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30-2775-B: Anti-Hu CD45 Biotin

Clonality :	Monoclonal
Clone Name :	2D1
Application :	FACS
Reactivity :	Human
Conjugate :	Biotin
Gene :	PTPRC
Gene ID :	5788
Uniprot ID :	P08575
Alternative Name :	protein tyrosine phosphatase receptor type C LCA, T200, LY5, B220, GP180, TPC
Isotype :	Mouse IgG1 kappa
Immunogen Information :	Human peripheral blood mononuclear cells

Description

Specificity: The mouse monoclonal antibody 2D1 reacts with an extracellular epitope of all alternative forms of human CD45 antigen (Leukocyte Common Antigen), a 180-220 kDa single chain type I transmembrane protein expressed at high level on all cells of hematopoietic origin, except from erythrocytes and platelets.

Description: CD45 (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10% of all surface proteins in lymphocytes. CD45 glycoprotein is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases. CD45 protein exists as multiple isoforms as a result of alternative splicing; these isoforms differ in their extracellular domains, whereas they share identical transmembrane and cytoplasmic domains. These isoforms differ in their ability to translocate into the glycosphingolipid-enriched membrane domains and their expression depends on cell type and physiological state of the cell. Besides the role in immunoreceptor signaling, CD45 is important in promoting cell survival by modulating integrin-mediated signal transduction pathway and is also involved in DNA fragmentation during apoptosis.
Specificity :The mouse monoclonal antibody 2D1 reacts with an extracellular epitope of all alternative forms of human CD45 antigen (Leukocyte Common Antigen), a 180-220 kDa single chain type I transmembrane protein expressed at high level on all cells of hematopoietic origin, except from erythrocytes and platelets.

Product Info

Amount :	0.1 mg
Purification :	Purified antibody is conjugated with biotin LC-NHS ester under optimum conditions and unconjugated antibody and free biotin are removed by size-exclusion chromatography.
Content :	Storage Buffer: Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Storage condition :	Store at 2-8°C. Do not freeze.

Application Note

Flow cytometry: Recommended dilution: 1-5 µg/ml

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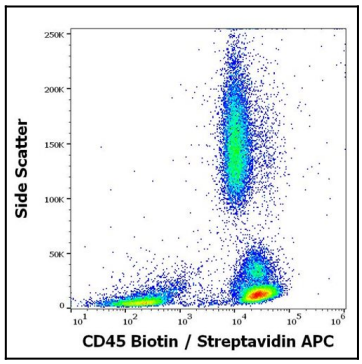

Figure 1: Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD45 (2D1) biotin antibody (concentration in sample 1.67 µg/ml, Streptavidin APC).

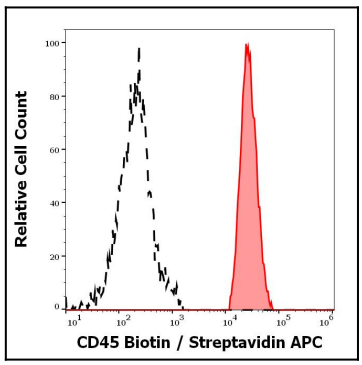

Figure 2: Separation of human lymphocytes (red-filled) from CD45 negative blood debris (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD45 (2D1) biotin antibody (concentration in sample 1.67 µg/ml, Streptavidin APC).

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