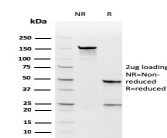


# Thymidylate Synthase Recombinant Monoclonal Mouse Antibody (rTYMS/1884)



## Product Description

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](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order.

**Catalog number key for antibody number 3812, Anti-Thymidylate Synthase (rTYMS/1884)**

## Product attributes

|  |   |
|--|---|
| <b>Antibody number</b>                       | #3812   |
| <b>Antibody reactivity (target)</b>          | Thymidylate Synthase  |
| <b>Antibody type</b>                         | Primary   |
| <b>Host species</b>                          | Mouse   |
| <b>Clonality</b>                             | Recombinant Monoclonal  |
| <b>Clone</b>                                 | rTYMS/1884  |
| <b>Isotype</b>                               | IgG1, kappa   |
| <b>Molecular weight</b>                      | 36 kDa  |
| <b>Synonyms</b>                              | dTMP synthase; TMS; TS; TSase; TYMS protein; Tyms thymidylate synthetase  |
| <b>Human gene symbol</b>                     | TYMS  |
| <b>Entrez gene ID</b>                        | 7298  |
| <b>SwissProt</b>                             | P04818  |
| <b>Unigene</b>                               | 369762  |
| <b>Immunogen</b>                             | Recombinant human thymidylate synthase protein fragment (around aa 60-174) (exact sequence is proprietary)  |
| <b>Verified antibody applications</b>        | Flow (intracellular) (verified), IF (verified)  |
| <b>Antibody target cellular localization</b> | Nucleus & cytoplasm   |
| <b>Species reactivity</b>                    | Human   |
| <b>Antibody application notes</b>            | ELISA: For coating, order antibody without BSA; Flow cytometry: 0.5-1 ug/million cells; Immunofluorescence: 0.5-1 ug/mL; Optimal dilution for a specific application should be determined., Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody |
| <b>Positive control</b>                      | 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.  |
| <b>Shipping condition</b>                    | Room temperature  |
| <b>Storage Conditions</b>                    | Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C   |
| <b>Regulatory status</b>                     | For research use only (RUO)   |
| <b>Antibody/conjugate formulation</b>        | 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   |
| <b>Shelf life</b>                            | Guaranteed for at least 24 months from date of receipt when stored as recommended   |
| <b>Product origin</b>                        | 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.   |
| <b>Tumor expression</b>                      | 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 | <a href="#">CF®405S Features</a> |
| BNC88             | CF®488A            | 490/515    | 488        | GFP, FITC                | <a href="#">CF®488A Features</a> |
| BNC68             | CF®568             | 562/583    | 532, 561   | RFP, TRITC               | <a href="#">CF®568 Features</a>  |
| BNC94             | CF®594             | 593/614    | 561        | Texas Red®               | <a href="#">CF®594 Features</a>  |
| BNC40             | CF®640R            | 642/662    | 633-640    | Cy®5                     | <a href="#">CF®640R Features</a> |
| BNC47             | CF®647             | 650/665    | 633-640    | Cy®5                     | <a href="#">CF®647 Features</a>  |
| BNC74             | CF®740             | 742/767    | 633-685    | 775/50                   | <a href="#">CF®740 Features</a>  |
| BNCB              | Biotin             | N/A        | N/A        | N/A                      |                                  |
| BNUB              | Purified           | N/A        | N/A        | N/A                      |                                  |
| BNUM              | Purified, BSA-free | N/A        | N/A        | N/A                      |                                  |

Alexa Fluor, Pacific Blue, Pacific Orange, and Texas Red are trademarks or registered trademarks of Thermo Fisher Scientific; Cy is a registered trademark of Cytiva; IRDye, LI-COR, and Odyssey are registered trademarks of LI-COR Bioscience.

This datasheet was generated on March 14, 2025 at 05:38:43 AM. Visit product page to check for updated information before use.

Product link: <https://biotium.com/product/thymidylate-synthase-recombinant-monoclonal-mouse-antibody-tyms-1884/>