

C57BL/6JGpt

Strain Name: C57BL/6JGpt

Strain Type: Inbred strain

Strain Number: N000013

Description

B6 mice are the most commonly used inbred mice and widely used as background mice for spontaneous mutation and induced mutation strains. Although this strain is a tumor refractory strain, it is still the preferred background strain for maximizing the expression of most mutations. This strain is used in many research fields, including cardiovascular research, developmental biology, diabetes and obesity, genetics, immunity, neurobiology, sensorineural research. B6 mice are also widely used to make transgenic mice. In general, B6 mice are an easy- fertile, long-lived, and tumor-resistant strain.

Compared with BALB/c and DBA/2J, the primordial hematopoietic stem cells derived from B6 are significantly delayed in senescence. Other symptoms include:

Diet-induced susceptibility to obesity, type 2 diabetes, atherosclerosis: B6 mice fed with high fat diet will develop obesity, mild to moderate hyperglycemia, and hyperinsulinemia. B6 mice fed an atherosclerosis-inducing diet (1.25% cholesterol, 0.5% cholic acid, 15% fat) will have 4500-8000 μm^2 size atherosclerotic large arteries or cross-sectional injuries after 14 weeks.

Delayed deafness: The study found that the variation of the aortic injury site in inbred strains is controlled by 8 genes: Ath1-Ath8. B6 mice also have severe progressive deafness later in life. Age-related deafness can also lead to changes in the corresponding histopathology (destruction of hair cells in the outer and inner ear canals). The auditory stem response of the brain found age-related deafness gene 1 (Ahl), which is the main cause of deafness.

Prone to small eyes and other related eye diseases; low bone density; hereditary hydrocephalus (early report is 1-4%); overgrooming will get acne; preference for alcohol and morphine; increased incidence of hydrocephalus and malocclusion.

Application

- 1、Diet-induced atherosclerosis
- 2、Lymphatic tissue defects
- 3、Study on hyperglycemia metabolism
- 4、Hematopoietic defects
- 5、Hearing defects

Data support

1. Growth curve

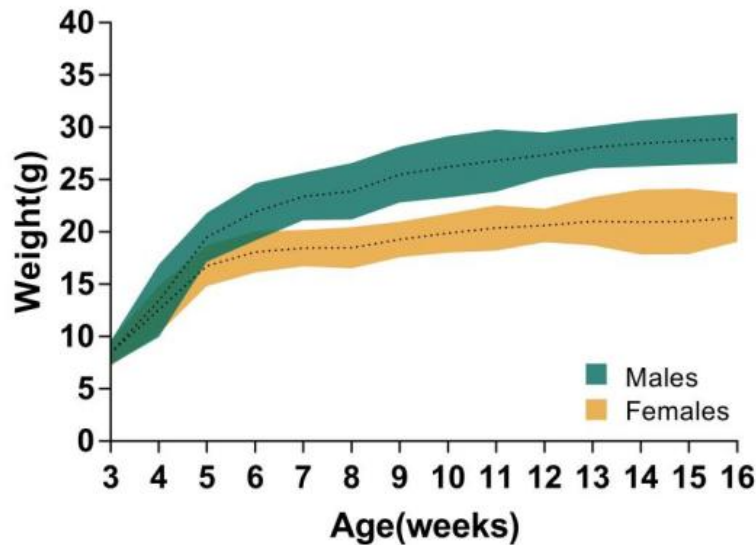


Figure 1. Graph of weight change over time.

2. Breeding and conservation

1. Feed: ordinary feed (6% fat content).
2. Appraisal method: No appraisal.
3. Ways of mating: siblings mate in the basic group and the expanded group of blood, and mate randomly in the production group.
4. Reproduction caution: This strain of mice has white hair on the abdomen, cataracts, large and small eyes, blind eyes and other abnormalities, which cannot be used as breeding. Female rats should be examined with double vaginas.
5. Reproduction and foster rearing situation: reproduction is general, foster rearing is general, the first fetus died easily.

3. Blood biochemistry

Parameter	Units	♂	♀
Biochemistry			
Age	weeks	20	20
ALT	IU/L	31.37±11.81	26.20±6.93
AST	IU/L	57.38±16.27	62.45±12.54
TP	g/L	59.57±12.38	59.00±1.58
ALB	g/L	39.87±8.54	42.13±1.46
TBIL	μmol/L	0.97±0.47	1.13±0.33

AKP	IU/L	86.00±18.83	126.46±12.41
BUN	mmol/L	9.29±2.15	7.92±1.11
CREA	μmol/L	15.97±3.54	15.54±1.07
CHOI	mmol/L	3.03±0.72	2.58±0.16
TG	mmol/L	1.07±0.43	0.36±0.18
HDL-C	mmol/L	2.38±0.57	1.98±0.14
LDL-C	mmol/L	0.24±0.08	0.34±0.04
Ca	mmol/L	2.39±0.49	2.40±0.06
P	mmol/L	1.97±0.46	2.41±0.35
Fe	μmol/L	22.63±5.17	25.90±4.02
GLU	mmol/L	9.93±2.31	8.21±1.09

Reference

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