Also Known As:D1, DBA1
DBA/1J mice are widely used as a model for rheumatoid arthritis: immunization with type II collagen leads to the development of severe polyarthritis mediated by an autoimmune response. DBA/1J mice show an intermediate susceptibility to developing atherosclerotic aortic lesions on an atherogenic diet. In response to challenge, DBA/1J mice develop immune-mediated nephritis characterized by proteinuria, glomerulonephritis and tubulointerstitial disease.
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
DBA/1J mice are widely used as a model for rheumatoid arthritis: immunization with type II collagen leads to the development of severe polyarthritis mediated by an autoimmune response. The incidence of collagen induced arthritis varies by experimental protocol, but is less than 100%. Similar to the human condition, mice with collagen-induced arthritis display synovitis and erosions of cartilage and bone. In addition, susceptibility in both humans and mice is linked to the expression of specific MHC class II molecules. DBA/1J mice show an intermediate susceptibility to developing atherosclerotic aortic lesions on an atherogenic diet. In response to challenge, DBA/1J mice develop immune-mediated nephritis characterized by proteinuria, glomerulonephritis and tubulointerstitial disease (Xie et al., 2004). There is high incidence of calcified lesions of the tongue with age. This strain is among the least responsive to phytohemagglutinin (Heiniger et al., 1975).

Development
Selected References

Genetics

Gpr84<sup>del</sup>

Rmc<sup>f</sup>

P2rx7<sup>P451L</sup>

Tyrp<sup>b</sup>

a

Cd<sup>23ahl</sup>

Cd<sup>5a</sup>

Cox7a2<sup>d</sup>

Myo5a<sup>d</sup>

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 formulation (6% fat)

Breeding Considerations
This strain is a good breeder.

Additional Breeding and Husbandry Support

Mating System
Sibling x Sibling

Appearance
dilute brown

Related Genotype: a/a Tyrp1b/Tyrp1b Myo5a/b Myo5a/d

Citation
When using the DBA/1J mouse strain in a publication, please include JAX stock #000670 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

- AX27 (Maximum)
- RB09 (Maximum)

Pricing & Availability

Sized to accommodate orders of up to 100 or more. Ask Customer Service for details.

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### Volume Pricing Details

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**Volume Pricing Program**

Quantities: Volume pricing is automatically applied when a minimum quantity per strain for a shipment is reached.

Sexes: Sexes of the same strain may be combined to reach minimum quantity levels to receive the volume pricing.

Shipment: All shipping destinations qualify.

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**Licensing Information**

Phone: 207-288-6470  
Email: TechTran@jax.org

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# Related Strains

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All Related Strains

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▼
Did you find what you were looking for?

- Yes
- No