Mice homozygous for this "knockout" allele of the \textit{Plac8} (placenta-specific 8 or Onzin) locus exhibit impaired host defense compared to wild-type mice. Because high expression of Onzin is normally observed in intestinal tract epithelial cells, lung epithelial cells, and immune system cells (including macrophages and granulocytes), these mutant mice may be useful in studying the role of Onzin in host defense and innate immune function (such as bacterial uptake in neutrophils).

Donating Investigator
Beverly H Koller, University of North Carolina at Chapel Hill
Homzygous (Onzin<sup>−/−</sup>) mice are viable and fertile with a loxP-flanked pgk-neo cassette disrupting exon 4 of the Plac8 (placenta-specific 8 or Onzin) locus. Tissues from homozygous mice have no RNA (full-length/isoforms/altered splice variants) or protein expression from the targeted allele. Histological and peripheral blood analysis of homozygous mice is indistinguishable from wild-type mice. Similarly, leukocyte populations in the thymus, spleen, and lymph nodes exhibit no gross changes in the development of T cell, B cell, or macrophage populations associated with Onzin-deficiency. Compared to wild-type mice, Onzin-deficient mice exhibit impaired host defense; when given intraperitoneal injection of Klebsiella pneumoniae, homozygotes develop acute peritonitis and heightened innate immune response consistent with an increased bacterial burden. Neutrophils isolated from homozygous mice exhibit normal phagocytosis but less effective killing of bacteria. Because high expression of Onzin is normally observed in intestinal tract epithelial cells, lung epithelial cells, and immune system cells (including macrophages and granulocytes), these mutant mice may be useful in studying the role of Onzin in host defense and innate immune function (such as bacterial uptake in neutrophils).
Mammalian Phenotype Terms by Genotype

References

Technical Support

Genotyping Protocols
Separated PCR: Plac8
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, homozygous mice may be bred together.

Additional Breeding and Husbandry Support

Citation
When using the B6.129S6-Plac8<tm1Bhk>/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #009598 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.

Cryo Recovery - Domestic Pricing

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<th>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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