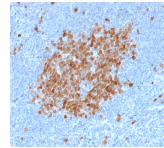


Thymidylate Synthase Monoclonal Mouse Antibody (TYMS/1884)



This antibody recognizes Thymidylate Synthase (TS), which converts deoxyuridine monophosphate (dUMP) to deoxythymidine monophosphate (dTMP), and 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.

Product Description

This antibody recognizes a protein of 36 kDa, 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. Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors. **Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email order@biotium.com to inquire about stock status and lead times before placing your order. **Catalog number key for antibody number 1884, Anti-Thymidylate Synthase (TYMS/1884)**

Antibody #	prefix Conjugation	Ex/Em	Concentration	Storage Buffer
BNC04	CF®405S	404/431 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC05	CF®405M	408/452 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC06	CF®405L	395/545 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC88	CF®488A	490/515 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC14	CF®514	516/548 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC43	CF®543	541/560 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC55	CF®555	555/565 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC68	CF®568	562/583 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC94	CF®594	593/614 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC40	CF®640R	642/662 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC47	CF®647	650/665 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC60	CF®660C	667/685 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC61	CF®660R	663/682 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC80	CF®680	681/698 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC81	CF®680R	680/701 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC00	CF®700	695/720 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNC70	CF®770	770/797 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNCR	R-PE (PE)	496, 546, 565/578 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNCA	APC	650/660 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNCP	PerCP	482/677 nm	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNCB	Biotin	N/A	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNCAP	Alkaline Phosphatase	N/A	0.1 mg/mL	PBS, 0.1% BSA, 0.05% azide
BNCH	Horse radish Peroxidase	N/A	0.1 mg/mL	PBS, 0.05% BSA, no azide
BNUB	Purified, with BSA	N/A	0.2 mg/mL	PBS, 0.05% BSA, 0.05% azide
BNUM	Purified, BSA-free	N/A	1 mg/mL	PBS, no BSA, no azide

References

Johnston PG, et. al. Journal of the National Cancer Institute, 1997, 89(4):308-13 | Pestalozzi BC, et. al. Journal of Clinical Oncology, 1997, 15(5):1923-31

Product attributes	
antibody-number	1884
Antibody number	1884
Reactivity (target)	Thymidylate Synthase
Antibody type	Primary
Host species	Mouse
Clonality	Monoclonal
Clone	TYMS/1884
Isotype	IgG2c, kappa
Molecular weight	36 kDa
Synonyms	dTMP synthase; TMS; TS; TSase; TYMS protein; Tyms thymidylate synthetase
Human gene symbol	TYMS
Entrez gene ID	7298
SwissProt	P04818
Unigene	369762
Immunogen	Recombinant human thymidylate synthase protein fragment (around aa 60-174) (exact sequence is proprietary)
Cellular localization	Nucleus & cytoplasm
Species reactivity	Human
Applications	Immunofluorescence, Immunohistology (formalin), Flow cytometry, Western
Positive control	MOLT4; Ramos, 5-FU-resistant colon carcinoma cell lines (NCI H630R10, NCI H630R1); 5-FU-resistant breast cancer cell lines, MCF-Ad5 and MCF-Ad10. Testicular carcinomas.
Shipping condition	Room temperature
Storage Conditions	Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C
Shelf life	Guaranteed for at least 24 months from date of receipt when stored as recommended
Regulatory status	For research use only (RUO)
Supplied As	Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified, BSA-free: 1 mg/mL in PBS without azide, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide
Validated in protein array	Monospecific
Antibody research areas	Cancer, Metabolism
Tumor expression	Colon cancer, Breast cancer, Gastrointestinal cancer, Head and neck cancer