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36-3323: Anti-Thymidylate Synthase (5-FU Resistance Marker) Monoclonal Antibody(Clone: TYMS/1884)

Clonality :	Monoclonal
Clone Name :	TYMS/1884
Application :	FACS,IF,WB,IHC
Reactivity :	Human
Gene :	TYMS
Gene ID :	7298
Uniprot ID :	P04818
Alternative Name :	dTMP synthase, TMS, TS, TSase, TYMS protein, Tyms thymidylate synthetase
Isotype :	Mouse IgG2c, kappa
Immunogen Information :	Recombinant human thymidylate synthase protein fragment (around aa 60-174) (exact sequence is proprietary)

Description

It recognizes a protein of 36kDa, identified as Thymidylate Synthase (TS) (EC 2.1.1.45). It converts deoxyuridine monophosphate (dUMP) to deoxythymidine monophosphate (dTMP), which is essential for DNA biosynthesis. TS is also a critical target for the fluoropyrimidines, an important group of antineoplastic drÂµgs that are widely used in the treatment of solid tumors. Both 5-FU and fluorodeoxyuridine are converted in tumor cells to FdUMP which inactivates TS by formation of a ternary covalent complex in the presence of the folate cofactor 5,10-methylenetetrahydrofolate. Expression of TS protein has been reported to associate with response to 5-fluorouracil (5-FU) in human colorectal, gastric, head and neck, and breast carcinomas.

Product Info

Amount :	20 µg / 100 µg
Content :	200 µg/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA at 1.0mg/ml.
Storage condition :	Antibody with azide - store at 2 to 8°C. Antibody is stable for 24 months. Non-hazardous.

Application Note

Flow Cytometry (1-2ug/million cells); Immunofluorescence (1-2ug/ml); Western Blot (1-2ug/ml); ,Immunohistochemistry (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95&degC followed by cooling at RT for 20 minutes);

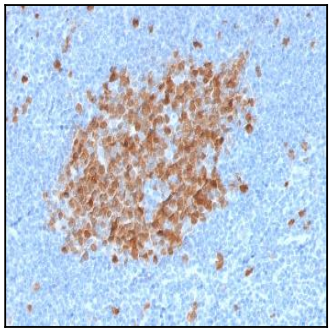


Fig. 1: Formalin-fixed, paraffin-embedded human Tonsil stained with Thymidylate Synthase Mouse Monoclonal Antibody (TYMS/1884).

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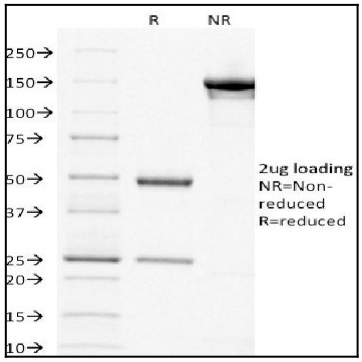


Fig. 2: SDS-PAGE Analysis Purified Thymidylate Synthase Mouse Monoclonal Antibody (TYMS/1884). Confirmation of Purity and Integrity of Antibody.

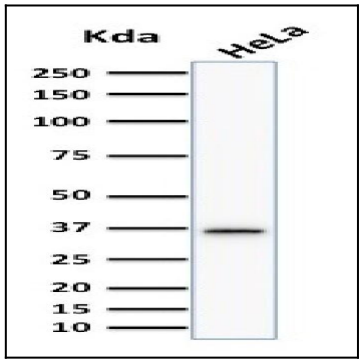


Fig. 3: Western Blot Analysis of human HeLa cell lysate using Thymidylate Synthase Mouse Monoclonal Antibody (TYMS/1884).

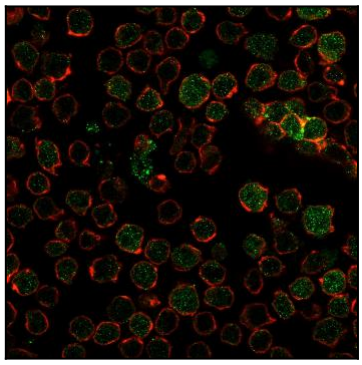


Fig. 4: Immunofluorescence Analysis of PFA-fixed Ramos cells labeling PU.1 with Thymidylate Synthase Mouse Monoclonal Antibody (TYMS/1884) followed by Goat anti-Mouse IgG-CF488 (Green). Membrane is labeled with Phalloidin (Red).

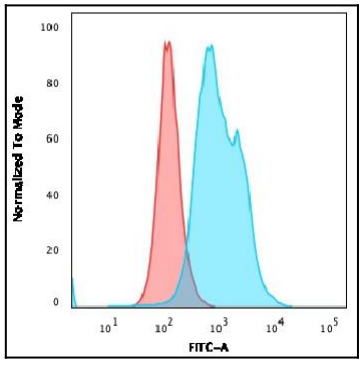


Fig. 5: Flow Cytometric Analysis of PFA-fixed MOLT4 cells. Thymidylate Synthase Monospecific Mouse Monoclonal Antibody followed by goat anti-Mouse IgG-CF488 (Blue); Isotype Control (Red).

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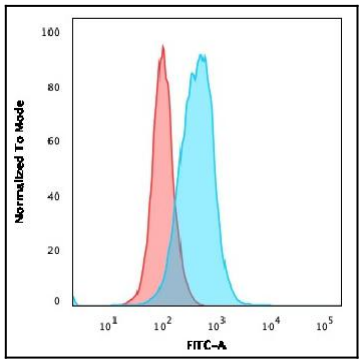


Fig. 6: Flow Cytometric Analysis of PFA-fixed Ramos cells. Thymidylate Synthase Monospecific Mouse Monoclonal Antibody followed by goat anti-Mouse IgG-CF488 (Blue); Isotype Control (Red).

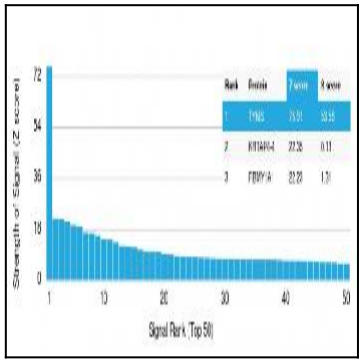


Fig. 7: Analysis of Protein Array containing more than 19,000 full-length human proteins using Thymidylate Synthase Monospecific Mouse Monoclonal Antibody (TYMS/1884) Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProtTM array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProtTM are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.

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