

# Human PPP3CA / Protein phosphatase 2B Protein (His Tag)

Catalog Number: 13670-H07B



**Sino Biological Inc.**  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CALN; CALNA; CALNA1; CCN1; CNA1; PPP2B; 2900074D19Rik; Caln; Calna; CN; CnA

### Protein Construction:

A DNA sequence encoding the human PPP3CA (Q08209-1) (Ser2-Gln521) was fused with a polyhistidine tag at the N-terminus.

**Source:** Human

**Expression Host:** Baculovirus-Insect Cells

## QC Testing

**Purity:** > 94 % as determined by SDS-PAGE

### Bio Activity:

Using the Octet RED System, the affinity constant (Kd) of human PPP3CA-His (Cat:13670-H07B) bound to Human PPIA-His (Cat:10436-H08E) was 0.9 nM.

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** His

### Molecular Mass:

The recombinant human PPP3CA consists of 538 amino acids and has a calculated molecular mass of 60.8 kDa. The recombinant protein migrates as an approximately 60 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% glycerol

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

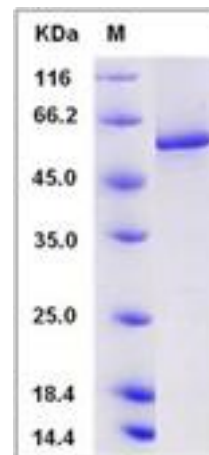
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

PPP3CA, also known as protein phosphatase 2B, is a member of the PPP phosphatase family, PP-2B subfamily. It is the alpha catalytic subunit of protein phosphatase 2B (PP2B). PP2B is a holoenzyme that is comprised of a catalytic subunit associated with regulatory subunits. It is a calcium regulated enzyme that is activated by calmodulin and participates in the signaling cascades involved in development of the nervous, cardiovascular, and musculoskeletal systems. PPP3CA activates the T cells of the immune system and can be blocked by drugs. It also activates NFATc (a transcription factor) by dephosphorylating it. The activated NFATc is subsequently translocated into the nucleus, where it upregulates the expression of interleukin 2. PPP3CA interacts with CRTC2, MYOZ1, MYOZ2 and MYOZ3. It also interacts with DNM1L. The interaction dephosphorylates DNM1L and regulates its translocation to mitochondria.

## References

- 1.Frey N, *et al.* (2002) Calsarcin-3, a Novel Skeletal Muscle-specific Member of the Calsarcin Family, Interacts with Multiple Z-disc Proteins. *Journal of Biological Chemistry*. 277(16): 13998-4004.
- 2.Frey N, *et al.* (2000) Calsarcins, a novel family of sarcomeric calcineurin-binding proteins. *Proceedings of the National Academy of Sciences*. 97(26):14632-7.
- 3.Crabtree G R, *et al.* (1999) Generic signals and specific outcomes: Signaling through Ca<sup>2+</sup>, calcineurin, and NF-AT. *Cell*. 96(5):611-4.

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