B6.129P-Cx3cr1 tm1Litt/J

Stock No: 005582 | CX3CR1-GFP

Congenic, Targeted Mutation

PLACE ORDER

0–2 week average lead time for 10 or more mice with age range

Also Known As: CX3CR1-GFP

These 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

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GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
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<tbody>
<tr>
<td>N13F2 (2018-04-17 00:00:00)</td>
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<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Reporter, Null/Knockout)</td>
<td>Cx3cr1</td>
<td>chemokine (C-X3-C motif) receptor 1</td>
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</table>

VIEW GENETICS

RESEARCH APPLICATIONS

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

VIEW ALL RESEARCH APPLICATIONS
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 wild type 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<sup>+</sup>) 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, CX<sub>3</sub>CR<sub>1</sub><sup>GFP</sup> monocytes downregulate GFP expression on differentiation into macrophages.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Cx3cr<sup>1<sub>mm</sub>Litt</sup>

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References
Genotyping Protocols
High Resolution Melting: Cx3cr1<sup>tm1Litt</sup> alternate1
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-CEBP mouse strain in a publication, please cite the originating article(s) and include JAX stock #005582 in your Materials and Methods section.
Facility Barrier Level Descriptions

Animal Health Reports

Pricing & Availability

<table>
<thead>
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- By Allele
- By Gene
- By Collection

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