abcam

ab216652

Anti-Paxillin antibody [Y113] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	Y113
Purification technique	Affinity purification Protein A
Specificity	This antibody recognises Paxillin alpha, beta and gamma isoforms.
Dissociation constant	4.17 x 10^{-10} M
Concentration	1.014 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human

Dilution info	-
Notes	-

Expected

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

Predicted

Species	Dog
Dilution info	-
Notes	-

WB

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Predicted

Species	Dog
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Dog
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Dog
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Dog
Dilution info	-
Notes	-

Target data

See full target information Paxillin

Function	Cytoskeletal protein involved in actin-membrane attachment at sites of cell adhesion to the extracellular matrix (focal adhesion). Recruits other proteins such as TRIM15 to focal adhesion.

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

ab216652 is the carrier-free version of ab32084.

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	Paxillin also known as PXN is a cytoskeletal protein involved in the assembly of focal adhesions. It has a molecular weight of approximately 68 kDa. You will find Paxillin expressed widely in various tissues including the liver colon and lung. Paxillin plays a part in cell motility by interacting with other focal adhesion proteins. It plays a significant mechanical role by serving as a docking site for structural and signaling molecules.
Biological function summary	Paxillin serves key functions in cellular processes such as migration proliferation and survival. It interacts with different proteins including vinculin and talin forming part of a complex at the focal adhesion sites. The phosphorylation state of Paxillin can modulate its interactions and in this way influence the assembly of signaling complexes that control dynamic cellular processes.
Pathways	Paxillin participates in the integrin signaling and MAPK pathways. It operates by linking integrin receptors to the actin cytoskeleton facilitating signal transduction. Paxillin phosphorylation is an important regulatory mechanism within these pathways. In particular its interaction with focal adhesion kinase (FAK) and Src family kinases signifies its role in transmitting signals from the extracellular matrix to the cellular interior which impacts cell behavior and response.
Associated diseases and disorders	Paxillin has links with osteosarcoma and lung cancer. Deregulation of Paxillin expression or its phosphorylation state contributes to oncogenic transformation

and tumor progression. In cancer Paxillin associates with altered activity of proteins such as Src and FAK exacerbating disease states. This relationship highlights Paxillin's potential as a biomarker and therapeutic target in treating related malignancies.

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

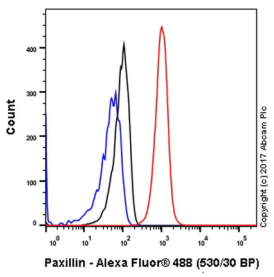
We do not recommend this combination. It is not covered by our product promise.

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.

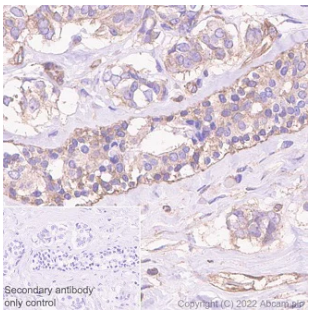
14 product images



Flow Cytometry (Intracellular) - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

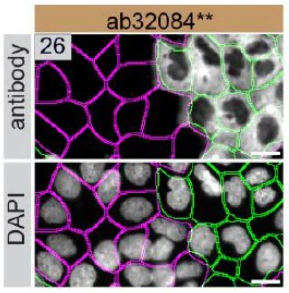
Paxillin Flow Cytometry (Intracellular) staining using rabbit Anti-Paxillin antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling with purified ab32084 at 1/100 dilution (10ug/ml) (Red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (ab172730) was used as a isotype control.Cell without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32084).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue sections labelling Paxillin with ab32084 at 1/1200 dilution. The section was incubated with ab32084 for 30 mins at room temperature. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.
Positive staining on human breast carcinoma tissue. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.
This data was developed using ab32084, the same antibody clone in a different buffer formulation.

