Datasheet for ABIN2749175

anti-CD40 Ligand antibody (PE)

3 Images | 7 Publications

Go to Product page

Overview

Quantity:	100 tests
Target:	CD40 Ligand (CD40LG)
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD40 Ligand antibody is conjugated to PE
Application:	Flow Cytometry (FACS)

Product Details

Immunogen:	human CD154 fusion protein
Clone:	24-31
Isotype:	IgG1
Specificity:	The mouse monoclonal antibody 24-31 detects an extracellular epitope of CD154 / CD40L (CD40-ligand), a 39 kDa cell surface type II glycoprotein expressed predominantly on activated CD4+ lymphocytes.
Cross-Reactivity (Details):	Human, Non-Human Primates
Purification:	Purified antibody is conjugated with R-phycoerythrin (PE) under optimum conditions. Unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

Target Details

Target:	CD40 Ligand (CD40LG)

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Target Details

Alternative Name:	CD154 / CD40L (CD40LG Products)
Background:	CD40 ligand,CD154 / CD40L (CD40 ligand) is a member of the tumor necrosis factor family, and is expressed primarily on activated CD4+ lymphocytes, but also on mast cells, basophils, eosinophils and human dendritic cells. Its counter-receptor CD40 is expressed on antigen presenting cells, including dendritic cells, macrophages, and B cells, and also on fibroblasts. Triggering of CD40 by CD40L causes maturation of dendritic cells and upregulation of antigen presentation in functions of the MHC and costimulatory molecules. CD40L also functions as a direct stimulating factor for T cells. CD40L plays also roles e.g. in antibody class switching and modulation of apoptosis in the germinal center.,CD40L, CD40 ligand, TNFSF5, Ly62, gp39, T-BAM
Gene ID:	21947
UniProt:	P27548
Pathways:	NF-kappaB Signaling, Production of Molecular Mediator of Immune Response, Cancer Immune Checkpoints

Application Details

Application Notes:	Flow cytometry: The reagent is designed for analysis of human blood cells using 10 µL reagent / 100 µL of whole blood or 10^6 cells in a suspension. The content of a vial (1 ml) is sufficient for 100 tests.
Comment:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Restrictions:	For Research Use only

Handling

Buffer:	Stabilizing phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Protect from prolonged exposure to light. Do not freeze.

Publications

Product cited in:

Fernandes, Gomes, Butcher, Hernandez-Alcoceba, Chang, Kansopon, Newman, Stone, Tong: " Growth inhibition of human multiple myeloma cells by an oncolytic adenovirus carrying the CD40 ligand transgene." in: **Clinical cancer research : an official journal of the American Association for Cancer Research**, Vol. 15, Issue 15, pp. 4847-56, (2009) (PubMed).

Kum, Hung, Cameron, Chow et al.: "Temporal sequence and functional implications of V beta-specific T cell receptor down-regulation and costimulatory molecule expression following in vitro stimulation with the staphylococcal ..." in: **The Journal of infectious diseases**, Vol. 185, Issue 4, pp. 555-60, (2002) (PubMed).

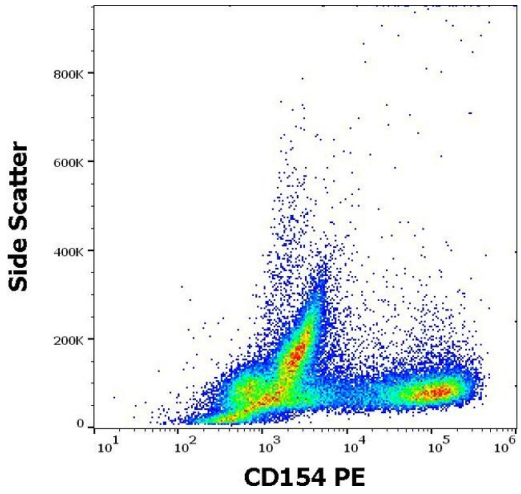
Brams, Black, Padlan, Hariharan, Leonard, Chambers-Slater, Noelle, Newman: "A humanized anti-human CD154 monoclonal antibody blocks CD154-CD40 mediated human B cell activation. " in: **International immunopharmacology**, Vol. 1, Issue 2, pp. 277-94, (2001) (PubMed).

Barnhart, Ford, Bhushan, Song, Covey: "A polymorphic CD40 ligand (CD154) molecule mediates CD40-dependent signalling but interferes with the ability of soluble CD40 to functionally block CD154:CD40 interactions." in: **Immunology**, Vol. 99, Issue 1, pp. 54-61, (2000) (PubMed).

Berner, Wolf, Hummel, Müller, Reuss-Borst: "Increased expression of CD40 ligand (CD154) on CD4+ T cells as a marker of disease activity in rheumatoid arthritis." in: **Annals of the rheumatic diseases**, Vol. 59, Issue 3, pp. 190-5, (2000) (PubMed).

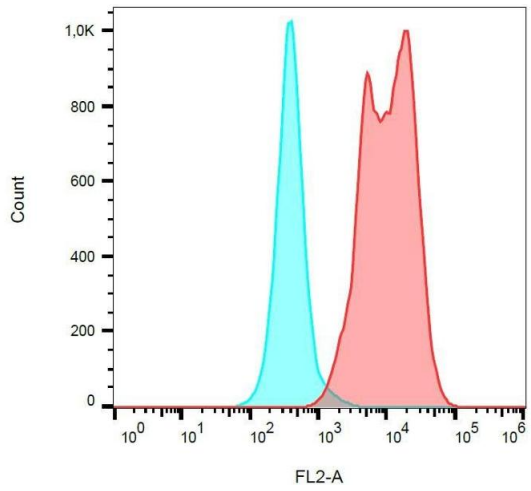
There are more publications referencing this product on: Product page

Images



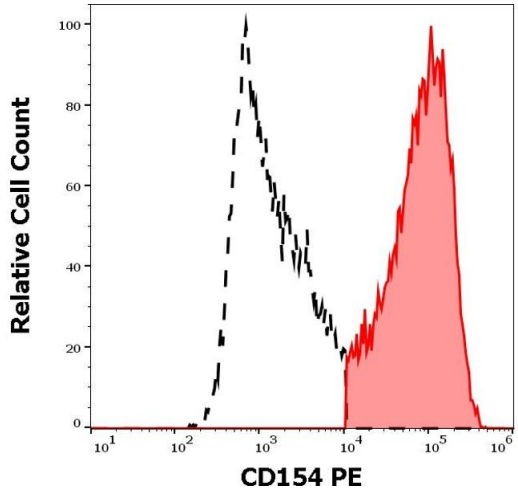
Flow Cytometry

Image 1. Flow cytometry surface staining pattern of human stimulated (PMA + ionomycin) peripheral blood mononuclear cells stained using anti-human CD154 (24-31) PE antibody (10 µL reagent per milion cells in 100 µL of cell suspension).



Flow Cytometry

Image 2. Surface staining of PMA/ionomycin-activated PBMC using anti-CD154 (24-31) PE.



Flow Cytometry

Image 3. Separation of human CD154 positive lymphocytes (red-filled) from CD154 negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human stimulated (PMA + ionomycin) peripheral blood mononuclear cells stained using anti-human CD154 (24-31) PE antibody (10 µL reagent per milion cells in 100 µL of cell suspension).

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