

Resource Summary Report

Generated by T1D on Sep 6, 2026

C57BL/6-Ins2^{Akita}/J

RRID:IMSR_JAX:003548

Type: Organism

Proper Citation

RRID:IMSR_JAX:003548

Organism Information

URL: <https://www.jax.org/strain/003548>

Proper Citation: RRID:IMSR_JAX:003548

Description: Mus musculus with name C57BL/6-Ins2^{Akita}/J from IMSR.

Species: Mus musculus

Synonyms: C57BL/6J-Ins2. MODY. Akita

Notes: gene symbol note: insulin II; mutant strain: Ins2

Affected Gene: insulin II

Genomic Alteration: Akita

Catalog Number: JAX:003548

Database: JAX Mice and Services

Database Abbreviation: JAX

Availability: live

Organism Name: C57BL/6-Ins2^{Akita}/J

Record Creation Time: 20250513T053640+0000

Record Last Update: 20260905T044420+0000

Ratings and Alerts

- Used for humanized mouse by the Human Islet Research Network community.
Contact(s): [Ronald Gill](#) - Human Islets Research Network <https://hirnetwork.org/>

No alerts have been found for C57BL/6-Ins2^{Akita}/J.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: JAX Mice and Services

Usage and Citation Metrics

We found 118 mentions in open access literature.

Listed below are recent publications. The full list is available at [T1D](#).

Wang Y, et al. (2026) Disrupting VE-cadherin Y685 phosphorylation inhibits development of experimental diabetic and prediabetic retinopathy. The Journal of clinical investigation, 136(10).

Iwakura T, et al. (2026) Finerenone Improves Albuminuria via MR-TRPC Signaling in Diabetic Kidney Disease. Hypertension (Dallas, Tex. : 1979), 83(4), e25739.

Nakano H, et al. (2026) Maternal hyperglycemia disrupts cardiomyocyte maturation via aberrant nucleotide metabolism and suppression of AMPK signaling. Cell reports, 45(5), 117321.

Realini G, et al. (2025) N-acetyl-L-cysteine ethyl ester (NACET) induces the transcription factor NRF2 and prevents retinal aging and diabetic retinopathy. Redox biology, 88, 103914.

De Rossi G, et al. (2025) Leucine-rich ?-2-glycoprotein 1 initiates the onset of diabetic retinopathy in mice. Science translational medicine, 17(821), eadn6047.

Bari? A, et al. (2025) Bradykinin Type 2 Receptor Deficiency Reshapes Acute Neuroinflammation and Improves Cell Survival after Ischemic Stroke in Diabetic Mice. Journal of neuroimmune pharmacology : the official journal of the Society on NeuroImmune Pharmacology, 20(1), 107.

Crespo-Masip M, et al. (2025) ASK1 limits kidney glucose reabsorption, growth, and mid-late proximal tubule KIM-1 induction when diabetes and Western diet are combined with SGLT2 inhibition. American journal of physiology. Renal physiology, 328(5), F662.

Silk RP, et al. (2024) Mapping the daily rhythmic transcriptome in the diabetic retina. Vision research, 214, 108339.

Tserga A, et al. (2024) Complement Cascade Proteins Correlate with Fibrosis and Inflammation in Early-Stage Type 1 Diabetic Kidney Disease in the Ins2Akita Mouse Model. International journal of molecular sciences, 25(3).

Kempf S, et al. (2024) Pericyte-to-Endothelial Cell Communication via Tunneling Nanotubes Is Disrupted by a Diol of Docosahexaenoic Acid. *Cells*, 13(17).

Mansoor H, et al. (2024) Topical and oral peroxisome proliferator-activated receptor- γ agonist ameliorates diabetic corneal neuropathy. *Scientific reports*, 14(1), 13435.

Anderson A, et al. (2024) Relaxation of mitochondrial hyperfusion in the diabetic retina via N6-furfuryladenosine confers neuroprotection regardless of glycaemic status. *Nature communications*, 15(1), 1124.

Rashwan AM, et al. (2024) Implications of endoplasmic reticulum stress and beta-cell loss in immunodeficient diabetic NRG-Akita mice for understanding monogenic diabetes. *International journal of surgery (London, England)*, 110(10), 6231.

Costa RM, et al. (2024) In utero exposure to maternal diabetes exacerbates dietary sodium intake-induced endothelial dysfunction by activating cyclooxygenase 2-derived prostanoids. *American journal of physiology. Endocrinology and metabolism*, 326(5), E555.

Sadikan MZ, et al. (2023) Diabetic retinopathy: a comprehensive update on in vivo, in vitro and ex vivo experimental models. *BMC ophthalmology*, 23(1), 421.

Tang Q, et al. (2023) Mitochondrial protein MPV17 promotes β -cell apoptosis in diabetogenesis. *Clinical science (London, England : 1979)*, 137(15), 1195.

Pomeroy B, et al. (2023) Fluorescence Angiography with Dual Fluorescence for the Early Detection and Longitudinal Quantitation of Vascular Leakage in Retinopathy. *Biomedicines*, 11(2).

Boström KI, et al. (2023) GSK3 γ Inhibition Reduced Vascular Calcification in Ins2Akita/+ Mice. *International journal of molecular sciences*, 24(6).

Saleem F, et al. (2023) Influence of Age on Hyperoxia-Induced Cardiac Pathophysiology in Type 1 Diabetes Mellitus (T1DM) Mouse Model. *Cells*, 12(11).

Dallacasagrande V, et al. (2023) Blockade of Annexin A2 Prevents Early Microvasculopathy in Murine Models of Diabetic Retinopathy. *Investigative ophthalmology & visual science*, 64(4), 33.