NOD.Cg-Prkdc<sup>scid</sup> Il2rg<sup>tm1Wjl</sup> H2-Ab1<sup>tm1Doi</sup> Tg(HLA-DRB1)31Dmz/SzJ

Stock No: 017637 | NSG-Ab<sup>+</sup> DR4

[Image 37x604 to 558x751]

Also Known As: NOD-scid IL2rgamma AB<sup>+</sup> Tg(HLA-DR4), NSG-Ab<sup>+</sup> DR4, NOD.Cg-Prkdc<sup>scid</sup> Il2rg<sup>tm1Wjl</sup> H2-Ab1<sup>tm1Gru</sup> Tg(HLA-DRB1)31Dmz/SzJ

These compound mutant NSG-Ab<sup>+</sup> DR4 mice lack expression of the murine Prkdc gene, the X-linked Il2rg gene, and MHC class II while expressing the human leukocyte antigen DR4 gene. These mice may be useful for targeting human CD4<sup>+</sup> T cells in transplantation studies in the absence of xeno-GVHD.

Donating Investigator

Dr. Leonard D. Shultz, The Jackson Laboratory

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**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td></td>
<td>?&lt;sup&gt;+&lt;/sup&gt;F16 (2017-04-26 00:00:00)</td>
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**Tg(HLA-DRB1)31Dmz**

<table>
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<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Transgenic</td>
<td>H2-Ab1</td>
<td>histocompatibility 2, class II antigen A, beta 1</td>
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**H2-Ab1<sup>tm1Doi</sup>**

<table>
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<tr>
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<th>Gene Name</th>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>H2-Ab1</td>
<td>histocompatibility 2, class II antigen A, beta 1</td>
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**Prkdc<sup>scid</sup>**

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<tr>
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<tbody>
<tr>
<td>Spontaneous</td>
<td>Prkdc</td>
<td>protein kinase, DNA activated, catalytic polypeptide</td>
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**Il2rg<sup>tm1Wjl</sup>**

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<tr>
<th>Allele Type</th>
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<th>Gene Name</th>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>Il2rg</td>
<td>interleukin 2 receptor, gamma chain</td>
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RESEARCH APPLICATIONS
Immunology, Inflammation and Autoimmunity Research
Research Tools
Internal/Organ Research
Virology Research
Cancer Research

BASE PRICE
Starting at:

$119.48 Domestic price for male
265.74 Domestic price for breeder pair

Details

Detailed Description
These NSG-Ab^5 DR4 mice lack expression of the murine Prkdc gene, the X-linked Il2rg gene, and MHC class II, but express the human leukocyte antigen DR4 gene. When maintained as homozygous for all three targeting events, and carrying one copy of the transgene, these mice are viable and fertile. Unlike in the NOD.Cg-Prkdc^{sod} Il2rg^{tm1Wil}/SzJ (NSG) mice (Stock No. 005557), the expression of HLA-DR4 in these mice leads to the development of allo-graft-versus-host disease (GVHD) after engraftment of human DR4-negative CD4^+ T cells. These mice may be useful for targeting human CD4^+ T cells in transplantation studies in the absence of xeno-GVHD.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(HLA-DRB1)31Dmz

H2-Ab^1^{tm1Dzi}
Genotyping Protocols
Standard PCR: H2-Ab1\textsuperscript{tm1Dol} Alternate 1
End Point Analysis: Prkdc\textsuperscript{scid} End Point
Probe: Il2rg\textsuperscript{tm1Wjl} - PROBE
Separated PCR: Tg(HLA-DRB1)31Dmz
MELT: Tg(HLA-DRB1) Alternate 1
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, mice homozygous for all three targeted mutations and hemizygous for the transgene may be bred to non-transgenic mice from the colony.
Additional Breeding and Husbandry Support

Mating System
See "Breeding Considerations"

Citation
When using the H2-Ab1\textsuperscript{tm1Dol} mouse strain in a publication, please cite the originating article(s) and include JAX stock #017637 in your Materials and Methods section.
Facility Barrier Level Descriptions
AX18 (Maximum)

Pricing & Availability
3–6 week average lead time depending on quantity and age requests are not accepted
Repository Live
## Live Mouse

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<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Prkdc&lt;sup&gt;scid&lt;/sup&gt;, Homozygous for Ii2rg&lt;sup&gt;tm1Wjl&lt;/sup&gt;, Homozygous for H-Ab1&lt;sup&gt;tm1Dai&lt;/sup&gt;, Hemizygous for Tg(HLA-DRB1)31Dmz</td>
<td>$132.87</td>
</tr>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Prkdc&lt;sup&gt;scid&lt;/sup&gt;, Homozygous for Ii2rg&lt;sup&gt;tm1Wjl&lt;/sup&gt;, Noncarrier</td>
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</tr>
<tr>
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<td>$119.48</td>
</tr>
<tr>
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<td>Male</td>
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## Breeder Pair

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<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
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<td>Male</td>
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<td>$265.74</td>
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## Related Products and Services

- Frozen Mouse Embryo
  - $2,595.00 per straw or vial

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**Payment Terms and Conditions**

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Terms of Use

*General Terms and Conditions*
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