

CPS1/CPSase I Protein, Human (His)

Cat. No.:	HY-P71445
Synonyms:	Carbamoyl phosphate synthase; Carbamoyl phosphate synthase mitochondrial; Carbamoyl phosphate synthase; Carbamoyl phosphate synthetase 1; Carbamoyl phosphate synthetase 1 mitochondrial; Carbamoyl phosphate synthetase I; Carbamoyl-phosphate synthase [ammonia]; Carbamoyl-phosphate synthetase I; Carbamoylphosphate synthase; Carbamoylphosphate synthetase 1; Carbamoylphosphate synthetase I; CPS 1; Cps1; CPSase 1; CPSase I; CPSASE1; mitochondrial; MS738
Species:	Human
Source:	E. coli
Accession:	P31327 (1354G-1500A)
Gene ID:	1373
Molecular Weight:	Approximately 20.5 kDa

PROPERTIES

AA Sequence	<p>G F K I P Q K G I L I G I Q Q S F R P R F L G V A E Q L H N E G F K L F A T E A</p> <p>T S D W L N A N N V P A T P V A W P S Q E G Q N P S L S S I R K L I R D G S I D</p> <p>L V I N L P N N N T K F V H D N Y V I R R T A V D S G I P L L T N F Q V T K L F</p> <p>A E A V Q K S R K V D S K S L F H Y R Q Y S A G K A A</p>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in 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	The CPS1/CPSase I Protein is a key participant in the urea cycle, particularly in ureotelic animals, where it plays a crucial role in the elimination of excess ammonia from the cell. As an essential enzyme in this metabolic pathway, CPS1 is instrumental in converting ammonia, a toxic byproduct of amino acid catabolism, into urea, which can be safely excreted from the body. This enzymatic activity is vital for maintaining nitrogen balance and preventing the accumulation of harmful levels of
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ammonia, highlighting the indispensable role of CPS1 in the urea cycle and overall nitrogen metabolism in ureotelic organisms.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA