

PRODUCT INFORMATION



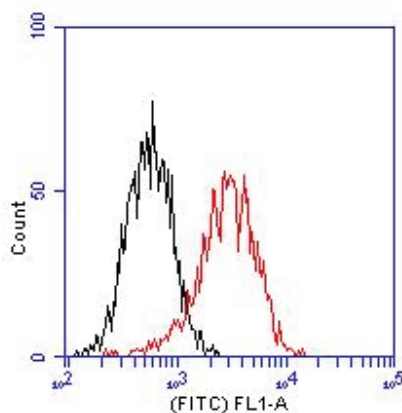
CD34 Monoclonal FITC Antibody (Clone ICO-115)

Item No. 10208

Overview and Properties

Contents:	This vial contains 500 µg of ammonium sulfate-purified, fluorescein labeled monoclonal antibody.
Synonym:	Hematopoietic Progenitor Cell Antigen CD34
Cross Reactivity:	(+) CD34
Species Reactivity:	(+) Human
Uniprot No.:	P28906
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥6 months
Storage Buffer:	PBS, pH 7.2
Clone:	ICO-115
Host:	Mouse
Isotype:	IgG1
Applications:	Flow cytometry (FC) and immunofluorescence (IF); the recommended starting concentration is 20-50 µg/ml for FC and IF. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Flow cytometry of human erythroleukemia cells.

Peak 1: IgG1-FITC isotype control

Peak 2: CD34 FITC (50 µg/ml)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

CD34 is a transmembrane phosphoglycoprotein and sialomucin protein that is commonly used as a marker for hematopoietic progenitor cells.^{1,2} It is composed of an N-terminal signaling peptide, a sialylated and O-glycosylated extracellular mucin domain, a cysteine-containing globular domain, a juxtamembrane stalk region, and an intracellular C-terminal tail.³ CD34 is expressed primarily in hematopoietic progenitor cells but is also expressed in mesenchymal stromal, muscle satellite, interstitial, epithelial and vascular endothelial progenitor, and adipose mesenchymal stem/stromal cells.^{1,3} It has both pro- and anti-adhesion activities, providing an anchor for L-selectin-mediated attachment of lymphocytes in vascular endothelial cells and blocking adhesion of bone marrow-derived mast cells *in vitro*.^{1,4} CD34 has commonly been used as a marker for the selection and enrichment of hematopoietic stem cells for bone marrow transplants.¹ Cayman's CD34 Monoclonal FITC Antibody (Clone ICO-115) can be used for flow cytometry (FC) and immunofluorescence (IF) applications.

References

1. Sidney, L.E., Branch, M.J., Dunphy, S.E., *et al.* Concise review: Evidence for CD34 as a common marker for diverse progenitors. *Stem Cells* **32(6)**, 1380-1389 (2014).
2. Hughes, M.R., Hernaez, D.C., Cait, J., *et al.* A sticky wicket: Defining molecular functions for CD34 in hematopoietic cells. *Exp. Hematol.* **86**, 1-14 (2020).
3. Scherberich, A., Di Maggio, N., and McNagny, K.M. A familiar stranger: CD34 expression and putative functions in SVF cells of adipose tissue. *World J. Stem Cells* **5(1)**, 1-8 (2013).
4. Drew, E., Merzaban, J.S., Seo, W., *et al.* CD34 and CD43 inhibit mast cell adhesion and are required for optimal mast cell reconstitution. *Immunity* **22(1)**, 43-57 (2005).

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