Human MTAP Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 1113601

Catalog Number: FAB11747T

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human MTAP protein in Direct ELISA
Source	Monoclonal Mouse IgG_{2A} Clone # 1113601
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human MTAP Accession # Q13126
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Methyl-thioadenosine phosphorylase/MTAP is part of the PNP/MTAP phosphorylase family and catalyzes the reversible phosphorylation of S-methyl-5'-thioadenosine (MTA), a major byproduct of polyamine synthesis essential for cell growth and proliferation. MTAP also produces most of the free adenine generated in human cells through a salvage pathway and thus couples the purine salvage pathway with polyamine biosynthesis. MTAP forms an active trimer where each identical 32 kDa monomer contains a separate active site (1). Each active site contains three distinct regions required for base-, methylthioribose-, and sulfate/phosphate-binding (1). MTAP is cytosolic and abundantly expressed in normal cells and tissues (2). In contrast, deficient MTAP expression is observed in many types of tumors including lung, bladder, pancreatic, and endometrial cancer (3) due to hyper-methylation gene suppression (4) or gene deletion (3, 5, 6). MTA accumulation leads to an immunosuppressive tumor microenvironment and apoptotic resistance (7-9) and MTAP directly regulates the level of MTA present. MTAP has been reported as a tumor suppressor (6,10) that may also act in a manner that is independent of enzymatic activity (11) through signaling pathways such as the insulin-like growth factor-1 receptor pathway (12). Potential therapeutic strategies to exploit MTAP deficiency in tumors (13,14) or inhibit MTAP in tumors that express MTAP, such as prostate cancer, are under investigation (15).

References:

1. Appleby, T.C. *et al.* (1999) Structure **7**:629.
2. Garbers, D.L. (1978) Biochim. Biophys. Acta. **523**:82.
3. Li, Y. *et al.* (2019) J. Cancer **10**:927.
4. Hellerbrand, C. *et al.* (2006) Carcinogenesis **27**:64.
5. Cairns, P. *et al.* (1995) Nat. Genet. **11**:210.
6. Christopher, S.A. (2002) Cancer Res. **62**:6639.
7. Kirovski, G. *et al.* (2011) Am. J. Pathol. **178**:1145.
8. Czech, B. *et al.* (2013) PLoS One **8**:e80703.
9. Henrich, F.C. *et al.* (2016) Oncoimmunology **5**:e1184802.
10. Kadariya, Y. *et al.* (2009) Cancer Res. **69**:5961.
11. Tang, B. *et al.* (2014) G3 (Bethesda) **5**:35.
12. Xu, J. *et al.* (2019) Signal Transduct. Target Ther. **4**:2.
13. Bertino, J.R. *et al.* (2011) Cancer Biol. Ther. **11**:627.
14. Tang, B. *et al.* (2018) Cancer Res. **78**:4386.
15. Bistulfi, G. *et al.* (2016) Oncotarget **7**:14380.

Bio-Techne®

Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956

USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449

China | info.cn@bio-techne.com TEL: 400.821.3475

Human MTAP Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 1113601

Catalog Number: FAB11747T

100 µg

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.

Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475