abcam

Product datasheet

Anti-FAK antibody [EP695Y] ab40794

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-FAK antibody [EP695Y]
Description	Rabbit monoclonal [EP695Y] to FAK
Host species	Rabbit
Specificity	ab40794 recognises Focal adhesion kinase (FAK). The mouse and rat recommendation is based on the WB results. We do not guarantee IHC-P for mouse and rat.
Tested applications	**Suitable for:** IHC-P, WB
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Cow
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: NIH/3T3, HeLa, A431, HEK-293T and K-562 cell lysates; Rat tissue lysate. IHC-P: Human hepatocellular carcinoma.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: PBS, 0.05% BSA, 40% Glycerol

Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP695Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab40794 in the following tested applications.

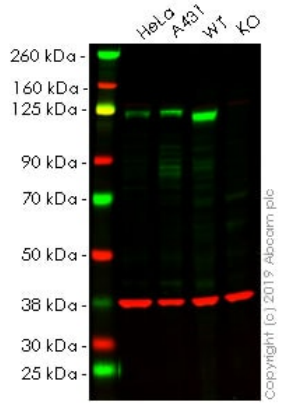
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★☆ (3)	1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. The mouse, rat and cow recommendation is based on the WB results. We do not guarantee IHC-P for mouse, rat and cow. See **IHC antigen retrieval protocols**.
WB	★★★★★ (3)	1/2000. Detects a band of approximately 125 kDa (predicted molecular weight: 119 kDa). **For unpurified use at 1/1000**

Target

Function	Non-receptor protein-tyrosine kinase implicated in signaling pathways involved in cell motility, proliferation and apoptosis. Activated by tyrosine-phosphorylation in response to either integrin clustering induced by cell adhesion or antibody cross-linking, or via G-protein coupled receptor (GPCR) occupancy by ligands such as bombesin or lysophosphatidic acid, or via LDL receptor occupancy. Microtubule-induced dephosphorylation at Tyr-397 is crucial for the induction of focal adhesion disassembly. Plays a potential role in oncogenic transformations resulting in increased kinase activity.
Tissue specificity	Expressed in all organs tested, in lymphoid cell lines, but most abundantly in brain.
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. FAK subfamily. Contains 1 FERM domain. Contains 1 protein kinase domain.
Domain	The first Pro-rich domain interacts with the SH3 domain of CRK-associated substrate (BCAR1) and CASL. The carboxy-terminal region is the site of focal adhesion targeting (FAT) sequence which mediates the localization of FAK1 to focal adhesions.
Post-translational modifications	Phosphorylated on 6 tyrosine residues upon activation. Microtubule-induced dephosphorylation at Tyr-397 could be catalyzed by PTPN11 and regulated by ZFYVE21. Dephosphorylated by PTPN11 upon EPHA2 activation by its ligand EFNA1.
Cellular localization	Cell junction > focal adhesion. Cell membrane. Constituent of focal adhesions.

Images



Western blot - Anti-FAK antibody [EP695Y] (ab40794)

All lanes : Anti-FAK antibody [EP695Y] (ab40794) at 1/1000 dilution

Lane 1 : HeLa cell lysate
Lane 2 : A431 cell lysate
Lane 3 : Wild-type HEK-293T cell lysate
Lane 4 : PTK2 knockout HEK-293T cell lysate

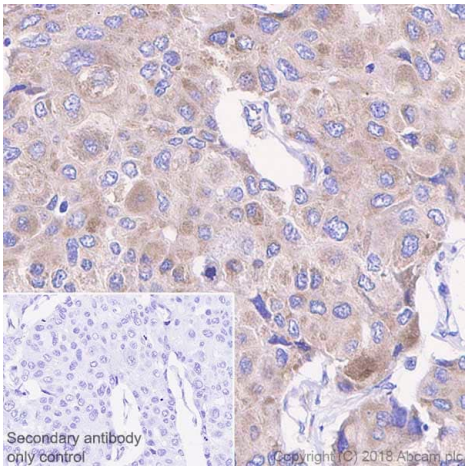
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 119 kDa

