Overview

Also Known As: MS-NASH (formerly called FATZO), FATZO
MS-NASH (formerly called FATZO) is an inbred polygenic mouse model for studying obesity, metabolic syndrome and diabetes - all in the presumed presence of an intact leptin pathway.

Donating Investigator
Crown Biosciences

GENETIC OVERVIEW
Genetic Background
Generation
Contact Technical Support
(2018-09-21 00:00:00)

RESEARCH APPLICATIONS
Diabetes and Obesity Research
Research Tools

BASE PRICE
Starting at:
$120.00 Domestic price for female 3-week

Details

Detailed Description
MS-NASH (formerly called FATZO) is an inbred polygenic mouse model for studying obesity, metabolic syndrome and diabetes - all in the presumed presence of an intact leptin pathway.

On standard diet, MS-NASH males exhibit obesity in a pre-diabetic state that slowly progresses to overt diabetes. MS-NASH females exhibit obesity but do not develop any diabetic phenotype. Approximately ~95% of MS-NASH males become obese (30 grams) by 8 weeks of age. Male obesity is progressive, but not as severe as mice with non-functioning leptin signaling pathways. Glucose intolerance with increased insulin levels is reported in MS-NASH males as young as 6 weeks of age. MS-NASH males become hyperglycemic at ~14 weeks of age, rapidly develop insulin resistance and become hyperinsulinemic (insulin secretion remains at high levels).

The early hyperglycemia of MS-NASH males can be accelerated by high fat diets. Furthermore, MS-NASH males maintained on a
western diet with fructose develop liver steatosis leading to NAFLD/NASH.

Upon administration of the GLP-1 agonist semaglutide, MS-NASH males respond with a reduction in body weight, food intake and blood glucose.

The observed coat color is similar to that of C57BL/6J, but there is a small range in coat color from dark brown to black.

Additional characterization of the MS-NASH inbred strain may be available at the Crown Biosciences - Rodent Models of Diabetes website.

Genetics

Currently there are no related genes or alleles for this strain.

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

Genotyping Protocols

Genotyping resources and troubleshooting

Breeding Considerations

The MS-NASH (formerly called FATZO) inbred strain is maintained by inbreeding.

Additional Breeding and Husbandry Support

Mating System

Sibling x Sibling

Citation

When using the MS-NASH (formerly called FATZO) mouse strain in a publication, please include JAX stock #030888 in your Materials and Methods section.

Animal Health Reports

Facility Barrier Level Descriptions
**Pricing & Availability**

Sized to accommodate orders of up to 50 or more. Ask Customer Service for details.

### Pricing & Availability

**Available Now**

**Domestic**

Pricing effective for USA, Canada and Mexico shipping destinations

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 weeks</td>
<td>Female</td>
<td>$120.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$140.00</td>
</tr>
<tr>
<td>4 weeks</td>
<td>Female</td>
<td>$120.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$140.00</td>
</tr>
<tr>
<td>5 weeks</td>
<td>Female</td>
<td>$120.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$140.00</td>
</tr>
<tr>
<td>6 weeks</td>
<td>Female</td>
<td>$127.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$147.00</td>
</tr>
<tr>
<td>7 weeks</td>
<td>Female</td>
<td>$132.88</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$152.88</td>
</tr>
<tr>
<td>8 weeks</td>
<td>Female</td>
<td>$139.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$159.00</td>
</tr>
<tr>
<td>9 weeks</td>
<td>Female</td>
<td>$145.36</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$165.36</td>
</tr>
<tr>
<td>10 weeks</td>
<td>Female</td>
<td>$157.97</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$171.97</td>
</tr>
<tr>
<td>11 weeks</td>
<td>Female</td>
<td>$158.85</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$178.85</td>
</tr>
<tr>
<td>12 weeks</td>
<td>Female</td>
<td>$168.21</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>$184.21</td>
</tr>
</tbody>
</table>

---

**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.

**The Jackson Laboratory's Genotype Promise**

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.

