Overview

Also known as: GluR2-

These Gria2 knock-out mice exhibit an increase in Ca\(^{2+}\) permeability and enhanced long-term potentiation.

Donating Investigator

IMR Colony, The Jackson Laboratory
**GENETIC OVERVIEW**

**Genetic Background**
000664 C57BL/6J

**Gria2<sup>tm1Rod</sup>**

<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>Gria2</td>
<td>glutamate receptor, ionotropic, AMPA2 (alpha 2)</td>
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**RESEARCH APPLICATIONS**

Cell Biology Research  
Neurobiology Research

**BASE PRICE**

Starting at:  
$2,854.50 Domestic price Cryo Recovery

**Details**

Mice homozygous for the *Gria2<sup>tm1Rod</sup>* targeted mutation (GluR2-deficient) were originally reported to be about one half the size of their normal littermates by two to three weeks of age, leading to some preweaning mortality. Growth retardation and mortality can be diminished by reducing litter size and eliminating some competition for the mother's milk. By eight weeks of age, homozygotes appear similar in size and weight to their unaffected littermates. Neurons from *Gria2*-deficient mice exhibit a 9-fold increase in Ca<sup>2+</sup> permeability and enhanced long-term potentiation (LTP). Antagonists of AMPA and NMDA receptors block all the enhanced LTP seen in homozygous null mice. Changes in pain thresholds, sensitivity to anaesthetics, focal cerebral ischemia, apoptosis of neuronal subpopulations and learning impairments are also observed.

*It has been the experience of The Jackson Laboratory that no homozygous animals have been recovered from heterozygous sibling matings.*

*In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. This is the case for the strain above. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.*
Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred with wildtype siblings or to C57BL/6J inbred mice. In our colonies at The Jackson Laboratory, no homozygous offspring are produced from heterozygous breedings. The expected coat color from breeding is black.

Additional Breeding and Husbandry Support

Citation
When using the GluR2- mouse strain in a publication, please cite the originating article(s) and include JAX stock #003143 in your Materials and Methods section.

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.
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

- All
- By Allele
- By Gene
- By Collection

All Related Strains