Overview

Also Known As: CX3CR1-GFP

CX3CR1-GFP mice express EGFP in monocytes, dendritic cells, NK cells, and brain microglia under control of the endogenous Cx3cr1 locus. They may be useful in studies of leukocyte migration and trafficking, as well as for transplantation studies.

Donating Investigator

Dr. Dan R. Littman, New York University Medical Center
GENETIC OVERVIEW

Genetic Background
Generation
N13F5
(2019-06-13 00:00:00)

Cx3cr1\textsuperscript{tm1Litt}

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tr>
<td>Targeted (Reporter, Null/Knockout)</td>
<td>Cx3cr1</td>
<td>chemokine (C-X3-C motif) receptor 1</td>
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RESEARCH APPLICATIONS

Research Tools
Cancer Research
Immunology, Inflammation and Autoimmunity Research
Neurobiology Research

BASE PRICE

Starting at:

$0.00 Domestic price for male 4-week

Details

Detailed Description

Mice that are homozygous for the CX3CR1-GFP targeted mutation are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. RT-PCR analysis of lymphoid tissue from homozygotes detects mutant gene product (mRNA) and no wild type gene product (mRNA). Flow cytometric analysis of peripheral blood cells identified a subset of green fluorescent cells not observed in wildtype mice. Enhanced Green Fluorescent Protein (EGFP), but not the endogenous gene, is expressed in monocytes, dendritic cells, NK cells, and brain microglia - mimicking endogenous gene expression. The same subset of peripheral blood cells isolated from heterozygote mice express detectable levels of EGFP. These CX3CR1-GFP mutant mice may be useful in studies of leukocyte migration and trafficking, as well as for transplantation studies.

Of note, CX3CR1-GFP mice are also available harboring with the CD45.1 (Ly5.1 or Ptprc\textsuperscript{a}) allele, which is atypical for the
C57BL/6 congenic background (see Stock No. 008451).

When compared with GFP expression in monocytes in C57BL/6-Tg(CD68-EGFP)1Drg/J mice (Stock No. 026827) using a sterile zymosan peritonitis model, CD68-GFP monocytes retain high-level GFP expression as they differentiate to become mature macrophages, while, CX3CR1<sup>GFP</sup> monocytes downregulate GFP expression on differentiation into macrophages.

Genotyping Protocols
Standard PCR: Cx3cr1<sup>tm1Litt</sup>
Probe: Cx3cr1<sup>tm1Litt</sup> Probe

Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, these mice are bred as homozygotes.

Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote
Citation
When using the CX3CR1-GFP mouse strain in a publication, please cite the originating article(s) and include JAX stock #005582 in your Materials and Methods section.

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

Available Now

Live Mouse

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