FVB.129(Cg)-Atp2b4<sup>tm1Ges</sup>/Mmjax

MMRRC Stock No: 36807-JAX

Congenic, Targeted Mutation

ORDER AT MMRRC JAX

Overview

Also Known As: FVB.Cg-Atp2b4<sup>tm1Ges</sup>/Mmjax

Mice homozygous for a null Atp2b4 or PMCA4 (Ca++ transporting ATPase, plasma membrane 4) allele exhibit male infertility (due to loss of hyperactive sperm motility), increased apoptosis in portal vein smooth muscle cells, accelerated osteoclastogenesis, osteopenia, attenuated Ca signaling in B lymphocytes, and increased cardiac hypertrophy following pressure overload stimulation. This strain may be useful for studying calcium signaling in male infertility, lymphocytes, osteoclasts and smooth muscle contractility.

Donating Investigator

Gary E Shull, University of Cincinnati
GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Atp2b4&lt;sup&gt;tm1Ges&lt;/sup&gt;</td>
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<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>Atp2b4</td>
<td>ATPase, Ca++ transporting, plasma membrane 4</td>
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RESEARCH APPLICATIONS
Cardiovascular Research
Cell Biology Research
Immunology, Inflammation and Autoimmunity Research
Reproductive Biology Research
Internal/Organ Research

Details
Development
Control Suggestions
Selected References
Genetics
Atp2b4<sup>tm1Ges</sup>
Disease/Phenotype
Disease Terms
Research Areas By Genotype
Mammalian Phenotype Terms by Genotype
References
Genotyping Protocols
Separated PCR: Atp2b4<sup>Im1Ges</sup>
Genotyping resources and troubleshooting

Breeding Considerations
While maintaining a live colony, these mice are bred as heterozygotes or homozygous female x heterozygous male. Male mice homozygous for the mutation are infertile.
Additional Breeding and Husbandry Support

Citation
When using the FVB:129(Co)-Atp2b4<sup>Im1Ges</sup>/Mmjax mouse strain in a publication, please cite the originating article(s) and include MMRRC stock #36807 in your Materials and Methods section.

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

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Related Strains

- All
- By Allele
- By Gene
- By Collection

All Related Strains