STOCK Trp53tm18rd Brca1tm1Ash Tg(LGB-cre)74Ac/J

Stock No: 012620 | BLG-Cre; Brca1 F22-24; p53 KO

Targeted Mutation, Transgenic

PLACE ORDER

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

Also Known As: BLG-Cre; Brca$1^{F_{22-24}/F_{22-24}}$, p53+/-, BLG-Cre; Brca$1^{F_{22-24}}$, p53 KO

These mice carry the beta-lactoglobulin Cre (BLG-Cre) transgene, are homozygous for floxed exons 22-24 of the breast cancer 1 (Brca1) allele, and are heterozygous for p53 tumor-suppressor gene (Trp53) deficiency. This strain may be useful for studying human basal-like cancer and breast cancer, as well as providing a useful tool for testing new therapeutics.

Donating Investigator

Afshan McCarthy, The Breakthrough Toby Robbins Breast Canc

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$F^7+F^{22}$</td>
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</table>

**Tg(LGB-cre)74Acl**

Allele Type

Transgenic (Recombinase-expressing)

**Trp53$^{1m1Brd}$**

Allele Type

Targeted (Null/Knockout)

Gene Symbol

Trp53

Gene Name

transformation related protein 53

**Brca1$^{1m1Aash}$**

Allele Type

Targeted (Conditional ready (e.g. floxed), No functional change)

Gene Symbol

Brca1

Gene Name

breast cancer 1, early onset

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools
Endocrine Deficiency Research
Cancer Research
Details

Important Note
To induce the tumor development in these mice, the donating investigator reports that BLG-Cre; Brca1\textsuperscript{tm1Aash} ; Trp53\textsuperscript{+/−} mice should be allowed to go through two rounds of pregnancy and then set aside to allow Cre activation and the loss of Brca1 function.

Detailed Description
BLG-Cre; Brca1\textsuperscript{tm1Aash} ; Trp53\textsuperscript{+/−} mice that carry the beta-lactoglobulin Cre (BLG-Cre) transgene are homozygous for floxed exons 22-24 of the breast cancer 1 (Brca1) allele, and are heterozygous for p53 tumor-suppressor gene (Trp53) deficiency. Mice of this genotype are viable, fertile, normal in size and do not display any behavioral abnormalities. BLG-Cre; Brca1\textsuperscript{tm1Aash} ; Trp53\textsuperscript{+/−} females have expression of the BLG-Cre transgene during lactation; which leads to loss of Brca1 function in the mammary gland. This results in formation of mammary tumors exhibiting high grade central necrosis and metaplastic elements in the form of spindle cell and squamous cell differentiation; as seen in human basal-like breast cancers and BRCA1 mutation carriers. Heterozygosity for the mutant p53 allele accelerates the formation of mammary tumors. This strain may be useful for studying human basal-like cancer and breast cancer, as well as providing a useful tool for testing new therapeutics.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(LGB-cre)74Acl

Trp53\textsuperscript{tm1Brd}

Brca1\textsuperscript{tm1Aash}
Genotyping Protocols
MELT: Tg(LGB-cre)74Acl
Standard PCR: Trp53<sup>tm1Brd</sup>
Standard PCR: Brca1<sup>tm1Aash</sup>
Genotyping resources and troubleshooting

Dietary Information
LabDiet<sup>®</sup> 5K52 formulation (6% fat)

Breeding Considerations
To induce the tumor development in these mice, the donating investigator reports that BLG-Cre; Brca1<sup>F22-24/F22-24</sup>; p53<sup>+/−</sup> mice should be allowed to go through two rounds of pregnancy and then set aside to allow Cre activation and the loss of Brca1 function.

Additional Breeding and Husbandry Support

Mating System
Heterozygous Homozygous Noncarrier x Wildtype Homozygous Hemizygous AND Wildtype Homozygous Noncarrier x Heterozygous Homozygous Hemizygou

Citation
When using the BLG-Cre; Brca1<sup>F22-24</sup>; p53 KO mouse strain in a publication, please cite the originating article(s) and include JAX stock #012620 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

Domestic | International
Pricing effective for USA, Canada and Mexico shipping destinations
## Live Mouse

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<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Heterozygous for Trp53&lt;sup&gt;im1Brd&lt;/sup&gt;, Homozygous for Brca1&lt;sup&gt;im1Aash&lt;/sup&gt;, Hemizygous for Tg(LGB-cre)&lt;sup&gt;74Acl&lt;/sup&gt;</td>
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<tr>
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<td>Male</td>
<td>Heterozygous for Trp53&lt;sup&gt;im1Brd&lt;/sup&gt;, Homozygous for Brca1&lt;sup&gt;im1Aash&lt;/sup&gt;, Hemizygous for Tg(LGB-cre)&lt;sup&gt;74Acl&lt;/sup&gt;</td>
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## Breeder Pair

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## Related Products and Services

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<th>Product</th>
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<tr>
<td>Frozen Mouse Embryo</td>
<td>$2,595.00 per straw or vial</td>
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Email: TechTran@jax.org

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Related Strains

- All
- By Allele
- By Gene
- By Collection
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<th>Strain Name</th>
<th>Stock No.</th>
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<tr>
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<td>cre</td>
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<td>029721</td>
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<td>B6.129P2-Lyz2tm1(cre)flo/J</td>
<td>004781</td>
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