B6.129P2-Nos2<sup>tm1Lau</sup>/J

Stock No: 002609 | iNOS-

Available Now

PLACE ORDER

Sized to accommodate orders of up to 10 or more with age range. Ask Customer Service for details.
Also Known As: iNOS-
Nos2<sup>tm1Lau</sup> homozygotes, unlike Nos2 wildtype mice, have virtually no serum nitric oxide response, but were susceptible to LPS-induced death. Nos2<sup>tm1Lau</sup> homozygotes exhibit altered responses to M. bovis (BCG), systemic E. coli infection, M. tuberculosis and M. pulmonis. In addition, wound healing properties of fibroblasts are impaired in Nos2<sup>tm1Lau</sup> homozygotes. These mice may be suitable for use in studies of inflammatory conditions including rheumatoid arthritis, inflammatory bowel disease, cardiac allograft rejection, hepatotoxicity, myocardial ischemia-reperfusion and septic shock.

Donating Investigator
Dr. Victor Laubach, University of Virginia Health Sci. Ctr.

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**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
<th>Contact Technical Support</th>
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<tbody>
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<td>(2018-07-27 00:00:00)</td>
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**Nos2<sup>tm1Lau</sup>**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>Nos2</td>
<td>nitric oxide synthase 2, inducible</td>
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**VIEW GENETICS**

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**RESEARCH APPLICATIONS**
Internal/Organ Research
Neurobiology Research
Details

Detailed Description

Mice homozygous for the Nos2^{tm1Lau} targeted mutation resemble wildtype mice in appearance and histology. Homozygotes are viable and fertile. Unlike Nos1 and Nos3, Nos2 is synthesized de novo in response to a variety of inflammatory stimuli. Induction of Nos2 results in the production of large amounts of nitric oxide (NO) over prolonged periods of time. Excessive NO production has been shown to be beneficial through its antitumor and antimicrobial activities. It is also thought to cause tissue damage and contribute to pathology in a variety of inflammatory conditions including rheumatoid arthritis, inflammatory bowel disease, cardiac allograft rejection, hepatotoxicity, myocardial ischemia-reperfusion and septic shock. NO has been demonstrated to play a role in the regulation of blood pressure and hemodynamics. In an LPS-induced model of septic shock, Nos2^{tm1Lau} homozygotes had virtually no serum NO response, but were susceptible to LPS-induced death. Nos2^{tm1Lau} homozygotes exhibit altered responses to M. bovis (BCG), systemic E. coli infection, M. tuberculosis and M. pulmonis. In addition, wound healing properties of fibroblasts are impaired in Nos2^{tm1Lau} homozygotes. Also known as iNOS.

Development

Control Suggestions

Selected References

Genetics

Nos2^{tm1Lau}

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References
Genotyping Protocols
High Resolution Melting: Nos2<sup>tm1Lau</sup> alternate4
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
black
Related Genotype: a/a

Citation

When using the NOS<sub>2</sub> mouse strain in a publication, please cite the originating article(s) and include JAX stock #002609 in your Materials and Methods section.

Animal Health Reports

Facility Barrier Level Descriptions

AX8 (Standard)

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Pricing & Availability

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<th>AGE</th>
<th>SEX</th>
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