abcam

ab40839

Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker

Lab Essentials | Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP886Y
Purification technique	Affinity purification Protein A
Concentration	0.821 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/40
Notes	**For upurified use at 1/50**

WB

Tested

Species	Human
Dilution info	1/5000 - 1/50000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	**For upurified use at 1/50 - 1/100**

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/800
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. For upurified use at 1/1000

IHC-P

Tested

Species	Human
Dilution info	1/250
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information EZR

Function	Probably involved in connections of major cytoskeletal structures to the plasma membrane. In epithelial cells, required for the formation of microvilli and membrane ruffles on the apical pole. Along with PLEKHG6, required for normal macropinocytosis.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

Supplementary info

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

Activity summary	Ezrin also known as cytovillin or villin-2 is a protein belonging to the ezrin-radixin-moesin (ERM) family. It is approximately 81 kDa in molecular weight. Ezrin plays a

	critical role in linking the actin cytoskeleton to the plasma membrane. This interaction occurs through its ability to bind to membrane proteins and phospholipids facilitating structural support and signal transduction. Ezrin is widely expressed in epithelial tissues but it also occurs in other cell types such as lymphocytes and osteoclasts.
Biological function summary	Ezrin functions as a membrane-microfilament linker and is essential for maintaining cell shape adhesion and motility. It is an integral component of many cellular structures including microvilli and ruffles. Ezrin's activity often involves forming complexes with other proteins such as EBP50 and F-actin which are fundamental for its role in cellular morphogenesis. These interactions allow ezrin to regulate membrane surface structure and cell surface organization.
Pathways	Ezrin participates in various signaling pathways that are essential for cell migration and invasion. One key pathway is the Rho family of GTPases which regulates actin cytoskeleton dynamics. Ezrin interacts with proteins like Rho-associated kinase (ROCK) that influence cell contraction and motility. Additionally ezrin is involved in the MAPK/ERK pathway which influences cell growth and survival by interacting with other signaling molecules.
Associated diseases and disorders	Ezrin shows significant relevance to cancer progression and metastasis particularly in conditions like osteosarcoma. Ezrin overexpression correlates with increased metastatic potential and poor clinical outcomes. It also has implications in allergic diseases due to its role in immune cell function. In these contexts ezrin interacts with SRC family kinases which are important for transmitting signals from cell-surface receptors to downstream pathways influencing disease development and 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

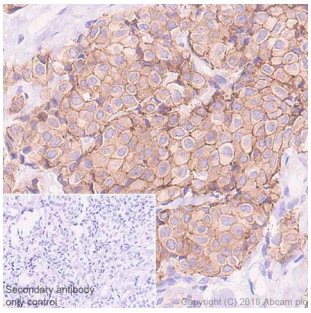
We do not recommend this combination. It is not covered by our product promise.

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.

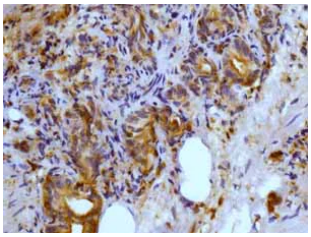
Full details and terms and conditions can be found here:
Terms & Conditions.

17 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

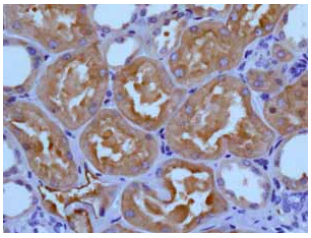
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human breast carcinoma tissue sections labeling Ezrin with Purified ab40839 at 1:250 dilution (3.28 µg/ml). Heat mediated antigen retrieval was performed Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use)was used as the secondary antibody. Negative control:PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

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

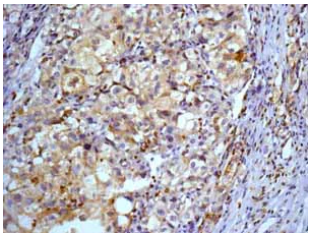
Unpurified ab40839 showing positive staining in Prostatic carcinoma tissue.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

