

DATA SHEET

Product Name: Calmodulin, Bovine Brain

Catalog #: C-1013

Alt: CAM, CALM

Molecular Mass: 16,000 Da theoretical

Protein Purity: >95%

Activity: \geq 250,000 units per mg protein. One unit is defined as the amount of calmodulin which will give rise to 50% of the maximal enzyme activation of a standard level of activatordeficient calcineurin

Supplied As: Lyophilized in 30 mM Hepes, pH 7.4, 1 mM CaCl₂ and 0.1 mM DTT

Storage: Aliquot and store at -20°C or lower. Avoid repeated freezing and thawing cycles

Description: Calmodulin (CaM) is a ubiquitous, calcium-binding protein that can bind to and regulate a multitude of different protein targets, thereby affecting many different cellular functions. CaM mediates processes such as inflammation, metabolism, apoptosis, muscle contraction, intracellular movement, short-term and long-term memory, nerve growth and the immune response. CaM is expressed in many cell types and can have different subcellular locations, including the cytoplasm, within organelles, or associated with the plasma or organelle membranes. Many of the proteins that CaM binds are unable to bind calcium themselves, and as such use CaM as a calcium sensor and signal transducer. CaM can also make use of the calcium stores in the endoplasmic reticulum, and the sarcoplasmic reticulum. CaM undergoes a conformational change upon binding to calcium, which enables it to bind to specific proteins for a specific response. CaM can bind up to four calcium ions, and can undergo post-translational modifications, such as phosphorylation, acetylation, methylation and proteolytic cleavage, each of which can potentially modulate its actions.

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