

# Anti-Synaptophysin Picoband Antibody

Catalog # ABO12100

### Specification

# **Anti-Synaptophysin Picoband Antibody - Product Information**

ApplicationWBPrimary AccessionP08247HostRabbitReactivityHuman, Mouse, RatClonalityPolyclonalFormatLyophilizedDescriptionRabbit IgG polyclonal antibody for Synaptophysin(SYP) detection. Tested with WB inHuman;Mouse;Rat.Human;Mouse;Rat.

**Reconstitution** Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

### Anti-Synaptophysin Picoband Antibody - Additional Information

Gene ID 6855

**Other Names** Synaptophysin, Major synaptic vesicle protein p38, SYP

Calculated MW 33845 MW KDa

**Application Details** Western blot, 0.1-0.5 μg/ml, Mouse, Rat, Human <br>

**Subcellular Localization** Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane; Multi-pass membrane protein. Cell junction, synapse, synaptosome.

#### **Tissue Specificity**

Characteristic of a type of small (30-80 nm) neurosecretory vesicles, including presynaptic vesicles, but also vesicles of various neuroendocrine cells of both neuronal and epithelial phenotype.

Protein Name Synaptophysin

**Contents** Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human Synaptophysin(1-26aa MLLLADMDVVNQLVAGGQFRVVKEPL), identical to the related mouse and rat



#### sequences.

**Purification** Immunogen affinity purified.

**Cross Reactivity** No cross reactivity with other proteins.

Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities Belongs to the synaptophysin/synaptobrevin family.

### Anti-Synaptophysin Picoband Antibody - Protein Information

Name SYP

Function

Possibly involved in structural functions as organizing other membrane components or in targeting the vesicles to the plasma membrane. Involved in the regulation of short-term and long-term synaptic plasticity (By similarity).

**Cellular Location** 

Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane; Multi-pass membrane protein. Synapse, synaptosome

**Tissue Location** 

Expressed in the brain, with expression in the hippocampus, the neuropil in the dentate gyrus, where expression is higher in the outer half of the molecular layer than in the inner half, and in the neuropil of CA4 and CA3 (PubMed:8838578). Expressed in the putamen (at protein level) (PubMed:17296554)

## Anti-Synaptophysin Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Anti-Synaptophysin Picoband Antibody - Images





Anti- Synaptophysin Picoband antibody, ABO12100, Western blottingAll lanes: Anti Synaptophysin (ABO12100) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugPredicted bind size: 34KDObserved bind size: 34KD

## Anti-Synaptophysin Picoband Antibody - Background

SYP(Synaptophysin) is located on the short arm of X chromosome (Xp11.23-p11.22). The protein is a synaptic vesicle glycoprotein with four transmembrane domains weighing 38kDa. It is present inneuroendocrine cells and in virtually all neurons in the brain and spinal cord that participate in synaptic transmission. It acts as a marker for neuroendocrine tumors, and its ubiquity at the synapse has led to the use of synaptophysin immunostaining for quantification of synapses. Also, the protein binds cholesterol and is thought to direct targeting of vesicle-associated membrane protein 2 (synaptobrevin) to intracellular compartments. Mutations in this gene are associated with X-linked mental retardation (XLMR).