Resource Summary Report

Generated by RRID on Aug 1, 2026

B6.129S7-Chrna7^{tm1Bay}/J

RRID:IMSR_JAX:003232
Type: Organism

Proper Citation

RRID:IMSR_JAX:003232

Organism Information

URL: https://www.jax.org/strain/003232

Proper Citation: RRID:IMSR_JAX:003232

Description: Mus musculus with name B6.129S7-Chrna7^{tm1Bay}/J from IMSR.

Species: Mus musculus

Notes: gene symbol note: cholinergic receptor; nicotinic; alpha polypeptide 7; mutant strain|congenic strain: Chrna7

Affected Gene: cholinergic receptor; nicotinic; alpha polypeptide 7

Genomic Alteration: targeted mutation 1; Baylor College of Medicine

Catalog Number: JAX:003232

Database: JAX Mice and Services

Database Abbreviation: JAX

Availability: live

Organism Name: B6.129S7-Chrna7^{tm1Bay}/J

Record Creation Time: 20250513T053638+0000

Record Last Update: 20260801T050341+0000

Ratings and Alerts

No rating or validation information has been found for B6.129S7-Chrna7^{tm1Bay}/J.

No alerts have been found for B6.129S7-Chrna7^{tm1Bay}/J.

Data and Source Information

Source: Integrated Animals

Source Database: JAX Mice and Services

Usage and Citation Metrics

We found 33 mentions in open access literature.

Listed below are recent publications. The full list is available at RRID .

Miranda K, et al. (2026) Loss of ?7 nicotinic acetylcholine receptor exacerbates adrenergic-induced cardiac damage. American journal of physiology. Cell physiology.

Zhang Z, et al. (2025) Prenatal electroacupuncture modulates maternal-fetal immune activation via a brain-to-splenic signal. Cell reports, 44(11), 116576.

Modares NF, et al. (2025) B cell-derived acetylcholine promotes liver regeneration by regulating Kupffer cell and hepatic CD8+ T cell function. Immunity, 58(5), 1201.

Heard MA, et al. (2025) Genetic and pharmacological targeting of nicotinic acetylcholine receptor action blocks tumor progression in mouse models of breast cancer. Journal of immunology (Baltimore, Md. : 1950), 214(8), 2098.

Cannata B, et al. (2025) Functional deletion of ?7 nicotinic acetylcholine receptor impairs Ca2+-dependent glutamatergic synaptic transmission by affecting both presynaptic and postsynaptic protein expression and function. Frontiers in physiology, 16, 1662171.

Fritz M, et al. (2024) Nicotinic ?7 receptors on cholinergic neurons in the striatum mediate cocaine-reinforcement, but not food reward. Frontiers in molecular neuroscience, 17, 1418686.

Andrew PM, et al. (2024) The ?4 Nicotinic Acetylcholine Receptor Is Necessary for the Initiation of Organophosphate-Induced Neuronal Hyperexcitability. Toxics, 12(4).

Lun J, et al. (2023) Kynurenic acid blunts A1 astrocyte activation against neurodegeneration in HIV-associated neurocognitive disorders. Journal of neuroinflammation, 20(1), 87.

Caravaca AS, et al. (2022) Vagus nerve stimulation promotes resolution of inflammation by a mechanism that involves Alox15 and requires the ?7nAChR subunit. Proceedings of the National Academy of Sciences of the United States of America, 119(22), e2023285119.

Zhang X, et al. (2022) Mesenchymal stromal cells alleviate acute respiratory distress syndrome through the cholinergic anti-inflammatory pathway. Signal transduction and targeted therapy, 7(1), 307.

Fielding C, et al. (2022) Cholinergic signals preserve haematopoietic stem cell quiescence during regenerative haematopoiesis. Nature communications, 13(1), 543.

Hammarlund ME, et al. (2022) The Alpha 7 Nicotinic Acetylcholine Receptor Does Not Affect Neonatal Brain Injury. Biomedicines, 10(8).

Zhong C, et al. (2022) Axonal ?7* nicotinic acetylcholine receptors modulate glutamatergic signaling and synaptic vesicle organization in ventral hippocampal projections. Frontiers in neural circuits, 16, 978837.

Gong Z, et al. (2022) Alpha7 Nicotinic Acetylcholine Receptor Antagonists Prevent Meningitic Escherichia coli-Induced Blood-Brain Barrier Disruptions by Targeting the CISH/JAK2/STAT5b Axis. Biomedicines, 10(10).

Hoogland ICM, et al. (2022) Microglial cell response in ?7 nicotinic acetylcholine receptor-deficient mice after systemic infection with Escherichia coli. Journal of neuroinflammation, 19(1), 94.

He X, et al. (2021) Endogenous ?7 nAChR Agonist SLURP1 Facilitates Escherichia coli K1 Crossing the Blood-Brain Barrier. Frontiers in immunology, 12, 745854.

Xu ZQ, et al. (2021) Autophagy is Involved in Neuroprotective Effect of Alpha7 Nicotinic Acetylcholine Receptor on Ischemic Stroke. Frontiers in pharmacology, 12, 676589.

Tropea MR, et al. (2021) Genetic deletion of ?7 nicotinic acetylcholine receptors induces an age-dependent Alzheimer's disease-like pathology. Progress in neurobiology, 206, 102154.

Chen X, et al. (2020) Vagal ?7nAChR signaling regulates ?7nAChR+Sca1+ cells during lung injury repair. Stem cell research & therapy, 11(1), 375.

Chen X, et al. (2020) Vagal-?7nAChR signaling promotes lung stem cells regeneration via fibroblast growth factor 10 during lung injury repair. Stem cell research & therapy, 11(1), 230.