

Recombinant Human Calmodulin-1/CALM1 Protein

Catalog No.: RP02931 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	801/805/808	P0DP23

Tags

No tag

Synonyms

CALM1; CALML2; CAMI; CPVT4; DD132; LQT14; PHKD; caM; CAMI; CPVT4; DD132; LQT14; PHKD; caM

Product Information

Source	Purification
<i>E. coli</i>	> 95% as determined by SDS-PAGE.

Calculated MW	Observed MW
16.8 kDa	16 kDa

Endotoxin

<1EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of 50mM NH₄HCO₃, pH 8.0.

Reconstitution

Centrifuge the tube before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Calmodulin (CaM) is a multifunctional intermediate calcium-binding messenger protein expressed in all eukaryotic cells. It is an intracellular target of the secondary messenger Ca²⁺, and the binding of Ca²⁺ is required for the activation of Calmodulin. Once bound to Ca²⁺, Calmodulin acts as part of a calcium signal transduction pathway by modifying its interactions with various target proteins such as kinases or phosphatases. Calmodulin is a small, highly conserved protein that is 148 amino acids long. The protein has two approximately symmetrical globular domains each containing a pair of EF-hand motifs (the N- and C-domain) separated by a flexible linker region for a total of four Ca²⁺ binding sites. Calmodulin mediates many crucial processes such as inflammation, metabolism, apoptosis, smooth muscle contraction, intracellular movement, short-term and long-term memory, and the immune response. Calmodulin 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, but it is always found intracellularly.

Basic Information

Description

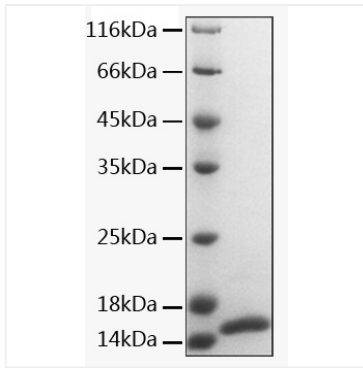
Recombinant Human Calmodulin-1/CALM1 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Met1-Lys149) of human Calmodulin-1/CALM1 (Accession #NP_001316851.1) fused with no additional amino acid.

Bio-Activity

Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human Calmodulin-1/CALM1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 16 kDa.