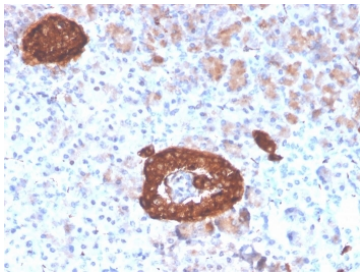
Synaptophysin Antibody Recombinant Mouse MAb Clone rSYP/4654 / Synaptophysin (SYP) Antibody [clone rSYP/4654] (V8644)

Catalog No.	Formulation	Size
V8644-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8644-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8644SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

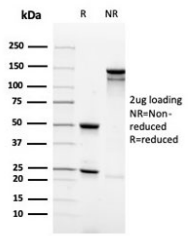
Recombinant MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2a, kappa
Clone Name	rSYP/4654
Purity	Protein G affinity chromatography
UniProt	IDP08247
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This Synaptophysin antibody is available for research use only.



Synaptophysin Antibody Recombinant Mouse MAb Clone rSYP/4654. Immunohistochemistry analysis of FFPE human pancreas tissue shows strong cytoplasmic HRP-DAB brown staining in pancreatic islet cells, consistent with Synaptophysin (SYP) localization in neuroendocrine secretory vesicles. Positive staining highlights endocrine cells within the islets of Langerhans, while surrounding exocrine pancreatic tissue shows minimal staining. Hematoxylin counterstain marks nuclei in blue. The recombinant mouse monoclonal Synaptophysin antibody clone rSYP/4654 was used to detect synaptic vesicle protein expression in human pancreatic neuroendocrine cells. 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 Recombinant Mouse MAb Clone rSYP/4654 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 Recombinant Mouse MAb Clone rSYP/4654 is used to detect SYP protein in studies of neuronal synapses and neuroendocrine cell biology where Synaptophysin serves as a widely recognized marker of synaptic vesicle membranes. Because synaptic vesicles are abundant in neuronal tissue, detection of SYP provides a reliable indicator of presynaptic vesicle distribution and neuronal synapse density in biological research.

Synaptophysin is also referred to 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 at neuronal synapses. 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 prior to neurotransmitter release. 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 rSYP/4654 is a recombinant mouse monoclonal antibody developed to recognize Synaptophysin protein in neuronal and neuroendocrine tissues. Recombinant monoclonal antibodies provide defined antibody sequences and consistent performance for detecting target proteins across research applications. Clone rSYP/4654 recognizes 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 rSYP/4654 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 Recombinant Mouse MAb Clone rSYP/4654 should be determined by the researcher.

Immunogen

A portion of amino acids 224-313 from the human protein was used as the immunogen for the recombinant Synaptophysin antibody.

Storage

Store the recombinant Synaptophysin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

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

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