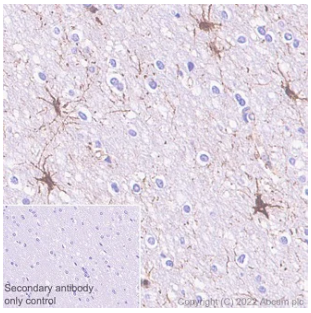


Immunocytochemistry/ Immunofluorescence - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

Paxillin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Paxillin antibody

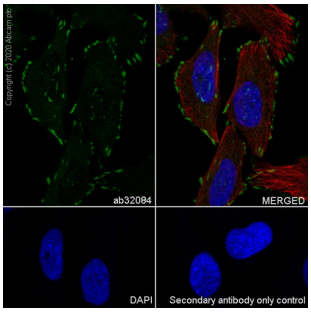
This data was developed using ab32084, the same antibody clone in a different buffer formulation. ab32084 was shown to react with PXN in wild-type A-431 cells in immunocytochemistry with loss of signal observed in PXN knockout cell line ab261892. Wild-type and knockout cells were mixed and pelleted at a 1:1 ratio on coverslips. The cells were fixed with 4% paraformaldehyde (15 min) then permeabilized with 0.1% Triton X-100 (10min) and then blocked with 1x PBS, 0.01% Triton X-100, 5% BSA, 5% NGS. The cells were then incubated with ab32084 at 1/150 dilution overnight at 4°C followed by a further incubation at room temperature for 1h with a goat anti-rabbit secondary antibody to (Alexa Fluor® 555) at 0.5 µg/ml. Acquisition of the green (wild-type), red (antibody staining) and far-red (knockout) channels was performed. Representative grayscale images of the red channel are shown. Wild-type and knockout cells are outlined with yellow and magenta dashed line, respectively. Schematic representation of the mosaic strategy used is shown on the bottom-right panel. Image was acquired with a Zeiss(LSM-880).

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

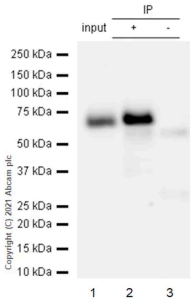
Immunohistochemistry analysis of paraffin-embedded human cerebrum tissue sections labelling Paxillin with ab32084 at 1/1200 dilution. The section was incubated with ab32084 for 30 mins at room temperature. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins.
Positive staining on human cerebrum tissue. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.
This data was developed using ab32084, the same antibody clone in a different buffer formulation.



Immunocytochemistry/ Immunofluorescence - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

Paxillin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Paxillin antibody

This data was developed using ab32084, the same antibody clone in a different buffer formulation. Immunocytochemistry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Paxillin with purified ab32084 at 1/50 dilution (2.88 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.

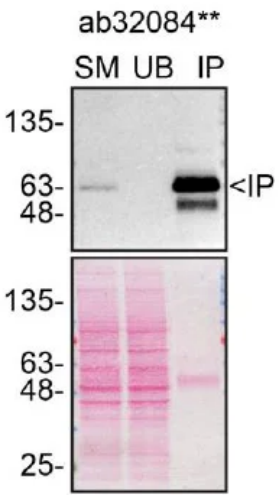


Immunoprecipitation - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

This data was developed using ab32084, the same antibody clone in a different buffer formulation. Purified ab32084 at 1/20 dilution (0.7µg) immunoprecipitating Paxillin in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg.
Lane 2 (+): ab32084 + HeLa whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab32084 in HeLa whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-Paxillin antibody [Y113] (ab32084)

Predicted band size: 65 kDa

Observed band size: 68 kDa



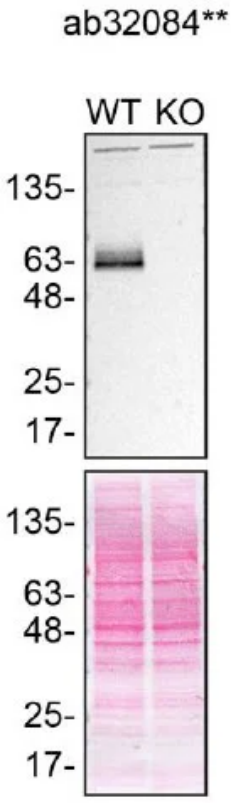
Immunoprecipitation - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

This data was developed using ab32084, the same antibody clone in a different buffer formulation. Immunoprecipitation of PXN in A-431 cells. Lysates were prepared and immunoprecipitation was performed using 13.6 µg of ab32084 pre-coupled to Protein A beads. Samples were then washed and processed for western blot.

