

Product datasheet for **AR39114PU-S**

PPP1CA (1-330, His-tag) Human Protein

Product data:

Product Type:	Recombinant Proteins
Description:	PPP1CA (1-330, His-tag) human recombinant protein, 10 µg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	<u>MGSSHHHHHH SSGLVPRGSH</u> MSDSEKLNLD SIIGRLLEVQ GSRPGKNVQL TENEIRGLCL KSREIFLSQP ILLELEAPLK ICGDIHGQYY DLLRLFYGG FPESNYLFL GDYVDRGKQS LETICLLLAY KIKYPENFFL LRGNHECASI NRIYGFYDEC KRRYNIKLWK TFTDCFNCLP IAAIVDEKIF CCHGGLSPDL QSMEQIRRM RPTDVPDQGL LCDLLWSDPD KDVQGWGEND RGVSFTEGAE VVAKFLHKHD LDLICRAHQV VEDGYEFAK RQLVTLFSAP NYCGEFDNAG AMMSVDETLM CSFQILKPAD KNKGKYGQFS GLNPGGRPIT PPRNSAKAKK
Tag:	His-tag
Predicted MW:	39.7 kDa
Concentration:	lot specific
Purity:	>80%
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 50 mM Tris-HCl buffer (pH 8.5) containing 50% glycerol, 0.2M NaCl, 1 mM DTT, 0.1 mM PMSF, 1 mM MnCl ₂
Bioactivity:	Specific: > 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.
Preparation:	Liquid purified protein



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Applications:	<p>Protocol: Activity Assay</p> <ol style="list-style-type: none">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.
Protein Description:	Recombinant human PPP1CA protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.
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.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_001008709
Locus ID:	5499
UniProt ID:	P62136 , A0A140VJS9 , P62136-2
Cytogenetics:	11q13.2
Synonyms:	PP-1A; PP1A; PP1alpha; PPP1A
Summary:	<p>The protein encoded by this gene is one of the three catalytic subunits of protein phosphatase 1 (PP1). This broadly expressed gene encodes the alpha subunit of the PP1 complex that associates with over 200 regulatory proteins to form holoenzymes which dephosphorylate their biological targets with high specificity. 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 suggest that PP1 is an important regulator of cardiac function and that PP1 deregulation is implicated in diabetes and multiple types of cancer. Three alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2020]</p>
Protein Families:	Druggable Genome, Phosphatase
Protein Pathways:	Focal adhesion, Insulin signaling pathway, Long-term potentiation, Oocyte meiosis, Regulation of actin cytoskeleton, Vascular smooth muscle contraction

Product images: