

Resource Summary Report

Generated by [RRID](#) on Sep 10, 2026

[SPRING](#)

RRID:SCR_023578

Type: Tool

Proper Citation

SPRING (RRID:SCR_023578)

Resource Information

URL: <https://kleintools.hms.harvard.edu/tools/spring.html>

Proper Citation: SPRING (RRID:SCR_023578)

Description: Interactive web tool to visualize single cell data using force directed graph layouts. Kinetic interface for visualizing high dimensional single cell expression data. Collection of pre-processing scripts and web browser based tool for visualizing and interacting with high dimensional data.

Resource Type: data access protocol, software resource, web service

Defining Citation: [PMID:29228172](#)

Keywords: visualizing high dimensional single cell expression data, single cell expression data visualization, high dimensional data,

Funding: Burroughs-Wellcome Career Award at the Scientific Interface ;
Edward J Mallinckrodt Foundation Fellowship ;
NCI 1R33CA212697;
NIGMS 5T32GM080177

Availability: Free, Available for download, Freely available

Resource Name: SPRING

Resource ID: SCR_023578

Alternate URLs: <https://github.com/AllonKleinLab/SPRING/>,
https://github.com/AllonKleinLab/SPRING_dev

Record Creation Time: 20230520T050209+0000

Record Last Update: 20260905T133024+0000

Ratings and Alerts

No rating or validation information has been found for SPRING.

No alerts have been found for SPRING.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 26 mentions in open access literature.

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

Arede L, et al. (2026) Loss of Hfe impairs hematopoietic stem and progenitor cell function. Blood. Red cells & iron, 2(2), None.

Yan X, et al. (2026) Activation of T Cell-Intrinsic p53 by Acetylation Elicits Antitumor Immunity to Boost Cancer Immunotherapy. Cancer discovery, 16(1), 155.

Nazari F, et al. (2025) Lossless and reference-free compression of FASTQ/A files using GeneSqueeze. Scientific reports, 15(1), 322.

M A Basher AR, et al. (2025) Heterogeneity-preserving discriminative feature selection for disease-specific subtype discovery. Nature communications, 16(1), 3593.

Betschart RO, et al. (2025) A benchmark study of compression software for human short-read sequence data. Scientific reports, 15(1), 15358.

Mikami T, et al. (2025) Multi-omics analysis identifies an M-MDSC-like immunosuppressive phenotype in lineage-switched AML with KMT2A rearrangement. Nature communications, 16(1), 7955.

Jou V, et al. (2024) Regeneration-specific promoter switching facilitates Mest expression in the mouse digit tip to modulate neutrophil response. NPJ Regenerative medicine, 9(1), 32.

Xu XP, et al. (2024) High-resolution yeast actin structures indicate the molecular mechanism of actin filament stiffening by cations. Communications chemistry, 7(1), 164.

Jou V, et al. (2024) Regeneration-specific promoter switching facilitates Mest expression in the mouse digit tip to modulate neutrophil response. bioRxiv : the preprint server for biology.

Zvirblyte J, et al. (2024) Single-cell transcriptional profiling of clear cell renal cell carcinoma reveals a tumor-associated endothelial tip cell phenotype. Communications biology, 7(1), 780.

Champion C, et al. (2024) OneNet-One network to rule them all: Consensus network inference from microbiome data. PLoS computational biology, 20(12), e1012627.

Simpson Ragdale H, et al. (2023) Injury primes mutation-bearing astrocytes for dedifferentiation in later life. *Current biology : CB*, 33(6), 1082.

Nishimura A, et al. (2023) Myeloid/natural killer (NK) cell precursor acute leukemia as a distinct leukemia type. *Science advances*, 9(50), eadj4407.

Mann D, et al. (2023) Atg18 oligomer organization in assembled tubes and on lipid membrane scaffolds. *Nature communications*, 14(1), 8086.

Basher ARMA, et al. (2023) Heterogeneity-Preserving Discriminative Feature Selection for Subtype Discovery. *bioRxiv : the preprint server for biology*.

Fletcher-Hoppe C, et al. (2023) Symbiotic UCYN-A strains co-occurred with *El Niño*, relaxed upwelling, and varied eukaryotes over 10 years off Southern California. *ISME communications*, 3(1), 63.

Hu H, et al. (2023) Thyroid Cancers Exhibit Oncogene-Enhanced Macropinocytosis that Is Restrained by IGF1R and Promote Albumin-Drug Conjugate Response. *Clinical cancer research : an official journal of the American Association for Cancer Research*, 29(17), 3457.

Lin TY, et al. (2021) Fibroblast dedifferentiation as a determinant of successful regeneration. *Developmental cell*, 56(10), 1541.

Rodriguez-Fraticelli AE, et al. (2020) Single-cell lineage tracing unveils a role for TCF15 in haematopoiesis. *Nature*, 583(7817), 585.

Jakobi AJ, et al. (2020) Structural basis of p62/SQSTM1 helical filaments and their role in cellular cargo uptake. *Nature communications*, 11(1), 440.