B6.129S4-Kras<sup>tm1Tji</sup> J

Stock No: 008179 | LSL-K-ras G12D

Congenic, Targeted Mutation

AVAILABLE NOW

PLACE ORDER

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

Overview

Also Known As: LSL-K-ras G12D

This Kras<sup>LSL-G12D</sup> strain carries a Lox-Stop-Lox (LSL) sequence followed by the K-ras G12D point mutation allele commonly associated with human cancer. When bred to a strain expressing Cre recombinase under control of various tissue specific promoters, Cre recombination deletes the LSL cassette and allows the expression of the mutant KRAS oncogenic protein. This strain may be useful in studies of cancer and development.

Donating Investigator

Dr. Tyler Jacks, Massachusetts Institute of Technology

READ MORE +
GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
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<td>N11+N3F3</td>
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Kras^{Im4Tyj}

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Conditional ready (e.g. floxed), No functional change)</td>
<td>Kras</td>
<td>Kirsten rat sarcoma viral oncogene homolog</td>
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RESEARCH APPLICATIONS

Research Tools
Developmental Biology Research
Cancer Research

BASE PRICE

Starting at:

- $255.00 Domestic price for female 4-week
- $333.51 Domestic price for breeder pair

Details

Detailed Description

This Kras^{LSL−G12D} strain carries a point mutation (G12D) whose expression is blocked by the presence of a loxP-flanked stop codon. Homozygotes die in utero. Cre-mediated recombination can excise the stop codon and permit the oncogenic protein to be expressed. Intranasal infection with an adenovirus encoding Cre results in a very high frequency of lung tumors and permits controlled timing of tumor initiation and tumor multiplicity. This strain may be useful in studies of cancer and development.

When bred to a strain expressing Cre recombinase under the control of a tetracycline-responsive promoter element and a strain expressing a tetracycline-controlled activator protein in lung epithelial cells (see Stock No. 006234 and 006235 respectively), this mutant mouse strain may be useful in studies of lung development.

When bred to a strain expressing Cre recombinase in the male germ line (see Stock No. 003328, 007252 for example), this mutant mouse strain may be useful in studies of embryonic development.

When bred to a strain expressing interferon inducible Cre recombinase (see Stock No. 003556, 005673 for example), this mutant...
mouse strain may be useful in studies of Ras and myeloproliferative disease.

When bred to a strain expressing Cre recombinase in mammary gland, skin, and other secretory glands (see Stock No. 003553 for example), this mutant mouse strain may be useful in studies of epithelial hyperplasias.

When bred to a strain expressing Cre recombinase in epiblast derived tissues (see Stock No. 003755 for example), this mutant mouse strain may be useful in studies of Ras and embryonic development.

When bred to a strain expressing Cre recombinase in liver (see Stock No. 003574 for example), this mutant mouse strain may be useful in studies of intrahepatic cholangiocarcinoma.

When bred to a strain expressing Cre recombinase in myeloid cell lineage (see Stock No. 004781 for example), this mutant mouse strain may be useful in studies of lung cancer.

When bred to a strain expressing tamoxifen-inducible Cre recombinase in melanocytes (see Stock No. 012328 for example), this mutant mouse strain may be useful in studies of melanomagenesis.

When bred to a strain expressing Cre recombinase in astrocytes (see Stock No. 012887 for example), this mutant mouse strain may be useful in studies of neurofibroma development.
Genotyping Protocols
MELT: Kras\textsuperscript{tm4Tfy} Alt1
Genotyping resources and troubleshooting

Dietary Information
LabDiet\textsuperscript{®} 5K52 formulation (6% fat)

Breeding Considerations
When maintained as a live colony, heterozygotes may be bred. Homozygotes are embryonic lethal.

Additional Breeding and Husbandry Support

Mating System
+/+ sibling x Heterozygote

Citation
When using the JAX Kras\textsuperscript{tm4Tfy} mouse strain in a publication, please cite the originating article(s) and include JAX stock #008179 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

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

Available Now

### Pricing Table

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<th>AGE</th>
<th>SEX</th>
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### JAX® Mice, Products & Services Conditions of Use

**Breeder Pair**

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**Related Products and Services**

- Frozen Mouse Embryo: $2,595.00 per straw or vial

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**Terms Of Use**

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**General Terms and Conditions**

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**Licensing Information**

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

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### Related Strains

- **All**
- **By Allele**
- **By Gene**
- **By Collection**

All Related Strains