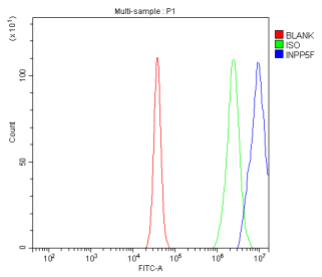
INPP5F Antibody / Type II inositol 1,4,5-trisphosphate 5-phosphatase (FY12708)

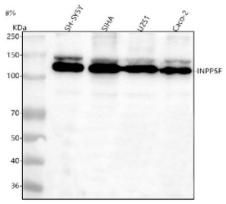
Catalog No.	Formulation	Size
FY12708	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q9Y2H2
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This INPP5F antibody is available for research use only.



Flow Cytometry analysis of Daudi cells using anti-INPP5F antibody. Overlay histogram showing Daudi cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-INPP5F 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 (Red line) was also used as a control.



Western blot analysis of INPP5F using anti-INPP5F antibody. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human SIHA whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: human Caco-2 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-INPP5F 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 predominant band is detected at ~128 kDa with a faint higher-migrating species, consistent with reported post-translationally modified forms (e.g., phosphorylated or mono-ubiquitinated INPP5F).

Description

INPP5F antibody detects Type II inositol 1,4,5-trisphosphate 5-phosphatase (also known as phosphatidylinositol polyphosphate 5-phosphatase INPP5F), an enzyme that regulates phosphoinositide metabolism and intracellular signaling. Encoded by the INPP5F gene on chromosome 10q26.11, this protein hydrolyzes the 5-phosphate group from phosphatidylinositol (4,5)-bisphosphate and phosphatidylinositol (3,4,5)-trisphosphate, thereby modulating PI3K/AKT and phosphatidylinositol signaling pathways. By controlling local phosphoinositide concentrations, INPP5F regulates membrane dynamics, vesicle trafficking, and cardiac hypertrophy signaling. It acts as a negative regulator of PI3K-dependent cell growth and survival, contributing to cellular homeostasis and organ size control.

INPP5F localizes to the cytoplasm and Golgi apparatus and is expressed in multiple tissues, with highest levels in heart, brain, and skeletal muscle. Functional studies have demonstrated that INPP5F attenuates insulin and growth factor signaling by dephosphorylating PIP3, thereby reducing AKT activation. In cardiomyocytes, INPP5F serves as an intrinsic brake on hypertrophic signaling by modulating the PI3K/AKT/mTOR axis. Mice lacking INPP5F display enhanced cardiac growth and increased susceptibility to heart failure, underscoring its physiological importance in maintaining normal cardiac morphology and function.

The INPP5F antibody is widely used in signal transduction, cardiovascular, and metabolic research to study phosphoinositide regulation and AKT signaling. Western blot analysis typically reveals a 108 kilodalton band corresponding to the full-length enzyme. Immunofluorescence shows perinuclear and Golgi-associated staining patterns consistent with its subcellular localization. Because INPP5F interacts with lipid-binding proteins and signaling kinases, this antibody is also employed in co-immunoprecipitation and pathway-mapping assays. Reduced INPP5F expression has been observed in glioblastoma, prostate cancer, and other tumors, suggesting its function as a tumor suppressor through attenuation of PI3K-driven oncogenic pathways.

In addition to its phosphatase activity, INPP5F contributes to endosomal sorting and receptor recycling by shaping local phosphoinositide pools on endomembranes. It cooperates with SHIP2 and synaptojanin to balance phosphoinositide turnover in response to receptor activation. The INPP5F antibody enables detailed examination of these signaling processes and provides insight into how lipid signaling defects contribute to disease. NSJ Bioreagents supplies this antibody validated for its applications, ensuring reliable detection in cellular and tissue models of phosphoinositide regulation.

Application Notes

Optimal dilution of the INPP5F antibody should be determined by the researcher.

Immunogen

E.coli-derived human INPP5F recombinant protein (Position: H317-Q1112) was used as the immunogen for the INPP5F antibody.

Storage

After reconstitution, the INPP5F 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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