ENVIGO

Genetically engineered models (GEMS)

MeCP2 knockout rat

Model	MeCP2 knockout rat
Strain	HsdSage:SD-*Mecp2*^{tm1Sage}
Location	U.S.
Availability	Cryopreserved

Characteristics/husbandry

+ Knockout rats exhibit complete loss of target protein as demonstrated by Western blot
+ Mutations in methyl-CpG-binding protein (MeCP2) result in Rett syndrome, a leading cause of intellectual disabilities in girls
+ Background strain: Sprague Dawley
+ Hemi males are compromised at 6 weeks of age

Zygosity genotype

+ Cryopreserved as heterozygous female embryos (X-Linked)

Research use

+ Autism
+ Rett syndrome
+ Cognition

Origin

The MeCP2 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 deletion of the methyl-CpG-binding protein (MeCP2) and is useful for the study of Rett syndrome. The gene is X-Linked. Mutations in MeCP2 have been linked to the development of Rett syndrome, a leading cause of intellectual disabilities in girls.

Citations

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Figure 1: Loss of MeCP2 protein in MeCP2 knockout rats MeCP2 protein expression is disrupted in MeCP2 knockout rats as compared to wild type controls as demonstrated by Western blot. Actin staining demonstrates equal sample loading.

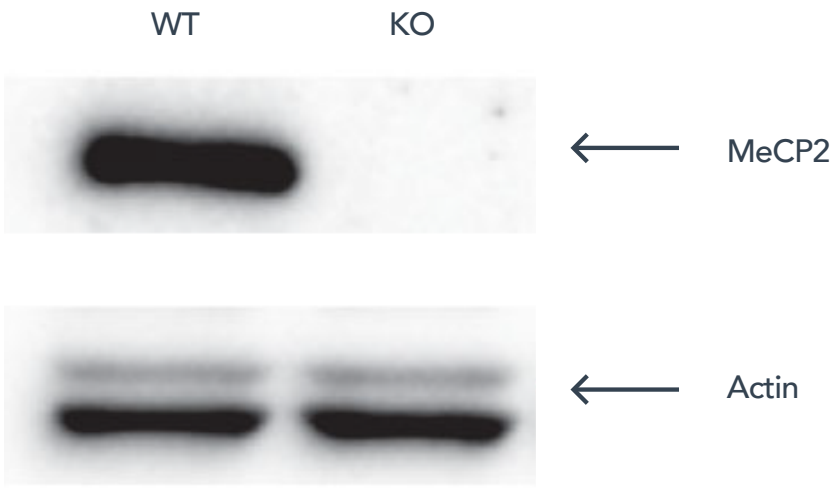
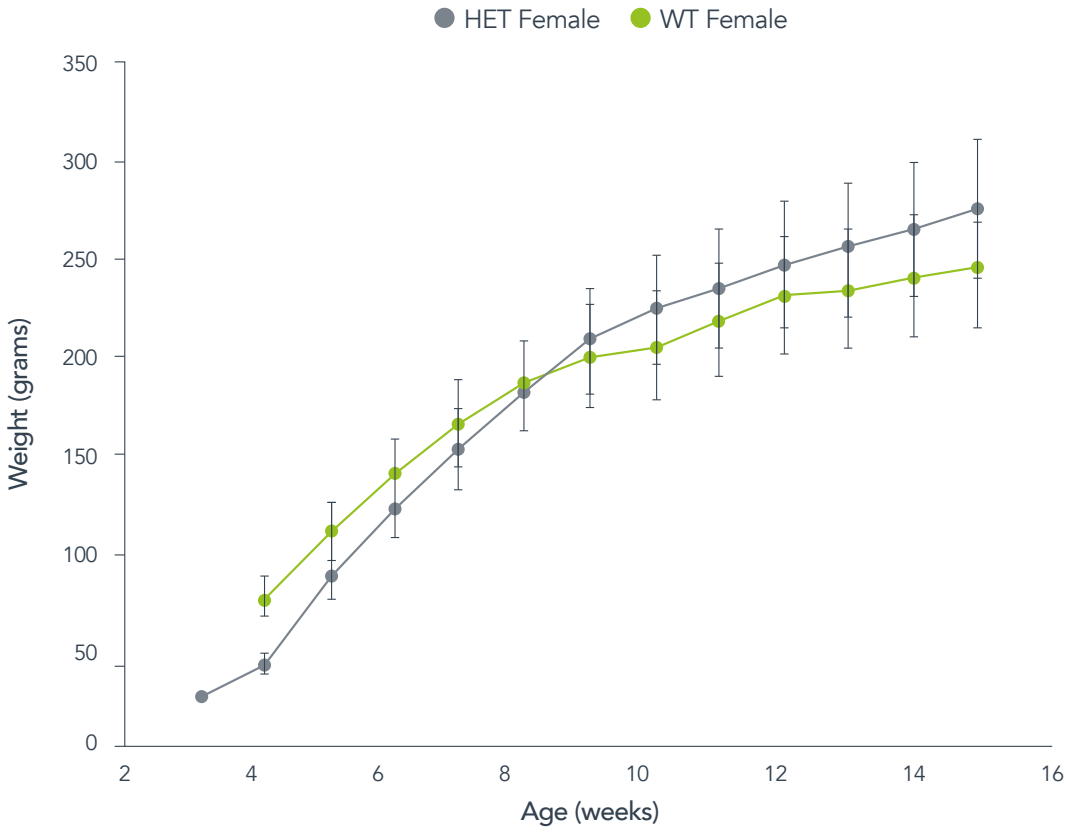


Figure 2: Weight and age comparison chart



Contact us

North America 800.793.7287 gemsorders@envigo.com
Envigo, 8520 Allison Pointe Blvd., Suite 400, Indianapolis, IN 46250, United States