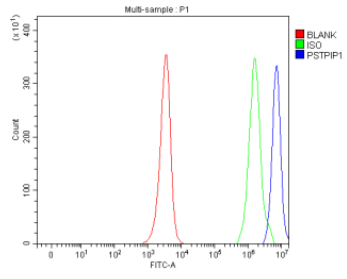
PSTPIP1 Antibody / PEST phosphatase-interacting protein 1 Antibody (FY12487)

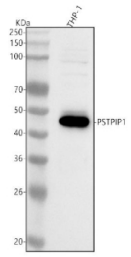
Catalog No.	Formulation	Size
FY12487	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

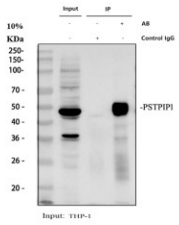
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O43586
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml Immunoprecipitation: 2ug per 500ug of lysate
Limitations	This PSTPIP1 Antibody / PEST phosphatase-interacting protein 1 Antibody is available for research use only.



PSTPIP1 Antibody by FACS in Human JK Cells. Flow cytometry analysis of fixed and permeabilized human JK cells using rabbit polyclonal PSTPIP1 antibody at 1 ug per million cells. Cells were fixed with 4% paraformaldehyde, permeabilized, and blocked with 10% normal goat serum before primary antibody incubation for 30 minutes at 20oC. DyLight 488-conjugated goat anti-rabbit IgG was used for detection. The histogram compares PSTPIP1 antibody staining (blue), rabbit IgG isotype control (green), and unstained cells (red). The antibody-stained population exhibits a clear rightward fluorescence shift relative to both controls, demonstrating intracellular detection of PEST Phosphatase-Interacting Protein 1.



PSTPIP1 Antibody by WB in Human THP-1 Cell Lysate. Western blot analysis of human THP-1 whole-cell lysate using rabbit polyclonal PSTPIP1 antibody at 0.5 ug/ml. Proteins were separated by SDS-PAGE and transferred to a nitrocellulose membrane. Following blocking with 5% non-fat milk, the membrane was incubated with primary antibody overnight at 4oC, followed by HRP-conjugated goat anti-rabbit IgG at 1:5000 and chemiluminescent detection. A prominent band is detected at approximately 50 kDa, consistent with the predicted molecular weight of approximately 48 kDa for PEST Phosphatase-Interacting Protein 1.



PSTPIP1 Antibody by IP in Human THP-1 Cell Lysate. Immunoprecipitation of PEST Phosphatase-Interacting Protein 1 from human THP-1 whole-cell lysate using rabbit polyclonal PSTPIP1 antibody. Lane 1 contains 30 ug of input lysate, lane 2 represents a rabbit IgG control immunoprecipitation, and lane 3 contains protein immunoprecipitated from 500 ug of THP-1 lysate using 2 ug of PSTPIP1 antibody. Following electrophoresis and membrane transfer, Western blot detection was performed using the same antibody at 0.5 ug/ml and an HRP-conjugated light-chain-specific secondary antibody. A prominent band near 50 kDa is detected in the input and antibody immunoprecipitation lanes, with no comparable band in the control IgG lane, demonstrating enrichment of PSTPIP1.

Description

PSTPIP1 Antibody recognizes proline-serine-threonine phosphatase-interacting protein 1 (PSTPIP1), a cytoskeletal adaptor protein involved in actin organization, immune cell signaling, and inflammatory regulation. Also known as PEST Phosphatase-Interacting Protein 1, CD2BP1, and CD2-binding protein 1, PSTPIP1 is expressed predominantly in hematopoietic cells and participates in protein interactions that coordinate cytoskeletal remodeling with cellular activation. Its functions are particularly relevant to macrophages, neutrophils, and T lymphocytes.

PSTPIP1 belongs to the F-BAR domain-containing protein family and contains an N-terminal F-BAR domain and a C-terminal Src homology 3 (SH3) domain. The F-BAR domain contributes to membrane association and cytoskeletal organization, while the SH3 domain mediates interactions with proline-rich regions of partner proteins. PSTPIP1 associates with the protein tyrosine phosphatase PTPN12, also known as PTP-PEST, linking tyrosine phosphorylation signaling to changes in cell morphology and actin dynamics.

Through interactions with cytoskeletal regulatory proteins, PSTPIP1 contributes to processes including cell adhesion, migration, and formation of specialized actin-rich structures. Its association with CD2 signaling complexes also supports a role in T-cell activation and organization of the immunological synapse. These functions connect PEST Phosphatase-Interacting Protein 1 to the coordination of immune receptor signaling and cytoskeletal responses.

PSTPIP1 is particularly important in autoinflammatory disease research because it interacts with pyrin, the protein encoded by MEFV. Certain disease-associated PSTPIP1 variants increase its interaction with pyrin and can promote inflammatory signaling involving the pyrin inflammasome and interleukin-1 beta. Pathogenic variants are associated with PAPA syndrome, characterized by pyogenic arthritis, pyoderma gangrenosum, and acne. Other PSTPIP1-associated inflammatory disorders demonstrate the importance of this protein in immune regulation.

Because PSTPIP1 integrates cytoskeletal organization with inflammatory signaling, it is relevant to investigations of immune cell function, inflammasome regulation, and inherited autoinflammatory disorders. A PSTPIP1 Antibody from NSJ Bioreagents supports research examining PEST Phosphatase-Interacting Protein 1 expression, protein interactions, and molecular mechanisms linking actin dynamics to immune activation.

For antibodies targeting additional proteins involved in innate immune signaling, inflammasome activation, and inflammatory responses, explore our Innate Immunity Antibodies collection.

Application Notes

Optimal dilution of the PSTPIP1 Antibody / PEST phosphatase-interacting protein 1 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.

Alternate Names

PEST Phosphatase-Interacting Protein 1 antibody, CD2-Binding Protein 1 antibody, CD2BP1 antibody, PSTPIP antibody, Proline-Serine-Threonine Phosphatase-Interacting Protein 1 antibody, PAPA Syndrome-Associated Protein antibody

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