



Genetically engineered models (GEMS)

Lrrk1-Lrrk2 knockout rat

Model	Lrrk1-Lrrk2 knockout rat
Strain	HsdSage:LE-Lrrk1/Lrrk2 ^{tm1Sage}
Location	U.S.
Availability	Cryopreserved

Characteristics/husbandry

+ Background strain: Long Evans Hooded

Zygosity genotype

+ Cryopreserved as heterozygous embryos

Research use

- + Parkinson's disease
- + Neuronal apoptosis

Origin

The Lrrk1-Lrrk2 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

Developed in collaboration with The Michael J. Fox Foundation, this model is a double knockout that contains deletions of both the Lrrk2 gene, encoding for the leucine-rich repeat kinase 2, as well as the Lrrk1 gene, encoding for the leucine-rich repeat kinase 1. Mutations in Lrrk2 are the most common monogenic cause of Parkinson's disease. This model is useful in understanding Lrrk biology.

Figure 1: Weight and age comparison chart

