



## Neurexin1 – Nrnx1 knockout rat

Model	Neurexin1 – Nrnx1 knockout rat
Strain	HsdSage:SD-Nrnx1 <sup>tm1Sage</sup>
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
- + Deletions in Neurexin 1 are present in ~0.5% of patients with ASD
- + Copy number variations in Neurexin 1 have been linked to both ASD and schizophrenia
- + Neurexins are important for postsynaptic differentiation, especially so for GABA synaptic connections
- + Background strain: Sprague Dawley

### Zygosity genotype

- + Cryopreserved as heterozygous embryos

### Research use

- + Autism
- + Schizophrenia
- + Synaptic plasticity

### Origin

The Neurexin1 - Nrnx1 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 a biallelic deletion of the Neurexin 1 gene (Nrnx1). Mutations in Nrnx1 have been associated with autism spectrum disorders (ASD) and this model is useful for understanding the role of neurexins in the development of ASD.

Figure 1: 16 bp deletion within Exon 1. Neurexin 1 knockout rats possess a 16 bp deletion (red) in Exon 1 (white). The blue region represents the ZFN binding site.

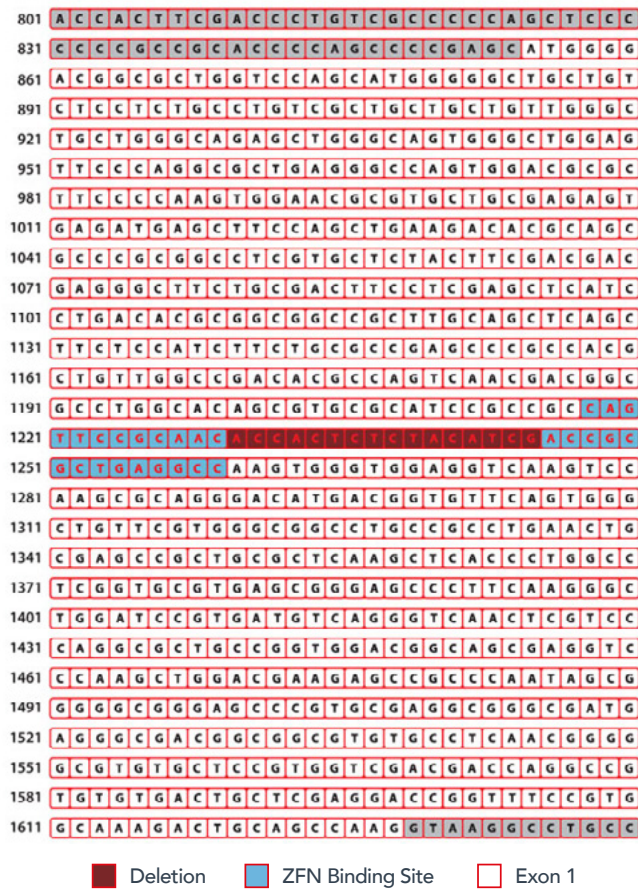
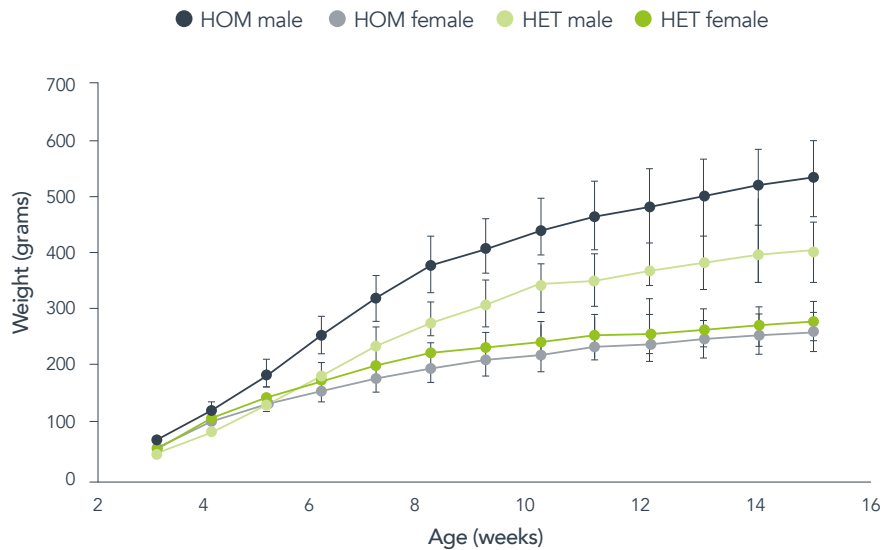


Figure 2: Age and weight comparison chart



Contact us

North America 800.793.7287 [gemsorders@envigo.com](mailto:gemsorders@envigo.com)  
 Envigo, 8520 Allison Pointe Blvd., Suite 400, Indianapolis, IN 46250, United States

