

B6N.129P2(Cg)-*Itgal*^{tm1Hz}/J

Stock No: **028241** | LFA-1^d

 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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conformation. Homozygous mice exhibit defects in cell adhesion and costimulatory signaling, including reduced antigen-specific T cell activation, impaired leukocyte migration and recruitment during inflammatory responses (e.g. sepsis, delayed-type hypersensitivity or transplant rejection).

Donating Investigator

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GENETIC OVERVIEW

Genetic Background Generation

Itgal^{tm1Hz}

Alele Type	Gene Symbol	Gene Name
Targeted (Null/Knockout)	<i>Itgal</i>	integrin alpha L

VIEW GENETICS

RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research

Research Tools

Cancer Research

Cell Biology Research

Developmental Biology 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

Integrin α L (*Itgal*; Cd11a or LFA-1) functions in cellular adhesion and costimulatory signaling. Deletion of the cytoplasmic GFFKR sequence in LFA-1 results in the disassembly of the α L- and the β 2-subunit cytoplasmic tails; leading to a constitutively active conformation (LFA-1^d).

When maintained in a barrier unit with standard specific-pathogen free conditions, the donating investigator reports that homozygous (LFA-1^{d/d}) and heterozygous (LFA-1^{d/+}) mice are viable and fertile with no gross anatomic or behavioral abnormalities.

LFA-1^{d/d} mouse leukocytes show increased adhesion to the LFA-1 ligand ICAM-1 on endothelial cells or antigen presenting cells; resulting in reduced antigen-specific T cell activation, impaired leukocyte migration and recruitment during inflammatory responses (e.g. sepsis, delayed-type hypersensitivity or transplant rejection).

Defective LFA-1 deactivation significantly prolongs cardiac allograft survival. Specifically, LFA-1^{d/d} animals receiving cardiac transplants of fully MHC-mismatched wildtype hearts survive significantly longer than wildtype recipients.

Development

Control Suggestions

Selected References

Genetics

Itgal^{tm1Hz}

– 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:[Itgal-Alternate 4](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, homozygous mice may be bred with wildtype mice from the colony or with C57BL/6N inbred mice (Stock No. [005304](#)).

[Additional Breeding and Husbandry Support](#)

Citation

When using the LFA-1^d mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #028241 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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CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous for Itgal<tm1Hz>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6N.129P2(Cg)-Itgal<tm1Hz>/J Frozen Embryo	\$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

LICENSING INFORMATION

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Email: TechTran@jax.org

Related Strains

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By Gene

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