



Genetically engineered models (GEMS)

Lgals1 (Gal1) knockout rat

Model	Lgals1 (Gal1) knockout rat
Strain	HsdSage:SD- Lgals1 ^{tm1Sage}
Location	U.S.
Availability	Cryopreserved

Characteristics/husbandry

- + Homozygous knockout rats display loss of LGALS1 protein via Western blot
- + Background Strain: Sprague-Dawley

Zygosity 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 Leptin 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

Galectins have been implicated in inflammation and cancer, and are useful targets for development of new anti-inflammatory and anticancer therapies. LGALS1 (GAL1) may act as an autocrine negative growth factor that regulates cell proliferation.

Figure 1: Homozygous knockout rats display loss of LGALS1 protein. Spleen and thymus lysates were isolated from wild type SD and Lgals1 homozygous knockout rats. Rat LGALS1 protein is ~14-15 kDa. Actin (42 kDa) was used as loading control. Anti-LGALS1 antibody from Cell Signaling Technology (#5418).

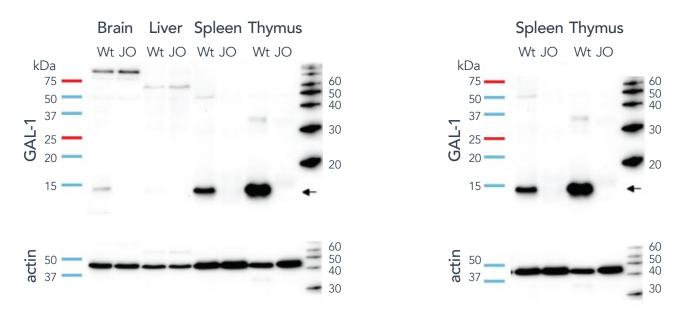


Figure 2: Age and weight chart

