



T9-664-T100

Monoclonal Antibody to CD34 PerCP-Cy™5.5 conjugated (100 tests)

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| Clone: | 581 |
| Isotype: | Mouse IgG1 |
| Specificity: | The mouse monoclonal antibody 581 reacts with 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 recognizes the class III CD34 epitope resistant to neuraminidase, chymopapain and glycoprotease. HLDA V.; WS Code MA27 |
| Regulatory Status: | RUO |
| Species Reactivity: | Human, Non-Human Primates |
| Preparation: | The purified antibody is conjugated with tandem dye PerCP-Cy™5.5 under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary. |
| Storage Buffer: | The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide. |
| Storage / Stability: | Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label. |
| Usage: | The reagent is designed for Flow Cytometry analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests. |
| Expiration: | See vial label |
| Lot Number: | See vial label |
| 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. |

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****References:**

- *Ando K, Nakamura Y, Chargui J, Matsuzawa H, Tsuji T, Kato S, Hotta T: Extensive generation of human cord blood CD34(+) stem cells from Lin(-)CD34(-) cells in a long-term in vitro system. *Exp Hematol.* 2000 Jun;28(6):690-9.
- *Janowska-Wieczorek A, Marquez LA, Nabholz JM, Cabuhat ML, Montano J, Chang H, Rozmus J, Russell JA, Edwards DR, Turner AR: Growth factors and cytokines upregulate gelatinase expression in bone marrow CD34(+) cells and their transmigration through reconstituted basement membrane. *Blood.* 1999 May 15;93(10):3379-90.
- *Felschow DM, McVeigh ML, Hoehn GT, Civin CI, Fackler MJ: The adapter protein CrkL associates with CD34. *Blood.* 2001 Jun 15;97(12):3768-75.
- *Kato S, Ando K, Nakamura Y, Muguruma Y, Sato T, Yabe H, Yabe M, Hattori K, Yasuda Y, Hotta T: Absence of a CD34- hematopoietic precursor population in recipients of CD34+ stem cell transplantation. *Bone Marrow Transplant.* 2001 Sep;28(6):587-95.
- *Suárez L, Vidriales MB, García-Lara A, Sanz G, Moreno MJ, López A, Barrena S, Martínez R, Tormo M, Palomera L, Lavilla E, López-Berges MC, de Santiago M, de Equiza ME, Miguel JF, Orfao A: CD34+ cells from acute myeloid leukemia, myelodysplastic syndromes, and normal bone marrow display different apoptosis and drug resistance-associated phenotypes. *Clin Cancer Res.* 2004 Nov 15;10(22):7599-606.
- *Ono F, Sharma BK, Smith CC, Burnett JW, Aurelian L: CD34+ cells in the peripheral blood transport herpes simplex virus DNA fragments to the skin of patients with erythema multiforme (HAEM). *J Invest Dermatol.* 2005 Jun;124(6):1215-24.
- *Ninos JM, Jefferies LC, Cogle CR, Kerr WG: The thrombopoietin receptor, c-Mpl, is a selective surface marker for human hematopoietic stem cells. *J Transl Med.* 2006 Feb 16;4:9.
- *Iwasaki H, Kawamoto A, Ishikawa M, Oyamada A, Nakamori S, Nishimura H, Sadamoto K, Horii M, Matsumoto T, Murasawa S, Shibata T, Suehiro S, Asahara T: Dose-dependent contribution of CD34-positive cell transplantation to concurrent vasculogenesis and cardiomyogenesis for functional regenerative recovery after myocardial infarction. *Circulation.* 2006 Mar 14;113(10):1311-25.
- *Goardon N, Nikolousis E, Sternberg A, Chu WK, Craddock C, Richardson P, Benson R, Drayson M, Standen G, Vyas P, Freeman S: Reduced CD38 expression on CD34+ cells as a diagnostic test in myelodysplastic syndromes. *Haematologica.* 2009 Aug;94(8):1160-3.
- *Sanz E, Muñoz-A N, Monserrat J, Van-Den-Rym A, Escoll P, Ranz I, Alvarez-Mon M, de-la-Hera A: Ordering human CD34+CD10-CD19+ pre/pro-B-cell and CD19- common lymphoid progenitor stages in two pro-B-cell development pathways. *Proc Natl Acad Sci U S A.* 2010 Mar 30;107(13):5925-30.
- *And many other.

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