abcam

ab232045

Anti-FADD antibody [EPR4415] - 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	EPR4415
Purification technique	Affinity purification Protein A
Concentration	0.994 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information FADD

Function	Apoptotic adapter molecule that recruits caspases CASP8 or CASP10 to the activated FAS/CD95 or TNFRSF1A/TNFR-1 receptors (PubMed:16762833, PubMed:19118384, PubMed:20935634, PubMed:23955153, PubMed:24025841, PubMed:7538907, PubMed:9184224). The resulting aggregate called the death-inducing signaling complex (DISC) performs CASP8 proteolytic activation (PubMed:16762833, PubMed:19118384, PubMed:20935634, PubMed:7538907, PubMed:9184224). Active CASP8 initiates the subsequent cascade of caspases mediating apoptosis (PubMed:16762833). Involved in interferon-mediated antiviral immune response, playing a role in the positive regulation of interferon signaling (PubMed:21109225, PubMed:24204270).

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

ab232045 is the carrier-free version of ab108601.

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.

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	FADD also known as Fas-Associated protein with Death Domain is an adaptor molecule with a molecular weight of approximately 23 kDa. It plays a critical role in the transmission of apoptotic signals. FADD is widely expressed in various tissues particularly in the thymus and immune system cells. This protein serves as a bridge linking death receptors like Fas and TNFR-1 with caspase activation pathways.
Biological function summary	FADD is essential in apoptosis where it assists in the assembly of the death-inducing signaling complex (DISC). Upon receptor activation FADD recruits procaspase-8 or -10 to DISC promoting their autocatalytic cleavage and activation. This leads to the subsequent cascade that results in cell apoptosis. FADD also plays a role in necroptosis and is involved in the immune response regulation highlighting its multifunctional nature in cellular processes.
Pathways	FADD integrates into the apoptotic and necroptotic pathways. In the apoptotic pathway it interacts closely with Fas a death receptor to promote caspase-8 activation. Additionally in the necroptotic pathway FADD associates with RIP1 and RIP3 contributing to an alternative form of programmed cell death. These interactions underline its significant role in controlling cell fate decisions.
Associated diseases and disorders	Aberrations in FADD function are associated with cancer and autoimmune diseases. Overexpression or mutation of FADD can lead to unchecked cell proliferation or defective apoptosis contributing to cancer development. In autoimmune disorders improper regulation of FADD may disrupt immune tolerance and lead to systemic inflammation. Key proteins involved in these disease processes include caspase-8 and RIPK1 which interact with FADD in regulating cell death and survival mechanisms.

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

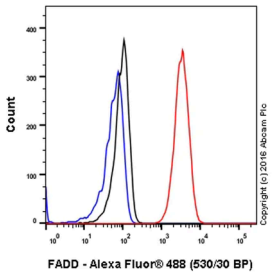
We do not recommend this combination. It is not covered by our product promise.

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.

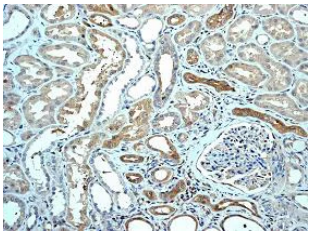
5 product images



Flow Cytometry (Intracellular) - Anti-FADD antibody [EPR4415] - BSA and Azide free (ab232045)

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

Flow Cytometry analysis of A431(human epidermoid carcinoma) cells labeling FADD with purified ab108601 at 1/140 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488)(1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) was used as the unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108601).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FADD antibody [EPR4415] - BSA and Azide free (ab232045)

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

Immunohistochemical staining of paraffin-embedded Human kidney tissue using ab108601 at a dilution of 1/100.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108601).



Immunoprecipitation - Anti-FADD antibody [EPR4415] - BSA and Azide free (ab232045)

This data was developed using ab108601, the same antibody clone in a different buffer formulation.
FADD was immunoprecipitated from 0.35 mg HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10 µg with 108601 at 1/120 dilution (2µg). VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10 µg

Lane 2: ab108601 IP in HeLa whole cell lysate

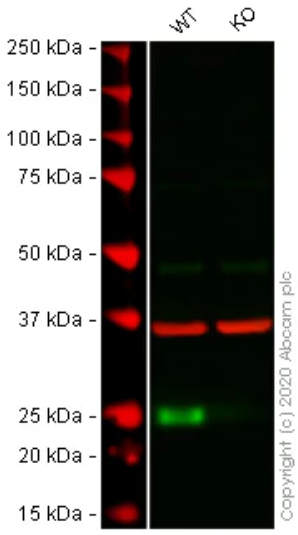
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab108601 in HeLa whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-FADD antibody [EPR4415] (ab108601)

Predicted band size: 23 kDa

Observed band size: 23 kDa



Western blot - Anti-FADD antibody [EPR4415] - BSA and Azide free (ab232045)

FADD Western blot staining using rabbit Anti-FADD antibody

This data was developed using the same antibody clone in a different buffer formulation (ab108601).
Lanes 1 - 2: Merged signal (red and green). Green - ab108601 observed at 23 kDa. Red - loading control ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

ab108601 was shown to react with FADD in wild-type HeLa cells in western blot with loss of signal observed in FADD knockout cell line ab261817 (FADD knockout cell lysate ab257261). Wild-type and FADD knockout HeLa cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab108601 and ab8245 (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated 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 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-FADD antibody [EPR4415] (ab108601) at 1/1000 dilution

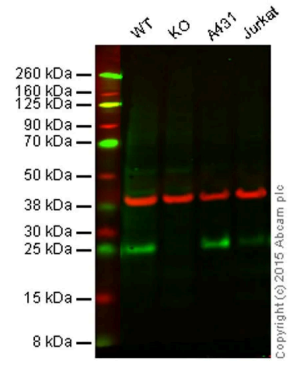
Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human FADD knockout HeLa cell lysate (ab257261) at 20 µg

Performed under reducing conditions.

Predicted band size: 23 kDa

Observed band size: 23 kDa



Western blot - Anti-FADD antibody [EPR4415] - BSA and Azide free (ab232045)

FADD Western blot staining using rabbit Anti-FADD antibody

Lanes 1 - 4: Merged signal (red and green). Green - ab108601 observed at 25 kDa. Red - loading control, ab8245, observed at 37 kDa.
ab108601 was shown to specifically react with FADD when FADD knockout samples were used. Wild-type and FADD knockout samples were subjected to SDS-PAGE. ab108601 and ab8245 (loading control to GAPDH) were diluted 1/1,000 and 1/2,000 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 1/10,000 dilution for 1 hour at room temperature before imaging.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab108601).

All lanes:
Western blot - Anti-FADD antibody [EPR4415] - BSA and Azide free (ab232045) at 1/1000 dilution

Lane 1:
Wild-type HAP1 cell lysate at 20 µg

Lane 2:
FADD knockout HAP1 cell lysate at 20 µg

Lane 3:
A431 cell lysate at 20 µg

Lane 4:
Jurkat cell lysate at 20 µg

Predicted band size: 23 kDa

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