

Product Datasheet

Thymidylate Synthase Antibody (orb2640441)

Description	This antibody recognizes a protein of 36kDa, identified as Thymidylate Synthase (TS, TYMS). TS 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 is associated with response to 5-fluorouracil (5-FU) in human colorectal, gastric, head and neck, and breast carcinomas.
Species/Host	Mouse
Reactivity	Human
Conjugation	Unconjugated
Tested Applications	FACS, IF, IHC-P, WB
Immunogen	A recombinant human parital protein corresponding to amino acids 60-174 was used as the immunogen for this TYMS antibody.
Preservatives	0.2 mg/ml in 1X PBS with 0.1 mg/ml rAlbumin (US sourced) and 0.05% sodium azide
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Note	For research use only
Application notes	The optimal dilution of the TYMS antibody for each application should be determined by the researcher.1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.
Formula	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide

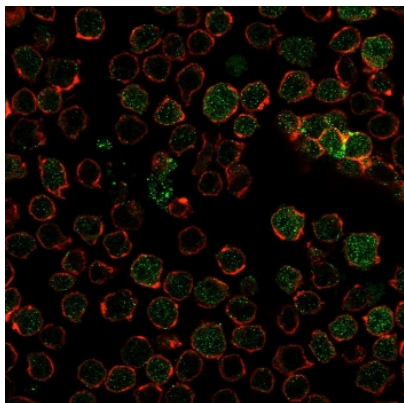
Biorbyt Ltd.

7 Signet Court, Swann's Road,
Cambridge, CB5 8LA, United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+44 \(0\) 1223 859-353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)

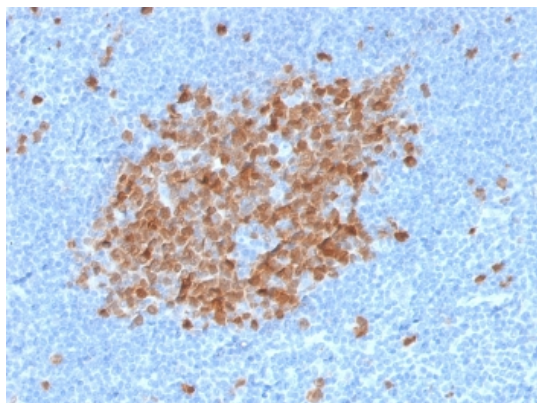
Biorbyt LLC.

68 TW Alexander Drive,
Durham, NC, 27713, United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+1 \(415\) 906-5211](tel:+1(415)9065211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)

Isotype	Mouse IgG2c, kappa
Clonality	Monoclonal
Clone Number	TYMS/1884
Antibody Type	Primary Antibody
Purity	Protein G affinity chromatography
Uniprot ID	P04818
Hazard Information	This TYMS antibody is available for research use only.
Dilution Range	Flow cytometry: 1-2ug/million cells, Immunofluorescence: 1-2ug/ml, Western blot: 1-2ug/ml, Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Expiration Date	12 months from date of receipt.



Immunofluorescent staining of PFA-fixed human Ramos cells with TYMS antibody cocktail (green, clone TYMS/1884) and Phalloidin (red).



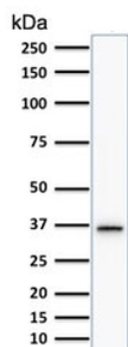
IHC testing of FFPE human tonsil tissue with TYMS antibody. HIER: boil tissue sections in pH9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.

Biorbyt Ltd.

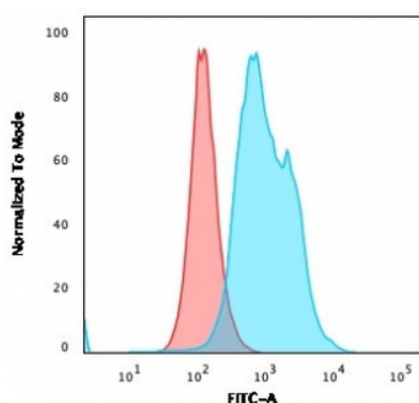
7 Signet Court, Swann's Road,
Cambridge, CB5 8LA, United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+44 \(0\) 1223 859-353](tel:+44201223859353) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)

Biorbyt LLC.

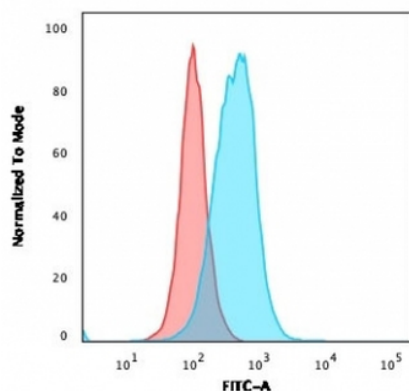
68 TW Alexander Drive,
Durham, NC, 27713, United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+1 \(415\) 906-5211](tel:+14159065211) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)



Western blot testing of human HeLa cell lysate with TYMS antibody (clone TYMS/1884). Predicted molecular weight ~36 kDa.



Flow cytometry testing of PFA-fixed human MOLT4 cells with TYMS antibody (clone TYMS/1884); Red = isotype control, Blue = TYMS antibody.



Flow cytometry testing of PFA-fixed human Ramos cells with TYMS antibody (clone TYMS/1884); Red = isotype control, Blue = TYMS antibody.

Biorbyt Ltd.

7 Signet Court, Swann's Road,
Cambridge, CB5 8LA, United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+44 \(0\) 1223 859-353](tel:+44201223859353) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)

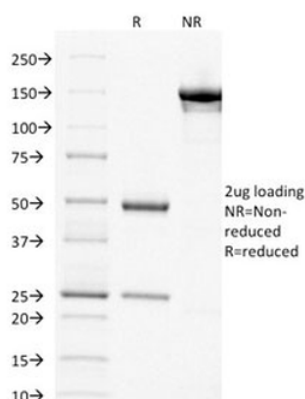
Biorbyt LLC.

68 TW Alexander Drive,
Durham, NC, 27713, United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+1 \(415\) 906-5211](tel:+14159065211) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)

Human Protein Microarray Specificity Validation



Analysis of HuProt (TM) microarray containing more than 19,000 full-length human proteins using TYMS antibody (clone TYMS/1884). These results demonstrate the foremost specificity of the TYMS/1884 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt (TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt (TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free TYMS antibody (clone TYMS/1884) as confirmation of integrity and purity.

Biorbyt Ltd.

7 Signet Court, Swann's Road,
Cambridge, CB5 8LA, United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+44 \(0\) 1223 859-353](tel:+44201223859353) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)

Biorbyt LLC.

68 TW Alexander Drive,
Durham, NC, 27713, United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+1 \(415\) 906-5211](tel:+14159065211) | Fax: [+1 \(415\) 651-8558](tel:+14156518558)