Datasheet for ABIN2749065

anti-CD4 antibody (PE)

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Overview

Quantity:	0.1 mg
Target:	CD4
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD4 antibody is conjugated to PE
Application:	Flow Cytometry (FACS)

Product Details

Immunogen:	MLR generated rat Th cells
Clone:	OX-35
Isotype:	IgG2a kappa
Specificity:	The mouse monoclonal antibody OX-35 reacts with an extracellular epitope of rat CD4 transmembrane glycoprotein (55 kDa).
Cross-Reactivity (Details):	Rat
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:	CD4

Target Details

Alternative Name:	CD4 (CD4 Products)
Background:	CD4 Molecule,CD4 (T4) is a single chain transmembrane glycoprotein and belongs to immunoglobulin supergene family. In extracellular region there are 4 immunoglobulin-like domains (1 Ig-like V-type and 3 Ig-like C2-type). Transmembrane region forms 25 aa, cytoplasmic tail consists of 38 aa. Domains 1,2 and 4 are stabilized by disulfide bonds. The intracellular domain of CD4 is associated with p56Lck, a Src-like protein tyrosine kinase. It was described that CD4 segregates into specific detergent-resistant T-cell membrane microdomains. Extracellular ligands: MHC class II molecules (binds to CDR2-like region in CD4 domain 1), HIV envelope protein gp120 (binds to CDR2-like region in CD4 domain 1), IL-16 (binds to CD4 domain 3), human seminal plasma glycoprotein gp17 (binds to CD4 domain 1), L-selectin. Intracellular ligands: p56LckCD4 is a co-receptor involved in immune response (co-receptor activity in binding to MHC class II molecules) and HIV infection (human immunodeficiency virus, CD4 is primary receptor for HIV-1 surface glycoprotein gp120). CD4 regulates T-cell activation, T/B-cell adhesion, T-cell diferentiation, T-cell selection and signal transduction. Defects in antigen presentation (MHC class II) cause dysfunction of CD4+ T-cells and their almost complete absence in patients blood, tissue and organs (SCID immunodeficiency).,T4/Leu-3, L3T4
Gene ID:	24932
UniProt:	P05540
Pathways:	TCR Signaling, Maintenance of Protein Location, CXCR4-mediated Signaling Events

Application Details

Application Notes:	Flow cytometry: Recommended dilution: 1-5 µg/mL.
Comment:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography.
Restrictions:	For Research Use only

Handling

Concentration:	0.5 mg/mL
Buffer:	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

Handling

	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:

Viel, Lemarié, Benkirane, Paradis, Schiffrin: "Immune regulation and vascular inflammation in genetic hypertension." in: **American journal of physiology. Heart and circulatory physiology**, Vol. 298, Issue 3, pp. H938-44, (2010) (PubMed).

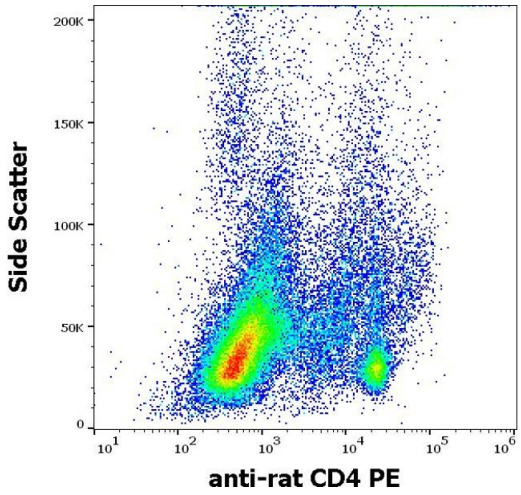
Monzon-Casanova, Steiniger, Schweigle, Clemen, Zdzieblo, Starick, Müller, Wang, Rhost, Cardell, Pyz, Herrmann: "CD1d expression in paneth cells and rat exocrine pancreas revealed by novel monoclonal antibodies which differentially affect NKT cell activation." in: **PLoS ONE**, Vol. 5, Issue 9, (2010) (PubMed).

Baba, Iwasaki, Maruoka, Suzuki, Tomaru, Ikeda, Yoshiki, Kasahara, Ishizu: "Rat CD4+CD8+ macrophages kill tumor cells through an NKG2D- and granzyme/perforin-dependent mechanism." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 180, Issue 5, pp. 2999-3006, (2008) (PubMed).

Ramiro-Puig, Pérez-Cano, Ramos-Romero, Pérez-Berezo, Castellote, Permanyer, Franch, Izquierdo-Pulido, Castell: "Intestinal immune system of young rats influenced by cocoa-enriched diet." in: **The Journal of nutritional biochemistry**, Vol. 19, Issue 8, pp. 555-65, (2008) (PubMed).

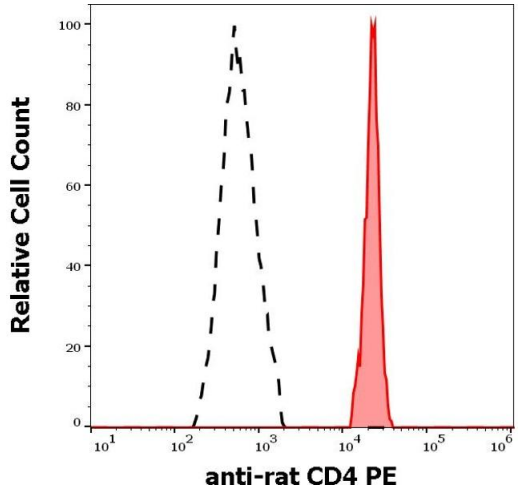
Baba, Ishizu, Iwasaki, Suzuki, Tomaru, Ikeda, Yoshiki, Kasahara: "CD4+/CD8+ macrophages infiltrating at inflammatory sites: a population of monocytes/macrophages with a cytotoxic phenotype." in: **Blood**, Vol. 107, Issue 5, pp. 2004-12, (2006) (PubMed).

There are more publications referencing this product on: Product page



Flow Cytometry

Image 1. Flow cytometry surface staining pattern of rat splenocyte suspension stained using anti-rat CD4 (OX-35) PE antibody (concentration in sample 5 µg/mL).



Flow Cytometry

Image 2. Separation of rat CD4 positive cells (red-filled) from rat CD4 negative cells (black-dashed) in flow cytometry analysis (surface staining) of rat splenocyte suspension stained using anti-rat CD4 (OX-35) PE antibody (concentration in sample 5 µg/mL).