mice for the transplantation of heterologous cells and tissues

□□□□: Immune and hematopoietic research

*Literature published using this strain should indicate: NMG mice (Cat. NO. NM-NSG-001) were purchased from Shanghai Model Organisms Center, Inc..

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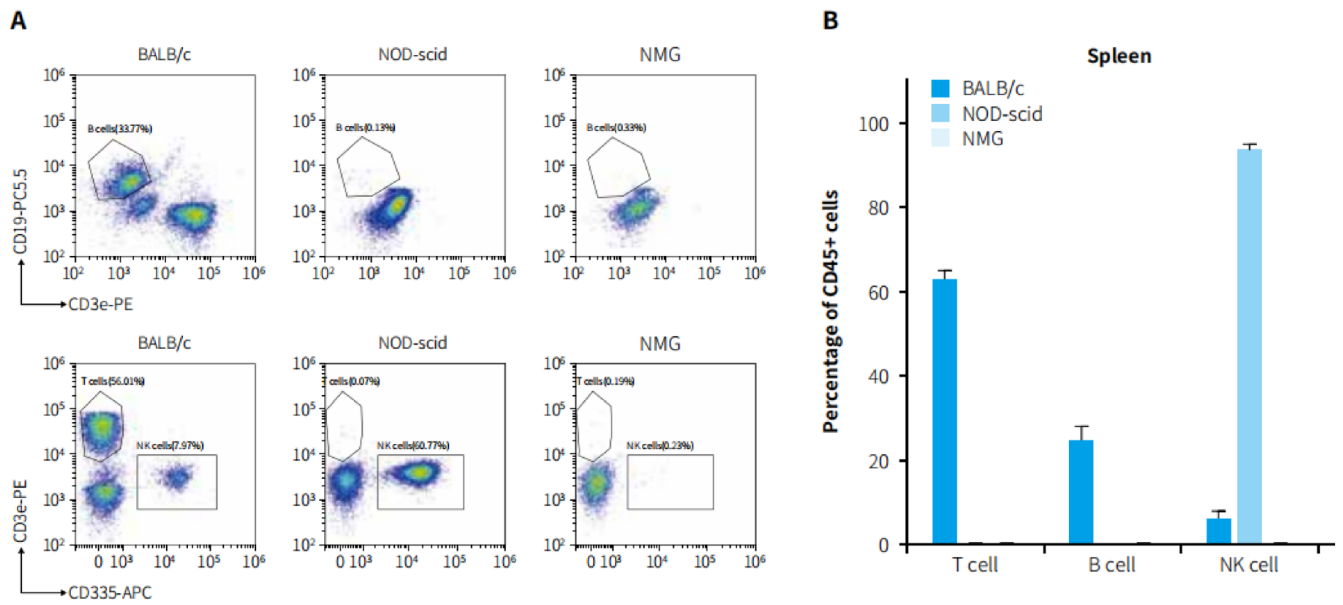


Figure 1. Complete deletion of T, B and NK cells in the spleen of NMG mice. (A) The splenocytes of BALB/c, NOD-scid and NMG mice were collected to analyze their compositions of T, B and NK cells by FACS. (B) Statistical analysis of sorted cells.

