



Pten knockout rat

Model	Pten knockout rat
Strain	HsdSage:SD- Pten ^{tm1sage} SD
Location	U.S.
Availability	Cryopreserved

Characteristics/husbandry

- + This model was created in collaboration with Autism Speaks and is currently undergoing phenotypic characterization by Dr. Richard Paylor at Baylor College of Medicine
- + Mutations in Pten have been associated with autism
- + Background Strain: Sprague-Dawley

Zygoty genotype

- + Cryopreserved as a mix of heterozygous & WT embryos

Research use

- + Autism
- + Cancer

Origin

The Pten knockout 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 monoallelic deletion of the phosphatase and tensin homolog gene (Pten). Pten mutations have been linked with autism, making this model useful for the study of autism spectrum disorders.

Citations

Rowley, Paul A; Guerrero-Gonzalez, Jose; Alexander, Andrew L; Yu, John-Paul J; Convergent microstructural brain changes across genetic models of autism spectrum disorder-A pilot study. Psychiatry research. Neuroimaging Vol.283, 2019

Figure 1: 7 bp deletion within Exon 7. Pten knockout rats possess a 7 bp deletion (red) within Exon 7 of the Pten gene (white). The blue region represents the ZFN binding site.

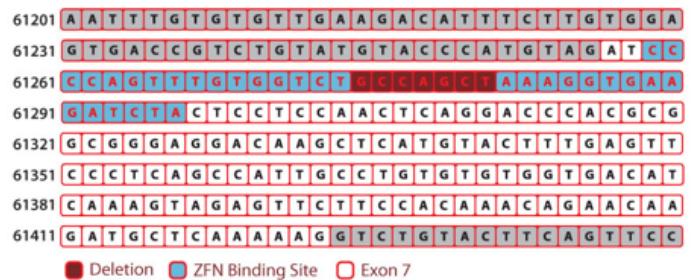
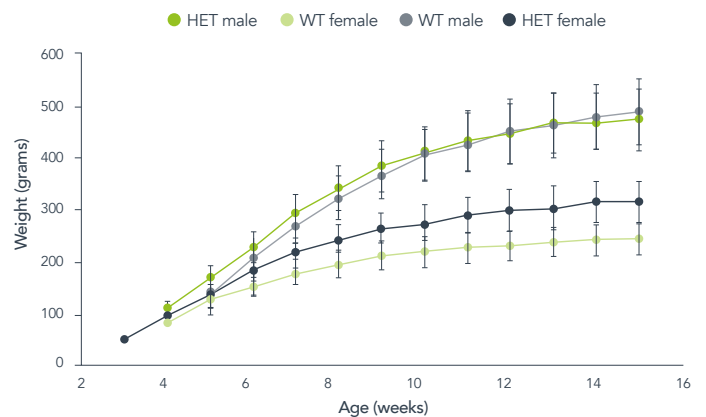


Figure 2: Age and weight chart



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