

Recombinant Human PPP1CA, His-tagged

Cat. No. PPP1CA-31049TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human PPP1A with an N terminal His tag; 350 amino acids with the tag; observed mwt: 39.7 kDa.
Species	Human
Source	E.coli
ProteinLength	330 amino acids
Description	The protein encoded by this gene is one of the three catalytic subunits of protein phosphatase 1 (PP1). PP1 is a serine/threonine specific protein phosphatase known to be involved in the regulation of a variety of cellular processes, such as cell division, glycogen metabolism, muscle contractility, protein synthesis, and HIV-1 viral transcription. Increased PP1 activity has been observed in the end stage of heart failure. Studies in both human and mice suggest that PP1 is an important regulator of cardiac function. Mouse studies also suggest that PP1 functions as a suppressor of learning and memory. Three alternatively spliced transcript variants encoding different isoforms have been found for this gene.
Conjugation	HIS
Molecular Weight	39.700kDa inclusive of tags
Biological 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,

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	pH 7.5, using 10 mM of substrate.
Form	Liquid
Purity	by SDS-PAGE
Storage buffer	pH: 8.00 Constituents: 0.79% Tris HCl, 40% Glycerol, 0.88% Sodium chloride, 0.02% DTT, 0.002% PMSF, 0.001% Manganese chloride
Storage	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Sequences of amino acids	MGSSHHHHHSSGLVPRGSHMSDSEKLNLDISIIGRLLEVQGS RPGKNVQLTENEIR GLCLKSREIFLSQPILLELEAPLKICGDIHGQYYDLLRLFYGGFPPE SNYFLGDYVD RGKQSLETICLLLAYKIKYPENFFLLRGNHECASINRIYGFYDECKRRYNIKLWKTFTD CFNCLPIAAIVDEKIFCCHGGLSPDLQSMEQIRIRMRPTDVPDQGLLCDLLWSDPK DVQGWGENDRGVSFTFGAEVVAKFLHKHDLDLICRAHQVVEDGYEFFAKRQLVTLF SAPNYCGEFDNAGAMMSVDETL MCSFQILKPADKNKGKYGQFSGLNPGGRPITPP RNSAKAKK
Sequence Similarities	Belongs to the PPP phosphatase family. PP-1 subfamily.

GENE INFORMATION

Gene Name	PPP1CA protein phosphatase 1, catalytic subunit, alpha isozyme [Homo sapiens]
Official Symbol	PPP1CA
Synonyms	PPP1CA; protein phosphatase 1, catalytic subunit, alpha isozyme; PPP1A, protein phosphatase 1, catalytic subunit, alpha isoform; serine/threonine-protein phosphatase

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	PP1-alpha catalytic subunit; PP 1A; PP1alpha;
Gene ID	5499
mRNA Refseq	NM_001008709
Protein Refseq	NP_001008709
MIM	176875
Uniprot ID	P62136
Chromosome Location	11q13
Pathway	ALK1 signaling events, organism-specific biosystem; BMP receptor signaling, organism-specific biosystem; DARPP-32 events, organism-specific biosystem; Dopaminergic synapse, organism-specific biosystem; Dopaminergic synapse, conserved biosystem;
Function	hydrolase activity; metal ion binding; protein binding; protein phosphatase type 1 regulator activity; protein serine/threonine phosphatase activity;