C57BLKS/J is closely related to C57BL/6J, but the strains are phenotypically distinct. Differences include more severe diet-induced atherosclerotic lesions in C57BLKS/J mice, low total cholesterol and low HDL cholesterol when fed a normal diet, and high total cholesterol and HDL cholesterol in an atherogenic diet. C57BLKS/J mice have a relatively high percentage of reticulocytes per total number of erythrocytes, high white blood cell count per volume, with a high percentage of lymphocytes and basophils and a low percentage of neutrophils per total number of leukocytes. C57BLKS/J mice exhibit age related hearing loss.

Also Known As: Black Kaliss J, C57 Kaliss, C57BL/Ks, BKS
C57BLKS/J is closely related to C57BL/6J, but the strains are phenotypically distinct. Differences include more severe diet-induced atherosclerotic lesions in C57BLKS/J mice, low total cholesterol and low HDL cholesterol when fed a normal diet, and high total cholesterol and HDL cholesterol in an atherogenic diet. C57BLKS/J mice have a relatively high percentage of reticulocytes per total number of erythrocytes, high white blood cell count per volume, with a high percentage of lymphocytes and basophils and a low percentage of neutrophils per total number of leukocytes. C57BLKS/J mice exhibit age related hearing loss.
RESEARCH APPLICATIONS

Neurobiology Research
Sensorineural Research
Research Tools
Diabetes and Obesity Research
Metabolism Research

BASE PRICE
Starting at:

$106.47 Domestic price for female 4-week

Important Note
This strain is homozygous for Cdh23<sup>ahl</sup>, the age related hearing loss 1 mutation, which on this background results in progressive hearing loss with onset prior to three months of age.

Detailed Description

Although C57BLKS/J is estimated to have more than 70% of its genome derived from C57BL/6J, these strains are phenotypically distinct. Diet-induced atherosclerotic lesions are much more severe in C57BLKS/J than in C57BL/6J or many other inbred strains. Compared with a panel of inbred strains, C57BLKS/J was found to have low total cholesterol and low HDL cholesterol when fed a normal diet and high total cholesterol and HDL cholesterol in an atherogenic diet. Paigen et al. found high levels of plasma bile salts in C57BLKS/J females after eight weeks on an atherogenic diet. The mutations diabetes (Lepr<sup>db</sup>) and obese (Lep<sup>ob</sup>) each express a much more severe phenotype on the C57BLKS/J background than on the C57BL/6J background. The Cpe<sup>ahl</sup> mutation causes severe obesity, hyperinsulinemia, and hyperglycemia on the C57BLKS/J background rather than the hyperinsulinemia, and mild obesity without hyperglycemia found on the HRS/J background. In a comparative study of 43 inbred strains, Barker and Peters found that C57BLKS/J had a relatively high percentage of reticulocytes per total number of erythrocytes, high white blood cell count per volume, with a high percentage of lymphocytes and basophils and a low percentage of neutrophils per total number of leukocytes. C57BLKS/J mice exhibit age related hearing loss by three months of age.

Development

Selected References
Genetics

- $Ah^{b-1}$
- $Cdh23^{ahl}$

Disease/Phenotype

- Disease Terms
- Research Areas By Phenotype
- Mammalian Phenotype Terms by Genotype
- Phenotype Information
- References

Technical Support

Genotyping Protocols
Genotyping resources and troubleshooting
Inbred mouse strains are maintained through sibling (sister x brother) matings; no genotyping required.

Breeding Considerations
This strain is a challenging breeder.
Additional Breeding and Husbandry Support
Mating System
Sibling x Sibling
Appearance
black
Related Genotype: $a/a$
Citation
When using the C57BLKS/J mouse strain in a publication, please include JAX stock #000662 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

MP15 (Standard)

Pricing & Availability

Available Now
Sized to accommodate orders of up to 10 or more with age range. Ask Customer Service for details.

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The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. Therefore, we cannot guarantee a strain's phenotype will meet all expectations. To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project. We do not guarantee breeding performance and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

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Email: TechTran@jax.org

Related Strains