

## TECHNICAL DATA SHEET

### CyFlow™ CD34 Pacific Blue™ Anti-Hu; Clone 4H11[APG]

**REF** AE506357

**For Research Use Only.  
Not for use in diagnostic or therapeutic procedures.**

### Specifications

<b>Antigen</b>	CD34
<b>Alternative Names</b>	—
<b>Clone</b>	4H11[APG]
<b>Clonality</b>	monoclonal
<b>Format</b>	Pacific Blue™
<b>Host / Isotype</b>	Mouse / IgG1
<b>Species Reactivity</b>	Human
<b>Negative Species Reactivity</b>	—
<b>Quantity</b>	100 tests
<b>Immunogen</b>	Permanent human cell line derived from peripheral leucocytes of a patient suffering from chronic myeloid leukaemia

### Specificity

The mouse monoclonal antibody 4H11[APG] recognizes Class III epitope on CD34 antigen, a 110-115 kDa monomeric transmembrane phosphoglycoprotein expressed on hematopoietic progenitors cells and

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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.

## Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10<sup>6</sup> cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

## Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

## Storage and Stability

<b>Storage</b>	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
<b>Stability</b>	Do not use after expiration date stamped on vial label.

## Background Information

CD34 (Mucosialin) 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

- 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. < PMID: 11798512 >
- 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. < PMID: 12589631 >

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- Kish DD, Gorbachev AV, Fairchild RL: CD8+ T cells produce IL-2, which is required for CD(4+)CD25+ T cell regulation of effector CD8+ T cell development for contact hypersensitivity responses. J Leukoc Biol. 2005 Sep; 78(3):725-35. < PMID: 16000396 >
- 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. < PMID: 16305332 >
- 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. < PMID: 16846369 >
- 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. < PMID: 17822321 >

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The Safety Data Sheet for this product is available at [www.sysmex-partec.com/services](http://www.sysmex-partec.com/services).

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