Datasheet for ABIN967968

anti-Syntaxin 4 antibody (AA 1-280)

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Overview

Quantity:	50 µg
Target:	Syntaxin 4 (STX4)
Binding Specificity:	AA 1-280
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Syntaxin 4 antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Immunofluorescence (IF), Immunohistochemistry (IHC)

Product Details

Immunogen:	Human Syntaxin 4 aa. 1-280
Clone:	49-Syntaxin 4
Isotype:	IgG1
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 4. 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. 5. For fluorochrome spectra and suitable instrument settings, please refer to us.

Product Details

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

Target Details

Target:	Syntaxin 4 (STX4)
Alternative Name:	Syntaxin 4 (STX4 Products)
Background:	Signal transmission between neurons is regulated by the release of neurotransmitters at the synapse. This process is controlled by a complex pathway of membrane trafficking in the presynaptic nerve terminal, which leads to membrane fusion and subsequent neurotransmitter secretion. Syntaxin is involved in three important protein complexes that modulate this process: syntaxin and n-sec1, syntaxin, VAMP and SNAP-25, and syntaxin, VAMP, SNAP-25, alphaSNAP, and NSF (20S complex). 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. It appears that syntaxin associates with -sec1 prior to and/or during the formation of the 7S complex. Two additional soluble proteins, alphaSNAP and NSF, associate with this complex as synaptotagmin releases from the complex. The resulting 20S complex contains syntaxin, SNAP-25, VAMP, alphaSNAP, and NSF. A large region including the N-terminus is involved in binding n-sec1 while both VAMP and SNAP-25 bind within residues 199-288 of syntaxin. Synonyms: STX4
Molecular Weight:	32 kDa
Pathways:	Synaptic Vesicle Exocytosis

Application Details

Comment:	Related Products: ABIN968536, 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.

Handling

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:

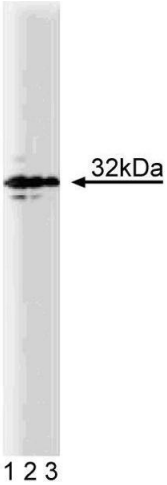
Faigle, Colucci-Guyon, Louvard, Amigorena, Galli: "Vimentin filaments in fibroblasts are a reservoir for SNAP23, a component of the membrane fusion machinery." in: **Molecular biology of the cell**, Vol. 11, Issue 10, pp. 3485-94, (2000) (PubMed).

Ramalho-Santos, Moreno, Sutovsky, Chan, Hewitson, Wessel, Simerly, Schatten: "SNAREs in mammalian sperm: possible implications for fertilization." in: **Developmental biology**, Vol. 223, Issue 1, pp. 54-69, (2000) (PubMed).

Kee, Lin, Hsu, Scheller: "Distinct domains of syntaxin are required for synaptic vesicle fusion complex formation and dissociation." in: **Neuron**, Vol. 14, Issue 5, pp. 991-8, (1995) (PubMed).

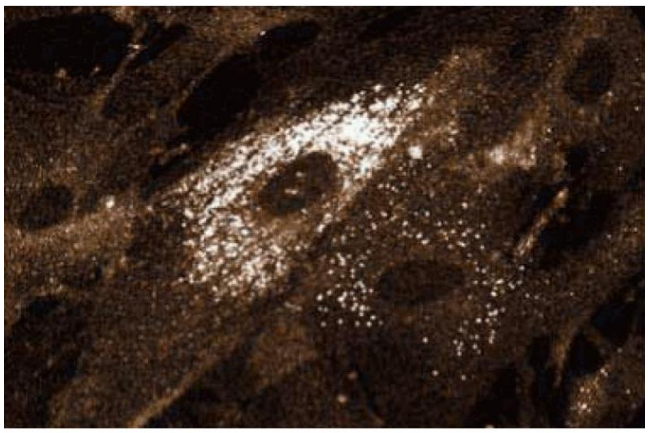
Bennett, Calakos, Scheller: "Syntaxin: a synaptic protein implicated in docking of synaptic vesicles at presynaptic active zones." in: **Science (New York, N.Y.)**, Vol. 257, Issue 5067, pp. 255-9, (1992) (PubMed).

Images



Western Blotting

Image 1. Western blot analysis of Syntaxin 4 on human endothelial lysate. Lane 1: 1:5000, lane 2: 1:10000, lane 3: 1:20000 dilution of anti-syntaxin 4.



Immunofluorescence

Image 2. Immunofluorescent staining on Human Intestinal Smooth Muscle (HISM) cells.

