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# SHMT1 Human

**Catalog #:**ENPS-206

For research use only.

**Description:**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.

**Synonyms:**Serine hydroxymethyltransferase 1 (soluble), CSHMT, Glycine hydroxymethyltransferase, Serine methylase, 14 kDa protein, cytoplasmic serine hydroxymethyltransferase, serine hydroxymethyltransferase cytosolic, EC 2.1.2.1.

**Source:**Escherichia Coli.

**Physical Appearance:**Sterile Filtered colorless solution.

**Amino Acid Sequence:**MGSSHHHHHH SSGLVPRGSH MTMPVNGAHK DADLWSSHDK MLAQPLKDSD VEVYNIIKKE SNRQRVGLEL IASENFASRA VLEALGSCLN NKYSEGYPGQ RYYGGTEFID ELETLCQKRA LQAYKLDPQC WGVNVQPYSG SPANFAVYTA LVEPHGRIMG LDLPDGGHLT HGFMTDKKKI SATSIFFESM PYKVNPDTGY INYDQLEENA RLFHPKLIIA GTSCYSRNLE YA

**Purity:**Greater than 95.0% as determined by SDS-PAGE.

**Formulation:**
SHMT1 protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH8.0), 100mM NaCl, 1mM DTT and 10% glycerol.

**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.

**Usage:**
NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drµgs, agricultural or pesticidal products, food additives or household chemicals.

**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.

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