

Datasheet: MCA1307

Description:	MOUSE ANTI HUMAN SYNAPTOPHYSIN
Specificity:	SYNAPTOPHYSIN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	SP15
Isotype:	IgM
Quantity:	0.2 mg

Product Details

RRID AB_2198861

Applications This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin (1)	▪			1/25
ELISA	▪			
Immunoprecipitation			▪	
Western Blotting	▪			1/500

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1)This product requires antigen retrieval using heat treatment prior to staining of paraffin sections.Sodium citrate buffer pH 6.0 is recommended for this purpose.

Target Species Human

Species Cross Reactivity Reacts with: Hamster, Rat, Marmoset
N.B. Antibody reactivity and working conditions may vary between species.

Product Form Purified IgM - liquid

Preparation Purified IgM prepared by ammonium sulphate precipitation

Buffer Solution Phosphate buffered saline

Preservative Stabilisers 0.09% Sodium Azide

Approx. Protein Isotype concentration 1.0 mg/ml

Concentrations

Immunogen Crude human synaptic immunoprecipitate.

External Database Links

UniProt:

[P08247](#) [Related reagents](#)

Entrez Gene:

[6855](#) SYP [Related reagents](#)

Fusion Partners

Spleen cells from immunised BALB/c mice were fused with cells of the NSO mouse myeloma cell line.

Specificity

Mouse anti Human Synaptophysin antibody, clone SP15 recognizes human synaptophysin, also known as Major synaptic vesicle protein p38. Synaptophysin is a 313 amino acid synaptic vesicle associated protein of ~38kDa containing a single [marvel](#) domain. Synaptophysin expression is ubiquitous in synaptic vesicle membranes where it is the most abundant protein and is involved in the regulation of endocytosis ([Kwon et al. 2011](#))

Loss and atypical expression of synaptophysin is noted in conditions such as Huntindon's disease ([Goto and Hirano 1990](#)) and Alzheimer's disease ([Masliah et al. 1989](#)). Mutations in the synaptophysin gene have been identified and lead to a condition, Mental retardation, X-linked 96 ([Tarpey et al. 2009](#)).

Mouse anti human synaptophysin antibody, clone SP15 has been used for the detection of synaptophysin by immunofluorescence, immunohistochemistry and western blotting on murine ([Vitry et al. 2009](#)), marmoset ([Ramirez et al. 2001](#)), rat ([Barr et al. 2004](#)), lapine ([Roher et al. 2000](#)) and human tissues ([Beach et al. 1997](#)).

Histology Positive Control Tissue

Pancreas

References

1. Honer, W.G. *et al.* (1994) Hippocampal synaptic pathology in patients with temporal lobe epilepsy. [Acta Neuropathol. 87 \(2\): 202-10.](#)
2. Honer, W.G. *et al.* (1992) Regional synaptic pathology in Alzheimer's disease. [Neurobiol Aging. 13 \(3\): 375-82.](#)
3. Honer, W.G. *et al.* (1993) Human synaptic proteins with a heterogeneous distribution in cerebellum and visual cortex. [Brain Res. 609: 9-20.](#)
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6. Masliah, E. *et al.* (1994) Topographical distribution of synaptic-associated proteins in the neuritic plaques of Alzheimer's disease hippocampus. [Acta Neuropathol. 87 \(2\): 135-42.](#)
7. Simpson, I.A. *et al.* (1994) Decreased concentrations of GLUT1 and GLUT3 glucose transporters in the brains of patients with Alzheimer's disease. [Ann Neurol. 35 \(5\): 546-51.](#)
8. Wakabayashi, K. *et al.* (1994) Synapse alterations in the hippocampal entorhinal formation in Alzheimer's disease with and without Lewy body disease. [Brain Research 667: 24-32.](#)
9. Dickson, D.W. *et al.* (1994) Hippocampal sclerosis: a common pathological feature of dementia in very old (> or = 80 years of age) humans. [Acta Neuropathol. 88 \(3\): 212-21.](#)
10. Dickson, D.W. *et al.* (1995) Correlations of synaptic and pathological markers with cognition of the elderly. [Neurobiol Aging 16: 285-98.](#)

11. Vitry, S. *et al.* (2010) Enhanced degradation of synaptophysin by the proteasome in mucopolysaccharidosis type IIIB. [Mol Cell Neurosci. 41: 8-18.](#)
12. Khan, O.H. *et al.* (2006) Brain damage in neonatal rats following kaolin induction of hydrocephalus. [Exp Neurol. 200 \(2\): 311-20.](#)
13. Del Bigio, M.R. *et al.* (2003) Chronic hydrocephalus in rats and humans: white matter loss and behavior changes. [Ann Neurol. 53 \(3\): 337-46.](#)

Storage Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee 18 months from date of despatch.

Health And Safety Information Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)

Goat Anti Mouse IgM (STAR138...) [Alk. Phos.](#)

Human Anti Mouse IgM (HCA040...) [FITC](#)

Recommended Negative Controls

[MOUSE IgM NEGATIVE CONTROL \(MCA692\)](#)

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'M353839:190530'

Printed on 30 May 2019

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