This CRISPR/Cas9 generated Chd8 mutant of the Chd8 gene carries a floxed exon 3. This strain may be useful for generating conditional mutations in applications related to the study of chromatin remodeling and autism spectrum disorder.

Donating Investigator
Cathleen Lutz, The Jackson Laboratory

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

Detailed Description

CRISPR/cas9 endonuclease mediated genome editing of the *Chd8*, chromodomain helicase DNA binding protein 8, gene, also known as Duplin, was used to introduce *loxP* sites flanking exon 3. The targeted *Chd8* gene encodes a DNA helicase involved in epigenetic (chromatin) remodeling and transcriptional regulation. Mutations in this gene have been associated with autism spectrum disorder. These mice possess *loxP* sites on either side of exon 3 of the targeted gene. Mice that are homozygous for this allele are viable and fertile. When these mutant mice are bred to mice that express Cre recombinase, resulting offspring will have exon 3 deleted in the *cre*-expressing tissues. Removal of the floxed sequence creates a null allele. As the mice are characterized, we will modify the strain description and add phenotype data.

This model was generated in collaboration with the Simons Foundation Autism Research Initiative (SFARI).

Development

Control Suggestions

Genetics

*Chd8*<sup>em3Lutzy</sup>

Disease/Phenotype

Disease Terms

Research Areas By Phenotype
Genotyping Protocols
Probe: Chd8 Exon3 (3' LoxP) - Probe Alternate 3
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, these mice can be bred as homozygotes.

Additional Breeding and Husbandry Support
Mating System
Homozygote x Homozygote

Citation
When using the Chd8 floxed mouse strain in a publication, please cite the originating article(s) and include JAX stock #031555 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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<tr>
<th>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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<tr>
<td>Cryo Recovery</td>
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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.

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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.

TERMS OF USE

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The use of this mouse model is subject to the terms and conditions of the Limited Use Label License from Caribou Biosciences, Inc.

LICENSING INFORMATION

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

Related Strains

All
By Allele
By Gene