Also Known As: Batf

These knockout mice lack exons 1-2 of the Batf gene, abolishing gene function. This strain may be useful for studying T17 cells differentiation associated with Multiple Sclerosis and Experimental Autoimmune Encephalomyelitis.

Donating Investigator
Dr. Kenneth Murphy, Washington Univ School of Medicine

GENETIC OVERVIEW

<table>
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<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tr>
<td>Batf^tm1.1Kmm</td>
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Allele Type | Gene Symbol | Gene Name |
------------|-------------|-----------|
Targeted (Null/Knockout) | Batf | basic leucine zipper transcription factor, ATF-like |

RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research
Neurobiology Research

BASE PRICE

129S-Batf^tm1.1Kmm/J
Stock No: 013757 | Batf

Coisogenic, Targeted Mutation

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

Detailed Description

These knockout mice lack exons 1-2 of the basic leucine zipper transcription factor (Batf), ATF-like gene, abolishing gene function. Mice that are homozygous for this allele are viable and fertile. Batf is highly expressed in T helper (Th) 1, Th 2 and Th 17 cells. Batf is required for the differentiation of interleukin (IL)-17-producing Th 17 cells which are CD4^+ T cells that coordinate inflammatory responses in host defense. These mice exhibit normal Th 1 and Th 2 differentiation, but show a defect in Th 17 differentiation with a reduction in IL-17 production, but maintain normal levels of IL-2, interferon (IFN)-γ, and IL-10 under Th 17 conditions. Since Th 17 cells are the major pathogenic population in experimental autoimmune encephalomyelitis (EAE), these Batf^{−/−} mice are completely resistant EAE even when immunized with myelin oligodendrocyte glycoprotein peptide 35-55 (MOG_{35-55}), a peptide known to cause demyelination associated with multiple sclerosis (MS) and EAE.

Development

Control Suggestions

Selected References

Genetics

Batf^{tm1.1Kmm}

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype
Technical Support

Genotyping Protocols
Standard PCR: Batf
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, homozygous mice may be bred together.

Additional Breeding and Husbandry Support

Citation
When using the Batf mouse strain in a publication, please cite the originating article(s) and include JAX stock #013757 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

Pricing & Availability

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

<table>
<thead>
<tr>
<th>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous for Batf&lt;tm1.1Kmm&gt;</td>
<td>$2,854.50</td>
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Related Strains

- All
- By Allele
- By Gene
- By Collection

All Related Strains