B6.129S6-Ptger4$^{tm1.1Matb}$/Vu

VANDERBILT UNIVERSITY labnodes

Floxed mutant mice possessing loxP sites which flank exon 2 of the Ptger4 gene.

Prostaglandin E2 (PGE2), a fatty acid derivative and a primary target of NSAIDs, is important in diverse physiological processes, including but not limited to: contraction and relaxation of smooth muscle, vasodilation, vasoconstriction, blood pressure regulation, immune response and inflammation regulation and bone formation and healing. There are four receptors for PGE2. The *Ptger4* gene encodes a G-protein coupled PGE2 receptor (EP4), which is essential for embryonic development and neonatal survival in mice.
These mice possess *loxP* sites on either side of exon 2 of the targeted gene. Mice that are homozygous for this allele are viable and fertile. When these mutant mice are bred to mice that express Cre recombinase, resulting offspring will have exon 2 deleted in the *cre*-expressing tissues. Removal of the floxed sequence creates a null allele. During backcrossing, the Y chromosome may not have been fixed to the C57BL/6J genetic background.

Keywords: Ptger4 | prostaglandin E2 | PGE2 PE4 | Brey | Matb

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Mouse Information

Common Name	floxEP4B6
VCMR ID	JW
Date Cryopreserved	2009-06-24
Method of Cryopreservation	Sperm
Trial IVF % Fertilization	25.00%

Genetic Alteration

Mutation #1: Targeted Mutagenesis

Allele	Name: prostaglandin E receptor 4 (subtype EP4); targeted mutation 1.1, Matthew D Breyer Symbol: Ptger4$^{tm1.1Matb}$ MGI: 3052967
Zygosity at cryopreservation	Homozygous
PCR Genotyping Protocol	Breyer_Lab_floxed_EP4_PCR_protocol.pdf
Citations	**Publication** Generation of a conditional allele of the mouse prostaglandin EP4 receptor. (2004) *Genesis* **40**: 7-14 (Added 12/21/2013) PMID: 15354288

Background Strain Information

Strain Type	Congenic Strain
Chimera/Founder Genetic Background	129S6/SvEvTac
Cryopreservation Strain Background (VCMR)	C57BL/6J
Viability and Fertility Data	No known abnormalities.

Attachments

Breyer_Lab_floxed_EP4_PCR_protocol.pdf - Added on June 18, 2019 at 1:29 PM by Jennifer Skelton

floxEP4B6_supporting_info.docx - Added on June 18, 2019 at 1:29 PM by Jennifer Skelton