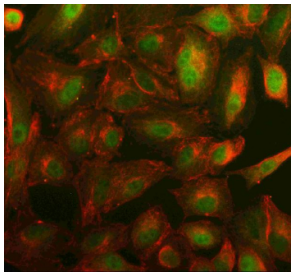
SYT17 Antibody / Synaptotagmin 17 (FY12721)

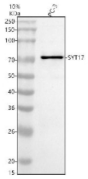
Catalog No.	Formulation	Size
FY12721	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q9BSW7
Localization	Nuclear, cytoplasmic
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This SYT17 antibody is available for research use only.



Immunofluorescent staining of SYT17 using anti-SYT17 antibody (green) and anti-Beta Tubulin antibody (red). SYT17 was detected in an immunocytochemical section of cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-SYT17 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of SYT17 using anti-SYT17 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. 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-SYT17 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 band is observed just above the 70 kDa marker, consistent with the glycosylated and membrane-associated form of SYT17 (predicted 54 kDa) known to migrate slower than its theoretical mass.

Description

SYT17 antibody detects Synaptotagmin-17 (also known as Synaptotagmin XVII), a member of the synaptotagmin family of membrane-trafficking proteins that regulate vesicle docking and fusion. Encoded by the SYT17 gene on chromosome 16q21, this isoform differs from classical synaptotagmins by lacking the N-terminal transmembrane region, suggesting a soluble or peripheral membrane association. SYT17 contains tandem C2 domains that mediate calcium-dependent phospholipid binding and interactions with SNARE complex proteins. Through these domains, Synaptotagmin-17 contributes to intracellular trafficking, membrane remodeling, and possibly exocytosis in non-neuronal tissues.

Unlike canonical synaptotagmins that function in neurotransmitter release, SYT17 is primarily expressed in non-synaptic regions of the brain, kidney, and liver, where it regulates membrane trafficking between the endoplasmic reticulum and Golgi apparatus. It may modulate calcium-sensitive steps in vesicle fusion and contribute to secretory pathway organization. In neurons, SYT17 expression has been linked to dendritic cargo transport and neurite extension, implicating it in intracellular trafficking rather than synaptic vesicle exocytosis. Loss or mutation of SYT17 alters intracellular transport dynamics, potentially affecting neural development and metabolic processes.

The SYT17 antibody is used in neuroscience and cell biology to detect Synaptotagmin-17 expression and subcellular localization. Western blot analysis typically identifies a ~50 kilodalton band, while immunofluorescence reveals punctate cytoplasmic staining consistent with endomembrane localization. In neuronal cultures, SYT17 co-localizes with markers of the Golgi network and early endosomes, indicating its role in vesicular transport. The antibody aids in studying membrane trafficking, calcium signaling, and synaptotagmin family diversification.

Functionally, SYT17 binds phospholipids in a calcium-dependent manner and may participate in regulating the SNARE machinery under specific conditions. It also interacts with proteins involved in vesicle tethering and sorting. Dysregulated SYT17 expression has been reported in certain neurodegenerative disorders and cancers, though its exact pathogenic roles remain under investigation. NSJ Bioreagents provides this SYT17 antibody validated for its applications, ensuring high specificity for basic and translational research on intracellular transport and signaling.

Application Notes

Optimal dilution of the SYT17 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SYT17 recombinant protein (Position: R24-K304) was used as the immunogen for the SYT17 antibody.

Storage

After reconstitution, the SYT17 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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