



Genetically engineered models (GEMS)

Oct1 knockout rat

Model	Oct1 knockout rat
Strain	HsdSage: SD- <i>Slc22a1</i> ^{tm1Sage}
Location	U.S.
Availability	Cryopreserved

Characteristics/husbandry

+ Oct1 (-/-) rats have increased exposure to specific substrates

Zygosity genotype

+ Homozygous

Research use

- + Autism
- + Asperger's syndrome
- + Synaptic plasticity

Origin

The Oct1 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

This model contains an 11 bp bi-allelic deletion within exon 1 of the Slc22a1 solute carrier family 22 (organic cation transporter), member 1, encoding for the basolateral hepatocyte uptake transporter OCT1.

Oct1 is involved in disposition and excretion through its role in xenobiotic uptake in the basolateral membrane of the liver. Polymorphisms within the gene also have clinical relevance - making this a useful model for studying drug-drug interations, toxicity and metabolism in the liver.Oct1 was cryopreserved at the 12th generation. For more information on cryorecovery, please follow the link below.

Figure 1: Age and weight chart

