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#4329

## Synaptophysin Antibody

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 38	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P08247	<b>Entrez-Gene Id:</b> 6855
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### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

Synaptophysin Antibody detects endogenous levels of total synaptophysin protein.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala230 of human synaptophysin. Antibodies are purified by peptide affinity chromatography.

### Background

Synaptophysin (SYP) is a neuronal synaptic vesicle glycoprotein that is expressed in neuroendocrine cells and neoplasms (1). Synaptophysin contains four transmembrane domains that form a hexameric channel or gap junction-like pore (2). 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 (3). Synaptophysin is also responsible for targeting synaptobrevin 2/VAMP2 to synaptic vesicles, a critical component of the fusion complex (4).

### Background References

1. Wiedenmann, B. et al. (1986) *Proc Natl Acad Sci USA* 83, 3500-4.
2. Valtorta, F. et al. (2004) *Bioessays* 26, 445-53.
3. Arthur, C.P. and Stowell, M.H. (2007) *Structure* 15, 707-14.
4. Bonanomi, D. et al. (2007) *Biochem J* 404, 525-34.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

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