Antibodies

Anti-Human CD45 Antibody, Clone 2D1, FITC

Mouse monoclonal IgG1 antibody against human CD45, FITC-conjugated

Catalog #60123FI	100 tests	5 µL/test
#60123FI.1	25 tests	5 µL/test

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Product Description

The 2D1 antibody reacts with all isoforms of CD45, a type I transmembrane glycoprotein expressed on the surface of hematopoietic stem and progenitor cells and mature blood cells, except mature erythrocytes, platelets and plasma cells; expression of CD45 is lost during differentiation of these cell lineages. CD45 is a member of the protein tyrosine phosphatase family and functions in a number of immunoregulatory processes, including cell activation, growth, differentiation and oncogenic transformation. The large cytoplasmic portion of CD45 contains two tyrosine phosphatase domains, one which is enzymatically active, that are involved in modulating the function of intracellular substrates such as the Src kinases Lck and Fyn. Several isoforms of CD45 have been identified, the expression of which differs according to cell type and functional status. Alternative splicing of three exons (4, 5, 6) encoding the extracellular RA, RB and RC polypeptide sequences gives rise to up to 8 isoforms with molecular masses in the range of 180 - 240 kDa. The Leukocyte Common Antigen, the region recognized by the 2D1 antibody, is an extracellular region located proximal to the membrane and common to all isoforms of CD45.

Target Antigen Name:	CD45
Alternative Names:	Hle-1, LCA, Leukocyte Common Antigen, Ly-5, T200
Gene ID:	5788
Species Reactivity:	Human
Host Species:	Mouse (BALB/c)
Clonality:	Monoclonal
Clone:	2D1
Isotype:	IgG1, kappa
Immunogen:	human peripheral blood mononuclear cells
Conjugate:	FITC

Applications

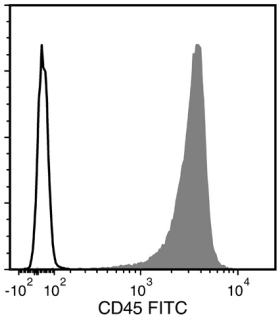
Verified:	FC
Reported:	FC

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide and 0.1% gelatin
Purification:	The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions. The solution is free of unconjugated FITC.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is 5 µL per 1 x 10^6 cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application.

Data



Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD45 Antibody, Clone 2D1, FITC (filled histogram) or Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, FITC (Catalog #60070FI; solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Barclay AN et al. (Eds.). (1997) The Leucocyte Antigen FactsBook, Second Edition. (pp. 244-47), NY: Academic Press.
2. Schwinzer R. (1989) In: Knapp W et al. (Eds.), Leucocyte Typing IV: White Cell Differentiation Antigens (pp. 628–34). New York, NY: Oxford University Press.
3. Shah VO et al. (1988) Flow cytometric analysis of human bone marrow. IV. Differential quantitative expression of T-200 common leukocyte antigen during normal hemopoiesis. J Immunol 140(6): 1861–7.
4. Dalchau R et al. (1980) Monoclonal antibody to a human leukocyte-specific membrane glycoprotein probably homologous to the leukocyte-common (L-C) antigen of the rat. Eur J Immunol 10(10): 737–44.