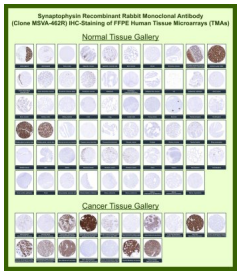
Synaptophysin Antibody for IHC / SYP Immunohistochemistry Antibody [clone MSVA-462R] (V6116)

Catalog No.	Formulation	Size
V6116-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6116-20UG	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-462R
UniProt	P08247
Localization	Cell junction, Cytoplasmic vesicle, Secretory vesicle, Synapse, Synaptic vesicle membrane, Synaptosome
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This SYP/Synaptophysin antibody is available for research use only.



Synaptophysin Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Synaptophysin SYP in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal Synaptophysin antibody clone MSVA-462R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates the characteristic granular cytoplasmic pattern in neuronal and neuroendocrine cell populations, consistent with synaptic vesicle localization of SYP. In normal tissue microarrays, staining is observed in neuroendocrine and neuronal tissues, while many other tissue types show minimal signal. Within tumor tissue microarrays, strong cytoplasmic staining highlights tumors with neuroendocrine differentiation, including small cell carcinoma and neuroendocrine tumors, whereas most non-neuroendocrine tumors remain largely negative. Evaluation across large TMA panels enables direct comparison of Synaptophysin expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported SYP expression profiles in the Human Protein Atlas.

Description

Synaptophysin (SYP) is a synaptic vesicle glycoprotein widely expressed in neurons and neuroendocrine cells where it functions as a major component of synaptic vesicle membranes involved in neurotransmitter storage and vesicle trafficking. Synaptophysin Antibody for IHC / SYP Immunohistochemistry Antibody (clone MSVA-462R) is a recombinant rabbit monoclonal antibody developed specifically for immunohistochemistry staining of Synaptophysin protein in formalin-fixed paraffin-embedded (FFPE) tissue sections. Synaptophysin is one of the most widely used neuroendocrine markers in immunohistochemistry and is routinely used in pathology to identify tumors with neuroendocrine differentiation. Because of its robust and characteristic staining pattern, Synaptophysin immunohistochemistry is commonly used to evaluate neuroendocrine tumors including small cell carcinoma, carcinoid tumors, pancreatic neuroendocrine tumors, neuroblastoma, and other malignancies demonstrating neuroendocrine lineage differentiation.

In immunohistochemistry staining of FFPE tissues, Synaptophysin typically shows a distinctive granular cytoplasmic staining pattern corresponding to synaptic vesicle membranes within neuronal and neuroendocrine cells. Synaptophysin Antibody for IHC enables visualization of these vesicle-associated structures within tissue sections, allowing identification of neuroendocrine cell populations in both normal tissues and tumors. Immunohistochemistry detection of SYP therefore provides an important tool for studying neuroendocrine differentiation and for evaluating tumor samples where neuroendocrine lineage markers are being investigated. The characteristic punctate cytoplasmic staining observed by immunohistochemistry reflects the localization of Synaptophysin within synaptic vesicle membranes.

Clone MSVA-462R is produced as a recombinant rabbit monoclonal antibody, combining the high affinity epitope recognition typical of rabbit-derived antibodies with the consistency of recombinant antibody technology. Recombinant rabbit monoclonal antibodies are generated from defined antibody sequences expressed in controlled recombinant systems, allowing highly reproducible antibody production and consistent immunohistochemistry staining results across manufacturing batches. The recombinant rabbit monoclonal format supports reliable detection of Synaptophysin protein in FFPE tissues and provides consistent staining performance for immunohistochemistry experiments examining neuroendocrine markers.

Extensive validation using human tissue microarray (TMA) panels further supports the immunohistochemistry performance of this antibody. Tissue microarrays contain hundreds of individual tissue cores representing diverse normal organs and multiple tumor types, enabling systematic immunohistochemistry evaluation of protein expression patterns across large tissue cohorts. TMA-based immunohistochemistry analysis with Synaptophysin Antibody for IHC demonstrates cytoplasmic staining patterns consistent with known Synaptophysin expression in neuronal and neuroendocrine tissues while allowing comparison of expression across numerous tumor types. Human tissue microarray validation provides important evidence supporting antibody performance in immunohistochemistry by enabling evaluation of staining specificity, tissue distribution, and tumor-associated expression patterns across extensive normal and cancer tissue panels.

Synaptophysin Antibody for IHC / SYP Immunohistochemistry Antibody (clone MSVA-462R) therefore provides a recombinant rabbit monoclonal antibody optimized for immunohistochemistry detection of the Synaptophysin synaptic vesicle protein. The combination of recombinant rabbit monoclonal antibody technology and large-scale human tissue microarray immunohistochemistry analysis supports reliable visualization of SYP expression in studies investigating neuroendocrine differentiation, neuronal biology, and neuroendocrine tumor pathology.

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 Synaptophysin Antibody for IHC should be determined by the researcher.

2. This SYP/Synaptophysin 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

A recombinant fragment (around amino acids 274-313) of human Synaptophysin (SYP) protein (exact sequence is proprietary) was used as the immunogen for the Synaptophysin Antibody for IHC.

Storage

SYP/Synaptophysin antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

SYP antibody, Synaptophysin antibody, Synaptic vesicle glycoprotein antibody, Major synaptic vesicle protein p38 antibody

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