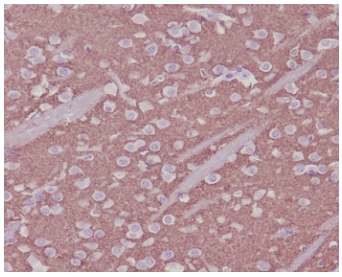
Synaptophysin Antibody Recombinant Rabbit MAb Clone BGB-19 / Synaptophysin (SYP) Antibody [clone BGB-19] (RQ5210)

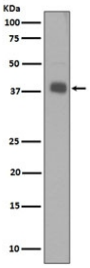
Catalog No.	Formulation	Size
RQ5210	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	BGB-19
Purity	Affinity purified
UniProt	P08247
Localization	Cytoplasmic
Applications	Western blot: 1:1000-1:2000 Immunohistochemistry (FFPE): 1:50-1:200
Limitations	This Synaptophysin antibody is available for research use only.



Synaptophysin Antibody Recombinant Rabbit MAb Clone BGB-19. Immunohistochemistry analysis of FFPE mouse brain tissue demonstrates widespread cytoplasmic HRP-DAB brown staining within neurons and surrounding neuropil, consistent with Synaptophysin (SYP) localization in presynaptic vesicle membranes. The staining pattern highlights synapse-rich neuronal regions where synaptic vesicles are densely distributed along neuronal processes. Hematoxylin counterstain marks nuclei in blue. The recombinant rabbit monoclonal Synaptophysin antibody clone BGB-19 was used to detect synaptic vesicle protein expression in mouse brain tissue. Heat-induced epitope retrieval was performed by boiling tissue sections in pH6 10mM citrate buffer for 10-20 minutes followed by cooling prior to staining.



Western blot testing of human SH-SY5Y cell lysate with Synaptophysin Antibody Recombinant Rabbit MAb Clone BGB-19. Predicted molecular weight: 34-38 kDa.

Description

Synaptophysin (SYP) is a synaptic vesicle membrane glycoprotein that plays a central role in neuronal communication and synaptic transmission. Synaptophysin Antibody Recombinant Rabbit MAb Clone BGB-19 is used to detect SYP protein in studies focused on brain tissue and neuronal signaling, where Synaptophysin serves as one of the most widely used molecular markers of presynaptic vesicles. Because synaptic vesicles are densely concentrated within neuronal synapses, detection of SYP allows researchers to examine synapse-rich regions and evaluate neuronal network organization within the brain.

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, enabling it to function as a structural component of vesicle membranes involved in neurotransmitter storage and release. Through interactions with proteins associated with vesicle fusion and exocytosis, Synaptophysin contributes to the regulation of synaptic vesicle trafficking and neurotransmitter release at neuronal synapses.

In the brain, Synaptophysin is highly enriched within presynaptic terminals of neurons where synaptic vesicles accumulate prior to neurotransmitter release. These presynaptic vesicle clusters are especially abundant within neuronal processes that form complex synaptic networks throughout the cerebral cortex, hippocampus, cerebellum, and other brain regions. Because of this localization, SYP is frequently used as a molecular indicator of synaptic density and neuronal connectivity in studies investigating brain development, neural circuitry, and neurological disease.

Clone BGB-19 is a recombinant rabbit monoclonal antibody developed to recognize Synaptophysin protein in neuronal tissue. Recombinant rabbit monoclonal antibodies are widely used in neuroscience research due to their strong target recognition and consistent performance in detecting neuronal proteins. Clone BGB-19 recognizes Synaptophysin present in synaptic vesicle membranes and supports investigation of synaptic vesicle protein expression in neuronal cells and brain tissue.

Synaptophysin expression is abundant throughout the central nervous system, reflecting the widespread distribution of synapses required for neuronal communication. High levels of SYP are found in regions of the brain containing dense synaptic networks, including the cerebral cortex, hippocampus, cerebellum, and brainstem. Because these regions contain large numbers of synaptic vesicles, Synaptophysin detection is commonly used to evaluate synapse-rich neuropil and to study neuronal signaling pathways within brain tissue.

Due to its strong association with synaptic vesicle membranes and presynaptic terminals, Synaptophysin remains one of the most widely studied proteins in neuroscience. Detection of SYP using Synaptophysin Antibody Recombinant Rabbit MAb Clone BGB-19 supports investigation of neuronal connectivity, synaptic vesicle organization, and mechanisms of synaptic transmission in experimental models of brain function and neurological disease.

Application Notes

Optimal dilution of the Synaptophysin Antibody Recombinant Rabbit MAb Clone BGB-19 should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Synaptophysin / SYP was used as the immunogen for the Synaptophysin antibody.

Storage

Store the Synaptophysin antibody at -20oC.

Alternate Names

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

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