

Pacific Blue™ anti-human CD34

Catalog # / Size: 343511 / 25 µg
343512 / 100 µg

Clone: 581

Isotype: Mouse IgG1, κ

Workshop Number: V MA27

Reactivity: Human, **Cross-Reactivity:** Cynomolgus

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

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5 mg/ml

Storage: The antibody solution should be stored undiluted at 4°C and protected from prolonged exposure to light. **Do not freeze.**

Applications:

Applications: FC - Quality tested
IF - Reported in the literature

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is ≤ 1.0 µg per 10⁶ cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

** Pacific Blue™ is a registered trademark of Molecular Probes, Inc. Pacific Blue™ dye antibody conjugates are sold under license from Molecular Probes, Inc. for research use only, except for use in combination with microarrays and high content screening, and are covered by pending and issued patents.

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 sections⁵ and immunofluorescence⁶.

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)
- Jarajapu YP, *et al.* 2013. *Diabetes.* 62:1258. PubMed.

Description: CD34, also known as gp105-120, is a type I monomeric sialomucin-like glycoposphoprotein 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:

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

Related Products: Product

Clone

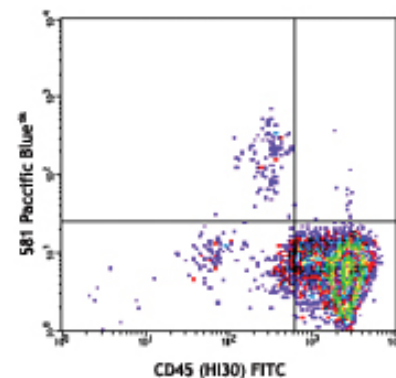
Application



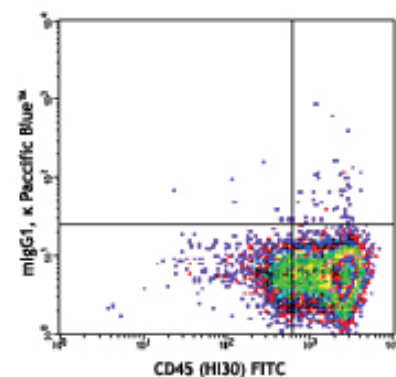
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Human peripheral blood leukocytes stained with CD34 Pacific Blue™ (clone 581) or mouse IgG1, κ Pacific Blue™ isotype control and costained with CD45 FITC, CD14 PE and 7-AAD, then analyzed via gating on total live and CD14 negative lymphocyte population.



Pacific Blue™ Mouse IgG1, κ Isotype Ctrl
Cell Staining Buffer
RBC Lysis Buffer (10X)
Human TruStain FcX™ (Fc Receptor Blocking Solution)

MOPC-21

FC, ICFC
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