

**NOD.Cg-Rag1<sup>tm1Mom</sup> Prf1<sup>tm1Sdz</sup> /SzJ**

Stock No: **004848** | NOD/LtSz-Rag1nullPfpnull

 Congenic, Targeted Mutation

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

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serum immunoglobulin. They also develop thymic lymphomas.

### Donating Investigator

Dr. Leonard D. Shultz, The Jackson Laboratory

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## GENETIC OVERVIEW

### Genetic Background

### Generation

#### *Prf1<sup>tm1Sdz</sup>*

#### Alele Type

Targeted (Null/Knockout)

#### Gene Symbol

*Prf1*

#### Gene Name

perforin 1 (pore forming protein)

#### *Rag1<sup>tm1Mom</sup>*

#### Alele Type

Targeted (Null/Knockout)

#### Gene Symbol

*Rag1*

#### Gene Name

recombination activating gene 1

VIEW GENETICS

## RESEARCH APPLICATIONS

Research Tools

Hematological Research

Immunology, Inflammation and Autoimmunity Research

Internal/Organ Research  
Cancer Research  
Apoptosis Research  
Developmental 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

## 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 both targeted mutations are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities when housed under specific pathogen free conditions. These double homozygote mutant mice have no mature T or B lymphocytes, no detectable NK cell cytotoxic activity, and lack serum immunoglobulin. The number of nucleated spleen cells is significantly reduced in double mutant mice, when compared to the single homozygote, NOD.129S7(B6)-*Rag1*<sup>tm1Ncm</sup>/J (Stock No. 003729). Although an increased number of DX5<sup>+</sup> CD122<sup>+</sup> NK cells are found in the spleens of double mutants, these NK cells have impaired cytotoxic activity. The disruption of *Prf1* ablates NK cell cytotoxic activity resulting in increased engraftment levels over that observed with Stock No. 003729. All mutant mice develop thymic lymphomas. This double mutant mouse strain may be useful in studies involving engraftment of human hematolymphoid cells.

#### Development

#### Control Suggestions

#### Selected References

### Genetics

#### *Prf1*<sup>tm1Sdz</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:[Prf1](#)

Standard PCR:[Prf1](#)

Standard PCR:[Rag1Alternate1](#)

[Genotyping resources and troubleshooting](#)

### Breeding Considerations

This strain is maintained as a homozygote for both mutant alleles, under specific pathogen free conditions.

[Additional Breeding and Husbandry Support](#)

### Citation

When using the NOD/LtSz-Rag1nullPfpnull mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #004848 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](#)*

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## ➤ Pricing & Availability



Cryo  
Recovery

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

### Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

#### CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Homozygous for Rag1<tm1Mom> Homozygous for Prf1<tm1Sdz>, 1 pair minimum	\$2,854.50

## 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

[General Terms and Conditions](#)

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

### 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

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

## Related Strains

All

By Allele

By Gene

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# TOMORROW'S CURES



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