



1A-664-T025

Monoclonal Antibody to CD34 Allophycocyanin (APC) 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 cross-linked Allophycocyanin (APC) 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

10 μl reagent / 100 μl of whole blood or 10⁶ cells in a suspension.

The content of a vial (0.25 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.

Unless indicated otherwise, all products are For Research Use Only and not for diagnostic or therapeutic use. Not for resale or transfer either as a stand-alone product or as a component of another product without written consent of EXBIO. EXBIO will not be held responsible for patent infringement or other violations that may occur with the use of our products. All orders are accepted subject to EXBIO's term and conditions which are available at www.exbio.cz.