Technical Data Sheet

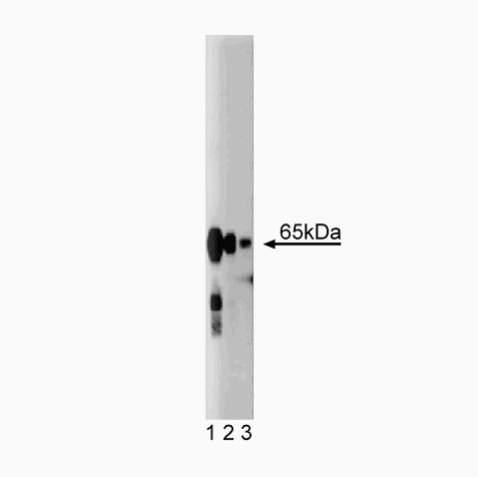
Purified Mouse Anti-Synaptotagmin

Product Information

Material Number:	**610433**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	41/Synaptotagmin
Immunogen:	Rat Synaptotagmin aa. 72-223
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human
Target MW:	65 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Synaptotagmin (p65) is an abundant synaptic vesicle protein that contains a single transmembrane region and two copies of an internal repeat that is homologous to the regulatory region of Protein Kinase C. It appears that synaptotagmin has a regulatory role in the synaptic vesicle pathway, particularly in vesicle docking and/or fusion with the plasmalemma. A model has been proposed to explain docking, activation, and fusion of synaptic vesicles with donor membranes. This model suggests that VAMP/synaptobrevin and synaptotagmin (vSNARE) on the synaptic vesicle, and SNAP-25 and syntaxin (tSNAREs) on the plasma membrane, interact to form a 7S complex. Two additional soluble proteins, αSNAP and NSF, are later added to the 7S complex, accompanied by the loss of synaptotagmin. The resulting 20S complex contains syntaxin, SNAP-25, VAMP, αSNAP, and NSF. Genetic studies in several species demonstrate that mutation or deletion of synaptotagmin results in a large decrease in Ca2+ triggered transmitter release. Mammalian synapses that lack synaptotagmin show a selective decrease in a fast component of release, suggesting that synaptotagmin is the Ca2+ sensor triggering exocytosis.



***Western blot analysis of Synaptotagmin on rat brain lysate**. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of anti-Synaptotagmin.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

Application Notes

Application

Western blot	Routinely Tested
Immunoprecipitation	Not Recommended
Immunofluorescence	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml .

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit **bdbiosciences.com/how_to_order/**

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Duncan RR, Don-Wauchope AC, Tapechum S, Shipston MJ, Chow RH, Estibeiro P. High-efficiency Semliki Forest virus-mediated transduction in bovine adrenal chromaffin cells. *Biochem J.* 1999; 342(Pt 3):497-501.(Clone-specific: Western blot)

Liu Y, Fallon L, Lashuel HA, Liu Z, Lansbury PT Jr. The UCH-L1 gene encodes two opposing enzymatic activities that affect alpha-synuclein degradation and Parkinson's disease susceptibility. *Cell.* 2002; 111(2):209-218.(Clone-specific: Western blot)

Perin MS, Johnston PA, Ozcelik T, Jahn R, Francke U, Sudhof TC. Structural and functional conservation of synaptotagmin (p65) in Drosophila and humans. *J Biol Chem.* 1991; 266(1):615-622.(Biology)

Ramalho-Santos J, Moreno RD. SNAREs in mammalian sperm: possible implications for fertilization. *Dev Biol.* 2000; 223(1):54-69.(Clone-specific: Immunofluorescence, Western blot)

Scheller RH. Membrane trafficking in the presynaptic nerve terminal. *Neuron.* 1995; 14(5):893-897.(Biology)