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30-2567: Anti-Human CD4 PE (Clone : EM4)

Clonality :	Monoclonal
Clone Name :	EM4
Application :	FACS
Reactivity :	Human
Conjugate :	PE
Gene :	CD4
Gene ID :	920
Alternative Name :	T4/Leu-3, L3T4,CD4 molecule
Isotype :	Mouse IgG2a
Immunogen Information :	Normal human blood lymphocytes

Description

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).
Specificity : The mouse monoclonal antibody EM4 recognizes an extracellular epitope of CD4 antigen, a 55 kDa transmebrane glycoprotein expressed on a subset of T lymphocytes (“helper“ T-cells) and also on monocytes, tissue macrophages and granulocytes. This antibody does not block Leu3a and OKT4 binding, and blocks HIV-1 infection in cell to cell system. Very strong flow cytometry staining, brighter than Leu3a, OKT4 and other.

Product Info

Amount :	100 tests
Purification :	The purified antibody is conjugated with R-phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography.
Content :	Formulation : Stabilizing phosphate buffered saline (PBS) solution containing 15 mM sodium azide
Storage condition :	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light.

Application Note

Flow cytometry: The reagent is designed for analysis of human blood cells using 10 ÃÂµl reagent / 100 ÃÂµl of whole blood or 10^6 cells in a suspension. The content of a vial (1 ml) is sufficient for 100 tests.

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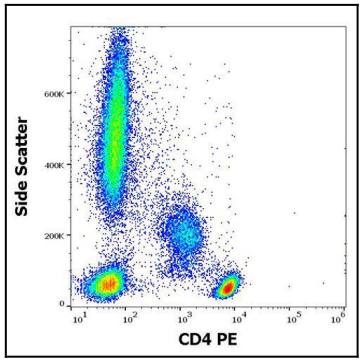

Figure 1 : Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD4 (EM4) PE antibody (10 µl reagent / 100 µl of peripheral whole blood).

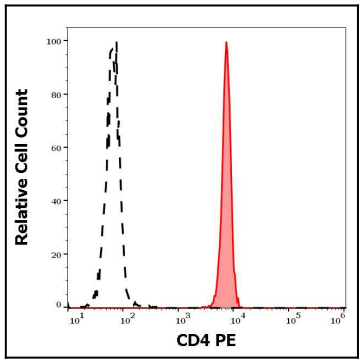

Figure 2 : Separation of human CD4 positive lymphocytes (red-filled) from human neutrophil granulocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD4 (EM4) PE antibody (10 µl reagent / 100 µl of peripheral whole blood).