

Synaptophysin Monoclonal Antibody (SYP02)

Catalog NumberMA5-11575

Product data sheet

Details		Species Reactivity	
Size	500 µL	Species reactivity	Human, Mouse, Rat
Host/Isotope	Mouse / IgG1	Published species	Human, Mouse
Class	Monoclonal	Tested ApplicationsDilution *	
Type	Antibody	Immunohistochemistry (Paraffin) (IHC (P))	1:100
Clone	SYP02	Western Blot (WB)	1:250
Immunogen	A synthetic peptide encoding a region near the C-terminal end of the synaptophysin protein	Published Applications	
Conjugate	Unconjugated	Immunohistochemistry (IHC)	See 6 publications below
Form	Liquid	Immunocytochemistry (ICC/IF)	See 1 publications below
Concentration	Conc. Not Determined	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Storage buffer	tissue culture supernatant		
Contains	0.09% sodium azide		
Storage Conditions	4° C		

Product specific information

MA5-11575 targets Synaptophysin in IHC (P) applications and shows reactivity with Human and Rat samples. The MA5-11575 immunogen is a synthetic peptide encoding a region near the C-terminal end of the synaptophysin protein.

Background/Target Information

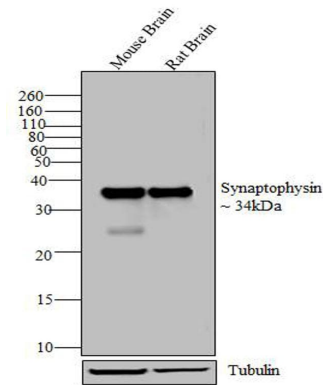
Synaptophysin is a calcium-binding and integral membrane glycoprotein present in presynaptic vesicles in almost all neurons. Synaptophysin has four transmembrane domains and it forms a complex with dynamin at high calcium concentrations suggesting an involvement in synaptic vesicle endocytosis. It is also involved in the regulation of short-term and long-term synaptic plasticity. Synaptophysin is currently the most widely used marker for nerve terminals and for differentiating neuroendocrine tumors. Mutations in the gene can result in mental retardation, X-linked 96.

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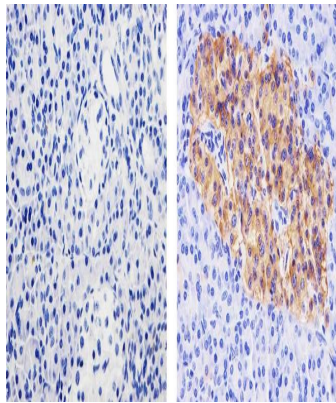
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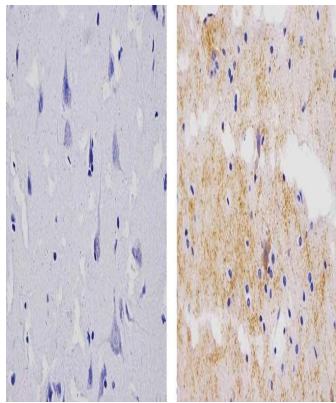
Synaptophysin Antibody (MA5-11575) in WB

Western blot analysis was performed on tissue lysates (30 µg) of Mouse Brain (Lane 1) and Rat Brain (Lane 2). The blots were probed with Synaptophysin Mouse monoclonal Antibody (Product # MA5-11575, 1:250 dilution) and detected by chemiluminescence using Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, HRP conjugate (Product # A28177, 0.4µg/mL, 1:2500 dilution). A 34 kDa band corresponding to Synaptophysin was observed across tissues tested. Known quantity of protein samples were electrophoresed using Novex® NuPAGE® 12 % Bis-Tris gel (Product # NP0341BOX), XCell SureLock™ Electrophoresis System (Product # EI0002) and Novex® Sharp Pre-Stained Protein Standard (Product # LC5800). Resolved proteins were then transferred onto a nitrocellulose membrane iBlot® 2 Dry Blotting System (Product # IB21001). The membrane was probed with the relevant primary and secondary Antibody following blocking with 5 % skimmed milk. Chemiluminescent detection was performed using Pierce™ ECL Western Blotting Substrate (Product # 32106).



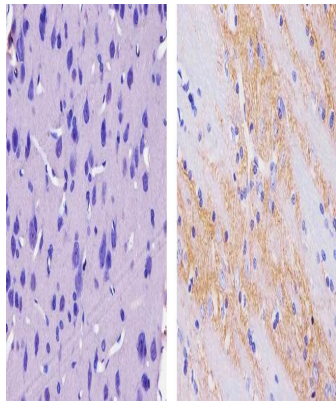
Synaptophysin Antibody (MA5-11575) in IHC (P)

Immunohistochemistry analysis of Synaptophysin showing staining in the cytoplasm of paraffin-embedded human pancreas tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with a Synaptophysin Mouse Monoclonal Antibody (Product # MA5-11575) diluted in 3% BSA-PBS at a dilution of 1:100 for 1 hour at 37°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



Synaptophysin Antibody (MA5-11575) in IHC (P)

Immunohistochemistry analysis of Synaptophysin showing staining in the cytoplasm of paraffin-embedded human brain tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with a Synaptophysin Mouse Monoclonal Antibody (Product # MA5-11575) diluted in 3% BSA-PBS at a dilution of 1:100 for 1 hour at 37°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



