B6.Cg-Ptprca Cx3cr1tm1Litt/LittJ (Jax No. 008451) Transgenic mice (HHMI)

These CX3CR1-GFP knock-in/knock-out mice express EGFP under control of the endogenous Cx3cr1 locus and also harbor the CD45.1 (Ly5.1 or Ptprca) allele, which is atypical for the C57BL/6 congenic background and may be useful in studies of leukocyte migration and trafficking, as well as for transplantation studies with C57BL/6 (CD45.2: Ptprcb) mice.

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 mice also express the CD45.1 (Ly5.1 or Ptprca) allele, which is atypical for the C57BL/6 congenic background, and this marker may be used to track donor cell populations in transplantation studies with C57BL/6 (CD45.2, Ly5.2 or Ptprcb) mice. These CX3CR1-GFP mice may be useful in studies of leukocyte migration and trafficking, as well as for transplantation studies.

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