Resource Summary Report

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Calmodulin Target Database

RRID:SCR_008443
Type: Tool

Proper Citation

Calmodulin Target Database (RRID:SCR_008443)

Resource Information

URL: http://calcium.uhnres.utoronto.ca/ctdb/ctdb/home.html

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Description: This database contains nearly 300 sequences known to bind calmodulin, published as of March 2003. Calmodulin is an intracellular calcium receptor found ubiquitously in eukaryotes. It is capable of regulating biological activities of many cellular proteins and transmembrane ion transporters mainly in a Ca2 -dependent manner. When the intracellular calcium level rises to 10-5 M, four Ca2 ions bind to calmodulin, and this Ca2 -calmodulin complex binds the target proteins, initiating various signalling cascades. Calmodulin has four EF-hand motifs that change conformation upon binding calcium ions. Each EF-hand motif contains two alpha helices connected by a 12-residue loop. The calcium ion binds to the loop region and changes the relative positions of the alpha helices (Yap et al, 1999). In absence of calcium, the alpha-helices in the EF-hand motif of calmodulin are positioned almost parallel to each other. This is known as the closed conformation. Sponsors: This resource is supported by the Ikura Lab, Ontario Cancer Institute. Keywords: Database, Sequence, Calmodulin, Intracellular, Calcium Receptor, Eukaryote, Transmembrane, Protein, Biological, Cellular, Target, Motif, Helix, Signaling,

Synonyms: CTDB

Resource Type: data or information resource, database

Resource Name: Calmodulin Target Database

Resource ID: SCR_008443

Alternate IDs: nif-0000-30283

Record Creation Time: 20220129T080247+0000

Record Last Update: 20260729T044209+0000

Ratings and Alerts

No rating or validation information has been found for Calmodulin Target Database.

No alerts have been found for Calmodulin Target Database.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 31 mentions in open access literature.

Listed below are recent publications. The full list is available at nidm-terms .

Curry HN, et al. (2025) Melastatin family Transient Receptor Potential channels support spermatogenesis in planarian flatworms. The International journal of developmental biology, 69(1), 21.

Curry HN, et al. (2024) Melastatin subfamily Transient Receptor Potential channels support spermatogenesis in planarian flatworms. bioRxiv : the preprint server for biology.

Chen Y, et al. (2022) Clinical features and direct medical cost of splenic injury in China: a cross-sectional study. BMJ open, 12(6), e058612.

Iqbal Z, et al. (2021) Comprehensive genome-wide analysis of calmodulin-binding transcription activator (CAMTA) in Durio zibethinus and identification of fruit ripening-associated DzCAMTAs. BMC genomics, 22(1), 743.

Yang Y, et al. (2021) Endophilin A1 drives acute structural plasticity of dendritic spines in response to Ca2+/calmodulin. The Journal of cell biology, 220(6).

Latorre-Estivalis JM, et al. (2021) Evolution of the Insect PPK Gene Family. Genome biology and evolution, 13(9).

Vuong-Brender TT, et al. (2021) Neuronal calmodulin levels are controlled by CAMTA transcription factors. eLife, 10.

Kantauskait?? M, et al. (2020) Rapid Regulation of Human Multidrug and Extrusion Transporters hMATE1 and hMATE2K. International journal of molecular sciences, 21(14).

Isozumi N, et al. (2019) Ca2+-dependent interaction between calmodulin and CoDN3, an effector of Colletotrichum orbiculare. Biochemical and biophysical research communications, 514(3), 803.

Mathavarajah S, et al. (2018) Neuronal Ceroid Lipofuscinoses: Connecting Calcium Signalling through Calmodulin. Cells, 7(11).

Pant P, et al. (2018) Genome-wide comparative and evolutionary analysis of Calmodulin-binding Transcription Activator (CAMTA) family in Gossypium species. Scientific reports, 8(1), 5573.

Chu HD, et al. (2018) Identification, Structural Characterization and Gene Expression Analysis of Members of the Nuclear Factor-Y Family in Chickpea (Cicer arietinum L.) under Dehydration and Abscisic Acid Treatments. International journal of molecular sciences, 19(11).

Nasir A, et al. (2018) Identification of a flagellar protein implicated in the gravitaxis in the flagellate Euglena gracilis. Scientific reports, 8(1), 7605.

Zhao H, et al. (2017) Calmodulin promotes matrix metalloproteinase 9 production and cell migration by inhibiting the ubiquitination and degradation of TBC1D3 oncoprotein in human breast cancer cells. Oncotarget, 8(22), 36383.

Parvin N, et al. (2017) TOM9.2 Is a Calmodulin-Binding Protein Critical for TOM Complex Assembly but Not for Mitochondrial Protein Import in Arabidopsis thaliana. Molecular plant, 10(4), 575.

Wu M, et al. (2016) Genome-wide identification and expression analysis of the IQD gene family in moso bamboo (Phyllostachys edulis). Scientific reports, 6, 24520.

Myers MD, et al. (2016) Calmodulin Promotes N-BAR Domain-Mediated Membrane Constriction and Endocytosis. Developmental cell, 37(2), 162.

O'Day DH, et al. (2015) Calmodulin Binding Proteins and Alzheimer's Disease. Journal of Alzheimer's disease : JAD, 46(3), 553.

Srivastava V, et al. (2015) Genome Wide Identification of LIM Genes in Cicer arietinum and Response of Ca-2LIMs in Development, Hormone and Pathogenic Stress. PloS one, 10(9), e0138719.

Sarkar TS, et al. (2014) Nitric oxide production by necrotrophic pathogen Macrophomina phaseolina and the host plant in charcoal rot disease of jute: complexity of the interplay between necrotroph-host plant interactions. PloS one, 9(9), e107348.