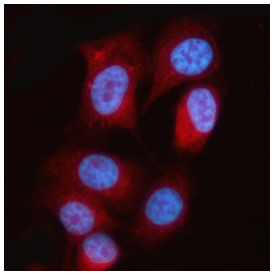
MTAP Polyclonal Antibody / Methylthioadenosine Phosphorylase Antibody (FY13688)

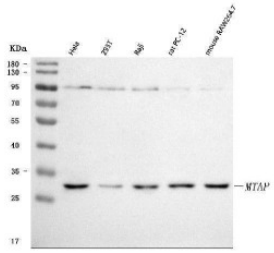
Catalog No.	Formulation	Size
FY13688	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

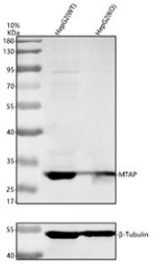
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q13126
Applications	Western blot: 1-2ug/ml Flow cytometry: 1-3ug/million cells Immunofluorescence: 5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This MTAP Polyclonal Antibody / Methylthioadenosine Phosphorylase Antibody is available for research use only.



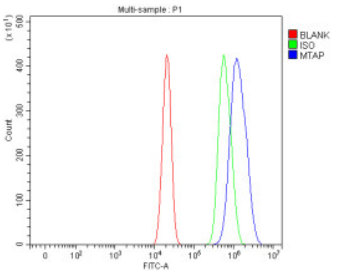
MTAP Polyclonal Antibody IF Staining of Human PC-3 Cells. Immunofluorescence analysis of human PC-3 cells using Methylthioadenosine Phosphorylase Antibody at 5 ug/ml. Red fluorescence indicates MTAP immunoreactivity distributed throughout the cytoplasm, with staining extending into perinuclear regions. DAPI counterstaining identifies nuclei in blue. Enzyme-mediated antigen retrieval was performed for 15 minutes, followed by overnight primary antibody incubation at 4oC and detection with a DyLight 550-conjugated secondary antibody.



MTAP Polyclonal Antibody Western Blot Analysis of HeLa, 293T, Raji, PC-12 and RAW264.7 Cell Lysates. Western blot analysis using Methylthioadenosine Phosphorylase Antibody at 0.5 ug/ml. Lane 1: human HeLa cells; lane 2: human 293T cells; lane 3: human Raji cells; lane 4: rat PC-12 cells; lane 5: mouse RAW264.7 cells. Each lane contains 30 ug of total protein under reducing conditions. Immunoreactive bands are detected at approximately 31 kDa across all five samples, consistent with the calculated molecular weight of MTAP at approximately 31.2 kDa.



MTAP Polyclonal Antibody Western Blot Validation in HepG2 Wild-Type and MTAP Knockout Cells. Western blot analysis of human HepG2 wild-type (WT, lane 1) and MTAP knockout (KO, lane 2) whole-cell lysates using Methylthioadenosine Phosphorylase Antibody at 0.5 ug/ml. Each lane contains 30 ug of total protein under reducing conditions. An immunoreactive band near 31 kDa is detected in the WT lysate and substantially reduced in the KO sample, supporting antibody specificity for MTAP. The observed molecular weight is consistent with the calculated size of approximately 31.2 kDa. Alpha-Tubulin serves as the loading control.



MTAP Polyclonal Antibody Flow Cytometry Analysis of Human U-2 OS Cells. Flow cytometric analysis of fixed and permeabilized human U-2 OS cells using Methylthioadenosine Phosphorylase Antibody at 1 ug per million cells. The blue histogram represents MTAP antibody-stained cells, the green histogram represents the rabbit IgG isotype control, and the red histogram represents the blank control. The MTAP-stained population displays a rightward fluorescence shift relative to the controls, demonstrating intracellular MTAP immunoreactivity. Cells were fixed with 4% paraformaldehyde, permeabilized, and stained using a DyLight 488-conjugated secondary antibody.

Description

MTAP Polyclonal Antibody / Methylthioadenosine Phosphorylase Antibody targets methylthioadenosine phosphorylase (MTAP), a metabolic enzyme that participates in the methionine salvage pathway and adenine recycling. MTAP catalyzes the phosphorolysis of 5'-methylthioadenosine (MTA), generating adenine and 5-methylthioribose-1-phosphate. MTA is produced during polyamine biosynthesis, making MTAP an important connection between polyamine metabolism, nucleotide salvage, and methionine homeostasis. The enzyme helps recover valuable metabolic intermediates while limiting the accumulation of MTA, which can influence several cellular regulatory processes.

MTAP functions within a metabolic pathway that converts sulfur-containing intermediates into methionine, supporting cellular methylation reactions and protein synthesis. Adenine released through MTAP activity can be recycled into adenine nucleotides through the purine salvage pathway. These interconnected processes contribute to metabolic efficiency, particularly in cells with substantial requirements for nucleotide synthesis and polyamine production. MTAP activity also influences intracellular MTA concentrations, which can affect methyltransferase activity and other biochemical processes associated with cellular growth and differentiation.

MTAP has attracted considerable attention in cancer research because its gene is located at chromosome 9p21, near the CDKN2A tumor suppressor locus. Homozygous deletions involving this chromosomal region frequently eliminate both CDKN2A and MTAP, resulting in loss of MTAP expression in several malignancies. MTAP-deficient cells accumulate MTA, creating metabolic changes that can influence protein arginine methyltransferase 5 (PRMT5) activity. This relationship has generated interest in therapeutic strategies targeting PRMT5 and methionine adenosyltransferase 2A (MAT2A), particularly in tumors with MTAP deletions. However, the biological consequences of MTAP deficiency depend on cellular metabolism and the surrounding tissue environment.

Beyond its involvement in cancer-associated metabolic vulnerabilities, MTAP contributes to the regulation of cellular

methylation potential, purine availability, and sulfur amino acid metabolism. Its expression status provides information about the integrity of methionine salvage and the metabolic consequences of chromosome 9p21 alterations. Research using MTAP Polyclonal Antibody can help characterize methylthioadenosine phosphorylase expression in relation to polyamine metabolism, nucleotide recycling, and the metabolic adaptations associated with MTAP deficiency.

For knockdown-validated detection of MTAP as a metabolic marker, see our MTAP antibody.

Application Notes

Optimal dilution of the MTAP Polyclonal Antibody / Methylthioadenosine Phosphorylase Antibody should be determined by the researcher.

Immunogen

E. Coli-derived human Methylthioadenosine Phosphorylase recombinant protein (amino acids E31-H283) was used as the immunogen for the MTAP Polyclonal Antibody.

Storage

After reconstitution, the MTAP Polyclonal Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

S-methyl-5-thioadenosine phosphorylase antibody, 5'-methylthioadenosine phosphorylase antibody, MTA phosphorylase antibody, MTA phosphorolysis enzyme antibody, MTAP enzyme antibody, Methylthioadenosine phosphorylase protein antibody, Methylthioadenosine recycling enzyme antibody, Adenine salvage enzyme antibody, Methionine salvage pathway enzyme antibody, MTAP metabolic enzyme antibody

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