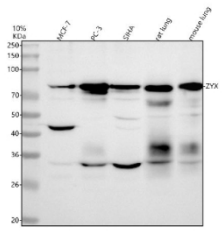
ZYX Antibody / Zyxin [clone AFOG-26] (FY12408)

Catalog No.	Formulation	Size
FY12408	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	AFOG-26
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q15942
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Immunocytochemistry: 5ug/ml Immunofluorescence: 5ug/ml Immunoprecipitation: 2-4ug/500ug of lysate Flow cytometry: 1-3ug/million cells
Limitations	This Zyxin antibody is available for research use only.



Western blot analysis of Zyxin using anti-Zyxin antibody. Lane 1: human MCF-7 whole cell lysates, Lane 2: human PC-3 whole cell lysates, Lane 3: human SIHA whole cell lysates, Lane 4: rat lung tissue lysates, Lane 5: mouse lung tissue 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-Zyxin antibody at 1:1000 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 1:500 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. Zyxin (ZYX, ~61 kDa predicted) was detected at ~75-80 kDa, consistent with its phosphorylated and isoform-dependent mobility reported in the literature. Lower bands (~35-45 kDa) likely represent proteolytic fragments generated during turnover or stress responses.

Description

The Zyxin antibody targets Zyxin, a LIM domain-containing cytoskeletal protein encoded by the ZYX gene. Zyxin functions as a scaffold that connects the actin cytoskeleton to signaling pathways controlling cell adhesion, migration, and mechanical stress responses. It localizes to focal adhesions and stress fibers, where it interacts with actin-binding and signaling proteins to regulate cytoskeletal dynamics. The Zyxin antibody enables specific detection of this mechanosensitive protein in studies of cell motility, tissue architecture, and mechanotransduction.

Zyxin is characterized by three LIM domains at its C-terminus, which mediate protein-protein interactions, and a proline-rich N-terminal region that binds to VASP and alpha-actinin. Through these domains, Zyxin coordinates actin filament assembly and cell-matrix adhesion. The Zyxin antibody supports visualization of these interactions, allowing researchers to examine how this structural adaptor transduces mechanical cues into gene expression changes. Zyxin relocates to the nucleus in response to stress, suggesting a dual cytoplasmic and nuclear role in mechanosignaling.

As a component of focal adhesions, Zyxin participates in processes such as wound healing, embryonic development, and tissue remodeling. It interacts with proteins including LPP, LIMD1, and Ena/VASP to modulate cell shape and movement. The Zyxin antibody supports functional studies of these interactions, revealing how Zyxin integrates extracellular matrix forces with actin cytoskeletal organization. Its recruitment to sites of mechanical strain makes it a critical sensor for cellular adaptation to physical stress.

Altered Zyxin expression has been associated with several diseases, including cancer, cardiovascular dysfunction, and fibrotic disorders. Overexpression can enhance migration and invasion in certain tumors, while loss impairs cytoskeletal resilience. The Zyxin antibody is widely used to investigate its role in metastasis, cell adhesion signaling, and smooth muscle plasticity. Studies have also linked Zyxin to stretch-activated signaling in cardiac and vascular cells, highlighting its contribution to mechanobiology.

The Zyxin antibody performs effectively in western blotting, immunofluorescence, and immunohistochemistry, producing distinct cytoplasmic and focal adhesion staining. NSJ Bioreagents provides this antibody as a validated reagent with strong specificity and reproducibility for use in cell biology, developmental, and oncology research. By enabling detailed analysis of Zyxin localization and expression, the Zyxin antibody supports discovery into the molecular coordination of cytoskeletal dynamics, adhesion signaling, and mechanical stress response.

Application Notes

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

Immunogen

A synthesized peptide derived from human Zyxin was used as the immunogen for the Zyxin antibody.

Storage

Store the Zyxin antibody at -20oC.

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