B6.Cg-Ndor1 Tg(UBC-CreERT2)1Ejp/1J

Stock No: 007001 | UBC-Cre-ERT2

Congenic, Transgenic

AVAILABLE

PLACE ORDER

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

Overview

Also Known As: UBC-Cre-ERT2

When these UBC-Cre-ERT2 mice are bred with mice containing a loxP-flanked sequence of interest, tamoxifen-inducible, Cre-
mediated recombination will result in deletion of the floxed sequences in widespread cells/tissues.

In Goodwin et al. 2019 Genome Res. 29:494, it was discovered that the transgene integrated into chromosome 2 causing a 5 bp deletion in the NADPH dependent diflavin oxidoreductase 1 locus (Ndor1).

Of note, UBC-Cre-ERT2 transgenic mice are available with different amounts of backcrossing onto the C57BL/6 genetic background. As of 2019, the live colony of Stock No. 007001 has been backcrossed a total of at least 11 generations (the last seven backcross generations were onto C57BL/6J). As of 2019, the live colony of Stock No. 008085 has been backcrossed a total of at least seven generations (the last three backcross generations were onto C57BL/6J).

Donating Investigator
Eric Brown, Univ of Penn - Abramson Inst (AFCRI)

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
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<tbody>
<tr>
<td>N4/N9F1</td>
<td></td>
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<tr>
<td>(2018-08-08 00:00:00)</td>
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Ndor1 Tg(UBC-cre/ERT2)1Ejb

Allele Type
Transgenic (Recombinase-expressing, Inducible)

RESEARCH APPLICATIONS
Research Tools

BASE PRICE
Starting at:

$236.78 Domestic price for female
$315.29 Domestic price for breeder pair

VIEW PRICE LIST
Detailed Description

These transgenic mice express a Cre-ERT2 fusion gene under the control of the human ubiquitin C (UBC) promoter. The transgene integrated into chromosome 2 causing a 5 bp deletion in Ndo1 (NADPH dependent diflavin oxidoreductase 1). Mice hemizygous for this Cre-ERT2 transgene are viable and fertile. Mice from this founder line have strong tamoxifen-inducible cre activity in all reported tissue types. 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 (17\'-estradiol) at physiological concentrations but will bind the synthetic estrogen receptor ligands 4-hydroxytamoxifen (OHT) and, with lesser sensitivity, ICI 182780. Restricted to the cytoplasm, Cre-ERT2 can only gain access to the nuclear compartment after exposure to OHT. 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 Cre-ERT2 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 widespread cells/tissues.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Ndo1\textsuperscript{Tag(UBC-creERT2)1Ejb}

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CHAT OFFLINE

CONTACT TECHNICAL SUPPORT
Genotyping Protocols
QPCR: Generic Cre Quantitative PCR
MELT: Tg [UBC-cre/ERT2]1Ejb
Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, transgenic mice can be bred to wildtype (noncarrier) mice from the colony or to C57BL/6J inbred mice (Stock No. 000664). Attempts to breed hemizygous mice to hemizygous mice yielded no homozygous animals as determined by PCR (July 2008).

Additional Breeding and Husbandry Support

Mating System
Hemizygote x Noncarrier
Noncarrier x Hemizygote

Citation

Animal Health Reports
Facility Barrier Level Descriptions
AX10 (Standard)

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

<table>
<thead>
<tr>
<th>Domestic</th>
<th>International</th>
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**Live Mouse**

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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</thead>
<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Hemizygous for Ndor1 Tg[UBC-cre/ERT2]1Ejb</td>
<td>$236.78</td>
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<tr>
<td></td>
<td>Male</td>
<td>Hemizygous for Ndor1 Tg[UBC-cre/ERT2]1Ejb</td>
<td>$236.78</td>
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<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Noncarrier</td>
<td>$78.51</td>
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<tr>
<td></td>
<td>Male</td>
<td>Noncarrier</td>
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**Breeder Pair**

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<th>GENOTYPE</th>
<th>PRICE</th>
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</thead>
<tbody>
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<td>Female</td>
<td>Hemizygous for Ndor1 Tg[UBC-cre/ERT2]1Ejb</td>
<td>$315.29</td>
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<tr>
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