B6C3Fe a/a-anx/J

Stock No: 000624 | anorexia

CRYO 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: anorexia

These mice carry the spontaneous anx mutation characterized by reduction in body weight, emaciated appearance, and abnormal behavior including head weaving and body tremors, uncoordinated gait, hyperactivity, and poor appetite.

READ MORE +

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tr>
<td>anx</td>
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RESEARCH APPLICATIONS
Metabolism Research
Neurobiology Research

BASE PRICE
Starting at:

$2,595.00 Domestic price Cryo Recovery with Progeny Testing

VIEW PRICE LIST

Details

Detailed Description

Compared with their wildtype siblings, anx/anx homozygotes are characterized by a thinning in the neck and tail at 5 days of age, lower body weight detectable by 9 days of age, and death by 22 days of age on the B6C3H-a/a background. Outbreeding to CAST/Ei modifies the phenotype such that homozygotes live to approximately 5 weeks of age. Evaluation of stomach content shows that anx/anx mice ingest less than their siblings. They show headweaving, body tremors, uncoordinated gait, and hyperactivity along with diminished adipose tissue and reduced serum leptin levels. (Maltais et al., 1984; Johansen et al., 2000)

Intrapерitoneal injection of 20 day old pups with 5,7-dihydroxytryptamine, a serotonin antagonist, reduces the severity of the neurological phenotypes. Homozygotes have extensive serotonergic hyperinnervation in normal target fields including the hippocampus, frontal cortex, olfactory bulb, and cerebellum, yet they have normal catecholaminergic innervation. This hyperinnervation is thought to reflect increased arborization of axonal fibers since there is no increase in serotonergic cell bodies. In the raphe nuclei, there are decreased mRNA levels of serotonin transporter (Slc6a4 previously Htt or 5-HTt) and tryptophan hydroxylase activity is diminished. Similar to food deprived wild type mice, anx/anx mice show decreased mRNA of monoamine oxidase A in the locus ceruleus but not the raphe nuclei. (Maltais et al., 1984; Son et al., 1994; Jahng et al., 1998, Brain Res; Jahng et al., 1998, Dev Brain Res.)

Despite their failure to eat adequately, homozygotes do not show elevated neuropeptide Y mRNA levels in the hypothalamic arcuate nucleus. However, immunohistochemistry revealed increased perikaryal neuropeptide Y staining in the arcuate nucleus and decreased density and neuropeptide Y staining of neuropeptide Y terminals in the paraventricular, arcuate, and other hypothalamic nuclei. Neuropeptide Y staining in the suprachiasmatic and thalamic paraventricular nuclei is normal. There is a similarly altered pattern of expression for agouti gene-related protein with immunoreactivity increased in the cell body and decreased in the terminals
in arcuate neurons despite apparently normal mRNA levels. (Broberger et al., 1997; Jahng et al., 1998, Brain Res; Broberger et al., 1998)

The arcuate nucleus also has a reduction in the number of pro-opiomelanocortin expressing neurons, a reduction in mRNA levels of pro-opiomelanocortin and neuropeptide Y receptors Y1 and Y5, and a reduction in immunoreactivity of neuropeptide Y receptor Y2, adrenocorticotropic hormone, and alpha melanocyte stimulating hormone. Decreased staining of aspartate, acetylcholinesterase, and somatostatin was also seen in the arcuate nucleus. Decreased staining of cocaine and amphetamine regulated transcript in the arcuate nucleus and other regions of the hypothalamus has also been reported. This pattern of decreased staining of pro-opiomelanocortin neurons may be due to degeneration of this cell population. No changes in brain cholecystokinin, galanin, or serotonin were detected by immunohistochemistry. (Broberger et al., 1997; Broberger et al., 1999; Johansen et al., 2000.)

The dentate gyrus of anx/anx mice is smaller than normal and has an increase in both the number of proliferating cells and cells undergoing apoptosis according to BrdU and TUNEL assessment. (Kim et al., 2001.)
Appearance
black, affected
Related Genotype: a anx/a anx

black, unaffected
Related Genotype: a ?/a +

Citation
When using this strain in a publication, please cite the originating article(s) and include JAX stock #000624 in your Materials and Methods section.

Facility Barrier Level Descriptions
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.

<table>
<thead>
<tr>
<th>Cryo Recovery - Domestic Pricing</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery with Progeny Testing</td>
<td>No genotyping assay is available for this recessive mutation. The customer will receive cryorecovered animals of undefined genotype.</td>
<td>$2,595.00</td>
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</tbody>
</table>

A molecular assay to genotype this strain is not available. We will fulfill your order by providing at least two untested males and two untested females (two pairs). The total number, sex, and genotypes will vary, although typically 8 or more mice are provided. Untested animals typically are available to ship between 10 and 14 weeks from the date of your order. If the first recovery attempt is unsuccessful, a second recovery will be done, extending the overall recovery time to approximately 25 weeks. Progeny testing may be required - If recovered animals do not display a phenotype, progeny testing will be required. This testing involves breeding the recovered animals and assessing the phenotype of the offspring to identify animals carrying the mutation of interest. Please note that identified pairs may not reflect the mating scheme utilized by The Jackson Laboratory prior to cryopreservation of the strain. Mating schemes are sometimes modified for successful cryopreservation. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (postarrival) 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.

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**

**General Terms and Conditions**

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**Licensing Information**

Phone: 207-288-6470
Email: TechTran@jax.org

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