

Resource Summary Report

Generated by [PRECISE-TBI](#) on Aug 2, 2026

CATALYST

RRID:SCR_017127

Type: Tool

Proper Citation

CATALYST (RRID:SCR_017127)

Resource Information

URL: <http://bioconductor.org/packages/CATALYST/>

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Description: Software R package to provide pipeline for preprocessing of cytometry data, including normalization using bead standards, single cell deconvolution, and bead based compensation.

Synonyms: Cytometry dATa anALYSIS Tools

Resource Type: software toolkit, data analysis software, software application, software resource, data processing software

Defining Citation: [PMID:29605184](#)

Keywords: preprocessing, cytometry, data, normalization, bead, standard, single, cell, deconvulsion, compensation, bio.tools

Funding: Swiss National Science Foundation ;
SNSF Assistant Professorship grant ;
PhosphonetPPM and MetastasiX SystemsX grant ;
NIDDK UC4 DK108132;
European Research Council ;
Roche Postdoctoral Fellowship

Availability: Free, Available for download, Freely available

Resource Name: CATALYST

Resource ID: SCR_017127

Alternate IDs: biotools:catalyst

Alternate URLs: <https://github.com/HelenaLC/CATALYST>, <https://bio.tools/catalyst>

License: GPL

Record Creation Time: 20220129T080333+0000

Record Last Update: 20260801T190603+0000

Ratings and Alerts

No rating or validation information has been found for CATALYST.

No alerts have been found for CATALYST.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 223 mentions in open access literature.

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

Herbrich S, et al. (2026) TET2-mutant clonal hematopoiesis enhances macrophage antigen presentation and improves immune checkpoint therapy in solid tumors. *Cancer cell*, 44(1), 187.

Lee Y, et al. (2025) Segmentation aware probabilistic phenotyping of single-cell spatial protein expression data. *Nature communications*, 16(1), 389.

Chayé MAM, et al. (2025) Multi-dimensional analysis of B cells reveals the expansion of memory and regulatory B-cell clusters in humans living in rural tropical areas. *Clinical and experimental immunology*, 219(1).

Salié H, et al. (2025) Spatial single-cell profiling and neighbourhood analysis reveal the determinants of immune architecture connected to checkpoint inhibitor therapy outcome in hepatocellular carcinoma. *Gut*, 74(3), 451.

Ke H, et al. (2025) Immune profiling of the macroenvironment in colorectal cancer unveils systemic dysfunction and plasticity of immune cells. *Clinical and translational medicine*, 15(2), e70175.

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.

Gonzalez E, et al. (2025) Cancer systems immunology reveals myeloid-T cell interactions and B cell activation mediate response to checkpoint inhibition in metastatic breast cancer. *bioRxiv : the preprint server for biology*.

Eling N, et al. (2025) Multi-modal image analysis for large-scale cancer tissue studies within IMMUcan. *Cell reports methods*, 5(9), 101170.

Karl V, et al. (2025) Limited vaccine-induced CD8+ T cell immunity in HIV-infected immunological nonresponders. *JCI insight*, 10(21).

Molina-García M, et al. (2025) Integrative Molecular and Immune Profiling in Advanced Unresectable Melanoma: Tumor Microenvironment and Peripheral PD-1+ CD4+ Effector Memory T-Cells as Potential Markers of Response to Immune Checkpoint Inhibitor Therapy. *Cancers*, 17(12).

Yassini N, et al. (2025) CD4 T Cells Acquire Innate Capability Upon Classical T Cell Activation. *European journal of immunology*, 55(9), e70054.

Lawson NM, et al. (2025) Recurrent ERBB2 alterations are associated with esophageal adenocarcinoma brain metastases. *medRxiv : the preprint server for health sciences*.

Kuett L, et al. (2025) Distant Metastases of Breast Cancer Resemble Primary Tumors in Cancer Cell Composition but Differ in Immune Cell Phenotypes. *Cancer research*, 85(1), 15.

Allen HI, et al. (2025) Prevalence and risk factors for milk allergy overdiagnosis in the BEEP trial cohort. *Allergy*, 80(1), 148.

Silvestre C, et al. (2025) NK Count and Natural Cytotoxicity in Immune Nonresponders Versus Responders Living With HIV. *Journal of medical virology*, 97(2), e70170.

Osborn G, et al. (2025) Hyperinflammatory repolarisation of ovarian cancer patient macrophages by anti-tumour IgE antibody, MOv18, restricts an immunosuppressive macrophage:Treg cell interaction. *Nature communications*, 16(1), 2903.

Bueno RJ, et al. (2025) Generation of decellularized human brain tissue for investigating cell-matrix interactions: a proof-of-concept study. *Frontiers in bioengineering and biotechnology*, 13, 1578467.

Ostendorf L, et al. (2025) Neutrophil Heterogeneity Identifies an Association of LAMP1 With Proliferative Lupus Nephritis. *European journal of immunology*, 55(8), e70022.

Wang M, et al. (2025) Comprehensive analysis of B cell repopulation in ocrelizumab-treated patients with multiple sclerosis by mass cytometry and proteomics. *iScience*, 28(5), 112383.

Fonner VA, et al. (2025) PrEP choice in the real world: Results of a prospective cohort study describing uptake and use patterns of oral PrEP and the dapivirine vaginal ring among women in sub-Saharan Africa. *Journal of the International AIDS Society*, 28 Suppl 2(Suppl 2), e26457.