

STOCK *Wt1*^{tm2(cre/ERT2)Wtp} / J

Stock No: 010912 | *Wt1*^{CreERT2}

Targeted Mutation

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

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the CreERT2 fusion protein to proepicardium and epicardium by the *Wt1* promoter/enhancer elements. As *Wt1* is expressed in the developing genitourinary system and in the mesothelia overlying most visceral organs, these mutant mice are useful as a tamoxifen-inducible Cre-lox tool for lineage-tracing/markings *Wt1*-expressing cells for studying cardiomyocytes in the developing heart.

Donating Investigator

William T Pu, Children's Hospital Boston, Harvard MS

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GENETIC OVERVIEW

Genetic Background

Generation

?+pN1F5
(2020-03-19 00:00:00)

Wt1^{tm2(cre/ERT2)Wtp}

Alele Type

Targeted (Recombinase-expressing, Inducible)

Gene Symbol

Wt1

Gene Name

Wilms tumor 1 homolog

VIEW GENETICS

RESEARCH APPLICATIONS

Developmental Biology Research
Research Tools
Cardiovascular Research
Internal/Organ Research
Reproductive Biology Research

BASE PRICE

Starting at:

\$278.00 Domestic price for female 4-week

356.51 Domestic price for breeder pair

VIEW PRICE LIST

Details

Detailed Description

Homozygous mice die between embryonic day (E)13.5 and birth with defects of heart, kidney, gonads, and multiple other organs. Heterozygous ($Wt1^{CreERT2/+}$) mice are viable and fertile. The $Wt1^{CreERT2}$ "knock-in" allele both abolishes $Wt1$ gene function and has expression of the CreER^{T2} fusion protein (CreERT2) under control of the $Wt1$ promoter/enhancer elements. In heart from heterozygous mice, CreERT2 expression is directed to proepicardium and epicardium from E9.5 to E15.5, and is not found in the myocardium. CreERT2 fusion gene activity is inducible; observed following tamoxifen administration. As such, when $Wt1^{CreERT2}$ mice are bred with mice containing *loxP*-flanked sequence, tamoxifen-inducible Cre-mediated recombination will result in deletion of the floxed sequences in the $Wt1$ -expressing cells of the offspring. The donating investigator reports that Cre activity may be observed prior to tamoxifen exposure only in epicardium of adult mice following myocardial infarction. As $Wt1$ is expressed in the developing genitourinary system and in the mesothelia overlying most visceral organs, these mutant mice are useful as a tamoxifen-inducible Cre-lox tool for lineage-tracing/markings $Wt1$ -expressing cells for studying cardiomyocytes in the developing heart.

The Cre-ERT2 fusion protein consists of Cre recombinase fused to a triple mutant form of the human estrogen receptor which does not bind its natural ligand (17 β -estradiol) at physiological concentrations but will bind the synthetic estrogen receptor ligands 4-hydroxytamoxifen (OHT or tamoxifen) and, with lesser sensitivity, ICI 182780. Restricted to the cytoplasm, Cre-ERT2 can only gain access to the nuclear compartment after exposure to tamoxifen. To counteract the mixed estrogen agonist effects of tamoxifen injections, which can result in late fetal abortions in pregnant mice, progesterone may be coadministered.

Development

Expression Data

Control Suggestions

Selected References

– Genetics

+ [Wt1^{tm2\(cre/ERT2\)}Wtp](#)

– 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:[Wt1](#)

Probe:[Wt1 Probe](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 5K52 formulation (6% fat)

Breeding Considerations

When maintaining a live colony, heterozygous mice may be bred together or to wildtype siblings. Homozygous mice die before birth.

[Additional Breeding and Husbandry Support](#)

Mating System

Heterozygote x +/+ sibling

Citation

When using the Wt1^{CreERT2} mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #010912 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

Domestic **International**

Pricing effective for USA, Canada and Mexico shipping destinations

LIVE MOUSE			
AGE	SEX	GENOTYPE	PRICE
4 weeks	Female	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
4 weeks	Female	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
	Male	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
5 weeks	Female	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
5 weeks	Female	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
	Male	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
6 weeks	Female	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
6 weeks	Female	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
	Male	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
7 weeks	Female	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
7 weeks	Female	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
	Male	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
8 weeks	Female	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
8 weeks	Female	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
	Male	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51
9 weeks	Female	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{trn2(cre/ERT2)Wtp}	\$278.00
9 weeks	Female	Wild-type for Wt1 ^{trn2(cre/ERT2)Wtp}	\$78.51

trn2(cre/ERT2)Wtp

	SEX	Genotype	PRICE
10 weeks	Female	Heterozygous for Wt1 ^{tm2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{tm2(cre/ERT2)Wtp}	\$278.00
10 weeks	Female	Wild-type for Wt1 ^{tm2(cre/ERT2)Wtp}	\$78.51
	Male	Wild-type for Wt1 ^{tm2(cre/ERT2)Wtp}	\$78.51
11 weeks	Female	Heterozygous for Wt1 ^{tm2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{tm2(cre/ERT2)Wtp}	\$278.00
11 weeks	Female	Wild-type for Wt1 ^{tm2(cre/ERT2)Wtp}	\$78.51
	Male	Wild-type for Wt1 ^{tm2(cre/ERT2)Wtp}	\$78.51
12 weeks	Female	Heterozygous for Wt1 ^{tm2(cre/ERT2)Wtp}	\$278.00
	Male	Heterozygous for Wt1 ^{tm2(cre/ERT2)Wtp}	\$278.00
12 weeks	Female	Wild-type for Wt1 ^{tm2(cre/ERT2)Wtp}	\$78.51
	Male	Wild-type for Wt1 ^{tm2(cre/ERT2)Wtp}	\$78.51

BREEDER PAIR		PRICE
SEX	GENOTYPE	
Female	Heterozygous for Wt1 ^{tm2(cre/ERT2)Wtp}	\$356.51
Male	Wild-type for Wt1 ^{tm2(cre/ERT2)Wtp}	
Female	Wild-type for Wt1 ^{tm2(cre/ERT2)Wtp}	\$356.51
Male	Heterozygous for Wt1 ^{tm2(cre/ERT2)Wtp}	

RELATED PRODUCTS AND SERVICES		
Frozen Mouse Embryo	STOCK Wt1<tm2(cre/ERT2)Wtp>/J	\$2595.00

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