

C57BL/6-Crnb^{tm1.1Ble}/JStock No: **032487** | Crbn (I391V), Crbn^{I391V}, CrbnI391V **Coisogenic, Targeted Mutation**

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related to the study of B cell malignancies (multiple myeloma, mantle cell lymphoma, chronic lymphocytic leukemia) and thalidomide-induced cytopenias and teratogenicity.

Donating Investigator

Benjamin Ebert, Dana Farber Cancer Institute

[R E A D M O R E +](#)**GENETIC OVERVIEW****Genetic Background****Generation**[?+pN1F7](#)
(2021-04-02 00:00:00)***Crnb^{tm1.1Ble}*****Allele Type**

Targeted (Humanized sequence)

Gene Symbol*Crbn***Gene Name**

cereblon

[V I E W G E N E T I C S](#)**RESEARCH APPLICATIONS**

Cancer Research

Research Tools

Hematological Research

Immunology, Inflammation and Autoimmunity 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 S](#)

BASE PRICE

Starting at:

\$255.00 Domestic price for female 4-week

V I E W P R I C E L I S T

Details

Detailed Description

The targeted *Crbn* gene encodes a substrate recognition component of a DCX (DDB1-CUL4-X-box) E3 protein ligase complex involved in the ubiquitination and subsequent proteasomal degradation of target proteins. Mutations in this gene are associated with autosomal recessive 2 mental retardation and autosomal recessive non-syndromic intellectual disability. These *Crbn*^{I391V} mice carry an allele for the I391V amino acid substitution mutation which corresponds to the human V388 residue mutation enabling lenalidomide-dependent degradation of casein kinase 1A1 and confers *in vivo* sensitivity to thalidomide and its derivatives. Sequencing was used to confirm the point mutation. Homozygotes are viable and fertile. T cells from homozygotes exhibit thalidomide derivative (lenalidomide) induced degradation of Ikaros, Zfp91, and Ck1a (casein kinase 1a1) proteins, and increased secretion of IL-2. Homozygotes treated for 21 days with lenalidomide develop leukopenia, thrombocytopenia, as well as impaired hematopoiesis, specifically reduction in hematopoietic stem and progenitor cell. Heterozygotes display sensitivity to thalidomide and its derivatives. Homozygous mice exposed to thalidomide (or lenalidomide) during pregnancy exhibit fetal loss (at around E10.5), compared to no fetal loss in wildtype controls.

Development

Control Suggestions

Selected References

Genetics

Crbn^{tm1.1Ble}

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

Sanger sequencing:[Crbn](#)

Probe:[Crbn Probe](#)

[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 homozygotes.

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the Crbn (I391V), Crbn^{I391V}, CrbnI391V mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #032487 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [AX18 \(Maximum\)](#)

[- Pricing & Availability](#)



Available

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

LIVE MOUSE			
AGE	SEX	GENOTYPE	PRICE
4 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
5 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
6 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
7 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
8 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
9 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
10 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
11 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
12 weeks	Female	Homozygous for Crbn ^{tm1.1Ble}	\$255.00
	Male	Homozygous for Crbn ^{tm1.1Ble}	\$255.00

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	C57BL/6-Crbn ^{tm1.1Ble} /J	\$2595.00
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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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[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

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LICENSING INFORMATION

Phone: 207-288-6470

Email: TechTran@jax.org

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By Gene

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