abcam

ab275203

Alexa Fluor® 488 Anti-TRAP/CD40L antibody [EPR20727-307]

Recombinant | RabMAb

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	EPR20727-307
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

Flow Cyt

Tested

Species	Human
Dilution info	1/500
Notes	-

Target data

See full target information CD40LG

Function	Cytokine that acts as a ligand to CD40/TNFRSF5 (PubMed:1280226, PubMed:31331973). Costimulates T-cell proliferation and cytokine production (PubMed:8617933). Its cross-linking on T-cells generates a costimulatory signal which enhances the production of IL4 and IL10 in conjunction with the TCR/CD3 ligation and CD28 costimulation (PubMed:8617933). Induces the activation of NF-kappa-B (PubMed:15067037, PubMed:31331973). Induces the activation of kinases MAPK8 and PAK2 in T-cells (PubMed:15067037). Induces tyrosine phosphorylation of isoform 3 of CD28 (PubMed:15067037). Mediates B-cell proliferation in the absence of co-stimulus as well as IgE production in the presence of IL4 (By similarity). Involved in immunoglobulin class switching (By similarity). CD40 ligand, soluble form. Acts as a ligand for integrins, specifically ITGA5:ITGB1 and ITGAV:ITGB3; both integrins and the CD40 receptor are required for activation of CD40-CD40LG signaling, which have cell-type dependent effects, such as B-cell activation, NF-kappa-B signaling and anti-apoptotic signaling.

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

This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.

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	TRAP/CD40L also known as CD154 or CD40 ligand is a type II transmembrane protein with a molecular mass of approximately 39 kDa. CD40L is mainly expressed on the surface of activated T cells. This protein binds to CD40 a significant receptor present on several immune cells including B cells macrophages and dendritic cells. The interaction with CD40 is essential for immune cell activation and development marking CD40L as an important player in adaptive immunity.
Biological function summary	The interaction between CD40L and CD40 triggers cell proliferation differentiation and apoptosis in immune cells. CD40L contributes to the formation of an immunological synapse encompassing its role in T helper cell function. Furthermore CD40L is implicated in the activation of B cells which are necessary for antibody class switching and memory cell generation. Its broad influence shows CD40L's involvement in immune system regulation and response.
Pathways	CD40L is integral to the CD40 signaling pathway which is involved in immune and inflammatory responses. CD40L activates the NF-kB and JNK signaling pathways by engaging with CD40 which then drives the transcription of genes related to immune response. This signaling cascade impacts several other proteins such as TRAF proteins which act as intermediaries in propagating the signal.

Associated diseases and disorders	CD40L has been linked to immune-related conditions including autoimmune disorders and inflammatory diseases. Elevated CD40L expression is observed in diseases such as systemic lupus erythematosus (SLE) and rheumatoid arthritis. In SLE CD40L interaction with CD40 on B cells is known to exacerbate disease severity by promoting autoantibody production. Exploring anti-CD40L therapeutic strategies can offer potential intervention in such diseases.

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

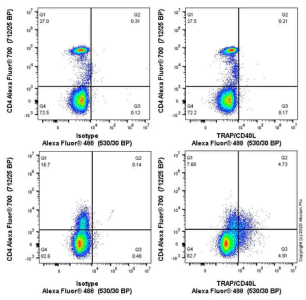
We do not recommend this combination. It is not covered by our product promise.

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.

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1 product image



Flow Cytometry - Alexa Fluor® 488 Anti-TRAP/CD40L antibody [EPR20727-307] (ab275203)

TRAP/CD40L Flow Cytometry staining using rabbit Anti-TRAP/CD40L antibody

Flow cytometry staining of human peripheral blood mononuclear cells (PBMCs) (top), or PBMCs treated with PMA (50 ng/ml, 18h) and ionomycin (500 ng/ml, 18h) (bottom) with ab275203 (right) or Rabbit IgG (monoclonal) Alexa Fluor® 488 (ab199091) isotype control (left). PBMCs were incubated on ice in 1x PBS containing 10 µg/ml anti CD16/CD32 and 10 % normal goat serum followed by the antibody (ab275203) or Rabbit IgG (monoclonal) Alexa Fluor® 488 (ab199091) isotype (1x 10^6 in 100 µl at 1 µg/ml (1/500)) for 30min on ice. The cells were also stained for CD4. Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.

Events were gated on live lymphocytes.

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