Also Known As: Nox1-

These Nox1 knockout mice exhibit a decrease in blood pressure, in proliferation of vascular smooth muscle, and in aortic media hypertrophy. They may have applications in studies examining the role played by NADPH oxidase in vascular proliferation and vasoconstriction.

Donating Investigator

Karl-Heinz Krause, University of Geneva
Nox1<sup>tm1Kkr</sup>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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</thead>
<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Nox1</td>
<td>NADPH oxidase 1</td>
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</table>

**RESEARCH APPLICATIONS**

Apoptosis Research  
Cardiovascular Research

**BASE PRICE**

Starting at:  
$0.00 Domestic price for male 4-week

**Details**

In this strain, a neo cassette replaces exons 3-6 of the X-linked NADPH oxidase 1 (Nox1) gene, abolishing gene expression. Homozygous females and hemizygous males are viable, fertile, and do not display any gross physical or behavioral abnormalities. The NOX1 gene product, NADPH oxidase, is an enzyme highly expressed in colon epithelium; however it is also expressed in a large number of tissues including vascular smooth muscle cells, endothelial cells, uterus, placenta, prostate, osteoclasts, retinal pericytes and others. NADPH oxidase regulates superoxide production in vascular tissues, influencing vasoconstriction, hypertension, and cellular and neuronal growth and apoptosis. These NOX1-deficient mice exhibit a decrease in blood pressure, in proliferation of vascular smooth muscle, and in aortic media hypertrophy. In response to Angiotensin II, a mediator of increased blood pressure and vascular disease, these mice show a reduction in sustained hypertension.

**Development**

**Control Suggestions**

**Selected References**

**Genetics**
**Genotyping Protocols**
Separated PCR: Nox1^{tm1Kkr}
Genotyping resources and troubleshooting

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

**Breeding Considerations**
When maintaining a live colony, homozygous females may be bred to hemizygous males.

**Additional Breeding and Husbandry Support**

**Mating System**
Homozygote x Hemizygote

**Citation**
When using the Nox1 mouse strain in a publication, please cite the originating article(s) and include JAX stock #018787 in your Materials and Methods section.

**Animal Health Reports**

**Facility Barrier Level Descriptions**
- AX18 (Maximum)

**Pricing & Availability**

Live mice available in varying quantities. Ask Customer Service for details.

<table>
<thead>
<tr>
<th>AGE</th>
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<th>PRICE</th>
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## Related Products and Services

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<tr>
<th></th>
<th>Frozen Mouse Embryo</th>
<th>B6.129X1-Nox1&lt;tm1Kkr&gt;/J</th>
<th>$2,595.00</th>
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<td>4 weeks Female</td>
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License Information
Phone: 207-288-6470
Email: TechTran@jax.org

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### Related Strains

- **All**
- **By Allele**
- **By Gene**
- **By Collection**

All Related Strains