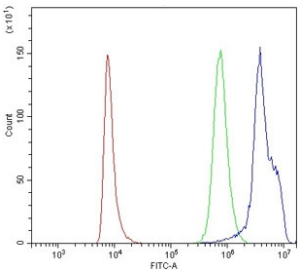
CD154 Antibody / CD40LG Antibody (RQ6411)

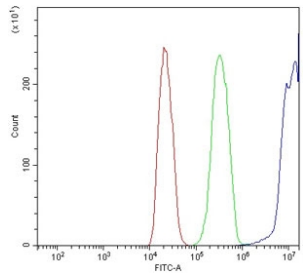
Catalog No.	Formulation	Size
RQ6411	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

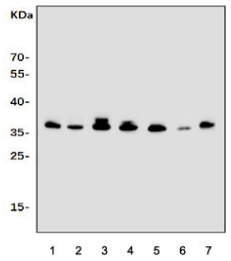
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P29965
RRID	AB_3753796
Applications	Western blot: 0.5-1ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This CD154 Antibody / CD40LG Antibody is available for research use only.



CD154 Antibody Human Peripheral Blood Mononuclear Cell FACS. Flow cytometry analysis of human peripheral blood mononuclear (PBM) cells using CD154 Antibody / CD40LG Antibody at 1 ug/million cells following blocking with goat sera. The red histogram represents cells alone, the green histogram represents the isotype control, and the blue histogram represents CD154 antibody staining. The strong positive fluorescence shift demonstrates detection of CD154 in the human PBM cell population, supporting analysis of CD40LG expression by flow cytometry.



CD154 Antibody Rat C6 Glioma Cell FACS. Flow cytometry analysis of rat C6 glioma cells using CD154 Antibody / CD40LG Antibody at 1 ug/million cells following blocking with goat sera. The red histogram represents cells alone, the green histogram represents the isotype control, and the blue histogram represents CD154 antibody staining. The strong positive fluorescence shift demonstrates detection of CD154 in rat C6 cells, supporting analysis of CD40LG expression by flow cytometry.



CD154 Antibody Human, Mouse and Rat WB. Western blot analysis of CD154 Antibody / CD40LG Antibody using human, mouse and rat lysates. Lanes: 1) human HL60, 2) human K562, 3) human Raji, 4) human Jurkat, 5) rat RH35, 6) mouse spleen and 7) mouse ANA-1. CD154 is detected at approximately 35-39 kDa across the samples tested. The expected molecular weight is 29-39 kDa depending on glycosylation, while the soluble form is approximately 18 kDa. The observed bands are consistent with the glycosylated form of CD154.

Description

CD154 Antibody / CD40LG Antibody recognizes CD154, an immune costimulatory protein encoded by the CD40LG gene. Also widely known as CD40 ligand or CD40L, CD154 is a member of the tumor necrosis factor ligand superfamily and is expressed prominently by activated T cells. The protein binds CD40 on B cells and other antigen-presenting cells, establishing an important signaling interaction between activated T lymphocytes and multiple components of the immune system.

CD154 expression is strongly associated with T cell activation, particularly in activated CD4-positive T cells. Interaction between CD154 and CD40 provides costimulatory signals that influence both cellular and humoral immune responses. In B cells, CD40 signaling contributes to proliferation, differentiation, immunoglobulin class switching and the development of memory B-cell responses. CD154-CD40 interactions can also activate dendritic cells and macrophages, helping coordinate antigen presentation, cytokine production and subsequent immune responses.

The importance of CD40LG extends beyond its function as an activation-associated T-cell molecule. CD154-CD40 signaling participates in adaptive immunity, inflammatory responses and immune regulation and has become an important area of investigation in immunology and immuno-oncology. Alterations affecting CD40LG can disrupt normal B-cell responses and immunoglobulin class switching. Pathogenic variants in the X-linked CD40LG gene are associated with X-linked hyper-IgM syndrome, illustrating the importance of CD154-mediated signaling for effective humoral immunity.

Because CD154 connects activated T cells with CD40-expressing B cells and antigen-presenting cells, its expression and signaling are relevant to studies of lymphocyte communication and immune costimulation. The CD154, CD40LG, CD40L and CD40 ligand names are widely used for the same target, with CD154 emphasizing its cluster of differentiation designation and CD40LG representing the official gene symbol.

A CD154 Antibody can be used to investigate CD40LG expression, T cell activation, CD154-CD40 signaling and mechanisms controlling B-cell and antigen-presenting cell responses.

CD40L, also known as CD154 and TNFSF5, mediates immune costimulatory signaling through CD40; additional information on this pathway and target biology is available on the CD40 Ligand Antibody page.

Application Notes

Optimal dilution of the CD154 Antibody / CD40LG Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids E76-H249) was used at the immunogen for the CD154 antibody.

Storage

After reconstitution, the CD154 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

CD154 antibody, CD40LG antibody, CD40 Ligand antibody, CD40L antibody, TNFSF5 antibody, Tumor Necrosis Factor Ligand Superfamily Member 5 antibody

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