Resource Summary Report

Generated by RRID on Sep 2, 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 ? 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 ? 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 ?-cell dedifferentiation by regulating insulin secretion. The Journal of biological chemistry, 301(9), 110544.

Jiao Y, et al. (2025) Nucleolar stress facilitates islet ? 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 ?-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 ?-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 ?-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 ?-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 ?-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 ?-cell function and preserving ?-cell mass. Nature communications, 14(1), 1020.