

STOCK *Axl^{tm1Gr1}* /JStock No: **011121** Targeted Mutation

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and apoptosis. *Axl* is highly expressed by key cellular targets of ZIKA virus (ZIKV), and is proposed to promote viral entry in certain cell types (including non-*Axl*-expressing cells). *Axl* inhibition represents a potential approach for antiviral therapies.

Donating Investigator

Greg Lemke, The Salk Institute

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GENETIC OVERVIEW

Genetic Background**Generation***Axl^{tm1Gr1}***Alele Type****Gene Symbol****Gene Name**

Targeted (Null/Knockout)

Axl

AXL receptor tyrosine kinase

[VIEW GENETICS](#)

RESEARCH APPLICATIONS

Research Tools

Immunology, Inflammation and Autoimmunity Research

Cell Biology Research

Virology Research

Reproductive Biology Research

Apoptosis 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

Mice that are homozygous for the targeted null mutation are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. When combined with the mutations *Tyro3^{tm1Gr1}* (Stock No. 007937) and *Mertk^{tm1Gr1}* (Stock No. 011122), mice exhibit a lymphoproliferative disorder, autoimmunity, increased apoptosis in multiple tissues, blindness, abnormal spermatogenesis and reduced fertility (in females) or infertility (in males).

The TAM receptors (Tyro3, Axl, and Mertk) are a family of receptor tyrosine kinases whose ligands (Gas6 and Protein S) bind to phosphatidylserine on the surface of apoptotic cells and enveloped viruses. Axl is highly expressed by key cellular targets of ZIKA virus (ZIKV) - including human radial glial cells, astrocytes, endothelial cells and microglia in developing human cortex, and by progenitor cells in developing retina (Nowakowski *et al.* 2016 *Cell Stem Cell* 18:591), as well as in subtypes of trophoblasts (Tabata *et al.* 2016 *Cell Host Microb.* 20:155). Research in 2017 identifies a dual role of Axl during ZIKV infection of human glial cells (astrocytes and microglia) - promoting viral entry and modulating innate immune responses - and suggests Axl inhibition may represent a potential target for antiviral therapies (Meertens *et al.* 2017 *Cell Rep.* 18:324).

Development

Control Suggestions

Selected References

Genetics

Axl^{tm1Gr1}

⊖ 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

Probe:[Axl Probe Alternate 1](#)

Standard PCR:[Axl](#)

[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 STOCK Axl^{tm1Grl}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #011121 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



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Domestic International

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous for Axl ^{tm1} Grl	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	STOCK Axl ^{tm1} Grl/J	\$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.

THE JACKSON LABORATORY'S GENOTYPE PROMISE

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.

Terms Of Use

TERMS OF USE

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ADDITIONAL USE RESTRICTIONS APPLY

[Use of MICE by companies or for-profit entities requires a license prior to shipping.](#)

LICENSING INFORMATION

Phone: 207-288-6470

☰ Related Strains

All

By Allele

By Gene

By Collection



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