abcam

ab238430

Anti-Zyxin antibody [EPR4302] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR4302
Purification technique	Affinity purification Protein A
Concentration	1.016 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Species	Rat
Dilution info	-
Notes	The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Species	Human
Dilution info	-
Notes	The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

IP

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

Species	Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information ZYX

Function	Adhesion plaque protein. Binds alpha-actinin and the CRP protein. Important for targeting TES and ENA/VASP family members to focal adhesions and for the formation of actin-rich structures. May be a component of a signal transduction pathway that mediates adhesion-stimulated changes in gene expression (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab238430 is the carrier-free version of ab109316.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Zyxin also known as ZYX is a mechanical regulator associated with cell adhesion and signaling. This protein has a molecular mass of approximately 61 kDa and shows expression in various cell types including those in the heart liver and lungs. As a component of focal adhesions zyxin plays a role in cytoskeletal dynamics by interacting with actin filaments and facilitating the formation of stress fibers.
Biological function summary	The protein has important roles in cellular processes such as migration and morphology. Zyxin often forms part of a larger protein complex that includes VASP and α-actinin which contribute to cell scaffolding and structural integrity. It serves as an organizer for cytoskeletal proteins ensuring proper cell movement and adaptability to cellular stress. Its actin-binding capacity enables it to regulate structural changes necessary for cellular adaptation to environmental stimuli.

Pathways	This protein is essential in the regulation of actin cytoskeleton associated pathways and adherens junction signaling. Zyxin interacts with Ena/VASP proteins which are significant in actin filament elongation helping regulate dynamic changes in cell shape and motility. Its relationship with LIM domain-containing proteins positions zyxin within pathways related to cell proliferation and signal transduction.
Associated diseases and disorders	Zyxin has been implicated in cancer progression especially in metastasis where altered cell adhesion and movement play a role. It also relates to cardiovascular diseases due to its involvement in mechanotransduction pathways critical to heart muscle function. In cancer zyxin influences the activity of YAP/TAZ transcription regulators affecting tumor cell behavior. In cardiovascular scenarios the protein interacts with paxillin to mediate responses to mechanical load changes impacting heart disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

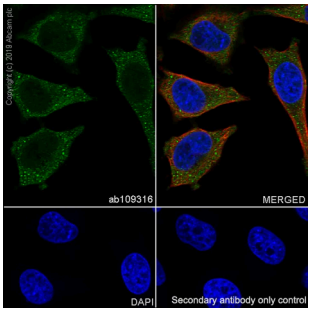
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

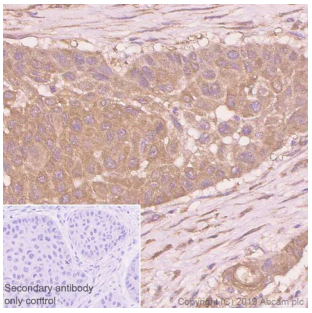
10 product images



Immunocytochemistry/ Immunofluorescence - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Zyxin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Zyxin antibody

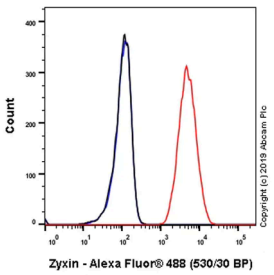
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Zyxin with Purified ab109316 at 1/500 dilution (1.87 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Zyxin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Zyxin antibody

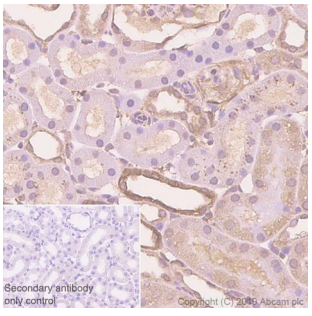
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human gastric carcinoma tissue sections labeling Zyxin with Purified ab109316 at 1/1000 dilution (0.94 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).



Flow Cytometry (Intracellular) - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Zyxin Flow Cytometry (Intracellular) staining using rabbit Anti-Zyxin antibody

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Zyxin with Purified ab109316 at 1/100 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).

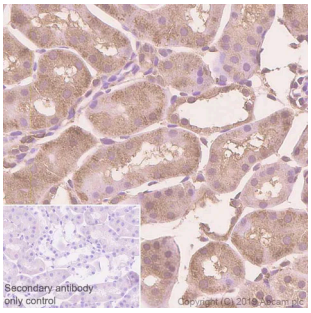


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Zyxin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Zyxin antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue sections labeling Zyxin with Purified ab109316 at 1/1000 dilution (0.94 µg/mL). Heat

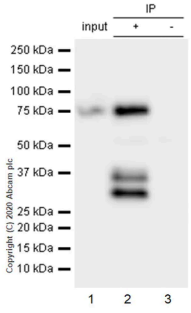
mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Zyxin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Zyxin antibody

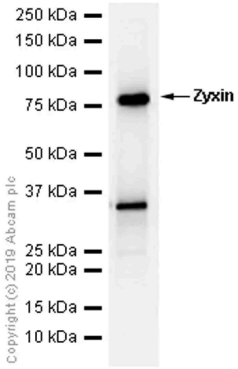
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue sections labeling Zyxin with Purified ab109316 at 1/1000 dilution (0.94 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).



