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**Product Data Sheet**


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Product Name: PPP1CA Human  
 Cat. No.: GP22139  
 Batch No.: 1

**Product Data**

|                     |   |                    |                         |
|---------------------|---|--------------------|-------------------------|
| Purity              | >98%  | Source             | Escherichia Coli.       |
| Physical Appearance | solid   | Shipping Condition | Shipped with Ice Packs. |
| Synonyms            | Serine/threonine-protein phosphatase PP1-alpha catalytic subunit; PP-1A; PPP1CA; PPP1A; PP1alpha.   |                    |                         |
| Amino Acid Sequence | MGSSHHHHHH SSGLVPRGSH MSDSEKLNLD SIIGRLLEVQ GSRPGKNVQL<br>TENEIRGLCL KSREIFLSQP ILLELEAPLK ICGDIHGQYY DLLRLFYGG<br>FPESNYLFL GDYVDRGKQS LETICLLLAY KIKYPENFFL LRGNHECASI<br>NRIYGFYDEC KRRYNIKLWK TFTDCFNCLP IAAIVDEKIF CCHGGLSPDL<br>QSMEQIRRM RPTDVPDQGL LCDLLWSDPD KDVQGWGEND RGVSTFTGAE<br>VVAKFLHKHD LDLICRAHQV VEDGYEFFAK RQLVTLFSAP NYCGEFDNAG<br>AMMSVDETLM CSFQILKPAD KNKGKYGFQFS GLNPGGRPIT PPRNSAKAKK. |                    |                         |
| Formulation         | PPP1CA protein solution (0.2mg/ml) containing 50mM Tris-HCl (pH8.5), 0.2M NaCl, 1mM DTT, 0.1mM PMSF, 1mM MnCl <sub>2</sub> and 50% glycerol.  |                    |                         |

**Introduction**

Serine/Threonine-protein phosphatase PP1-alpha catalytic subunit (PPP1CA) is crucial for cell division, and participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. The PPP1CA protein may have a significant role in dephosphorylating substrates such as the postsynaptic density-associated Ca<sup>2+</sup>/calmodulin dependent protein kinase II.

**Biological Activity**

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 37C, pH7.5 using 10mM of substrate.

**Stability**

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

PPP1CA Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 350 amino acids (1-330 a.a) and having a molecular mass of 39.7kDa. PPP1CA is fused to a 20 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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