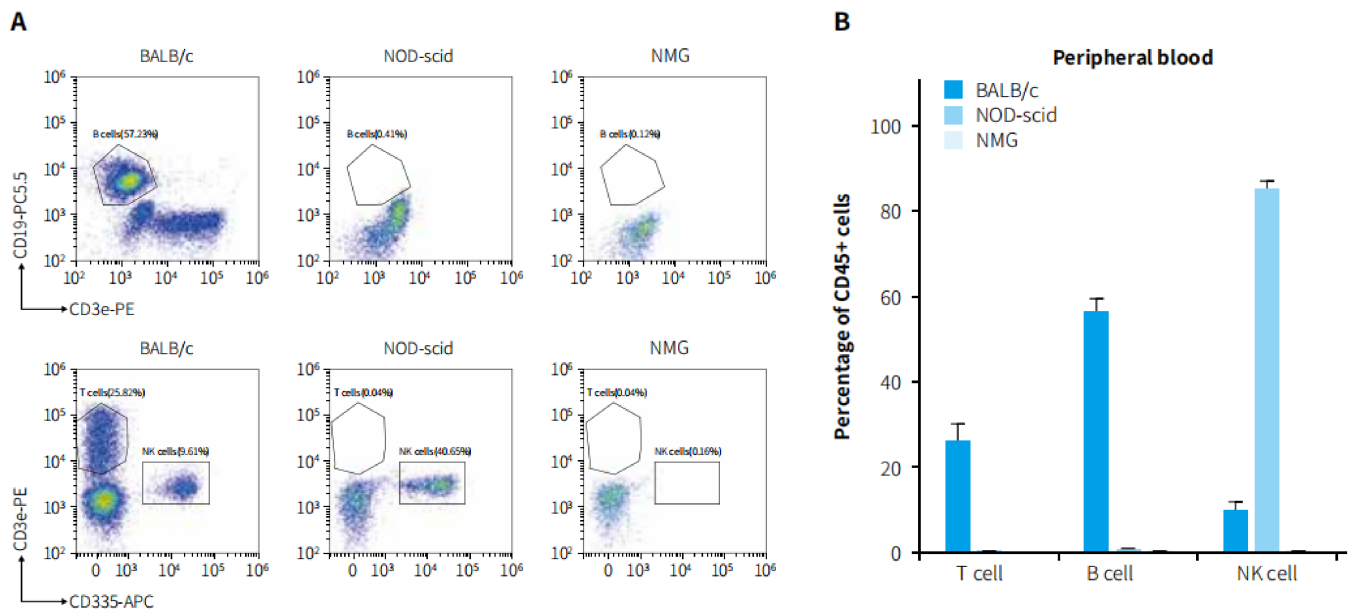


Figure 2. Complete deletion of T, B and NK cells in the blood of NMG mice. (A) The peripheral blood samples of BALB/c, NOD-scid and NMG mice were collected to analyze their compositions of T, B and NK cells by FACS. (B) Statistical analysis of sorted cells.

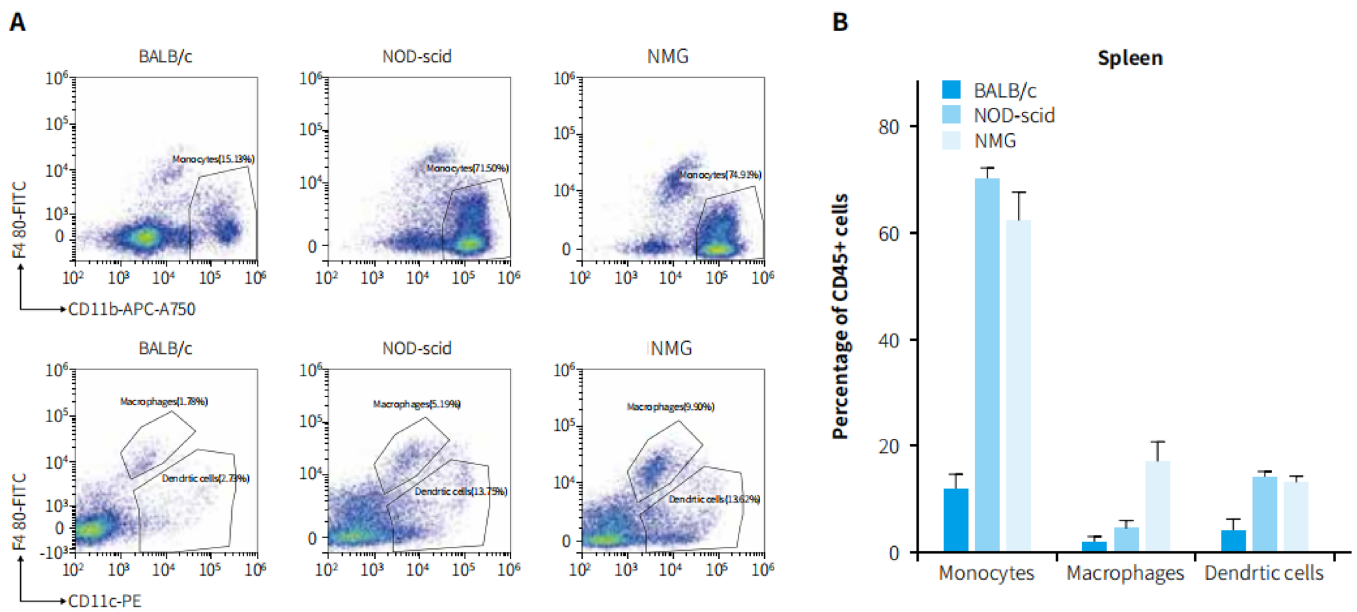


Figure 3. Compositions of monocytes, macrophages, DCs in the spleen of NMG mice. (A) The splenocytes of BALB/c, NOD-scid and NMG mice were collected to analyze their compositions of monocytes, macrophages, DCs. (B) Statistical analysis of sorted cells.

