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#12270**Synaptophysin (7H12) Mouse mAb**

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	38	Mouse IgG1	#P08247	6855

**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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Synaptophysin (7H12) Mouse mAb recognizes endogenous levels of total synaptophysin protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human synaptophysin protein.

**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 nonfat dry milk, 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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