PRODUCT INFORMATION

CD34 Monoclonal Antibody (Clone ICO-115)

Item No. 10004835

Overview and Properties

Contents:	This vial contains 100 µg purified IgG1 monoclonal antibody.
Synonym:	Hematoietic Progenitor Cell Antigen CD34
Cross Reactivity:	(+) CD34
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	4°C (as supplied)
Stability:	≥1 year
Storage Buffer:	500 µl PBS, pH 7.2, with 0.02% sodium azide
Clone:	ICO-115
Host:	Mouse
Applications:	Flow Cytometry (FC) and Immunocytochemistry (ICC); The optimal working concentration/dilution should be determined empirically.

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 Antibody (Clone ICO-115) can be used for flow cytometry (FC) and immunocytochemistry (ICC) 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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