B6.129(Cntnap)rn-1^{imp2} J

Stock No: 017482 | Caspr2-

Congenic, Targeted Mutation

AVAILABLE

PLACE ORDER

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

Overview

Also Known As: Caspr2-

_Cntnap2_ knock-out mice mice exhibit hyperactivity, social and communication behavioral impairment, spontaneous seizures, abnormal cortical neuron migration, and abnormal neural synchrony. They may be useful in studies related to Cortical Dysplasia-Focal Epilepsy Syndrome and autism spectrum disorders.

Of note, _Cntnap2^{flaczt/lacZ}_ mice (Stock No. 028635) contain a tau-LacZ gene creating a knock-in/knock-out _Cntnap2_ allele.

Donating Investigator
GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td></td>
<td>N11+pN2F6</td>
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<td>(2019-12-27 00:00:00)</td>
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Cntnap2<sup>tm1Pele</sup>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Cntnap2</td>
<td>contactin associated protein-like 2</td>
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RESEARCH APPLICATIONS

Mouse/Human Gene Homologs
Neurobiology Research
Research Tools
Developmental Biology Research

BASE PRICE

Starting at:

$236.78 Domestic price for female 4-week

Details

No gene product (mRNA or protein) is detected by RT-PCR, Western blot, or immunoprecipitation analysis of brain tissue from homozygous Cntnap2 (contactin associated protein-like 2) knockout animals. Homozygous mice older than 6 months of age exhibit handling-induced and spontaneous seizures. Abnormal organization of neurons in the cortex and fewer parvalbumin-positive interneurons in the hippocampus are observed in homozygotes. Homozygotes exhibit an asynchronous neuronal firing pattern, but no defects in peripheral and central nerve conductance. Homozygotes also display hyperreactivity in open field tests and to thermal sensory stimuli. In buried food olfaction analysis, homozygotes perform better than wildtype controls. Fewer ultrasonic vocalizations are observed in homozygous pups. Mutant mice exhibit impaired social behavior: less interaction, increased grooming and digging, impaired nest building. Risperidone (atypical antipsychotic drug) treatment reduced the phenotype severity of mutant mice.
Contactin associated protein-like 2, a member of the neurexin superfamily, is critical for proper potassium ion channel localization in myelinated axons at the juxtaparanodal region. Mutations in human CNTNAP2 have been found to play a role in cortical dysplasia-focal epilepsy syndrome and autism spectrum disorders. Mice that are homozygous for this targeted mutation are viable, fertile, and normal in size.
Related Products and Services

| Frozen Mouse Embryo | B6.129(Cg)-Cntnap2<tm1Pele>/J | $2595.00 |

Payment Terms and Conditions
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Related Strains

All

By Allele

By Gene

By Collection

All Related Strains