
Tymidylate synthase, 1-313aa, Human, His tag, E.coli

Cat.NO.: TP04363

3th Edition

Synonyms:HST422, TMS, TS, dTMP synthase, EC 2.1.1.45, MGC88736, Thymidylate synthase, Thymidylate synthetase, Tsase, TYMS, TYMS protein, Tyms thymidylate synthetase,

Description:Thymidylate synthase is an intracellular enzyme critical for de novo synthesis of DNA. This function maintains the dTMP(thymidine-5-prime monophosphate) pool critical for DNA replication and repair. In cancer, expression of this protein is often elevated and becomes further elevated as a result of treatment with the most commonly used chemotherapeutic, 5-fluorouracil (5-FU). Resistance or lack of response to 5-FU is attributed to the elevation of thymidylate synthase activity. Recombinant human Thymidylate synthase 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 10% glycerol, 1mM DTT, 0.1 M NaCl.

Molecular Weight:37.8 kDa (333aa), confirmed by MALDI-TOF.

Sequences:

MGSSHHHHHSSGLVPRGSHMPVAGSELPRRPLPPAAQERDAEPRPPHGELQYLGQIQHILRCGVRKDDRTGTG
TLSVFGMQARYSLRDEFPLLTKRVFWKGVLEELLWFIKGSTNAKELSSKGVKIWDANGSRDFLDSLGFSTREEGD
LGPVYGFQWRHFGAEYRDMESDYSGQGVLDLQRVIDTIKTNPDDRRRIIMCAWNPRDLPLMALPPCHALCQFYVFN
SELSCQLYQRSMDGLGVFNFNIAASYALLTYMIAHITGLKPGDFIHTLGDAHIYLNHIEPLKIQLQREPRPFPKLRILRKV
EKIDDFKAEDFQIEGYNPHPTIKMEMAV

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.