

SHMT2 Protein, Human

Cat. No.:	HY-P701976
Synonyms:	SHMT2; Serine hydroxymethyltransferase; mitochondrial; SHMT; Glycine hydroxymethyltransferase; Serine methylase
Species:	Human
Source:	E. coli
Accession:	P34897 (S29-H504)
Gene ID:	6472
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
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	SHMT2, a versatile enzyme, serves a crucial role in cellular metabolism by catalyzing the cleavage of serine to glycine while concurrently producing 5,10-methylenetetrahydrofolate, an essential intermediate in purine biosynthesis. This process is pivotal for generating one-carbon units, with serine acting as the major contributor to folate-associated one-carbon metabolism. SHMT2's involvement extends to mitochondrial thymidylate biosynthesis, where it aids in preventing uracil accumulation in mtDNA. Additionally, it plays a crucial role in mitochondrial translation by producing 5,10-methylenetetrahydrofolate, a methyl donor essential for the modification of mitochondrial tRNAs. Beyond its mitochondrial functions, SHMT2 participates in the deubiquitination of target proteins as a component of the BRISC complex, demonstrating its multifaceted contributions to cellular processes.
------------	---

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