abcam

ab134406

APC Anti-TRAP/CD40L antibody [24-31]

Anti-TRAP/CD40L antibody [24-31] conjugated to APC - suitable for flow cytometry, and reacts with human samples. Clone [24-31] is a mouse monoclonal antibody cited in 68 publications.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human CD40LG. The exact immunogen used to generate this antibody is proprietary information. Database link P29965
Clone number	24-31
Purification technique	Affinity purification Protein G
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	5 µL for 10^6 Cells
Notes	ab37391 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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 conditions	+4°C
Appropriate long-term storage conditions	+4°C

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

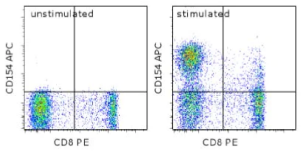
We do not recommend this combination. It is not covered by our product promise.

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 - APC Anti-TRAP/CD40L antibody [24-31] (ab134406)

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

Flow cytometry analysis of unstimulated (left) or stimulated for 6 hours using Cell Stimulation Cocktail (500X) (right) normal Human peripheral blood cells with Anti-Human CD8a PE ab134406 at 5 µL (0.5 µg/test. Cells in the lymphocyte gate were used for analysis.

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