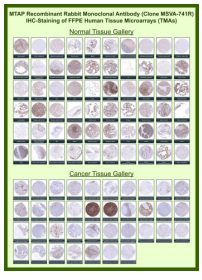
MTAP Antibody for IHC / Tumor Metabolism Marker Antibody [clone MSVA-741R] (V6155)

Catalog No.	Formulation	Size
V6155-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6155-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-741R
UniProt	P04626
Localization	Cytoplasm, Nucleus
Applications	Immunohistochemistry (FFPE) : 1:50-1:100
Limitations	This MTAP Antibody for IHC / Tumor Metabolism Marker Antibody is available for research use only.



MTAP Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Methylthioadenosine phosphorylase (MTAP) across human tissue microarray (TMA) panels using MTAP antibody clone MSVA-741R. Formalin-fixed, paraffin-embedded human tissue microarrays containing a wide range of normal and cancer tissues show predominantly cytoplasmic staining in normal tissues, while many tumor samples demonstrate reduced or absent expression. The staining pattern highlights differential MTAP expression between normal and malignant tissues, consistent with its role in cellular metabolism and tumor-associated gene loss.

Description

Methylthioadenosine phosphorylase (MTAP) is a cytoplasmic metabolic enzyme that plays a central role in the methionine salvage pathway, catalyzing the conversion of methylthioadenosine to adenine and methylthioribose-1-phosphate. This reaction is essential for nucleotide recycling and maintenance of methionine homeostasis, linking MTAP activity directly to cellular metabolism and proliferation. MTAP (MTAP) is broadly expressed in normal tissues, particularly within epithelial and glandular compartments, where active metabolic turnover is required. MTAP Antibody for IHC / Tumor Metabolism

Marker Antibody is optimized for detecting this enzyme in formalin-fixed, paraffin-embedded tissues, enabling evaluation of metabolic protein expression in histological context. For knockdown-validated detection of MTAP as a metabolic marker, see our MTAP antibody.

MTAP antibody, also referred to as Methylthioadenosine phosphorylase antibody, demonstrates a characteristic cytoplasmic staining pattern in immunohistochemistry, consistent with the enzyme's intracellular localization. In normal human tissues, IHC analysis shows widespread and relatively uniform expression across a variety of organs, including epithelial linings, glandular structures, and metabolically active parenchymal cells. This baseline expression provides a clear reference for assessing changes in MTAP levels in disease states and supports its use in comparative tissue analysis.

Tissue microarray (TMA) analysis across large panels of normal and cancer tissues highlights a defining feature of MTAP biology: its frequent loss in malignant cells. While normal tissues typically retain moderate to strong cytoplasmic staining, many tumor samples show markedly reduced or completely absent MTAP expression. This loss is observed across multiple tumor types and often appears as a sharp contrast between negative tumor regions and adjacent MTAP-positive stromal or non-neoplastic cells, creating a distinct and interpretable staining pattern. The inclusion of extensive TMA data strengthens confidence in the reproducibility of this expression profile across diverse tissue types and disease contexts.

Functionally, MTAP loss is closely linked to alterations in tumor metabolism and cell cycle regulation. The MTAP gene is located near the CDKN2A locus on chromosome 9p21, and co-deletion of these regions is common in a wide range of cancers. As a result, loss of MTAP expression frequently accompanies disruption of tumor suppressor pathways, making it a useful surrogate marker in studies of genomic deletion events. In IHC, this manifests as absence of cytoplasmic staining in tumor cells despite preserved expression in surrounding normal tissue, providing a built-in internal control that enhances interpretability.

In lymphoid tissues and other proliferative environments, MTAP staining may appear more heterogeneous, reflecting differences in metabolic activity among cell populations. In contrast, epithelial tumors often show more uniform loss or reduction of staining, depending on the extent of genomic alteration. These patterns are readily visualized in TMA formats, where parallel analysis of multiple tissue types enables direct comparison of staining intensity and distribution.

Immunohistochemical staining with MTAP antibody clone MSVA-741R produces clear cytoplasmic signal with minimal background, supporting reliable identification of MTAP-positive and MTAP-negative cell populations. The combination of strong normal tissue expression, frequent tumor-associated loss, and robust performance in tissue microarrays makes this antibody particularly well suited for studies of tumor metabolism, biomarker discovery, and tissue-based analysis of gene deletion-associated phenotypes.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the MTAP Antibody for IHC / Tumor Metabolism Marker Antibody should be determined by the researcher.

2. This MTAP Antibody for IHC is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant human MTAP protein fragment within amino acids 97-196 (exact sequence is proprietary) was used as the immunogen for the MTAP Antibody for IHC.

Storage

MTAP Antibody for IHC with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

MTAP antibody, Methylthioadenosine phosphorylase antibody, MTAP IHC antibody, MTAP tumor metabolism antibody, MTAP cancer biomarker antibody