



Recombinant Protein Technical Manual

Recombinant Human Calmodulin/CALM1 Protein

RPES3974

Product Data:

Product SKU: RPES3974

Size: 10µg

Species: Human

Expression host: E. coli

Uniprot: P62158

Protein Information:

Molecular Mass: 16.8 kDa

AP Molecular Mass: 16 kDa

Tag:

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of 50mM NH₄HCO₃, pH 8.0 .

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Calmodulin; CaM; CALM1; CALM; CAM; CAM1; CALM2; CAM2; CAMB; CALM3; CALML2; CAM3; CAMC; CAMIII

Immunogen Information:

Sequence: Met 1-Lys149

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 Ca^{2+} , and the binding of Ca^{2+} is required for the activation of Calmodulin. Once bound to Ca^{2+} , 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 Ca^{2+} 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.