

#5461 Store at -20°C

# Synaptophysin (D35E4) Rabbit mAb



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	38	Rabbit IgG	#P08247	6855

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
	Immunoprecipitation	1:25
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 (D35E4) Rabbit mAb detects endogenous levels of total synaptophysin protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide surrounding Ala230 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	<ol style="list-style-type: none"> <li>1. Wiedenmann, B. et al. (1986) <i>Proc Natl Acad Sci USA</i> 83, 3500-4.</li> <li>2. Valtorta, F. et al. (2004) <i>Bioessays</i> 26, 445-53.</li> <li>3. Arthur, C.P. and Stowell, M.H. (2007) <i>Structure</i> 15, 707-14.</li> <li>4. Bonanomi, D. et al. (2007) <i>Biochem J</i> 404, 525-34.</li> </ol>	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	<b>WB:</b> Western Blotting <b>IP:</b> Immunoprecipitation
Cross-Reactivity Key	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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