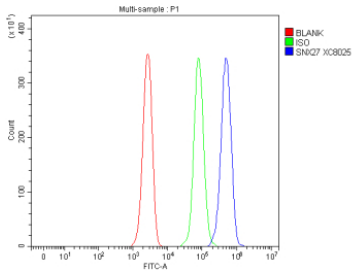
SNX27 Antibody / Sorting nexin-27 (FY12224)

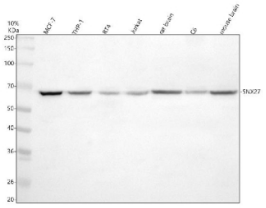
Catalog No.	Formulation	Size
FY12224	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
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	Q96L92
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SNX27 antibody is available for research use only.



Flow Cytometry analysis of Jurkat cells using anti-SNX27 antibody. Overlay histogram showing Jurkat 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-SNX27 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.



Western blot analysis of SNX27 using anti-SNX27 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human MCF-7 whole cell lysates, Lane 2: human THP-1 whole cell lysates, Lane 3: human RT4 whole cell lysates, Lane 4: human Jurkat whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat C6 whole cell lysates, Lane 7: mouse brain tissue 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-SNX27 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 SNX27 at approximately 61 kDa. The expected band size for SNX27 is at 61 kDa.

Description

SNX27 antibody detects Sorting nexin-27, encoded by the SNX27 gene on chromosome 1q21.1. SNX27 antibody is widely used in studies of endosomal trafficking, receptor recycling, and neurological disorders. Sorting nexins are a diverse family of endosomal proteins characterized by PX domains that bind phosphoinositides. SNX27 is unique among sorting nexins in containing a PDZ domain, which recognizes PDZ-binding motifs in target proteins, and an FERM-like domain, which regulates interactions with cytoskeletal and signaling proteins. This structural versatility enables SNX27 to link endosomal sorting with cell signaling and polarity.

Structurally, SNX27 is a ~61 kDa protein containing three functional domains: an N-terminal PDZ domain, a central PX domain, and a C-terminal FERM-like domain. The PX domain mediates binding to phosphatidylinositol-3-phosphate in endosomal membranes, targeting SNX27 to recycling endosomes. The PDZ domain recognizes a wide variety of membrane proteins with C-terminal PDZ-binding motifs, including receptors, transporters, and channels.

Functionally, SNX27 promotes endosome-to-plasma membrane recycling of nutrient transporters, GPCRs, and signaling receptors. This ensures surface availability of proteins like glucose transporters (GLUT1), beta-adrenergic receptors, and NMDA receptors, which are essential for metabolism, neurotransmission, and signaling. SNX27 works within the retromer complex to mediate cargo selection and retrieval. Loss of SNX27 impairs receptor recycling, leading to reduced nutrient uptake and signaling defects. Researchers employ SNX27 antibody to study receptor trafficking, endosome biology, and neurological disease mechanisms.

Clinically, SNX27 dysfunction is associated with Down syndrome, neurodevelopmental delay, and epilepsy. Reduced SNX27 expression contributes to synaptic dysfunction and impaired glutamate receptor recycling in Down syndrome models. Its broad role in trafficking links it to metabolic disease, immunity, and cancer, where altered receptor localization influences signaling outcomes. NSJ Bioreagents provides SNX27 antibody to support neuroscience, immunology, and cell biology research.

Experimentally, SNX27 antibody is applied in western blotting to detect the ~61 kDa protein, in immunofluorescence microscopy to study endosomal distribution, and in immunohistochemistry to examine tissue-specific patterns. Co-immunoprecipitation with SNX27 antibody identifies PDZ-binding cargo proteins and retromer complex partners.

Application Notes

Optimal dilution of the SNX27 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SNX27 recombinant protein (Position: R96-T541) was used as the immunogen for the SNX27 antibody.

Storage

After reconstitution, the SNX27 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.