

# Oct1 knockout rat



<b>MODEL</b>	Oct1 knockout rat
<b>STRAIN</b>	HsdSage: SD-Slc22a1 <sup>em1Sage</sup>
<b>LOCATION</b>	U.S.
<b>AVAILABILITY</b>	Cryopreserved

## CHARACTERISTICS/HUSBANDRY

- Oct1 knockout (KO) 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. The animal inventory was acquired by Envigo in 2019 and then by Inotiv in 2021. The line continues to be maintained through the original SAGE Labs animal inventory and is distributed out of the Boyertown, PA, facility.

## 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 interactions, toxicity and metabolism in the liver. Oct1 was cryopreserved at the 12th generation.

Figure 1: Age and weight chart