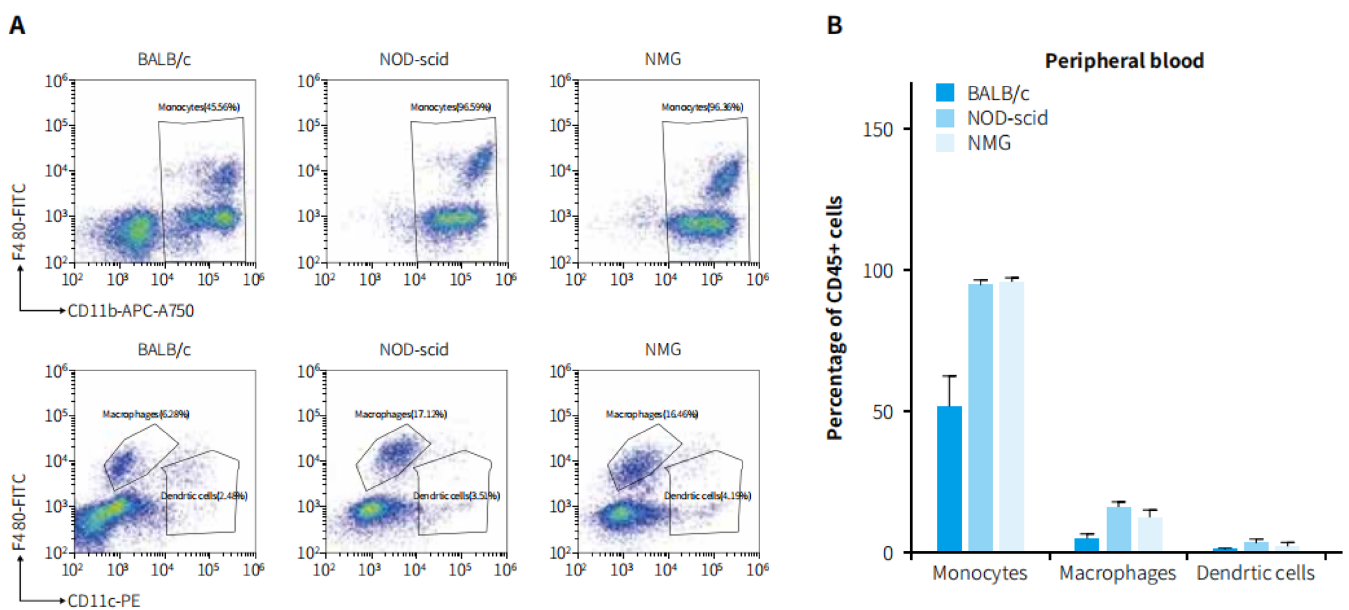


Figure 4. Compositions of monocytes, macrophages, DCs in the blood of NMG mice. (A) The peripheral blood samples of BALB/c, NOD-scid and NMG mice were collected to analyze their compositions of monocytes, macrophages, DCs. (B) Statistical analysis of sorted cells.

