

Resource Summary Report

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[sleuth](#)

RRID:SCR_016883

Type: Tool

Proper Citation

sleuth (RRID:SCR_016883)

Resource Information

URL: <https://pachterlab.github.io/sleuth/about>

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Description: Software tool for analysis of RNA-Seq experiments for which transcript abundances have been quantified with kallisto. Used for the differential analysis of gene expression data that utilizes bootstrapping in conjunction with response error linear modeling to decouple biological variance from inferential variance.

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

Defining Citation: [PMID:28581496](#)

Keywords: differential, analysis, RNA-Seq, data, gene, expression, bootstrapping, error, linear, modeling, decouple, biological, variance, inferential, bio.tools

Funding: NIDDK R01 DK094699;
NHGRI R01 HG006129

Availability: Free, Available for download, Freely available

Resource Name: sleuth

Resource ID: SCR_016883

Alternate IDs: biotools:sleuth, BioTools:sleuth

Alternate URLs: <https://bio.tools/sleuth>, <https://bio.tools/sleuth>, <https://bio.tools/sleuth>

License: GNU General Public License v3.0

Record Creation Time: 20220129T080332+0000

Record Last Update: 20260801T190543+0000

Ratings and Alerts

No rating or validation information has been found for sleuth.

No alerts have been found for sleuth.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 24 mentions in open access literature.

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

Papadopoulos AO, et al. (2025) Spatial regulation of CD8+ T cells at the HLA-E-NKG2A axis drives HIV persistence in lymph node B cell follicles. *Cell reports*, 44(9), 116181.

Chakraborty S, et al. (2024) Lurbinectedin sensitizes PD-L1 blockade therapy by activating STING-IFN signaling in small-cell lung cancer. *Cell reports. Medicine*, 5(12), 101852.

Bookout T, et al. (2024) Construction of Whole Cell Bacterial Biosensors as an Alternative Environmental Monitoring Technology to Detect Naphthenic Acids in Oil Sands Process-Affected Water. *ACS synthetic biology*, 13(10), 3197.

Kapur M, et al. (2024) Cell-type-specific expression of tRNAs in the brain regulates cellular homeostasis. *Neuron*.

Chakraborty S, et al. (2023) De Novo and Histologically Transformed Small-Cell Lung Cancer Is Sensitive to Lurbinectedin Treatment Through the Modulation of EMT and NOTCH Signaling Pathways. *Clinical cancer research : an official journal of the American Association for Cancer Research*, 29(17), 3526.

Dinsmore CJ, et al. (2022) Differential regulation of cranial and cardiac neural crest by serum response factor and its cofactors. *eLife*, 11.

Otero BA, et al. (2021) Transcriptome alterations in myotonic dystrophy frontal cortex. *Cell reports*, 34(3), 108634.

Zhang T, et al. (2021) Cell-type-specific meQTLs extend melanoma GWAS annotation beyond eQTLs and inform melanocyte gene-regulatory mechanisms. *American journal of human genetics*, 108(9), 1631.

Loo Yau H, et al. (2021) DNA hypomethylating agents increase activation and cytolytic activity of CD8+ T cells. *Molecular cell*, 81(7), 1469.

Terrey M, et al. (2021) Defects in translation-dependent quality control pathways lead to convergent molecular and neurodevelopmental pathology. *eLife*, 10.

Rodríguez-Pérez F, et al. (2021) Ubiquitin-dependent remodeling of the actin cytoskeleton drives cell fusion. *Developmental cell*, 56(5), 588.

Yuan S, et al. (2020) Nonstructural Protein 1 of SARS-CoV-2 Is a Potent Pathogenicity Factor Redirecting Host Protein Synthesis Machinery toward Viral RNA. *Molecular cell*, 80(6), 1055.

Schumacker ST, et al. (2020) RNA sequencing analysis of the human retina and associated ocular tissues. *Scientific data*, 7(1), 199.

Terrey M, et al. (2020) GTPBP1 resolves paused ribosomes to maintain neuronal homeostasis. *eLife*, 9.

Kapur M, et al. (2020) Expression of the Neuronal tRNA n-Tr20 Regulates Synaptic Transmission and Seizure Susceptibility. *Neuron*, 108(1), 193.

Manford AG, et al. (2020) A Cellular Mechanism to Detect and Alleviate Reductive Stress. *Cell*, 183(1), 46.

Hilgendorf KI, et al. (2019) Omega-3 Fatty Acids Activate Ciliary FFAR4 to Control Adipogenesis. *Cell*, 179(6), 1289.

Schumacker ST, et al. (2019) RNA sequencing dataset characterizing transcriptomic responses to dietary changes in *Caenorhabditis elegans*. *Data in brief*, 25, 104006.

Ling SC, et al. (2019) Overriding FUS autoregulation in mice triggers gain-of-toxic dysfunctions in RNA metabolism and autophagy-lysosome axis. *eLife*, 8.

He S, et al. (2019) Natural depletion of histone H1 in sex cells causes DNA demethylation, heterochromatin decondensation and transposon activation. *eLife*, 8.