

**Alexa Fluor® 647 anti-human CD34**

**Catalog # / Size:** 2317535 / 25 tests  
2317540 / 100 tests

**Clone:** 581

**Isotype:** Mouse IgG1, κ

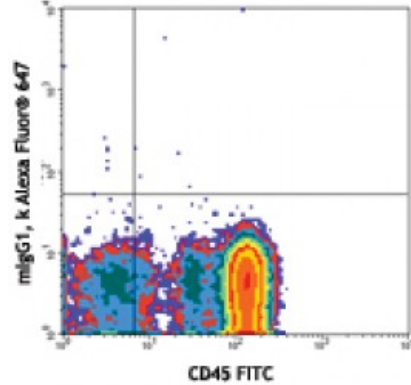
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

**Workshop Number:** V MA27

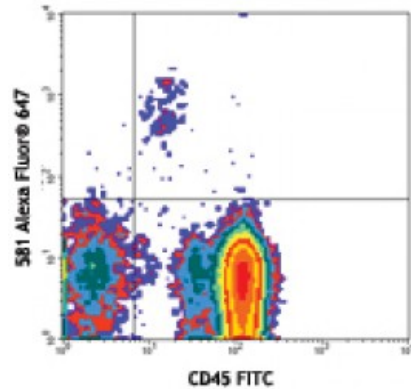
**Concentration:** Lot-specific



**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.



**Application Notes:** \* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.

The 581 antibody recognizes the class III group epitope which is resistant to sialidase/glycolyprotease and chymopapain treatment. Additional reported applications (for the relevant formats) include: immunohistochemical staining of paraffin-embedded tissue sections<sup>5</sup> and immunofluorescence<sup>6</sup>.

Human peripheral blood leukocytes stained with 581 Alexa Fluor® 647 and CD45 (HI30) FITC (top) or mIgG1, κ isotype control Alexa Fluor® 647 and CD45 (HI30) FITC (bottom). Cytograms were gated to display CD14 negative lymphocyte population.

- Application References:**
- Schlossman SF, et al. 1995. *Leukocyte Typing V: White Cell Differentiation Antigen*. New York: Oxford University Press.
  - Felschow DM, et al. 2001. *Blood* 97:3768.
  - Rudin CE, et al. 1997. *Br. J. Haematol.* 97:488.
  - Yoshino N, et al. 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
  - Skowasch D, et al. 2003. *Cardiovasc Res.* 60:684. (IHC)
  - Umland O, et al. 2003. *J. Histochem. Cytochem.* 51:977. (IF)

**Description:** CD34, also known as gp105-120, is a type I monomeric sialomucin-like glycoprophosphoprotein with an approximate molecular weight of 105-120 kD. Selectively expressed on the majority of hematopoietic stem/progenitor cells, bone marrow stromal cells, capillary endothelial cells, embryonic fibroblasts, and some nervous tissue, CD34 is a commonly used marker to identify human hematopoietic stem/progenitor cells. According to the differential sensitivity to enzymatic cleavage, four groups of epitopes of CD34 have been described. CD34 mediates cell adhesion and lymphocytes homing through binding to L-selectin and E-selectin ligands.

**Antigen**  
**References:**

1. Krause DS, *et al.* 1996. *Blood* 87:1.
2. Puri KD, *et al.* 1995. *J. Cell Biol.* 131:261.
3. Zola H, *et al.* 2007. *Leukocyte and Stromal Cell Molecules: The CD Markers*. John Wiley & Sons In