

**PE anti-human CD34**

**Catalog # / Size:** 2317525 / 25 tests  
2317530 / 100 tests

**Clone:** 581

**Isotype:** Mouse IgG1,  $\kappa$

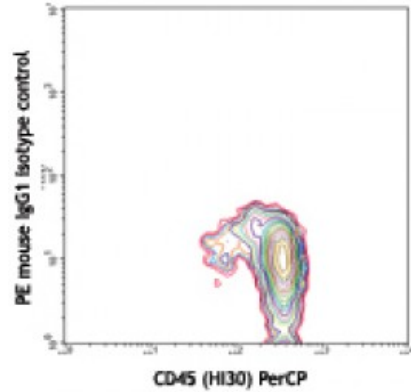
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions. The solution is free of unconjugated PE and unconjugated antibody.

**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



Human peripheral blood mononuclear cells stained with 581 PE (lower panel) or PE mouse IgG1 isotype control (upper panel) and CD45 (HI30) PerCP (gated on CD14-cell population)

**Applications:**

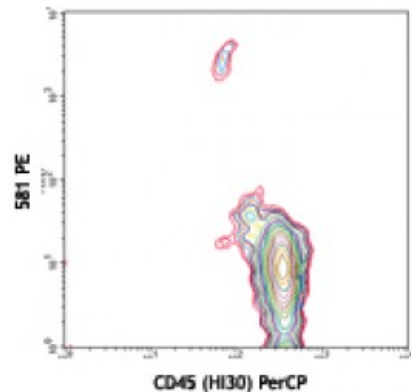
**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. **Test size products are transitioning from 20 microL to 5 microL per test.** Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 microL staining volume or per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

**Application Notes:** 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>.

**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)
- Werner-Klein M, et al. 2014. *PLoS One.* 9:97860. [PubMed](#)



**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