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Research Models and Services

Hybrid Mice

B6D2F1 (C57BL/6 x DBA/2)F1

Origin

B6D2F1/OlaHsd

This F1 hybrid is a cross between C57BL/6JOlaHsd females and DBA/2OlaHsd males.

Research applications

Behavior, radiation, bioassays of nutrient, drugs and hormones.

Characteristics

The F1 hybrid of two inbred strains can be a useful animal for many purposes. It is genetically uniform and heterozygous for all the genes for which the two parental strains differ. F1 animals are easy to produce (hybrid vigor) and are less susceptible to environmental influences than the parent inbred strain. F1 mice will accept transplants of tissues from mice of either parental strain. This B6D2F1 hybrid has frequently been used in screening the antitumor activities of chemicals.

Genetics

Coat color genes - *a/a, B/b, C/C, D/d* : black.

Histocompatibility - *H-2*$^{b/d}$.

The B6D2F1 will be heterozygous for all the loci where the C57BL/6 and DBA/2 differ and homozygous for all the loci where both parental strains are the same.

Life-span

The median life-span is 27.5 months for males and 26.1 months for females (Yamate *et al*, 1990). The relationship of genotype, sex, body weight, and growth parameters to life-span in inbred and hybrid mice is described by Ingram *et al* (1982).

Nutrition

The immune function and food restriction during aging has been described by Venkatraman *et al* (1997). Caloric restriction and resistance to environmental disease have been described by Frame *et al* (1998).

Physiology and biochemistry

Parameters for hematology and clinical chemistry have been described by Harrison *et al* (1978). Levels of serum steroids, aromatase activity, and estrogen after castration have been described by Sinchak *et al*, 1996.

References

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4. Sinchak K, Roselli CE, Clemens LG (1996) Levels of serum steroids, aromatase activity, and estrogen receptors in preoptic area, hypothalamus and amygdala of B6D2F1 male house mice that differ in the display of copulatory behavior after castration. Behavioral Neuroscience. 110, 593-602.
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Contact us

North America 800.793.7287 EU and Asia envigo.com/contactus info@envigo.com

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Envigo RMS Division, 8520 Allison Pointe Blvd., Suite 400, Indianapolis, IN 46250, United States