Immunoprecipitation - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Purified ab109316 at 1/50 dilution (2ug) immunoprecipitating Zyxin in Mouse testis lysate.
Lane 1 (input): Mouse testis lysate (10µg)
Lane 2 (+): ab109316 + Mouse testis lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab109316 in mouse testis lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/5000) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 82 kDa
We are unsure about the extra bands. They might be the cleavage fragments as what are described in PMID:17572661
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).
All lanes:
Immunoprecipitation - Anti-Zyxin antibody [EPR4302] (ab109316)

Predicted band size: 61 kDa



Western blot - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

We are unsure about the extra bands. They might be the cleavage fragments as what are described in PMID:17572661.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).

All lanes:
Western blot - Anti-Zyxin antibody [EPR4302] (ab109316) at 1/20000 dilution

All lanes:

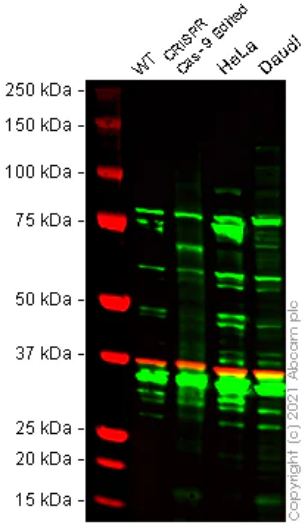
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 61 kDa

Observed band size: 82 kDa



Western blot - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Zyxin Western blot staining using rabbit Anti-Zyxin antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).
False colour image of Western blot: Anti-Zyxin antibody [EPR4302] staining at 1/20000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab109316 was shown to bind specifically to Zyxin. A band was observed at 75 kDa in wild-type HEK-293T cell lysates with no signal observed at this size in ZYX CRISPR-Cas9 edited cell line ab266504 (CRISPR-Cas9 edited cell lysate ab257810). The band observed in the CRISPR-Cas9 edited lysate lane below 75 kDa is likely to represent a truncated form of Zyxin. This has not been investigated further and the functional properties of the gene product have not been determined. To generate this image, wild-type and ZYX CRISPR-Cas9 edited HEK-293T cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) at 1/20000 dilution.

All lanes:
Western blot - Anti-Zyxin antibody [EPR4302] (ab109316) at 1/20000 dilution

Lane 1:
Wild-type HEK-293T cell lysate at 20 µg

Lane 2:
ZYX CRISPR-Cas9 edited HEK-293T cell lysate at 20 µg

Lane 2:
Western blot - Human ZYX (Zyxin) knockout HEK-293T cell line (ab266504)

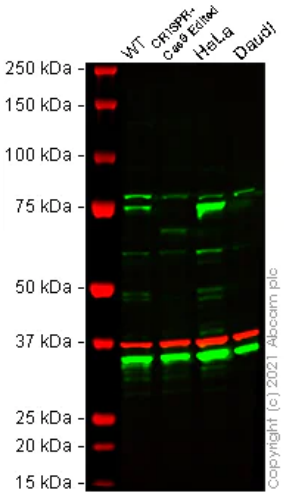
Lane 3:
HeLa cell lysate at 20 µg

Lane 4:
Daudi cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 61 kDa

Observed band size: 75 kDa



Western blot - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Zyxin Western blot staining using rabbit Anti-Zyxin antibody

False colour image of Western blot: Anti-Zyxin antibody [EPR4302] staining at 1/20000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab109316 was shown to bind specifically to Zyxin. A band was observed at 75 kDa in wild-type HEK-293T cell lysates with no signal observed at this size in ZYX CRISPR-Cas9 edited cell line ab266503 (CRISPR-Cas9 edited cell lysate ab257809). The band observed in the CRISPR-Cas9 edited lysate lane below 75 kDa is likely to represent a truncated form of Zyxin. This has not been investigated further and the functional properties of the gene product have not been determined. To generate this image, wild-type and ZYX CRISPR-Cas9 edited HEK-293T cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) at 1/20000 dilution.
All lanes:
Western blot - Anti-Zyxin antibody [EPR4302] (ab109316) at 1/20000 dilution

Lane 1:
Wild-type HEK-293T cell lysate at 20 µg

Lane 2:
ZYX CRISPR-Cas9 edited HEK-293T cell lysate at 20 µg

Lane 2:
Western blot - Human ZYX (Zyxin) knockout HEK-293T cell line (ab266503)

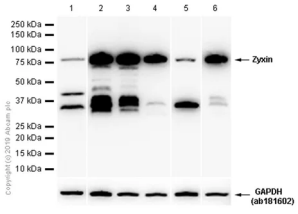
Lane 3:
HeLa cell lysate at 20 µg

Lane 4:
Daudi cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 61 kDa

Observed band size: 75 kDa



Western blot - Anti-Zyxin antibody [EPR4302] - BSA and Azide free (ab238430)

Zyxin Western blot staining using rabbit Anti-Zyxin antibody

We are unsure about the extra bands. They might be the cleavage fragments as what are described in PMID:17572661.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109316).

All lanes:
Western blot - Anti-Zyxin antibody [EPR4302] (ab109316) at 1/20000 dilution

Lane 1:
MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysates at 20 µg

Lane 2:
C2C12 (Mouse myoblasts myoblast) whole cell lysates at 20 µg

Lane 3:
Mouse lung lysates at 20 µg

Lane 4:
Mouse testis lysates at 20 µg

Lane 5:
Rat lung lysates at 20 µg

Lane 6:
Rat testis lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.