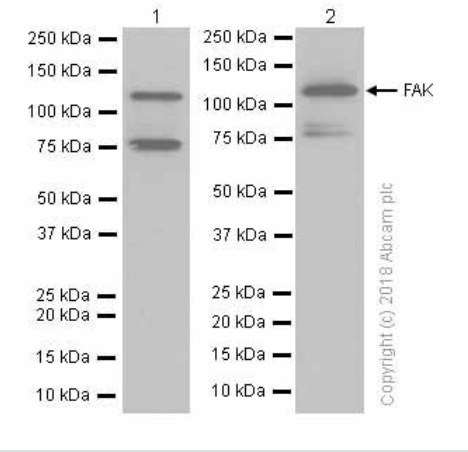
Lanes 1 - 4: Merged signal (red and green). Green - ab40794 observed at 119 kDa. Red - loading control, **ab8245** observed at 37 kDa.

ab40794 was shown to react with FAK in wild-type HEK-293T cells. Loss of signal was observed when knockout cell line **ab255421** (knockout cell lysate **ab263766**) was used. Wild-type and FAK knockout samples were subjected to SDS-PAGE. ab40794 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. 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 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FAK antibody [EP695Y] (ab40794)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human hepatocellular carcinoma tissue sections labeling FAK with purified ab40794 at 1:250 dilution (2.32 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.



Western blot - Anti-FAK antibody [EP695Y] (ab40794)

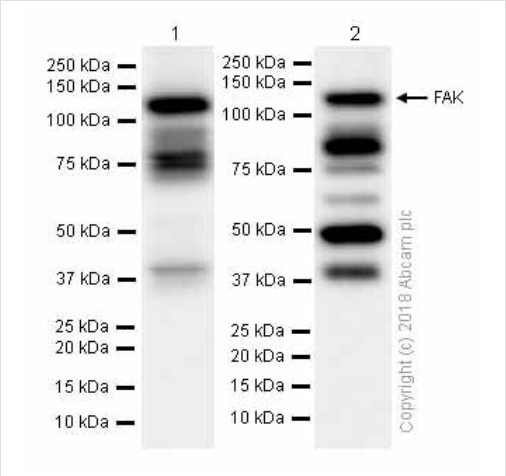
Lane 1 : Anti-FAK antibody [EP695Y] (ab40794) at 1/2000 dilution (Purified)
Lane 2 : Anti-FAK antibody [EP695Y] (ab40794) at 1/2000 dilution

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2 : K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysates

Lysates/proteins at 20 µg per lane.

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

Predicted band size: 119 kDa
Observed band size: 119 kDa



Western blot - Anti-FAK antibody [EP695Y] (ab40794)

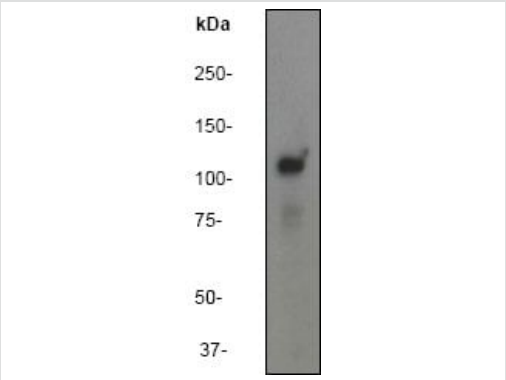
Lane 1 : Anti-FAK antibody [EP695Y] (ab40794) at 1/2000 dilution (Purified)
Lane 2 : Anti-FAK antibody [EP695Y] (ab40794) at 1/1000 dilution

Lane 1 : NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates
Lane 2 : Rat brain lysates

Lysates/proteins at 20 µg per lane.

