B6.129S-Sftpctm1[creERT2]Blih/J

Stock No: 028054 | Sftpct-CreER T2

Also Known As: Sftpct-CreERT2

These knockin Sftpct-CreER T2 mice express a tamoxifen-inducible cre recombinase from the endogenous promoter/enhancer elements of the Sftpct locus. When induced, cre activity is observed in Type II alveolar cells.

Donating Investigator

Brigid LM Hogan, Duke University Medical Center
Jason Rock, University of California, San Francisco

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N8+pN1F3</td>
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<td>(2017-08-03 00:00:00)</td>
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Sftpcttm1[cre/ERT2]Blih

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Recombinase-expressing, Inducible)</td>
<td>Sftpct</td>
<td>surfactant associated protein C</td>
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</tbody>
</table>

RESEARCH APPLICATIONS

Research Tools
Cancer Research

VIEW ALL RESEARCH APPLICATIONS
BASE PRICE
Starting at:
$263.00 Domestic price for female

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Details

Detailed Description

The Sftpc gene encodes pulmonary-associated surfactant protein C which is produced at high levels by type II alveolar epithelial cells in the lung. These Sftpc-CreERT² knock-in mice carry IRES-cre/ERT2 in the 3' UTR of the Sftpc gene. When crossed with a strain containing a loxp site flanked sequence of interest, the offspring are useful for generating tamoxifen-induced, Cre-mediated targeted deletions of the floxed sequences specifically in Type II alveolar cells of the lung. In adult mice after tamoxifen treatment, Cre recombinase activity is detected in approximately 85% of Sftpc expressing alveolar epithelial cells. No significant Cre recombinase activity is detected in the airway epithelium except in a few cells at the bronchioalveolar duct junction. There may also be low levels of Sftpc expression in tissues secreting lubricating fluids. Mice homozygous for this knock-in allele are viable and fertile.

Importantly, the donating investigator reports some spontaneous recombination is detected in the lung in the absence of tamoxifen. The level of spontaneous recombination at the time of donation from Dr. Rock (UCSF) was 5-10% - the same level as first reported. Dr. Hogan (Duke) reports that when continually maintained on the C57BL/6Ncr genetic background, they observed spontaneous recombination levels up to 25%.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Sftpc^{CreERT2/Bfl}

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References
Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
Standard PCR: Sftpctm1(cre/ERT2)Bln
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, these mice can be bred as homozygotes. Of note, the donating investigator reports that when continually maintained on the C57BL/6NCr genetic background, they observed spontaneous recombination levels up to 25%.
Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Citation
When using the Sftpctm1(cre/ERT2)Bln mouse strain in a publication, please cite the originating article(s) and include JAX stock #028054 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

AX18 (Maximum)

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

Repository Live

Domestic International
Pricing effective for USA, Canada and Mexico shipping destinations

Live Mouse

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Sftpctm1(cre/ERT2)Bln</td>
<td>$263.00</td>
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<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Sftpctm1(cre/ERT2)Bln</td>
<td>$263.00</td>
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</tbody>
</table>

Related Products and Services

Frozen Mouse Embryo $2,595.00 per straw or vial

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