# Data Sheet (Cat.No.TMPJ-00029)

TargetMol

## CALM1 Protein, Human, Recombinant

### General Information

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| Synonyms: | Calmodulin;CAMIII;CAMC;CALM;CALML2;CALM2;CAM2;CALM3;CAM1;CAM3;CaM;CAMB;CALM1 |
| Protein Construction: | Met1-Lys149 |
| Species: | Human |
| Expression Host: | E. coli |
| Accession: | P0DP23 |
| Molecular Weight: | 16 KDa (reducing condition) |
| AA Sequence: | Met1-Lys149 |

### QC Testing

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| Biological Activity: | Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity: | Greater than 95% as determined by reducing SDS-PAGE. (QC verified) |
| Endotoxin: | < 0.1 ng/μg (1 EU/μg) as determined by LAL test. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM NH4HCO3, pH 8.0. |

### Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein 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.



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