Technical Data Sheet

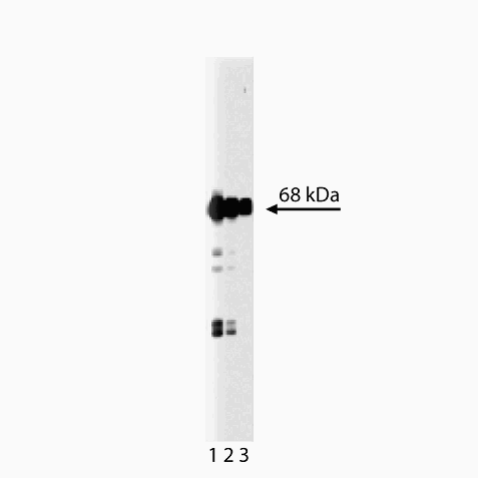
Purified Mouse Anti- Munc-18

Product Information

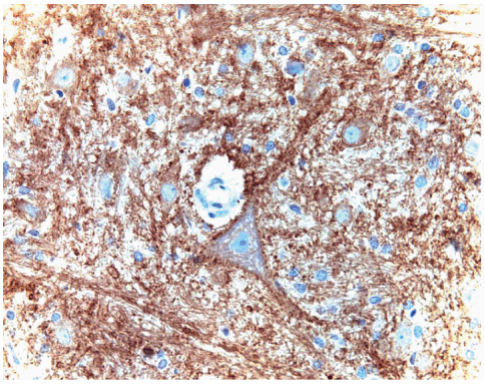
Material Number:	**610336**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	31/Munc-18
Immunogen:	Rat Munc-18-1 aa. 381-567
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Mouse, Human
Target MW:	68 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

There are two Munc-18 isoforms: Munc-18-1 and Munc-18-2. Munc-18-1 (n-sec1 or rb-sec1; 68 kDa) is a neuronal protein that binds tightly to syntaxin 1 and functions in synaptic vesicle exocytosis. Munc-18-2 exhibits 63% amino acid sequence identity with Munc-18-1. Although Munc-18-2 is expressed in most tissues, Munc-18-1 is primarily expressed in brain. Both forms of Munc-18 bind tightly to syntaxins 1A, 2, and 3, but not to syntaxin 4. Syntaxin 1A is a plasma membrane protein implicated in synaptic vesicle docking. Following calcium entry into the presynaptic nerve terminal, the neurotransmitter-containing synaptic vesicle fuses with the plasma membrane at a region known as the active zone. Thus, by virtue of its interaction with syntaxin 1A, Munc-18-1 is thought to have an essential function in neurotransmitter release.



Western blot analysis of Munc-18 on a rat cerebrum lysate. *Lane 1: 1:5000, lane 2: 1:10,000, lane 3: 1:20,000 dilution of the mouse anti- Munc-18 antibody.*



Immunohistochemical staining for Munc-18 on a formalin-fixed, paraffin-embedded rat brain section with citrate buffer pretreatment (40X magnification).

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
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development
Immunoprecipitation	Tested During Development

Recommended Assay Procedure:

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

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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)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

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

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Hata Y, Slaughter CA, Sudhof TC. Synaptic vesicle fusion complex contains unc-18 homologue bound to syntaxin. *Nature.* 1993; 366(6453):347-351.(Biology)

Shuang R, Zhang L, Fletcher A, Groblewski GE, Pevsner J, Stuenkel EL. Regulation of Munc-18/syntaxin 1A interaction by cyclin-dependent kinase 5 in nerve endings. *J Biol Chem.* 1998; 273(9):4957-4966.(Biology: Immunoprecipitation, Western blot)

Torii S, Zhao S, Yi Z, Takeuchi T, Izumi T. Granuphilin modulates the exocytosis of secretory granules through interaction with syntaxin 1a. *Mol Cell Biol.* 2002; 22(15):5518-5526.(Biology: Western blot)

Zhang W, Efanov A, Yang SN, et al. Munc-18 associates with syntaxin and serves as a negative regulator of exocytosis in the pancreatic beta -cell. *J Biol Chem.* 2000; 275(52):41521-41527.(Biology: Western blot)