C57BL/6J DIO

Stock No: 380050 | Black 6 DIO

Inbred Strain

Readily available in any quantity needed.

Overview

Also Known As: B6 DIO, B6J DIO, Black 6 DIO, DIO Mouse, Diet-induced Obesity

Diets high in fat have been attributed to a host of diseases, including obesity, metabolic and inflammatory diseases. The Jackson Laboratory maintains an inventory of diet-induced obese (DIO) C57BL/6J models, so that your mice are ready when you need them. DIO C57BL/6J mice are a model of pre-diabetic type 2 diabetes and obesity with mildly elevated blood glucose and impaired glucose tolerance for your metabolic studies. Study ready diet-induced obese (DIO) C57BL/6J males and controls are placed on diet at 6 weeks of age, and are available from 7-30 weeks of age to suit your unique research needs. For projects requiring a custom diet or a
different strain, our project managers can work with you to get the mice you need.

**GENETIC OVERVIEW**

**Genetic Background**
C57BL/6J

**Generation**
000664

**RESEARCH APPLICATIONS**

Cardiovascular Research
Diabetes and Obesity Research
Metabolism Research

**BASE PRICE**
Starting at:

$45.02 Domestic price for male 7-week

**Details**

**Important Note**
This strain is homozygous for Cdh23<sup>ahl</sup>, the age related hearing loss 1 mutation, which on this background results in progressive hearing loss with onset after 10 months of age.

**Detailed Description**

C57BL/6J mice fed a high-fat diet develop obesity, mild hyperglycemia, dyslipidemia, and impaired glucose tolerance (see detailed phenotypic data).

A naturally occurring deletion in nicotinamide nucleotide transhydrogenase (Nnt) exons 7-11 occurred in C57BL/6J sometime prior to 1984. This deletion results in the absence of the NNT protein, and is associated with impaired glucose homeostasis control and reduced insulin secretion. This mutation is not found in C57BL/6JEi, C57BL/6N, C57BL/6NJ, C57BL/6ByJ, C57BL/10J, C57L/J, or C58/J (Toye AA, et al, Diabetologia, 2005). Since C57BL/6JEi separated from C57BL/6J in 1976, the Nnt deletion arose sometime between 1976 and 1984.

**Development**

**Control Suggestions**
Selected References

Genetics

- Glucos1^C57BL/6J
- Glucos3^C57BL/6J
- P2rx7^Ratsl
- Fbrw1^C57BL/6J
- Fbrw1^C57BL/6J
- Apobec3^Rnu-r
- Cdh23^Ab
- Glucos2^C57BL/6J
- Mx1^St
- Ahr^b-1
- Nnt^C57BL/6J
- Cd5^b
- Micrl^d
- Nlrp12^C57BL/6J
- n-TRtctS^mJ
- Cox7a2l^6
- Aanat^C57BL/6J

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype
Genotyping Protocols
End Point Analysis: $H_2^\text{NR} \, rs253049200$-Alt 1-EP
Separated MCA: $C_0.64^\text{C57BL/6J}$
Standard PCR: $N_0.57^\text{C57BL/6J}$
Genotyping resources and troubleshooting

Dietary Information
Research Diets, Inc. D12492 (60 kcal% fat)
DIo Diet Information

Mating System
Sibling x Sibling

Appearance
black
Related Genotype: a/a

Animal Health Reports
Facility Barrier Level Descriptions
- MP23 (Standard)
- RB12 (Maximum)

Pricing & Availability
Readily available in any quantity needed.

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<th>AGE</th>
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Terms of Use
General Terms and Conditions

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