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Datasheet for ABIN967910

anti-STXBP1 antibody (AA 18-1)

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Overview

| | |
|----------------------|--|
| Quantity: | 50 µg |
| Target: | STXBP1 |
| Binding Specificity: | AA 18-1 |
| Reactivity: | Human, Mouse, Rat |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This STXBP1 antibody is un-conjugated |
| Application: | Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunoprecipitation (IP) |

Product Details

| | |
|-------------------|---|
| Immunogen: | Rat Munc-18-1 aa. 381-567 |
| Clone: | 31-Munc |
| Isotype: | IgG1 |
| Cross-Reactivity: | Mouse (Murine), Human |
| Characteristics: | <ol style="list-style-type: none">1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.2. Please refer to us 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. |

Product Details

Purification: The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target: STXBP1

Alternative Name: Munc-18 ([STXBP1 Products](#))

Background: 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.

Molecular Weight: 68 kDa

Pathways: [Synaptic Vesicle Exocytosis](#), [Dicarboxylic Acid Transport](#)

Application Details

Comment: Related Products: ABIN968545, ABIN967389

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 250 µg/mL

Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C

Storage Comment: Store undiluted at -20°C.

Publications

Product cited in:

Torii, Zhao, Yi, Takeuchi, Izumi: "Granuphilin modulates the exocytosis of secretory granules through interaction with syntaxin 1a." in: **Molecular and cellular biology**, Vol. 22, Issue 15, pp. 5518-26, (2002) ([PubMed](#)).

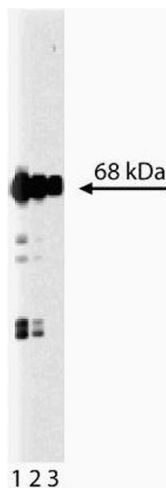
Fisher, Pevsner, Burgoyne: "Control of fusion pore dynamics during exocytosis by Munc18." in: **Science (New York, N.Y.)**, Vol. 291, Issue 5505, pp. 875-8, (2001) ([PubMed](#)).

Zhang, Efanov, Yang, Fried, Kolare, Brown, Zaitsev, Berggren, Meister: "Munc-18 associates with syntaxin and serves as a negative regulator of exocytosis in the pancreatic beta -cell." in: **The Journal of biological chemistry**, Vol. 275, Issue 52, pp. 41521-7, (2001) ([PubMed](#)).

Shuang, Zhang, Fletcher, Groblewski, Pevsner, Stuenkel: "Regulation of Munc-18/syntaxin 1A interaction by cyclin-dependent kinase 5 in nerve endings." in: **The Journal of biological chemistry**, Vol. 273, Issue 9, pp. 4957-66, (1998) ([PubMed](#)).

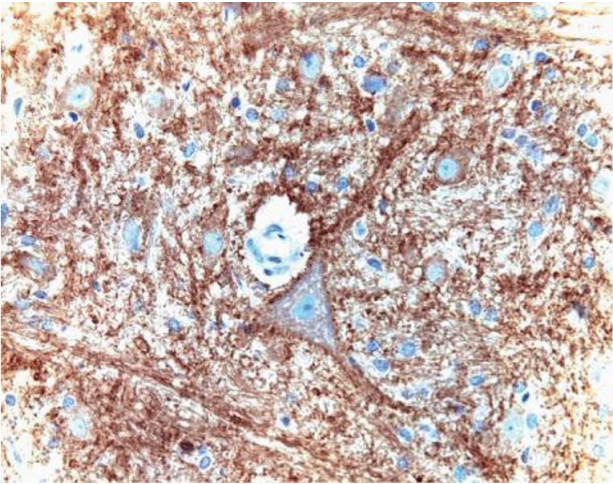
Hata, Slaughter, Südhof: "Synaptic vesicle fusion complex contains unc-18 homologue bound to syntaxin." in: **Nature**, Vol. 366, Issue 6453, pp. 347-51, (1993) ([PubMed](#)).

Images



Western Blotting

Image 1. 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.



Immunohistochemistry (Paraffin-embedded Sections)

Image 2. Immunohistochemical staining for Munc-18 on a formalin-fixed, paraffin-embedded rat brain section with citrate buffer pretreatment (40X magnification).