



WILD TYPE



MICE  
Inbred

GENETICALLY  
ENGINEERED  
MODELS  
(GEM)

NATURAL  
MUTANTS

NATURAL  
IMMUNO-  
DEFICIENT

## DBA/1 Mouse

**Strain name:** DBA/1JRj

**Type:** Inbred mouse

**Colour and related genotype:**

Dilute brown mouse, a/a, Tyrp1<sup>b</sup>/Tyrp1<sup>b</sup>, Myo5a<sup>d</sup>/Myo5a<sup>d</sup> - MHC: Haplotype H2<sup>q</sup>

**Breeding:** Difficult to rear (poor lactation)



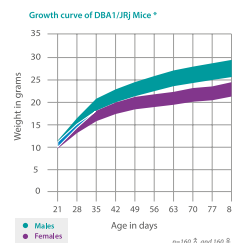
## Presentation of the model

The DBA is the oldest of all inbred strains of mice. Its story begins in 1909 when Dr. CC LITTLE began inbreeding and selecting for coat color. From 1929 until 1930 crosses were made among substrains, and several new strains were established including DBA/1 and DBA/2.

DBA/1 and DBA/2 differ at a large number of loci including the MHC (Major Histocompatibility Complex) H2 Haplotype. This heterozygosity is most likely a result of residual heterozygosity in the strain when the substrains were separated. DBA/1JRj is widely used as a model for rheumatoid arthritis. Immunisation with type-II collagen results in severe autoimmune polyarthritis. The rates of induced arthritis vary depending on chosen protocol but remain inferior to 100%. This collagen-induced arthritis leads to the same complications as in humans; there is synovial inflammation, cartilage and bone erosion. Furthermore, as is the case with humans, the sensitivity is linked to the expression of molecules belong to the MHC H2 haplotype. DBA/1Rj mice have

a moderate sensitivity to the development of atherosclerotic lesions of the aorta following an atherogenic diet. Old breeders heart and tongue calcification with age. Females can develop mammary carcinomas.

**Important notice:** This strain is homozygous for the Cdh23<sup>ahl</sup> mutation which leads to age-related hearing loss. Its expression on a DBA/1 background results in progressive hearing loss with onset after 10 months of age.



Reproductive data*	
Bigamous mating	
Litter size at birth	4.48
Weaning %	86
Productivity index	0.49
Sterility %	3
Gestation time	Between 18 and 20 days



## Main application and research fields

BEHAVIOUR

IMMUNOLOGY: ADJUVANTINDUCED ARTHRITIS

INFLAMMATION

ONCOLOGY

PHARMACOLOGY



## Our added value

- The «JANVIER LABS Genetic Policy», specific programme, guarantees homozygosity of autosomal pairs
- Animals with the SPF or SOPF standards
- A gentling policy for docile and easy-to-handle animals
- Optimal stability conditions of our models during shipments, thanks to our dedicated and internal transport service
- A scientific support with a team of Veterinarians and PhD

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