STOCK Gli1tm3(cre/ERT2)Alj/J

Stock No: 007913  |  Gli1-CreER T2

Targeted Mutation

REPOSITORY LIVE

PLACE ORDER

3-6 week lead time for most orders depending on quantity and age range requested

Also Known As: Gli1-CreERT2

When these Gli1-CreERT2 mice are bred with mice containing a loxP-flanked sequence of interest, tamoxifen-inducible, Cre-mediated recombination will result in deletion of the flanked sequences in Gli1 expressing cells; making them useful for studying axis patterning, proliferation, and cell fate specification of Hedgehog responding cells at different stages of embryogenesis.

Donating Investigator

Dr. Alexandra L Joyner, Memorial Sloan-Kettering Cancer Center

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<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<td>?+pN2F5</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 (Recombinase-expressing, Inducible)</td>
<td>Gli1</td>
<td>GLI-Kruppel family member GLI1</td>
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</table>

VIEW GENETICS

Research Tools
Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS
## Important Note
This strain is on a mixed background and produces mice with both black and albino coat colors.

### Detailed Description
Mice homozygous for this Gli1-CreER<sup>T2</sup> targeted allele are viable and fertile (although homozygous males are reported to have breeding problems). Under control of the endogenous upstream promoter/enhancer elements, tamoxifen-inducible cre activity is observed in cells that have received positive Hedgehog/Sonic Hedgehog signaling. The Cre-ERT2 fusion protein consists of Cre recombinase fused to a triple mutant form of the human estrogen receptor which does not bind its natural ligand (17β-estradiol) at physiological concentrations but will bind the synthetic estrogen receptor ligands 4-hydroxytamoxifen and, with lesser sensitivity, ICI 182780. Restricted to the cytoplasm, Cre-ERT2 can only gain access to the nuclear compartment after exposure to tamoxifen. To counteract the mixed estrogen agonist effects of tamoxifen injections, which can result in late fetal abortions in pregnant mice, progesterone may be coadministered. When these Gli1-CreER<sup>T2</sup> mice are bred with mice containing a loxP-flanked sequence of interest, tamoxifen-inducible, Cre-mediated recombination will result in deletion of the flanked sequences in Gli1 expressing cells; making them useful for studying axis patterning, proliferation, and cell fate specification of Hedgehog responding cells at different stages of embryogenesis.

### Development

### Expression Data

### Control Suggestions

### Selected References

### Genetics

### Gli<sup>1<sub>tm3CreERT2</sub></sup>Aj

### Disease/Phenotype

### Disease Terms

### Research Areas By Genotype

### Mammalian Phenotype Terms by Genotype
Genotyping Protocols
Probe: Generic Cre Probe
MELT: Generic Cre Melt Curve Analysis
MELT: GlI11tm3cre/ERT2Alj, alternate3
Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred together or to wildtype mice from the colony. The donating investigator reports that homozygous males do not breed well.
Additional Breeding and Husbandry Support

Mating System
Wild-type x Heterozygote
Heterozygote x Wild-type

Appearance
This strain is on a mixed background and produces mice with both black and albino coat colors.

Citation
When using the GlI1-CreER12 mouse strain in a publication, please cite the originating article(s) and include JAX stock #007913 in your Materials and Methods section.
Facility Barrier Level Descriptions

Pricing & Availability
3–6 week lead time for most orders depending on quantity and age range requested

Repository Live

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<th>International</th>
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<th>PRICE</th>
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<tbody>
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<td></td>
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Breeder Pair

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| Frozen Mouse Embryo | $2,595.00 per straw or vial |

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Related Strains

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<tr>
<td>By Allele</td>
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<tr>
<td>By Gene</td>
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<tr>
<td>By Collection</td>
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All Related Strains
ELLSWORTH FACILITY OFFICIALLY OPEN AND OPERATIONAL
Shipments have begun at our new facility, allowing increased access to JAX mouse models.

Leading the search for
TOMORROW’S CURES

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