STOCK Trpc1\textsuperscript{tm1Lbi}/Mmjax

MMRRC Stock No: 37347-JAX | Trpc1-

Targeted Mutation

CRYO RECOVERY

ORDER AT MMRRC JAX

Also Known As: Trpc1-

Trpc1 (transient receptor potential cation channel, c1) knockout mice exhibit an altered allergic immune response and nervous system electrophysiology.

Donating Investigator

Lutz Birnbaumer, National Institutes of Health

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GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Trpc1\textsuperscript{tm1Lbi}</td>
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<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Trpc1</td>
<td>transient receptor potential cation channel, subfamily C, member 1</td>
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</tbody>
</table>

VIEW GENETICS

RESEARCH APPLICATIONS

- Immunology, Inflammation and Autoimmunity Research
- Cell Biology Research
- Neurobiology Research
- Cardiovascular Research

VIEW ALL RESEARCH APPLICATIONS

Details
Detailed Description

Trpc1 (transient receptor potential cation channel, c1) encodes a mechanosensitive and store-operated cation channel. Homozygous knockout mice exhibit reduced allergan-induced pulmonary leukocyte infiltration and reduced T helper 2 responses. Splenocytes exposed to allergen have impaired proliferation and IL2 production. In addition, members of the TRPC family are associated with epileptogenesis and neuronal excitotoxicity. Trpc1 knockout mice have reduced epileptiform burst firing induced by m GluR agonists. Plateau amplitudes and spike numbers per burst are reduced. This strain may be useful for studying regulation of allergan-induced lung hyperresponsiveness and seizure physiology.

Development

Control Suggestions

Selected References

Genetics

Trpc1	m1Lbi

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

High Resolution Melting: \textit{Trpc1}^{-m1Lbi}
Standard PCR: \textit{Trpc1}^{-m1Lbi}
Genotyping resources and troubleshooting

Breeding Considerations

While maintaining a live colony, these mice are bred as homozygotes.
Additional Breeding and Husbandry Support
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