STOCK Npas3^tm^1Sm/J

Stock No: 031112 | NPAS3^-

Targeted Mutation

CRYD RECOVERY

PLACE ORDER

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

Overview

Also Known As: NPAS3^-Npas3 KO mice exhibit multiple behavioral phenotypes and altered brain morphologies including altered stride, increased locomotor activity, impaired social interaction, loss of neural precursor cells in the dentate gyrus and a reduction of cortical interneurons. This strain may be useful for studying schizophrenia.

Donating Investigator

Andrew A Pieper, University of Iowa
GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
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<tbody>
<tr>
<td>Npas3&lt;sup&gt;tm1Sm&lt;/sup&gt;</td>
<td></td>
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<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Npas3</td>
<td>neuronal PAS domain protein 3</td>
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RESEARCH APPLICATIONS
Neurobiology Research
Reproductive Biology Research

BASE PRICE
Starting at:
$2,854.50 Domestic price
Cryo Recovery

Details

Detailed Description

Npas3 (neuronal PAS domain protein 3) encodes a transcription factor that localizes to the nucleus and may regulate genes involved in neurogenesis. Mutations in this gene are associated with schizophrenia and cognitive disability. Mice homozygous for this null allele exhibit a variety of behavioral phenotypes including: a 20% decrease in size, a shorter and irregular stride length, impaired social recognition, and increased locomotor activity. Neural precursor cell proliferation in the hippocampal dentate gyrus is decreased by 85% compared to wild-type mice resulting in a decrease in the thickness of the dentate gyrus granular cell layer. In addition, cortical interneuron density is reduced leading to a 21% reduction in cortical volume. Basal ganglia volumes also are decreased by 25%. Expression of reelin, a large extracellular matrix protein closely associated with schizophrenia, is substantially diminished in Npas3 null mice. Male homozygotes are infertile. Females are fertile, but fail to properly nest and mother their litters. This strain may be useful for studying schizophrenia.

Development

Control Suggestions

Selected References
Genotyping Protocols
QPCR: Npas3^{im15im}
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred to heterozygous mice or wild-type mice from the colony. Male homozygotes are sterile and female homozygotes are poor mothers.

Additional Breeding and Husbandry Support

Mating System
Wild-type x Heterozygote
Heterozygote x Wild-type

Citation
When using the Npas3^{im15im} mouse strain in a publication, please cite the originating article(s) and include JAX stock #031112 in your

Animal Health Reports
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.
Pricing effective for USA, Canada and Mexico shipping destinations

**Cryorecovery - Domestic Pricing**

<table>
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<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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</thead>
<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or wildtype for Npas3&lt;tm1Slm&gt;</td>
<td>$2,854.50</td>
</tr>
</tbody>
</table>

We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. **Please check genotypes which will be recovered.** While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. **Animals are typically ready to ship in 11-14 weeks.** If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a **Dedicated Supply** for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

**Related Products and Services**

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

**Payment Terms and Conditions**

Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. **Therefore, we cannot guarantee a strain's phenotype will meet all expectations.** To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project.

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**Terms Of Use**

**Terms of Use**

**General Terms and Conditions**

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**Licensing 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