Overview

Mice homozygous for the Gja1<sup>tm1Kdr</sup> knock-out die at birth from a failure in pulmonary gas exchange caused by a swelling and blockage of the right ventricular outflow tract from the heart. The mutation also predisposes mice to lens cataracts and causes a severe reduction of germ cell numbers in homozygous mutant mice of both sexes.

Donating Investigator

Dr. Gerald Kidder, University of Western Ontario
**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gja1&lt;sup&gt;tm1Kdr&lt;/sup&gt;</strong></td>
<td></td>
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<table>
<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>Gja1</td>
<td>gap junction protein, alpha 1</td>
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</tbody>
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**RESEARCH APPLICATIONS**

- Internal/Organ Research
- Sensorineural Research
- Developmental Biology Research
- Reproductive Biology Research
- Mouse/Human Gene Homologs
- Cardiovascular Research

**BASE PRICE**

Starting at: $2,595.00 Domestic price Cryo Recovery

**Details**

**Detailed Description**

Mice homozygous for the Gja1<sup>tm1Kdr</sup> targeted mutation die at birth. The cause of death is a failure in pulmonary gas exchange caused by a swelling and blockage of the right ventricular outflow tract from the heart. The cardiac abnormality involves a delay in the normal looping of the ascending limb of the heart tube, which includes the right ventricle and the outflow tract. This predisposes homozygous mutant mice to malformations of the subpulmonary outflow tract and tricuspid valve. The mutation also predisposes mice to lens cataracts and causes a severe reduction of germ cell numbers in homozygous mutant mice of both sexes. Both neonatal and adult mice heterozygous for the Gja1<sup>tm1Kdr</sup> targeted mutation have slower ventricular epicardial conduction of paced beats in the heart.

**Development**

**Control Suggestions**
Selected References

Genetics

Gja\textsubscript{1}\textsuperscript{tm1Kdr}

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
Standard PCR: Gja\textsubscript{1}\textsuperscript{tm1Kdr}
High Resolution Melting: Gja\textsubscript{1}\textsuperscript{tm1Kdr}
Genotyping resources and troubleshooting

Appearance
white-bellied agouti
Related Genotype: A\textsuperscript{w}/A\textsuperscript{w}

Citation
When using the B6.129-Gja\textsubscript{1}\textsuperscript{tm1Kdr}\textsuperscript{J} mouse strain in a publication, please cite the originating article(s) and include JAX stock #002201 in your Materials and Methods section.

Animal Health Reports
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.
We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a Dedicated Supply for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

Payment Terms and Conditions
Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. Therefore, we cannot guarantee a strain’s phenotype will meet all expectations. To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project.
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Related Strains
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Shipments have begun at our new facility, allowing increased access to JAX mouse models.

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TOMORROW'S CURES

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