

# 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;LQT 14;PHKD;caM; CAMI; CPVT4; DD132; LQT14; PHKD; caM

### **Product Information**

Source Purification

E. coli ≥ 95 % as
determined by SDS-

PAGE.

### Calculated MW Observed MW

16.8 kDa 16 kDa

#### **Endotoxin**

< 1 EU/µg of the protein by LAL method.

#### **Formulation**

Lyophilized from a 0.22  $\mu m$  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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

#### **Contact**

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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**

#### Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

#### Storage

Store at  $-20^{\circ}$ C. Store the lyophilized protein at  $-20^{\circ}$ C to  $-80^{\circ}$ C up to 1 year from the date of receipt.

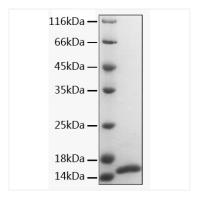
After reconstitution, the protein solution is stable at -20  $^{\circ}$ C for 3 months, at 2-8  $^{\circ}$ C for up to 1 week.

Avoid repeated freeze/thaw cycles.

### **Operational Notes**

For your safety and health, please wear a lab coat and disposable gloves for handling.

# **Validation Data**



Recombinant Human Calmodulin-1/CALM1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.