



11-297-C100

Monoclonal Antibody to CD34 Purified Antibody (0.1 mg)

Clone:	4H11[APG]
Isotype:	Mouse IgG1
Specificity:	The antibody 4H11[APG] 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 4H11[APG] completely blocks binding of Class II antibody QBEnd10 and Class III antibodies BIRMA K3 and 8G12 on KG1a cell line. HLDA VI; WS Code M MA58
Regulatory Status:	RUO
Immunogen:	Permanent human cell line derived from peripheral leucocytes of a patient suffering from chronic myeloid leukaemia.
Species Reactivity:	Human
Application:	Flow Cytometry Recommended dilution: 2 µg/ml Western Blotting Recommended dilution: 2 µg/ml Positive control: Kg-1a human leukemia cell lysate Negative control: JURKAT human leukemia T-cell line Sample preparation: Resuspend approx. 50 mil. cells in 1 ml cold Lysis buffer (1% laurylmaltoside in 20 mM Tris/Cl, 100 mM NaCl pH 8.2, 50 mM NaF including Protease inhibitor Cocktail). Incubate 60 min on ice. Centrifuge to remove cell debris. Mix lysate with non-reducing SDS-PAGE sample buffer. Application note: Non-reducing conditions. Immunohistochemistry (paraffin sections) Recommended dilution: 10 µg/ml Positive tissue: placenta endothelium Immunocytochemistry
Purity:	> 95% (by SDS-PAGE)
Purification:	Purified by precipitation and chromatography
Concentration:	1 mg/ml
Storage Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Storage / Stability:	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
Expiration:	See vial label
Lot Number:	See vial label

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**Antibodies****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.

References:

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- *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.
- *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.
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- *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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