abcam

ab45688

Anti-Fibronectin antibody [F14]

Anti-Fibronectin antibody [F14] (ab45688) is a rabbit monoclonal antibody detecting Fibronectin in **Western Blot, Flow Cytometry (Intra), ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 110 publications
- Trusted since 2006

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), 0.21% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	F14
Purification technique	Affinity purification Protein A
Concentration	1.364 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

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

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/150
Notes	-

Expected

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

Target data

See full target information FN1

Function

Fibronectins bind cell surfaces and various compounds including collagen, fibrin, heparin, DNA, and actin (PubMed:3024962, PubMed:3593230, PubMed:3900070, PubMed:7989369). Fibronectins are involved in cell adhesion, cell motility, opsonization, wound healing, and maintenance of cell shape (PubMed:3024962, PubMed:3593230, PubMed:3900070, PubMed:7989369). Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process, essential for osteoblast mineralization (By similarity). Participates in the regulation of type I collagen deposition by osteoblasts (By similarity). Acts as a ligand for the LILRB4 receptor, inhibiting FCGR1A/CD64-mediated monocyte activation (PubMed:34089617). Anastellin. Binds fibronectin and induces fibril formation. This fibronectin polymer, named superfibronectin, exhibits enhanced adhesive properties. Both anastellin and superfibronectin inhibit tumor growth, angiogenesis and metastasis. Anastellin activates p38 MAPK and inhibits lysophospholipid signaling. Secreted by contracting muscle, induces liver autophagy, a degradative pathway for nutrient mobilization and damage removal, and systemic insulin sensitization via hepatic ITGA5:ITGB1 integrin receptor signaling.

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

Product Specifications
Anti-Fibronectin antibody [F14] (ab45688) is a rabbit recombinant monoclonal antibody and is validated for use in Flow Cyt (Intra), ICC/IF, WB in human, mouse and rat samples.
Anti-Fibronectin antibody [F14] (ab45688) specifically detects Fibronectin (UniProt ID: P02751; Molecular weight: 269kDa) and is sold in 100 µL and 1 mL selling sizes.

Quality and Validation
Abcam's high quality manufacturing and validation processes ensure Anti-Fibronectin antibody [F14] (ab45688) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.
The specificity of Anti-Fibronectin antibody [F14] (ab45688) has been confirmed by testing in knockout samples.
Anti-Fibronectin antibody [F14] (ab45688) has been cited over 110 times in peer reviewed journals and is trusted by the scientific community.
Anti-Fibronectin antibody [F14] (ab45688) has 5 independent reviews from customers.

Related Products
Conjugation-ready, carrier free format available for antibody clone F14 - ab206928.
Antibody clone F14 is also available pre-conjugated to a variety of labels for your convenience - HRP, Alexa Fluor® 488, Alexa Fluor® 647, PE (ab207628, ab246735, ab246736, ab246737).

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.

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.

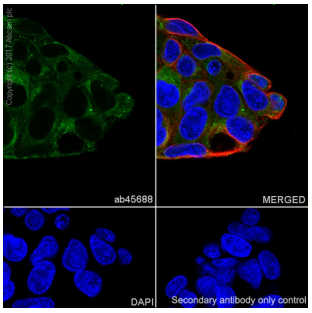
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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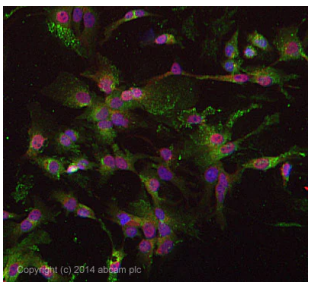
10 product images



Immunocytochemistry/ Immunofluorescence - Anti-Fibronectin antibody [F14] (ab45688)

Fibronectin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Fibronectin antibody

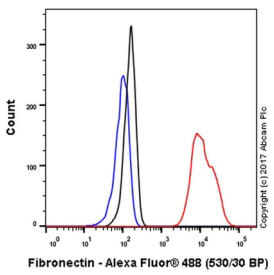
Immunocytochemistry/ Immunofluorescence analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Fibronectin with Purified ab45688 at 1:500 dilution. Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200. ab150077 Goat anti rabbit IgG(Alexa Fluor® 488) was used as the secondary antibody at 1:1000 dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunocytochemistry/ Immunofluorescence - Anti-Fibronectin antibody [F14] (ab45688)

