

# Resource Summary Report

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## 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:** 20260801T042805+0000

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## Ratings and Alerts

No rating or validation information has been found for CATALYST.

No alerts have been found for CATALYST.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 223 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [kravitz2](#).

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).

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

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.

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.

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.

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.

Barnard TR, et al. (2025) Zika virus induces persistent phenotypic changes in natural killer cells distinct from dengue virus infection. *bioRxiv : the preprint server for biology*.

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.

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

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

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.