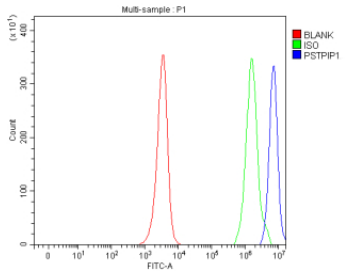
PSTPIP1 Antibody / PEST phosphatase-interacting protein 1 (FY12487)

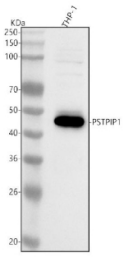
Catalog No.	Formulation	Size
FY12487	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	O43586
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This PSTPIP1 antibody is available for research use only.



Flow Cytometry analysis of JK cells using anti-PSTPIP1 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-PSTPIP1 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 PSTPIP1 using anti-PSTPIP1 antibody. Lane 1: human THP-1 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-PSTPIP1 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 PSTPIP1 is ~48 kDa.

Description

PSTPIP1 antibody detects Proline-serine-threonine phosphatase-interacting protein 1, a cytoskeletal adaptor protein that regulates actin dynamics, immune signaling, and inflammasome activation. PSTPIP1 is primarily expressed in hematopoietic cells, where it interacts with the actin cytoskeleton and tyrosine phosphatases to coordinate immune cell morphology and migration. The PSTPIP1 antibody is extensively used in immunology and inflammation research to study cytoskeletal remodeling and autoinflammatory disease mechanisms.

PSTPIP1 is encoded by the PSTPIP1 gene located on human chromosome 15q24.3. The protein belongs to the F-BAR domain-containing family and features an N-terminal F-BAR domain that mediates membrane curvature and actin binding, along with a C-terminal SH3 domain that interacts with proline-rich regions in partner proteins such as PEST-type tyrosine phosphatases and pyrin. Through these interactions, PSTPIP1 regulates membrane deformation, phagocytosis, and signaling cascades in macrophages and neutrophils.

The PSTPIP1 antibody typically detects a 48-52 kilodalton protein by western blot and produces strong cytoplasmic and membrane-associated staining in immune cells. Functionally, PSTPIP1 links the actin cytoskeleton to signaling complexes, modulating processes such as cell spreading, migration, and inflammasome assembly. Mutations in PSTPIP1 are associated with PAPA (pyogenic arthritis, pyoderma gangrenosum, and acne) syndrome and other autoinflammatory disorders, where altered protein-protein interactions lead to hyperactivation of the pyrin inflammasome and excessive interleukin-1 beta production.

PSTPIP1 interacts with proteins including WASP, c-Abl kinase, and SHIP1, integrating actin dynamics with immune receptor signaling. In macrophages, it contributes to the formation of podosomes and phagocytic structures. Beyond immune regulation, PSTPIP1 participates in bone remodeling and osteoclast differentiation through cytoskeletal control. NSJ Bioreagents provides a validated PSTPIP1 antibody optimized for western blot, immunoprecipitation, and immunofluorescence applications. This antibody supports research into inflammatory signaling, actin organization, and the molecular mechanisms underlying autoinflammatory diseases.

Application Notes

Optimal dilution of the PSTPIP1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PSTPIP1 recombinant protein (Position: M1-D394) was used as the immunogen for the PSTPIP1 antibody.

Storage

After reconstitution, the PSTPIP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.