abcam

ab247736

Anti-TRAF4 antibody [EPR1729] - BSA and Azide free

Recombinant | RabMAb

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	EPR1729
Purification technique	Affinity purification

Reactivity data

IP

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information TRAF4

Function	Adapter protein with E3 ligase activity that is involved in many diverse biological processes including cell proliferation, migration, differentiation, DNA repair, platelet activation or apoptosis (PubMed:30352854, PubMed:31076633, PubMed:32268273, PubMed:33991522). Promotes EGFR-mediated signaling by facilitating the dimerization of EGFR and downstream AKT activation thereby promoting cell proliferation (PubMed:30352854). Ubiquitinates SMURF2 through 'Lys-48'-linked ubiquitin chain leading to SMURF2 degradation through the proteasome and subsequently osteogenic differentiation (PubMed:31076633). Promotes 'Lys-63'-mediated ubiquitination of CHK1 which in turn activates cell cycle arrest and activation of DNA repair (PubMed:32357935). In addition, promotes an atypical 'Lys-29'-linked ubiquitination at the C-terminal end of IRS1 which is crucial for insulin-like growth factor (IGF) signal transduction (PubMed:33991522). Regulates activation of NF-kappa-B in response to signaling through Toll-like receptors. Required for normal skeleton development, and for normal development of the respiratory tract (By similarity). Required for activation of RPS6KB1 in response to TNF signaling. Modulates TRAF6 functions. Inhibits adipogenic differentiation by activating pyruvate kinase PKM activity and subsequently the beta-catenin signaling pathway (PubMed:32268273).

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

ab247736 is the carrier-free version of ab108991.

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.

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

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	TRAF4 also known as Tumor Necrosis Factor Receptor-Associated Factor 4 is a scaffold protein with a molecular weight of approximately 55 kDa. TRAF4 interacts with a variety of intracellular signaling molecules influencing signal transduction. It is expressed prominently in epithelial cells and the respiratory tract reflecting its involvement in tissue homeostasis and cell communication. The protein contains a conserved RING finger domain a novel zinc finger TRAF-type domain and a coiled-coil region which are essential for its function in protein-protein interactions.
Biological function summary	TRAF4 participates in the regulation of immune responses and development of epithelial tissues. This protein modulates signaling pathways by promoting or inhibiting the activation of transcription factors including NF-κB and AP-1 which are critical for the immune system's function. TRAF4 associates with various adapter proteins forming signaling complexes that influence cellular outcomes during immune responses. It also plays a role in the development and integrity of the respiratory epithelium highlighting its importance in maintaining epithelial barrier functions.
Pathways	TRAF4 integrates into the TNF receptor signaling pathway and the TGF-beta signaling pathway. In the TNF receptor pathway TRAF4 interacts with other TRAF family members mediating responses to inflammatory cytokines and regulating apoptosis. Within the TGF-beta pathway TRAF4 modulates signal transduction involving Smad proteins impacting cellular growth and differentiation. The protein's role within these pathways highlights its capacity to influence both immune responses and tissue homeostasis.
Associated diseases and disorders	TRAF4 has associations with cancer progression and chronic inflammatory diseases. Altered expression levels of TRAF4 can contribute to tumorigenesis by affecting cell survival and proliferation involving interaction with proteins like NF-κB and TGF-beta receptors. In chronic inflammatory diseases TRAF4's dysregulation can exacerbate inflammation through pathways that involve interactions with cytokines and other TRAF family proteins. TRAF4 represents a

potential target for therapeutic intervention aiming to modulate immune responses and ameliorate disease symptoms.

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

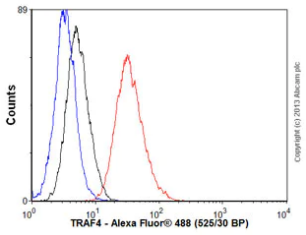
We do not recommend this combination. It is not covered by our product promise.

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.

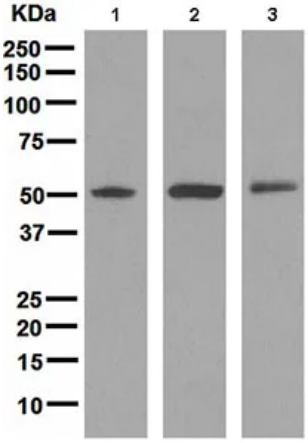
2 product images



Flow Cytometry (Intracellular) - Anti-TRAF4 antibody [EPR1729] - BSA and Azide free (ab247736)

TRAF4 Flow Cytometry (Intracellular) staining using rabbit Anti-TRAF4 antibody

This data was developed using ab108991, the same antibody clone in a different buffer formulation.
Overlay histogram showing HeLa cells stained with ab108991 (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 (ab108991, 1/100 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) (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.



Western blot - Anti-TRAF4 antibody [EPR1729] - BSA and Azide free (ab247736)

This data was developed using ab108991, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-TRAF4 antibody [EPR1729] (ab108991) at 1/1000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
SKBR-3 cell lysate at 10 µg

Predicted band size: 54 kDa

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