STOCKb x^{tm2.1(cre/ERT2)Jyhl} J

Stock No: 022135 | Gbx2 CreER

Targeted Mutation

CRYO RECOVERY

PLACE ORDER

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.
Also Known As: Gbx2\(^{\text{CreER}}\)

This strain expresses a CreER\(^{\text{T2}}\)-IRES-EGFP cassette from the gastrulation brain homeobox 2 (Gbx2) promoter/enhancer elements. These mice may be useful for lineage mapping of thalamic neuronal precursor cells.

Donating Investigator

James Li, UConn Health Center

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**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gbx2(^{tm1.1(cre/ERT2)Jyhl})</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Recombinase-expressing, Inducible)</td>
<td>Gbx2</td>
<td>gastrulation brain homeobox 2</td>
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</tbody>
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**RESEARCH APPLICATIONS**

Neurobiology Research
Research Tools
Developmental Biology Research

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**BASE PRICE**

Starting at:

$2,854.50 Domestic price Cryo Recovery

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**Detailed Description**

The Gbx2\(^{\text{CreER}}\) allele expresses a CreER\(^{\text{T2}}\)-internal ribosome entry site (IRES)-enhanced green fluorescent protein (EGFP) cassette from the Gbx2 promoter/enhancer elements. Gbx2 is induced, and EGFP immunofluorescence is observed in thalamic neuronal
precursor cells in the diencephalon. Cre-ER\textsuperscript{12} fusion gene activity is inducible; observed in the same cells only following tamoxifen administration. When Gbx2\textsuperscript{creER} mice are bred with mice containing loxP-flanked sequence, tamoxifen-inducible, Cre-mediated recombination will result in deletion of the floxed sequences in the Gbx2-expressing cells of the offspring. Heterozygous mice are viable and fertile. Homozygotes lack a cerebellum and thalamocortical projections, and die at birth.

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 (OHT or tamoxifen) 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.
Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred to wildtype mice from the colony. Homozygotes lack a cerebellum and thalamocortical projections, and die at birth.

Additional Breeding and Husbandry Support

Citation
When using the Gbx2<tm1.1(cre/ERT2)Jyhl> mouse strain in a publication, please cite the originating article(s) and include JAX stock #022135 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.

Domestic
Pricing effective for USA, Canada and Mexico shipping destinations

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or wildtype for Gbx2&lt;tm1.1(cre/ERT2)Jyhl&gt;</td>
<td>$2,854.50</td>
</tr>
</tbody>
</table>

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.

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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...
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Email: TechTran@jax.org

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