Also Known As: CD36 KO

In this Cd36 knockout strain, a range of lipid-related metabolic traits are observed: reduced preference for food rich in fat, altered fatty acid uptake and lowered food intake. They may be useful in studies of taste preference, glucose metabolism, lipid homeostasis, hemostasis, thrombosis, malaria, inflammation, and atherogenesis.

Donating Investigator

Maria Febbraio, Cleveland Clinic
**GENETIC OVERVIEW**

**Genetic Background**

<table>
<thead>
<tr>
<th>Generation</th>
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<tbody>
<tr>
<td>N10+pN2F5</td>
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<td>(2019-12-27 00:00:00)</td>
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</table>

**Cd36<sup>tm1Mfe</sup>**

<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>Cd36</td>
<td>CD36 molecule</td>
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</table>

**RESEARCH APPLICATIONS**

Neurobiology Research  
Cardiovascular Research  
Metabolism Research  
Diabetes and Obesity Research  
Research Tools  
Immunology, Inflammation and Autoimmunity Research  
Sensorineural Research

**BASE PRICE**

**Starting at:**

$236.78 Domestic price for female 4-week

**Important Note**

CD36 is a class B scavenger receptor that is involved in fatty acid and glucose metabolism, heart disease, gustatory taste of lipid/fat, and lipid metabolism. CD36 also functions as a microglial surface receptor for amyloid beta peptide. These mutant mice carry a targeted mutation in which exon 3, which encodes the first 40 amino acids and the translation initiation site, is replaced by a NEO cassette (in opposite orientation). Mice that are homozygous for the targeted mutation are viable and fertile, but smaller in size than controls. No gene product (protein) is detected by immunoprecipitation or Western blot analysis of fat, muscle, heart, macrophages, liver, and endothelial cells from homozygotes. Homozygotes eat less and have a reduced preference for food rich in fat. Mutant homozygous mice exhibit increased plasma ketone (beta hydroxybutyrate) and circulating HDL cholesterol levels; elevated fasting levels of nonesterified free fatty acids, and triacylglycerol; and decreased fasting blood glucose levels, when compared to controls. Uptake of fatty acids is decreased in muscle, heart and adipose tissue in homozygotes. IgM levels and transitional B cells in spleen and bone are increased in homozygotes. The increase in cerebral blood flow induced by amyloid-beta peptide is absent in
homozygotes. Following experimentally induced injury, regenerating nerves have thinner myelination and more macrophages present than seen in controls. The resting coronary resistance blood pressure is lower in homozygotes than in controls.

**Development**

**Control Suggestions**

**Selected References**

**Genetics**

**Cd36<sup>tm1Mfe</sup>**

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Genotype**

**Mammalian Phenotype Terms by Genotype**

**References**

**Technical Support**

**Genotyping Protocols**
Standard PCR: Cd36<sup>tm1Mfe</sup>
Separated PCR: Cd36<sup>tm1Mfe</sup>

**Genotyping resources and troubleshooting**

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

**Breeding Considerations**
When maintaining a live colony, these mice can be bred as homozygotes.

**Additional Breeding and Husbandry Support**

**Mating System**
Homozygote x Homozygote

**Citation**
When using the CD36 KO mouse strain in a publication, please cite the originating article(s) and include JAX stock #019006 in your Materials and Methods section.

**Animal Health Reports**

**Facility Barrier Level Descriptions**

**AX12 (Maximum)**
### Pricing & Availability

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

Available Now

<table>
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<th>Domestic</th>
<th>International</th>
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Pricing effective for USA, Canada and Mexico shipping destinations

<table>
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<th>GENOTYPE</th>
<th>PRICE</th>
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<td>Male</td>
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<td>$236.78</td>
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### Related Products and Services

| Frozen Mouse Embryo | B6.129S1-Cd36<sup>tm1Mfe</sup>/J Frozen Embryo | $2595.00 |

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

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