

Resource Summary Report

Generated by [NIF](#) on Sep 11, 2026

B6.Cg-Piezo1^{tm2.1Apat}/J

RRID:IMSR_JAX:029213

Type: Organism

Proper Citation

RRID:IMSR_JAX:029213

Organism Information

URL: <https://www.jax.org/strain/029213>

Proper Citation: RRID:IMSR_JAX:029213

Description: Mus musculus with name B6.Cg-Piezo1^{tm2.1Apat}/J from IMSR.

Species: Mus musculus

Synonyms: STOCK Piezo1/J

Notes: gene symbol note: piezo-type mechanosensitive ion channel component 1; mutant strain|congenic strain: Piezo1

Affected Gene: piezo-type mechanosensitive ion channel component 1

Genomic Alteration: targeted mutation 2.1; Ardem Patapoutian

Catalog Number: JAX:029213

Database: JAX Mice and Services

Database Abbreviation: JAX

Availability: live

Organism Name: B6.Cg-Piezo1^{tm2.1Apat}/J

Record Creation Time: 20250513T053808+0000

Record Last Update: 20260905T044544+0000

Ratings and Alerts

No rating or validation information has been found for B6.Cg-Piezo1^{tm2.1Apat}/J.

No alerts have been found for B6.Cg-Piezo1^{tm2.1Apat/J}.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: JAX Mice and Services

Usage and Citation Metrics

We found 23 mentions in open access literature.

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

Hill RZ, et al. (2026) Renal PIEZO2 is an essential regulator of renin. *Cell*, 189(1), 161.

Chen H, et al. (2026) Hepatocyte PIEZO1 Negatively Regulates Lipogenesis and Ameliorates MASLD by Sensing Membrane Tension and Activating AMPK. *Advanced science* (Weinheim, Baden-Wurttemberg, Germany), 13(34), e15847.

Coombs AM, et al. (2026) PIEZOs regulate oligodendrocyte sheath formation, expansion, and myelination potential. *bioRxiv : the preprint server for biology*.

Kim MJ, et al. (2026) Excessive epithelial mechanosensation drives nociceptive innervation and chronic bladder pain via the PIEZO1-SLC7A11-glutamate axis. *Cell*.

Di R, et al. (2025) A mechano-resistance mechanism in skin adapts to terrestrial locomotion. *Cell*.

Glogowska E, et al. (2025) Potentiation of macrophage Piezo1 by atherogenic 7-ketocholesterol. *Cell reports*, 44(4), 115542.

Shi Y, et al. (2025) Piezo1 senses hyphae and initiates host defense against pathogenic fungi. *Cell reports*, 44(6), 115839.

Chen P, et al. (2025) Pyroptosis of periodontal ligament stem cells aggravates periodontitis via Piezo1 channel. *iScience*, 28(5), 112395.

Schappe MS, et al. (2024) A vagal reflex evoked by airway closure. *Nature*, 627(8005), 830.

Huang Y, et al. (2024) Mechano-regulation of GLP-1 production by Piezo1 in intestinal L cells. *eLife*, 13.

Mukhopadhyay A, et al. (2024) trans-Endothelial neutrophil migration activates bactericidal function via Piezo1 mechanosensing. *Immunity*, 57(1), 52.

Hurrell BP, et al. (2024) Piezo1 channels restrain ILC2s and regulate the development of airway hyperreactivity. *The Journal of experimental medicine*, 221(5).

Zhang J, et al. (2024) Osr2 functions as a biomechanical checkpoint to aggravate CD8+ T cell exhaustion in tumor. *Cell*, 187(13), 3409.

Toma K, et al. (2024) Perivascular neurons instruct 3D vascular lattice formation via neurovascular contact. *Cell*, 187(11), 2767.

Xie Z, et al. (2023) Piezo2 channels expressed by colon-innervating TRPV1-lineage neurons mediate visceral mechanical hypersensitivity. *Neuron*, 111(4), 526.

Hu J, et al. (2023) Microglial Piezo1 senses A β fibril stiffness to restrict Alzheimer's disease. *Neuron*, 111(1), 15.

Leng S, et al. (2022) Ion channel Piezo1 activation promotes aerobic glycolysis in macrophages. *Frontiers in immunology*, 13, 976482.

Xie Y, et al. (2022) Hair shaft miniaturization causes stem cell depletion through mechanosensory signals mediated by a Piezo1-calcium-TNF- α axis. *Cell stem cell*, 29(1), 70.

Chakraborty M, et al. (2021) Mechanical Stiffness Controls Dendritic Cell Metabolism and Function. *Cell reports*, 34(2), 108609.

Glogowska E, et al. (2021) Piezo1 and Piezo2 foster mechanical gating of K2P channels. *Cell reports*, 37(9), 110070.