

Mouse Anti-TS (Thymidylate Synthase) [TS106]: MC0307, MC0307RTU7

Intended Use: For Research Use Only

Description: TS (EC:2.1.1.45), a cytosolic enzyme, is a dimer of two identical monomers of about 36kDa. The enzyme provides the sole intracellular de novo source of thymidylate and plays a crucial role in DNA replication and repair. TS catalyzes the methylation of deoxyuridine monophosphate (dUMP) and its conversion to deoxythymidine monophosphate (dTTP). Therefore, TS is primarily active in proliferating and metabolically active cells. TS is a central target of the widely used antineoplastic agent 5-Fluorouracil (5-FU) and thus also of the Xeloda, which is enzymatically activated to 5-FU. TS is inactivated by a covalent complex formation with 5-FdUMP and methylenetetrahydrofolate. Literature indicates that expression of TS is associated with response to 5-fluorouracil (5-FU) in human breast, colorectal, gastric, head, and neck carcinomas with low TS expression predicting better response to 5-FU and survival.

Specifications

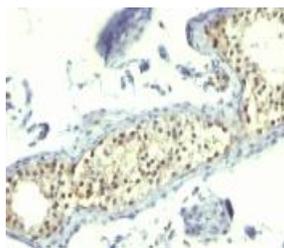
Clone:	TS106
Source:	Mouse
Isotype:	IgG1k
Reactivity:	Human
Localization:	Cytoplasm, nucleus
Formulation:	Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN ₃)
Storage:	Store at 2°- 8°C
Applications:	IHC, Flow Cyt., ICC/IF
Package:	

Description	Catalog No.	Size
TS (Thymidylate Synthase) Concentrated	MC0307	1 ml
TS (Thymidylate Synthase) Prediluted	MC0307RTU7	7 ml

IHC Procedure

Positive Control Tissue:	5-FU-resistant cell cancer lines, colonic ca
Concentrated Dilution:	50-100
Pretreatment:	Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
Incubation Time and Temp:	30-60 minutes @ RT
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human Testicular Carcinoma stained with anti-TS using DAB

References:

1. Prognostic and therapeutic impact of argininosuccinate synthetase 1 control in bladder cancer as monitored longitudinally by PET imaging. Allen MD, et al. Cancer Res 74:896-907, 2014.
2. A phase II study of erlotinib monotherapy in pre-treated non-small cell lung cancer without EGFR gene mutation who have never/light smoking history: re-evaluation of EGFR gene status (NEJ006/TCOG0903). Matsumoto Y, et al. Lung Cancer 86:195-200, 2014.
3. Overexpression of thymidylate synthetase confers an independent prognostic indicator in nasopharyngeal carcinoma. Lee SW, et al. Exp Mol Pathol 95:83-90, 2013.

Doc. 100-MC0307
Rev. A