abcam

ab76468

Anti-Integrin linked ILK antibody [EPR1592]

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	EPR1592
Purification technique	Affinity purification Protein A
Concentration	0.092 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

WB

Tested

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

Expected

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

Species	Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	**For unpurified use at 1/100 - 1/250**

Expected

Species	Mouse
Dilution info	1/500

Notes	**For unpurified use at 1/100 - 1/250**

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information ILK

Function	Scaffold protein which mediates protein-protein interactions during a range of cellular events including focal adhesion assembly, cell adhesion and cell migration (PubMed:17420447, PubMed:20005845, PubMed:30367047, PubMed:32528174). Regulates integrin-mediated signal transduction by contributing to inside-out integrin activation (By similarity). Recruits PARVA and LIMS1/PITCH to form the

heterotrimeric IPP (ILK-PINCH-PARVIN) complex which binds to F-actin via the C-terminal tail of LIMS1 and the N-terminal region of PARVA, promoting F-actin filament bundling, a process required to generate force for actin cytoskeleton reorganization and subsequent dynamic cell adhesion events such as cell spreading and migration (PubMed:30367047). Binding to PARVA promotes effective assembly of ILK into focal adhesions while PARVA-bound ILK can simultaneously engage integrin-beta cytoplasmic tails to mediate cell adhesion (PubMed:20005845). Plays a role with PARVG in promoting the cell adhesion and spreading of leukocytes (PubMed:16517730). Acts as an upstream effector of both AKT1/PKB and GSK3 (PubMed:9736715). Mediates trafficking of caveolae to the cell surface in an ITGB1-dependent manner by promoting the recruitment of IQGAP1 to the cell cortex which cooperates with its effector DIAPH1 to locally stabilize microtubules and allow stable insertion of caveolae into the plasma membrane (By similarity). Required for the maintenance of mitotic spindle integrity by promoting phosphorylation of TACC3 by AURKA (PubMed:18283114). Associates with chromatin and may act as a negative regulator of transcription when located in the nucleus (PubMed:17420447).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

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	Integrin-linked kinase (ILK) is a 59 kDa protein involved mechanically in linking the extracellular matrix to the intracellular cytoskeleton. It serves as an important adaptor and scaffold in cell signaling facilitating communication between integrins and other cellular components. Expressed widely in various cell types ILK operates at focal adhesions and plays an important role in regulating cell shape movement and survival. The ILK protein is also referred to as 'integrin-linked protein' in some scientific circles and has significant relevance in cellular mechanics.
Biological function summary	ILK influences numerous cell processes including adhesion migration and proliferation. It forms a complex with other proteins such as parvin and PINCH known collectively as the ILK complex. This complex regulates actin cytoskeletal dynamics affecting cell-extracellular matrix interactions. ILK also modulates signal transduction pathways linked to cell cycle control making it integral to maintaining normal cellular functions. This protein’s interaction within the cell influences processes like angiogenesis and tissue remodeling showing its biological significance.
Pathways	ILK participates significantly in the PI3K/Akt and Wnt signaling pathways. It interacts with proteins like Akt and GSK-3β playing an essential role in these pathways. In the PI3K/Akt pathway it mediates cell survival and growth by influencing Akt phosphorylation. Within Wnt signaling ILK’s relationship with GSK-3β contributes to regulating β-catenin affecting gene expression downstream. These interactions place ILK as a vital component in cellular signaling networks coordinating important pathway activities.
Associated diseases and disorders	ILK’s malfunction or aberrant expression is linked to cancer and cardiovascular disorders. In cancer excessive ILK expression often correlates with tumor progression and metastasis likely involving interactions with proteins like β-catenin. In cardiovascular diseases dysregulated ILK function can contribute to heart failure where it associates with proteins like Akt affecting cardiac cell survival. These connections highlight the importance of ILK in pathology showing its role beyond normal physiology.

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

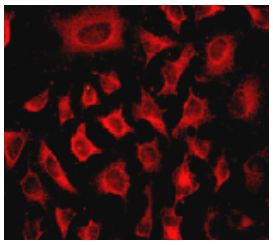
We do not recommend this combination. It is not covered by our product promise.

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.