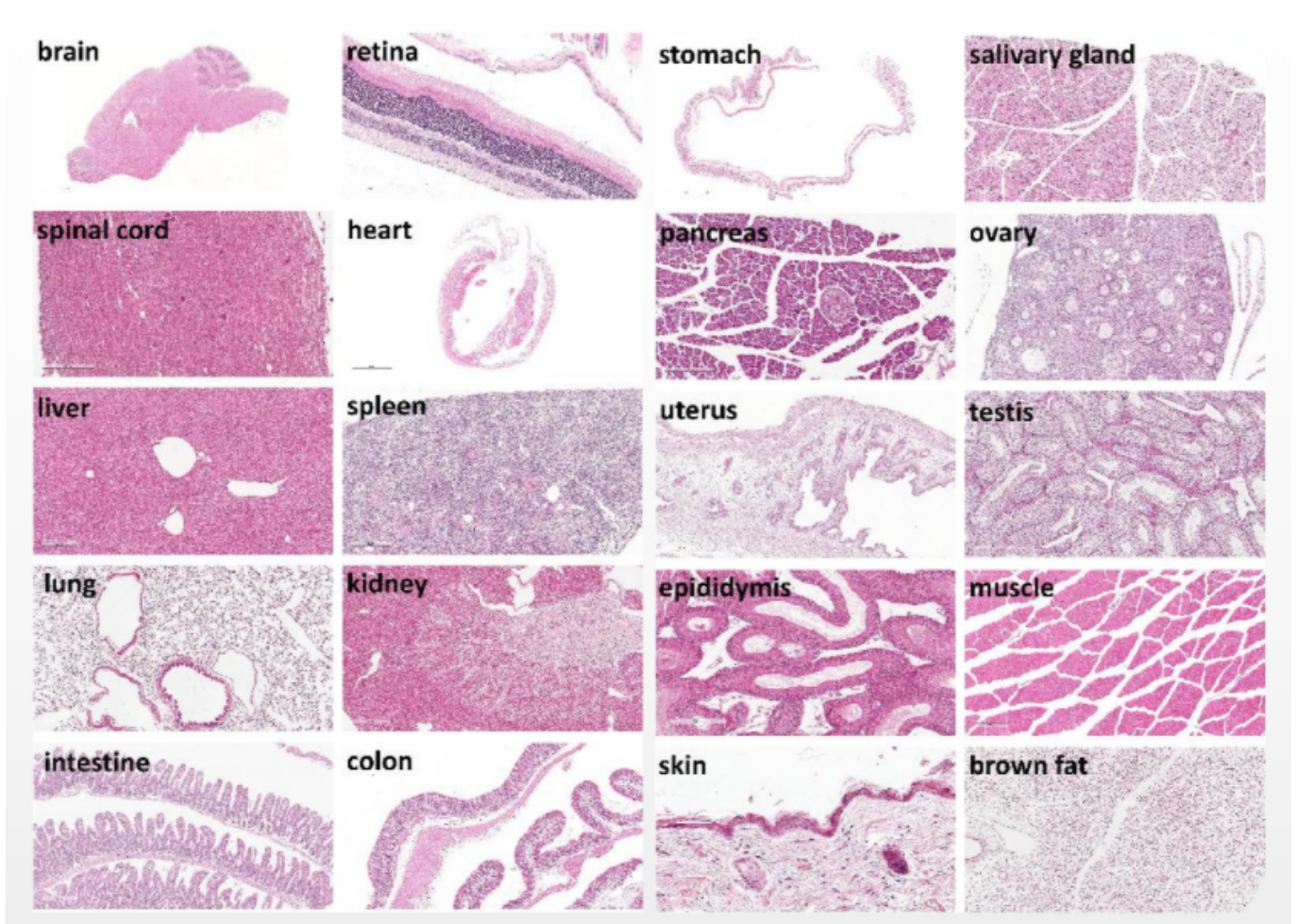
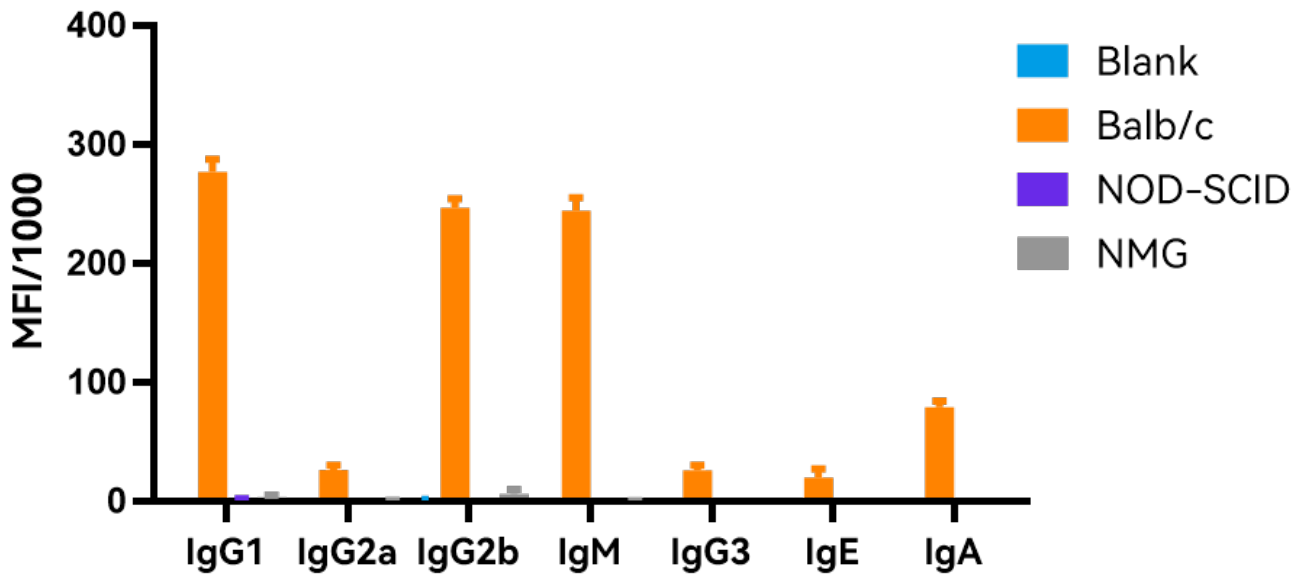


