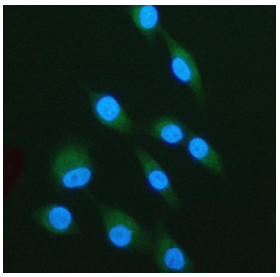
LPXN Antibody / Leupaxin (FY12903)

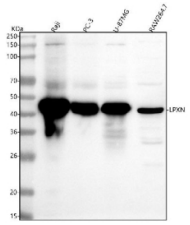
Catalog No.	Formulation	Size
FY12903	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

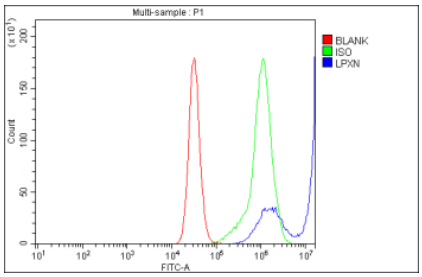
Availability	1-2 days
Species Reactivity	Human, Mouse
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O60711
Localization	Cytoplasm, nucleus, cell membrane
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This LPXN antibody is available for research use only.



Immunofluorescent staining of LPXN using anti-LPXN antibody (green). LPXN was detected in an immunocytochemical section of cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-LPXN antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of LPXN using anti-LPXN antibody. Lane 1: human Raji whole cell lysates, Lane 2: human PC-3 whole cell lysates, Lane 3: human U-87 MG whole cell lysates, Lane 4: mouse RAW264.7 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-LPXN antibody at 0.25 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 LPXN at approximately 43 kDa. The expected molecular weight of LPXN is ~43 kDa.



Flow Cytometry analysis of RAJI cells using anti-LPXN antibody. Overlay histogram showing RAJI 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-LPXN 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.

Description

LPXN antibody detects Leupaxin, an adaptor protein involved in focal adhesion signaling, cytoskeletal organization, and immune cell migration. Encoded by the LPXN gene on chromosome 11q12.1, this protein belongs to the paxillin family of LIM domain-containing adaptors that mediate integrin-dependent signaling and actin cytoskeleton rearrangement. LPXN is primarily expressed in hematopoietic and endothelial cells, where it modulates adhesion dynamics, motility, and signal transduction downstream of integrins and growth factor receptors.

Structurally, Leupaxin is a 395-amino-acid cytoplasmic protein of approximately 46 kilodaltons that contains four C-terminal LIM domains and an N-terminal LD motif region that binds focal adhesion kinase (FAK), PYK2, and other adhesion regulators. These motifs allow LPXN to function as a scaffold linking structural proteins, tyrosine kinases, and cytoskeletal components at focal adhesions. Its phosphorylation on tyrosine residues by FAK and Src family kinases regulates recruitment to adhesion complexes and determines downstream signaling strength.

The LPXN antibody is widely used in cell biology, immunology, and cancer research to study integrin-mediated signaling, immune cell migration, and cytoskeletal regulation. Western blot analysis detects a 46 kilodalton band corresponding to Leupaxin, while immunofluorescence shows punctate cytoplasmic and peripheral staining consistent with focal adhesion localization. This antibody supports studies examining adhesion turnover, cell spreading, and mechanotransduction in immune and endothelial systems.

Functionally, LPXN modulates adhesion strength and migratory capacity in leukocytes and macrophages by coordinating the FAK/PYK2 and paxillin signaling pathways. It influences podosome formation, phagocytosis, and chemotaxis through its ability to regulate actin polymerization and integrin clustering. Dysregulated LPXN expression has been linked to cancer metastasis, inflammatory disorders, and defective immune cell trafficking. The LPXN antibody provides a reliable tool for evaluating these processes and understanding how adhesion adaptors control immune cell behavior. NSJ Bioreagents validates this antibody for its applications, ensuring dependable performance for adhesion and cytoskeletal studies.

Application Notes

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

Immunogen

E.coli-derived human LPXN recombinant protein (Position: E45-H323) was used as the immunogen for the LPXN antibody.

Storage

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