Overview

Also Known As: B6-lymphoproliferation, B6 lpr

Mice homozygous for the lymphoproliferation spontaneous mutation \( (Fas^{lpr}) \) show systemic autoimmunity, massive lymphadenopathy associated with proliferation of aberrant T cells, arthritis, and immune complex glomerulonephrosis. These mice serve as a model for systemic lupus erythematosus-like autoimmune syndromes.

Genetic Overview

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>000664 C57BL/6J</td>
<td>Contact Technical Support (2019-05-22 00:00:00)</td>
</tr>
</tbody>
</table>

\( Fas^{lpr} \)

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spontaneous (Hypomorph)</td>
<td>Fas</td>
<td>Fas (TNF receptor superfamily member 6)</td>
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</table>
Mice homozygous for the lymphoproliferation spontaneous mutation (Fas<sup>lpr</sup>) show systemic autoimmunity, massive lymphadenopathy associated with proliferation of aberrant T cells, arthritis, and immune complex glomerulonephrosis. Onset and severity of symptoms associated with the Fas<sup>lpr</sup> allele is strain-dependent. For example, lymphoproliferation varies greatly with congenic strain C57BL/6J-Fas<sup>lpr</sup>/Fas<sup>lpr</sup> at a 24 fold increase over control lymph node weight, MRL/Mp-Fas<sup>lpr</sup>/Fas<sup>lpr</sup> at 75 fold and congenic strain C3H/HeJ-Fas<sup>lpr</sup>/Fas<sup>lpr</sup> highest at 116 fold increase over control lymph node weight (Morse et al 1985). Variance in renal pathology ranks from extensive in MRL/Mp-Fas<sup>lpr</sup>/Fas<sup>lpr</sup> at 4 to 7 months to negligible at 14 to 16 months in mice with C57BL/6J and C3H/HeJ backgrounds and homozygous for Fas<sup>lpr</sup> (Kelley and Roths 1985). Spontaneous production of anti-dsDNA autoantibodies is likewise affected with percentage binding of radiolabeled dsDNA in Fas<sup>lpr</sup>/Fas<sup>lpr</sup> mice varying from 5 percent on C57BL/6J to 26 percent on C3H/HeJ to as high as 49 percent on MRL/Mp (Izui et al 1984). Female MRL/Mp-Fas<sup>lpr</sup> mice die at an average age of 17 weeks of age and males at 22 weeks. This compares to between 42 and 52 weeks in females on the C57BL/6J or C3H/HeJ background (Roths 1987). This mouse is a model for systemic lupus erythematosus-like autoimmune syndromes.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. This is the case for the strain above. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.
Genetics

Fas<sup>lpr</sup>

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

Genotyping Protocols
Standard PCR: Fas
Standard PCR: Fas MCA
Genotyping resources and troubleshooting

Breeding Considerations
This strain is a good breeder.
Additional Breeding and Husbandry Support
Mating System
Homozygote x Homozygote
Appearance
black
Related Genotype: a/a
Citation
When using the B6 lpr mouse strain in a publication, please cite the originating article(s) and include JAX stock #000482 in your Materials and Methods section.

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Domestic

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<table>
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<th>AGE</th>
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</tbody>
</table>

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Related Strains

All

By Allele

By Gene

By Collection