



Faah knockout rat

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

Characteristics/husbandry

- + Homozygous knockout rats exhibit complete loss of protein
- + FAAH KO rats show an increased fear/startle reaction as observed in a functional observational battery (Irwin)
- + FAAH KO rats show normal sensitivity to thermal pain via hot plate assay
- + Background Strain: Sprague Dawley

Zygoty genotype

- + Cryopreserved as heterozygous embryos

Research use

- + Pain
- + Nociception
- + Analgesia
- + Cannabinoids

Origin

The Faah 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 biallelic disruption of the Faah gene encoding the fatty acid amide hydrolase. FAAH is a serine hydrolase responsible for the breakdown of endocannabinoids. This model is useful for the study of cannabinoid biology including nociception.

Cannabinoids perform a variety of functions including the regulation of nociception. FAAH KO rats lack the enzyme responsible for endocannabinoid degradation, and endocannabinoid levels should be elevated in this model.

Figure 1: Western blot demonstrating lack of FAAH in FAAH knockout rats. Brain homogenates were probed with anti-rat FAAH ab54615 (Abcam) at 1:500.

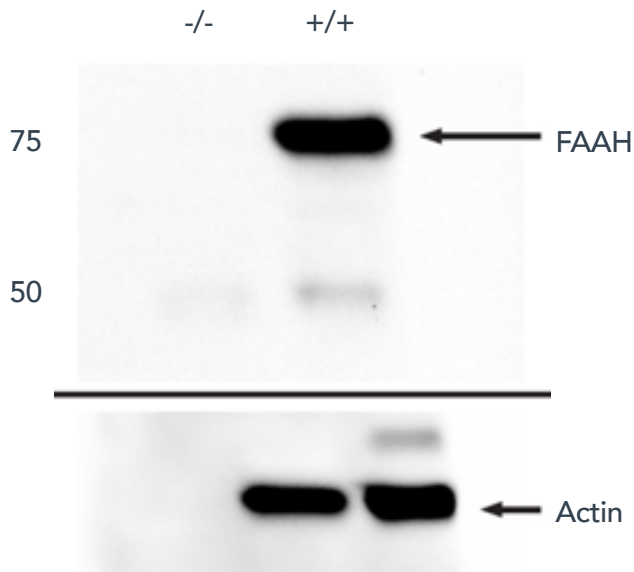


Figure 2. Normal thermal sensitivity in FAAH KO rats. FAAH KO rats display normal sensitivity to thermal pain as measured by hot plate assay.

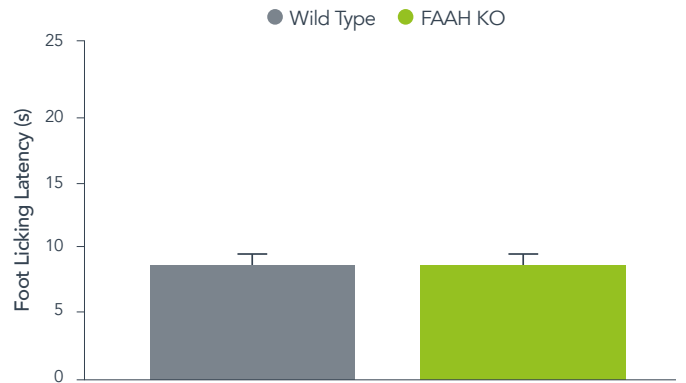
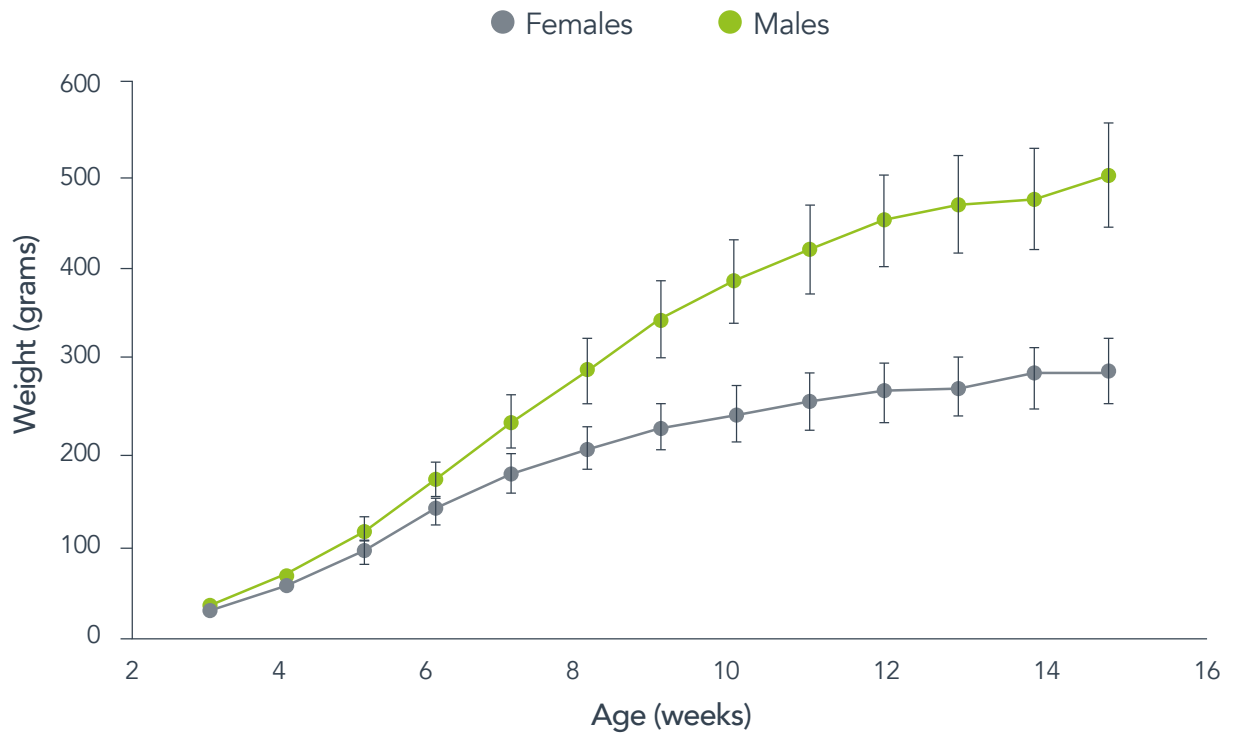


Figure 3: Weight and age chart



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