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
All lanes:
Immunoprecipitation - Anti-Paxillin antibody [Y113] (ab32084) at 13.6 µg

All lanes:
A-431 cell Lysates

Observed band size: 64 kDa



Western blot - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

Paxillin Western blot staining using rabbit Anti-Paxillin antibody

This data was developed using ab32084, the same antibody clone in a different buffer formulation. ab32084 was shown to react with PXN in wild-type A-431 cells in Western blot with loss of signal observed in PXN knockout cell line ab261892. Wild-type A-431 and PXN knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab32084 overnight at 4 °C at a 1/1000 dilution. Blots were incubated with secondary antibodies at 0.2 µg/mL before imaging.

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
All lanes:
Western blot - Anti-Paxillin antibody [Y113] (ab32084) at 1/1000 dilution

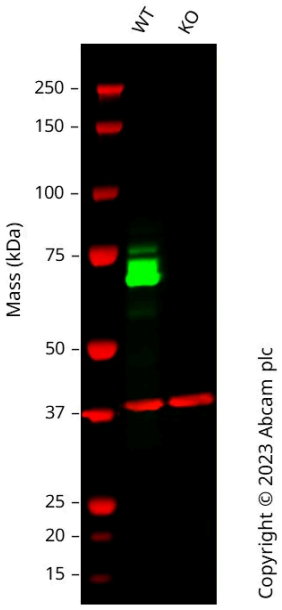
Lane 1:
Wild-type A-431 lysate at 30 µg

Lane 2:
PXN knock-out A-431 lysate at 30 µg

Lane 2:
Western blot - Human PXN (Paxillin) knockout A-431 cell line (ab261892)

Observed band size: 63 kDa

Western blot - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)



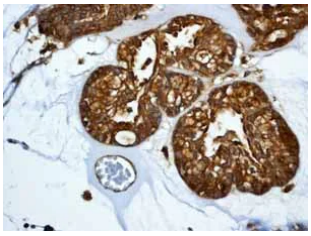
Anti-PXN antibody [Y113] (ab32084) staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab32084 was shown to bind specifically to PXN. A band was observed at 70 kDa in wild-type A431 cell lysates with no signal observed at this size in PXN knockout cell line ab261892 (knockout cell lysate ab261701). To generate this image, wild-type and PXN knockout A431 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween$^®$ 20 (TBS-T) 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 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution
All lanes:
Western blot - Anti-Paxillin antibody [Y113] (ab32084) at 1/1000 dilution

Lane 2:
Western blot - Human PXN (Paxillin) knockout A-431 cell lysate (ab261701)

Lane 2:
Western blot - Human PXN (Paxillin) knockout A-431 cell line (ab261892)

Predicted band size: 65 kDa

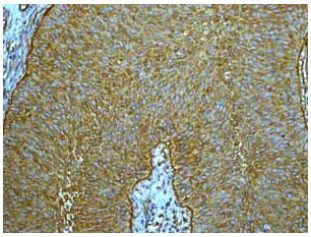
Observed band size: 70 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

ab32084 (Unpurified format) showing positive staining in Normal ovary tissue.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32084).

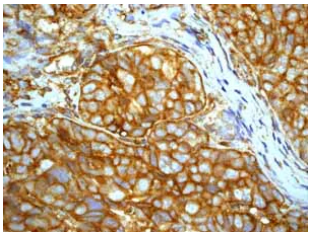
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

ab32084 (Unpurified format) showing positive staining in Transitional cell carcinoma of kidney tissue.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32084).

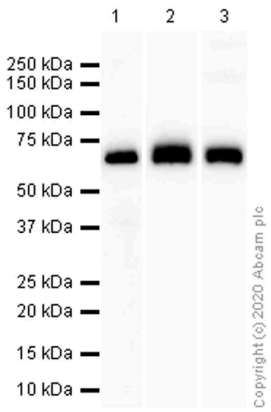
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

ab32084 (Unpurified format) showing positive staining in Ovarian carcinoma tissue.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab32084).

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

All lanes:
Western blot - Anti-Paxillin antibody [Y113] (ab32084) at 1/1000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

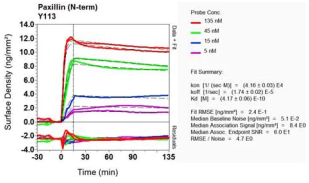
Lane 2:
RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate

Lane 3:
Mouse heart lysate

Secondary

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

Predicted band size: 65 kDa



OI-RD Scanning - Anti-Paxillin antibody [Y113] - BSA and Azide free (ab216652)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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