

B6.129S4(FVB)-Agr2^{tm1.2Erle}/J

Stock No: **025630**

 Congenic, Targeted Mutation

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

PLACE ORDER

[Email](#) [Download PDF](#) [Help](#)

Donating Investigator

David Erle, University of California, San Francisco

READ MORE +

GENETIC OVERVIEW

Genetic Background

Generation

Agr2^{tm1.2Erle}

Alele Type

Targeted (Null/Knockout)

Gene Symbol

Agr2

Gene Name

anterior gradient 2

VIEW GENETICS

RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research

Endocrine Deficiency Research

Developmental Biology Research

Internal/Organ 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

Agr2^{-/-} mice lack exons 2-3 of the anterior gradient 2 (*Agr2*) gene, abolishing gene expression. AGR2 is present within the endoplasmic reticulum (ER) of intestinal secretory epithelial cells and is essential for the synthesis of mucin (MUC2). MUC2 is a large, cysteine-rich glycoprotein that forms the protective mucus gel lining the intestine and airway. Mice that are homozygous for this allele are viable and fertile. MUC2 synthesis is decreased and no mucus is present in the small and large intestinal mucosa of *Agr2*^{-/-} mice. Incidence of rectal prolapse is increased, occurring in 5 of 8 mice during the first year of life. Mice have increased numbers of mast cells and mast cell proteases, and increased expression of ER-related genes such as *Hsp90b1* (heat shock protein 90, beta (Grp94), member 1) and *Sec61a1* (Sec61 alpha 1 subunit). They also have decreased expression of some genes associated with inflammation such as *Klk1* (kallikrein 1) and *Cyp1a1* (Cytochrome P450, family 1, subfamily a, polypeptide 1). Dextran Sodium Sulfate exposed *Agr2*^{-/-} mice have bloody stool and 20% weight loss, resulting in colonic epithelial damage. *Agr2*^{-/-} mice have also been used to study the role of ARG2 and MUC2 and MUC1 in asthma and pancreatic cancer progression.

Development

Control Suggestions

Selected References

Genetics

Agr2^{tm1.2Erle}

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:[Agr2](#)

Standard PCR:[Agr2](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, homozygous mice may be bred together.

[Additional Breeding and Husbandry Support](#)

Citation

When using the B6.129S4(FVB)-*Agr2*^{tm1.2Erle}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #025630 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

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	Heterozygous or wildtype for <i>Agr2</i> <tm1.2Erle>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo

B6.129S4(FVB)-Agr2<tm1.2Erle>/J

\$2595.00

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

Related Strains

All

By Allele

By Gene

By Collection



DO YOU NEED BALB/c MICE?

Rely on JAX to provide the models you need, when you need them.

LEARN MORE



CONTACT



DONATE



SUBSCRIBE

JAX HOME CAREERS LEGAL INFORMATION

RESEARCH CENTERS MOUSE GENOME INFORMATICS

MOUSE PHENOME DATABASE

Leading the search for

TOMORROW'S CURES



©2021 THE JACKSON LABORATORY

Choose other country or region 

^ E E E D B

Did you find what you were looking for?

Yes No