Figure 5. Histological sections of various tissues from NMG mice. Furthermore, no significant abnormalities were observed in other tissues, including brain, retina, spinal cord, heart, liver, lung, kidney, small intestine, large intestine, stomach, salivary glands, pancreas, ovary, uterus, testis, epididymis, skeletal muscle, skin, and brown fat.

Serum Antibody Response



Serum Antibody Response(MFI/1000)				
Parameter	Blank	Balb/c	NOD-SCID	NMG
IgG1	1.28 ± 0.03	276.83 ± 10.64	1.69 ± 0.41	3.33 ± 1.55
IgG2a	0.55 ± 0.05	26.12 ± 3.88	0.44 ± 0.01	0.77 ± 0.22
IgG2b	1.28 ± 0.29	246.64 ± 7.36	0.78 ± 0.04	6.09 ± 3.71
IgM	0.27 ± 0.04	244.19 ± 11.02	0.47 ± 0.09	0.39 ± 0.15
IgG3	0.22 ± 0.01	25.72 ± 4.61	0.19 ± 0	0.24 ± 0.03
IgE	0.15 ± 0.02	19.68 ± 7.59	0.16 ± 0.02	0.17 ± 0.02
IgA	0.18 ± 0.02	78.96 ± 5.19	0.17 ± 0.01	0.16 ± 0.01

Fig6. Serum antibody response in the serum of BALB/c, NOD-SCID, NMG and Blank. (n=5, 8-week-old, male)

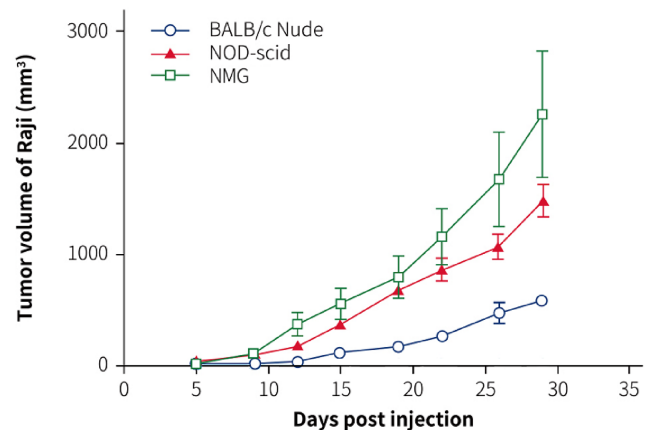
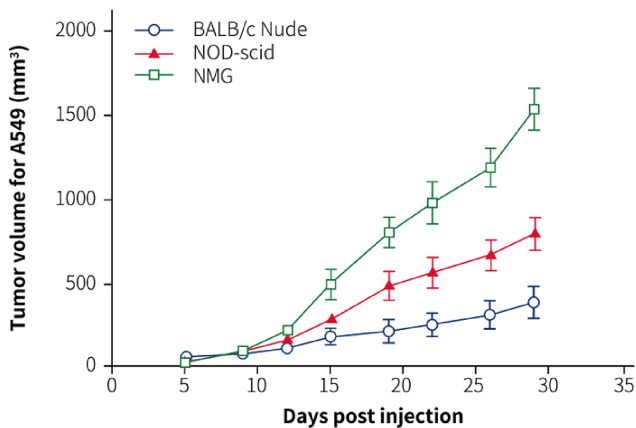


Fig7. The establishment of tumor models using A549 or Raji cells is more effective in NMG mice.

