
Product Data Sheet

Product Name: SHMT1 Human
 Cat. No.: GP22248
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Serine hydroxymethyltransferase 1 (soluble); CSHMT; Glycine hydroxymethyltransferase; Serine methylase; 14 kDa protein; cytoplasmic serine hydroxymethyltransferase; serine hydroxymethyltransferase cytosolic; EC 2.1.2.1.		
Amino Acid Sequence	<p>MGSSHHHHHH SSGLVPRGSH MTMPVNGAHK DADLWSSHDK MLAQPLKDSD VEVYNIKKE SNRQRVGLEL IASENFASRA VLEALGSCLN NKYSEGYPGQ RYYGGTEFID ELETLCQKRA LQAYKLDPQC WGVNVQPYSG SPANFAVYTA LVEPHGRIMG LDLPDGGHLT HGFMTDKKKI SATSIFFESM PYKVNPDGTG INYDQLEENA RLFHPKLIIA GTSCYSRNLE YARLRKIADE NGAYLMADMA HISGLVAAGV VPSPFEHCHV VTTTTHKTLR GCRAGMIFYR KGVKSVDPKT GKEILYNLES LINSVFPGL QGGPHNHAIA GVAVALKQAM TLEFKVYQH VVANCRALE ALTELGYKIV TGGSDNHLIL VDLRSKGTG GRAEKVLEAC SIACNKNTCP GDRSALRPSG LRLGTPALTS RGLLEKDFQK VAHFIHRGIE LTLQIQSDTG VRATLKEFKE RLAGDKYQAA VQALREEVES FASFFPLPGL PDF.</p>		
Formulation	SHMT1 protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH8.0), 100mM NaCl, 1mM DTT and 10% glycerol.		

Introduction

SHMT1 is a member of the SHMT family. SHMT1 is the cellular form of serine hydroxymethyltransferase, a pyridoxal phosphate-containing enzyme which catalyzes the reversible conversion of serine and tetrahydrofolate to glycine and 5,10-methylene tetrahydrofolate. In addition, SHMT1 specifically provides one-carbon units for thymidylate biosynthesis, reduces methylenetetrahydrofolate pools for S-adenosylmethionine (SAM) synthesis by synthesizing serine, sequesters 5-methyltetrahydrofolate and inhibits SAM synthesis.

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

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Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

SHMT1 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 503 amino acids (1-483 a.a.) and having a molecular mass of 55.2kDa. SHMT1 is fused to a 20 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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