

Resource Summary Report

Generated by [ASWG](#) on Aug 23, 2026

B6.129-Shank3^{tm2Gfng/J}

RRID:IMSR_JAX:017688

Type: Organism

Proper Citation

RRID:IMSR_JAX:017688

Organism Information

URL: <https://www.jax.org/strain/017688>

Proper Citation: RRID:IMSR_JAX:017688

Description: Mus musculus with name B6.129-Shank3^{tm2Gfng/J} from IMSR.

Species: Mus musculus

Notes: gene symbol note: SH3 and multiple ankyrin repeat domains 3; mutant strain|congenic strain: Shank3

Affected Gene: SH3 and multiple ankyrin repeat domains 3

Genomic Alteration: targeted mutation 2; Guoping Feng

Catalog Number: JAX:017688

Database: JAX Mice and Services

Database Abbreviation: JAX

Availability: live

Organism Name: B6.129-Shank3^{tm2Gfng/J}

Record Creation Time: 20250513T053733+0000

Record Last Update: 20260815T050645+0000

Ratings and Alerts

No rating or validation information has been found for B6.129-Shank3^{tm2Gfng/J}.

No alerts have been found for B6.129-Shank3^{tm2Gfng/J}.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: JAX Mice and Services

Usage and Citation Metrics

We found 25 mentions in open access literature.

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

Wehle DT, et al. (2026) Dissociation of the mTOR Protein Interaction Network Following Neuronal Activation Is Altered by Shank3 Mutation. *Journal of neurochemistry*, 170(1), e70353.

Wu CH, et al. (2025) Learning-Associated Flexibility of Cortical Taste Coding Is Impaired in Shank3 Knockout Mice. *bioRxiv : the preprint server for biology*.

Bortolozzo-Gleich MH, et al. (2025) Impaired vasopressin neuromodulation of the lateral septum leads to social behavior deficits in Shank3B^{+/-} male mice. *Nature communications*, 16(1), 6783.

Eberly GL, et al. (2025) Shank3 mutation manifests in abnormal gastrointestinal morphology and function in mice. *Frontiers in neuroscience*, 19, 1552369.

Wen W, et al. (2024) Modular Arrangement of Synaptic and Intrinsic Homeostatic Plasticity within Visual Cortical Circuits. *bioRxiv : the preprint server for biology*.

Bařová Z, et al. (2024) Shank3 deficiency alters midbrain GABAergic neuron morphology, GABAergic markers and synaptic activity in primary striatal neurons. *Molecular brain*, 17(1), 71.

Pan YD, et al. (2024) Intermittent Hypobaric Hypoxia Ameliorates Autistic-Like Phenotypes in Mice. *The Journal of neuroscience : the official journal of the Society for Neuroscience*, 44(7).

Wang YZ, et al. (2024) Neuron type-specific proteomics reveals distinct Shank3 proteoforms in iSPNs and dSPNs lead to striatal synaptopathy in Shank3B^{-/-} mice. *Molecular psychiatry*.

Guo B, et al. (2024) Restoring thalamocortical circuit dysfunction by correcting HCN channelopathy in Shank3 mutant mice. *Cell reports. Medicine*, 5(5), 101534.

Chung M, et al. (2024) Conditional knockout of Shank3 in the ventral CA1 by quantitative in vivo genome-editing impairs social memory in mice. *Nature communications*, 15(1), 4531.

Chhabra S, et al. (2023) Striatal increase of dopamine receptor 2 density in idiopathic and syndromic mouse models of autism spectrum disorder. *Frontiers in psychiatry*, 14, 1110525.

Nardi L, et al. (2023) Neuroanatomical changes of ionotropic glutamatergic and GABAergic receptor densities in male mice modeling idiopathic and syndromic autism spectrum disorder. *Frontiers in psychiatry*, 14, 1199097.

Maloney SE, et al. (2023) A comprehensive assay of social motivation reveals sex-specific roles of autism-associated genes and oxytocin. *Cell reports methods*, 3(6), 100504.

Tao K, et al. (2022) Disrupted social memory ensembles in the ventral hippocampus underlie social amnesia in autism-associated Shank3 mutant mice. *Molecular psychiatry*, 27(4), 2095.

Pillerová M, et al. (2022) Neuromotor Development in the Shank3 Mouse Model of Autism Spectrum Disorder. *Brain sciences*, 12(7).

Otazu GH, et al. (2021) Neurodevelopmental malformations of the cerebellum and neocortex in the Shank3 and Cntnap2 mouse models of autism. *Neuroscience letters*, 765, 136257.

Tatavarty V, et al. (2020) Autism-Associated Shank3 Is Essential for Homeostatic Compensation in Rodent V1. *Neuron*, 106(5), 769.

Wang L, et al. (2020) A kinome-wide RNAi screen identifies ERK2 as a druggable regulator of Shank3 stability. *Molecular psychiatry*, 25(10), 2504.

Vyas Y, et al. (2020) Influence of maternal zinc supplementation on the development of autism-associated behavioural and synaptic deficits in offspring Shank3-knockout mice. *Molecular brain*, 13(1), 110.

Reichova A, et al. (2020) Abnormal neuronal morphology and altered synaptic proteins are restored by oxytocin in autism-related SHANK3 deficient model. *Molecular and cellular endocrinology*, 518, 110924.