

Resource Summary Report

Generated by [kravitz2](#) on Jul 31, 2026

LE-Tg(Th-cre)3.1Deis

RRID:RRRC_00659

Type: Organism

Proper Citation

RRID:RRRC_00659

Organism Information

URL: http://rgd.mcw.edu/tools/strains/strains_view.cgi?id=10401201

Proper Citation: RRID:RRRC_00659

Description: Rattus norvegicus with name LE-Tg(Th-cre)3.1Deis from RGD.

Species: Rattus norvegicus

Notes: Cre gene was introduced immediately before the ATG of the mouse tyrosine hydroxylase (Th) gene on BAC RP23-350E13 [Rat Resource and Research Center](#)

Catalog Number: 00659

Background: transgenic

Database: Rat Resource and Research Center (RRRC)

Database Abbreviation: RRRC

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

Alternate IDs: RGD_10401201, 10401201, RRRC_659, RRRC_0659, RRRC_00659

Organism Name: LE-Tg(Th-cre)3.1Deis

Record Creation Time: 20230607T202007+0000

Record Last Update: 20260725T094204+0000

Ratings and Alerts

No rating or validation information has been found for LE-Tg(Th-cre)3.1Deis .

No alerts have been found for LE-Tg(Th-cre)3.1Deis .

Data and Source Information

Source: [Integrated Animals](#)

Source Database: Rat Resource and Research Center (RRRC)

Usage and Citation Metrics

We found 28 mentions in open access literature.

Listed below are recent publications. The full list is available at [kravitz2](#) .

Ding M, et al. (2025) Ventral tegmental area dopamine neural activity switches simultaneously with rule representations in the medial prefrontal cortex and hippocampus. The Journal of neuroscience : the official journal of the Society for Neuroscience, 45(37).

Hagena H, et al. (2025) Oppositional and competitive instigation of hippocampal synaptic plasticity by the VTA and locus coeruleus. Proceedings of the National Academy of Sciences of the United States of America, 122(1), e2402356122.

Fraser KM, et al. (2025) Contextual cues facilitate dynamic value encoding in the mesolimbic dopamine system. Current biology : CB, 35(4), 746.

Loh MK, et al. (2025) Dopamine activity encodes the changing valence of the same stimulus in conditioned taste aversion paradigms. eLife, 13.

Higginbotham JA, et al. (2025) Estradiol protects against pain-facilitated fentanyl use via suppression of opioid-evoked dopamine activity in males. Neuron, 113(9), 1413.

Herring EW, et al. (2025) Modulation of Dopamine Neurons Alters Behavior and Event Encoding in the Nucleus Accumbens during Pavlovian Conditioning. The Journal of neuroscience : the official journal of the Society for Neuroscience, 45(26).

Romero-Sosa JL, et al. (2025) Neural coding of choice and outcome are modulated by uncertainty in orbitofrontal but not secondary motor cortex. Nature communications, 16(1), 8931.

Ding M, et al. (2025) Ventral tegmental area dopamine neural activity switches simultaneously with rule representations in the prefrontal cortex and hippocampus. bioRxiv : the preprint server for biology.

Lui S, et al. (2024) Optogenetic stimulation of the locus coeruleus enhances appetitive extinction in rats. eLife, 12.

Calderon-Williams DR, et al. (2024) Optogenetic inhibition of the locus coeruleus blocks vagus nerve stimulation-induced enhancement of extinction of conditioned fear in rats. Learning & memory (Cold Spring Harbor, N.Y.), 31(12).

Romero-Sosa JL, et al. (2024) Neural coding of choice and outcome are modulated by uncertainty in orbitofrontal but not secondary motor cortex. bioRxiv : the preprint server for biology.

Hrelja KM, et al. (2024) Increased risky choice during forced abstinence from fentanyl on the cued rat gambling task. *Psychopharmacology*.

Engel L, et al. (2024) Dopamine neurons drive spatiotemporally heterogeneous striatal dopamine signals during learning. *Current biology : CB*, 34(14), 3086.

Konanur VR, et al. (2024) Dopamine neuron activity evoked by sucrose and sucrose-predictive cues is augmented by peripheral and central manipulations of glucose availability. *The European journal of neuroscience*, 59(10), 2419.

Hathaway BA, et al. (2024) Dopamine activity in the nigrostriatal pathway alters cue-induced risky choice patterns in female rats. *The European journal of neuroscience*, 59(7), 1621.

Tseng CT, et al. (2024) Frequency Specific Optogenetic Stimulation of the Locus Coeruleus Induces Task-Relevant Plasticity in the Motor Cortex. *The Journal of neuroscience : the official journal of the Society for Neuroscience*, 44(7).

Lepreux G, et al. (2023) Recapitulating phenotypes of alcohol dependence via overexpression of Oprk1 in the ventral tegmental area of non-dependent TH::Cre rats. *Neuropharmacology*, 228, 109457.

Seitz BM, et al. (2022) Dopamine errors drive excitatory and inhibitory components of backward conditioning in an outcome-specific manner. *Current biology : CB*, 32(14), 3210.

Casado-Sainz A, et al. (2022) Dorsal striatal dopamine induces fronto-cortical hypoactivity and attenuates anxiety and compulsive behaviors in rats. *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology*, 47(2), 454.

Stowe TA, et al. (2022) Diurnal rhythms in cholinergic modulation of rapid dopamine signals and associative learning in the striatum. *Cell reports*, 39(1), 110633.