

Resource Summary Report

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FLUX CAPACITOR

RRID:SCR_006651

Type: Tool

Proper Citation

FLUX CAPACITOR (RRID:SCR_006651)

Resource Information

URL: <http://sammeth.net/confluence/display/FLUX/Home>

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Description: Software to reconstruct abundances of known transcript forms from RNAseq data. The algorithm works by distributing the reads mapping to a given exonic region (or splice junction) among the transcripts including the exon (or splice junction). The input is the annotation of a reference transcriptome and reads from RNAseq technologies aligned to the genome. From the reference annotation, splicing graphs are produced and reads are mapped to corresponding edges in these graphs according to the position where they align in the genomic sequence. The resulting graph with edges labelled by the number of reads can be interpreted as a flow network where each transcript representing a transportation path from its start to its end and consequently each edge a possibly shared segment of transportation along which a certain number of reads per nucleotide -- i.e., a flux -- is observed. Given a density function of reads along a transcript, the expected participation of each transcript in an edge under consideration can be estimated. The basic idea is to cast back from these latter participations and the observed number of reads - allowing for a certain amount of noise - to the original transcript abundancies. To do so, a linear constraint is formalized for each edge, and an optimal solution for the complete set of constraints is found by a standard linear program solver.

Abbreviations: FLUX CAPACITOR

Synonyms: The FLUX CAPACITOR, FluxCapacitor

Resource Type: software resource

Defining Citation: [PMID:20220756](#)

Keywords: bio.tools

Resource Name: FLUX CAPACITOR

Resource ID: SCR_006651

Alternate IDs: biotools:the_flux_capacitor, OMICS_01293

Alternate URLs: https://bio.tools/the_flux_capacitor

Record Creation Time: 20220129T080237+0000

Record Last Update: 20260905T132558+0000

Ratings and Alerts

No rating or validation information has been found for FLUX CAPACITOR.

No alerts have been found for FLUX CAPACITOR.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 2 mentions in open access literature.

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

Ogando J, et al. (2019) PD-1 signaling affects cristae morphology and leads to mitochondrial dysfunction in human CD8+ T lymphocytes. Journal for immunotherapy of cancer, 7(1), 151.

Tigchelaar EF, et al. (2015) Cohort profile: LifeLines DEEP, a prospective, general population cohort study in the northern Netherlands: study design and baseline characteristics. BMJ open, 5(8), e006772.