

## Product datasheet for **TP304814M**

### Thymidylate Synthase (TYMS) (NM\_001071) Human Recombinant Protein

#### Product data:

|                                       |  |
|---------------------------------------|--|
| Product Type:                         | Recombinant Proteins   |
| Description:                          | Recombinant protein of human thymidylate synthetase (TYMS), 100 µg   |
| Species:                              | Human  |
| Expression Host:                      | HEK293T  |
| Expression cDNA Clone or AA Sequence: | >RC204814 representing NM_001071<br><b>Red</b> =Cloning site <b>Green</b> =Tags(s)   |
|                                       | <p>MPVAGSELPRRPLPPAAQERDAEPRPPHGELQYLGQIQHILRCGVRKDDRTGTGTLVFGMQARYSLRDE<br/>FPLLTTRKRVFWKGVLEELLWFIKGSTNAKELSSKGVKIWDANGSRDFLDSLGFSTREEGLGPVYGFQWR<br/>HFGAEYRDMESDYSQGQVDQLQRVIDTIKTNPDDRRRIIMCAWNPRDLPLMALPPCHALCQFYVNSELSC<br/>QLYQRSGDMGLGVPFNIAASYALLTYMIAHITGLKPGDFIHTLGDAHIYLNHIEPLKIQLQREPRPFPKLR<br/>ILRKVEKIDDFKAEDFQIEGYNPHPTIKMEMAV</p> <p><b>TRTRPLEQKLISEEDLAANDILDYKDDDDKV</b></p> |
| Tag:                                  | C-Myc/DDK  |
| Predicted MW:                         | 35.5 kDa   |
| Concentration:                        | >0.05 µg/µL as determined by microplate BCA method   |
| Purity:                               | > 80% as determined by SDS-PAGE and Coomassie blue staining  |
| Buffer:                               | 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol   |
| Preparation:                          | Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.   |
| Note:                                 | For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.   |
| Storage:                              | Store at -80°C.  |
| Stability:                            | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.  |
| RefSeq:                               | <a href="#">NP_001062</a>  |
| Locus ID:                             | 7298   |



[View online »](#)

UniProt ID: [P04818, Q53Y97](#)

RefSeq Size: 1536

Cytogenetics: 18p11.32

RefSeq ORF: 939

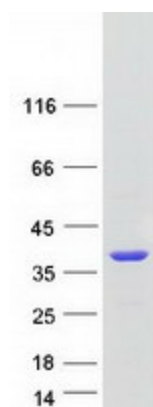
Synonyms: HST422; TMS; TS

**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]).