



1P-566-T025

Monoclonal Antibody to CD34 Phycoerythrin (PE) conjugated (25 tests)

Clone:	QBEnd-10
Isotype:	Mouse IgG1
Specificity:	<p>The antibody QBEnd-10 reacts with Class II epitope on CD34 (Mucosialin), a 110-115 kDa monomeric transmembrane phosphoglycoprotein expressed on hematopoietic progenitors cells and on the most pluripotential stem cells; it is gradually lost on progenitor cells. This antibody has been also used as an endothelial marker.</p> <p>HLDA V.; WS Code BP BP275 HLDA V.; WS Code E E038 HLDA V.; WS Code M MA065 HLDA V.; WS Code M MR09</p>
Immunogen:	Human endothelial vesicles
Species Reactivity:	Human, Non-Human Primates
Negative Species:	Rat, Bovine, Sheep, Canine (Dog)
Preparation:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent.
Storage / Stability:	<p>Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light.</p> <p>Do not use after expiration date stamped on vial label.</p> <p>Short-term exposure to room temperature should not affect the quality of the reagent. However, if reagent is stored under any conditions other than those specified, the conditions must be verified by the user.</p>
Usage:	<p>The reagent is designed for Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension.</p> <p>The content of a vial (0.5 ml) is sufficient for 25 tests.</p>
Expiration:	See vial label
Lot Number:	See vial label
Background:	<p>CD34 is a highly glycosylated monomeric 111-115 kDa surface protein, which is present on many stem cell populations. It is a well established stem cell marker, though its expression on human hematopoietic stem cells is reversible. CD34 probably serves as a surface receptor that undergoes receptor-mediated endocytosis and regulates adhesion, differentiation and proliferation of hematopoietic stem cells and other progenitors. CD34 expression is likely to represent a specific state of hematopoietic development that may have altered adhering properties with expanding and differentiating capabilities in both in vitro and in vivo conditions.</p>

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****References:**

- *Krauter J, Hartl M, Hambach L, Kohlenberg A, Gunsilius E, Ganser A, Heil G: Receptor-mediated endocytosis of CD34 on hematopoietic cells after stimulation with the monoclonal antibody anti-HPCA-1. *J Hematother Stem Cell Res.* 2001 Dec;10(6):863-71.
 - *Dao MA, Arevalo J, Nolta JA: Reversibility of CD34 expression on human hematopoietic stem cells that retain the capacity for secondary reconstitution. *Blood.* 2003 Jan 1;101(1):112-8.
 - *Gangenhalli GU, Singh VK, Verma YK, Gupta P, Sharma RK, Chandra R, Gulati S, Luthra PM: Three-dimensional structure prediction of the interaction of CD34 with the SH3 domain of Crk-L. *Stem Cells Dev.* 2005 Oct;14(5):470-7.
 - *Gangenhalli GU, Singh VK, Verma YK, Gupta P, Sharma RK, Chandra R, Luthra PM: Hematopoietic stem cell antigen CD34: role in adhesion or homing. *Stem Cells Dev.* 2006 Jun;15(3):305-13.
 - *Schlingemann RO, Rietveld FJ, de Waal RM, Bradley NJ, Skene AI, Davies AJ, Greaves MF, Denekamp J, Ruiter DJ: Leukocyte antigen CD34 is expressed by a subset of cultured endothelial cells and on endothelial abluminal microprocesses in the tumor stroma. *Lab Invest.* 1990 Jun;62(6):690-6.
 - *Ramani P, Bradley NJ, Fletcher CD: QBEND/10, a new monoclonal antibody to endothelium: assessment of its diagnostic utility in paraffin sections. *Histopathology.* 1990 Sep;17(3):237-42.
 - *Kuzu I, Bicknell R, Harris AL, Jones M, Gatter KC, Mason DY: Heterogeneity of vascular endothelial cells with relevance to diagnosis of vascular tumours. *J Clin Pathol.* 1992 Feb;45(2):143-8.
 - *Sutherland DR, Marsh JC, Davidson J, Baker MA, Keating A, Mellors A: Differential sensitivity of CD34 epitopes to cleavage by *Pasteurella haemolytica* glycoprotease: implications for purification of CD34-positive progenitor cells. *Exp Hematol.* 1992 Jun;20(5):590-9.
 - *Grimsley PG, Amos TA, Gordon MY, Greaves MF: Rapid positive selection of CD34+ cells using magnetic microspheres coated with monoclonal antibody QBEND/10 linked via a cleavable disulphide bond. *Leukemia.* 1993 Jun;7(6):898-908.
 - *Poblet E, Jimenez-Acosta F, Rocamora A: QBEND/10 (anti-CD34 antibody) in external root sheath cells and follicular tumors. *J Cutan Pathol.* 1994 Jun;21(3):224-8.
 - *Traoré Y, Hirn J: Certain anti-CD34 monoclonal antibodies induce homotypic adhesion of leukemic cell lines in a CD18-dependent and a CD18-independent way. *Eur J Immunol.* 1994 Oct;24(10):2304-11.
- And many other publications.

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