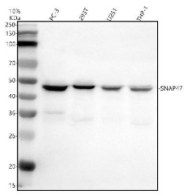
SNAP47 Antibody / Synaptosomal-associated protein 47 (FY12175)

Catalog No.	Formulation	Size
FY12175	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q5SQN1
Applications	Western Blot: 0.25-0.5ug/ml ELISA: 0.1-0.5ug/ml
Limitations	This SNAP47 antibody is available for research use only.



Western blot analysis of SNAP47 using anti-SNAP47 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human PC-3 whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: human THP-1 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SNAP47 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for SNAP47 at approximately 47 kDa. The expected band size for SNAP47 is at 53 kDa.

Description

SNAP47 antibody detects Synaptosomal-associated protein 47, encoded by the SNAP47 gene on chromosome 1q32.1. SNAP47 antibody is commonly used to study this SNARE family protein involved in vesicular trafficking and

neurotransmitter release. SNAP47 belongs to the soluble N-ethylmaleimide-sensitive factor attachment protein receptor (SNARE) superfamily, which mediates vesicle fusion with target membranes. Unlike classical SNAP25, SNAP47 is not palmitoylated and has distinct regulatory functions in neuronal and non-neuronal cells. It is expressed in brain, spinal cord, endocrine tissues, and other organs where vesicle trafficking is critical.

Structurally, SNAP47 contains coiled-coil SNARE motifs that form complexes with other SNARE proteins such as Syntaxins and VAMPs. These complexes enable vesicle docking and membrane fusion. SNAP47 lacks the cysteine-rich palmitoylation sites of SNAP25, which influences its membrane association and trafficking dynamics. It localizes to intracellular membranes, including the Golgi apparatus, recycling endosomes, and synaptic vesicles.

Functionally, SNAP47 regulates synaptic vesicle exocytosis and intracellular trafficking. It contributes to neurotransmitter release by participating in alternative SNARE complexes. SNAP47 also functions in recycling of synaptic vesicles and endosomal sorting, impacting synaptic plasticity and neurotransmission efficiency. Knockdown of SNAP47 in neurons results in impaired neurotransmission and defects in vesicle recycling. Researchers employ SNAP47 antibody to study neurotransmission, SNARE complex assembly, and membrane trafficking pathways.

Clinically, SNAP47 dysregulation has been associated with neuropsychiatric disorders such as schizophrenia and autism spectrum disorders, where altered synaptic vesicle cycling contributes to disease mechanisms. Genome studies have linked SNAP47 variants to cognitive traits and neurological conditions. Aberrant expression has also been observed in certain cancers, where vesicle trafficking contributes to tumor progression. NSJ Bioreagents provides SNAP47 antibody to enable studies of synaptic biology, vesicular trafficking, and disease pathogenesis.

Experimentally, SNAP47 antibody is used in western blotting to detect the ~47 kDa protein, in immunofluorescence microscopy to study intracellular localization, and in immunoprecipitation assays to analyze SNARE complex composition. These tools facilitate detailed exploration of vesicle fusion mechanisms in neurons and other cell types.

Application Notes

Optimal dilution of the SNAP47 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SNAP47 recombinant protein (Position: M1-D440) was used as the immunogen for the SNAP47 antibody.

Storage

After reconstitution, the SNAP47 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Copyright © NSJ Bioreagents. All rights reserved.