

B6.Cg-Cnih2^{tm1.1Ran}/J
Stock No: **028442** | Cnih2^{tm1.1Ran}

 [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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a null allele. These mice may be useful in studying the role of synaptic glutamate AMPA receptors in hippocampal synaptic transmission/plasticity, nociception and behavioral, social and cognitive abnormalities, as well as neuropsychiatric disorders such as schizophrenia and depression/mania.

Donating Investigator

Roger A Nicoll, University of California, San Francisco

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GENETIC OVERVIEW

Genetic Background

Generation

Cnih2^{tm1.1Ran}

Alele Type

Targeted (Conditional ready (e.g. floxed), No functional change)

Gene Symbol

Cnih2

Gene Name

cornichon family AMPA receptor auxiliary protein 2

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research
Sensorineural Research
Research Tools

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

Synaptic α -amino-3-hydroxy-5-methyl-4-isoxazole propionic acid receptors (AMPA receptors) are the dominant glutamate receptor in the brain. AMPARs are regulated by a family of auxiliary subunits known as transmembrane AMPAR regulatory proteins (TARPs) and the additional AMPAR auxiliary subunits/binding proteins (cornichon). Cornichon-2 (*Cnih2*) and cornichon-3 (*Cnih3*) promote receptor trafficking and play a critical role in supporting AMPAR-mediated responses. CNIH2 and CNIH3 bind to the GluA1 subunit of AMPAR in hippocampal neurons, allowing GluA1/A2 receptors to reach the surface. CNIH2/CNIH3 interaction with non-GluA1 subunits may be prevented by TARP γ -8 (*Cacng8*).

The *Cnih2*^{fl} floxed allele has *loxP* sites flanking exons 2-5 of the cornichon-2 gene (*Cnih2*). When bred to mice that express Cre recombinase, the resulting offspring may be useful in generating a tissue-specific CNIH2 knockout.

For example, following Cre recombinase expression in hippocampal neurons, the resulting CNIH2-deficiency leads to a profound and selective reduction in AMPAR-evoked excitatory postsynaptic currents (AMPA-eEPSC). When bred to also have the *Cnih3*^{fl} floxed allele (Stock No. [028443](#)), Cre-mediated knockout of both CNIH2 and CNIH3 in hippocampal neurons results in a similar reduction in amplitude (~20% reduced) but significantly faster decay compared to CNIH2 deletion alone.

Mice homozygous for the *Cnih2*^{fl} floxed allele are viable and fertile with no reported abnormalities.

Development

Control Suggestions

Selected References

Genetics

Cnih2^{tm1.1Ran}

– 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:[Cnih2](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, heterozygous mice may be bred together or to wildtype mice from the colony. Alternatively, homozygous mice may be bred together.

[Additional Breeding and Husbandry Support](#)

Citation

When using the Cnih2^{fl} mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #028442 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



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 for Cnih2<tm1.1Ran>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6.Cg-Cnih2<tm1.1Ran>/J Frozen Embryo	\$2595.00
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ADDITIONAL USE RESTRICTIONS APPLY

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LICENSING INFORMATION

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- All
- By Allele
- By Gene
- By Collection




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