LP/J mice display a high susceptibility to audiogenic seizures, and have a fairly high incidence of tumors that develop later in life. LP/J mice are also homozygous for the spontaneous mutation piebald in the endothelin receptor type B gene (EdnrB\(^5\)). 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.
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
LP/J mice display a high susceptibility to audiogenic seizures. This strain is also reported to have a fairly high incidence of tumors that develop later in life, including mammary tumors, lymphoma, lung and soft-tissue sarcomas. LP/J mice are also homozygous for the spontaneous mutation piebald in the endothelin receptor type B gene (Ednrb<sup>B<sub>2</sub></sup>). The piebald spontaneous mutation is the result of a mutation in the endothelin receptor type B gene, Ednrb. 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. Kanes et al (1993) found that this inbred strain is much less responsive to haloperidol than are other inbred strains, such as DBA/2J.

In 2019-2020, researchers at The Jackson Laboratory discovered this inbred strain contains the Trem2<sup>148E</sup> allele - a naturally occurring variant at position 48351151-48351152 on Chr 17 (rs108080490 and rs107649577; Ensembl GRCm38.p6). This TC to GA transition results in a serine to glutamic acid substitution at amino acid 148 (S148E).
Genetics

- Disc1del
- Cdh23ahl
- Mx1st
- Ahrd
- Ednrbst
- Cox7a2l

Disease/Phenotype

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

Technical Support

Genotyping Protocols
Genotyping resources and troubleshooting
Inbred mouse strains are maintained through sibling (sister x brother) matings; no genotyping required.

Dietary Information
LabDiet® 5K52/5K67
Breeding Considerations

This strain is a challenging breeder.

Additional Breeding and Husbandry Support

Mating System
Sibling x Sibling

Appearance
white-bellied agouti, piebald

Related Genotype: \( A^w/A^w \) \( Ednrb^s/Ednrb^s \)

Citation
When using the LP/J mouse strain in a publication, please include JAX stock #000676 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

MP13 (Maximum)

Pricing & Availability

Available Now

Sized to accommodate orders of up to 10 or more with age range. Ask Customer Service for details.

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