A CDX model has been successfully established in NMG mice

	Cell lines	Tumor type
Human tumor cell lines	A431	Epidermoid carcinoma
	A549	Lung carcinoma
	HCT116	Colon carcinoma
	HepG2	Hepatocellular carcinoma
	MDA-MB-468	Mammary gland adenocarcinoma
	MSTO-211H	Biphasic mesothelioma
	SH-SY5Y	Neuroblastoma
	SW480	Colorectal adenocarcinoma
	Raji	lymphoma
	JIMT-1	Breast carcinoma

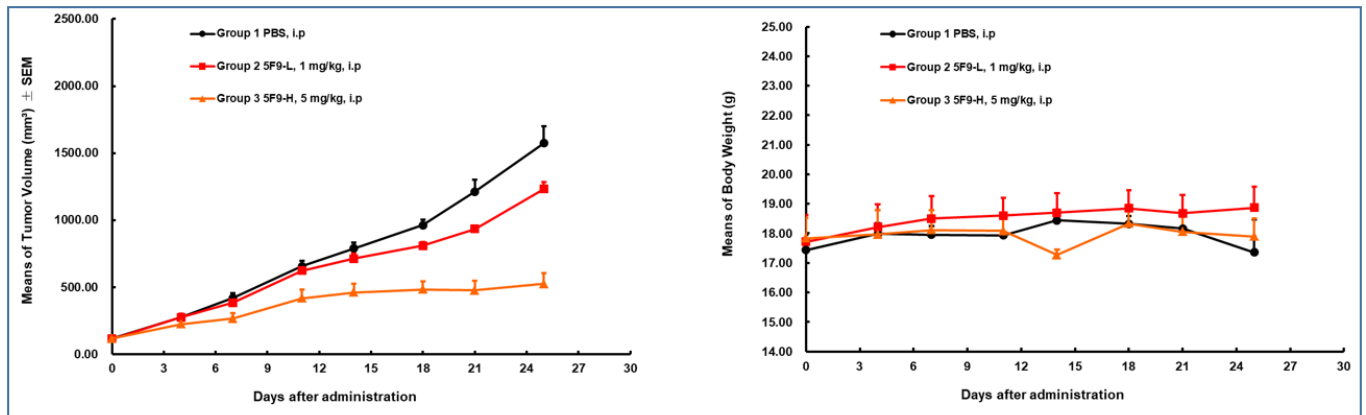


Fig8. In vivo Efficacy Study of Anti-human CD47 Reference Antibody in the Treatment of Raji lymphoma CDX Tumor model in NMG mice.

