

Human PPP3R1 Protein (His Tag)

Catalog Number: 13673-H07B



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

CALNB1; CNB; CNB1; CaNB1; Cnb1; MCIP1

Protein Construction:

A DNA sequence encoding the human PPP3R1 (P63098) (Gly2-Val170) was fused with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 87 % as determined by SDS-PAGE

Bio Activity:

Using the Octet RED System, the affinity constant (Kd) of human PPP3R1-His bound to Human PPIA-His (Cat:10436-H08E) was 6 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 PPP3R1 consists of 187 amino acids and has a calculated molecular mass of 21.4 kDa. The recombinant protein migrates as an approximately 20 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% glycerol, 2mM DTT

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:

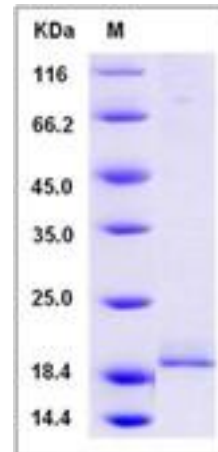
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

PPP3R1 belongs to the calcineurin regulatory subunit family. It is a regulatory subunit of calcineurin. Calcineurin is composed of two subunits: calcineurin A (CnA) and calcineurin B (CnB). Dephosphorylation of the nuclear factor of activated T-cells (NF-AT) by Calcineurin is essential for NF-AT activation, nuclear translocation, and early gene expression in T-cells. PPP3R1 is a Ser/Thr-specific calcium and calmodulin-dependent protein phosphatase which takes a vital part in the T cell activation pathway. PPP3R1 is involved in protein dephosphorylation, NFAT protein import into nucleus (ortholog) and epithelial to mesenchymal transition (ortholog). It participates in calcineurin signaling pathway; mitogen activated protein kinase signaling pathway. PPP3R1 interacts with (+)-pilocarpine, 2,4-dinitrotoluene and ammonium chloride. It contains four EF-hand domains and four functional calcium-binding sites. PPP3R1 play an important role in the T cell activation pathway.

References

- 1.Feng B, *et al.* (1999) Interactions of calcineurin A, calcineurin B, and Ca²⁺. *Biochemistry* 38 (38): 12481-9.
- 2.Kawamura A, *et al.* (1995) Interaction of FKBP12-FK506 with calcineurin A at the B subunit-binding domain. *J Biol Chem.* 270(26):15463-6.
- 3.Wang MG, *et al.* (1997) Calcineurin A alpha (PPP3CA), calcineurin A beta (PPP3CB) and calcineurin B (PPP3R1) are located on human chromosomes 4, 10q21q22 and 2p16p15 respectively. *Cytogenet Cell Genet.* 72(2-3):236-41.

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