

# Calmodulin Antibody



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| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W             | M R         | Endogenous   | 17        | Rabbit          | #PODP23     | 801             |

## Product Usage Information

### Application

Western Blotting

### Dilution

1:1000

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

Calmodulin Antibody detects endogenous levels of total calmodulin protein.

## Species predicted to react based on 100% sequence homology

Human, Monkey, Xenopus, Pig

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide surrounding Glu140 of human calmodulin. Antibodies are purified by peptide affinity chromatography.

## Background

Calmodulin is a ubiquitously expressed small protein mediating many cellular effects such as short-term and long-term memory, nerve growth, inflammation, apoptosis, muscle contraction and intracellular movement (1). Upon binding of four Ca<sup>2+</sup> ions, calmodulin undergoes conformational changes, allowing this complex to bind to and activate many enzymes including protein kinases, protein phosphatases, ion channels, Ca<sup>2+</sup> pumps, nitric oxide synthase, inositol triphosphate kinase, and cyclic nucleotide phosphodiesterase (2,3). Since calmodulin binds Ca<sup>2+</sup> in a cooperative fashion, small changes in cytosolic Ca<sup>2+</sup> levels lead to large changes in the level of active calmodulin and its target proteins (4).

## Background References

1. Persechini, A. et al. (1989) *Trends Neurosci* 12, 462-7.
2. Finn, B.E. et al. (1995) *Nat Struct Biol* 2, 777-83.
3. Agell, N. et al. (2002) *Cell Signal* 14, 649-54.
4. Porter, J.A. et al. (1993) *Science* 262, 1038-42.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting

## Cross-Reactivity Key

**M:** Mouse **R:** Rat

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