STOCK Cfrtm1Unc Tg(FABPCFTR)1Jaw/J

Stock No: 002364 | CFTR S489X-; FABP-hCFTR

Targeted Mutation, Transgenic

PLACE ORDER

3–6 week average lead time depending on quantity and age requests are not accepted

Also Known As: CFTR S489X-; FABP-hCFTR

These FABP-hCFTR-CFTR bitransgenic mice harbor the FABP-hCFTR transgene (rat fatty acid binding protein 2, intestinal (Fabp2) promoter directing expression of a human cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7) (CFTR) gene) and a targeted mutation of the cystic fibrosis transmembrane conductance regulator homolog gene (Cftr), and may be useful as a mouse model of Cystic Fibrosis.

Donating Investigator

Dr. Jeffrey Whitsett, Children’s Hospital Medical Center

READ MORE +

GENETIC OVERVIEW

Genetic Background

Generation

pN1p+F19
(2018-02-06 00:00:00)

Tg(FABPCFTR)1Jaw

Allele Type
Transgenic (Inserted expressed sequence, Humanized sequence)

Cftrtm1Unc

Allele Type
Targeted (Null/Knockout)

Gene Symbol
Cftr

Gene Name
cystic fibrosis transmembrane conductance regulator

VIEW GENETICS

RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research
Metabolism Research
Mouse/Human Gene Homologs
Details

Detailed Description

These FABP-hCFTR-CFTR bitransgenic mice harbor the FABP-hCFTR transgene (rat fatty acid binding protein 2, intestinal (Fabp2) promoter directing expression of a human cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7) (CFTR) gene) and a targeted mutation of the cystic fibrosis transmembrane conductance regulator homolog gene (Cftr^{tm1Unc}). Mice homozygous for both the Cftr targeted mutation and the FABP-hCFTR transgene have normal longevity up to nine months (longest time examined). There is correction of ileal goblet cell and crypt cell hyperplasia and cAMP-stimulated chloride secretion. There is little or no expression of the transgene in the lung. This more robust model may be used to assess the effects of the null mutation on the nose and lungs, and may be useful as a mouse model of Cystic Fibrosis.

Of note, colonies maintained at The Jackson Laboratory report poor breeding performance when using females homozygous for both the Cftr^{tm1Unc} targeted mutation and the FABP-hCFTR transgene. Therefore when maintaining a live colony, females that are heterozygous for the Cftr^{tm1Unc} targeted mutation and homozygous for the FABP-hCFTR transgene may be bred with males that are homozygous for both the Cftr^{tm1Unc} targeted mutation and the FABP-hCFTR transgene (i.e. HET HOM females X HOM HOM males).

Please note: sometime after this strain arrived at The Jackson Laboratory, the the promoter was incorrectly described as having been derived from the human fatty acid binding protein 1 liver (FABP1) gene.
Genotyping Protocols
Standard PCR: Cfr\textsuperscript{tm1Unc}
Standard PCR: Tg(FABPCFTR)1Jaw
QPCR: Tg(FABPCFTR)
MELT: Cfr\textsuperscript{tm1Unc} Alternate 1
Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, females that are heterozygous for the Cfr\textsuperscript{tm1Unc} targeted mutation and homozygous for the FABP-hCFTR transgene may be mated with males that are homozygous for both the Cfr\textsuperscript{tm1Unc} targeted mutation and the FABP-hCFTR transgene (i.e. HET HOM females X HOM HOM males). Colonies maintained at The Jackson Laboratory report poor breeding performance when using females homozygous for both the Cfr\textsuperscript{tm1Unc} targeted mutation and the FABP-hCFTR transgene. The expected coat color from breeding is White Bellied Agouti.

Additional Breeding and Husbandry Support

Mating System
See "Breeding Considerations"

Appearance
agouti
Related Genotype: A/A

Citation
When using the CFTR-S489X- FABP-hCFTR mouse strain in a publication, please cite the originating article(s) and include JAX stock #002364 in your Materials and Methods section.

Animal Health Reports
AX10 (Standard)

Pricing & Availability
### Live Mouse

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<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
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<td>Female</td>
<td>Heterozygous for Cfr&lt;sup&gt;tm1Unc&lt;/sup&gt;, Homozygous for Tg(FABPCFTR1Jaw</td>
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### Breeder Pair

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### Related Products and Services

- Frozen Mouse Embryo: $2,595.00 per straw or vial

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#### Terms of Use

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[QUESTIONS ABOUT TERMS OF USE]
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