

h4-1BB(2)

Nomenclature	C57BL/6Smoc- <i>Tnfrsf9</i> ^{tm2(TNFRSF9)Smoc}
Cat. NO.	NM-HU-190077
Strain State	Repository Live

Gene Summary

Gene Symbol Tnfrsf9	Synonyms	ILA; Ly63; 4-1BB; Cd137; CDw137; AA408498; AI325004; A930040I11Rik
	NCBI ID	21942
	MGI ID	1101059
	Ensembl ID	ENSMUSG00000028965
	Human Ortholog	TNFRSF9

Model Description

The endogenous mouse *Tnfrsf9* gene was replaced by human TNFRSF9(4-1BB) gene. While h4-1BB mice (Stock No. NM-HU-00099) have been pulled from shelves for some reasons.

Research Application: Immunotherapy, Cancer research, Drug screening

*Literature published using this strain should indicate: h4-1BB(2) mice (Cat. NO. NM-HU-190077) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

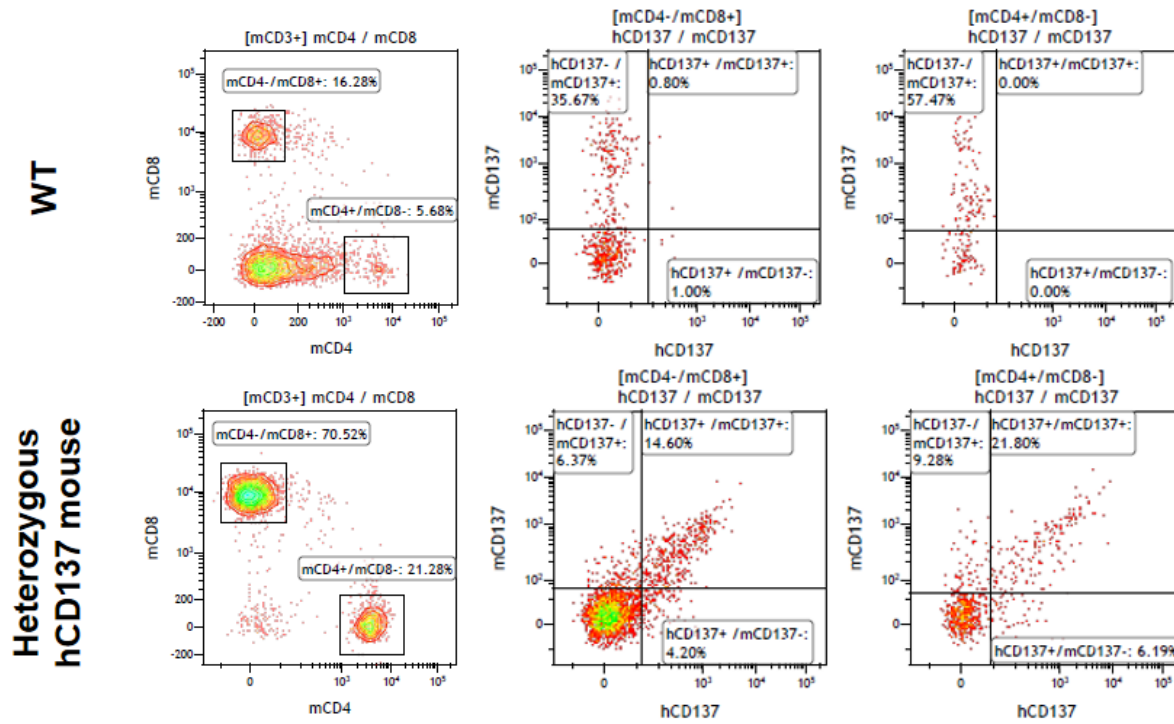


Figure 1. Expression of humanized CD137(4-1BB) in the activated spleen lymphocytes of heterozygous humanized 4-1BB mice is detected by FACS.