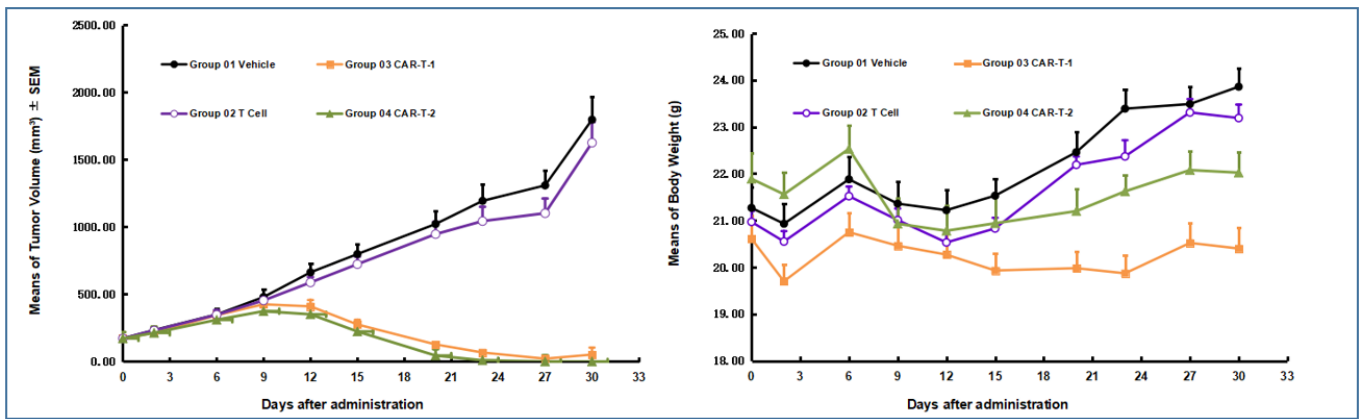


Fig9. CAR-T in vivo efficacy study of A549 NSCLC model in NMG mice

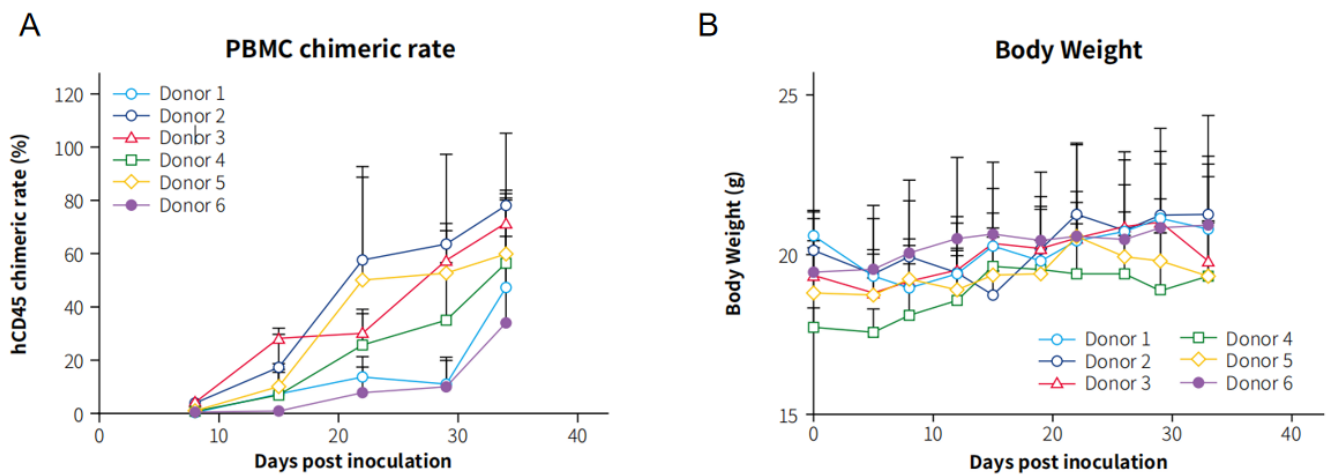


Fig10. PBMC reconstitution model. Human PBMC cells were intravenous implanted into homozygote NMG mice. Percentage of human CD45+ cells (A), body weight (B).

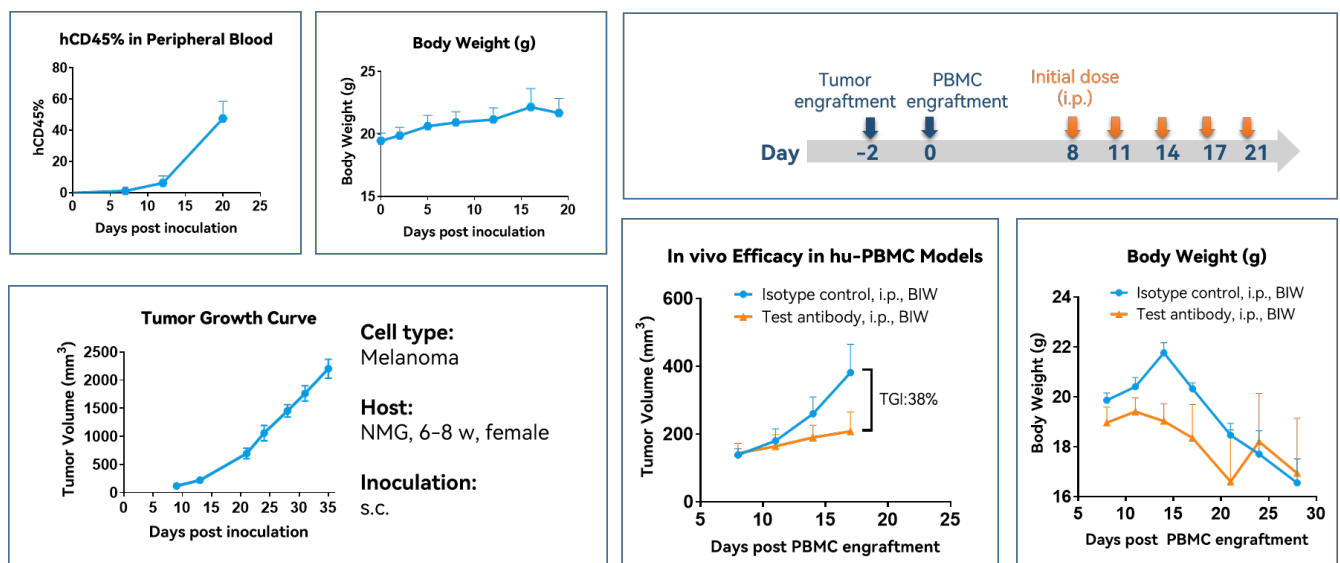


Fig11. In vivo Efficacy Study of Hu-PBMC Reconstruction Model in NMG mice.

