

WLHR/LeJ

Stock No: **000147**

 **Inbred Strain, Segregating Inbred**

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GENETIC OVERVIEW

Genetic Background

Generation

VIEW GENETICS

RESEARCH APPLICATIONS

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BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

Details

Important Note

This strain is homozygous for *Esd^c* and segregating for *Hr^{hr}* and *wl*, which are held in repulsion.

Detailed Description

WLHR/Le is a balanced stock with wabblers-lethal (*wl*) and hairless (*hr*) spontaneous mutations maintained in repulsion on Chromosome 14. Homozygous wabblers-lethal mutant mice are first recognizable at 12 days of age and usually die at about four weeks. They have an abnormal wobbly gait and a pronounced tremor when walking. In an extensive study of behavioral development of this mutant, homozygous wabblers-lethal mice were shown to be deficient in nearly all behaviors tested. Histological examination showed myelin degeneration widely distributed throughout the CNS, particularly in the vestibulocerebellar and spinocerebellar systems. Electron microscopy showed widespread axonal (Wallerian) degeneration in the medulla with secondary myelin dissolution. Similar abnormalities were present to a lesser extent in the basal ganglia, spinal cord, and cerebellum and in the optic nerve. Homozygous hairless mutant mice have a higher incidence and earlier onset of leukemia, reducible by virus-specific antibody. A deficiency of splenic T helper cells ($Ly1^+$) may account for low cellular immune response of homozygous mutant mice. The coat is normal on hairless mice up to 10 days but then hair is lost from the follicle. Waves of hair growth with few thin fuzzy hairs occur at monthly intervals for some time but homozygotes eventually become continuously hairless. Vibrissae are repeatedly regrown and shed, becoming more abnormal with age. Toenails are long and curved. There is hyperkeratosis of stratified epithelium and the upper part of hair canals beginning at 14 days. Hair club formation is abnormal. Cysts form from the hyperkeratotic upper part of hair canals and sheaths of abnormal follicles stranded in dermis. Some cysts also form from sebaceous glands. All cysts undergo sebaceous transformation and later keratinization.

Development

Genetics

+ *Hr^{hr}*

+ *Atp8a2^{wl}*

+ *Esd*

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

Separated PCR:[Hr](#)

[Genotyping resources and troubleshooting](#)

Mating System

Progeny Tested

TJL Breeding Scheme: progeny test

for *hr*: heterozygote x heterozygote in repulsion with *wl*

for *wl*: heterozygote x heterozygote in repulsion with *hr*

for *Es10^c*: homozygote x homozygote

TJL Breeding Summary: *hr + Es10^c /+ wl Es10^c X hr + Es10^c /+ wl Es10^c*. This yields progeny of three genotypes that can be identified phenotypically before weaning

see Strain Description above

Appearance

brown, haired, normal gait

Related Genotype: *a/a Tyrp1^b /Tyrp1^b wl + Esd^c /+ Hr^{hr} Esd^c* or *a/a Tyrp1^b /Tyrp1^b ? + Esd^c /+ ? Esd^c*

brown, haired, wobbly gait

Related Genotype: *a/a Tyrp1^b /Tyrp1^b + wl Esd^c /? wl Esd^c*

pigmented, hairless, normal gait

Related Genotype: *a/a Tyrp1^b /Tyrp1^b Hr^{hr} + Esd^c /Hr^{hr} ? Esd^c*

Citation

When using the WLHR/LeJ mouse strain in a publication, please include JAX stock #000147 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



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SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Homozygous for a, Homozygous for Tyrp1, Homozygous for Esdc, Genes in Repulsion: Assumed Heterozygous for w(Untested), Heterozygous for hr	\$2,854.50

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