

**SHMT1, 1-483aa, Human, His tag, E.coli**

**Cat.NO.: TP03935**

3th Edition

**Synonyms:**Serine hydroxymethyltransferase 1, CSHMT, SHMT.

**Description:**Serine hydroxymethyltransferase 1, also known as SHMT1, belongs to the SHMT family. This protein is cellular form of serine hydroxymethyltransferase, a pyridoxal phosphate-containing enzyme that catalyzes the reversible conversion of serine and tetrahydrofolate to glycine and 5,10-methylene tetrahydrofolate. Also, SHMT1 preferentially supplies one-carbon units for thymidylate biosynthesis, depletes methylenetetrahydrofolate pools for S-adenosylmethionine (SAM) synthesis by synthesizing serine, sequesters 5-methyltetrahydrofolate and inhibits. Recombinant human SHMT1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.

**Form:**Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol, 0.1M NaCl

**Molecular Weight:**55.2 kDa (503aa)

**Sequences:**

MGSSHHHHHHSSGLVPRGSHMTMPVNGAHKDADLWSSHDKMLAQPLKDS DVEVYNIKKESNRQRVGLIELIASEN  
FASRAVLEALGSLNKKYSEGYPGQRYGGTEFIDELETLCQKRALQAYKLDPQCWGVNVQPYSGSPANFAVYTA  
LVEPHGRIMGLDLPDGGHLTHGFMTDKKKISATSIFFESMPYKVNPD TGYINYDQLEENARLFHPKLIAGTSCYSRN  
LEYARLRKIADENGAYLMADMAHISGLVAAGVVPSPFEHCHVVT TTTHTKTLRGCRAGMIFYRKGVKSVDPKTGKEIL  
YNLESLINSAVFPGLQGPHNHAIAGVAVALKQAMTLEFKVYQH QVVANCRALSEALTELG YKIVTGGSDNHLILVD  
LRSGTDGGRAEKVLEACSIACNKNTCPGDRSALRPSGLRLGTPAL TSRGLLEKDFQKVAHFHHRGIELTLQIQSDT  
GVRATLKEFKERLAGDKYQAAVQALREEVESFASFFPLPGLPDF

**Purity:**> 95% by HPLC

**Concentration:**1 mg/ml (determined by Bradford assay)

**Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)

**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.