abcam

ab214638

Alexa Fluor® 488 Anti-TRAF6 antibody [EP591Y]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP591Y
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	1/100
Notes	This product gave a positive signal in HeLa cells fixed with 100% methanol (5 min)

Predicted

Species	Mouse, Rat, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/0.1
Notes	-

Expected

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

IHC-P

Expected

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

Target data

See full target information TRAF6

Function	E3 ubiquitin ligase that, together with UBE2N and UBE2V1, mediates the synthesis of 'Lys-63'-linked-polyubiquitin chains conjugated to proteins, such as ECSIT, IKBKG, IRAK1, AKT1 and AKT2 (PubMed:11057907, PubMed:18347055,

PubMed:19465916, PubMed:19713527, PubMed:27746020, PubMed:31620128). Also mediates ubiquitination of free/unanchored polyubiquitin chain that leads to MAP3K7 activation (PubMed:19675569). Leads to the activation of NF-kappa-B and JUN (PubMed:16378096, PubMed:17135271, PubMed:17703191). Seems to also play a role in dendritic cells (DCs) maturation and/or activation (By similarity). Represses c-Myb-mediated transactivation, in B-lymphocytes (PubMed:18093978, PubMed:18758450). Adapter protein that seems to play a role in signal transduction initiated via TNF receptor, IL-1 receptor and IL-17 receptor (PubMed:12140561, PubMed:19825828, PubMed:8837778). Regulates osteoclast differentiation by mediating the activation of adapter protein complex 1 (AP-1) and NF-kappa-B, in response to RANK-L stimulation (By similarity). Together with MAP3K8, mediates CD40 signals that activate ERK in B-cells and macrophages, and thus may play a role in the regulation of immunoglobulin production (By similarity). Acts as a regulator of the JNK and NF-kappa-B signaling pathways by initiating assembly of heterotypic 'Lys-63'-/'Lys-48'-linked branched ubiquitin chains that are then recognized by TAB2: TRAF6 catalyzes initial 'Lys-63'-linked-polyubiquitin chains that are then branched via 'Lys-48'-linked polyubiquitin by HUWE1 (PubMed:27746020). 'Lys-63'-/'Lys-48'-linked branched ubiquitin chains protect 'Lys-63'-linkages from CYLD deubiquitination (PubMed:27746020). Participates also in the TCR signaling by ubiquitinating LAT (PubMed:23514740, PubMed:25907557).

Storage

Shipped at conditions	Blue Ice
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, Store in the dark

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.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	TRAF6 also known as TNF receptor-associated factor 6 is an E3 ubiquitin ligase that is part of the TRAF family. It has a molecular mass of approximately 60 kDa. TRAF6 is ubiquitously expressed in many types of tissues and cells including immune cells like macrophages and dendritic cells. Its primary role is to mediate signal transduction from members of the TNF receptor and Toll-like receptor (TLR) families which it achieves through polyubiquitination of target proteins. This process facilitates the recruitment of downstream signaling components necessary for cellular responses.
Biological function summary	TRAF6 plays a critical role in regulating immune and inflammatory responses. It acts within a complex often associating with other signaling proteins such as IRAK1 and TAK1 to activate downstream kinases like IKK and JNK. These signaling pathways lead to the activation of transcription factors such as NF-kB and AP-1 which regulate the expression of genes involved in inflammation and immune responses. TRAF6 is an important modulator of adaptive and innate immunity influencing both the maturation of immune cells and the body's response to infection.
Pathways	TRAF6 significantly contributes to the NF-kB and MAPK signaling pathways. In the NF-kB pathway TRAF6 mediates signal transduction following TLR engagement interacting with proteins such as MyD88 and RIP1 to drive inflammatory cytokine production. In the MAPK pathway it associates predominantly with TAK1 to facilitate the phosphorylation and activation of downstream kinases. These pathways are essential for transmitting signals from cell surface receptors to the nucleus controlling the magnitude of immune signaling and cellular stress responses.
Associated diseases and disorders	TRAF6 has a significant association with autoimmune diseases and certain cancers. In autoimmune disorders aberrant activation of TRAF6 can lead to prolonged inflammation and detrimental immune responses. For cancers TRAF6 is linked to

tumor progression and metastasis acting alongside proteins like IRAK1 and RIP1 which can further promote malignancy through chronic inflammation and immune evasion. Understanding TRAF6's role in these diseases provides insights that could lead to targeted therapeutic strategies.

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

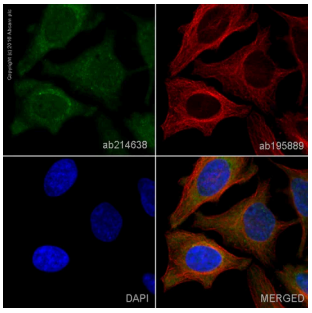
We do not recommend this combination. It is not covered by our product promise.

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.

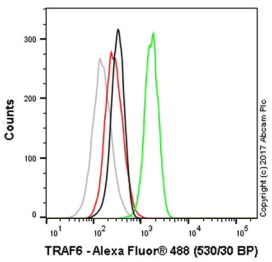
2 product images



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-TRAF6 antibody [EP591Y] (ab214638)

TRAF6 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TRAF6 antibody

ab214638 staining TRAF6 in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab214638 at 1/100 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-TRAF6 antibody [EP591Y] (ab214638)

TRAF6 Flow Cytometry (Intracellular) staining using rabbit Anti-TRAF6 antibody

Overlay histogram showing HAP1 wildtype (green line) and HAP1-TRAF6 knockout cells (red line) stained with ab214638. The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab214638, 0.1µg/ml) for 30 min at 22°C.

A rabbit IgG isotype control antibody (ab199091) was used at the same concentration and conditions as the primary antibody (HAP1 wildtype - black line, HAP1-TRAF6 knockout - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity).

Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.

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