



B 6 . 1 2 9 T S r ^{tm13y} p-53 / J

Stock No: 002101 | p53 KO

Congenic, Targeted Mutation



AVAILABLE NOW

P L A C E O R D E R

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

Overview



Also Known As: p53 KO

Trp53 knockout mutant mice develop tumors at three to six months of age. They are suitable for use in applications related to the study of familial breast cancers such as Li-Fraumeni syndrome as well as research of lung, brain and bone tumors, lymphoma and leukemia, and other rare cancers.

Donating Investigator

IMR Colony, The Jackson Laboratory

[READ MORE +](#)

GENETIC OVERVIEW

Genetic Background

000664 C57BL/6J

Generation

N5F6pF1+N1F13
(2019-05-06 00:00:00)

Trp53^{tm1Tyj}

Allele Type

Targeted (Null/Knockout)

Gene Symbol

Trp53

Gene Name

transformation related protein 53

[VIEW GENETICS](#)

RESEARCH APPLICATIONS

Apoptosis Research

Cancer Research

Immunology, Inflammation and Autoimmunity Research

Mouse/Human Gene Homologs

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

\$236.78 Domestic price for female 4-week

473.55 Domestic price for breeder pair

VIEW PRICE LIST

Details

Detailed Description

A neomycin cassette replaces exons 2-6 (including the start codon) of the transformation related protein 53 gene (*Trp53*). Mice homozygous for the mutation show no visible phenotype but most develop tumors (principally lymphomas and sarcomas) at three to six months of age. Heterozygous mice develop tumors at about 10 months of age. These mice model some of the features of human Li-Fraumeni syndrome, a form of familial breast cancer with mutations in TRP53. Homozygous mice may produce a litter before succumbing to tumors.

For the C57BL/6-J congenic *Trp53*^{tm1Tyj} mouse line (Stock No. 002101), it is the experience of The Jackson Laboratory that homozygous males have expected Mendelian survival rates at wean age, but homozygous females have significantly reduced survival by wean age. Specifically, breeding heterozygous females to heterozygous males results in only ~3.5% homozygous females by wean age (expected Mendelian 12.5%). Additionally, breeding heterozygous females to homozygous males results in only ~6.8% homozygous females by wean age (expected Mendelian 25%).

Development

Control Suggestions

Selected References

Genetics

Trp53^{tm1Tyj}

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

+ References

- Technical Support

C H A T O  F L I N E

C O N T A C T T E C H N I C A L S U P P O R T

Genotyping Protocols

Standard PCR: [Trp53^{tm1Tyj}](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 5K52 formulation (6% fat)

Breeding Considerations

[This strain is a challenging breeder.](#)

This *Trp53^{tm1Tyj}* strain is maintained by mating heterozygous mice together or by mating heterozygous females with homozygous males.

For the C57BL/6-J congenic *Trp53^{tm1Tyj}* mouse line (Stock No. 002101), it is the experience of The Jackson Laboratory that homozygous males have expected Mendelian survival rates at wean age, but homozygous females have significantly reduced survival by wean age. Specifically, breeding heterozygous females to heterozygous males results in only ~3.5% homozygous females by wean age (expected Mendelian 12.5%). Additionally, breeding heterozygous females to homozygous males results in only ~6.8% homozygous females by wean age (expected Mendelian 25%).

[Additional Breeding and Husbandry Support](#)

Mating System

Heterozygote x Homozygote

Appearance

black

Related Genotype: *a/a*

Citation

When using the *Trp53* KO mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #002101 in your

Materials and Methods section.

[Facility Barrier Level Descriptions](#)

 [AX10 \(Standard\)](#)

- Pricing & Availability



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Live Mouse

AGE	SEX	GENOTYPE	PRICE
4 weeks	Female	Heterozygous for <i>Trp53^{tm1Tyj}</i>	\$236.78

	SEX	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
4 weeks	Female	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
5 weeks	Female	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
5 weeks	Female	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
6 weeks	Female	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
6 weeks	Female	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
7 weeks	Female	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
7 weeks	Female	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
8 weeks	Female	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Heterozygous for Trp53 ^{tm1Tyj}	\$236.78
8 weeks	Female	Homozygous for Trp53 ^{tm1Tyj}	\$236.78
	Male	Homozygous for Trp53 ^{tm1Tyj}	\$236.78

Breeder Pair			
SEX	GENOTYPE		PRICE
Female	Heterozygous for Trp53 ^{tm1Tyj}		\$473.55
Male	Heterozygous for Trp53 ^{tm1Tyj}		
Female	Heterozygous for Trp53 ^{tm1Tyj}		\$473.55
Male	Homozygous for Trp53 ^{tm1Tyj}		

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