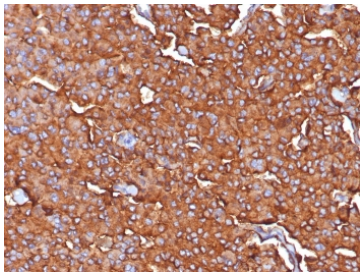
Synaptophysin Antibody Rabbit Monoclonal Clone SYP/7976R / Synaptophysin (SYP) Antibody [clone SYP/7976R] (V5336)

Catalog No.	Formulation	Size
V5336-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5336-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5336SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

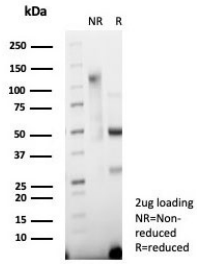
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	SYP/7976R
Purity	Protein A/G affinity
UniProt	P08247
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Synaptophysin antibody is available for research use only.



Synaptophysin Antibody Rabbit Monoclonal Clone SYP/7976R. Immunohistochemistry analysis of FFPE human adrenal tissue demonstrates strong cytoplasmic HRP-DAB brown staining in adrenal medullary neuroendocrine cells, consistent with Synaptophysin (SYP) localization in secretory vesicles. The staining pattern highlights clusters of neuroendocrine cells within the adrenal medulla, while surrounding cortical tissue shows minimal signal. Hematoxylin counterstain marks nuclei in blue. The rabbit monoclonal Synaptophysin antibody clone SYP/7976R was used to detect synaptic vesicle protein expression in human adrenal tissue. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining.



SDS-PAGE analysis of purified, BSA-free Synaptophysin Antibody Rabbit Monoclonal Clone SYP/7976R as confirmation of integrity and purity.

Description

Synaptophysin (SYP) is an integral synaptic vesicle membrane glycoprotein that is highly enriched in presynaptic terminals of neurons and in neuroendocrine secretory vesicles. Synaptophysin Antibody Rabbit Monoclonal Clone SYP/7976R is used to detect SYP protein in studies of neuronal synapses and neuroendocrine cells where Synaptophysin functions as a well-established marker of synaptic vesicle membranes. Because synaptic vesicles are abundant in neuronal tissue, detection of SYP provides a reliable indicator of presynaptic vesicle presence and neuronal synapse density in biological research.

Synaptophysin is also known as synaptic vesicle glycoprotein p38 or major synaptic vesicle protein p38 and is encoded by the SYP gene. The protein contains four transmembrane domains that anchor it within synaptic vesicle membranes where it participates in vesicle trafficking, vesicle recycling, and neurotransmitter release. Through interactions with vesicle-associated proteins involved in membrane fusion and exocytosis, Synaptophysin contributes to the regulation of synaptic vesicle cycling within presynaptic terminals.

Within neurons, Synaptophysin localizes primarily to presynaptic boutons along axons where clusters of synaptic vesicles accumulate before neurotransmitter release occurs. Because of this localization, Synaptophysin is widely used as a molecular marker of synaptic vesicle abundance and presynaptic compartments. Detection of SYP enables researchers to study synaptic vesicle distribution and evaluate neuronal connectivity in experimental models of brain function and neurological disease.

Clone SYP/7976R is a rabbit monoclonal antibody developed to recognize Synaptophysin protein in neuronal and neuroendocrine tissues. Rabbit monoclonal antibodies are frequently used in protein detection studies because they provide strong target recognition and consistent performance in experimental assays. Clone SYP/7976R detects the vesicle-associated Synaptophysin protein present in synaptic vesicle membranes and supports investigation of synaptic vesicle protein expression in neuroscience research.

Synaptophysin expression is abundant throughout the central nervous system including the cerebral cortex, hippocampus, cerebellum, and spinal cord where synapses are densely distributed. The protein is also present in neuroendocrine cells such as pancreatic islet cells, adrenal medulla chromaffin cells, and endocrine cells of the gastrointestinal tract. Because of this distribution, SYP serves as a widely used marker for neuronal lineage cells and neuroendocrine differentiation in biological research.

Due to its strong association with synaptic vesicle membranes and presynaptic compartments, Synaptophysin remains one of the most widely used proteins for studying synaptic vesicle biology and neuronal communication. Detection of SYP using clone SYP/7976R supports research into synaptic vesicle trafficking, neuronal signaling pathways, and synapse-associated changes in neurological disease models.

Application Notes

Optimal dilution of the Synaptophysin Antibody Rabbit Monoclonal Clone SYP/7976R should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 274-313) from the human protein was used as the immunogen for the Synaptophysin antibody.

Storage

Aliquot the Synaptophysin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

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