

Resource Summary Report

Generated by [NIF](#) on Sep 18, 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: 20260912T111859+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 29 mentions in open access literature.

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

Hoang IB, et al. (2026) Methamphetamine potentiates the use of outcome-specific associations via a hypothalamic-dopamine circuit. *Neuron*.

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).

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

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.

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).

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.

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

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.

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.

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.

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.

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.