Gad2-IRES-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-IRES-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
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 (Gad2tm2(cre)Zjh). This same information would also be found searching the MGI Recombinase Activity database.
Gad2<sup>m2(cre)Zjh</sup>

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

Genotyping Protocols
Standard PCR: Gad2 Alternate1
Separated PCR: GAL Panel-B6J vs. 129S
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.

Animal Health Reports
Facility Barrier Level Descriptions

AX10 (Standard)
Pricing & Availability

Live mice available in varying quantities. Ask Customer Service for details.

Available

Domestic

International

Pricing effective for USA, Canada and Mexico shipping destinations

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<th>LIVE MOUSE</th>
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<th>GENOTYPE</th>
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RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo

STOCK Gad2\(^{tm2(cre)Zjh}\)/J $2595.00

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.

THE JACKSON LABORATORY'S GENOTYPE PROMISE

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. We do not guarantee breeding performance and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

Terms Of Use

TERMS OF USE

General Terms and Conditions

LICENSING INFORMATION

Phone: 207-288-6470
Email: TechTran@jax.org

Related Strains

All

By Allele

By Gene

By Collection