

PPP1CC Protein, Human (His)

Cat. No.:	HY-P71228
Synonyms:	Serine/Threonine-Protein Phosphatase PP1-Gamma Catalytic Subunit; PP-1G; Protein Phosphatase 1C Catalytic Subunit; PPP1CC
Species:	Human
Source:	E. coli
Accession:	P36873 (M1-K323)
Gene ID:	5501
Molecular Weight:	30-40 kDa

PROPERTIES

AA Sequence

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M A D L D K L N I D   S I I Q R L L E V R   G S K P G K N V Q L   Q E N E I R G L C L
K S R E I F L S Q P   I L L E L E A P L K   I C G D I H G Q Y Y   D L L R L F E Y G G
F P P E S N Y L F L   G D Y V D R G K Q S   L E T I C L L L A Y   K I K Y P E N F F L
L R G N H E C A S I   N R I Y G F Y D E C   K R R Y N I K L W K   T F T D C F N C L P
I A A I V D E K I F   C C H G G L S P D L   Q S M E Q I R R I M   R P T D V P D Q G L
L C D L L W S D P D   K D V L G W G E N D   R G V S F T F G A E   V V A K F L H K H D
L D L I C R A H Q V   V E D G Y E F F A K   R Q L V T L F S A P   N Y C G E F D N A G
A M M S V D E T L M   C S F Q I L K P A E   K K K P N A T R P V   T P P R G M I T K Q
A K K
  
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Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris-HCl, 1 mM DTT, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

PPP1CC protein, a versatile phosphatase, forms highly specific holoenzymes by associating with over 200 regulatory proteins, collectively orchestrating the dephosphorylation of numerous biological targets. Essential for cell division,

PPP1CC contributes to the regulation of glycogen metabolism, muscle contractility, and protein synthesis. Among its diverse functions, PPP1CC dephosphorylates RPS6KB1, participates in the regulation of ionic conductances and long-term synaptic plasticity, and may play a crucial role in dephosphorylating substrates like the postsynaptic density-associated Ca(2+)/calmodulin-dependent protein kinase II. As a component of the PTW/PP1 phosphatase complex, PPP1CC is integral in controlling chromatin structure and cell cycle progression during the transition from mitosis into interphase. Collaborating with CSNK1D and CSNK1E, PPP1CC determines circadian period length by regulating the speed and rhythmicity of PER1 and PER2 phosphorylation. Moreover, PPP1CC exhibits the capability to dephosphorylate CSNK1D and CSNK1E. Notably, PPP1CC targets FOXP3 in regulatory T-cells from rheumatoid arthritis patients, dephosphorylating the 'Ser-418' residue and rendering FOXP3 functionally defective, thereby contributing to Treg cell dysfunction. The myriad roles of PPP1CC underscore its central position in the intricate network of cellular signaling and regulatory processes.

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

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