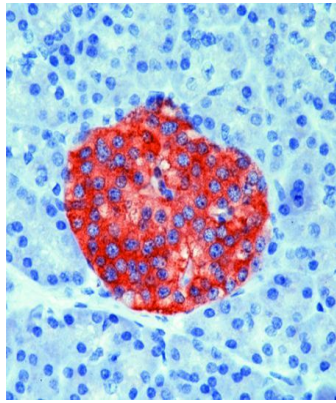
Synaptophysin Antibody (MA5-11575) in IHC (P)

Immunohistochemistry analysis of Synaptophysin showing staining in the cytoplasm of paraffin-embedded rat brain tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with a Synaptophysin Mouse Monoclonal Antibody (Product # MA5-11575) diluted in 3% BSA-PBS at a dilution of 1:100 for 1 hour at 37°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

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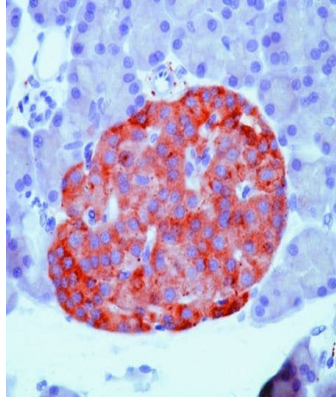
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Synaptophysin Antibody (MA5-11575) in IHC (P)

Formalin-fixed, paraffin-embedded human pancreas stained with Synaptophysin antibody using peroxidase-conjugate and AEC chromogen. Note cytoplasmic staining of secretory cells in the islets of Langerhans.



Synaptophysin Antibody (MA5-11575) in IHC (P)

Formalin-fixed, paraffin-embedded rat pancreas stained with Synaptophysin antibody using peroxidase-conjugate and AEC chromogen. Note cytoplasmic staining of secretory cells in the islets.

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PubMed References For Synaptophysin Monoclonal Antibody (SYP02)

6 Immunohistochemistry References

Species / Dilution	Summary
Human / 1:200	MA5-11575 was used in immunohistochemistry to report on a case of desmoplastic small round cell tumor of the submandibular gland
	Human pathology (2010; 41: 438) "Desmoplastic small round cell tumor of the submandibular gland--a rare but distinctive primary salivary gland neoplasm." Author(s):Yin WH,Guo SP,Yang HY,Chan JK PubMed Article URL: http://dx.doi.org/10.1016/j.humpath.2009.08.015
Human / 1:100	MA5-11575 was used in immunohistochemistry to report on four cases of papillary glioneuronal tumor
	Child's nervous system : ChNS : official journal of the International Society for Pediatric Neurosurgery (2012; 28: 1897) "Papillary glioneuronal tumor--a rare entity: report of four cases and brief review of literature." Author(s):Agarwal S,Sharma MC,Singh G,Suri V,Sarkar C,Garg A,Kumar R,Chandra PS PubMed Article URL: http://dx.doi.org/10.1007/s00381-012-1860-3
Human / Not Cited	MA5-11575 was used in immunohistochemistry to report on a case of invasive lobular carcinoma with extracellular mucin
	Diagnostic pathology (2012; 7:) "Invasive lobular carcinoma with extracellular mucin as a distinct variant of lobular carcinoma: a case report." Author(s):Haltas H,Bayrak R,Yenidunya S,Kosehan D,Sen M,Akin K PubMed Article URL: http://dx.doi.org/10.1186/1746-1596-7-91
Human / 1:400	MA5-11575 was used in immunohistochemistry to report on four cases of carcinoid-like pattern in melanoma
	The American Journal of dermatopathology (2009; 31: 542) "Carcinoid-like pattern in melanoma: report of 4 cases." Author(s):Kacerovska D,Michal M,Sosna B,Cempirkova D,Ambrus M,Richtr P,Danis D,Zelger B,Kazakov DV PubMed Article URL: http://dx.doi.org/10.1097/DAD.0b013e3181a8525a
Human / 1:100	MA5-11575 was used in immunohistochemistry to report on a case of cerebellar liponeurocytoma/lipidized medulloblastoma
	Journal of neuro-oncology (2005; 71: 53) "Cerebellar liponeurocytoma/lipidized medulloblastoma." Author(s):Aker FV,Ozkara S,Eren P,Peker O,Armaan S,Hakan T PubMed Article URL: http://dx.doi.org/10.1007/s11060-004-9172-4
Human / 1:500	MA5-11575 was used in immunohistochemistry to report on a case of primary signet-ring cell carcinoma of the cervix
	International journal of gynecological pathology : official journal of the International Society of Gynecological Pathologists (2010; 29: 181) "Primary signet-ring cell carcinoma of the cervix: case report and review of the literature." Author(s):Balci S,Saglam A,Usubutun A PubMed Article URL: http://dx.doi.org/10.1097/PGP.0b013e3181b70176

1 Immunocytochemistry References

Species / Dilution	Summary
Mouse / 1:50	MA5-11575 was used in immunocytochemistry to develop a culture system in which lens, neural retina and pigmented retina structures can be induced from embryonic stem cells
	Developmental dynamics : an official publication of the American Association of Anatomists (2003; 228: 664) "Generation of structures formed by lens and retinal cells differentiating from embryonic stem cells." Author(s):Hirano M,Yamamoto A,Yoshimura N,Tokunaga T,Motohashi T,Ishizaki K,Yoshida H,Okazaki K,Yamazaki H, Hayashi S,Kunisada T PubMed Article URL: http://dx.doi.org/10.1002/dvdy.10425

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