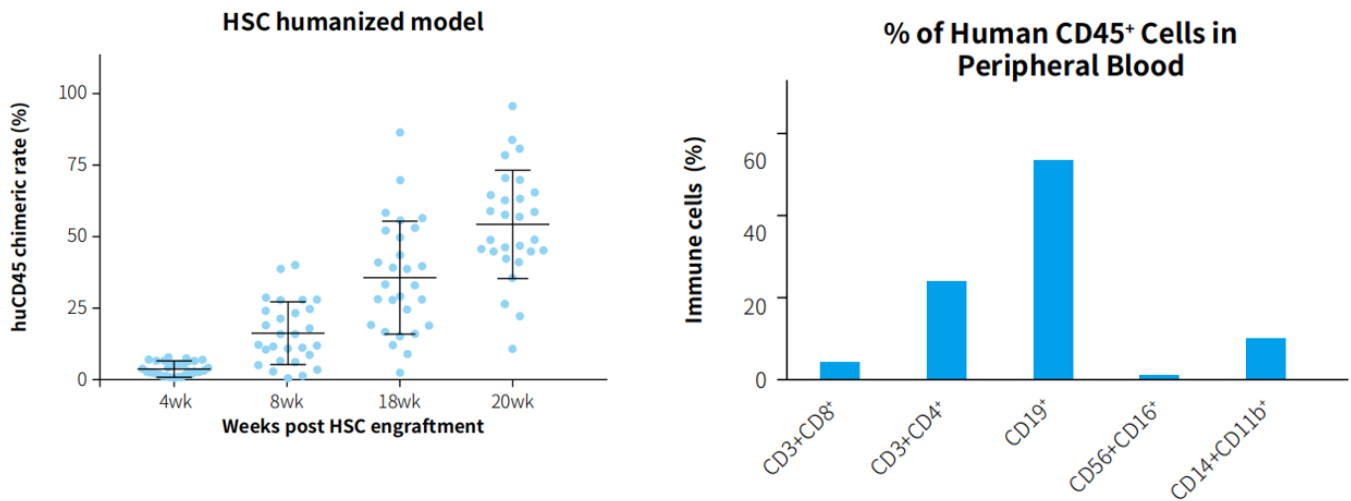


Fig12. Analysis of peripheral blood lymphocyte subpopulations of NMG mice after implantation of human CD34+ HSC at different times.

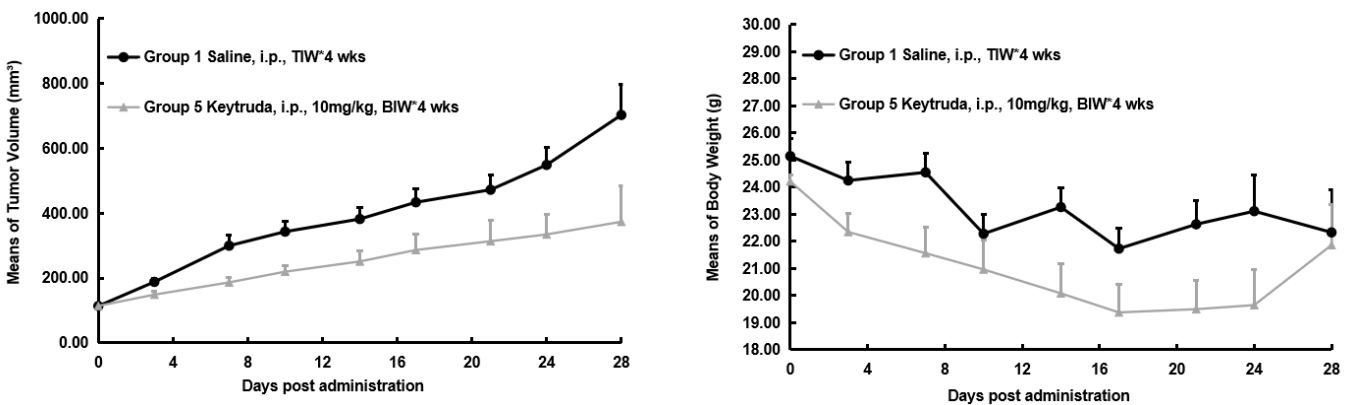


Fig13. Drug efficacy evaluation study performed in NMG mice reconstituted with hCD34+ cells. Humanized NMG mice reconstituted with human CD34+ cells were i.v. injected with MDA-MB-231 cells.

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