The Jackson Laboratory

I/LnJ

Stock No: **000674** | I Lyon

Inbred Strain

Please contact Technical Support for more information

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Also Known As:I Lyon, I/Lyn, I/FnLn

This strain is currently unavailable due to replenishing of cryopreserved stocks. Customers who register interest will be contacted when the strain is available again.

I inbred mice are a piebald strain that lacks a corpus callosum and exhibits behaviors consistent with attention deficit hyperactivity disorder (ADHD). They are resistant to mouse mammary tumor virus (MMTV) and generate neutralizing antibodies to MMTV and Murine Leukemia Virus (MuLv).

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GENETIC OVERVIEW

Genetic Background **Generation**

VIEW GENETICS

RESEARCH APPLICATIONS

Reproductive Biology Research
Sensorineural Research
Neurobiology Research
Cancer Research
Immunology, Inflammation and Autoimmunity Research
Research Tools
Dermatology Research
Mouse/Human Gene Homologs

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Details

Detailed Description

I/LnJ mice were originally derived by Dr. LC Strong in 1926 from an unpedigreed stock of mice. A high proportion of mice from this strain lack a corpus callosum. This absence is associated with slow growth of the medial septum subadjacent to the cavum septi. I/LnJ mice are resistant to MMTV induced mammary tumor development and generate neutralizing antibodies to MMTV and MuLv virions that effectively block viral transmission. This phenotype was traced to the I/LnJ loss-of-function allele, *vic1*, in *H2-Ob* (Denzin *et al.*, 2017). Due to a frameshift mutation in alpha 1 phosphorylase kinase these mice have increased glycogen content in resting skeletal muscle. The reproductive performance of I/LnJ mice is very poor. Further analysis indicates that oocytes from I/LnJ mice display retarded kinetics of meiotic maturation and a high frequency of metaphase I arrest. Some oocytes fail to resume meiosis. Oocytes have many very small centrosomes with an absence of microtubules. I/LnJ mice, in addition to carrying several other coat color alleles, are homozygous for the piebald mutation (*Ednrb*^{s}). Thus, these mice show irregular white spotting, the amount of which is greatly influenced by minor modifying genes. They also have dark eyes. The white areas of the coat are completely lacking in neural crest-derived melanocytes, and there is a reduction in the number of melanocytes in the choroid layer of the eye. Although kinked tail is not a phenotype noted at birth, approximately 10% of pups at wean age and 20% of breeders have a single kink in the tail. This phenotype was recorded in 2006, and whether this strain characteristic was part of the original phenotype of this inbred strain or arose subsequent to inbreeding is not known.

Control Suggestions

Selected References

Genetics

Myo5a^{d}

Ednrb^{s}

- *Ahr*^{d}
- *Hc*^{0}
- *H2-Ob*^{vic1}
- *Il3ra*^{m1}
- *Phka1*$^{l/FnLn}$
- *Gpr84*^{del}
- *Mx1*^{s2}
- *Cox7a2l*^{l}

Disease/Phenotype

- Disease Terms
- Research Areas By Phenotype
- Mammalian Phenotype Terms by Genotype
- Phenotype Information
- References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
Genotyping resources and troubleshooting

Mating System
Sibling x Sibling

Appearance

pink-eyed dilute brown, piebald (spotted)
Related Genotype: *a/a Tyrp1^{b}/Tyrp1^{b} Oca2^{p}/Oca2^{p} Myo5a^{d}/Myo5a^{d} Ednrb^{s}/Ednrb^{s}*

Citation

When using the I Lyon mouse strain in a publication, please include JAX stock #000674 in your Materials and Methods section.

STRAIN INTEREST REGISTRATION

Please fill out the form below to indicate your interest in purchasing this JAX®Mice strain.
This information helps us manage the colony build and better meet the broad needs of the research community.
Please send any technical questions to Technical Support.

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Number of Mice
Frequency
Product
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Frequency...

Products...

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