

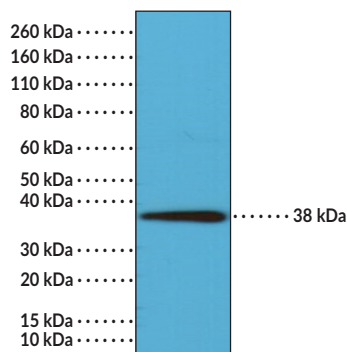
PRODUCT INFORMATION

Synaptophysin (C-Term) Rabbit Monoclonal Antibody (Clone RM258) Item No. 32213

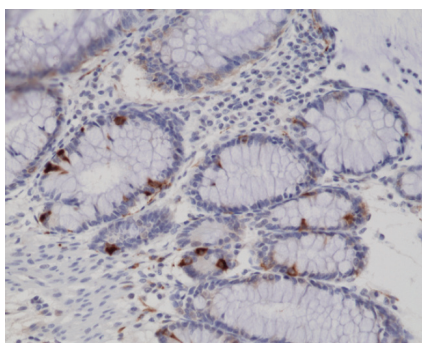
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	SYP, Major Synaptic Vesicle Protein p38
Immunogen:	Peptide from the C-terminal region of synaptophysin
Cross Reactivity:	(+) Synaptophysin
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM258
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:1,000-1:2,000 for IHC and 1:200-1:500 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of HeLa whole cell lysates using Synaptophysin (C-Term) Rabbit Monoclonal Antibody (Clone RM258).



Immunohistochemical staining of formalin-fixed and paraffin-embedded human colon tissue using Synaptophysin (C-Term) Rabbit Monoclonal Antibody (Clone RM258) at a dilution of 1:200.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/31/2024

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Synaptophysin is a transmembrane glycoprotein found in synaptic vesicle membranes of the CNS, neuroendocrine tissues, and certain tumors.^{1,2} It is composed of a cytoplasmic N-terminus, four transmembrane domains with the two intravesicular loops containing one disulfide bond per loop, and a cytoplasmic C-terminus containing ten pentapeptide repeat domains.¹ Nine of the repeat domains begin with a tyrosine residue subject to phosphorylation.³ Synaptophysin interacts with the v-SNARE synaptobrevin and the GTPase dynamin to facilitate exo-endocytosis coupling in the release of neurotransmitters.³⁻⁵ Mutations in *SYP*, the gene encoding synaptophysin, are associated with X-linked intellectual disability.⁶ Synaptophysin has commonly been used as a marker of synapses and synapse vesicles in the brain.¹ Cayman's Synaptophysin (C-Term) Rabbit Monoclonal Antibody (Clone RM258) can be used for immunohistochemistry (IHC) and Western blot (WB) applications. The antibody recognizes synaptophysin at approximately 38 kDa from human samples.

References

1. Valtorta, F., Pennuto, M., Bonanomi, D., *et al.* Synaptophysin: Leading actor or walk-on role in synaptic vesicle exocytosis? *Bioessays* **26(4)**, 445-453 (2004).
2. Wiedenmann, B., Franke, W.W., Kuhn, C., *et al.* Synaptophysin: a marker protein for neuroendocrine cells and neoplasms. *Proc. Natl. Acad. Sci. USA*. **83(10)**, 3500-3504 (1986).
3. Evans, G.J.O. and Cousin, M.A. Tyrosine phosphorylation of synaptophysin in synaptic vesicle recycling. *Biochem. Soc. Trans.* **33(Pt 6)**, 1350-1353 (2005).
4. Kwon, S.E. and Chapman, E.R. Synaptophysin regulates the kinetics of synaptic vesicle endocytosis in central neurons. *Neuron* **70(5)**, 847-854 (2011).
5. Xie, Z., Long, J., Liu, J., *et al.* Molecular mechanisms for the coupling of endocytosis to exocytosis in neurons. *Front. Mol. Neurosci.* **10**, 47 (2017).
6. Tarpey, P.S., Smith, R., Pleasance, E., *et al.* A systematic, large-scale resequencing screen of X-chromosome coding exons in mental retardation. *Nat. Genet.* **41(5)**, 535-543 (2009).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM