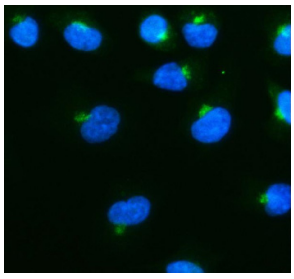
STX10 Antibody / Syntaxin 10 (FY12767)

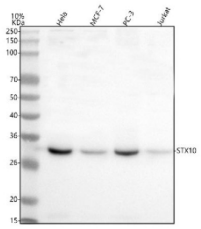
Catalog No.	Formulation	Size
FY12767	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

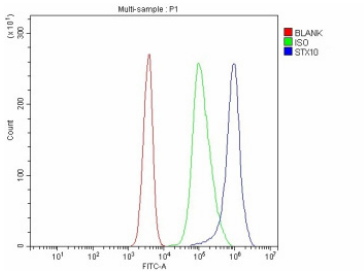
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O60499
Localization	Golgi apparatus
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This STX10 antibody is available for research use only.



Immunofluorescent staining of Syntaxin 10/STX10 using anti-STX10 antibody (green). Syntaxin 10/STX10 was detected in 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 5ug/ml rabbit anti-STX10 antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of Syntaxin 10/STX10 using anti-STX10 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human Jurkat 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-STX10 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 enhanced chemiluminescent. The expected molecular weight of Syntaxin 10/STX10 is at 28 kDa.



Flow Cytometry analysis of JK cells using anti-STX10 antibody. Overlay histogram showing JK cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-STX10 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

STX10 antibody detects Syntaxin-10, a member of the t-SNARE family involved in vesicle trafficking and membrane fusion within the endosomal system. Encoded by the STX10 gene on chromosome 19q13.32, this protein localizes primarily to the trans-Golgi network (TGN) and endosomes, where it regulates cargo recycling and sorting. Syntaxin-10 interacts with other SNARE proteins, including Vti1a, VAMP3, and STX16, forming complexes that mediate vesicle fusion events critical for protein trafficking between the Golgi apparatus and endosomal compartments.

STX10 is essential for maintaining endosomal organization and cargo specificity, particularly in the recycling of mannose 6-phosphate receptors (MPRs) that deliver lysosomal hydrolases. It contributes to the tethering and fusion of vesicles returning from late endosomes to the TGN, a process required for proper lysosome formation and enzyme sorting. Loss of STX10 function disrupts endosomal integrity and leads to defective lysosomal enzyme trafficking, underscoring its role in vesicle-mediated transport.

The STX10 antibody is widely used in cell biology, membrane trafficking, and neurobiology research to investigate SNARE-mediated vesicular transport. Western blot analysis identifies a 30 kilodalton band corresponding to Syntaxin-10, while immunofluorescence reveals punctate perinuclear staining that colocalizes with Golgi and endosomal markers such as TGN46 and Rab9. This antibody supports detailed analysis of intracellular trafficking, organelle organization, and vesicle fusion mechanisms.

Beyond its role in vesicle trafficking, STX10 participates in endosome-to-Golgi transport pathways that maintain protein homeostasis and receptor recycling. It also contributes to specialized trafficking functions in neurons, immune cells, and epithelial tissues. Dysregulation of SNARE complex components, including STX10, has been implicated in neurodegenerative diseases and metabolic disorders where vesicle trafficking pathways are compromised. The STX10 antibody enables researchers to explore these processes and assess Syntaxin-10 function in both normal and pathological conditions. NSJ Bioreagents provides this antibody validated for its applications, ensuring accurate and reproducible detection for studies of intracellular trafficking and membrane fusion.

Application Notes

Optimal dilution of the STX10 antibody should be determined by the researcher.

Immunogen

E.coli-derived human Syntaxin 10/STX10 recombinant protein (Position: K77-K218) was used as the immunogen for the STX10 antibody.

Storage

After reconstitution, the STX10 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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