

Calmodulin

Cat.No. 301-0P; control peptide, 100 µg peptide (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg peptide, lyophilized. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 140 to 149 from rat Calmodulin (UniProt Id: P62161)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	301 003
Remarks	This control peptide consists of the synthetic peptide (aa 140-149 in rat calmodulin) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Calmodulin (CaM) is an ubiquitously expressed 17 kDa protein which mediates many essential Ca-dependent physiological processes. For instance, in neurons it is involved in the regulation of synaptic transmission. Calmodulin belongs to a family of structurally homologous Ca-binding proteins, e.g. troponin C, parvalbumin and S100.

Selected General References

- Calcium-dependent folding of single calmodulin molecules.
Stigler J, Rief M
Proceedings of the National Academy of Sciences of the United States of America (2012) 109(44): 17814-9.
- Calmodulin suppresses synaptotagmin-2 transcription in cortical neurons.
Pang ZP, Xu W, Cao P, Südhof TC
The Journal of biological chemistry (2010) 285(44): 33930-9.
- Calcium-calmodulin signalling pathway up-regulates glutamatergic synaptic function in non-pyramidal, fast spiking rat hippocampal CA1 neurons.
Wang JH, Kelly P
The Journal of physiology (2001) 533(Pt 2): 407-22.
- Monoclonal antibody to calmodulin: development, characterization, and comparison with polyclonal anti-calmodulin antibodies.
Sacks DB, Porter SE, Ladenson JH, McDonald JM
Analytical biochemistry (1991) 194(2): 369-77.
- Calcium/calmodulin-dependent protein kinase II.
Colbran RJ, Schworer CM, Hashimoto Y, Fong YL, Rich DP, Smith MK, Soderling TR
The Biochemical journal (1989) 258(2): 313-25.
- Calcium/calmodulin-dependent phosphorylation of vimentin in rat sertoli cells.
Spruill WA, Zysk JR, Tres LL, Kierszenbaum AL
Proceedings of the National Academy of Sciences of the United States of America (1983) 80(3): 760-4.