Overview

Also Known As: Cd19cre

The CD19-Cre knock-in/knock-out allele has a Cre recombinase gene inserted into the first coding exon of the CD19 antigen gene; both abolishing endogenous Cd19 gene function and placing cre expression under the control of the endogenous Cd19 promoter/enhancer elements. Cre recombinase expression is directed at the earliest stages and throughout B-lymphocyte development and differentiation. Homozygous mice are also useful for studying B cell-deficiency.
Homozygous mutant mice are viable, fertile, normal in size, and do not display any gross physical or behavioral abnormalities. Homozygotes have a deficiency in the B-1 subset of B-lymphocytes along with a concomitant reduction in serum IgM. Their ability to respond to T-cell-dependent antigens is severely impaired, and they fail to form splenic germinal centers.

In addition to disrupting the targeted gene, the targeting construct also introduced a cre cassette into exon 2 of the targeted gene, effectively placing cre expression under the control of the endogenous promoter. The Cd19 promoter specifically directs cre expression at the earliest stages and throughout B-lymphocyte development and
differentiation. Although homozygous mutant mice are Cd19-deficient, heterozygous mice are phenotypically normal, and can be used for specific deletion of loxP-flanked (floxed) targets in B-lymphocytes.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.

Genotyping Protocols
Separated PCR: Cd19<sup>tm1(cre)Cgn</sup>

Genotyping resources and troubleshooting

Dietary Information
New Diet as of March 2015: Lab Diet® 5K0Q (6% fat)

Breeding Considerations
When maintaining a live colony, these mice may be bred as heterozygotes or homozygotes. The donating investigator reports that homozygotes older than 3 months of age do not breed well. Homozygous breeding pairs maintained at The Jackson Laboratory have shown no such problems.

Additional Breeding and Husbandry Support
Mating System
Homozygote x Homozygote
Citation

When using the Cd19 mouse strain in a publication, please cite the originating article(s) and include JAX stock #006785 in your Materials and Methods section.

Pricing & Availability

Live mice available in varying quantities. Ask Customer Service for details.

Available

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Related Products and Services

Frozen Mouse Embryo  
B6.129P2(C)-Cd19<sup>tm1(cre)Cgn</sup>/J Frozen Embryo  
$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.

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Terms of Use

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Licensing Information
Phone: 207-288-6470
Email: TechTran@jax.org

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Related Strains

All

By Allele

By Gene

By Collection

All Related Strains

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