

Genetically engineered models (GEMS)



Cntnap2 knockout rat

Model	Cntnap2 knockout rat
Strain	HsdSage:SD-Cntnap2 ^{tm1Sage}
Location	U.S.
Availability	Cryopreserved

Characteristics/husbandry

- + This model was created in collaboration with Autism Speaks and has undergone phenotypic characterization by Dr. Richard Paylor at Baylor College of Medicine
- + Homozygous knockout rats exhibit complete loss of target protein as demonstrated by Western blot
- + 5 base pair deletion in exon 6 of Cntnap2
- + Spontaneous seizures >7 weeks of age
- + Background strain: Sprague Dawley

Zygosity genotype

+ Cryopreserved as heterozygous embryos

Research use

- + Autism spectrum disorders
- + Language disorders
- + Synaptic plasticity
- + Cell adhesion

Origin

The Cntnap2 KO rat model was originally created at SAGE Labs, Inc. in St. Louis, MO and distributed out of the Boyertown, PA facility. The line continues to be maintained through the original SAGE Labs animal inventory acquired by Envigo.

Description

Generated in conjunction with Autism Speaks, this model possesses a bi-allelic deletion in the contactin associated protein-like 2 (Cntnap2) gene. A member of the neurexin family, Cntnap2 has been associated with the autism spectrum disorders. Spontaneous seizures have been observed in homozygous animals >7 weeks of age.

Figure 1: Lack of Cntnap2 protein expression in homozygous Cntnap2 knockout rats.



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