These PRBKO mice do not express the B isoform of the progesterone receptor and may be useful in studies of ovulation, pregnancy, alveolar development in the breast, sexual behavior, and mammary gland tumorigenesis.

Donating Investigator

Orla M. Conneely, Baylor College of Medicine

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>$Pgr^{tm2Omc}$</td>
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</table>

- **Allele Type**: Targeted (Null/Knockout)
- **Gene Symbol**: $Pgr$
- **Gene Name**: progesterone receptor

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

RESEARCH APPLICATIONS

- Research Tools
- Cancer Research
- Developmental Biology Research
- Reproductive Biology Research
- Endocrine Deficiency Research

PLACE ORDER

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Details

Detailed Description

The progesterone receptor is a nuclear steroid receptor, ligand activated transcription factor which regulates gene expression following progesterone hormone binding. The progesterone receptor gene has two distinct promoters and translation start sites in the first exon which produce two isoforms, A and B. These PRBKO mice express only the A isoform of the progesterone receptor. An introduced amino acid substitution in the isoform B translational start site (Met-> Leu) prevents expression of isoform B. Homozygous males are viable and fertile. Homozygous females exhibit lactational defects resulting in growth retardation in pups. Mammary gland development and morphogenesis during pregnancy in homozygous females is defective (reduced duct branching & development of alveolar lobules). No gene product (protein) isoform B is detected by Western blot analysis of uterine extracts from estrogen treated homozygous female mice. Expression levels of isoform A is not altered.

Development

Control Suggestions

Selected References

Genetics

Pgr^{tm2Omc}

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype
Genotyping Protocols
End Point Analysis: Pgr-Alt 2
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, these mice can be bred as homozygotes. Homozygotes are viable and fertile, however, homozygous females have lactational defects, that results in pup growth retardation.

Additional Breeding and Husbandry Support
Mating System
Wild-type x Heterozygote
Heterozygote x Wild-type

Citation
When using the B6;129S7-Pgr<sup>tm2Omc</sup>/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #022465 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

Pricing & Availability
TYPICALLY MICE ARE RECOVERED IN 10-14 WEEKS. CONTACT CUSTOMER SERVICE TO PLACE AN ORDER OR FOR MORE INFORMATION.

<table>
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<tr>
<th>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or non carrier for Pgr&lt;tm2Omc&gt;</td>
<td>$2,854.50</td>
</tr>
</tbody>
</table>
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