


C57BL/6J-Ldlr^{Hlb301}/J

Stock No: **005061** | WHC

 Chemically Induced Mutation, Coisogenic

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

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(WHC) for a phenotype of elevated atherosclerotic lesion formations and reduced hepatosteatosi following an atherogenic diet. This mutant mouse strain may be useful in studies of familial hypercholesterolemia and atherosclerosis.

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GENETIC OVERVIEW

Genetic Background

Generation

Ldlr^{Hlb301}

Allele Type

Chemically induced (ENU)

Gene Symbol

Ldlr

Gene Name

low density lipoprotein receptor

VIEW GENETICS

RESEARCH APPLICATIONS

Internal/Organ Research

Cardiovascular Research

Mouse/Human Gene Homologs

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

V I E W P R I C E L I S T

Details

Detailed Description

Mice that are homozygous for the mutation are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. This single base pair G to A transition mutation in exon 14, nucleotide 2096 was induced by ENU mutagenesis. The "Wicked High Cholesterol" (WHC) phenotype was mapped to the *Ldlr*, low density lipoprotein receptor, gene. Although total plasma cholesterol levels do not differ between sexes, when fed a standard chow diet for 5 weeks, homozygous WHC males exhibit higher triglyceride and HDL levels than homozygous WHC females. When fed Western diet for 5 weeks, mutant WHC males exhibit higher HDL levels than female WHC mutants. When fed an atherogenic diet for 5 weeks, WHC homozygotes of both sexes develop elevated total cholesterol levels of more than a 4 fold increase when compared to WHC homozygotes on standard chow diet. Cholesterol and HDL levels of WHC homozygotes fed atherogenic diet for 5 weeks remain elevated 1 month after resuming chow diet. Atherosclerotic lesions develop in WHC homozygotes fed Western and atherogenic diet, with the largest lesions observed in homozygous WHC mice fed the atherogenic diet. Long term (34 weeks) atherogenic diet consumption results in formation of multiple cutaneous xanthomas in the distal limbs of WHC homozygotes, 42 weeks of age. Half of the WHC homozygotes develop gallstones.

On the atherogenic diet WHC homozygotes develop significantly greater HDL and triglyceride levels, as well as larger atherosclerotic lesions, when compared to mice carrying the *Ldlr* targeted mutation (Stock No. [002207](#)).

This mutant mouse strain may be useful in studies of familial hypercholesterolemia and atherosclerosis.

Development

Control Suggestions

Selected References

Genetics

Ldlr^{H1b301}

Disease/Phenotype

[+ Disease Terms](#)

[+ Research Areas By Phenotype](#)

[+ Mammalian Phenotype Terms by Genotype](#)

[+ References](#)

[- Technical Support](#)

C O N T A C T T E C H N I C A L S U P P O R T

Genotyping Protocols

Pyrosequencing:[Ldlr](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

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

[Additional Breeding and Husbandry Support](#)

Appearance

black

Related Genotype: *a/a*

Citation

When using the WHC mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #005061 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, [G200](#)

[- Pricing & Availability](#)



Cryo
Recovery

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

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Homozygous for Ldlr<Hlb301>, 1 pair minimum	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	C57BL/6J-Ldlr<Hlb301>/J Frozen Embryos	\$2595.00
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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. We do not guarantee [breeding performance](#) and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

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Q U E S T I O N S A B O U T T E R M S O F U S E

LICENSING INFORMATION

Phone: 207-288-6470

Email: TechTran@jax.org

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