SONY

Product Data Sheet

Alexa Fluor® 647 anti-human CD34

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

Clone: 581

Isotype: Mouse IgG1, κ

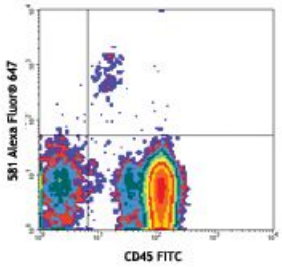
Reactivity: Human, Non-human primate

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 BSA (origin USA).

Workshop Number: V MA27

Concentration: Lot-specific



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

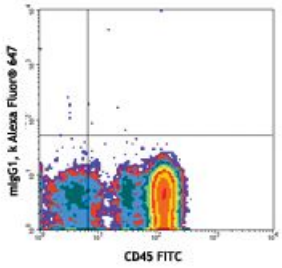
Applications:

Applications: Flow Cytometry, Immunohistochemistry, Other

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 µl per million cells or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

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

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 immunofluorescence[6].



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.

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Application References:

1. Schlossman SF, *et al.* 1995. *Leukocyte Typing V:White Cell Differentiation Antigen. New York:Oxford University Press.*
2. Felschow DM, *et al.* 2001. *Blood* 97:3768.
3. Rudin CE, *et al.* 1997. *Br. J. Haematol.* 97:488.
4. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
5. Skowasch D, *et al.* 2003. *Cardiovasc Res.* 60:684. (IHC)
6. 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 glycophosphoprotein 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 Inc, Hoboken New Jersey.

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