

Resource Summary Report

Generated by [NIF](#) on Sep 17, 2026

[vbSPT](#)

RRID:SCR_017554

Type: Tool

Proper Citation

vbSPT (RRID:SCR_017554)

Resource Information

URL: <http://vbspt.sourceforge.net/>

Proper Citation: vbSPT (RRID:SCR_017554)

Description: Software package for analysis of single particle diffusion trajectories, where diffusion constants switch randomly according to Markov process. Analytical tool to combine information from thousands of short single-molecule trajectories of intracellularly diffusing proteins. Has ability to learn number of diffusive states directly from data, in addition to model parameters such as transition rates and diffusion constants.

Synonyms: variational Bayes single particle tracking

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

Defining Citation: [PMID:23396281](#)

Keywords: Analysis, single, particle, diffusion, trajectory, Markov, short, molecule, intracellularly, protein, data, transition, state

Availability: Free, Available for download, Freely available

Resource Name: vbSPT

Resource ID: SCR_017554

Alternate URLs: <https://sourceforge.net/projects/vbspt/files/latest/download?source=files>

Record Creation Time: 20220129T080335+0000

Record Last Update: 20260912T195854+0000

Ratings and Alerts

No rating or validation information has been found for vbSPT.

No alerts have been found for vbSPT.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 3 mentions in open access literature.

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

Kuramoto R, et al. (2025) Membrane-domain compartmentalization of active GPCRs by ??-arrestins through PtdIns(4,5)P2 binding. Nature chemical biology.

Ball DA, et al. (2022) Impact of Saccharomyces cerevisiae on the Field of Single-Molecule Biophysics. International journal of molecular sciences, 23(24).

Kim JM, et al. (2021) Single-molecule imaging of chromatin remodelers reveals role of ATPase in promoting fast kinetics of target search and dissociation from chromatin. eLife, 10.