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ENVIGO

Research Models
and Services

Inbred Mice

FVB (Friend Virus B)

Origin

Outbred N:Gp (NIH General-purpose) Swiss mice, established at the National Institutes of Health, Bethesda, Maryland, USA in 1935. In 1966 two strains (HSFS/N and HSR/N) were selected for sensitivity and resistance, respectively, to the action of Histamine after treatment with *Bordetella pertussis* vaccination. In the early 1970's, a group of mice at the eighth inbred generation of HSFS/N were found to carry the *Fv-1^b*, allele for sensitivity to the B strain of Friend leukaemia virus. Homozygous mice were then inbred as strain FVB, without further selection for histamine sensitivity (Taketo *et al*, 1991).

FVB/NHsd

Derived from a breeding nucleus obtained from the National Institutes of Health, Bethesda in 1988.

FVB/NHan[®]Hsd

In 1994, to Harlan Laboratories through acquisition of Central Institute for Laboratory Breeding, Hannover. Harlan became Envigo in 2015.

Characteristics

This strain is useful for the production of transgenic mice on a fully inbred genetic background.

Drugs

Relatively insensitive to the initiation of papillomas following initiation by 7,12-dimethylbenz(a)anthracene and promotion with 12-o-tetradecanoylphorbol-13-acetate (TPA), but a high proportion progress to carcinomas (Hennings *et al*, 1993).

Genetics

Coat colour genes	- A, B, c, D, P : albino.
Histocompatibility	- H-2 ^a , Hc ^d , Ly-1 ^b , Ly-2 ^b , Ly-3 ^b , Thy-1 ^a .
Biochemical markers	- Apoa-1 ^b , Car-2 ^b , Es-1 ^b , Es-2 ^b , Es-3 ^c , Fv-1 ^b , Gpd-1 ^b , Gpi-1 ^b , Hbb ^d , Idh-1 ^a , Mod-1 ^a , Mup-1 ^a , Pep-3 ^b , Pgm-1 ^a , Pgm-2 ^a , Trf ^b .

Description of the difference between FVB/N and C57BL/6J for 272 microsatellites (Neuhaus *et al*, 1997).

Infection

Highly susceptible paralysis induced by ts1, a mutant of Moloney murine leukaemia virus (Wong *et al*, 1991).

Life-span and spontaneous disease

60% survival to 24 months of age in both sexes with 55% and 66% gross tumour incidence in males and females, respectively at that time (Mahler *et al*, 1996). Most common tumour types were lung alveolar-bronchiolar, hepatocellular, subcutis neural crest and Harderian gland adenomas in males, and lung, pituitary, ovarian, lymphomas, histiocytic sarcomas, Harderian gland adenomas and pheochromocytomas in females (Mahler *et al*, 1996).

Miscellaneous

A new strain 129-derived embryonic stem cell line, H3, gives good levels of germ-line transmission in chimeras involving FVB (Kim *et al*, 1966).

Reproduction

These mice have a vigorous reproductive performance with large litters. Fertilised eggs contain large and prominent pronuclei, which facilitate the microinjection of DNA (Taketo *et al*, 1991). Good reproductive performance with large litters (Wong *et al*, 1991). Characteristics of the FVB strain have been described by Festing (1997) and Lyon *et al*, (1996).

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