C58/J inbred mice develop leukemia at one year of age, and are susceptible to diet-induced atherosclerotic aortic lesions. They may also be useful in inflammation and immunology studies due to their lack of IL-3R.

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
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RESEARCH APPLICATIONS

Cardiovascular Research  
Cancer Research  
Research Tools  
Neurobiology Research  
Sensorineural Research  
Metabolism Research  
Immunology, Inflammation and Autoimmunity Research

BASE PRICE

Starting at:

$218.00 Domestic price for female 4-week
Details

Important Note
This strain is homozygous for $Cdh23^{ahl}$, the age related hearing loss 1 mutation, which on this background results in progressive hearing loss with onset after 10 months of age.

Detailed Description

This strain was developed by MacDowell in 1921 from litter mates 58 and 52 of Miss Lathrop's stock. A mating of the same male but a different female gave rise to the commonly used C57BL group of strains. C58/J mice exhibit a high incidence of leukemia (>90% by one year of age). C58/J mice also exhibit an intermediate susceptibility to developing atherosclerotic aortic lesions (1670 to 1690 um2 atherosclerotic aortic lesions/aortic cross-section) following 14 weeks on an atherogenic diet (1.25% cholesterol, 0.5% cholic acid and 15% fat).

Bone marrow cells of C58/J mice (and mice of 9 other strains, excluding closely derived C57 strains) carry the interleukin 3 receptor, alpha chain; mutation 1 allele ($Il3ra^{m1}$) which confers non-responsiveness to Interleukin-3 (IL-3). IL-3 normally stimulates colony formation of multiple lineages of hematopoietic cells.

Other characteristics include: low social preference, poor performance in the T-maze, and overt motoric stereotypy. C58/J mice are homozygous for the high affinity aryl-hydrocarbon receptor; b-1 variant ($Ahr^{b-1}$).

From 2014-2020, The Jackson Laboratory Repository Stock No. 000669 live colony had ~14% nonproductive breeding units (33 of 236 breeding units failed to produce offspring). Therefore, researchers are encouraged to order more than one breeding unit.

Selected References

Genetics

- $Ahr^{b-1}$
- $Cdh23^{ahl}$
- $Il3ra^{m1}$
- $Rmd^f$
- $Micr^a$
- $Cd5^b$
- $Mx1^{s1}$
- $Cox7a2^{is}$
From 2014-2020, The Jackson Laboratory Repository Stock No. 000669 live colony had ~14% nonproductive breeding units (33 of 236 breeding units failed to produce offspring). Therefore, researchers are encouraged to order more than one breeding unit.

Additional Breeding and Husbandry Support
Mating System
Sibling x Sibling
Appearance
black
Related Genotype: al/a
Citation
When using the C58/J mouse strain in a publication, please include JAX stock #000669 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

AX10 (Standard)
## Pricing & Availability

Live mice available in varying quantities. Ask Customer Service for details.

### Available

### Domestic

Pricing effective for USA, Canada and Mexico shipping destinations

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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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**TERMS OF USE**

**General Terms and Conditions**

**LICENSING INFORMATION**

Phone: 207-288-6470  
Email: TechTran@jax.org  
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Related Strains

- All
- By Allele
- By Gene
- By Collection

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