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

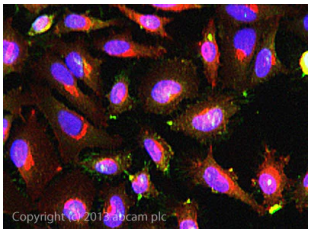
Unpurified ab40839 showing positive staining in Normal kidney tissue.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

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

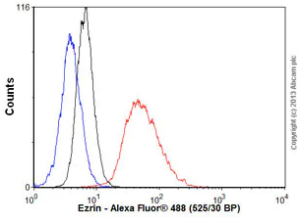
Unpurified ab40839 showing positive staining in Hepatocellular carcinoma tissue.



Immunocytochemistry/ Immunofluorescence - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

Ezrin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Ezrin antibody

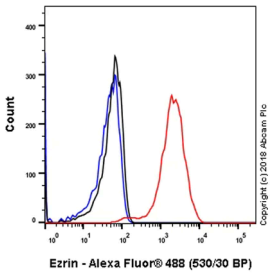
ICC/IF image of unpurified ab40839 stained HeLa cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab40839 at 1/100 dilution overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- rabbit (ab96899) IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Flow Cytometry (Intracellular) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

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

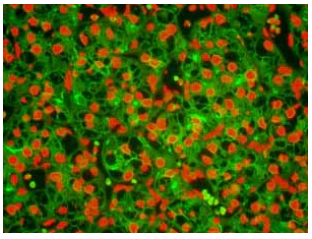
Overlay histogram showing SH-SY5Y cells stained with upurifiedab40839 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab40839, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Flow Cytometry (Intracellular) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

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

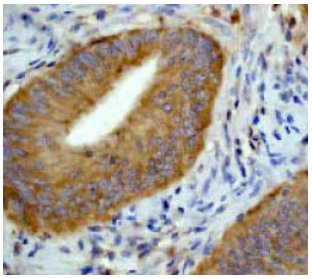
Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Ezrin with Purified ab40839 at 1/800 dilution (1 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

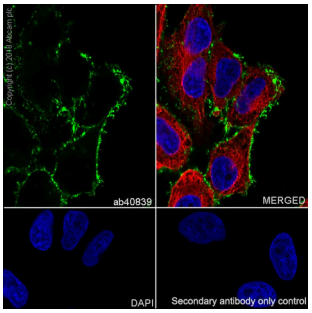
Ezrin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Ezrin antibody

Fluorescent immunohistochemical analysis of paraffin-embedded human kidney carcinoma tissue using unpurified ab40839. Green-Ezrin red-PI



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

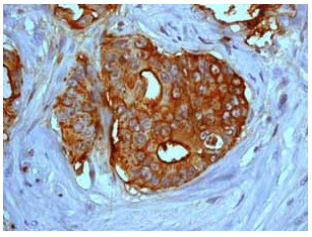
Unpurified ab40839 at a 1:100 dilution staining Ezrin in human colon carcinoma tissue.



Immunocytochemistry/ Immunofluorescence - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

Ezrin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Ezrin antibody

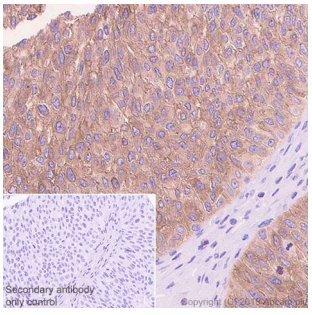
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Ezrin with Purified ab40839 at 1:500 dilution (1.6 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha 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 nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

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

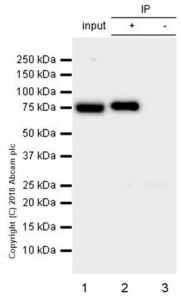
Unpurified ab40839 showing positive staining in Breast carcinoma tissue.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