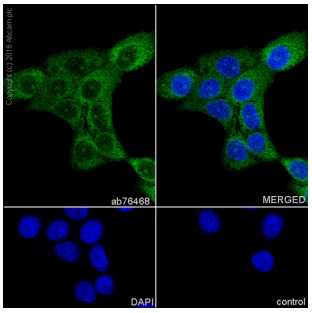
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-Integrin linked ILK antibody [EPR1592] (ab76468)

Integrin linked ILK Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Integrin linked ILK antibody

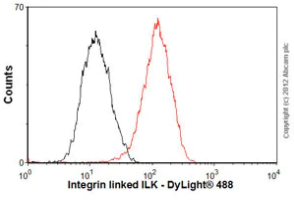
ab76468 at 1/100 dilution staining Integrin linked ILK in HeLa cells by Immunofluorescence.



Immunocytochemistry/ Immunofluorescence - Anti-Integrin linked ILK antibody [EPR1592] (ab76468)

Integrin linked ILK Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Integrin linked ILK antibody

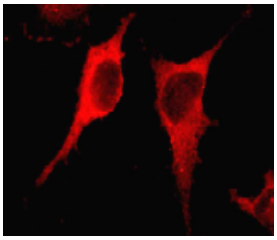
Immunocytochemistry/Immunofluorescence analysis of A431 (human epidermoid carcinoma) cells labelling Integrin linked ILK (green) with purified ab76468 at 1/500. Cells were fixed with 100% methanol. ab150077, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. Nuclei were stained blue with DAPI.
Secondary Only Control: PBS was used instead of the primary antibody as the negative control.



Flow Cytometry (Intracellular) - Anti-Integrin linked ILK antibody [EPR1592] (ab76468)

Integrin linked ILK Flow Cytometry (Intracellular) staining using rabbit Anti-Integrin linked ILK antibody

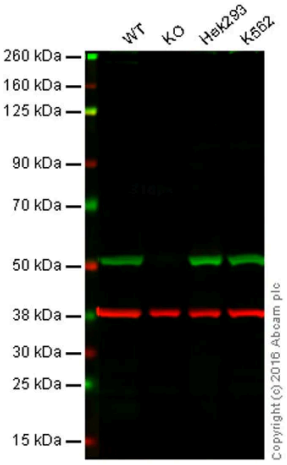
Overlay histogram showing HEK293 cells stained with ab76468 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab76468, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was a goat anti-rabbit DyLight® 488 (IgG; H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HEK293 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-Integrin linked ILK antibody [EPR1592] (ab76468)

Integrin linked ILK Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Integrin linked ILK antibody

ab76468 at 1/100 dilution staining Integrin linked ILK in HeLa cells by Immunofluorescence.



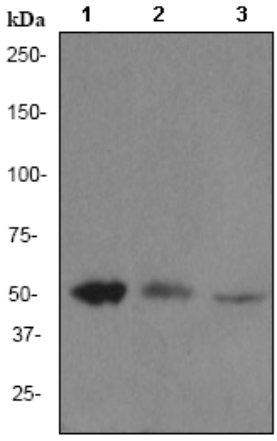
Western blot - Anti-Integrin linked ILK antibody [EPR1592] (ab76468)

Integrin linked ILK Western blot staining using rabbit Anti-Integrin linked ILK antibody

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: Integrin linked ILK knockout HAP1 cell lysate (20 µg)
Lane 3: Hek293 cell lysate (20 µg)
Lane 4: K562 cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab76468 observed at 51 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab76468 was shown to specifically react with Integrin linked ILK when Integrin linked ILK knockout samples were used. Wild-type and Integrin linked ILK knockout samples were subjected to SDS-PAGE. ab76468 and ab8245 (loading control to GAPDH) were diluted at 1/5000 and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/10000 dilution for 1 h at room temperature before imaging.
All lanes:
Western blot - Anti-Integrin linked ILK antibody [EPR1592] (ab76468)

Predicted band size: 51 kDa



Western blot - Anti-Integrin linked ILK antibody [EPR1592] (ab76468)

Integrin linked ILK Western blot staining using rabbit Anti-Integrin linked ILK antibody

All lanes:
Western blot - Anti-Integrin linked ILK antibody [EPR1592] (ab76468) at 1/50000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
Jurkat cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 51 kDa

Observed band size: 51 kDa

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