

Resource Summary Report

Generated by [NIF](#) on Aug 1, 2026

B6.129S4-Grin1^{tm2Stl}/J

RRID:IMSR_JAX:005246

Type: Organism

Proper Citation

RRID:IMSR_JAX:005246

Organism Information

URL: <https://www.jax.org/strain/005246>

Proper Citation: RRID:IMSR_JAX:005246

Description: Mus musculus with name B6.129S4-Grin1^{tm2Stl}/J from IMSR.

Species: Mus musculus

Notes: gene symbol note: glutamate receptor; ionotropic; NMDA1 (zeta 1); mutant strain|congenic strain: Grin1

Affected Gene: glutamate receptor; ionotropic; NMDA1 (zeta 1)

Genomic Alteration: targeted mutation 2; Susumu Tonegawa

Catalog Number: JAX:005246

Database: JAX Mice and Services

Database Abbreviation: JAX

Availability: live

Organism Name: B6.129S4-Grin1^{tm2Stl}/J

Record Creation Time: 20250513T053649+0000

Record Last Update: 20260801T050353+0000

Ratings and Alerts

No rating or validation information has been found for B6.129S4-Grin1^{tm2Stl}/J.

No alerts have been found for B6.129S4-Grin1^{tm2Stl}/J.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: JAX Mice and Services

Usage and Citation Metrics

We found 39 mentions in open access literature.

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

Kim JH, et al. (2025) Discrete interneuron subsets participate in GluN1/GluN3A excitatory glycine receptor (eGlyR)-mediated regulation of hippocampal network activity throughout development and evolution. *bioRxiv : the preprint server for biology*.

Ruggiero A, et al. (2025) NMDA receptors regulate the firing rate set point of hippocampal circuits without altering single-cell dynamics. *Neuron*, 113(2), 244.

Wong YT, et al. (2024) Artificial fluorescent sensor reveals pre-synaptic NMDA receptors switch cholecystokinin release and LTP in the hippocampus. *Journal of neurochemistry*, 168(9), 2621.

Furon J, et al. (2023) Blood tissue Plasminogen Activator (tPA) of liver origin contributes to neurovascular coupling involving brain endothelial N-Methyl-D-Aspartate (NMDA) receptors. *Fluids and barriers of the CNS*, 20(1), 11.

Nakagawa N, et al. (2023) Golgi polarity shift instructs dendritic refinement in the neonatal cortex by mediating NMDA receptor signaling. *Cell reports*, 42(8), 112843.

Xu Y, et al. (2023) Lateral septum as a melanocortin downstream site in obesity development. *Cell reports*, 42(5), 112502.

Fujimoto S, et al. (2023) Activity-dependent local protection and lateral inhibition control synaptic competition in developing mitral cells in mice. *Developmental cell*, 58(14), 1221.

Hayden DJ, et al. (2023) Electrophysiological Signatures of Visual Recognition Memory across All Layers of Mouse V1. *The Journal of neuroscience : the official journal of the Society for Neuroscience*, 43(44), 7307.

Li H, et al. (2023) Multiple dynamic interactions from basal ganglia direct and indirect pathways mediate action selection. *eLife*, 12.

Hayden DJ, et al. (2023) Electrophysiological signatures of visual recognition memory across all layers of mouse V1. *bioRxiv : the preprint server for biology*.

Chaloner FA, et al. (2022) Multiple Mechanistically Distinct Timescales of Neocortical Plasticity Occur During Habituation. *Frontiers in cellular neuroscience*, 16, 840057.

Sonneborn A, et al. (2021) Norepinephrine transporter antagonism prevents dopamine-dependent synaptic plasticity in the mouse dorsal hippocampus. *Neuroscience letters*,

740, 135450.

Guyon N, et al. (2021) Network Asynchrony Underlying Increased Broadband Gamma Power. *The Journal of neuroscience : the official journal of the Society for Neuroscience*, 41(13), 2944.

Chipman PH, et al. (2021) Astrocyte GluN2C NMDA receptors control basal synaptic strengths of hippocampal CA1 pyramidal neurons in the stratum radiatum. *eLife*, 10.

Léger C, et al. (2020) Glutamate controls vessel-associated migration of GABA interneurons from the pial migratory route via NMDA receptors and endothelial protease activation. *Cellular and molecular life sciences : CMLS*, 77(10), 1959.

Léger C, et al. (2020) In utero alcohol exposure exacerbates endothelial protease activity from pial microvessels and impairs GABA interneuron positioning. *Neurobiology of disease*, 145, 105074.

Pu?cian A, et al. (2020) NMDAR-Dependent Emergence of Behavioral Representation in Primary Visual Cortex. *Cell reports*, 32(4), 107970.

Luo L, et al. (2020) Optimizing Nervous System-Specific Gene Targeting with Cre Driver Lines: Prevalence of Germline Recombination and Influencing Factors. *Neuron*, 106(1), 37.

Fernandes AB, et al. (2020) Postingestive Modulation of Food Seeking Depends on Vagus-Mediated Dopamine Neuron Activity. *Neuron*, 106(5), 778.

Vesuna S, et al. (2020) Deep posteromedial cortical rhythm in dissociation. *Nature*, 586(7827), 87.