

Resource Summary Report

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NicheNet

RRID:SCR_023158

Type: Tool

Proper Citation

NicheNet (RRID:SCR_023158)

Resource Information

URL: <https://github.com/saeyslab/nichenetr>

Proper Citation: NicheNet (RRID:SCR_023158)

Description: Software tool as R implementation of NicheNet method to predict active ligand-target links between interacting cells. NicheNet uses human or mouse gene expression data of interacting cells as input and combines this with prior model that integrates existing knowledge on ligand-to-target signaling paths. This allows to predict ligand-receptor interactions that might drive gene expression changes in cells of interest.

Resource Type: software application, simulation software, software resource

Defining Citation: [PMID:31819264](#)

Keywords: predict ligand-receptor interactions, intercellular communication, predict active ligand target interactions, interacting cells prediction,

Funding: Research Foundation—Flanders ;
Flemish Government

Availability: Free, Available for download, Freely available

Resource Name: NicheNet

Resource ID: SCR_023158

Record Creation Time: 20230121T050159+0000

Record Last Update: 20260821T043111+0000

Ratings and Alerts

No rating or validation information has been found for NicheNet.

No alerts have been found for NicheNet.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 73 mentions in open access literature.

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

Anilkumar Sithara A, et al. (2026) Composition and Functional State of T and NK Cells in the Extramedullary Myeloma Tumor Microenvironment. *Blood cancer discovery*, 7(2), 250.

Ibáñez-Molero S, et al. (2026) Tumour-reactive heterotypic CD8 T cell clusters from clinical samples. *Nature*, 649(8096), 467.

Johnson LA, et al. (2026) Clonal expansion of cytotoxic CD8⁺ T cells in lecanemab-associated ARIA. *Nature communications*, 17(1).

Wu J, et al. (2026) RUNX2 drives adenoma-to-carcinoma transition in colon cancer. *Cell death & disease*, 17(1).

Jaiswal A, et al. (2026) Spatial transcriptomics reveals altered communities and drivers of aberrant epithelia and pro-fibrotic fibroblasts in interstitial lung diseases. *Cell genomics*, 6(3), 101066.

Al Souz J, et al. (2026) Organ injury in systemic autoimmunity is mediated by stem-like CD8⁺ T cells arising from tissue-draining lymph nodes. *Immunity*, 59(6), 1667.

Xu W, et al. (2025) Single-Cell RNA Sequencing Identifies MMP11⁺ Cancer-Associated Fibroblasts as Drivers of Angiogenesis and Bladder Cancer Progression. *Advanced science* (Weinheim, Baden-Wurttemberg, Germany), 12(32), e02774.

Goldscheitter GM, et al. (2025) Sexual dimorphism of MASLD-driven bone loss. *Scientific reports*, 15(1), 23090.

Zia S, et al. (2025) Age-impaired remyelination is associated with dysregulated microglial transitions. *Nature communications*, 16(1), 9951.

Turiel G, et al. (2025) Single-cell compendium of muscle microenvironment in peripheral artery disease reveals altered endothelial diversity and LYVE1⁺ macrophage activation. *Nature cardiovascular research*, 4(10), 1221.

Lo Tartaro D, et al. (2025) Metabolically activated and highly polyfunctional intratumoral VISTA⁺ regulatory B cells are associated with tumor recurrence in early-stage NSCLC. *Molecular cancer*, 24(1), 16.

Dheedene W, et al. (2025) Loss of endothelial ZEB2 in mice attenuates steatosis early during metabolic dysfunction-associated steatotic liver disease. *Scientific reports*, 15(1),

23434.

Craig-Schapiro R, et al. (2025) Single-cell atlas of human pancreatic islet and acinar endothelial cells in health and diabetes. *Nature communications*, 16(1), 1338.

Chi D, et al. (2025) Astrocytic pleiotrophin deficiency in the prefrontal cortex contributes to stress-induced depressive-like responses in male mice. *Nature communications*, 16(1), 2528.

Liao T, et al. (2025) A spatially resolved transcriptome landscape during thyroid cancer progression. *Cell reports. Medicine*, 6(4), 102043.

de Almeida LY, et al. (2025) Skeletal Maturity and Age-Related Changes in Immune Cells and Circulatory Factors Impair Large-Scale Bone Regeneration. *Aging cell*, 24(10), e70177.

Jiang RD, et al. (2025) Impaired inflammatory resolution with severe SARS-CoV-2 infection in leptin knock out obese hamster. *iScience*, 28(2), 111837.

Chen J, et al. (2025) Mutual regulation of microglia and astrocytes after Gas6 inhibits spinal cord injury. *Neural regeneration research*, 20(2), 557.

Xiao X, et al. (2025) Single-cell transcriptomic profiling reveals cell type heterogeneity between HFpEF and HFrEF. *Communications biology*, 8(1), 1436.

Zhang J, et al. (2025) Neonatal bone marrow interstitial fluid supports expansion and osteogenic ability of human bone marrow mesenchymal stromal cells. *Bone research*, 13(1), 102.