

Rag2-KO

Nomenclature	C57BL/6Smoc- <i>Rag2</i> ^{em2Smoc}
Cat. NO.	NM-KO-190429
Strain State	Repository Live

Gene Summary

Gene Symbol Rag2	Synonyms	Rag-2
	NCBI ID	19374
	MGI ID	97849
	Ensembl ID	ENSMUSG00000032864
	Human Ortholog	RAG2

Model Description

Partial exon 3 of Rag2 gene was deleted to generate Rag2 knockout mice. Deletion of this region will cause frameshift and result in loss of function of mouse Rag2 gene.

Research Application: Immunodeficiency,tumor-bearing model

*Literature published using this strain should indicate: Rag2-KO mice (Cat. NO. NM-KO-190429) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Ulcerative Colitis	Phenotype(s)	MGI:4360989 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Tbx21-KO(NM-KO-190157) mice.
	Reference(s)	Garrett WS, Lord GM, Punit S, Lugo-Villarino G, Mazmanian SK, Ito S, Glickman JN, Glimcher LH, Communicable ulcerative colitis induced by T-bet deficiency in the innate immune system. Cell. 2007 Oct 5;131(1):33-45

Severe Combined Immunodeficiency, Autosomal Recessive, T Cell-Negative, B Cell-Negative, Nk Cell-Positive	Phenotype(s) MGI:2174910
	Reference(s) Shinkai Y, Rathbun G, Lam KP, Oltz EM, Stewart V, Mendelsohn M, Charron J, Datta M, Young F, Stall AM, Alt FW, RAG-2-deficient mice lack mature lymphocytes owing to inability to initiate V(D)J rearrangement. Cell. 1992 Mar 6;68(5):855-67

Validation Data

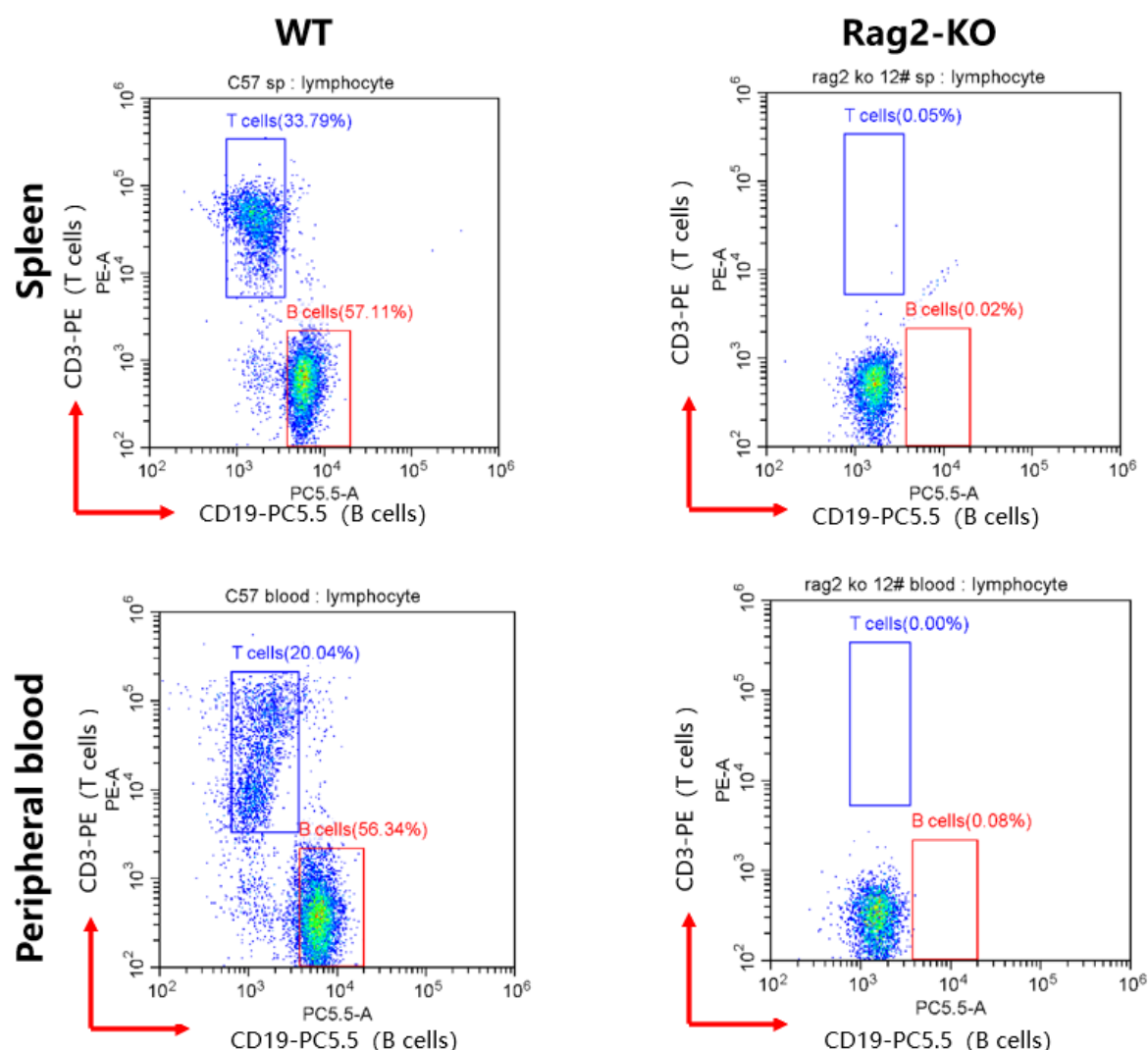


Figure 1. Loss of T,B cells in Rag2(-/-) mice.

Splenocytes and blood cells of Rag2 knockout mice were isolated. Fractions of T and B cells were characterized using flow-cytometry.

Publications

[E4BP4-mediated inhibition of T follicular helper cell differentiation is compromised in autoimmune diseases](#)

References: The Journal of Clinical Investigation

[Induction of Foxp3 and activation of Tregs by HSP gp96 for treatment of autoimmune diseases](#)

References: iScience