

Monoclonal Antibody to CD34 Class III - APC

Alternate names:	Hematopoietic progenitor cell antigen CD34, Hematopoietic progenitor cell marker
Catalog No.:	SM3018APC
Quantity:	100 Tests
Background:	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.
Uniprot ID:	P28906
NCBI:	NP_001020280.1
GeneID:	947
Host / Isotype:	Mouse / IgG1
Clone:	4H11
Immunogen:	Permanent human cell line derived from peripheral leucocytes of a patient suffering from chronic myeloid leukaemia
Format:	State: Liquid Ig fraction Buffer System: 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 Label: APC – Conjugated with Fluorescein isothiocyanate (FITC)
Applications:	Cytometry analysis of human blood cells using 20 μ l reagent / 100 μ l of whole blood or 10e6 cells in a suspension. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody reacts with Class III epitope on CD34 (Mucosalin), 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. The antibody 4H11[APG] completely blocks binding of Class II antibody QBEnd10 and Class III antibodies BIRMA K3 and 8G12 on KG1a cell line. Species: Human. Other species not tested.
Storage:	Store the antibody at 2 - 8 °C. DO NOT FREEZE! This product is photosensitive and should be protected from light. Shelf life: one year from despatch.

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com

- General References:**
1. 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.
 2. Dao MA, Arevalo J, Nolte 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.
 3. Gangenahalli 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.
 4. Gangenahalli 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.
 5. *Leukocyte Typing VI.*, Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
 6. Elknerová K, Lacinová Z, Soucek J, Marinov I, Stöckbauer P: Growth inhibitory effect of the antibody to hematopoietic stem cell antigen CD34 in leukemic cell lines. *Neoplasma.* 2007;54(4):311-20.

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