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

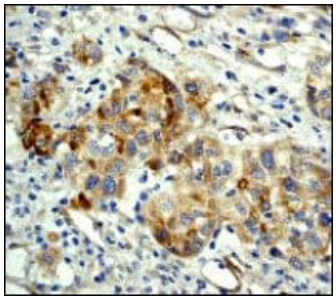
Predicted band size: 119 kDa
Observed band size: 119 kDa



Western blot - Anti-FAK antibody [EP695Y] (ab40794)

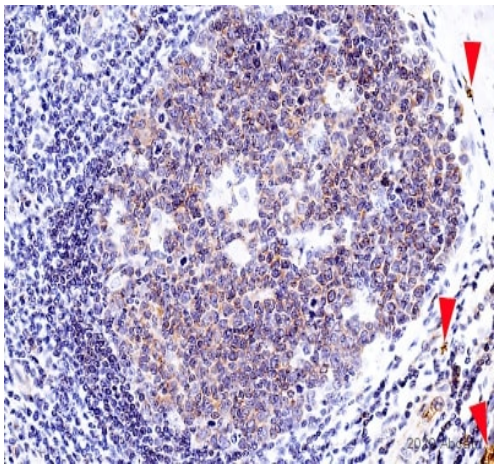
Anti-FAK antibody [EP695Y] (ab40794) at 1/1000 dilution + Hela cell lysate

Predicted band size: 119 kDa
Observed band size: 119 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FAK antibody [EP695Y] (ab40794)

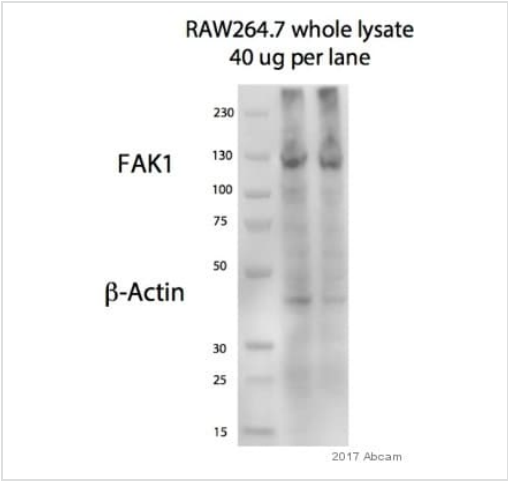
Immunohistochemical analysis of paraffin-embedded human hepatocellular carcinoma using ab40794.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FAK antibody [EP695Y] (ab40794)

This image is courtesy of an abreview submitted by Carl Hobbs, King's College London, United Kingdom

The image shows FAK antibody (ab40794) in human spleen tissue. Clear cytoplasmic positivity in a subset of germinal centre cells. The there is intense positivity of the serum in the blood vessels. Endogenous peroxidases was blocked using 2% H_2O_2, for 15 minutes.



Western blot - Anti-FAK antibody [EP695Y] (ab40794)

This image is courtesy of an Abreview submitted by Magali Boissiere (6970246)

All lanes : Anti-FAK antibody [EP695Y] (ab40794)

All lanes : Milk PBS Tween

Blocking peptides at 5 % per lane.

Secondary

All lanes : HRP conjugated goat anti-rabbit poly clonal at 1/5000 dilution

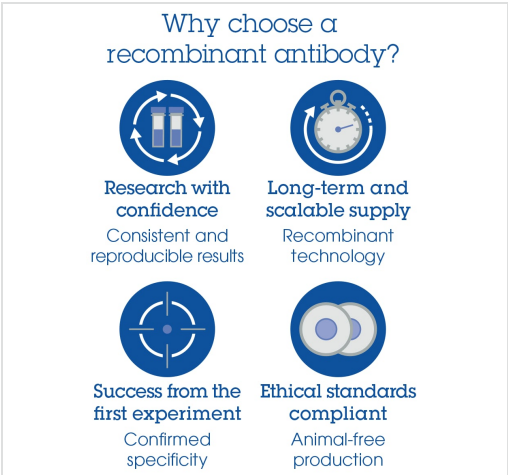
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 119 kDa
Observed band size: 130 kDa

Exposure time: 5 minutes

Western blot analysis of RAW264.7 cells lysate (40µg/lane) labelling FAK with ab40794 at 1/5000 in 5% Milk PBS Tween for 16 hours at 4ºC. A HRP conjugated goat anti-rabbit poly clonal (1/5000) was used as the secondary antibody.



Anti-FAK antibody [EP695Y] (ab40794)

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