abcam

ab99894

Anti-TRAP/CD40L antibody [MR-1]

Key facts

Isotype	IgG1
Host species	Armenian hamster
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Cd40lg protein. The exact immunogen used to generate this antibody is proprietary information. Database link P27548
Clone number	MR-1
Purification technique	Affinity purification Protein A
Specificity	This antibody detects mouse TRAP/CD40L/CD154. a 39 kDa cell surface glycoprotein expressed predominantly on activated CD4+ lymphocytes.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from cell culture supernatant (> 95% by SDS-PAGE)

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	3 µg/mL

Notes	-

Target data

See full target information Cd40lg

Function	Cytokine that acts as a ligand to CD40/TNFRSF5 (By similarity). Costimulates T-cell proliferation and cytokine production (By similarity). 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 (By similarity). Induces the activation of NF-kappa-B (By similarity). Induces the activation of kinases MAPK8 and PAK2 in T-cells (By similarity). Mediates B-cell proliferation in the absence of co-stimulus as well as IgE production in the presence of IL4 (PubMed:1374165). Involved in immunoglobulin class switching (PubMed:1374165). 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
Storage information	Avoid freeze / thaw cycle

Notes

Functional Application: Blocking T cell costimulation in vivo.

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

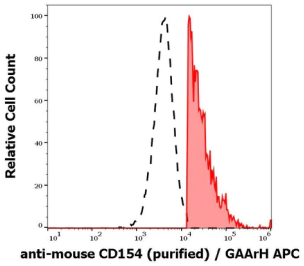
We do not recommend this combination. It is not covered by our product promise.

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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Terms & Conditions.

1 product image



Flow Cytometry - Anti-TRAP/CD40L antibody [MR-1] (ab99894)

TRAP/CD40L Flow Cytometry staining using armenian hamster Anti-TRAP/CD40L antibody

Flow Cytometry analysis of CD154 positive cells (red) from mouse CD154 negative cells (black) using ab99894 at 3 µg/ml.

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