



# Recombinant Protein Technical Manual

## Recombinant Human PPP3CA/CALNA Protein (His Tag)(Active)

RPES4318

### Product Data:

**Product SKU:** RPES4318

**Size:** 10µg

**Species:** Human

**Expression host:** Baculovirus-Insect Cells

**Uniprot:** Q08209

### Protein Information:

**Molecular Mass:** 60.8 kDa

**AP Molecular Mass:** 60 kDa

**Tag:** N-His

**Bio-activity:** Using the Octet RED System, the affinity constant (Kd) of human PPP3CA-His bound to Human PPIA-His was 0.9 nM.

**Purity:** > 94 % 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 sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% glycerol

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

**Application:**

**Synonyms:** CALN;CALNA;CALNA1;CCN1;CNA1;PPP2B

## Immunogen Information:

**Sequence:** Ser2-Gln521

## Background:

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.