Anti-Synaptophysin, clone SY38

Monoclonal Antibody

Cat. # MAB5258-I
Lot # 2814664

Pack Size: **100 µL**
Concentration: **0.5 mg/mL**
Storage: **2-8°C**

FOR RESEARCH USE ONLY
NOT FOR USE IN DIAGNOSTIC PROCEDURES
NOT FOR HUMAN OR ANIMAL CONSUMPTION

Certificate of Analysis

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Applications	Species Cross-Reactivity	Antibody Isotype	Epitope/ Region	Host Species	Molecular Weight	Accession #
IHC(P), IF, WB, ICC	M, B, H, R	IgG1κ	N/A	M	~38 kDa	NP_776388

Immunogen
Presynaptic vesicles from bovine brain (Wiedenmann, B., and Franke, W.W. (1985). Cell. 41(3):1017-1028).

Specificity
Clone SY38 detects synaptophysin and stains synaptophysin-containing vesicles by targeting the flexible segment -SGGGG- in the center of the C-termimal pentapeptide repeats (Knaus, P., and Betz, H. (1990). FEBS Lett. 261(2):358-360).

Species Cross-reactivity
Bovine (B), Human (H), Mouse (M), Rat (R).

Molecular Weight
~38 kDa observed. 33.91/34.03/33.31 kDa (bovine/mouse/rat), 33.85/20.76 kDa (human isoform 1/2) calculated. Uncharacterized bands may be observed in some lysate(s).

Method of Purification
Protein G purified.

Presentation
Purified mouse IgG1 in buffer containing 0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl with 0.05% sodium azide.

Storage and Handling
Stable for 1 year at 2-8°C from date of receipt.

Quality Control Testing
Evaluated by Western Blotting in mouse hypothalamus tissue lysate.

Western Blotting Analysis (WB): A 1:1,000 dilution of this antibody detected Synaptophysin in 10 µg of mouse hypothalamus tissue lysate.

Additional Applications
Immunohistochemistry Analysis (IHC): A 1:50 dilution from a representative lot detected Synaptophysin in human cerebellum and cerebral cortex tissue sections.

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Additional Applications

Western Blotting Analysis (WB): A 1:1,000 dilution from a representative lot detected Synaptophysin in 10 µg of rat hippocampus and human whole brain tissue lysates.

Immunocytochemistry Analysis (ICC): Representative lots immunostained presynaptic vesicles of 4% formaldehyde-fxied, 0.2% Triton X-100-permeabilzied primary mouse hippocampal neurons by fluorescent immunocytochemistry (Hu, X., *et al*. (2008). *J. Neurosci.* 28(49):13094-13105; Tarr, P.T., and Edwards, P.A. (2008). J. Lipid Res. 49(1):169-182).

Immunofluorescence Analysis (IF): A representative lot immunostained presynaptic membrane of neurons by fluorescent immunohistochemistry staining of 4% paraformaldehyde-fixed, 0.3% Triton X-100-permeabilized, OCT-embedded rat spinal cord cryosections (Stück, E.D., *et al.* (2012). *Neural Plast.* 2012:261345).

Immunofluorescence Analysis (IF): A representative lot immunostained synaptophysin around a large neuron in the ventral horn of the lumbar (L3/L4) segment by fluorescent immunohistochemistry staining of 2% paraformaldehyde/0.2% parabenzoquinone-fixed free-floating rat spinal cord sections (Macias, M., *et al.* (2009). *BMC Neurosci.* 10:144).

Immunofluorescence Analysis (IF): A representative lot immunostained synaptophysin in bovine (pancreas) and human (pancreas, pheochromocytoma, and islet-cell carcinoma) frozen tissue sections (Wiedenmann, B., *et al.* (1986). *Proc. Natl. Acad. Sci. U.S.A.* 83(10):3500-3504).

Western Blotting Analysis (WB): A representative lot detected an upregulated synaptophysin expression in human iPSCs with a 4-bp deletion in DISC1 gene (Wen, Z., *et al.* (2014). *Nature.* 515(7527):414-418).

Western Blotting Analysis (WB): A representative lot detected synaptophysin distribution among PC12 rat pheochromocytoma cell membrane fractions (Salazar, G., *et al.* (2005). *Mol. Biol. Cell.* 16(8):3692-3704).

Western Blotting Analysis (WB): A representative lot detected only synaptophysin recombinant contructs that contained the flexible segment -SGGGG- in the center of the c-terminal pentapeptide repeats (Knaus, P., and Betz, H. (1990). FEBS Lett. 261(2):358-360).

For sample data please visit – www.emdmillipore.com

References

1. Wen, Z., *et al.* (2014). *Nature.* 515(7527):414-418.
2. Stück, E.D., *et al.* (2012). *Neural Plast.* 2012:261345.
3. Macias, M., *et al.* (2009). *BMC Neurosci.* 10:144.
4. Tarr, P.T., and Edwards, P.A. (2008). J. Lipid Res. 49(1):169-182.
5. Salazar, G., *et al.* (2005). *Mol. Biol. Cell.* 16(8):3692-3704.
6. Knaus, P., and Betz, H. (1990). FEBS Lett. 261(2):358-360.
7. Wiedenmann, B., *et al.* (1986). *Proc. Natl. Acad. Sci. U.S.A.* 83(10):3500-3504.