

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

<b>Clonality :</b>	Monoclonal
<b>Clone Name :</b>	TYMS/1884
<b>Application :</b>	FACS,IF,WB,IHC
<b>Reactivity :</b>	Human
<b>Gene :</b>	TYMS
<b>Gene ID :</b>	7298
<b>Uniprot ID :</b>	P04818
<b>Alternative Name :</b>	dTMP synthase, TMS, TS, TSase, TYMS protein, Tyms thymidylate synthetase
<b>Isotype :</b>	Mouse IgG2c, kappa
<b>Immunogen Information :</b>	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 drugs 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

<b>Amount :</b>	20 µg / 100 µg
<b>Content :</b>	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.
<b>Storage condition :</b>	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);

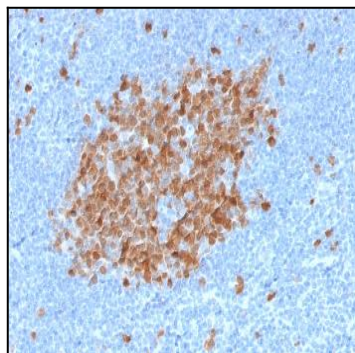


Fig. 1: Formalin-fixed, paraffin-embedded human Tonsil stained with Thymidylate Synthase Mouse Monoclonal Antibody (TYMS/1884).

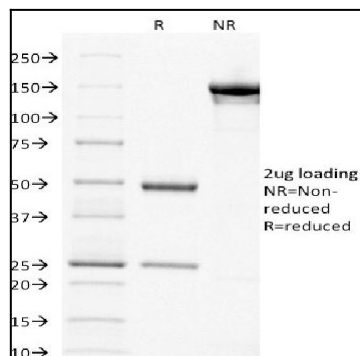


Fig. 2: SDS-PAGE Analysis Purified Thymidylate Synthase Mouse Monoclonal Antibody (TYMS/1884). Confirmation of Purity and Integrity of Antibody.

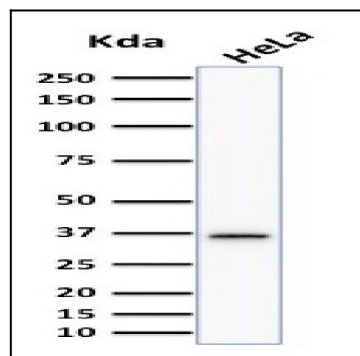


Fig. 3: Western Blot Analysis of human HeLa cell lysate using Thymidylate Synthase Mouse Monoclonal Antibody (TYMS/1884).

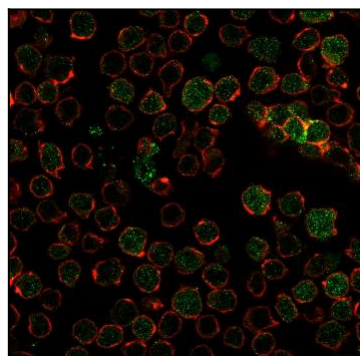


Fig. 4: Immunofluorescence Analysis of PFA-fixed Ramos cells labeling PU.1 with Thymidylate Synthase Mouse Monoclonal Antibody (TYMS/1884) followed by Goat anti-Mouse IgG-CF488 (Green). Membrane is labeled with Phalloidin (Red).

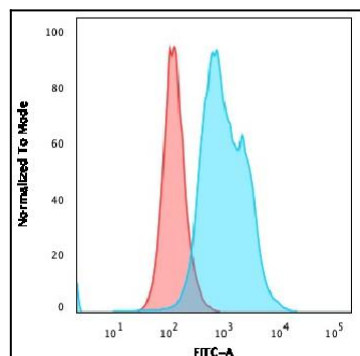


Fig. 5: Flow Cytometric Analysis of PFA-fixed MOLT4 cells. Thymidylate Synthase Monospecific Mouse Monoclonal Antibody followed by goat anti-Mouse IgG-CF488 (Blue); Isotype Control (Red).

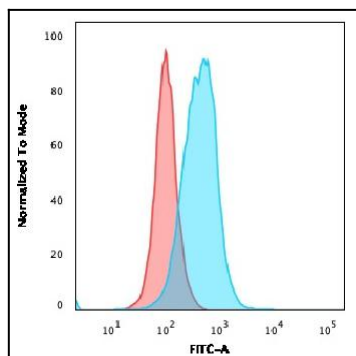


Fig. 6: Flow Cytometric Analysis of PFA-fixed Ramos cells. Thymidylate Synthase Monospecific Mouse Monoclonal Antibody followed by goat anti-Mouse IgG-CF488 (Blue); Isotype Control (Red).

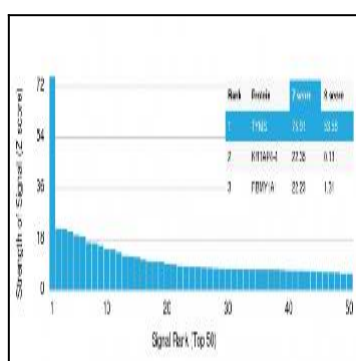


Fig. 7: Analysis of Protein Array containing more than 19,000 full-length human proteins using Thymidylate Synthase Monospecific Mouse Monoclonal Antibody (TYMS/1884) Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt™ 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 HuProt™ 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.