Fibronectin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Fibronectin antibody

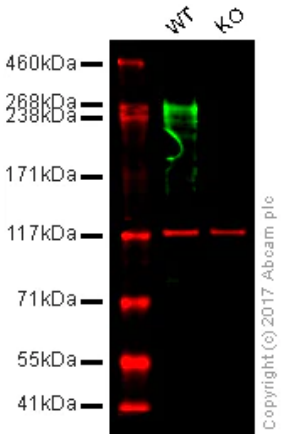
ICC/IF image of unpurified ab45688 stained HepG2 (Human liver hepatocellular carcinoma cell line) cells. The cells were fixed in 4% formaldehyde (10 minutes) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1 hour to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab45688 at 1/250 dilution overnight at +4°C. The secondary antibody (pseudo-colored green) was Alexa Fluor® 488 goat anti- rabbit (ab150081) IgG (H+L) preadsorbed, used at a 1/1000 dilution for 1 hour. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1 hour at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43 µM for 1 hour at room temperature.



Flow Cytometry (Intracellular) - Anti-Fibronectin antibody [F14] (ab45688)

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

Intracellular Flow Cytometry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Fibronectin with purified ab45688 at 1/150 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-Fibronectin antibody [F14] (ab45688)

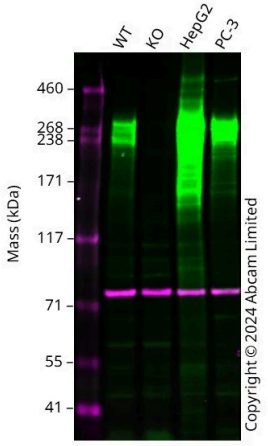
Fibronectin Western blot staining using rabbit Anti-Fibronectin antibody

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: Fibronectin knockout HAP1 whole cell lysate (20 µg)
Lanes 1 - 2: Merged signal (red and green). Green - ab45688 observed at 262 kDa. Red - loading control, ab18058, observed at 130 kDa.

ab45688 was shown to react with Fibronectin in wild-type HAP1 cells as signal was lost in Fibronectin knockout cells. Wild-type and Fibronectin knockout samples were subjected to SDS-PAGE. ab45688 and ab18058 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/500 dilution and 1/2000 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-Fibronectin antibody [F14] (ab45688)

Predicted band size: 262 kDa



Western blot - Anti-Fibronectin antibody [F14] (ab45688)

Fibronectin Western blot staining using rabbit Anti-Fibronectin antibody

Western blot: Rabbit Monoclonal[F14] to Fibronectin ab45688 staining at 1/1000 dilution, shown in green; Mouse anti-CANX (ab238078) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 238-268 kDa in Wild-type MCF7 cell lysates with no signal observed at this size in FN1 knockout MCF7 cell line (ab326019). To generate this image, 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 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-Fibronectin antibody [F14] (ab45688) at 1/1000 dilution

Lane 1:
Wild-type MCF7 at 20 µg

Lane 2:
Western blot - Human FN1 knockout MCF7 cell line (ab286324) at 20 µg

Lane 2:
Western blot - Human FN1 knockout MCF7 cell line (ab326019) at 20 µg

Lane 3:
HepG2 at 20 µg

Lane 4:
PC-3 at 20 µg

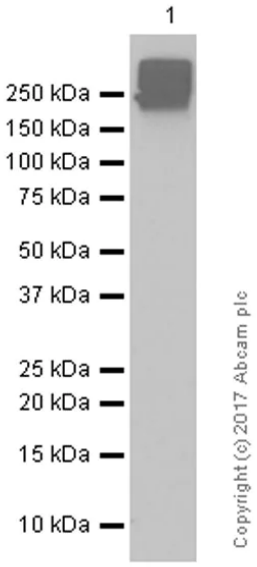
Secondary

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

Performed under reducing conditions.

