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TYSY Antibody(C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AX10003

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P04818
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB20041
Calculated MW	35716
Antigen Region	265-294

Additional Information

Gene ID	7298
Other Names	Thymidylate synthase, TS, TSase, TYMS, TS
Target/Specificity	This TYSY antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 265-294 amino acids from the C-terminal region of human TYSY.
Dilution	WB~~1:2000 IHC-P~~1:500 IF~~1:50 FC~~1:50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TYSY Antibody(C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TYMS (HGNC:12441)
Synonyms	TS
Function	Catalyzes the reductive methylation of 2'-deoxyuridine 5'- monophosphate (dUMP) to thymidine 5'-monophosphate (dTMP), using the cosubstrate, 5,10-

	methylenetetrahydrofolate (CH2H4folate) as a 1- carbon donor and reductant and contributes to the mitochondrial and nuclear de novo thymidylate biosynthesis pathway.
Cellular Location	Nucleus. Cytoplasm Mitochondrion. Mitochondrion matrix. Mitochondrion inner membrane. Note=Localized to the nucleus during S and G2/M phases of the cell cycle. As a component of the de novo thymidylate synthesis complex, localizes specifically to replication forks during DNA synthesis (PubMed:22235121)

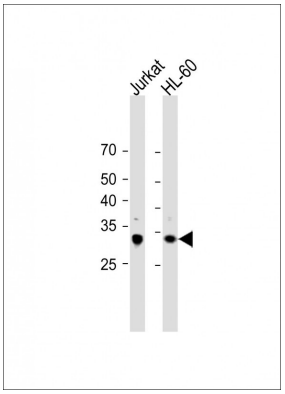
Background

Thymidylate synthase catalyzes the methylation of deoxyuridylate to deoxythymidylate using 5,10-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.

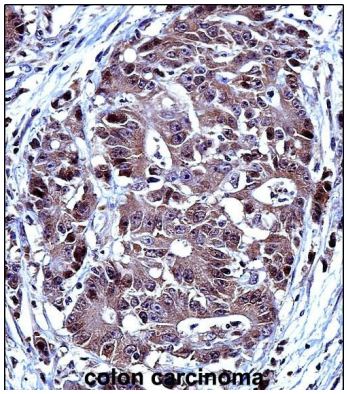
References

Ren,D.N., J Surg Oncol (2009) Schiffer,C.A., Biochemistry 34 (50), 16279-16287 (1995)

Images

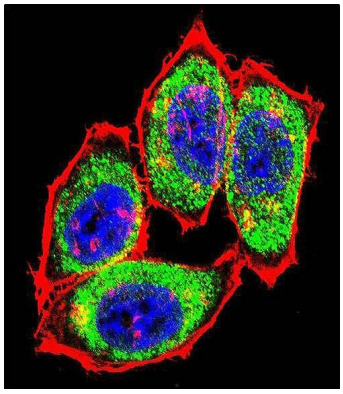


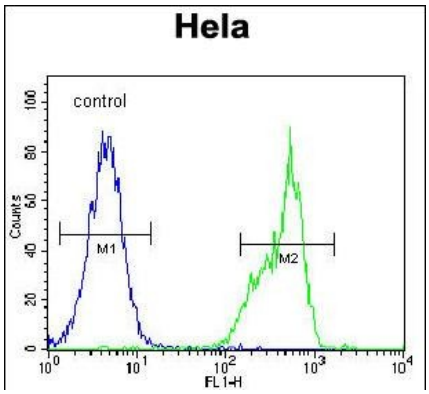
All lanes: Anti-TYSY Antibody(C-term) at 1:500 dilution Lane 1: Jurkat whole cell lysate Lane 2: HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 32 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



TYSY Antibody (C-term) immunohistochemistry analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of TYSY Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Confocal immunofluorescent analysis of TYSY Antibody (C-term) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).





TYSY Antibody (C-term) flow cytometric analysis of Hela cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.