

Product datasheet for PH304814

Thymidylate Synthase (TYMS) (NM_001071) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	TYMS MS Standard C13 and N15-labeled recombinant protein (NP_001062)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC204814
Predicted MW:	35.5 kDa
Protein Sequence:	>RC204814 representing NM_001071 Red=Cloning site Green=Tags(s) MPVAGSELPRRPLPPAAQERDAEPRPPHGELQYLQIQIHILRCGVRKDDRTGTGTLVFGMQARYSLRDE FPLLTTKRWFVKGVLEELLWFIKGSTNAKELSSKGVKIWDANGSRDFLDLGFSTREEGDLGPVYGFQWR HFGAEYRDMESDYSQGVDQLQRVIDTIKTNPDDRIIMCAWNPRDLPLMALPPCHALCQFYVNSELS QLYQRSGDMGLGVFNIAASYALLTYMIAHITGLKPGDFIHTLGDAAHIYLNHIEPLKIQLQREPRPFKLR ILRKVEKIDDFKAEDFQIEGYNPHPTIKMEMAV TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- ¹³ C ₆ , ¹⁵ N ₄]-L-Arginine and [U- ¹³ C ₆ , ¹⁵ N ₂]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<u>NP_001062</u>
RefSeq Size:	1536
RefSeq ORF:	939
Synonyms:	HST422; TMS; TS
Locus ID:	7298



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UniProt ID: [P04818](#), [Q53Y97](#)

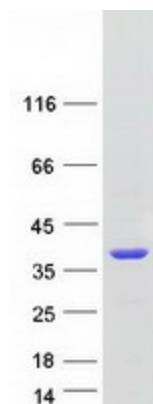
Cytogenetics: 18p11.32

Summary: Thymidylate synthase catalyzes the methylation of deoxyuridylate to deoxythymidylate using, 10-methylenetetrahydrofolate (methylene-THF) as a cofactor. This function maintains the dTMP (thymidine-5-prime monophosphate) pool critical for DNA replication and repair. The enzyme has been of interest as a target for cancer chemotherapeutic agents. It is considered to be the primary site of action for 5-fluorouracil, 5-fluoro-2-prime-deoxyuridine, and some folate analogs. Expression of this gene and that of a naturally occurring antisense transcript, mitochondrial enolase superfamily member 1 (GeneID:55556), vary inversely when cell-growth progresses from late-log to plateau phase. Polymorphisms in this gene may be associated with etiology of neoplasia, including breast cancer, and response to chemotherapy. [provided by RefSeq, Aug 2017]

Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, One carbon pool by folate, Pyrimidine metabolism

Product images:



Coomassie blue staining of purified TYMS protein (Cat# [TP304814]). The protein was produced from HEK293T cells transfected with TYMS cDNA clone (Cat# [RC204814]) using MegaTran 2.0 (Cat# [TT210002]).