NOD.CB17-Prkdc<sup>scid</sup>/J

Stock No: 001303 | NOD scid

Spontaneous Mutation

**Also Known As: NOD SCID, NOD scid**

Mice homozygous for the severe combined immune deficiency spontaneous mutation Prkdc<sup>scid</sup>, commonly referred to as scid, are characterized by an absence of functional T cells and B cells, lymphopenia, hypogammaglobulinemia, and a normal hematopoietic microenvironment. Prkdc<sup>scid</sup> mice accept allogeneic and xenogeneic grafts making them an ideal model for cell transfer experiments. In general, Prkdc<sup>scid</sup> leakiness is low on the NOD/ShiLtSz genetic background.

**Genetic Background**

<table>
<thead>
<tr>
<th>Generation</th>
</tr>
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<tbody>
<tr>
<td>Contact Technical Support</td>
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</table>
Cancer Research
Research Tools
Diabetes and Obesity Research
Immunology, Inflammation and Autoimmunity Research
Internal/Organ Research
Virology Research

Details

Detailed Description

Mice homozygous for the severe combined immune deficiency spontaneous mutation (Prkdc<sup>scid</sup>, commonly referred to as scid) are characterized by an absence of functional T cells and B cells, lymphopenia, hypogammaglobulinemia, and a normal hematopoietic microenvironment. Normal antigen-presenting cell, myeloid, and NK cell functions are strain dependent. scid mice carry a DNA repair defect and a defect in the rearrangement of genes that code for antigen-specific receptors on lymphocytes. Most homozygotes have no detectable IgM, IgG1, IgG2a, IgG2b, IgG3, or IgA. Thymus, lymph nodes, and splenic follicles are virtually devoid of lymphocytes. scid mice accept allogeneic and xenogeneic grafts making them an ideal model for cell transfer experiments. Some scid mice will spontaneously develop partial immune reactivity. scid mice that have serum Ig levels greater than 1 ug/ml are considered “leaky.” scid leakiness is highly strain dependent, increases with age, and is higher in mice housed under non-SPF conditions. In general, scid leakiness is high on the C57BL/6J and BALB/cBy genetic backgrounds, low on the C3H/HeJ background, and even lower on the NOD/ShiLtSz background. NOD/ShiLtSz-Prkdc<sup>scid</sup> mice are both insulitis- and diabetes-free throughout life and serve as a diabetes-free control for comparison to NOD/ShiLtJ mice (Stock No. 001976). Thymic lymphomas occur with high frequency, however, and life span typically is limited to only 8.5 months under specific pathogen-free conditions. In addition to being an excellent host for xenografts, NOD.CB17-Prkdc<sup>scid</sup>/J mice may be useful for delineation of the role of T cell subsets in autoimmune diabetes and also as a source for insulitis-free islets.
Genotyping Protocols
End Point Analysis: Prkdc<sup>scid</sup> End Point
Genotyping resources and troubleshooting

Dietary Information
LabDiet® 5K52 formulation (6% fat)

Breeding Considerations
This strain is a good breeder.
Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote
### Appearance

albino
**Related Genotype:** A/A Tyr\(^c\)/Tyr\(^c\)

### Citation

When using the NOD-scid mouse strain in a publication, please cite the originating article(s) and include JAX stock #001303 in your Materials and Methods section.

- MP14 (Maximum)
- RB04 (Maximum)

## Pricing & Availability

Readily available in any quantity needed.

### Domestic | International

**Pricing effective for USA, Canada and Mexico shipping destinations**

### Live Mouse

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