

Resource Summary Report

Generated by SPARC SAWG on Aug 30, 2026

celltrackR

RRID:SCR_021021

Type: Tool

Proper Citation

celltrackR (RRID:SCR_021021)

Resource Information

URL: <https://cran.r-project.org/web/packages/celltrackR/index.html>

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Description: Software R package to analyze immune cell migration data. Supports pipeline for track analysis by providing methods for data management, quality control, extracting and visualizing migration statistics, clustering tracks, and simulating cell migration. Available measures include displacement, confinement ratio, autocorrelation, straightness, turning angle, and fractal dimension. Measures can be applied to entire tracks, steps, or subtracks with varying length.

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

Defining Citation: [DOI:10.1101/670505v1](https://doi.org/10.1101/670505v1)

Keywords: Immune cell migration data, dimensional space, cell analysis, cell migration, cell tracks, cell migration data, displacement, confinement ratio, autocorrelation, turning angle, fractal dimension

Funding: NIAID R01 AI077600;
NIAID U01 AI095550

Availability: Free, Available for download, Freely available

Resource Name: celltrackR

Resource ID: SCR_021021

Alternate URLs: <https://github.com/ingewortel/celltrackR>

License: GPL-2

Record Creation Time: 20220129T080353+0000

Ratings and Alerts

No rating or validation information has been found for celltrackR.

No alerts have been found for celltrackR.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 8 mentions in open access literature.

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

Kalinowski J, et al. (2026) Peroxisome calcium uptake is dependent on ER-peroxisome membrane contact. Cellular and molecular life sciences : CMLS, 83(1).

Abukar S, et al. (2025) Early coordination of cell migration and cardiac fate determination during mammalian gastrulation. The EMBO journal, 44(12), 3327.

Joshi AS, et al. (2025) Advancing in vitro cell migration studies: a review of open-source analytical platforms for cancer and wound healing research. Cell adhesion & migration, 19(1), 2488116.

Kuehl M, et al. (2025) Pathology-oriented multiplexing enables integrative disease mapping. Nature, 644(8076), 516.

Martin E, et al. (2024) Time-resolved proximity proteomics uncovers a membrane tension-sensitive caveolin-1 interactome at the rear of migrating cells. eLife, 13.

Lodewijk GA, et al. (2024) Self-organization of embryonic stem cells into a reproducible embryo model through epigenome editing. bioRxiv : the preprint server for biology.

Wortel IMN, et al. (2022) Listeria motility increases the efficiency of epithelial invasion during intestinal infection. PLoS pathogens, 18(12), e1011028.

Wortel IMN, et al. (2021) CelltrackR: An R package for fast and flexible analysis of immune cell migration data. Immunoinformatics (Amsterdam, Netherlands), 1-2.