



B 6 . 1 2 9 Kras^{LSL-G12D} / J

Stock No: 008179 | LSL-K-ras G12D

Congenic, Targeted Mutation



AVAILABLE

PLACE ORDER

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

Overview

Also Known As: LSL-K-ras G12D

This Kras^{LSL-G12D} 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

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GENETIC OVERVIEW

Genetic Background

Generation

[N11+N3F5](#)

(2019-12-31 00:00:00)

Kras^{tm4Tyj}

Allele Type

Gene Symbol

Gene Name

Targeted (Conditional ready (e.g. floxed), No functional change)

Kras

Kirsten rat sarcoma viral oncogene homolog

[VIEW GENETICS](#)

RESEARCH APPLICATIONS

Research Tools

Developmental Biology Research

Cancer Research

[VIEW ALL RESEARCH APPLICATIONS](#)

BASE PRICE

Starting at:

\$255.00 Domestic price for female 4-week

333.51 Domestic price for breeder pair

[VIEW PRICE LIST](#)

[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.

+ Development

+ Control Suggestions

+ Selected References

- Genetics

+ *Kras^{tm4Tyj}*

- Disease/Phenotype

+ Disease Terms

+ Research Areas By Phenotype

+ Mammalian Phenotype Terms by Genotype

+ References

- Technical Support

CHAT OFFLINE

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

Standard PCR:[Kras Alt1](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 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 LSL-Kras G12D mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #008179 in your Materials and Methods section.

[Facility Barrier Level Descriptions](#)

 [AX10 \(Standard\)](#)

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Available

Domestic **International**

Pricing effective for USA, Canada and Mexico shipping destinations

Live Mouse			
AGE	SEX	GENOTYPE	PRICE
4 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00
	Male	Heterozygous for Kras ^{tm4Tyj}	\$255.00
4 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51
5 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00
	Male	Heterozygous for Kras ^{tm4Tyj}	\$255.00
5 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51
6 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00
	Male	Heterozygous for Kras ^{tm4Tyj}	\$255.00
6 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51
7 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00
	Male	Heterozygous for Kras ^{tm4Tyj}	\$255.00
7 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51
8 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00

	SEX	Heterozygous for Kras ^{tm4Tyj}	\$255.00
8 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51
9 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00
	Male	Heterozygous for Kras ^{tm4Tyj}	\$255.00
9 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51
10 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00
	Male	Heterozygous for Kras ^{tm4Tyj}	\$255.00
10 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51
11 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00
	Male	Heterozygous for Kras ^{tm4Tyj}	\$255.00
11 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51
12 weeks	Female	Heterozygous for Kras ^{tm4Tyj}	\$255.00
	Male	Heterozygous for Kras ^{tm4Tyj}	\$255.00
12 weeks	Female	Wildtype for Kras ^{tm4Tyj}	\$78.51
	Male	Wildtype for Kras ^{tm4Tyj}	\$78.51

Breeder Pair			
SEX	GENOTYPE		PRICE
Female	Heterozygous for Kras ^{tm4Tyj}		\$333.51
Male	Wildtype for Kras ^{tm4Tyj}		
Female	Wildtype for Kras ^{tm4Tyj}		\$333.51
Male	Heterozygous for Kras ^{tm4Tyj}		

Related Products and Services		
Frozen Mouse Embryo	B6.129S4-Kras<tm4Tyj>/J Frozen Embryos	\$2595.00

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