

B6.129P2-*Pvalb*^{tm1Swal}/J

Stock No: **027503** | PV

 Congenic, Targeted Mutation

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phenotypes associated with autism spectrum disorders.

Donating Investigator

Beat Schwaller, University of Fribourg

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GENETIC OVERVIEW

Genetic Background

Generation

Pvalb^{tm1Swal}

Alele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Pvalb

parvalbumin

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

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

Details

Detailed Description

Pvalb (parvalbumin) encodes a high affinity calcium ion-binding protein that is expressed at high levels in fast contracting muscles and, to different extents, in brain and several endocrine tissues. During a fast-twitch in tibialis anterior muscles, the decay of the intracellular calcium concentration is slower compared with wild-type mice. This leads to a prolongation of the time required to attain peak twitch tension and to slower relaxation kinetics. In analogy, absence of parvalbumin increases facilitation of synaptic transmission, since the presence of parvalbumin slows down build-up of residual calcium in presynaptic terminals leading to facilitation. In addition, loss of parvalbumin results in multiple phenotypes associated with autism spectrum disorders including: abnormal social interactions, impaired communication, repetitive and stereotypic behaviors, reduced pain sensitivity, reduced startle response and increased seizure susceptibility. MRI analysis reveals transient cortical hypertrophy and cerebellar hypoplasia in the brains of homozygotes. Mice homozygous for this knockout allele are viable and fertile.

Development

Control Suggestions

Selected References

Genetics

Pvalb^{tm1Swal}

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:[Pvalb](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

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

[Additional Breeding and Husbandry Support](#)

Citation

When using the PV⁻ mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #027503 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, [G200](#)

[- Pricing & Availability](#)



Cryo
Recovery

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Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT

DESCRIPTION

PRICE

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo

B6.129P2-Pvalb<tm1Swal>/J

\$2595.00

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The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. **Therefore, we cannot guarantee a strain's phenotype will meet all expectations.** To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project. We do not guarantee [breeding performance](#) and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

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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

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Email: TechTran@jax.org[Related Strains](#)

All

By Allele

By Gene

By Collection



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