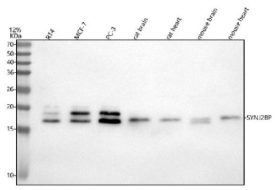
SYNJ2BP Antibody / Synaptojanin-2-binding protein (FY12586)

Catalog No.	Formulation	Size
FY12586	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	P57105
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This SYNJ2BP antibody is available for research use only.



Western blot analysis of SYNJ2BP using anti-SYNJ2BP antibody. Lane 1: human RT4 whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: rat brain tissue lysates, Lane 5: rat heart tissue lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse heart 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-SYNJ2BP 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. Western blot analysis of cell and tissue lysates probed with anti-SYNJ2BP shows a major band at the expected ~16 kDa and an additional ~18 kDa band present only in human samples, corresponding to the N-glycosylated form of SYNJ2BP. This glycosylation occurs at Asn 108 in the human protein, a modification not efficiently conserved in mouse or rat orthologs.

Description

SYNJ2BP antibody detects Synaptojanin-2-binding protein, a mitochondrial outer membrane protein that regulates protein targeting, mitochondrial morphology, and endoplasmic reticulum-mitochondria contact. SYNJ2BP acts as an adaptor linking the mitochondrial surface to signaling and trafficking proteins, influencing energy metabolism and cellular stress responses. The SYNJ2BP antibody is widely used in mitochondrial biology and cell signaling research to study organelle communication, trafficking, and apoptosis regulation.

SYNJ2BP is encoded by the SYNJ2BP gene on human chromosome 14q22.1. The protein is approximately 118 amino acids in length and contains a PDZ-binding motif that mediates interactions with synaptojanin-2 and other cytoplasmic adaptors. It localizes to the outer mitochondrial membrane, where it plays a role in tethering mitochondria to the endoplasmic reticulum and modulating calcium and lipid exchange between the two organelles.

The SYNJ2BP antibody detects a 13 kilodalton band by western blot and exhibits mitochondrial and perinuclear staining patterns under confocal microscopy. SYNJ2BP interacts with the PDZ domain of SYNJ2, which links phosphoinositide metabolism to mitochondrial signaling. By maintaining proper mitochondrial-endoplasmic reticulum contact sites, SYNJ2BP supports cellular homeostasis and regulates apoptotic sensitivity under metabolic stress.

Functionally, SYNJ2BP contributes to the stabilization of mRNAs on the mitochondrial surface and may assist in local translation of mitochondrial proteins. Loss of SYNJ2BP disrupts organelle coupling and leads to mitochondrial fragmentation, altered calcium signaling, and reduced energy efficiency. In cancer and metabolic disorders, SYNJ2BP expression correlates with altered mitochondrial dynamics and oxidative phosphorylation capacity.

Beyond its role in organelle tethering, SYNJ2BP participates in endothelial cell migration and angiogenesis by coordinating signal transduction from cell surface receptors to mitochondria. This function connects metabolic status with cell motility and vascular remodeling. Because of its position at the interface of metabolism, trafficking, and signaling, SYNJ2BP is a valuable model for studying mitochondrial communication and adaptation to stress.

NSJ Bioreagents provides a validated SYNJ2BP antibody optimized for its applications, enabling precise investigation of mitochondrial contact sites, signaling pathways, and metabolic regulation.

Application Notes

Optimal dilution of the SYNJ2BP antibody should be determined by the researcher.

Immunogen

E.coli-derived human SYNJ2BP recombinant protein (Position: D32-L145) was used as the immunogen for the SYNJ2BP antibody.

Storage

After reconstitution, the SYNJ2BP antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.