Technical Data Sheet

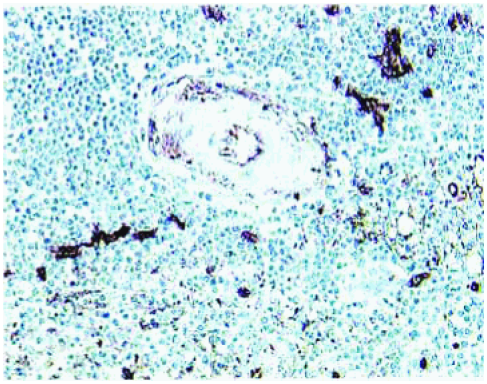
Purified Mouse Anti-Human CD34

Product Information

Material Number:	**550390**
Alternate Name:	gp105-120; My10; Hematopoietic progenitor cell antigen CD34
Size:	1.0 ml
Concentration:	250 µg/ml
Clone:	581
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	V MA27, VI E004
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

Description

The 581 monoclonal antibody specifically binds to CD34, a single-chain 105-120 kDa heavily O-glycosylated transmembrane glycoprotein expressed on a hemotopoietic progenitor cells, vascular endothelium and some tissue fibroblasts. The intracellular chain of the CD34 antigen is a target for phosphorylation by activated protein kinase C suggesting CD34 may play a role in signal transduction. CD34 may also play a role in adhesion of specific antigens to endothelium. Clone 581 reacts with the class III CD34 epitope, it is resistant to neuraminidase, chymopapain and glycoprotease. The 581 antibody blocks reactivity of another anti-CD34 monoclonal antibody, 8G12.



Immunohistochemical staining of endothelial cells. *A formalin-fixed, paraffin-embedded section of normal human spleen was stained with the Purified Mouse Anti-Human CD34 (clone 581) antibody. The endothelial cells of the blood vessels and splenic sinus can be identified by the intense brown staining (20X magnification).*

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development

Recommended Assay Procedure:

Immunohistochemistry: For optimal indirect immunohistochemical staining, investigators are encouraged to titrate the Mouse Anti-Human CD34 antibody (clone 581) (suggested starting dilution of 1:10 to 1:50) and visualize staining via a three-step staining procedure in combination with a Biotin Goat Anti-Mouse Ig (Cat. No. 550337) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) using a DAB detection system (Cat. No. 550880). Alternatively, investigators may want to consider using the Anti-Mouse Ig HRP Detection Kit (Cat. No. 551011), which contains the biotinylated secondary antibody, antibody diluent, Streptavidin-HRP and DAB substrate.

Suggested Companion Products

Catalog Number	Name	Size	Clone
550337	Biotin Goat Anti-Mouse Ig (Multiple Adsorption)	1.0 ml	Polyclonal
550946	Streptavidin HRP	50 ml	(none)
550880	DAB Substrate Kit	500 tests	(none)
551011	Anti-Mouse Ig HRP Detection Kit	200 tests	(none)

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550878	Purified Mouse IgG1 κ Isotype Control	1.0 ml	MOPC-31C
559148	Antibody Diluent for IHC	125 ml	(none)
550524	Retrievagen A (pH 6.0)	1000 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Egeland T, Tjonnfjord G, Steen R, Gaudernack G, Thorsby E. Positive selection of bone marrow-derived CD34 positive cells for possible stem cell transplantation. *Transplant Proc.* 1993; 25(1):1261-1263. (Biology)

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Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leukocyte Typing V: White Cell Differentiation Antigens.* New York: Oxford University Press; 1995. (Biology)

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