



T9-664-T025

Monoclonal Antibody to CD34 PerCP-Cy[™]5.5 conjugated (25 tests)

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 10⁶ cells in a suspension.

The content of a vial (0.1 ml) is sufficient for 25 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.



PRODUCT DATA SHEET

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, Nabholtz JM, Cabuhat ML, Montaño 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 Cl, 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-Laraña J, 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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