



Genetically engineered models (GEMS)

# 5Ht3a-Cre Knock-in Rat

Model	5Ht3a-Cre Knock-in Rat
Strain	HsdSage: LE- <i>Tg(5Ht3aCre)</i> <sup>1Sage</sup>
Location	U.S.
Availability	Live colony

### Characteristics/husbandry

- + Cre recombinase driven by endogenous 5Ht3a promoter
- + No observed ectopic expression of cre
- + Targeted insertion eliminates possible gene disruption that may occur in random insertion technologies such as BAC
- + Background strain: Long Evans Hooded

# Zygosity genotype

+ Homozygous

#### Research use

- + Optogenetics
- + Expression/knockout of floxed genes

# Origin

The 5Ht3a-Cre KI 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 expresses cre-recombinase under the control of the endogenous 5'- hydroxytryptamine receptor 3A (5Ht3a) promoter enabling specific expression in 5Ht3a positive serotonergic neurons. This model possesses a targeted insertion of (T2A)-cre immediately before the translational stop in the open reading frame of the 5Ht3a gene. The 5Ht3a-Cre rat is useful for applications requiring tissue specific expression, including optogenetics and breeding with transgenic floxed lines.

