

**SYP Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1385a**

**Specification**

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**SYP Antibody - Product Information**

Application	<b>WB, IHC, FC, IF</b>
Primary Accession	<a href="#">P08247</a>
Reactivity	<b>Human, Rat</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>33.8kDa KDa</b>

**Description**

Synaptophysin (p38) is an integral membrane protein of small synaptic vesicles in brain and endocrine cells. Synaptophysin contains four transmembrane domains that form a hexameric channel or gap junction-like pore. Synaptophysin binds to the SNARE protein synaptobrevin/VAMP, which prevents the inclusion of synaptobrevin in the synaptic vesicle fusion complex and creates a pool of synaptobrevin for exocytosis when synapse activity increases. Synaptophysin is also responsible for targeting synaptobrevin 2/VAMP2 to synaptic vesicles, a critical component of the fusion complex.

**Immunogen**

Purified recombinant fragment of SYP expressed in E. Coli.

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**SYP Antibody - Additional Information**

**Gene ID** 6855

**Other Names**

Synaptophysin, Major synaptic vesicle protein p38, SYP

**Dilution**

WB~~1/500 - 1/2000

IHC~~1/200 - 1/1000

FC~~1:200~~400

IF~~1:200~1000.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

SYP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## SYP 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)

## SYP Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## SYP Antibody - Images

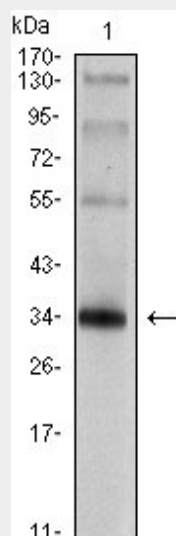


Figure 1: Western blot analysis using SYP mouse mAb against rat brain tissue lysate.

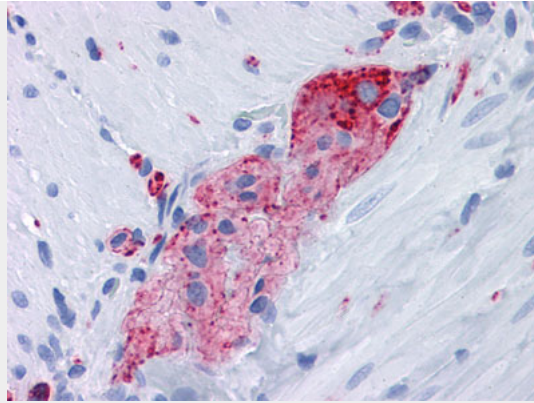


Figure 2: Immunohistochemical analysis of paraffin-embedded human Small Intestine, myenteric plexus tissues using anti-SYP mouse mAb

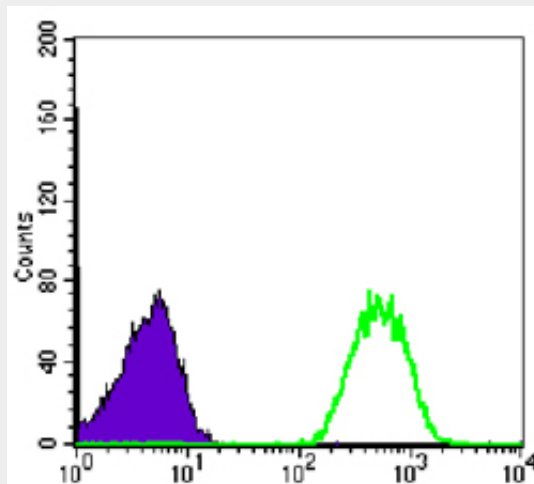


Figure 4: Flow cytometric analysis of Jurkat cells using NME1 mouse mAb (green) and negative control (purple).

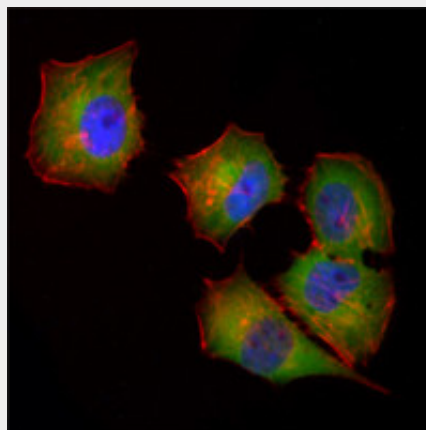


Figure 2: Immunofluorescence analysis of HeLa cells using NME1 mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

**SYP Antibody - References**

1. Cancer. 2007 Oct 15;110(8):1776-81. 2. J Gastroenterol Hepatol. 2008 Oct;23(10):1574-85. 3. Virchows Arch. 2009 Aug;455(2):125-32.