



Cox2 knockout rat

Model	Cox2 knockout rat
Strain	HsdSage:SD- Cox2 ^{tm1Sage}
Location	U.S.
Availability	Cryopreserved

Characteristics/husbandry

- + Homozygous knockouts display loss of COX2 protein via Western blot
- + Background Strain: Sprague Dawley

Zygoty genotype

- + Cryopreserved as heterozygous embryos

Research use

- + Rheumatoid arthritis
- + Inflammation/Autoimmune disorders
- + Asthma
- + Multiple sclerosis
- + Thrombosis/Cardiac fibrosis
- + Vascular defects
- + Platelet defects/Platelet aggregation
- + Renal dysplasia
- + Crohn's disease
- + Colitis

Origin

The Cox2 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

COX2 is one of the isoenzymes from Cyclooxygenase (COX) family and is responsible for inflammation and pain. Several pain relieving drugs such as Celecoxib and Rofecoxib selectively target COX2.

Figure 1. Homozygous knockout rats display loss of COX2 protein. Peritoneal macrophages were isolated from a wild type or a Cox2 homozygous knockout (COX2 ^{-/-}) rat and cultured in the presence or absence of LPS overnight. Lysates from these cultured macrophages were subjected to Western blot with the anti-COX2 antibody from Cell Signaling Technology (#4842). Rat COX2 protein is ~74 kDa.

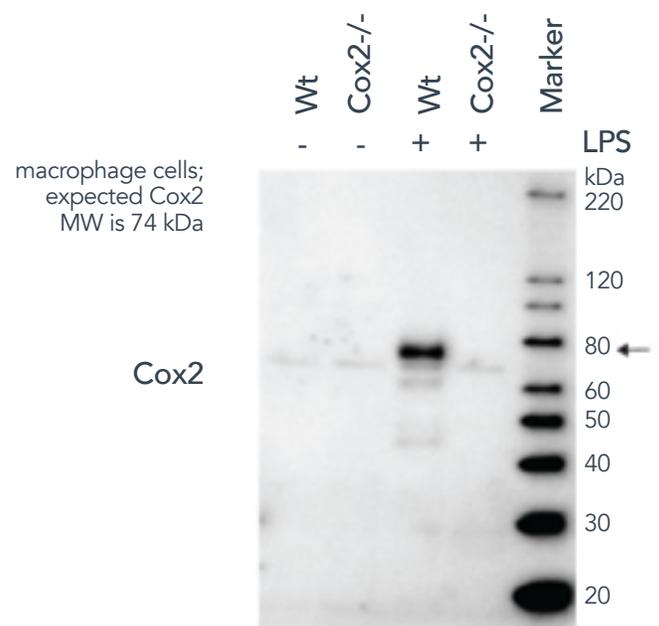
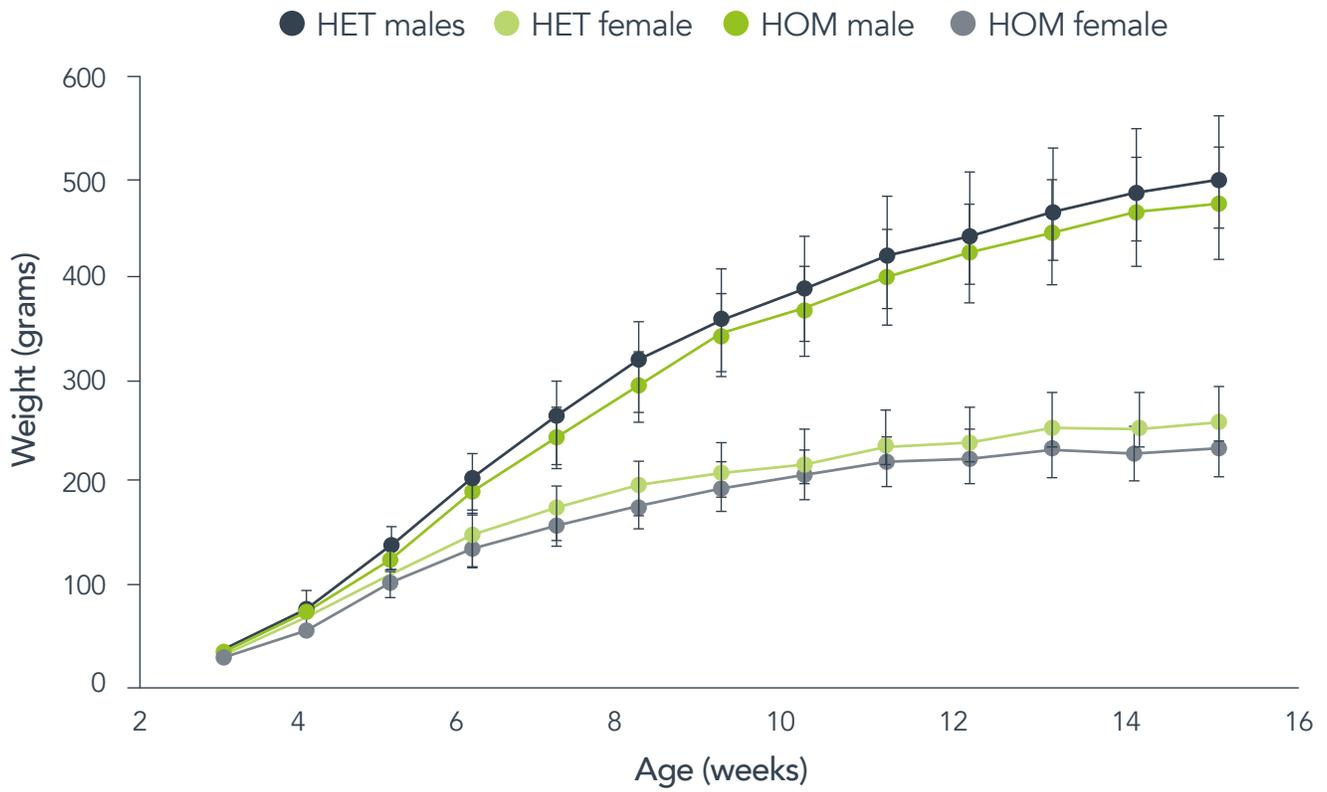


Figure 2. Weight and age chart



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