P.O. Box 3286 - Logan, Utah 84323, U.S.A. - Tel. (800) 729-8350 – Tel. (435) 755-9848 - Fax (435) 755-0015 - www.scytek.com

Thymidylate Synthase (5-FU Resistance Marker); Clone TS106 & TMS715
(Concentrate)

Availability/Contents:

Item #	Volume
RA0328-C.5	0.5 ml

Description:

Species:	Mouse
Immunogen:	Recombinant human thymidylate synthase (TS106 & TMS715)
Clone:	TS106 & TMS715
Isotype:	IgG1, kappa (TS106 & TMS715)
Entrez Gene ID:	7298 (Human)
Hu Chromosome Loc.:	18p11.32
Synonyms:	dTMP synthase, TMS, TS, TSase, TYMS protein, Tyms thymidylate synthetase
Mol. Weight of Antigen:	36kDa
Format:	200µg/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Specificity:	This antibody recognizes a protein of 36kDa, identified as Thymidylate Synthase (TS) (EC 2.1.1.45).
Background:	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 Reactivity:	Human. Others not known.
Positive Control:	5-FU-resistant colon carcinoma cell lines (NCI H630R10, NCI H630R1), 5-FU-resistant breast cancer cell lines, MCF-Ad5 and MCF-Ad10. Colorectal, gastric, head & neck, and breast carcinomas.
Cellular Localization:	Cytoplasmic
Titer/ Working Dilution:	Immunohistochemistry (Frozen and Formalin-fixed): 0.5-1 µg/ml
	Flow Cytometry: 0.5-1 µg/million cells
	Immunofluorescence: 0.5-1 µg/ml
	Western Blotting: 0.25-0.5 µg/ml
	Immunoprecipitation: 0.5-1 µg/500µg protein lysate
Microbiological State:	This product is not sterile.

Storage: 2° C 8° C

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EC REP EmergoEurope (31)(0) 70 345-8570
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Uses/Limitations:

Not to be taken internally.
For Research Use Only.
This product is intended for qualitative immunohistochemistry with normal and neoplastic formalin-fixed, paraffin-embedded tissue sections, to be viewed by light microscopy.
Do not use if reagent becomes cloudy.
Do not use past expiration date.
Non-Sterile.

Ordering Information and Current Pricing at www.scytek.com

Procedure:

1. **Tissue Section Pretreatment (Highly Recommended):** Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with Citrate Plus (ScyTek catalog# CPL500).

2. **Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.

3. **Visualization:** For maximum staining intensity we recommend the "UltraTek HRP Anti-Polyvalent Lab Pack" (ScyTek catalog# UHP125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

Precautions:

Contains Sodium Azide as a preservative (0.09% w/v).
Do not pipette by mouth.
Avoid contact of reagents and specimens with skin and mucous membranes.
Avoid microbial contamination of reagents or increased nonspecific staining may occur.
This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.

References:

1. Johnston PG, *et. al.* Cancer Research, 1991, 51(24):6668-76.
2. Johnston PG, *et. al.* Cancer Research, 1992, 52(16):4306-12.
3. Johnston PG, *et. al.* Biochemical Pharmacology, 1993, 45(12):2483-6.
4. Johnston PG, *et. al.* Journal of Clinical Oncology, 1994, 12(12):2640-7.
5. Johnston PG, *et. al.* Cancer Research, 1995, 55(7):1407-12.
6. Johnston PG, *et. al.* Journal of the National Cancer Institute, 1997, 89(4):308-13.
7. Pestalozzi BC, *et. al.* Journal of Clinical Oncology, 1997, 15(5):1923-31.

Warranty:

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products. Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used.

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