Terms Of Use

Terms of Use

General Terms and Conditions

Additional Use Restrictions Apply

MICE ARE NOT AVAILABLE FOR DISTRIBUTION TO CONTRACT RESEARCH ORGANIZATIONS

Licensing Information

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

JAX® Mice, Products & Services Conditions of Use

"MICE" means mouse strains, their progeny derived by inbreeding or crossbreeding, unmodified derivatives from mouse strains or their progeny supplied by The Jackson Laboratory ("JACKSON"). "PRODUCT(S)" means biological materials supplied by JACKSON, and their derivatives. "SERVICES" means projects conducted by JACKSON for other parties that may include but are not limited to the use of MICE or PRODUCTS. "RECIPIENT" means each recipient of MICE, PRODUCTS, or SERVICES provided by JACKSON including each institution, its employees and other researchers under its control. MICE or PRODUCTS shall not be: (i) used for any purpose other than internal research, (ii) sold or otherwise provided to any third party for any use, or (iii) provided to any agent or other third party to provide breeding or other services. Acceptance of MICE, PRODUCTS or SERVICES from JACKSON shall be deemed as agreement by RECIPIENT to these conditions, and departure from these conditions requires JACKSON’s prior written authorization.

No Warranty

MICE, PRODUCTS AND SERVICES ARE PROVIDED "AS IS". JACKSON EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS, IMPLIED, OR STATUTORY, WITH RESPECT TO MICE, PRODUCTS OR SERVICES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF NON-INFRINGEMENT OF ANY PATENT, TRADEMARK, OR OTHER INTELLECTUAL PROPERTY RIGHTS.

Credit for PRODUCTS or SERVICES

In case of dissatisfaction for a valid reason and claimed in writing by a purchaser within ninety (90) days of receipt of, PRODUCTS or SERVICES, JACKSON will, at its option, provide credit or replacement for the PRODUCT received or the SERVICES provided; JACKSON makes no other representations and this shall be the exclusive remedy of the purchaser. Please note specific policy for live mice.

Animal Care and Use for SERVICES

Consistent with the requirement for a written understanding regarding animal care and use, the JACKSON Animal Care and Use Committee will review the animal care and use protocol(s) associated with any SERVICES to be performed at JACKSON, and JACKSON shall have ultimate responsibility and authority for the care of animals while on site or in JACKSON custody.

No Liability

In no event shall JACKSON, its trustees, directors, officers, employees, and affiliates be liable for any causes of action or damages, including any direct, indirect, special, or consequential damages, arising out of the provision of MICE, PRODUCTS, or SERVICES, including economic damage or injury to property and lost profits, and including any damage arising from acts or negligence on the part of JACKSON, its agents or employees. Unless prohibited by law, in purchasing or receiving MICE, PRODUCTS, or SERVICES from JACKSON, purchaser or recipient, or any party claiming by or through them, expressly releases and discharges JACKSON from all such causes of action or damages, and further agrees to defend and indemnify JACKSON from any costs or damages arising out of any third party claims.

MICE, PRODUCTS or SERVICES are to be used in a safe manner and in accordance with all applicable governmental rules and regulations.

The foregoing represents the General Terms and Conditions applicable to JACKSON’s MICE, PRODUCTS or SERVICES. In addition, special terms and conditions of sale of certain MICE, PRODUCTS, or SERVICES may be set forth separately in JACKSON web pages, catalogs, price lists, contracts, and/or other documents, and these special terms and conditions shall also govern the sale of these MICE, PRODUCTS and SERVICES by JACKSON, and by its licensees and distributors.
Acceptance of delivery of MICE, PRODUCTS or SERVICES shall be deemed agreement to these terms and conditions. No purchase order or other document transmitted by purchaser or recipient that may modify the terms and conditions hereof, shall be in any way binding on JACKSON, and instead the terms and conditions set forth herein, including any special terms and conditions set forth separately, shall govern the sale of MICE, PRODUCTS or SERVICES by JACKSON.