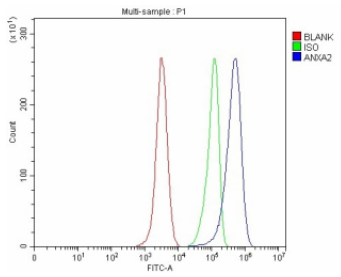
ANXA2 Polyclonal Antibody / Annexin A2 (FY12921)

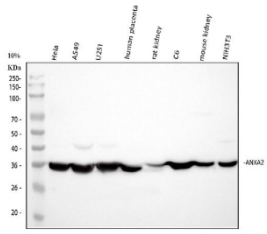
Catalog No.	Formulation	Size
FY12921	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

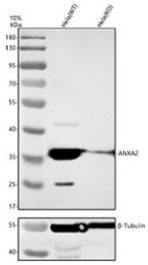
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P07355
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This ANXA2 Polyclonal Antibody is available for research use only.



Flow Cytometry analysis of Hela cells using anti-ANXA2 Polyclonal Antibody. Overlay histogram showing Hela 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-ANXA2 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 Annexin / ANXA2 using ANXA2 Polyclonal Antibody. Lane 1: human Hela whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: human placenta tissue lysates, Lane 5: rat kidney tissue lysates, Lane 6: rat C6 whole cell lysates, Lane 7: mouse kidney tissue lysates, Lane 8: mouse NIH/3T3 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-ANXA2 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 single band is detected at ~36 kDa across samples, consistent with the known faster SDS-PAGE migration of Annexin A2 relative to its ~39 kDa predicted mass.



ANXA2 Polyclonal Antibody WB Analysis of HeLa Wild-Type and Knockout Cells. Western blot analysis of human HeLa wild-type (WT, lane 1) and ANXA2 knockout (KO, lane 2) whole-cell lysates using Annexin A2 at 0.5 ug/ml. A prominent band near 36 kDa is detected in WT lysate and is absent in KO lysate, supporting antibody specificity for ANXA2. The observed molecular weight is slightly below the calculated 39 kDa. Each lane contains 30 ug of protein under reducing conditions. Beta-Tubulin serves as the loading control.

Description

ANXA2 Polyclonal Antibody detects Annexin A2, a calcium-dependent phospholipid-binding protein involved in membrane organization, cytoskeletal interactions, and fibrinolysis. Encoded by the ANXA2 gene on chromosome 15q26.1, this multifunctional protein participates in membrane trafficking, endocytosis, cell-cell adhesion, and extracellular matrix remodeling. Annexin A2 also acts as a cell surface receptor for tissue plasminogen activator (tPA) and plasminogen, facilitating localized fibrin degradation and vascular repair.

Structurally, Annexin A2 is a 339-amino-acid protein of approximately 39 kilodaltons containing four annexin repeats that mediate calcium-dependent phospholipid binding and a unique N-terminal domain that interacts with S100A10 (p11) to form a heterotetrameric complex. This complex localizes to the plasma membrane, cytoskeleton, and endosomal compartments, where it modulates vesicle fusion, cytoskeletal anchoring, and membrane curvature. Annexin A2 is expressed in endothelial, epithelial, and tumor cells, as well as macrophages and neurons.

The ANXA2 antibody is widely used in cell biology, vascular biology, and cancer research to study membrane organization, signal transduction, and fibrinolytic regulation. Western blot analysis detects a 39 kilodalton band corresponding to Annexin A2, while immunofluorescence shows cytoplasmic, membrane, and perinuclear localization. This antibody provides a powerful reagent for investigating calcium-dependent membrane remodeling and extracellular proteolytic activity.

Functionally, Annexin A2 regulates actin cytoskeleton rearrangement and vesicle trafficking, influencing endocytosis, exocytosis, and cell motility. At the cell surface, it promotes plasmin generation, contributing to fibrin degradation, angiogenesis, and tumor invasion. Dysregulation of ANXA2 expression is associated with cancer progression, thrombosis, and inflammatory disease. The ANXA2 antibody supports detailed studies of its role in cellular dynamics, extracellular matrix remodeling, and vascular homeostasis. NSJ Bioreagents validates this antibody for its applications, ensuring precise detection in studies of cytoskeletal and membrane biology.

For additional information on Annexin A2 biology and broader tissue, cell and species validation, visit our Annexin A2 Antibody / ANXA2 Membrane Binding Protein Antibody page.

Application Notes

Optimal dilution of the ANXA2 Polyclonal Antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human ANXA2 was used as the immunogen for the ANXA2 antibody.

Storage

After reconstitution, the ANXA2 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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