

Resource Summary Report

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cisTEM

RRID:SCR_016502

Type: Tool

Proper Citation

cisTEM (RRID:SCR_016502)

Resource Information

URL: <https://cistem.org/>

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Description: Software to process cryo-EM images of macromolecular complexes and obtain high-resolution 3D reconstructions from them.

Abbreviations: cisTEM

Synonyms: computational imaging system for Transmission Electron Microscopy

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

Defining Citation: [DOI:10.7554/eLife.35383](https://doi.org/10.7554/eLife.35383)

Keywords: data, processing, high, resolution, electron, cryo, macroscopy, single, particle, averaging, image, macromolecule, high, resolution, 3D, bio.tools

Funding: Howard Hughes Medical Institute

Availability: Open source, Trial available

Resource Name: cisTEM

Resource ID: SCR_016502

Alternate IDs: biotools:cistem

Alternate URLs: <https://bio.tools/cistem>

License: the Janelia Research Campus Software License

Record Creation Time: 20220129T080331+0000

Ratings and Alerts

No rating or validation information has been found for cisTEM.

No alerts have been found for cisTEM.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 64 mentions in open access literature.

Listed below are recent publications. The full list is available at [kravitz2](#) .

Smith AM, et al. (2025) The HIV-1 nuclear export complex reveals the role of RNA in CRM1 cargo recognition. *Molecular cell*, 85(16), 3108.

Qerqez AN, et al. (2025) Selective decoupling of IgG1 binding to viral Fc receptors restores antibody-mediated NK cell activation against HCMV. *Cell reports*, 44(12), 116593.

Remesh SG, et al. (2023) Computational pipeline provides mechanistic understanding of Omicron variant of concern neutralizing engineered ACE2 receptor traps. *Structure (London, England : 1993)*, 31(3), 253.

Lucas BA, et al. (2023) Baited reconstruction with 2D template matching for high-resolution structure determination in vitro and in vivo without template bias. *eLife*, 12.

Yu X, et al. (2023) The evolution and determinants of neutralization of potent head-binding antibodies against Ebola virus. *Cell reports*, 42(11), 113366.

Silva RP, et al. (2023) Identification of a conserved S2 epitope present on spike proteins from all highly pathogenic coronaviruses. *eLife*, 12.

Eren E, et al. (2022) Structural characterization of the *Myxococcus xanthus* encapsulin and ferritin-like cargo system gives insight into its iron storage mechanism. *Structure (London, England : 1993)*, 30(4), 551.

Zhang K, et al. (2022) A step-by-step protocol for capturing conformational snapshots of ligand gated ion channels by single-particle cryo-EM. *STAR protocols*, 3(4), 101732.

Koester DC, et al. (2022) Discovery of Novel Quinoline-Based Proteasome Inhibitors for Human African Trypanosomiasis (HAT). *Journal of medicinal chemistry*, 65(17), 11776.

Milligan JC, et al. (2022) Asymmetric and non-stoichiometric glycoprotein recognition by two distinct antibodies results in broad protection against ebolaviruses. *Cell*, 185(6), 995.

- Rabuck-Gibbons JN, et al. (2022) Quantitative mining of compositional heterogeneity in cryo-EM datasets of ribosome assembly intermediates. *Structure* (London, England : 1993), 30(4), 498.
- Kumar N, et al. (2021) Structure of the human secretory immunoglobulin M core. *Structure* (London, England : 1993), 29(6), 564.
- Yu J, et al. (2021) Mechanism of gating and partial agonist action in the glycine receptor. *Cell*, 184(4), 957.
- Rong Y, et al. (2021) TMEM120A contains a specific coenzyme A-binding site and might not mediate poking- or stretch-induced channel activities in cells. *eLife*, 10.
- Jiang D, et al. (2021) Open-state structure and pore gating mechanism of the cardiac sodium channel. *Cell*, 184(20), 5151.
- Travis BA, et al. (2021) Structural Basis for Virulence Activation of *Francisella tularensis*. *Molecular cell*, 81(1), 139.
- Joyce MG, et al. (2021) SARS-CoV-2 ferritin nanoparticle vaccines elicit broad SARS coronavirus immunogenicity. *Cell reports*, 37(12), 110143.
- Lucas BA, et al. (2021) Locating macromolecular assemblies in cells by 2D template matching with cisTEM. *eLife*, 10.
- Hsieh CL, et al. (2021) Stabilized coronavirus spike stem elicits a broadly protective antibody. *Cell reports*, 37(5), 109929.
- Myasnikov A, et al. (2021) Structural analysis of the full-length human LRRK2. *Cell*, 184(13), 3519.