

Resource Summary Report

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NarrowPeaks

RRID:SCR_012924

Type: Tool

Proper Citation

NarrowPeaks (RRID:SCR_012924)

Resource Information

URL: <http://www.bioconductor.org/packages/release/bioc/html/NarrowPeaks.html>

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Description: Software package for post-processing of peaks and differential binding in ChIP-seq based on standard wiggle visualization files. The double aim of the package is to apply a functional version of principal component analysis (FPCA) to: (1) Process data in wiggle track format (WIG) commonly produced by ChIP-seq peak finders by applying FPCA over a set of selected candidate enriched regions. This is done in order to shorten the genomic locations accounting for a given proportion of variation among the enrichment-score profiles. The function "narrowpeaks" allows the user to discriminate between binding regions in close proximity to each other and to narrow down the length of the putative transcription factor binding sites while preserving the information present in the variability of the dataset and capturing major sources of variation. (2) Analyze differential variation when multiple ChIP-seq samples need to be compared. The function "narrowpeaksDiff" quantifies differences between the tag-enrichment, and uses non-parametric tests on the FPC scores for testing differences between conditions.

Abbreviations: NarrowPeaks

Synonyms: NarrowPeaks: Analysis of Variation in ChIP-seq using Functional PCA Statistics

Resource Type: software resource

Keywords: functional principal component analysis

Availability: Artistic License

Resource Name: NarrowPeaks

Resource ID: SCR_012924

Alternate IDs: OMICS_00449

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Ratings and Alerts

No rating or validation information has been found for NarrowPeaks.

No alerts have been found for NarrowPeaks.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 41 mentions in open access literature.

Listed below are recent publications. The full list is available at [T1D](#).

Buonaiuto G, et al. (2025) LncRNA HSCHARME is altered in human cardiomyopathies and promotes stem cell-derived cardiomyogenesis via splicing regulation. Nature communications, 16(1), 7880.

O'Dwyer MR, et al. (2025) Nucleosome fibre topology guides transcription factor binding to enhancers. Nature, 638(8049), 251.

Minaeva M, et al. (2025) Specifying cellular context of transcription factor regulons for exploring context-specific gene regulation programs. NAR genomics and bioinformatics, 7(1), lqae178.

Reed KSM, et al. (2025) Genome reorganization and its functional impact during breast cancer progression. bioRxiv : the preprint server for biology.

Karthikeyan SK, et al. (2025) MammOnc-DB, an integrative breast cancer data analysis platform for target discovery. NPJ breast cancer, 11(1), 35.

Saelens W, et al. (2025) ChromatinHD connects single-cell DNA accessibility and conformation to gene expression through scale-adaptive machine learning. Nature communications, 16(1), 317.

Malkmus J, et al. (2025) WNT signaling coordinately controls mouse limb bud outgrowth and establishment of the digit-interdigit pattern. Development (Cambridge, England), 152(11).

Wang L, et al. (2024) Predictive Prioritization of Enhancers Associated with Pancreas Disease Risk. bioRxiv : the preprint server for biology.

Woo BJ, et al. (2024) Integrative identification of non-coding regulatory regions driving metastatic prostate cancer. *Cell reports*, 43(9), 114764.

Kabir A, et al. (2024) Advancing Transcription Factor Binding Site Prediction Using DNA Breathing Dynamics and Sequence Transformers via Cross Attention. *bioRxiv : the preprint server for biology*.

Bamgbose G, et al. (2024) Mono-methylated histones control PARP-1 in chromatin and transcription. *eLife*, 13.

Varambally S, et al. (2024) MammOnc-DB, an integrative breast cancer data analysis platform for target discovery. *Research square*.

Caldas P, et al. (2024) Transcription readthrough is prevalent in healthy human tissues and associated with inherent genomic features. *Communications biology*, 7(1), 100.

Bubb KL, et al. (2024) The regulatory potential of transposable elements in maize. *bioRxiv : the preprint server for biology*.

Mononen J, et al. (2024) Genetic variation is a key determinant of chromatin accessibility and drives differences in the regulatory landscape of C57BL/6J and 129S1/SvImJ mice. *Nucleic acids research*, 52(6), 2904.

Bamgbose G, et al. (2024) PARP-1 is a transcriptional rheostat of metabolic and bivalent genes during development. *Life science alliance*, 7(2).

Minaeva M, et al. (2024) Specifying cellular context of transcription factor regulons for exploring context-specific gene regulation programs. *bioRxiv : the preprint server for biology*.

Tsaytler P, et al. (2023) BMP4 triggers regulatory circuits specifying the cardiac mesoderm lineage. *Development (Cambridge, England)*, 150(10).

Kannan S, et al. (2023) Trajectory reconstruction identifies dysregulation of perinatal maturation programs in pluripotent stem cell-derived cardiomyocytes. *Cell reports*, 42(4), 112330.

John L, et al. (2023) Resolving the spatial architecture of myeloma and its microenvironment at the single-cell level. *Nature communications*, 14(1), 5011.