

**B6.Cg-Tg(Tyr-cre/ERT2)13Bos *Braf*^{tm1Mmcm}
Pten^{tm1Hwu}/BosJ**

Stock No: **013590** | *BRAF*^{CA}, *Pten*^{loxP}, Tyr::CreER^{T2}

◆ Congenic, Targeted Mutation, Transgenic

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

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weeks of age

This tri-allelic mouse model develops induced malignant melanomas following topical application of tamoxifen.

Donating Investigator

Marcus Bosenberg, Yale University

Martin McMahon, University of California, San Francisco

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GENETIC OVERVIEW

Genetic Background

Generation

F?+F29
(2021-04-07 00:00:00)

Pten^{tm1Hwu}

Alele Type

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

Gene Symbol

Pten

Gene Name

phosphatase and tensin homolog

Tg(Tyr-cre/ERT2)13Bos

Alele Type

Transgenic (Recombinase-expressing, Inducible)

Braf^{tm1Mmcm}

Alele Type

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

Gene Symbol

Braf

Gene Name

Braf transforming gene

change)

V I E W G E N E T I C S

RESEARCH APPLICATIONS

Research Tools
Cancer Research
Cell Biology Research

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

BASE PRICE

Starting at:

\$278.00 Domestic price for female

556.00 Domestic price for breeder pair

V I E W P R I C E L I S T

Details

Detailed Description

Mice that are hemizygous for the Tg(Tyr-cre/ERT2)13Bos transgene, heterozygous for the *Braf*^{*tm1M/mcm*} allele (BRaf^{CA}; Cre-inducible V600E) and homozygous for the floxed *Pten*^{*tm1H/wu*} allele (Pten^{loxP}; Cre-inducible knock-out) are viable and fertile, but 25%-60% or more will develop spontaneous melanomas with an onset of 2-12 months of age due to "leaky" Cre recombinase expression and activity in a genetic background setting that is conducive to tumor formation - see details below.

Topical application of tamoxifen results in development of pigmented skin lesions within 21-28 days, and which progress to malignant melanoma. Metastases are detected in lymph nodes and lung. All treated mutant mice developed metastases in regional draining lymph nodes.

Spontaneous melanoma phenotype: The Donating Investigator reported that by 6 months of age, mice hemizygous for Tg(Tyr-cre/ERT2)13Bos, heterozygous for BRaf^{CA} and homozygous for Pten^{loxP}, exhibit a 25-60% spontaneous melanoma rate in the absence of 4-hydroxytamoxifen induction, due to "leaky" Cre recombinase expression and activity in a genetic background setting that is conducive to tumor formation. ***It is the experience of The Jackson Laboratory that the spontaneous melanoma rate is even more severe than originally reported.***

Mice that are hemizygous for the Tg(Tyr-cre/ERT2)13Bos transgene, homozygous for BRaf^{CA} and homozygous for Pten^{loxP}

develop larger melanoma lesions with tamoxifen application.

[+ Development](#)

[+ Expression Data](#)

[+ Control Suggestions](#)

[+ Selected References](#)

[- Genetics](#)

[+ *Pten^{tm1Hwu}*](#)

[+ Tg\(Tyr-cre/ERT2\)13Bos](#)

[+ *Braf^{tm1Mcm}*](#)

[- Disease/Phenotype](#)

[+ Disease Terms](#)

[+ Research Areas By Phenotype](#)

[+ Mammalian Phenotype Terms by Genotype](#)

[+ References](#)

[- Technical Support](#)

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:[Tg\(Tyr-cre/ERT2\)13Bos-alternate2](#)

Standard PCR:[Pten](#)

Standard PCR:[Braf](#)

Probe:[Braf Probe](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 5K52 formulation (6% fat)

Breeding Considerations

When maintaining a live colony, these mice can be bred as hemizygous for the Tg(Tyr-cre/ERT2)13Bos transgene, heterozygous for the *Braf*^{tm1Mmcm} allele and heterozygous for the floxed *Pten*^{tm1Hwu} allele. **See [Detailed Description for information on the spontaneous melanoma rate in the absence of 4-hydroxytamoxifen induction](#).**

Additional Breeding and Husbandry Support

Mating System

Homozygous for *Braf*^{tm1Mmcm}, Homozygous for *Pten*^{tm1Hwu}, Hemizygous for Tg(Tyr-cre/ERT2)13Bos X Heterozygous for *Braf*^{tm1Mmcm}, Homozygous for *Pten*^{tm1Hwu}, Non-carrier for Tg(Tyr-cre/ERT2)13Bos

or

Heterozygous for *Braf*^{tm1Mmcm}, Homozygous for *Pten*^{tm1Hwu}, Non-carrier for Tg(Tyr-cre/ERT2)13Bos X Homozygous for *Braf*^{tm1Mmcm}, Homozygous for *Pten*^{tm1Hwu}, Hemizygous for Tg(Tyr-cre/ERT2)13Bos

Citation

When using the *BRAF*^{CA}, *Pten*^{loxP}, *Tyr::CreER*^{T2} mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #013590 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [FGB29 \(Standard\)](#)

🔙 Pricing & Availability



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Available

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LIVE MOUSE			
AGE	SEX	GENOTYPE	PRICE
Approx 4-8 weeks	Female	Hemizygous for Tg(Tyr-cre/ERT2)13Bos Heterozygous for <i>Braf</i> ^{tm1Mmcm} Homozygous for <i>Pten</i> ^{tm1Hwu}	\$278.00
	Male	Hemizygous for Tg(Tyr-cre/ERT2)13Bos Heterozygous for <i>Braf</i> ^{tm1Mmcm} Homozygous for <i>Pten</i> ^{tm1Hwu}	\$278.00
Approx 4-8 weeks	Female	Hemizygous for Tg(Tyr-cre/ERT2)13Bos Homozygous for <i>Braf</i> ^{tm1Mmcm} <i>Pten</i> ^{tm1Hwu}	\$278.00

		SEX	Homozygous for Pten		
	Male		Hemizygous for Tg(Tyr-cre/ERT2)13Bos Homozygous for Pten	Homozygous for Braf ^{tm1Mmcm} Homozygous for Pten ^{tm1Hwu}	\$278.00
Approx 4-8 weeks	Female		Noncarrier Heterozygous for Braf ^{tm1Mmcm}	Homozygous for Pten ^{tm1Hwu}	\$278.00
	Male		Noncarrier Heterozygous for Braf ^{tm1Mmcm}	Homozygous for Pten ^{tm1Hwu}	\$278.00

BREEDER PAIR					
SEX	GENOTYPE				PRICE
Female	Noncarrier Heterozygous for Braf ^{tm1Mmcm}	Homozygous for Pten ^{tm1Hwu}			\$556.00
Male	Hemizygous for Tg(Tyr-cre/ERT2)13Bos	Homozygous for Braf ^{tm1Mmcm}	Homozygous for Pten ^{tm1Hwu}		
Female	Hemizygous for Tg(Tyr-cre/ERT2)13Bos	Homozygous for Braf ^{tm1Mmcm}	Homozygous for Pten ^{tm1Hwu}		
Male	Noncarrier Heterozygous for Braf ^{tm1Mmcm}	Homozygous for Pten ^{tm1Hwu}			

RELATED PRODUCTS AND SERVICES			
Frozen Mouse Embryo	B6.Cg-Tg(Tyr-cre/ERT2)13Bos Braf<tm1Mmcm> Pten<tm1Hwu>/BosJ		\$2595.00

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