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Synaptophysin (7H12) Mouse mAb (IF Formulated)

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

Applications: IF-F	Reactivity: H M R	Sensitivity: Endogenous	Source/Isotype: Mouse IgG1	UniProt ID: #P08247	Entrez-Gene Id: 6855
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Product Usage Information

Application

Immunofluorescence (Frozen)

Dilution

1:200

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 (IF Formulated) recognizes endogenous levels of total synaptophysin protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to 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).

Applications Key

IF-F: Immunofluorescence (Frozen)

Cross-Reactivity Key

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

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