Anti-Human CD34 Antibody, Clone 581, Alexa Fluor® 488

Antibodies

Mouse monoclonal IgG1 antibody against human CD34, Alexa Fluor® 488-conjugated

Catalog	#60013AD	100 Tests	5 µL/test
	#60013AD.1	25 Tests	5 µL/test

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Product Description

The 581 antibody reacts with human CD34, an ~105 - 120 kDa type 1 transmembrane glycoprotein expressed on the surface of most human hematopoietic stem and progenitor cells (HSPCs) as well as on mesenchymal stem cells, embryonic fibroblasts, endothelial cells, neurons, and some tumor cell lines. CD34 is expressed only transiently during hematopoiesis, so the frequency of CD34+ cells is low in bone marrow or cord blood (~1 - 5%) and very low (~0.1 - 0.5%) in peripheral blood. CD34 is a marker used to identify and isolate HSPCs capable of cell engraftment. CD34 is thought to mediate attachment of stem cells to the bone marrow extracellular matrix or directly to stromal cells during early hematopoiesis, and to be involved in lymphocyte recruitment through binding to the ligands L- and E-selectin. Distinct epitope groups have been assigned to CD34 based on their sensitivity to enzymatic cleavage, with the 581 antibody recognizing a class III epitope (resistant to neuraminidase and O-glycoprotease).

Target Antigen Name:	CD34
Alternative Names:	Gp105-120, My10
Gene ID:	947
Species Reactivity:	Human
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	581
Isotype:	IgG1, kappa
Immunogen:	Human CD34+ leukemic cells
Conjugate:	Alexa Fluor® 488

Applications

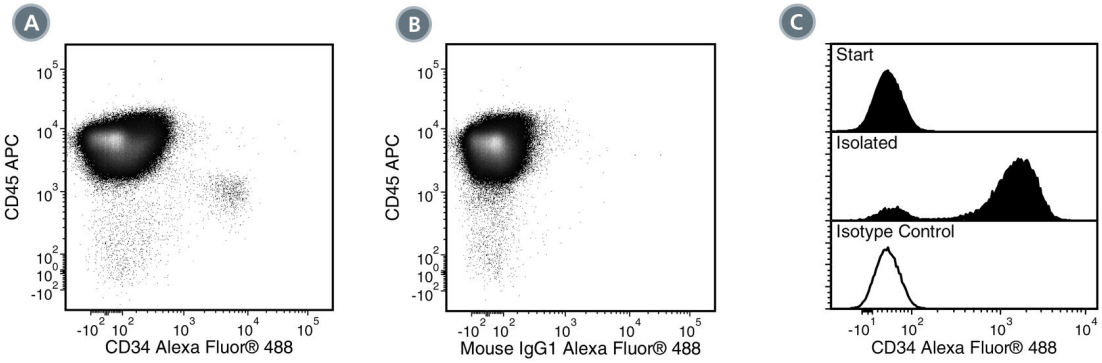
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ Human CD34 Positive Selection Kit (Catalog #18056) and for labeling human mesenchymal cells grown in MesenCult™ Proliferation Kit (Human; Catalog #05411).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin
Purification:	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 488.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For flow cytometry, the suggested use of this antibody is 5 µL per 1 x 10^6 cells in 100 µL or per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD34 Antibody, Clone 581, Alexa Fluor® 488 and Anti-Human CD45 Antibody, Clone HI30, APC (Catalog #60018AZ).
(B) Flow cytometry analysis of PBMCs labeled with Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, Alexa Fluor® 488 (Catalog #60070AD) and Anti-Human CD45 Antibody, Clone HI30, APC.
(C) Flow cytometry analysis of human PBMCs processed with EasySep™ Human CD34 Positive Selection Kit and labeled with Anti-Human CD34 Antibody, Clone 581, APC. Histograms show labeling of PBMCs (Start) and isolated cells (Isolated). Labeling of start cells with Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, Alexa Fluor® 488 is shown (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

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