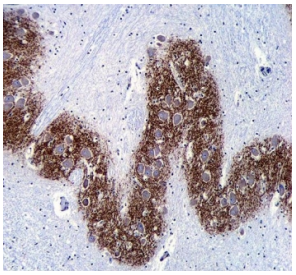
Synaptophysin Antibody Rabbit Polyclonal / SYP Polyclonal Antibody (F54371)

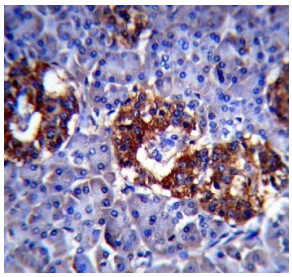
Catalog No.	Formulation	Size
F54371-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54371-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

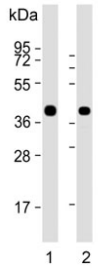
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P08247
Applications	Immunohistochemistry (FFPE): 1:25 Western blot: 1:500-1:2000
Limitations	This Synaptophysin antibody is available for research use only.



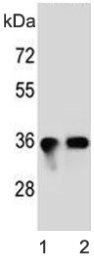
Synaptophysin Antibody Rabbit Polyclonal. Immunohistochemistry analysis of FFPE human brain tissue demonstrates strong cytoplasmic HRP-DAB brown staining consistent with Synaptophysin (SYP) localization in presynaptic vesicle compartments of neuronal tissue. Positive staining highlights neuronal processes and synapse-rich neuropil regions where synaptic vesicles are densely distributed, while surrounding tissue structures show minimal background signal. Hematoxylin counterstain marks nuclei in blue. The rabbit polyclonal Synaptophysin antibody was used to detect synaptic vesicle protein expression in human brain tissue. Heat-induced epitope retrieval was performed by steaming sections in pH6 citrate buffer for 20 minutes followed by cooling prior to staining.



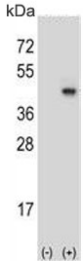
IHC testing of FFPE human pancreas tissue with Synaptophysin antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



Synaptophysin Antibody Rabbit Polyclonal for WB. Western blot analysis of human brain (lane 1) and human cerebellum (lane 2) lysates shows a distinct band at approximately 34-38 kDa, consistent with the predicted molecular weight of Synaptophysin (SYP). Synaptophysin is an integral synaptic vesicle membrane glycoprotein that is highly enriched in neuronal presynaptic terminals, and strong expression in brain and cerebellar tissue is expected due to the high density of synaptic vesicles in neuronal neuropil. The rabbit polyclonal Synaptophysin antibody detects SYP protein in human neuronal tissue.



Western blot testing of mouse 1) brain and 2) cerebellum lysate with Synaptophysin antibody. Predicted molecular weight: 34-38 kDa.



Western blot testing of 1) non-transfected and 2) transfected 293 cell lysate with Synaptophysin antibody.

Description

Synaptophysin (SYP) is a synaptic vesicle membrane glycoprotein that is highly enriched in presynaptic terminals of neurons and in neuroendocrine secretory vesicles. Synaptophysin Antibody Rabbit Polyclonal is widely used in neuroscience and neuroendocrine research to detect synaptic vesicle proteins and identify presynaptic structures within neuronal tissue. Because Synaptophysin is tightly associated with synaptic vesicle membranes, antibodies targeting SYP provide a reliable method for identifying synaptic vesicle populations and studying neuronal communication.

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 fusion machinery and other vesicle-associated proteins, Synaptophysin helps regulate the organization and cycling of synaptic vesicles that support neurotransmission at neuronal synapses.

Within neurons, Synaptophysin localizes predominantly to presynaptic boutons along axons and neuronal processes where synaptic vesicles accumulate before neurotransmitter release. Detection of SYP therefore provides an effective way to visualize presynaptic compartments and synaptic vesicle distribution. A Synaptophysin Antibody Rabbit Polyclonal can recognize multiple epitopes on the Synaptophysin protein, which can enhance detection of vesicle-associated protein

across diverse experimental conditions and tissue preparations.

Synaptophysin expression is abundant throughout the central nervous system including the cerebral cortex, hippocampus, cerebellum, and spinal cord. 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 expression pattern, SYP serves as a widely used marker for neuronal lineage cells and neuroendocrine differentiation in biological research.

Rabbit polyclonal Synaptophysin antibodies are frequently used in microscopy and protein detection experiments where recognition of multiple epitopes can improve signal detection of vesicle-associated proteins. In neuronal cells, SYP localization often appears as vesicle-associated cytoplasmic staining corresponding to clusters of synaptic vesicles within presynaptic terminals. This staining pattern enables researchers to investigate synaptic vesicle organization, neuronal connectivity, and synapse formation in experimental models.

Due to its strong presynaptic localization and role in vesicle trafficking, Synaptophysin remains one of the most widely used markers for identifying synaptic vesicles and studying synaptic biology. Detection of SYP using a rabbit polyclonal Synaptophysin antibody supports research into neuronal development, synaptic plasticity, neurodegenerative disease mechanisms, and neuroendocrine cell biology.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Synaptophysin Antibody Rabbit Polyclonal may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 225-253 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

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