MOUSE STRAIN DATASHEET

B6J.129P2-Traf2tm1Mak/MmjaxJ

MMRRC Stock No: 44043-JAX | ***traf2*** -

Congenic,Targeted Mutation

CRYO RECOVERY

ORDER AT MMRRC JAX

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

Overview

Also Known As: *traf2*-

Traf2 (TNF receptor-associated factor 2) knock-out mice exhibit a high percentage of perinatal lethality, lymphopenia, high levels of

serum TNF and an increased susceptibility to TNF-induced cell death. These mice may be useful for studies of TNF signaling and TNF-induced apoptosis.

Donating Investigator

Dr. Tak Mak, University Health Network/Un of Toronto

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GENETIC OVERVIEW

Genetic Background	Generation

Traf2^{tm1Mak}

Allele Type	Gene Symbol	Gene Name
Targeted (Null/Knockout)	*Traf2*	TNF receptor-associated factor 2

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools
Developmental Biology Research
Apoptosis Research
Immunology, Inflammation and Autoimmunity Research

VIEW ALL RESEARCH APPLICATIONS

Details

Detailed Description

The *Traf2* (TNF receptor-associated factor 2) gene belongs to a family of six intracellular signal transducers and is a component of the TNFR1 and TNFR2 complexes that are formed following TNF stimulation. Mice homozygous for this knock-out allele appear normal at birth, but become progressively runted and most die by 10-14 days. Although no developmental or morphological abnormalities are observed, the viability of homozygous embryos decreases after E14.5, the effect is more pronounced when the genetic background contains more alleles from C57BL/6. At death, mice are 20% to 50% the size of normal controls and exhibit decreased muscle mass and fat deposits. In addition, both the thymus and spleen are depleted of lymphocytes. Peripheral blood cells show loss of both T and B lymphocytes and relative granulocytosis. In the absence of *Traf2* serum TNF levels are increased and thymocytes and other hematopoietic progenitors become susceptible to TNF-induced cell death. Examination of *Traf2*-deficient cells reveals a severe reduction in TNF-mediated JNK/SAPK activation, but a mild effect on NF-kappaB activation. These mice may be useful for studies of TNF signaling and TNF-induced apoptosis.

Development

Control Suggestions

Selected References

Genetics

Traf2^{tm1Mak}

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

TECHNICAL SUPPORT CHAT

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
Separated PCR:*Traf2*^{tm1Mak}
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred to wildtype siblings. Most homozygotes die by 10-14 days.
Additional Breeding and Husbandry Support

Mating System
+/+ sibling x Heterozygote
Heterozygote x +/+ sibling
Heterozygote x C57BL/6J (000664)
C57BL/6J (000664) x Heterozygote

Citation
When using the *traf2*$^{-}$ mouse strain in a publication, please cite the originating article(s) and include MMRRC stock #44043 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions
Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

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