C57BL/6-Tg(Csf1r-EGFP-NGFR/FKBP1A/TNFRSF6)2Bck/J

Stock No: 005070 | Macrophage Fas-Induced Apoptosis (MaFIA)

Transgenic

AVAILABLE

PLACE ORDER

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

Also Known As: Macrophage Fas-Induced Apoptosis (MaFIA)
These macrophage Fas-Induced apoptosis (MaFIA) transgenic mice allow inducible/reversible apoptosis of macrophages and dendritic cells using the mouse colony stimulating factor 1 receptor promoter (Csf1r) to drive expression of a mutant human FK506 binding protein 1A, 12kDa. The transgene also allows fluorescent labeling of Csf1r-expressing cells. These mice may be useful in investigating the role of macrophages and dendritic cells.

Donating Investigator
Donald A. Cohen, University of Kentucky

GENETIC OVERVIEW

<table>
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<tr>
<th>Genetic Background</th>
<th>Generation</th>
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Tg(Csf1r-EGFP-NGFR/FKBP1A/TNFRSF6)2Bck

Allele Type
Transgenic (Reporter, Inserted expressed sequence, Humanized sequence)

RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research
Research Tools

BASE PRICE
Starting at:
$236.78 Domestic price for female 4-week

Details
Detailed Description

These Macrophage Fas-Induced Apoptosis (MAFIA) transgenic mice have an inducible Fas suicide/apoptotic system driven by the mouse Csf1r, colony stimulating factor 1 receptor promoter. The transgene insert contains a mutant human FK506 binding protein 1A, 12kDa (FKBP12) which preferentially binds the dimerization drug AP20187. Enhanced Green Fluorescent Protein (EGFP) fluorescence and transgene expression is detected in 78% of isolated peritoneal cells. EGFP fluorescence is variable among tissues (B- and T-cells do not express EGFP). Administration of the dimerizing reagent, AP20187, induces apoptosis in macrophages and dendritic cells (intravenous injection of dimerizer is recommended, since the intraperitoneal route can elicit peritoneal adhesions [Burnett et al. 2006 J Surg Res. 131:296]). In treated mice, EGFP fluorescing peritoneal and bone marrow macrophage numbers are depleted by more than 90%, and macrophage numbers in blood, spleen, lung and thymus by more than 70%. 7 days after cessation of treatment, the EGFP fluorescing macrophage and dendritic cell populations rebound. Homozygous mutant mice are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. Prior to June 2008, this strain may have contained multiple transgene insertion sites (about which the donating investigator recommended that all offspring be screened for EGFP expression [via flow cytometry]). By June 2008, the live MAFIA mouse colony at The Jackson Laboratory Repository was confirmed to have one transgene integration site and retained the ability for inducible macrophage deletion.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(Csf1r-EGFP-NGFR/FKBP1A/TNFRSF6)2Bck

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support
Genotyping Protocols
QPCR: Generic GFP
Standard PCR: Generic GFP
Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, transgenic mice can be bred together, to wildtype siblings, or to C57BL/6J wildtype mice.

Additional Breeding and Husbandry Support
Mating System
Homozygote x Homozygote

Citation
When using the Macrophage Fas-Induced Apoptosis (MaFIA) mouse strain in a publication, please cite the originating article(s) and include JAX stock #005070 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

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

Available

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