

MTAP (C-20): sc-17017

BACKGROUND

5'-Deoxy-5'-methylthioadenosine phosphorylase (MTAP, MSAP) catalyzes the reversible phosphorolysis of methylthioadenosine, which is important in polyamine metabolism and for the salvage of adenine and methionine. The gene encoding MTAP maps to human chromosome 9p21.3 and is linked to the tumor suppressor gene, p16INK4A. Deficient levels of MTAP can occur in cancers primarily through codeletion of the MTAP gene and the p16INK4A gene. Cells expressing MTAP and possessing adenine salvage pathway activity may be less susceptible to malignancy due to growth-inhibitory actions of agents (e.g. antifolates), whose mechanism of action, in part, involves this *de novo* purine pathway.

REFERENCES

1. Nobori, T., et al. 1996. Genomic cloning of methylthioadenosine phosphorylase: a purine metabolic enzyme deficient in multiple different cancers. *Proc. Natl. Acad. Sci. USA* 93: 6203-6208.
2. Chen, Z.H., et al. 1997. Expression of methylthioadenosine phosphorylase cDNA in p16-, MTAP- malignant cells: restoration of methylthioadenosine phosphorylase-dependent salvage pathways and alterations of sensitivity to inhibitors of purine *de novo* synthesis. *Mol. Pharmacol.* 52: 903-911.
3. Yu, J., et al. 1997. Presence of methylthioadenosine phosphorylase (MTAP) in hematopoietic stem/progenitor cells: its therapeutic implication for MTAP (-) malignancies. *Clin. Cancer Res.* 3: 433-438.
4. Schmid, M., et al. 1998. Homozygous deletions of methylthioadenosine phosphorylase (MTAP) are more frequent than p16INK4A (CDKN2) homozygous deletions in primary non-small cell lung cancers (NSCLC). *Oncogene* 17: 2669-2675.

CHROMOSOMAL LOCATION

Genetic locus: MTAP (human) mapping to 9p21.3; Mtap (mouse) mapping to 4 C4.

SOURCE

MTAP (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MTAP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17017 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

MTAP (C-20) is recommended for detection of MTAP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MTAP (C-20) is also recommended for detection of MTAP in additional species, including canine and porcine.

Suitable for use as control antibody for MTAP siRNA (h): sc-60006, MTAP siRNA (m): sc-60007, MTAP shRNA Plasmid (h): sc-60006-SH, MTAP shRNA Plasmid (m): sc-60007-SH, MTAP shRNA (h) Lentiviral Particles: sc-60006-V and MTAP shRNA (m) Lentiviral Particles: sc-60007-V.

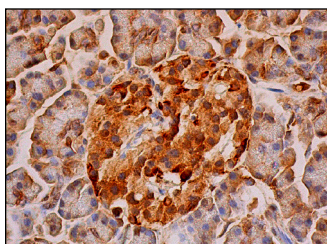
Molecular Weight of MTAP: 31 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



MTAP (C-20): sc-17017. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic and nuclear staining of exocrine glandular cells and islets of Langerhans.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **MTAP (42-T): sc-100782**, our highly recommended monoclonal alternative to MTAP (C-20).