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AR39114PU-N Human PPP1CA (1-330, His-tag) - Purified

Alternate names: PP-1A, PPP1A, Serine/threonine-protein phosphatase PP1-alpha catalytic subunit

Quantity: 50 µg

Concentration: 0.25 mg/ml (determined by Bradford assay)

Background: PPP1CA, also known as serine/threonine-protein phosphatase PP1-alpha catalytic subunit, is essential for cell division, and participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. This protein may play an important role in dephosphorylating substrates such as the postsynaptic density-associated Ca2+/calmodulin dependent protein kinase II.

Uniprot ID: P62136

NCBI: NP_002699

Species: Human

Source: E. coli

Format:
State: Liquid purified protein
Purity: >80%
Buffer System: 50mM Tris-HCl buffer (pH 8.0) containing 40% glycerol, 0.15M NaCl, 1mM DTT, 0.1mM PMSF, 1mM MnCl2

Description: Recombinant human PPP1CA protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.
AA Sequence:
MGSSHHHHHH SSGLVPRGSH MSDSEKLNLD SIIGRLLEVQ GSRPGKNVQL TENEIRGLCL
KSREIFLSQP ILLELEAPLK ICGDIHGQYY DLLRLFEYGG FPPESNYLFL GDYVDRGKQS
LETICLLLAY KIKYPENFFL LRGNHECASI NRIYGFYDEC KRRYNIKLWK TFTDCFNCLP
IAAIVDEKIF CCHGGLSPDL QSMEQIRRIM RPTDVPDQGL LCDLLWSDPD KDVQGWGEND
RGVSFTFGAE VVAKFLHKHD LDLICRAHQV VEDGYEFFAK RQLVTLFSAP NYCGEFDNAG
AMMSVDETLM CSFQILKPAD KNKGKYGQFS GLNPGGRPIT PPRNSAKAKK
Specific Activity: › 3,000 units/mg.
Enzymatic activity was confirmed by measuring the amount of enzyme hydrolyzing 1 nmole of p-nitrophenyl phosphate (pNPP) per minute at 37°C, pH 7.5 using 10mM of substrate.
Molecular weight: 39.7 kDa (350aa), confirmed by MALDI-TOF

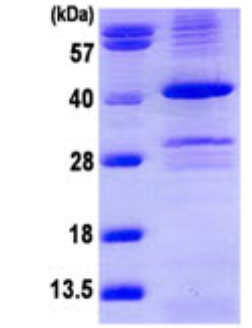
Storage: Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings: Trinkle-Mulcahy L., et al. (2001) J. Cell Sci. 114:4219-4228.

Protocols: **Activity Assay**
1. Prepare a 200 ul reaction mix into a suitable container : The final concentrations are 10mM Tris (pH 7.5), 50mM NaCl, 2mM DTT, 1mM MnCl2, 10mM pNPP.
2. Pre-warm reaction mix in heat block at 37°C.
3. Add recombinant PPP1CA solution with various concentrations (2ug, 3ug) in 200ul

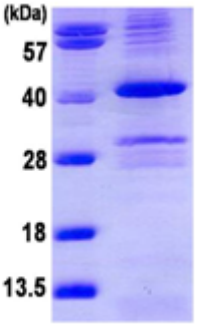
reaction buffer.
4. Mix by inversion and incubate at 37°C for 10 minutes.
5. Stop the reaction by adding the 800ul of 0.1N NaOH.
6. Record the absorbance at 405nm.

Pictures:



15% SDS-PAGE (3ug)

PPP1CA, 1-330 aa, Human, His-tagged



15% SDS-PAGE (3ug)