

Resource Summary Report

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LE-Slc32a1^{tm1}(cre)Sage

RRID:RGD_12905033

Type: Organism

Proper Citation

RRID:RGD_12905033

Organism Information

URL: <https://rgd.mcw.edu/rgdweb/report/strain/main.html?id=12905033>

Proper Citation: RRID:RGD_12905033

Description: Rattus norvegicus with name LE-Slc32a1^{tm1}(cre)Sage from RGD.

Species: Rattus norvegicus

Notes: This model expresses cre-recombinase under the control of the endogenous solute carrier family 32 member 1 (Vgat) promoter enabling specific expression in Vgat positive GABAergic neurons. This model possesses a targeted insertion of (IRES)-cre immediately after the translational stop in the open reading frame of the Vgat gene. The Vgat-Cre rat is useful for applications requiring tissue specific expression, including optogenetics and breeding with transgenic floxed lines. [Horizon Discovery](#)

Catalog Number: 12905033

Background: mutant

Database: Rat Genome Database (RGD)

Database Abbreviation: RGD

Availability: Live Animals (as of 2017-05-31)

Alternate IDs: 12905033

Organism Name: LE-Slc32a1^{tm1}(cre)Sage

Record Creation Time: 20230509T191948+0000

Record Last Update: 20260808T193744+0000

Ratings and Alerts

No rating or validation information has been found for LE-*Slc32a1^{tm1(cre)}*Sage.

No alerts have been found for LE-*Slc32a1^{tm1(cre)}*Sage.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: Rat Genome Database (RGD)

Usage and Citation Metrics

We found 92 mentions in open access literature.

Listed below are recent publications. The full list is available at [nidm-terms](#) .

Chintalacheruvu N, et al. (2026) The anterior cingulate cortex modulates pupil-linked arousal. *Science advances*, 12(19), eadv5652.

Alton H, et al. (2026) Cannabinoid CB1 receptor and mu-opioid receptor interaction: new insights from conditional knockout mice. *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology*, 51(2), 506.

Peng XY, et al. (2026) Activation of the Gamma-Aminobutyric Acid (GABA)ergic Neural Circuit in Salicylate-Induced Tinnitus: the Inferior Colliculus to the Medial Geniculate Body. *Clinical and experimental otorhinolaryngology*, 19(1), 55.

Zhang Y, et al. (2026) Medial prefrontal cortex neurons integrate amygdala and hypothalamic oxytocin signals to mediate stress-induced social alterations. *Communications biology*, 9(1).

Nakashiba T, et al. (2026) Assessing leaky expression of Cre-dependent DNA constructs in the mouse genome using sensitive bioluminescent reporters. *Cell reports methods*, 6(4), 101369.

Zhan L, et al. (2026) A midbrain circuit for high-fat-food induced conditioned taste aversion. *Nature communications*, 17(1).

Luo L, et al. (2026) γ -Aminobutyric Acid-mediated Parafacial Zone: Integrating Consciousness and Respiratory Control in Sevoflurane Anesthesia. *Anesthesiology*, 144(1), 116.

Strassmann P, et al. (2026) A behavioral integration mechanism underlies action timing. *Science advances*, 12(1), eaea5558.

Tsukano H, et al. (2026) Orbitofrontal cortex drives predictive filtering of sensory responses. *Nature neuroscience*, 29(4), 888.

Yong HC, et al. (2026) A transcriptomic axis aligns with in vivo functional dynamics in hippocampal inhibitory circuits. *bioRxiv : the preprint server for biology*.

Supiot LF, et al. (2026) A prefrontal cortex-lateral hypothalamus circuit controls stress-driven increased food intake. *Nature communications*, 17(1).

Yu J, et al. (2026) The role of amygdala GABA neurons in controlling stress and reproduction in female mice. *Nature communications*, 17(1).

Cissé Y, et al. (2026) Nicotinamide mononucleotide stimulates the activity of bursting slow-oscillation neurons in the supramammillary nucleus and enhances REM sleep. *iScience*, 29(5), 115741.

Bakhurin K, et al. (2025) Dopamine dynamics during stimulus-reward learning in mice can be explained by performance rather than learning. *Nature communications*, 16(1), 9081.

Prévost ED, et al. (2025) Untangling dopamine and glutamate in the ventral tegmental area. *bioRxiv : the preprint server for biology*.

Harvey BJ, et al. (2025) Automated Classification of Sleep-Wake States and Seizures in Mice. *eNeuro*, 12(10).

Cui J, et al. (2025) Activation of the zona incerta GABAergic circuit for the treatment of pain hypersensitivity in Parkinson's disease mice model. *The journal of headache and pain*, 26(1), 244.

Wang ZQ, et al. (2025) Decoding auditory cognition: Unraveling the corticostriatal-SNr circuit's role in frequency discrimination accuracy. *iScience*, 28(12), 114184.

Ducrocq F, et al. (2025) Reduced Ventral Tegmental Area GABA neuron output contributes to hyperactivity in the activity-based anorexia model in female mice. *Nature communications*, 17(1), 1135.

Zhang JS, et al. (2025) GABAergic Neurons in the Central Amygdala Promote Emergence from Isoflurane Anesthesia in Mice. *Anesthesiology*, 142(2), 278.