Predicted band size: 272 kDa

Observed band size: 238-268 kDa



Western blot - Anti-Fibronectin antibody [F14] (ab45688)

Fibronectin Western blot staining of Human serum lysates using rabbit Anti-Fibronectin antibody

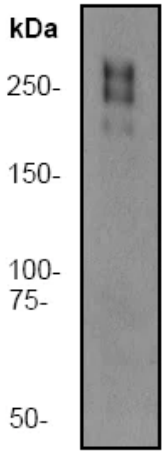
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Fibronectin antibody [F14] (ab45688) at 1/10000 dilution

All lanes:
Human serum lysates at 15 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 262 kDa



Western blot - Anti-Fibronectin antibody [F14] (ab45688)

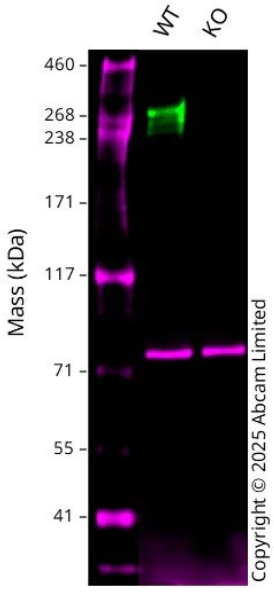
All lanes:
Western blot - Anti-Fibronectin antibody [F14] (ab45688) at 1/5000 dilution

All lanes:
human serum

Predicted band size: 262 kDa

Observed band size: 263 kDa

Western blot - Anti-Fibronectin antibody [F14] (ab45688)



Fibronectin Western blot staining using rabbit Anti-Fibronectin antibody

Western blot: Rabbit Monoclonal[F14] to Fibronectin ab45688 staining at 1/1000 dilution, shown in green; Mouse anti-CANX (ab238078) loading control staining at 1/20,000 dilution, shown in magenta.
A band was observed at 272 kDa in Wild-type A549 cell lysates with no signal observed at this size in FN1 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 & Goat anti-Mouse 680RD at 1/20,000 dilution.

All lanes:
Western blot - Anti-Fibronectin antibody [F14] (ab45688) at 1/1000 dilution

Lane 1:
Wild-type A549 at 20 µg

Lane 2:
FN1 knockout A549 at 20 µg

Lane 2:
Western blot - Anti-Calnexin antibody [CANX/1543] (ab238078) at 20 µg

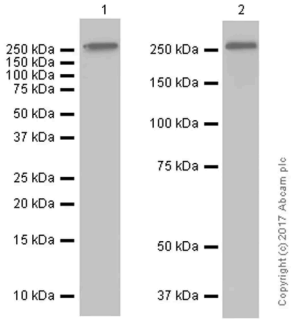
Secondary

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

Performed under reducing conditions.

Predicted band size: 272 kDa

Observed band size: 272 kDa



Western blot - Anti-Fibronectin antibody [F14] (ab45688)

Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Fibronectin antibody [F14] (ab45688) at 1/10000 dilution

Lane 1:
Mouse serum lysates at 15 µg

Lane 2:
Rat serum lysates at 15 µg

Secondary

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

Predicted band size: 262 kDa

Observed band size: 263 kDa

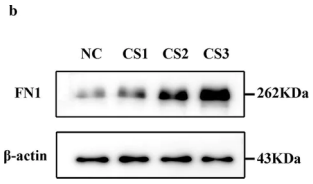


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Western blot - Anti-Fibronectin antibody [F14] (ab45688)

Fibronectin Western blot staining using rabbit Anti-Fibronectin antibody

Fibronectin western blot using anti-Fibronectin antibody [F14] ab45688. Publication image and figure legend from Liu, B., Ding, Y., et al., 2020, BMC Urol, PubMed 33287818.

ab45688 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab45688 please see the product overview.

FN1 expression in EAE-induced fibrotic bladder tissue. a The expression of FN1 in bladder fibrosis with different scores was analyzed by immunohistochemistry. b The expression of FN1 in bladder fibrosis with different scores was analyzed by Western blot. c The expression of FN1 in bladder fibrosis with different scores was analyzed by RT-qPCR. The findings were from three separate experiments. The data are expressed as the mean ± SD. NC, normal control group; CS, clinical symptoms; FN1, fibronectin 1. nsP > 0.05, *p < 0.05, **p < 0.01, ***p < 0.001, ****p < 0.0001 versus control. Scale bar = 200 μm

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