

PRPS1 Protein, Human (His-SUMO)

Cat. No.:	HY-P700595
Synonyms:	PRPS1; phosphoribosyl pyrophosphate synthetase 1; deafness, X linked 2, perceptive, congenital, DFN2; ribose-phosphate pyrophosphokinase 1; CMTX5; DFNX1; PRS I; ribose phosphate diphosphokinase 1;
Species:	Human
Source:	E. coli
Accession:	P60891 (P2-L318)
Gene ID:	5631
Molecular Weight:	50.7 kDa

PROPERTIES

AA Sequence	<pre> P N I K I F S G S S H Q D L S Q K I A D R L G L E L G K V V T K K F S N Q E T C V E I G E S V R G E D V Y I V Q S G C G E I N D N L M E L L I M I N A C K I A S A S R V T A V I P C F P Y A R Q D K K D K S R A P I S A K L V A N M L S V A G A D H I I T M D L H A S Q I Q G F F D I P V D N L Y A E P A V L K W I R E N I S E W R N C T I V S P D A G G A K R V T S I A D R L N V D F A L I H K E R K K A N E V D R M V L V G D V K D R V A I L V D D M A D T C G T I C H A A D K L L S A G A T R V Y A I L T H G I F S G P A I S R I N N A C F E A V V V T N T I P Q E D K M K H C S K I Q V I D I S M I L A E A I R R T H N G E S V S Y L F S H V P L </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
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 ₂ O.
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	Phosphoribosylpyrophosphate Synthetase 1 (PRPS1) is an essential enzyme that catalyzes the synthesis of phosphoribosylpyrophosphate (PRPP), a critical precursor in nucleotide biosynthesis. PRPP is a central molecule in the de novo biosynthesis of purine and pyrimidine nucleotides, playing a fundamental role in DNA and RNA synthesis. PRPS1
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facilitates the transfer of pyrophosphate from ATP to ribose 5-phosphate, generating PRPP. This enzymatic activity is vital for maintaining cellular nucleotide pools and supporting various cellular processes that rely on nucleotide availability. The role of PRPS1 in PRPP synthesis underscores its significance in fundamental cellular functions, including the preservation of genetic material and the regulation of cellular proliferation.

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

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