## Thymidylate Synthase Monoclonal Mouse Antibody (TYMS/1884)



## **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 <a href="mailto:order@biotium.com">order@biotium.com</a> to inquire about stock status and lead times before placing your order.

Catalog number key for antibody number 1884, Anti-Thymidylate Synthase (TYMS/1884)

## Product attributes

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Product attributes				
Antibody number	#1884			
Antibody 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)			
Verified antibody applications	Flow (intracellular) (verified), IF (verified), IHC (FFPE) (verified)			
Antibody target cellular localization	Nucleus & cytoplasm			
Species reactivity	Human			
Positive control	MOLT4; Ramos, 5-FU-resistant colon carcinoma cell lines (NC H630R10, NCI H630R1); 5-FU-resistant breast cancer cell line 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)			
Antibody/conjugate formulation	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: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide			
Validated in protein array	Monospecific			
Antibody research areas	Cancer, Metabolism			
Product origin	Product may contain either bovine serum albumin (BSA) from bovine serum (Bos taurus), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot.			
Tumor expression	Colon cancer, Breast cancer, Gastrointestinal cancer, Head and neck cancer			

Antibody # prefix	Conjugation	Ex/Em (nm)	Laser line	Detection channel	Dye Features
BNC04	CF®405S	404/431	405	DAPI (microscopy), AF405	CF®405S Features
BNC88	CF®488A	490/515	488	GFP, FITC	CF®488A Features
BNC68	CF®568	562/583	532, 561	RFP, TRITC	CF®568 Features
BNC94	CF®594	593/614	561	Texas Red®	CF®594 Features
BNC40	CF®640R	642/662	633-640	Cy®5	CF®640R Features
BNC47	CF®647	650/665	633-640	Cy®5	CF®647 Features
BNC74	CF®740	742/767	633-685	775/50	CF®740 Features
BNCB	Biotin	N/A	N/A	N/A	
BNUB	Purified	N/A	N/A	N/A	
BNUM	Purified,	N/A	N/A	N/A	

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