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

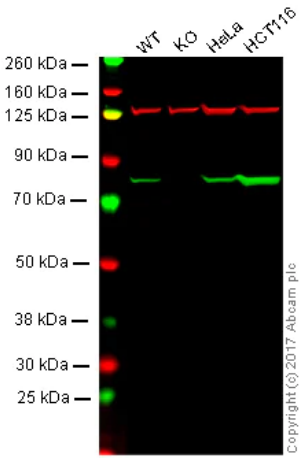
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human bladder carcinoma tissue sections labeling Ezrin with Purified ab40839 at 1:250 dilution (3.28 µg/ml). Heat mediated antigen retrieval was performed Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use)was used as the secondary antibody. Negative control:PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunoprecipitation - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

ab40839 (purified) at 1:40 dilution (2µg) immunoprecipitating Ezrin in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab40839 & HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab40839 in HeLa whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

Predicted band size: 69 kDa



Western blot - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

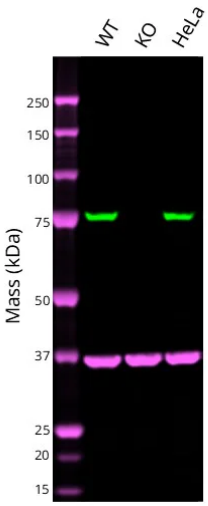
Ezrin Western blot staining using rabbit Anti-Ezrin antibody

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: Ezrin knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: HCT116 whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab40839 observed at 75 kDa. Red - loading control, ab18058, observed at 130 kDa.

ab40839 was shown to specifically react with Ezrin in wild-type HAP1 cells as signal was lost in Ezrin knockout cells. Wild-type and Ezrin knockout samples were subjected to SDS-PAGE. ab40839 and ab18058 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/5000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

Predicted band size: 69 kDa



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Western blot - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

Ezrin Western blot staining using rabbit Anti-Ezrin antibody

Western blot: Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker ab40839 staining at 1/5000 dilution, shown in green; Mouse anti GAPDH ab8245 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 76 kDa in Wild-type A549 cell lysates with no signal observed at this size in EZR knockout A549 cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3pc 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 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
Lanes 1 - 3:
Western blot - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839) at 1/5000 dilution

Lanes 1 - 3:
Western blot - Anti-Ezrin antibody [EP886Y] - BSA and Azide free (ab239832) at 1/5000 dilution

Lane 1:
Wild-type A549 at 20 µg

Lane 2:
Western blot - Human EZR knockout A549 cell line (ab300934) at 20 µg

Lane 3:
HeLa at 20 µg

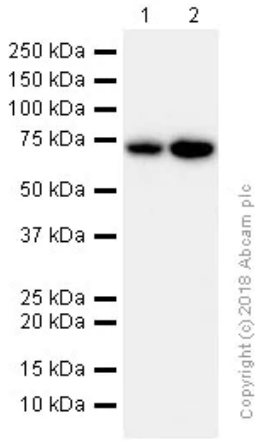
Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 76 kDa

Observed band size: 76 kDa



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Western blot - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

All lanes:
Western blot - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839) at 1/20000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates at 20 µg

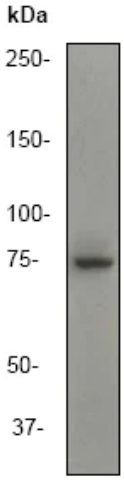
Lane 2:
HCT 116 (Human colorectal carcinoma epithelial cell) whole cell lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 69 kDa

Observed band size: 72 kDa



Western blot - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839)

All lanes:
Western blot - Anti-Ezrin antibody [EP886Y] - Plasma Membrane Marker (ab40839) at 1/50000 dilution

All lanes:
Hela cell lysate at 10 µg

Predicted band size: 69 kDa

Observed band size: 72 kDa

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