

## Monoclonal Antibody to CD34 Class III - FITC

<b>Alternate names:</b>	Hematopoietic progenitor cell antigen CD34, Hematopoietic progenitor cell marker
<b>Catalog No.:</b>	SM3018F
<b>Quantity:</b>	100 Tests
<b>Background:</b>	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.
<b>Uniprot ID:</b>	<a href="#">P28906</a>
<b>NCBI:</b>	<a href="#">NP_001020280.1</a>
<b>GeneID:</b>	<a href="#">947</a>
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Clone:</b>	4H11
<b>Immunogen:</b>	Permanent human cell line derived from peripheral leucocytes of a patient suffering from chronic myeloid leukaemia
<b>Format:</b>	<b>State:</b> Liquid purified Ig fraction. <b>Buffer System:</b> PBS containing 15 mM Sodium Azide as preservative and 0.2% (w/v) high-grade protease free BSA as a stabilizing agent. <b>Label:</b> FITC – Conjugated with Fluorescein isothiocyanate under optimum conditions. The reagent is free of unconjugated
<b>Applications:</b>	Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl sample. Note: This conjugate is routinely tested on permanent CML cell line MOLM-7. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	The antibody reacts with Class III 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. The antibody completely blocks binding of Class II antibody QBEnd10 and Class III antibodies BIRMA K3 and 8G12 on KG1a cell line. <b>Species:</b> Human. Other species not tested.

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

Material Safety Datasheets are available at [www.acris-antibodies.com](http://www.acris-antibodies.com) or on request.

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

**Storage:**

Store the antibody undiluted at 2-8°C.

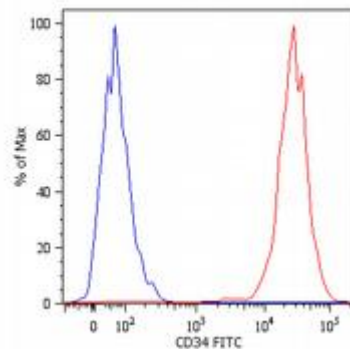
**DO NOT FREEZE!**

This product is photosensitive and should be protected from light.

Shelf life: one year from despatch.

**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, 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.
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.

**Pictures:**

Surface staining of Kg-1a human acute myelogenous leukemia cell line with anti-human CD34 (4H11[APG]) FITC. Total viable cells were used for analysis.

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