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CamKIIa-Cre knockin rat

MODEL	CamKIIa-Cre knockin rat
STRAIN	HsdSage:LE-*CAMKIIA*$^{em1(IRES-Cre)Sage}$
LOCATION	U.S.
AVAILABILITY	Live colony

CHARACTERISTICS/HUSBANDRY

- Cre recombinase driven by endogenous CamKIIa 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 CamKIIa-Cre knockin rat model was originally created at SAGE Labs, Inc. in St. Louis, MO. The animal inventory was acquired by Envigo in 2019 and then by Inotiv in 2021. The line continues to be maintained through the original SAGE Labs animal inventory and is distributed out of the Boyertown, PA facility.

DESCRIPTION

This model expresses Cre-recombinase under the control of the endogenous CamKIIa promoter enabling specific expression in excititory neurons. This model possesses a targeted insertion of (IRES)-Cre immediately after the translational stop in the open reading frame of CamKIIa. The CamKIIa-Cre rat is useful for applications requiring tissue specific expression, including optogenetics and breeding with transgenic floxed lines.