The spleen lymphocytes of heterozygous humanized 4-1BB mice were activated by anti-CD3 and anti-CD28 for 48 hours, and then collected for staining. The expression of humanized 4-1BB was detected by FACS. The results showed that the active expression of humanized 4-1BB can be detected in both activated CD4⁺ and CD8⁺ T lymphocytes collected from heterozygous humanized 4-1BB mice. (Cooperation with CrownBio)

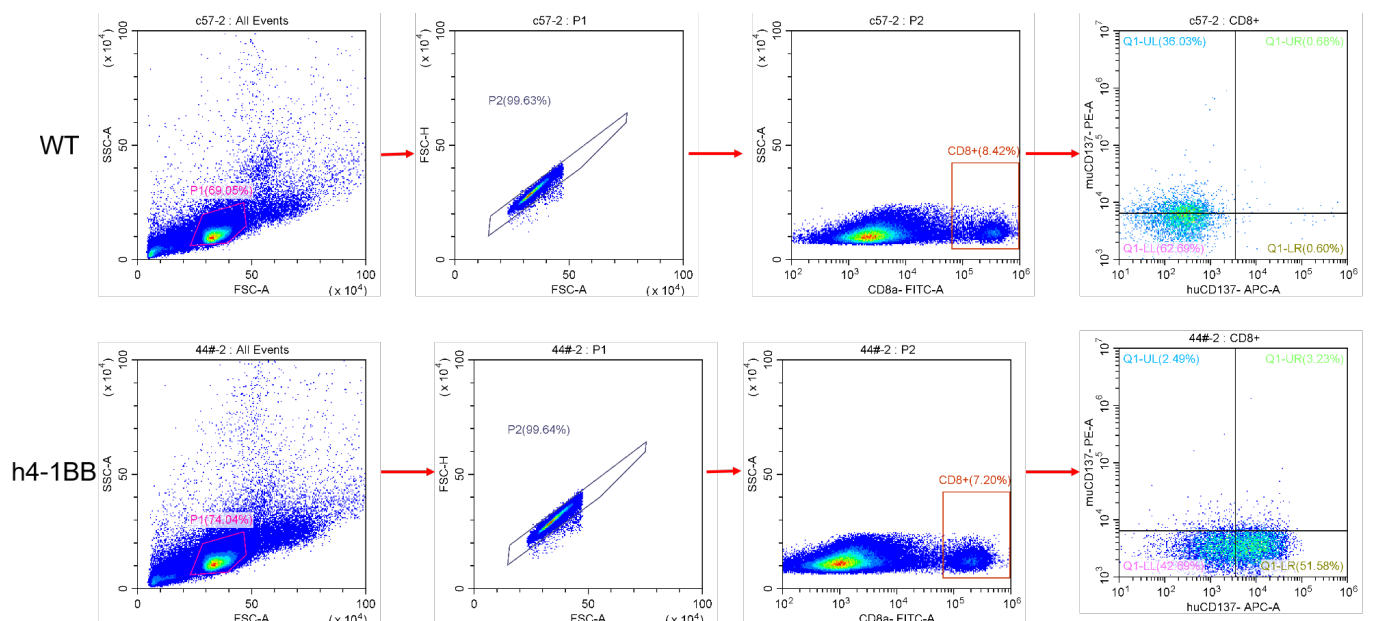


Figure 2 Analysis of human 4-1BB(CD137) expression in the spleen by FACS. The homozygous KI mouse expresses human 4-1BB on the CD8⁺ T cells.

