

Resource Summary Report

Generated by [NIF](#) on Aug 15, 2026

C57BL/6-Arg1^{tm1Pmu/J}

RRID:IMSR_JAX:008817

Type: Organism

Proper Citation

RRID:IMSR_JAX:008817

Organism Information

URL: <https://www.jax.org/strain/008817>

Proper Citation: RRID:IMSR_JAX:008817

Description: Mus musculus with name C57BL/6-Arg1^{tm1Pmu/J} from IMSR.

Species: Mus musculus

Notes: gene symbol note: arginase; liver; coisogenic strain: Arg1

Affected Gene: arginase; liver

Genomic Alteration: targeted mutation 1; Peter J Murray

Catalog Number: JAX:008817

Database: JAX Mice and Services

Database Abbreviation: JAX

Availability: sperm

Organism Name: C57BL/6-Arg1^{tm1Pmu/J}

Record Creation Time: 20250513T053711+0000

Record Last Update: 20260815T050632+0000

Ratings and Alerts

No rating or validation information has been found for C57BL/6-Arg1^{tm1Pmu/J}.

No alerts have been found for C57BL/6-Arg1^{tm1Pmu/J}.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: JAX Mice and Services

Usage and Citation Metrics

We found 18 mentions in open access literature.

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

Gogiraju R, et al. (2026) Loss of erythrocyte arginase-1 impairs vasorelaxation due to endothelial GSNOR overexpression and denitrosylation of G protein subunits. *Redox biology*, 94, 104201.

Braun LM, et al. (2025) Adiponectin reduces immune checkpoint inhibitor-induced inflammation without blocking anti-tumor immunity. *Cancer cell*, 43(2), 269.

Chennupati R, et al. (2023) Chronic anemia is associated with systemic endothelial dysfunction. *Frontiers in cardiovascular medicine*, 10, 1099069.

West EE, et al. (2023) Loss of CD4+ T cell-intrinsic arginase 1 accelerates Th1 response kinetics and reduces lung pathology during influenza infection. *Immunity*, 56(9), 2036.

Zhang H, et al. (2022) Annexin A2/TLR2/MYD88 pathway induces arginase 1 expression in tumor-associated neutrophils. *The Journal of clinical investigation*, 132(22).

Ramji K, et al. (2022) Targeting arginase-1 exerts antitumor effects in multiple myeloma and mitigates bortezomib-induced cardiotoxicity. *Scientific reports*, 12(1), 19660.

Ma C, et al. (2021) Myeloid Arginase 1 Insufficiency Exacerbates Amyloid- β Associated Neurodegenerative Pathways and Glial Signatures in a Mouse Model of Alzheimer's Disease: A Targeted Transcriptome Analysis. *Frontiers in immunology*, 12, 628156.

Richmond CR, et al. (2021) Arginase-1 deficiency in neural cells does not contribute to neurodevelopment or functional outcomes after sciatic nerve injury. *Neurochemistry international*, 145, 104984.

Sosnowska A, et al. (2021) Inhibition of arginase modulates T-cell response in the tumor microenvironment of lung carcinoma. *Oncoimmunology*, 10(1), 1956143.

Ahrends T, et al. (2021) Enteric pathogens induce tissue tolerance and prevent neuronal loss from subsequent infections. *Cell*, 184(23), 5715.

Ma C, et al. (2020) Arginase 1 Insufficiency Precipitates Amyloid- β Deposition and Hastens Behavioral Impairment in a Mouse Model of Amyloidosis. *Frontiers in immunology*, 11, 582998.

Yurdagul A, et al. (2020) Macrophage Metabolism of Apoptotic Cell-Derived Arginine Promotes Continual Efferocytosis and Resolution of Injury. *Cell metabolism*, 31(3), 518.

Sin YY, et al. (2018) Transplantation of Gene-Edited Hepatocyte-like Cells Modestly Improves Survival of Arginase-1-Deficient Mice. *Molecular therapy. Nucleic acids*, 10, 122.

Lange SM, et al. (2017) L-Citrulline Metabolism in Mice Augments CD4⁺ T Cell Proliferation and Cytokine Production In Vitro, and Accumulation in the Mycobacteria-Infected Lung. *Frontiers in immunology*, 8, 1561.

Sin YY, et al. (2017) Proof-of-Concept Gene Editing for the Murine Model of Inducible Arginase-1 Deficiency. *Scientific reports*, 7(1), 2585.

Mondanelli G, et al. (2017) A Relay Pathway between Arginine and Tryptophan Metabolism Confers Immunosuppressive Properties on Dendritic Cells. *Immunity*, 46(2), 233.

Ballantyne LL, et al. (2016) Liver-specific knockout of arginase-1 leads to a profound phenotype similar to inducible whole body arginase-1 deficiency. *Molecular genetics and metabolism reports*, 9, 54.

Sin YY, et al. (2013) Inducible arginase 1 deficiency in mice leads to hyperargininemia and altered amino acid metabolism. *PloS one*, 8(11), e80001.