

Resource Summary Report

Generated by [RRID](#) on Sep 1, 2026

INS-1

RRID:CVCL_0352

Type: Cell Line

Proper Citation

RRID:CVCL_0352

Cell Line Information

URL: https://web.expasy.org/cellosaurus/CVCL_0352

Proper Citation: RRID:CVCL_0352

Description: Cell line INS-1 is a Cancer cell line with a species of origin Rattus norvegicus (Rat)

Sex: Male

Disease: Rat insulinoma

Defining Citation: [PMID:1370150](#), [PMID:8697299](#), [PMID:22538498](#), [PMID:36180704](#)

Comments: Characteristics: Established from the transplantable insulinoma RIN.

Category: Cancer cell line

Organism: Rattus norvegicus (Rat)

Name: INS-1

Synonyms: INS1

Cross References: BTO:BTO_0002135, EFO:EFO_0002529, MCCL:MCC:0000246, AddexBio:C0018007/371, CCRID:1101RAT-PUMC000378, ChEMBL-Cells:ChEMBL3308040, ChEMBL-Targets:ChEMBL613545, CLS:300471, KCB:KCB 2010005YJ, Lonza:301, PRIDE:PXD013232, PubChem_Cell_line:CVCL_0352, TOKU-E:3996, Wikidata:Q54897741

ID: CVCL_0352

Record Creation Time: 20220427T220636+0000

Record Last Update: 20260829T234320+0000

Ratings and Alerts

No rating or validation information has been found for INS-1.

No alerts have been found for INS-1.

Data and Source Information

Source: [CelloSaurus](#)

Usage and Citation Metrics

We found 681 mentions in open access literature.

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

Pang H, et al. (2026) Biomimetic MCC950-loaded cerium-layered double hydroxide nanoparticles for targeted treatment of Type 1 diabetes in streptozotocin-induced mice. British journal of pharmacology, 183(16), 4919.

Wang C, et al. (2026) Arenarine D Promotes Pancreatic β Cell Proliferation Via DYRK1A Inhibition for T1DM Therapy. Chemistry & biodiversity, 23(3), e71132.

Pournejati R, et al. (2026) Functionally coupled ion channels begin co-assembling at the start of their synthesis. eLife, 14.

Luo C, et al. (2025) Deficiency of Leucine-Rich Repeat Containing G Protein-Coupled Receptor 4 in Pancreas Reduces β Cell Mass. Advanced science (Weinheim, Baden-Wurttemberg, Germany), e08858.

Harada K, et al. (2025) Expression of Mitochondrial Uncoupling Proteins and GABA Signaling Molecules in Unstimulated and Nerve Growth Factor-Stimulated PC12 Cells: Models for Chromaffin Cells and Sympathetic Neurons. The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society, 73(5-6), 251.

Andersen PAK, et al. (2025) Circadian synchronization differentially modifies cytokine-mediated transcriptomic remodeling and cell death in INS-1 cells and mouse islets. iScience, 28(5), 112431.

Gu J, et al. (2025) Sidt2 inhibits islet β -cell dedifferentiation by regulating insulin secretion. The Journal of biological chemistry, 301(9), 110544.

Jiao Y, et al. (2025) Nucleolar stress facilitates islet β cell senescence via hijacking the DNA damage response pathways. iScience, 28(10), 113508.

Germanos M, et al. (2025) Cab45G trafficking through the insulin secretory pathway is altered in human type 2 diabetes. iScience, 28(2), 111719.

Yamada Y, et al. (2025) Nrf2-and p53-inducible REDD2/DDIT4L/Rtp801L confers pancreatic β -cell dysfunction, leading to glucose intolerance in high-fat diet-fed mice. The

Journal of biological chemistry, 301(6), 110271.

Ghosh S, et al. (2025) Hepatic and Pancreatic Cellular Response to Early Life Nutritional Mismatch. *Endocrinology*, 166(3).

Gautheron G, et al. (2024) The flavonoid resokaempferol improves insulin secretion from healthy and dysfunctional pancreatic β -cells. *British journal of pharmacology*.

Murata N, et al. (2024) Insulin reduces endoplasmic reticulum stress-induced apoptosis by decreasing mitochondrial hyperpolarization and caspase-12 in INS-1 pancreatic β -cells. *Physiological reports*, 12(12), e16106.

Guneri D, et al. (2024) Structural insights into i-motif DNA structures in sequences from the insulin-linked polymorphic region. *Nature communications*, 15(1), 7119.

Song YL, et al. (2024) SQSTM1/p62 is a prognostic molecular marker and potential therapeutic target for pancreatic neuroendocrine tumours. *Endocrine*.

Collado Camps E, et al. (2023) Conjugation to a cell-penetrating peptide drives the tumour accumulation of the GLP1R antagonist exendin(9-39). *European journal of nuclear medicine and molecular imaging*, 50(4), 996.

Koppes EA, et al. (2023) Insulin secretion deficits in a Prader-Willi syndrome β -cell model are associated with a concerted downregulation of multiple endoplasmic reticulum chaperones. *PLoS genetics*, 19(4), e1010710.

Chen J, et al. (2023) SNAP23 decreases insulin secretion by competitively inhibiting the interaction between SNAP25 and STX1A. *Bioscience reports*, 43(5).

Lee D, et al. (2023) Protopanaxadiol ameliorates palmitate-induced lipotoxicity and pancreatic β -cell dysfunction in INS-1 cells. *Journal of ginseng research*, 47(4), 572.

Zhang Y, et al. (2023) THADA inhibition in mice protects against type 2 diabetes mellitus by improving pancreatic β -cell function and preserving β -cell mass. *Nature communications*, 14(1), 1020.