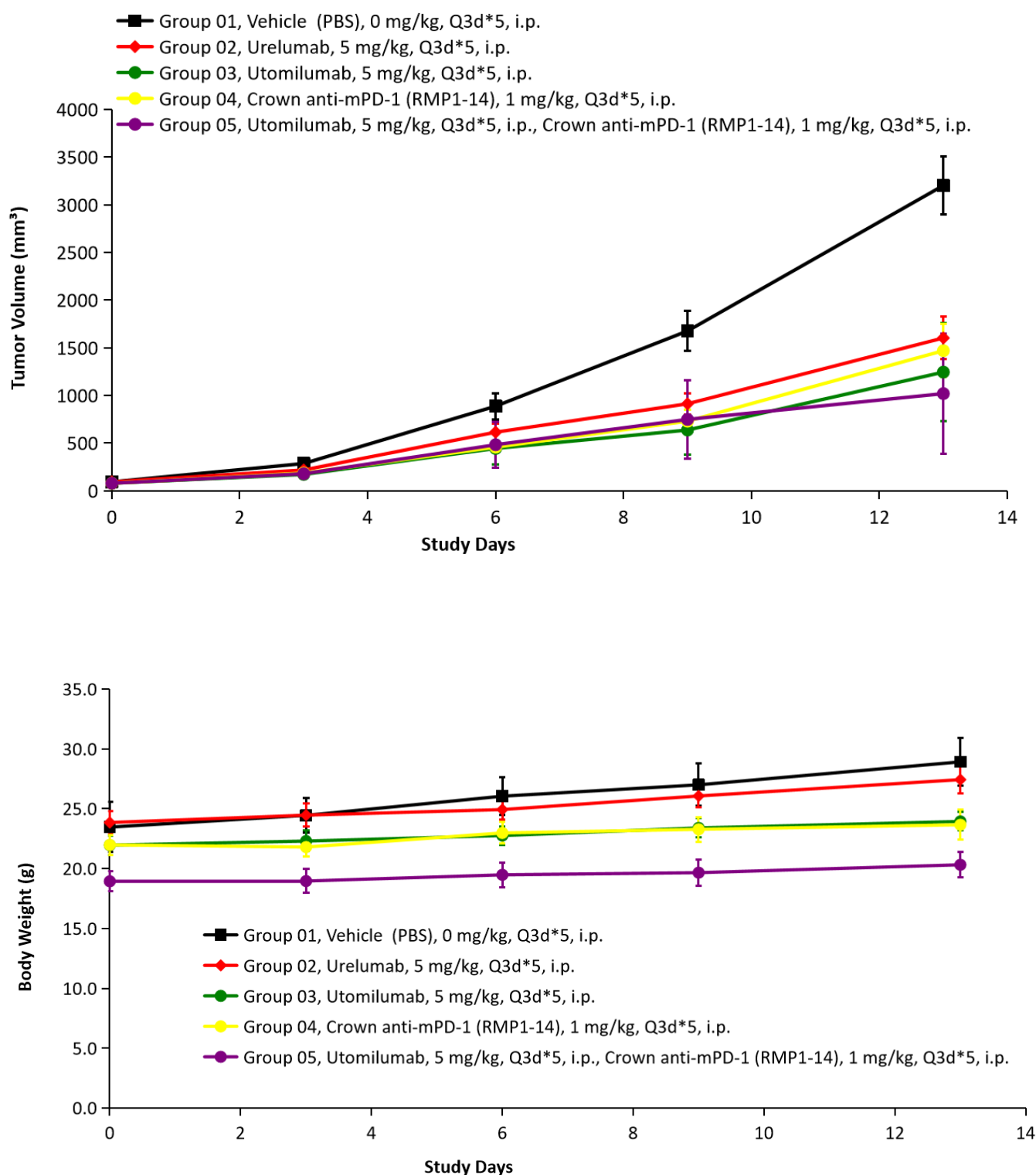


Figure 3. In vivo validation of humanized 4-1BB mice. Humanized 4-1BB mice were inoculated with MC38 colon cancer cells, and were randomly assigned into different groups (n=6) when the tumors grew to a volume of 100 mm³. Human-specific, 4-1BB antibody (Urelumab or Utomilumab) was given every three days (Q3D) for two weeks (In collaboration with Crownbio).