

Resource Summary Report

Generated by [SPARC SAWG](#) on Aug 28, 2026

STOCK Bdnf^{tm3Jae/J}

RRID:IMSR_JAX:004339

Type: Organism

Proper Citation

RRID:IMSR_JAX:004339

Organism Information

URL: <https://www.jax.org/strain/004339>

Proper Citation: RRID:IMSR_JAX:004339

Description: Mus musculus with name STOCK Bdnf^{tm3Jae/J} from IMSR.

Species: Mus musculus

Synonyms: STOCK Bdnf/J

Notes: gene symbol note: brain derived neurotrophic factor; mutant stock: Bdnf

Affected Gene: brain derived neurotrophic factor

Genomic Alteration: targeted mutation 3; Rudolf Jaenisch

Catalog Number: JAX:004339

Database: JAX Mice and Services

Database Abbreviation: JAX

Availability: embryo

Organism Name: STOCK Bdnf^{tm3Jae/J}

Record Creation Time: 20250513T053644+0000

Record Last Update: 20260815T050553+0000

Ratings and Alerts

No rating or validation information has been found for STOCK Bdnf^{tm3Jae/J}.

No alerts have been found for STOCK Bdnf^{tm3Jae/J}.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: JAX Mice and Services

Usage and Citation Metrics

We found 13 mentions in open access literature.

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

McLachlan CA, et al. (2025) Transcriptional determinants of goal-directed learning and representational drift in the parahippocampal cortex. *Cell reports*, 44(1), 115175.

Yoo K, et al. (2024) Muscle-resident mesenchymal progenitors sense and repair peripheral nerve injury via the GDNF-BDNF axis. *eLife*, 13.

Zhang J, et al. (2024) Localized release of muscle-generated BDNF regulates the initial formation of postsynaptic apparatus at neuromuscular synapses. *Cell death and differentiation*.

Li L, et al. (2022) Ablation of cardiomyocyte-derived BDNF during development causes myocardial degeneration and heart failure in the adult mouse heart. *Frontiers in cardiovascular medicine*, 9, 967463.

Thapliyal S, et al. (2022) Retinoic acid-gated BDNF synthesis in neuronal dendrites drives presynaptic homeostatic plasticity. *eLife*, 11.

Zhang K, et al. (2022) A functional circuit formed by the autonomic nerves and myofibroblasts controls mammalian alveolar formation for gas exchange. *Developmental cell*, 57(13), 1566.

Kim S, et al. (2020) Dynamic Fas signaling network regulates neural stem cell proliferation and memory enhancement. *Science advances*, 6(17), eaaz9691.

Song HD, et al. (2020) Aging-Induced Brain-Derived Neurotrophic Factor in Adipocyte Progenitors Contributes to Adipose Tissue Dysfunction. *Aging and disease*, 11(3), 575.

Blaszkiwicz M, et al. (2020) The involvement of neuroimmune cells in adipose innervation. *Molecular medicine (Cambridge, Mass.)*, 26(1), 126.

Chase KA, et al. (2019) Examining the effects of the histone methyltransferase inhibitor BIX-01294 on histone modifications and gene expression in both a clinical population and mouse models. *PloS one*, 14(6), e0216463.

Xie X, et al. (2019) Activation of Anxiogenic Circuits Instigates Resistance to Diet-Induced Obesity via Increased Energy Expenditure. *Cell metabolism*, 29(4), 917.

Sun C, et al. (2018) Maintenance of Mouse Gustatory Terminal Field Organization Is Dependent on BDNF at Adulthood. *The Journal of neuroscience : the official journal of the*

Society for Neuroscience, 38(31), 6873.

Ferrini F, et al. (2013) Morphine hyperalgesia gated through microglia-mediated disruption of neuronal Cl⁻ homeostasis. *Nature neuroscience*, 16(2), 183.