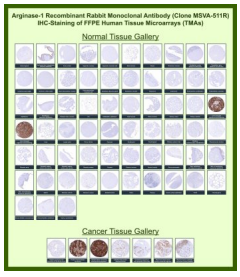
ARG1 Antibody for IHC / Arginase-1 Immunohistochemistry Antibody [clone MSVA-511R] (V6093)

Catalog No.	Formulation	Size
V6093-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6093-20UG	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-511R
UniProt	P05089
Localization	Cytoplasm, Cytoplasmic granule
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This ARG1 Antibody for IHC / Arginase-1 Immunohistochemistry Antibody is available for research use only.



ARG1 Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Arginase 1 / ARG1 in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal antibody clone MSVA-511R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates strong cytoplasmic localization in hepatocytes within liver tissue, consistent with the known hepatic expression pattern, while most other normal tissues remain largely negative. Within tumor tissue microarrays, strong cytoplasmic staining is observed in hepatocellular carcinoma, supporting hepatocyte lineage identification, whereas most non-hepatic malignancies show minimal to no staining. Evaluation across large TMA panels enables direct comparison of ARG1 expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported expression profiles in the Human Protein Atlas and support its use as a marker of hepatocellular differentiation.

Description

Arginase-1 (ARG1) is a cytosolic enzyme encoded by the ARG1 gene that catalyzes the final step of the urea cycle, converting L-arginine into urea and ornithine. This enzyme plays a central role in nitrogen metabolism and detoxification of ammonia in the liver. Arginase-1 is highly expressed in hepatocytes and represents one of the most characteristic metabolic enzymes of liver tissue. ARG1 Antibody for IHC (clone MSVA-511R) enables immunohistochemical detection of arginase-1 protein in formalin-fixed, paraffin-embedded tissue sections, allowing visualization of hepatocyte-specific expression within intact tissue architecture.

Immunohistochemistry analysis of arginase-1 typically demonstrates strong cytoplasmic staining in hepatocytes, reflecting the enzymeÃ¢Â€Â™s cytosolic localization and metabolic role in the urea cycle. ARG1 Antibody for IHC (clone MSVA-511R) is designed for immunohistochemical detection of arginase-1 in FFPE tissues, where the antibody produces clear cytoplasmic chromogenic staining in arginase-positive cells. This staining pattern allows direct visualization of hepatocyte populations and facilitates identification of liver-derived cells within tissue specimens.

Because arginase-1 expression is highly enriched in hepatocytes, immunohistochemistry detection of ARG1 is widely used to examine liver tissue structure and hepatocellular differentiation. Strong cytoplasmic staining in hepatocytes provides a distinctive morphological pattern that distinguishes liver parenchymal cells from surrounding stromal and non-hepatic tissues. The ability to visualize arginase-1-positive cells within histologic sections makes ARG1 Antibody for IHC (clone MSVA-511R) particularly useful for studies examining liver tissue architecture and hepatocyte biology.

Tissue microarray immunohistochemistry analysis further supports the tissue-specific expression pattern of arginase-1. In large panels of normal tissues, arginase-1 immunostaining is typically strongest in hepatocytes of the liver while most other tissues show minimal or absent staining. Such tissue distribution patterns are consistent with gene expression datasets and reinforce the value of ARG1 immunohistochemistry for identifying hepatocellular differentiation within complex tissue samples.

Immunohistochemical analysis of arginase-1 is also widely used in cancer research, particularly in the evaluation of hepatocellular carcinoma. Tumor cells derived from hepatocytes frequently retain arginase-1 expression, and visualization of cytoplasmic ARG1 staining in tumor cells can support identification of hepatocellular lineage. The ability to evaluate arginase-1 expression directly within tumor tissue architecture highlights the importance of immunohistochemistry-based detection approaches.

ARG1 Antibody for IHC (clone MSVA-511R) is a recombinant rabbit monoclonal antibody developed for immunohistochemistry applications targeting arginase-1 protein. By enabling clear cytoplasmic staining of hepatocyte populations in FFPE tissues, this antibody supports studies focused on liver biology, hepatocyte differentiation, and tissue-based analysis of arginase-1 expression.

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 ARG1 Antibody for IHC / Arginase-1 Immunohistochemistry Antibody should be determined by the researcher.

2. This ARG1 / Arginase 1 antibody 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 ARG1 protein fragment (aa300-400) (exact sequence is proprietary) was used as the immunogen for the ARG1 / Arginase 1 antibody.

Storage

ARG1 / Arginase 1 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

Arginase-1 antibody, ARG1 antibody, Liver arginase antibody, Arginine metabolism enzyme ARG1 antibody