

# Resource Summary Report

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## DESeq2

RRID:SCR\_015687

Type: Tool

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### Proper Citation

DESeq2 (RRID:SCR\_015687)

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### Resource Information

**URL:** <https://bioconductor.org/packages/release/bioc/html/DESeq2.html>

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**Description:** Software package for differential gene expression analysis based on the negative binomial distribution. Used for analyzing RNA-seq data for differential analysis of count data, using shrinkage estimation for dispersions and fold changes to improve stability and interpretability of estimates.

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

**Keywords:** differential, gene, expression, analysis, binominal, distribution, RNA-seq data, Bioconductor, bio.tools

**Funding:** International Max Planck Research School for Computational Biology and Scientific Computing ;  
NCI T32 CA009337;  
European Union's 7th Framework Programme

**Availability:** Free, Available for download, Freely available

**Resource Name:** DESeq2

**Resource ID:** SCR\_015687

**Alternate IDs:** biotools:deseq2

**Alternate URLs:** <https://github.com/mikelove/DESeq2>, <https://bio.tools/deseq2>

**License:** LGPL

**Record Creation Time:** 20220129T080327+0000

**Record Last Update:** 20250412T055949+0000

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## Ratings and Alerts

No rating or validation information has been found for DESeq2.

No alerts have been found for DESeq2.

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## Data and Source Information

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

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## Usage and Citation Metrics

We found 34538 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [FDI Lab - SciCrunch.org](#).

Bryan E, et al. (2025) Nucleosomal asymmetry shapes histone mark binding and promotes poising at bivalent domains. *Molecular cell*, 85(3), 471.

Ramponi V, et al. (2025) H4K20me3-Mediated Repression of Inflammatory Genes Is a Characteristic and Targetable Vulnerability of Persister Cancer Cells. *Cancer research*, 85(1), 32.

Nataraj K, et al. (2025) Androgen Effects on Alcohol-induced Liver Fibrosis Are Controlled by a Notch-dependent Epigenetic Switch. *Cellular and molecular gastroenterology and hepatology*, 19(1), 101414.

Huang S, et al. (2025) STAMBPL1/TRIM21 Balances AXL Stability Impacting Mesenchymal Phenotype and Immune Response in KIRC. *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*, 12(1), e2405083.

Zhu W, et al. (2025) Self-Healing Hyaluronic Acid-based Hydrogel with miRNA140-5p Loaded MON-PEI Nanoparticles for Chondrocyte Regeneration: Schiff Base Self-Assembly Approach. *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*, 12(1), e2406479.

Choi H, et al. (2025) Application of computational algorithms for single-cell RNA-seq and ATAC-seq in neurodegenerative diseases. *Briefings in functional genomics*, 24.

Cero C, et al. (2025) Profiling the cancer-prone microenvironment in a zebrafish model for MPNST. *Oncogene*, 44(3), 179.

Du Y, et al. (2025) Critical and differential roles of eIF4A1 and eIF4A2 in B-cell development and function. *Cellular & molecular immunology*, 22(1), 40.

Wu Q, et al. (2025) Defects in the H3t Gene Cause an Increase in Leydig Cells With Impaired Spermatogenesis in Mice. *Genes to cells : devoted to molecular & cellular mechanisms*, 30(1), e13182.

Sun Y, et al. (2025) Melanin-like nanoparticles slow cyst growth in ADPKD by dual inhibition of oxidative stress and CREB. *EMBO molecular medicine*, 17(1), 169.

Zhang G, et al. (2025) Nanostructure-Mediated Photothermal Effect for Reinforcing Physical Killing Activity of Nanorod Arrays. *Advanced science (Weinheim, Baden-Wurtemberg, Germany)*, 12(2), e2411997.

Lei M, et al. (2025) Prenatal Silicon Dioxide Nanoparticles Exposure Reduces Female Offspring Fertility Without Affecting Males. *Advanced science (Weinheim, Baden-Wurtemberg, Germany)*, 12(3), e2410353.

Bae S, et al. (2025) Lonafarnib Protects Against Muscle Atrophy Induced by Dexamethasone. *Journal of cachexia, sarcopenia and muscle*, 16(1), e13665.

Yang Z, et al. (2025) NFATc1 in CD4+ T cells and CD11c+ dendritic cells drives TH2-mediated eosinophilic inflammation in allergic asthma. *The journal of allergy and clinical immunology. Global*, 4(1), 100355.

Song Q, et al. (2025) Subtype-specific transcription factors affect polyamine metabolism and the tumor microenvironment in breast cancer. *Cancer innovation*, 4(1), e138.

Guo XL, et al. (2025) Fetal hepatocytes protect the HSPC genome via fetuin-A. *Nature*, 637(8045), 402.

Cheng C-J, et al. (2025) Extracellular vesicles from fifth-stage larval *Angiostrongylus cantonensis* upregulate cholesterol biosynthesis and suppress NLRP2-associated inflammatory responses in mouse astrocytes. *mSystems*, 10(1), e0101424.

Panwar D, et al. (2025) Transcriptional delineation of polysaccharide utilization loci in the human gut commensal *Segatella copri* DSM18205 and co-culture with exemplar *Bacteroides* species on dietary plant glycans. *Applied and environmental microbiology*, 91(1), e0175924.

Guillou MC, et al. (2025) Phytocytokine genes newly discovered in *Malus domestica* and their regulation in response to *Erwinia amylovora* and acibenzolar-S-methyl. *The plant genome*, 18(1), e20540.

Angarola BL, et al. (2025) Comprehensive single-cell aging atlas of healthy mammary tissues reveals shared epigenomic and transcriptomic signatures of aging and cancer. *Nature aging*, 5(1), 122.