

## Product datasheet for **AM09355PU-S**

### Thymidylate Synthase (TYMS) Mouse Monoclonal Antibody [Clone ID: AT1S5]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	AT1S5
Applications:	ELISA, IF, WB
Recommended Dilution:	ELISA. Western blot (1:500 - 1:1,000). Immunofluorescence (1:500 - 1:1,000).
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2b
Clonality:	Monoclonal
Immunogen:	Recombinant TYMS (1-313 aa) purified from E. coli
Specificity:	The antibody recognizes human TYMS. Other species not tested.
Formulation:	PBS, pH 7.4 containing 0.02% Sodium Azide and 10% Glycerol State: Purified State: Liquid purified Ig fraction
Concentration:	lot specific
Purification:	Protein-G affinity chromatography
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	thymidylate synthetase
Database Link:	<a href="#">Entrez Gene 7298 Human P04818</a>



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**Background:**

The methylation of deoxyuridine monophosphate (dUMP) to deoxythymidine monophosphate (dTMP) is an essential step for the formation of thymine nucleotides. This process is catalyzed by thymidylate synthase (TS or TYMS). TYMS is an intracellular enzyme that provides the sole de novo source of thymidylate in activity highest proliferating cells. Being the exclusive source of dTMP, TS is also an important target for anticancer agents such as 5-fluorouracil (5-FU). 5-FU acts as a TS inhibitor and is active against solid tumors such as colon, breast, head and neck. TS expression may be useful in predicting overall patient survival, but the prognostic value of TS expression continues to be a subject of investigation for different types of cancers.

**Synonyms:**

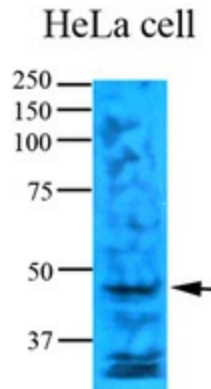
TYMS, TSase, OK/SW-cl.29

**Protein Families:**

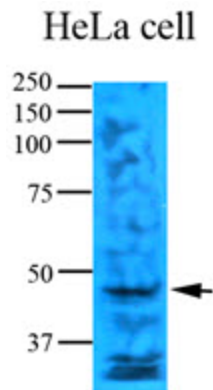
Druggable Genome

**Protein Pathways:**

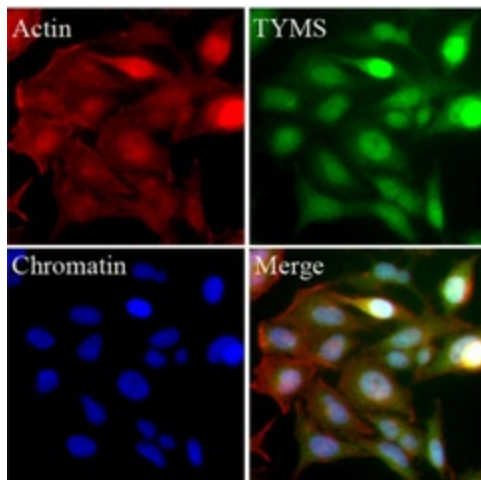
Metabolic pathways, One carbon pool by folate, Pyrimidine metabolism

**Product images:**

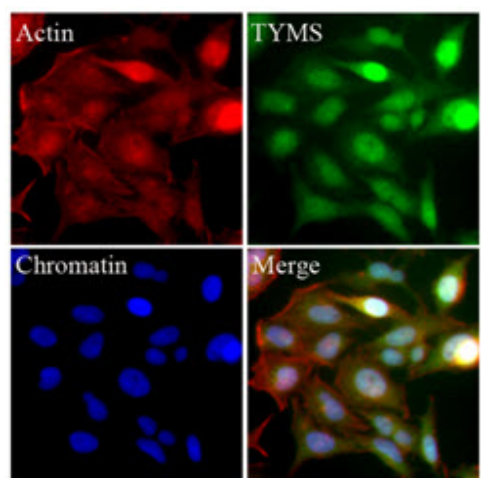
Cell lysates of HeLa (35ug) were resolved by SDS-PAGE, transferred to NC membrane and probed with anti-human TYMS (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.



Western blot analysis: Cell lysates of HeLa (35 ug) were resolved by SDS-PAGE, transferred to NC membrane and probed with anti-human TYMS (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.



HeLa cells were stained with monoclonal anti-TYMS antibody (Green). Nucleus and Actin were stained by Phalloidin-TRITC (Red) or Hoechst 33342 (Blue).



Immunofluorescence: HeLa cells were stained with monoclonal anti-TYMS antibody (Green). Nucleus and Actin were stained by Phalloidin-TRITC (Red) or Hoechst 33342 (Blue).