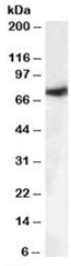
STXBP1 Antibody / Syntaxin Binding Protein 1 Antibody / MUNC18-1 (R36062)

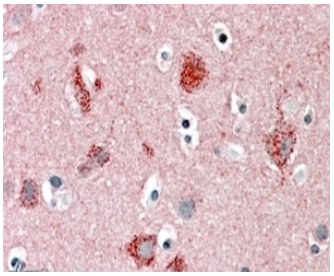
Catalog No.	Formulation	Size
R36062-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	6812
Applications	Western blot: 0.1-0.3ug/ml Immunohistochemistry (FFPE): 5-10ug/ml ELISA (peptide) LOD: 1:16000
Limitations	This STXBP1 Antibody / Syntaxin Binding Protein 1 Antibody is available for research use only.



STXBP1 Antibody Human Brain WB. Western blot testing of human brain lysate with STXBP1 / MUNC18-1 antibody at 0.1 ug/ml. A single prominent band is detected at approximately 69 kDa, consistent with the predicted molecular weight of STXBP1/MUNC18-1. The results demonstrate specific detection of endogenous STXBP1 in human brain tissue.



STXBP1 Antibody Human Cortex IHC. Immunohistochemical staining of FFPE human cortex with STXBP1 / MUNC18-1 antibody at 5 ug/ml. Heat-induced epitope retrieval (HIER) was performed by steaming tissue sections in pH 6 citrate buffer prior to alkaline phosphatase (AP) staining. Strong STXBP1 immunoreactivity is observed predominantly within the cytoplasm of cortical neurons, with little staining of the surrounding neuropil, consistent with the expected neuronal expression pattern of MUNC18-1. Cell nuclei are counterstained with hematoxylin (blue).

Description

STXBP1 Antibody recognizes Syntaxin Binding Protein 1 (STXBP1), a member of the Sec1/Munc18 protein family that plays a fundamental role in regulated vesicle fusion and neurotransmitter release. STXBP1 interacts directly with syntaxin-1 to control assembly of the SNARE complex, an essential step required for synaptic vesicle docking, priming, and membrane fusion at presynaptic nerve terminals. Through these interactions, STXBP1 serves as a central regulator of calcium-dependent exocytosis and efficient synaptic transmission. Because of its indispensable role in neuronal secretion, STXBP1 Antibody is widely used to investigate synaptic biology, vesicle trafficking, and the molecular mechanisms that govern neurotransmitter release.

STXBP1 is expressed predominantly in neurons throughout the central and peripheral nervous systems, where it is required for normal synapse formation, maintenance, and function. Complete loss of STXBP1 severely disrupts synaptic transmission and is incompatible with normal neuronal activity, while partial loss-of-function variants are associated with a spectrum of neurodevelopmental disorders. Pathogenic mutations in the STXBP1 gene have been linked to early infantile epileptic encephalopathy, developmental delay, intellectual disability, autism spectrum disorders, and movement disorders. As a result, STXBP1 Antibody has become an important research tool for studying the molecular basis of epilepsy, developmental brain disorders, and other neurological diseases characterized by impaired synaptic communication.

Beyond its interaction with syntaxin-1, STXBP1 coordinates the activity of multiple proteins involved in vesicle trafficking, including synaptobrevin, SNAP25, Munc13 proteins, and additional components of the exocytotic machinery. The protein undergoes dynamic regulation through phosphorylation and protein-protein interactions that influence synaptic strength, vesicle recycling, and neuronal plasticity. These diverse functions have expanded interest in STXBP1 beyond basic neuroscience into broader studies of intracellular membrane trafficking and regulated secretion. Consequently, STXBP1 Antibody is valuable for examining protein localization, expression, and functional regulation in both normal physiology and disease models.

NSJ Bioreagents offers highly validated STXBP1 Antibody products for reliable detection of endogenous Syntaxin Binding Protein 1 in a variety of experimental systems. These antibodies support investigations into synaptic vesicle biology, neuronal development, neurotransmitter release, and neurological disorders while providing researchers with dependable tools for characterizing STXBP1 expression and function. Whether studying presynaptic organization, vesicle fusion mechanisms, or disease-associated alterations in synaptic signaling, STXBP1 Antibody provides a robust solution for neuroscience and cell biology research.

earn more about the role of MUNC18-1 in synaptic vesicle exocytosis and neurotransmitter release on our MUNC18-1 Antibody / Synaptic Vesicle Exocytosis Protein Antibody page.

Application Notes

Optimal dilution of the STXBP1 Antibody / Syntaxin Binding Protein 1 Antibody should be determined by the researcher.

Immunogen

Amino acids SRVSFEDQAPTME were used as the immunogen for this MUNC18-1 / STXBP1 antibody.

Storage

Aliquot and store the MUNC18-1 / STXBP1 antibody at -20oC.

Alternate Names

MUNC18-1 antibody, Syntaxin-binding protein 1 antibody, Unc18-1 antibody, N-Sec1 antibody, Protein unc-18 homolog 1 antibody, Neuronal Sec1 antibody

Copyright © NSJ Bioreagents. All rights reserved.