Product Name: KD-Validated Thymidylate Synthase Recombinant Rabbit Monoclonal Antibody

Catalog #: KVAb01329

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,M
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 35.7kDa

Antigen Information

Gene Name	TYMS
Alternative Names	TYMS; Thymidylate Synthetase; HsT422; Tsase; TMS; TS; Thymidylate Synthase; EC 2.1.1.45; TSase; DKCD
Gene ID	7298.0
SwissProt ID	P04818
Immunogen	A synthesized peptide derived from human Thymidylate Synthase

Background

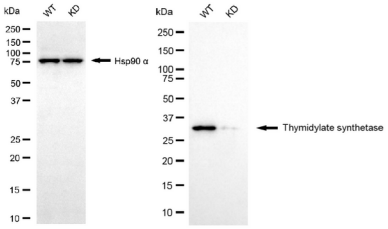
Thymidylate synthase catalyzes the methylation of deoxyuridylate to deoxythymidylate using, 10-methylenetetrahydrofolate (methylene-THF) as a cofactor. This function maintains the dTMP (thymidine-5-prime monophosphate) pool critical for DNA

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]

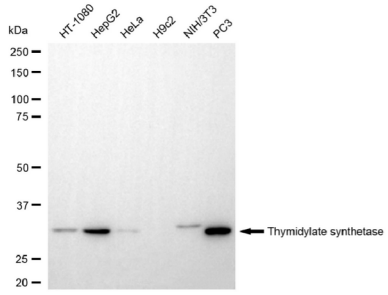
Research Area

Epigenetics and Nuclear Signaling,Metabolism

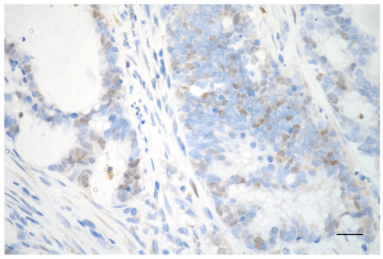
Image Data



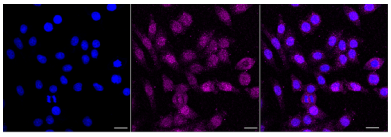
Western blotting analysis using thymidylate synthetase antibody (KVAb01329). Thymidylate synthetase expression in wild type (WT) and thymidylate synthetase (TYMS) knockdown (KD) HSHC cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with thymidylate synthetase antibody (KVAb01329, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



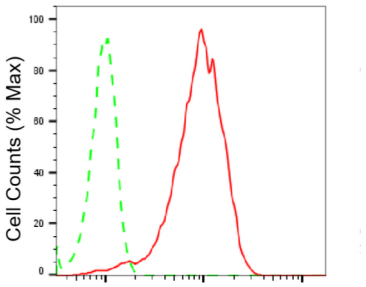
Western blotting analysis using thymidylate synthetase antibody (KVAb01329). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with thymidylate synthetase antibody (KVAb01329, 1:5,000) and HRP-conjugated goat anti rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunohistochemistry was performed on paraffin-embedded human sigmoid colon carcinoma using thymidylate synthetase antibody (KVAb01329, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Immunocytochemical staining of HepG2 cells with Thymidylate synthetase antibody (KVAb01329, 1:1,000). Nuclei were stained blue with DAPI; Thymidylate synthetase was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.



Thymidylate synthetase-Alexa Fluor® 647

Flow cytometric analysis of Thymidylate synthetase expression in HepG2 cells using Thymidylate synthetase antibody (KVAb01329, 1:2,000). Green, isotype control; red, Thymidylate synthetase.