

Resource Summary Report

Generated by [dkNET](#) on Aug 27, 2026

RBL-2H3

RRID:CVCL_0591

Type: Cell Line

Proper Citation

RRID:CVCL_0591

Cell Line Information

URL: https://web.expasy.org/cellosaurus/CVCL_0591

Proper Citation: RRID:CVCL_0591

Description: Cell line RBL-2H3 is a Cancer cell line with a species of origin Rattus norvegicus (Rat)

Disease: Rat leukemia

Defining Citation: [PMID:2940298](#), [PMID:3262677](#), [PMID:6166481](#), [PMID:6173265](#), [PMID:17210052](#), [PMID:19301096](#), [PMID:19669619](#), [PMID:25149487](#), [PMID:36125550](#)

Comments: Characteristics: Compound 48/80 which is used to promote mast cell degranulation is toxic to this cell line (DOI=10.57844/arcadia-3207-4695)., Characteristics: Degranulates as a consequence of Fc-epsilon-R stimulation. Histamine-releasing (PubMed=19669619).

Category: Cancer cell line

Organism: Rattus norvegicus (Rat)

Name: RBL-2H3

Synonyms: RBL2H3, RBL 2H3, RBL.2H3

Cross References: BTO:BTO_0000833, CLO:CLO_0008763, CLO:CLO_0051024, MCCL:MCC:0000394, AddexBio:C0003007/376, ATCC:CRL-2256, BCRC:60310, CCRID:1101RAT-PUMC000817, CCRID:3101RATSCSP518, CCRID:3101RATTCT7, CCRID:4201SWI-CCTCC00213, CCTCC:GDC0213, ChEMBL-Cells:ChEMBL3307666, ChEMBL-Targets:ChEMBL614632, CLS:305194, DSMZ:ACC-312, DSMZCellDive:ACC-312, JCRB:JCRB0023, KCB:KCB 2018046YJ, KCLB:22256, Lonza:1035, NCBI_Iran:C536, PubChem_Cell_line:CVCL_0591, RCB:RCB2782, TKG:TKG 0321, Wikidata:Q54949346

ID: CVCL_0591

Hierarchy: cvcl_e3p7

Record Creation Time: 20220427T221452+0000

Record Last Update: 20260815T235620+0000

Ratings and Alerts

No rating or validation information has been found for RBL-2H3.

No alerts have been found for RBL-2H3.

Data and Source Information

Source: [CelloSaurus](#)

Usage and Citation Metrics

We found 571 mentions in open access literature.

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

Wang Y, et al. (2026) γ -Linolenic acid suppresses Th17 cell differentiation to mitigate allergic rhinitis by binding to Lyn kinase in mast cells. British journal of pharmacology, 183(12), 3234.

Omari-Manaa S, et al. (2026) Distinct phosphoinositide signatures orchestrate Fc γ RI versus MRGPRX2 mast cell secretion. iScience, 29(4), 115457.

Squair DR, et al. (2026) ZNFX1 uses two-component ubiquitin circuitry to quarantine viral RNA. Molecular cell, 86(6), 1164.

Ha DT, et al. (2026) Anti-Allergic and Anti-Inflammatory Activities of a New Benzodioxane Derivative and Phenolic Compounds From Pharbitis nil Seeds. Chemistry & biodiversity, 23(5), e02992.

Leipe A, et al. (2026) Pharmacological modulation of TRPV2 enhances migration and induces Immunoglobulin E (IgE)-independent degranulation of mast cells. Cell calcium, 136, 103166.

Moreno-Ballesteros R, et al. (2025) Site-resolved assessment of targeted protein degradation. Cell chemical biology, 32(7), 969.

Choi HW, et al. (2025) Platelet-mediated activation of perivascular mast cells triggers progression of sepsis to septic shock in mice. Nature communications, 17(1), 270.

Omari S, et al. (2024) Mast cell secretory granule fusion with amphisomes coordinates their homotypic fusion and release of exosomes. Cell reports, 43(7), 114482.

Bauer R, et al. (2024) NLRP3 promotes allergic responses to birch pollen extract in a model of intranasal sensitization. *Frontiers in immunology*, 15, 1393819.

Chua XL, et al. (2024) Competition and synergy of Arp2/3 and formins in nucleating actin waves. *Cell reports*, 43(7), 114423.

Xie XB, et al. (2024) To activate NAD(P)H oxidase with a brief pulse of photodynamic action. *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*, 38(23), e70246.

Shelby SA, et al. (2023) Membrane phase separation drives responsive assembly of receptor signaling domains. *Nature chemical biology*.

Pavlyuchenkova AN, et al. (2023) The Distinct Effects of the Mitochondria-Targeted STAT3 Inhibitors Mitocur-1 and Mitocur-3 on Mast Cell and Mitochondrial Functions. *International journal of molecular sciences*, 24(2).

Ye X, et al. (2023) Characterization of the Molecular Diversity and Degranulation Activity of Mastoparan Family Peptides from Wasp Venoms. *Toxins*, 15(5).

Kim TY, et al. (2023) *Nymphoides peltata* Root Extracts Improve Atopic Dermatitis by Regulating Skin Inflammatory and Anti-Oxidative Enzymes in 2,4-Dinitrochlorobenzene (DNCB)-Induced SKH-1 Hairless Mice. *Antioxidants (Basel, Switzerland)*, 12(4).

Kim YY, et al. (2023) Oleanolic Acid Acetate Inhibits Mast Cell Activation in Ovalbumin-Induced Allergic Airway Inflammation. *Allergy, asthma & immunology research*, 15(2), 214.

Yang Q, et al. (2023) Effects of methylglyoxal on shrimp tropomyosin structure and allergenicity during thermal processing. *Food chemistry: X*, 17, 100532.

Guo Y, et al. (2023) GEF-H1 Transduces Fc γ RI Signaling in Mast Cells to Activate RhoA and Focal Adhesion Formation during Exocytosis. *Cells*, 12(4).

Toti A, et al. (2023) Ultramicronized N-Palmitoylethanolamine Regulates Mast Cell-Astrocyte Crosstalk: A New Potential Mechanism Underlying the Inhibition of Morphine Tolerance. *Biomolecules*, 13(2).

Anqi L, et al. (2023) Molecular docking, network pharmacology and experimental verification to explore the mechanism of Wulongzhiyangwan in the treatment of pruritus. *Scientific reports*, 13(1), 361.