

**B6.129-*Il21r<sup>tm1Kopf</sup>*/J**

Stock No: **019115** | *Il-21r*

 Congenic, Targeted Mutation

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responses. This strain may be useful for studying IL21 in T and B cell response to various pathogens and in models of allergies and autoimmunity.

### Donating Investigator

Dr. Manfred Kopf, ETH Zurich

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## GENETIC OVERVIEW

### Genetic Background

### Generation

?+pN2F5  
(2020-12-03 00:00:00)

*Il21<sup>tm1Kopf</sup>*

### Alele Type

### Gene Symbol

### Gene Name

Targeted (Null/Knockout)

*Il21r*

interleukin 21 receptor

VIEW GENETICS

## RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research

VIEW ALL RESEARCH APPLICATIONS

## BASE PRICE

Starting at:

\$236.78 Domestic price for female

V I E W   P R I C E   L I S T

### Details

#### Detailed Description

IL21R is a type I cytokine receptor for IL21. Type 1 cytokines are involved in T cell proliferation, differentiation, and maintenance of memory population. Ligand binding of IL21R activates downstream signaling through the JAK/STAT pathway.

In this strain, developed by Drs. Manfred Kopf and Martin Hodge, a neomycin cassette replaces exons 2-5 of the targeted allele, *Il21r<sup>tm1Kopf</sup>*. Mice homozygous for the mutation are viable, fertile, and do not display any gross physical or behavioral abnormalities.

OVA airway challenge and infection with gastrointestinal nematodes of *Il21r*<sup>-/-</sup> mice resulted in impaired Th2 type effector responses (i.e. reduced numbers of IL-4 producing cells, basophils, eosinophils, and intestinal granuloma). In contrast, no differences were observed in development of Th17 cells and organ-related autoimmunity in models of experimental allergic encephalitis (EAE) and myocarditis (EAM). Further studies showed that *Il21r*<sup>-/-</sup> mice were highly susceptible to chronic viral infection due to a defect in maintenance of polyfunctional anti-viral CD8 T cell responses.

This strain may be useful for studying the role of IL21 in T and B cell responses to various pathogens and in models of allergies and autoimmunity.

When referencing the use of this strain, please be sure to use this citation: Frohlich A. et al., Blood 2007 109(5):2023-31.

#### Development

#### Control Suggestions

#### Selected References

### Genetics

## – 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

Separated PCR:[Il21r](#)

[Genotyping resources and troubleshooting](#)

### Dietary Information

LabDiet® 5K52 formulation (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 *Il-21r<sup>-/-</sup>* mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #019115 in your Materials and Methods section.

### Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [FGB29 \(Standard\)](#)

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## 🔍 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
Approx 4-8 weeks	Female	Homozygous for Il21r <sup>tm1Kopf</sup>	\$236.78
	Male	Homozygous for Il21r <sup>tm1Kopf</sup>	\$236.78

#### RELATED PRODUCTS AND SERVICES

<a href="#">Frozen Mouse Embryo</a>	B6.129-Il21r <sup>tm1Kopf</sup> /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.

## 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

[Notice regarding distribution of this strain.](#)

## LICENSING INFORMATION

Phone: 207-288-6470

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

### ☰ Related Strains

All

By Allele

By Gene

By Collection



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