

**STOCK *Gpx4*<sup>tm1.1Qra</sup> /J**Stock No: **027964** | *Gpx4*<sup>1</sup> Targeted Mutation

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

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creates a null allele. Homozygous knockout mice exhibit mitochondrial dysfunction, increased apoptosis and neurodegeneration.

### Donating Investigator

Qitao Ran, UT Health Science at San Antonio

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## GENETIC OVERVIEW

### Genetic Background

### Generation

?+pN1F13  
(2021-05-11 00:00:00)

*Gpx4*<sup>tm1.1Qra</sup>

### Alele Type

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

### Gene Symbol

*Gpx4*

### Gene Name

glutathione peroxidase 4

[VIEW GENETICS](#)

## RESEARCH APPLICATIONS

Neurobiology Research  
Research Tools

[VIEW ALL RESEARCH APPLICATIONS](#)

## BASE PRICE

Starting at:

\$270.00 Domestic price for female 4-week

V I E W   P R I C E   L I S T

### Details

#### Detailed Description

The *Gpx4*<sup>f</sup> allele has *loxP* sites flanking exons 2-4 of the glutathione peroxidase 4 (*Gpx4*) gene.

*Gpx4* encodes a member of the selenoprotein glutathione peroxidase family that functions to reduce hydroperoxides in membrane lipids and lipoproteins, thus protecting mitochondrial function and suppressing apoptosis.

Mice homozygous for the floxed allele are viable and fertile with no reported abnormalities.

When bred to mice that express a tamoxifen-inducible Cre recombinase, the resulting offspring may be useful in generating an inducible *Gpx4* knockout.

For example, when bred to *Gt(ROSA)26Sor<sup>tm1(cre/ERT)Nat</sup>* Cre-expressing mice (Stock No. [004847](#)) the resulting *Gpx4* knockout homozygotes die within 2 weeks. Mice exhibit increased mitochondrial damage, decreased electron transport complex activity, reduced liver ATP production, increased apoptosis, neuronal loss, and increased astrogliosis.

#### Development

#### Control Suggestions

#### Selected References

### Genetics

#### *Gpx4*<sup>tm1.1Qra</sup>

## ⊖ Disease/Phenotype

+ Disease Terms

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+ Research Areas By Phenotype

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+ Mammalian Phenotype Terms by Genotype

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+ References

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## ⊖ 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:[Gpx4 Alternate 1](#)

[Genotyping resources and troubleshooting](#)

### Dietary Information

New Diet as of March 2015: Lab Diet® 5K0Q (6% fat)

### Breeding Considerations

While maintaining a live colony, these mice are bred as homozygotes.

[Additional Breeding and Husbandry Support](#)

### Mating System


Homozygote x Homozygote

### Citation

When using the Gpx4<sup>f</sup> mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #027964 in your Materials and Methods section.

### Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [AX10 \(Standard\)](#)

## ⊖ 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	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
5 weeks	Female	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
6 weeks	Female	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
7 weeks	Female	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
8 weeks	Female	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
9 weeks	Female	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
10 weeks	Female	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
11 weeks	Female	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
12 weeks	Female	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00
	Male	Homozygous for Gpx4 <sup>tm1.1Qra</sup>	\$270.00

## RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	STOCK Gpx4<tm1.1Qra>/J Frozen Embryo	\$2595.00
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## PAYMENT TERMS AND CONDITIONS

Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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Q U E S T I O N S   A B O U T   T E R M S   O F   U S E

### LICENSING INFORMATION

Phone: 207-288-6470

Email: [TechTran@jax.org](mailto:TechTran@jax.org)

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## Related Strains

All

By Allele

By Gene

By Collection






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