



Inbred Mice

Inbred strains are defined as colonies produced by a minimum of 20 generations of brother-sister mating, traceable to a single founding pair. This mating structure results in animals that are genetically identical within each strain (i.e., fundamentally free of genetic variations that could increase variation in experimental results). Charles River uses a pyramid mating system coupled to a foundation colony for all inbred strains. In this system, the foundation colony serves as the genetic and health standard and provides breeders for the top level of the pyramid in every barrier room. This top level, the nucleus colony, is composed of a relatively small number of pedigreed brother-sister mating pairs that produce breeders for the next level of the pyramid, in addition to replenishing itself. In larger colonies, the next level is called the expansion colony, and it provides breeders to the production colony, which in turn produces the animals that are commercially available.

Charles River's inbred strains are bred under the IGS program to help minimize subline divergence due to genetic drift and prevent genetic contamination by mismatings with other strains. This genetic management program enables Charles River to breed research animals with uniformity, regardless of production location throughout the world.

129-Elite Mouse

Nomenclature: 129S2/SvPasCrl **Strain Code:** 476 **Origin:** Developed by Dr. L.C. Stevens from The Jackson Laboratory. During the 1970s, Dr. Stevens introduced this line to the Pasteur Institute of Paris in the laboratory of Dr. J.L. Guenet. To Charles River France in 1996. To Charles River North America in 1998. **Coat Color:** Light-bellied agouti. **Research Application:** Transgenic/knockout model development **MHC Haplotype:** H2^b

A/JCr Mouse

Nomenclature: A/JCr **Strain Code:** 563 **Origin:** Developed by L.C. Strong in 1921 from a cross between a Cold Spring Harbor albino and a Bagg albino. Received by NCI from Jackson Laboratory in 1982. To Charles River in 2014. **Coat Color:** White (Albino). **Research Application:** Oncology and immunology **MHC Haplotype:** H2^a

Mouse Models

With more than 20 breeding facilities around the world, Charles River is the leading global supplier of standard mouse models for biomedical research. Charles River stocks and strains are managed under the International Genetic Standardization (IGS) program, a unique program designed to manage the health and genetics of outbred and inbred strains on a global basis, ensuring that researchers worldwide have access to standardized models, regardless of the production location.

Benefits

- Worldwide availability
- Veterinary and professional support
- VAF/Plus® and VAF/Elite® health status
- Genetics managed under the IGS program



B6 Albino Mouse

Nomenclature: B6N-*Tyr^{c-Brd}/BrdCrCrI* **Strain Code:** 493
Origin: Received by NCI from Dr. Allan Bradley at Baylor College of Medicine in 2000. The B6 albino strain is a spontaneous albino mutant coisogenic C57BL/6 strain. The mice contain a mutation in the tyrosinase gene and when homozygous for the mutation, the coat color of the mice is albino rather than black. To Charles River in 2009 from NCI.
Coat Color: White (Albino). **Research Application:** Creation of chimeras with B6N-derived embryonic stem cells
MHC Haplotype: H2^b

BALB/c Mouse*

Nomenclature: BALB/cAnNCrI **Strain Code:** 028 **Origin:** H.J. Bagg developed the "Bagg albino" in 1913 with stock from an Ohio pet dealer. Inbred in 1923 by McDowell. To Snell in 1932 at F26, then to Andervont in 1935. To NIH in 1951 from Andervont at F72. To Charles River in 1974 from NIH.
Coat Color: White (Albino). **Research Application:** General multipurpose model, hybridoma development, monoclonal antibody production and infectious disease
MHC Haplotype: H2^d

**Also available in Elite health status (strain code 547)*

C3H Mouse

Nomenclature: C3H/HeNCrI **Strain Code:** 025 **Origin:** From a cross of a Bagg albino female and a DBA male by Strong in 1920. A litter of four females and two males was sent to Andervont in 1930, then to Heston at F35. To NIH in 1951 from Heston at F57. To Charles River in 1974 from NIH.
Coat Color: Agouti (wild-type). **Research Application:** Safety and efficacy testing, oncology, neurological disorders and retinal degeneration **MHC Haplotype:** H2^k

C57BL/6 Mouse*

Nomenclature: C57BL/6NCrI **Strain Code:** 027
Origin: Developed by C.C. Little in 1921, from a mating of Miss Abbie Lathrop's stock that also gave rise to strains C57BR and C57L. Strains 6 and 10 separated around 1937. To The Jackson Laboratory from Hall in 1948. To NIH in 1951 from The Jackson Laboratory at F32. To Charles River in 1974

from NIH. **Coat Color:** Black. **Research Application:** General multipurpose model, diet-induced obesity, transgenic/knockout model development, safety and efficacy testing and immunology **MHC Haplotype:** H2^b

**Also available in Elite health status (strain code 475)*

DBA/2 Mouse*

Nomenclature: DBA/2NCrI **Strain Code:** 026 **Origin:** Developed by C.C. Little in 1909 from stock segregating for coat color. Oldest of all the inbred strains of mice. From 1929-1930, crosses were made between sublines, establishing several new ones, including the widely used sublines 1 (previously called 12) and 2 (previously called 212). To Mider in 1938. To NIH in 1951 from Mider at F34. To Charles River in 1974 from NIH. **Coat Color:** Non-agouti, dilute brown.
Research Application: Safety and efficacy testing, immunology and audiogenic seizures **MHC Haplotype:** H2^d
**Also available in Elite health status (strain code 507)*

FVB Mouse*

Nomenclature: FVB/NCrI **Strain Code:** 207 **Origin:** Derived in 1935 from an outbred Swiss colony [N:GP(S)] at NIH. In the early 1970s, while being established as an inbred strain, sensitivity to Friend leukemia virus B strain was discovered. At this time, inbreeding of this line for the *Fv1^b* allele was undertaken and the strain was called FVB. To Charles River from NIH in 1994. **Coat Color:** White (Albino).
Research Application: Transgenic/knockout model development **MHC Haplotype:** H2^a
**Also available in Elite health status (strain code 508)*

SJL-Elite Mouse

Nomenclature: SJL/JOrlIcoCrI **Strain Code:** 478
Origin: Selected by James Lambert in 1955 from three different strains of Swiss Webster brought to The Jackson Laboratory between 1938 and 1943. This strain was introduced to CNRS-CSEAL, Orleans, France, in 1978, and acquired by Charles River France in 1990 at F114. To Charles River North America from Charles River France in 1997. **Coat Color:** White (Albino). **Research Application:** Immunology, retinal degeneration and transgenic/knockout model development
MHC Haplotype: H2^s