

## TECHNICAL DATA SHEET

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

**REF** BL106959

**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>	Purified
<b>Host / Isotype</b>	Mouse / IgG1
<b>Species Reactivity</b>	Human
<b>Negative Species Reactivity</b>	—
<b>Quantity [Concentration]</b>	0.1 mg [ 1 mg/ml ]
<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

#### Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)

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

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Western blot
- Immunohistochemistry (paraffin-embedded sections)
- Immunocytochemistry

## Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH  $\approx$ 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, Ganzer 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 >

---

### Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)

- 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 >

---

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

---

---

**Contact Information:**

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany  
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: [info@sysmex-partec.com](mailto:info@sysmex-partec.com)