**Overview**

**Also Known As:** sash, c-Kit, cKit

These mice carry the spontaneous Kit "sash" mutation associated with melanogenesis and mast cell deficiency.

**GENETIC OVERVIEW**

**Genetic Background**

Generation: N4F3
(2019-06-13 00:00:00)

**Kit<sup>W-sh</sup>**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Spontaneous</td>
<td>Kit</td>
<td>KIT proto-oncogene receptor tyrosine kinase</td>
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</tbody>
</table>

**RESEARCH APPLICATIONS**

Dermatology Research  
Research Tools  
Immunology, Inflammation and Autoimmunity Research  
Hematological Research  
Sensorineural Research

**BASE PRICE**

**Stock No:** 030764 | sash  
**Congenic, Spontaneous Mutation**

Live mice available in varying quantities. Ask Customer Service for details.
The sash mutation results in an embryonic deficit and eventual abolishment of mast cells soon after birth. There is also a deficit of melanocytes and interstitial cells in these mice. Reduced numbers of melanocytes results in some hearing impairment in homozygotes. The Kit<sup>W-sh</sup> mutation is an inversion in regulatory elements upstream of the c-kit element. Homozygotes are white with black eyes and some pigment around the ears. Heterozygotes are black with a white sash at the midline. The mice are fertile and not anemic.

Recent findings of altered immune responses as a result of mast cell deficit in these mice include:

- heightened susceptibility to vaccinia virus skin infection;
- earlier and more severe experimental autoimmune encephalomyelitis disease (a model of multiple sclerosis) with extensive demyelination and inflammation in the CNS;
- exacerbated dermatitis upon repeated oxazolone challenge when compared to their wild-type;
- Ultra violet exposure in these mice does not induce immune suppression, as it does in wild type mice;
- lower serum IgE levels compared with wild-type mice under steady-state conditions and after N. brasiliensis (hookworm) infection;
- failure to elicit histamine release or contractile responses in trachea isolated from ovalbumin sensitized mast cell-deficient mice;
- development of 50% more adenomas than littermate controls and with tumors being 33% larger in Kit<sup>W-sh</sup> mice;
- increased resistance to bacterial lipopolysaccharide injection;
- failure of ovalbumin sensitization to elicit histamine release or contractile responses in trachea isolated from sensitized Kit<sup>W-sh</sup> mice.
**Genetics**

*Kit<sup>W-sh</sup>*

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Phenotype**

**Mammalian Phenotype Terms by Genotype**

**References**

**Technical Support**

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
Separated PCR: Kit-alternate2
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, these mice can be bred as homozygotes.

Additional Breeding and Husbandry Support

Appearance
white coat, black eyes
Related Genotype: a/a Kit<sup>W-sh</sup> / Kit<sup>W-sh</sup>

Citation
When using the sash mouse strain in a publication, please cite the originating article(s) and include JAX stock #030764 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

AX11 (Maximum)
### Pricing & Availability

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

**Frozen Mouse Embryo**

| B6.Cg-Kit<W-sh>/HNRahrJaeBsmJ | $2595.00 |

**Domestic | International**

Pricing effective for USA, Canada and Mexico shipping destinations

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

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Related Strains

All

By Allele

By Gene

By Collection