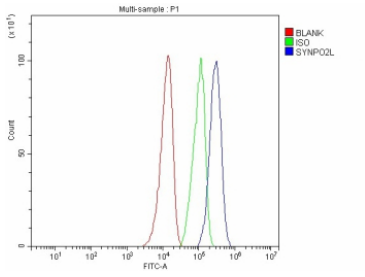
SYNPO2L Antibody / Synaptopodin 2-like protein (FY12797)

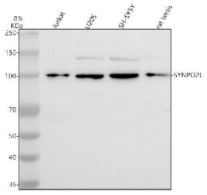
Catalog No.	Formulation	Size
FY12797	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, 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	Q9H987
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This SYNPO2L antibody is available for research use only.



Flow Cytometry analysis of SH-SY5Y cells using anti-SYNPO2L antibody. Overlay histogram showing SH-SY5Y 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-SYNPO2L 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 SYNPO2L using anti-SYNPO2L antibody. Lane 1: human Jurkat whole cell lysates, Lane 2: human U20S whole cell lysates, Lane 3: human SH-SY5Y whole cell lysates, Lane 4: rat testis 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-SYNPO2L 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. A specific band was detected for SYNPO2L at approximately 102 kDa. The expected molecular weight of SYNPO2L is ~102 kDa.

Description

SYNPO2L antibody detects Synaptopodin 2-like protein, an actin-binding cytoskeletal protein associated with cardiac and skeletal muscle structure and function. Encoded by the SYNPO2L gene on chromosome 10q22.2, this protein is part of the synaptopodin family and contributes to sarcomere organization, Z-disc stability, and myofibril assembly. SYNPO2L localizes to actin stress fibers and the Z-discs of cardiomyocytes, where it plays a key role in linking the actin cytoskeleton to contractile apparatus components.

Structurally, SYNPO2L contains actin-binding domains and proline-rich motifs that mediate interaction with alpha-actinin and other cytoskeletal proteins. It helps anchor signaling molecules at Z-discs, coordinating mechanical and biochemical responses during muscle contraction and adaptation. Through its role in actin filament organization, SYNPO2L contributes to cardiomyocyte differentiation and maintenance of sarcomere integrity.

The SYNPO2L antibody is widely used in cardiovascular and muscle research to study cytoskeletal architecture, myofibril assembly, and Z-disc organization. Western blot analysis detects a 110 kilodalton band corresponding to SYNPO2L, while immunofluorescence shows striated staining patterns characteristic of sarcomeric proteins. This antibody is valuable for investigating the molecular mechanisms of cardiac development, contractile regulation, and myopathy pathogenesis.

Genetic variants in SYNPO2L are associated with atrial fibrillation and cardiomyopathy, suggesting its importance in cardiac conduction and mechanical stability. Altered expression of SYNPO2L may also affect stress fiber organization in non-muscle cells, influencing cell migration and adhesion. The SYNPO2L antibody supports studies of muscle structure, cytoskeletal signaling, and heart disease mechanisms. NSJ Bioreagents provides this antibody validated for its applications, ensuring accuracy in studies of cytoskeletal and cardiac biology.

Application Notes

Optimal dilution of the SYNPO2L antibody should be determined by the researcher.

Immunogen

E.coli-derived human SYNPO2L recombinant protein (Position: H66-E923) was used as the immunogen for the SYNPO2L antibody.

Storage

After reconstitution, the SYNPO2L 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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