

## Anti-Thymidylate Synthase/TYMS Antibody Picoband®

Catalog Number: A04320-4

### About TYMS

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.

### Overview

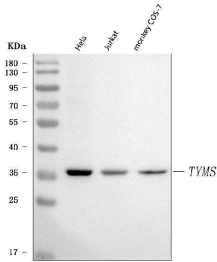
Product Name	Anti-Thymidylate Synthase/TYMS Antibody Picoband®
Reactive Species	Human, Monkey, Rat
Description	Boster Bio Anti-Thymidylate Synthase/TYMS Antibody Picoband® catalog # A04320-4. Tested in ELISA, IF, IHC, WB applications. This antibody reacts with Human, Monkey, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	P04818

### Technical Details

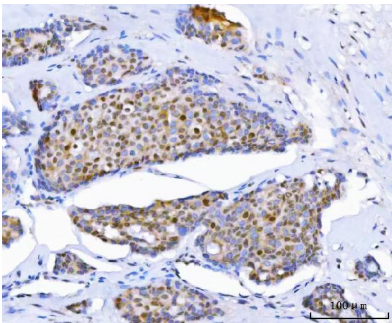
Immunogen	E.coli-derived human Thymidylate Synthase/TYMS recombinant protein (Position: M1-V313).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Monkey Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Rat Immunofluorescence, 5 ug/ml, Human ELISA, 0.1-0.5 ug/ml, -

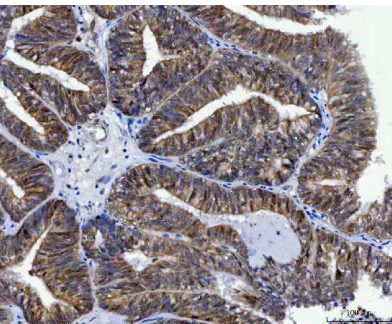
## Anti-Thymidylate Synthase/TYMS Antibody Picoband® (A04320-4) Images



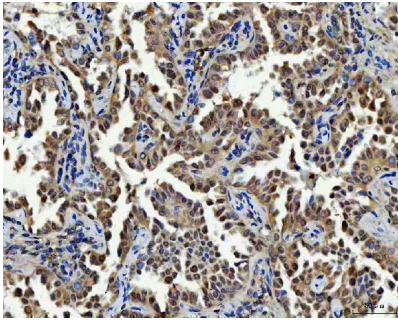
Western blot analysis of Thymidylate Synthase/TYMS using anti-Thymidylate Synthase/TYMS antibody (A04320-4). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HeLa whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: monkey COS-7 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Thymidylate Synthase/TYMS antigen affinity purified polyclonal antibody (Catalog # A04320-4) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Thymidylate Synthase/TYMS at approximately 36 kDa. The expected band size for Thymidylate Synthase/TYMS is at 36 kDa.



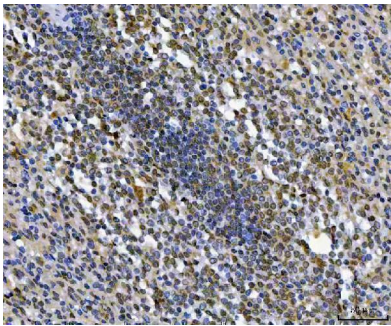
IHC analysis of Thymidylate Synthase/TYMS using anti-Thymidylate Synthase/TYMS antibody (A04320-4). Thymidylate Synthase/TYMS was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Thymidylate Synthase/TYMS Antibody (A04320-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



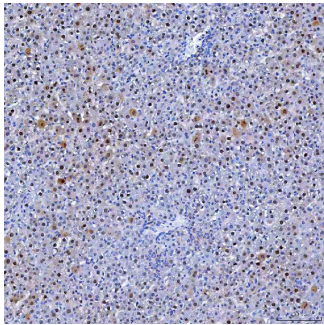
IHC analysis of Thymidylate Synthase/TYMS using anti-Thymidylate Synthase/TYMS antibody (A04320-4). Thymidylate Synthase/TYMS was detected in a paraffin-embedded section of human endometrial adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Thymidylate Synthase/TYMS Antibody (A04320-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



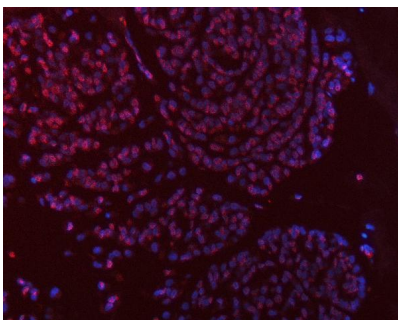
IHC analysis of Thymidylate Synthase/TYMS using anti-Thymidylate Synthase/TYMS antibody (A04320-4). Thymidylate Synthase/TYMS was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Thymidylate Synthase/TYMS Antibody (A04320-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of Thymidylate Synthase/TYMS using anti-Thymidylate Synthase/TYMS antibody (A04320-4). Thymidylate Synthase/TYMS was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Thymidylate Synthase/TYMS Antibody (A04320-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of Thymidylate Synthase/TYMS using anti-Thymidylate Synthase/TYMS antibody (A04320-4). Thymidylate Synthase/TYMS was detected in a paraffin-embedded section of rat liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Thymidylate Synthase/TYMS Antibody (A04320-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of Thymidylate Synthase/TYMS using anti-Thymidylate Synthase/TYMS antibody (A04320-4). Thymidylate Synthase/TYMS was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-Thymidylate Synthase/TYMS Antibody (A04320-4) overnight at 4°C. DyLight®550 Conjugated Goat Anti-Rabbit IgG (BA1135) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was

counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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### Anti-Thymidylate Synthase/TYMS Antibody

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