

## PTPMT1 Protein, Human (His)

Cat. No.:	HY-P76556
Synonyms:	Phosphatidylglycerophosphatase and protein-tyrosine phosphatase 1; PTPMT1; MOSP; PLIP
Species:	Human
Source:	E. coli
Accession:	Q8WUK0 (K28-T201)
Gene ID:	114971
Molecular Weight:	Approximately 22 kDa

### PROPERTIES

AA Sequence	<p>K V P G R A H R D W Y</p> <p>I T M N E E Y E T R D N L Q K G V Q F A Q V H K W S P E E A R A T K D G T F V I</p> <p>H R I D P T V L L G F L C N S S Q E W K L K Y Q S L G Q C V V R A I A K I R S Y S K T</p> <p>A L P L R S L T R Q R L G V E Q L R L S Y V H C K A G R S R I H I R P G Q L D V</p> <p>L V Q D E N V R G V T V D M T G I P T L S A T M V A A Y L I L K E F H K Q I T A</p>
Biological Activity	<p>1.The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.</p> <p>2.Measured by its ability to cleave pNPP. The specific activity is 666.88 pmoles/min/μg.</p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	PTPMT1 protein functions as a lipid phosphatase with a key role in cellular lipid metabolism. It catalyzes the dephosphorylation of phosphatidylglycerophosphate (PGP) to phosphatidylglycerol (PG), a crucial step in the biosynthetic pathway of cardiolipin—an essential mitochondrial phospholipid that regulates membrane integrity and mitochondrial
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activities. Beyond its lipid-related functions, PTPMT1 exhibits phosphatase activity toward phosphoprotein substrates, particularly involved in the dephosphorylation of mitochondrial proteins. This activity is crucial for ATP production and plays a role in the regulation of insulin secretion in pancreatic beta cells. Additionally, PTPMT1 is implicated in preventing intrinsic apoptosis, likely by regulating mitochondrial membrane integrity.

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

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