

B6.129X1-Trpv1^{tm1Jul}/JStock No: **003770** | Trpv1 KO Congenic, Targeted Mutation

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Also Known As: Trpv1 KO

Mice that are homozygous for the targeted mutation, unlike wildtype mice, show no pain response and reduced swelling after subcutaneous hind paw injection of vanilloid compounds. They have a markedly attenuated response to acidified environments or heat (43 degrees C). Also absent is the profound reduction in body temperature following a subcutaneous injection of capsaicin. Homozygotes appear to display robust deficits in thermally evoked pain-related behavior and do not display an aversion to ingesting capsaicin-supplemented drinking water. These mice live longer than wildtype mice, maintain a youthful metabolic profile, and have improved spatial memory.

Donating Investigator

Dr. David Julius, Univ of California at San Francisco

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GENETIC OVERVIEW

Genetic Background**Generation**[Contact Technical Support](#)
(2018-07-27 00:00:00)*Trpv1^{tm1Jul}*

Alele Type
Targeted (Null/Knockout)

Gene Symbol
Trpv1

Gene Name
transient receptor potential cation channel, subfamily V, member 1

[VIEW GENETICS](#)

RESEARCH APPLICATIONS

Sensorineural Research
Immunology, Inflammation and Autoimmunity Research
Neurobiology Research

[VIEW ALL RESEARCH APPLICATIONS](#)

BASE PRICE

Starting at:

\$177.45 Domestic price for female 3-week

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[- Details](#)

[- Detailed Description](#)

Trpv1 KO mice are viable and fertile. No gene product (mRNA or protein) is detected in dorsal root ganglia. Cultured dorsal root ganglia neurons and skin preparations display no, or markedly attenuated, response to vanilloid compounds, acidified environments or heat (43 degrees C). In intact wild type mice, a subcutaneous injection of vanilloid compounds into the hind paw elicits a pain response with subsequent swelling. No pain response is observed in homozygotes and swelling is noticeably reduced. Also absent is the profound reduction in body temperature following a subcutaneous injection of capsaicin. Homozygotes appear to display robust deficits in thermally evoked pain-related behavior and do not display an aversion to ingesting capsaicin-supplemented drinking water. Trpv1 KO mice also display increased longevity and reduced aging. Mutant male mice live 12% longer than controls, while mutant female mice live 16% percent longer than controls. These mice display a youthful metabolic profile at old age, including retaining the circadian shift in the respiratory exchange ratio (RER) seen in young mice. Mutant mice are also more glucose tolerant at 3 and 22 months of age. Mutant mice have improved spatial memory and showed a delay in age-related decline in motor coordination.

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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:[Trpv1-Alternate 1](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 5K52 formulation (6% fat)

Breeding Considerations

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

When maintaining a live colony, these mice are bred as homozygotes. Coat color expected from breeding:Black

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the Trpv1 KO mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #003770 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [AX8 \(Standard\)](#)

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LIVE MOUSE			
AGE	SEX	GENOTYPE	PRICE
3 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$177.45
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$177.45
4 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$177.45
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$177.45
5 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$177.45
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$177.45
6 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$182.60
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$182.60
7 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$187.75
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$187.75
8 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$192.90
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$192.90
9 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$198.05
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$198.05
10 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$203.20
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$203.20
11 weeks	Female	Homozygous for Trpv1 ^{tm1.Jul}	\$208.35
	Male	Homozygous for Trpv1 ^{tm1.Jul}	\$208.35

12 weeks	SEX	Homozygous for Trpv1	\$213.50
	Female	Homozygous for Trpv1	\$213.50
	Male	Homozygous for Trpv1	\$213.50

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Email: TechTran@jax.org

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