Resource Summary Report

Generated by SPARC SAWG on Jul 28, 2026

Orientations of Proteins in Membranes database

RRID:SCR_011961
Type: Tool

Proper Citation

Orientations of Proteins in Membranes database (RRID:SCR_011961)

Resource Information

URL: http://opm.phar.umich.edu/

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Description: Database that provides a collection of transmembrane, monotopic and peripheral proteins from the Protein Data Bank whose spatial arrangements in the lipid bilayer have been calculated theoretically and compared with experimental data. The database allows analysis, sorting and searching of membrane proteins based on their structural classification, species, destination membrane, numbers of transmembrane segments and subunits, numbers of secondary structures and the calculated hydrophobic thickness or tilt angle with respect to the bilayer normal.

Abbreviations: OPM

Synonyms: Orientations of Proteins in Membranes (OPM) database, OPM Database

Resource Type: database, image collection, data or information resource

Defining Citation: PMID:16397007

Keywords: protein, membrane, bio.tools, FASEB list

Funding: NSF

Availability: Acknowledgement requested

Resource Name: Orientations of Proteins in Membranes database

Resource ID: SCR_011961

Alternate IDs: OMICS_01612, biotools:opm

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

Record Creation Time: 20220129T080307+0000

Record Last Update: 20260725T190725+0000

Ratings and Alerts

No rating or validation information has been found for Orientations of Proteins in Membranes database.

No alerts have been found for Orientations of Proteins in Membranes database.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 120 mentions in open access literature.

Listed below are recent publications. The full list is available at SPARC SAWG .

Yamamuro T, et al. (2025) Mitochondria-derived PEP licenses glycerolipid synthesis via SLC25A35. bioRxiv : the preprint server for biology.

van der Velden WJC, et al. (2025) Allosteric communication mechanism in the glucagon receptor. The Journal of biological chemistry, 301(6), 108530.

Markwardt F, et al. (2025) Activation of the Rat P2X7 Receptor by Functionally Different ATP Activation Sites. Cells, 14(12).

Merz M, et al. (2025) Downstream Signaling of Muscarinic M4 Receptors Is Regulated by Receptor Density and Cellular Environment. Pharmacology research & perspectives, 13(3), e70123.

Farfán-García AE, et al. (2025) Structural and functional analysis of Escherichia coli membrane disruption by Ib-M peptides. PloS one, 20(10), e0334029.

Romp E, et al. (2025) Modifications in FLAP's second cytosolic loop influence 5-LOX interaction, inhibitor binding, and leukotriene formation. FEBS letters, 599(15), 2179.

Vladkova R, et al. (2025) X-Ray Crystal and Cryo-Electron Microscopy Structure Analysis Unravels How the Unique Thylakoid Lipid Composition Is Utilized by Cytochrome b6f for Driving Reversible Proteins' Reorganization During State Transitions. Membranes, 15(5).

Clemente-Moragón A, et al. (2025) Pharmacogenomics and chronotherapy of drug-induced cardioprotection in acute myocardial infarction. Nature communications, 16(1), 10450.

Guo CR, et al. (2025) Understanding interspecies drug response variations between human and rodent P2X7 receptors. Nature communications, 16(1), 10827.

Lazzara F, et al. (2024) Anti-angiogenic and antioxidant effects of axitinib in human retinal endothelial cells: implications in diabetic retinopathy. Frontiers in pharmacology, 15, 1415846.

Rullo-Tubau J, et al. (2024) Structure and mechanisms of transport of human Asc1/CD98hc amino acid transporter. Nature communications, 15(1), 2986.

Floch A, et al. (2024) Molecular dynamics of the human RhD and RhAG blood group proteins. Frontiers in chemistry, 12, 1360392.

Lin YY, et al. (2024) Finely ordered intracellular domain harbors an allosteric site to modulate physiopathological function of P2X3 receptors. Nature communications, 15(1), 7652.

Akbari Ahangar A, et al. (2024) Mapping structural distribution and gating-property impacts of disease-associated mutations in voltage-gated sodium channels. iScience, 27(9), 110678.

Trotta MC, et al. (2024) Ocular pharmacological and biochemical profiles of 6-thioguanine: a drug repurposing study. Frontiers in pharmacology, 15, 1375805.

Saillant V, et al. (2024) HssS activation by membrane heme defines a paradigm for two-component system signaling in Staphylococcus aureus. mBio, 15(6), e0023024.

Kahveci K, et al. (2024) Discovering allatostatin type-C receptor specific agonists. Nature communications, 15(1), 3965.

Jin F, et al. (2024) Cryo-EM structure of the zinc-activated channel (ZAC) in the Cys-loop receptor superfamily. Proceedings of the National Academy of Sciences of the United States of America, 121(44), e2405659121.

de Araújo NS, et al. (2024) Aptamer-Based Recognition of Breast Tumor Cells: A New Era for Breast Cancer Diagnosis. International journal of molecular sciences, 25(2).

Rooney J, et al. (2024) Structural and functional analyses of nematode-derived antimicrobial peptides support the occurrence of direct mechanisms of worm-microbiota interactions. Computational and structural biotechnology journal, 23, 1522.