STOCK Gad2 tm2(cre)Jzh/J

Stock No: 010802 | Gad2-IRE5-Cre

Targeted Mutation

PLACE ORDER
0–2 week average lead time for 10 or more mice with age range

Also Known As: Gad2-IRE5-Cre

Gad2-IRE5-Cre knock-in mice have Cre recombinase expression directed to GAD2 positive neurons. These mice may be used to generate conditional mutations for studying GAD2 cell populations. Of note, the same Gad2-IRE5-Cre knock-in allele is also available as C57BL/6N-congenic (Stock No. 019022) and C57BL/6J-congenic (Stock No. 028867).

Donating Investigator
Z. Josh Huang, Cold Spring Harbor Laboratory

READ MORE +

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td></td>
<td>F7×n1f2</td>
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<td>(2017-11-17 00:00:00)</td>
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Gad2^tm2(cre)Jzh

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tr>
<td>Targeted (Recombinase-expressing)</td>
<td>Gad2</td>
<td>glutamic acid decarboxylase 2</td>
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</tbody>
</table>

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools
Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS
**Details**

**Detailed Description**

The Gad2-IRES-Cre knock-in allele has an internal ribosome entry site and Cre recombinase in the 3' UTR of the glutamic acid decarboxylase 2 locus (Gad2). As such, the endogenous Gad2 promoter/enhancer elements direct Cre expression to GAD2 positive neurons. When Gad2-IRES-Cre mice are bred with mice containing loxP-flanked sequences, Cre-mediated recombination will result in deletion of the floxed sequences in the Gad2-expressing cells (GAD2 positive neurons) of the offspring. Gad2 expression from the Gad2-IRES-Cre allele has not been evaluated. Additional phenotype information described below.

In 2010, the donating investigator reported Cre recombinase activity is specific and efficient (largely recapitulates the endogenous Gad2 expression pattern with highly efficient recombination). The donating investigator did not examine cre expression in tissues other than brain. Gad2 expression from the Gad2-IRES-Cre allele was not evaluated. They also report that homozygous mice are viable and fertile.

For characterization information of the Gad2-IRES-Cre knock-in allele, see images at the Allen Institute for Brain Science website (Gad2-IRES-Cre images).

If the recombinase activity pattern of this allele is further characterized by the Genetic Resource Science group at The Jackson Laboratory, such findings will be reported on the Mouse Genome Informatics (MGI) Allele Detail entry (Gad2<sup>tm2[cre12j]h</sup>). This same information would also be found searching the MGI Recombinase Activity database.

**Development**

**Expression Data**

**Control Suggestions**

**Selected References**

**Genetics**

- **Gad2<sup>tm2[cre12j]h</sup>**

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Genotype**
Genotyping Protocols
MELT: Gad2^{tm2(cre)Zjh Alternate1
Genotyping resources and troubleshooting

Dietary Information
LabDiet® 5K52 formulation (6% fat)

Breeding Considerations
Homozygous mice are viable and fertile. When maintaining a live colony at The Jackson Laboratory Repository, homozygous mice may be bred together.
Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Citation
When using the Gad2-ires-Cre mouse strain in a publication, please cite the originating article(s) and include JAX stock #010802 in your Materials and Methods section.

Facility Barrier Level Descriptions
AX10 (Standard)

Pricing & Availability
0–2 week average lead time for 10 or more mice with age range

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<td>SEX</td>
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<tr>
<td>Male</td>
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<tr>
<td>Male</td>
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### Related Products and Services

- **Frozen Mouse Embryo**: $2,595.00 per straw or vial

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Email: TechTran@jax.org

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Related Strains

- All
- By Allele
- By Gene