

MTAP (m): 293T Lysate: sc-125650

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.
5. Online Mendelian Inheritance in Man, OMIM[™]. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 156540. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Schmid, M., et al. 2000. A methylthioadenosine phosphorylase (MTAP) fusion transcript identifies a new gene on chromosome 9p21 that is frequently deleted in cancer. *Oncogene* 19: 5747-5754.
7. LocusLink Report (LocusID: 4507). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Mtap (mouse) mapping to 4 C4.

PRODUCT

MTAP (m): 293T Lysate represents a lysate of mouse MTAP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

MTAP (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive MTAP antibodies. Recommended use: 10-20 µl per lane.

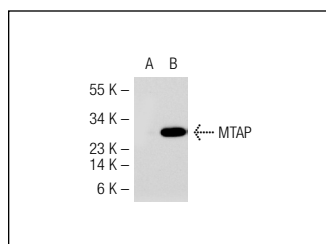
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MTAP (42-T): sc-100782 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse MTAP expression in MTAP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™]
Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



MTAP (42-T): sc-100782. Western blot analysis of MTAP expression in non-transfected: sc-117752 (A) and mouse MTAP transfected: sc-125650 (B) 293T whole cell lysates.

RESEARCH USE

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