

Technical Data Sheet

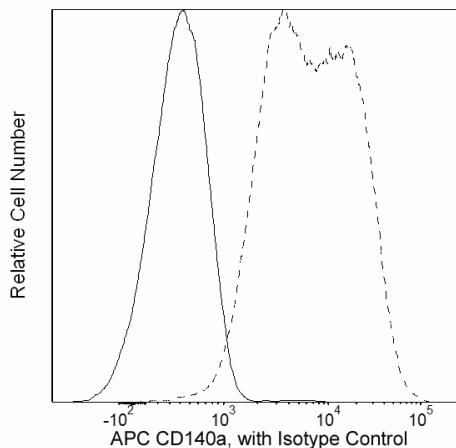
APC Rat Anti-Mouse CD140a

Product Information

Material Number:	562777
Alternate Name:	Pdgfra; Pdgfr2; PDGF-R alpha; Platelet derived growth factor receptor alpha
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	APA5
Immunogen:	Mouse PDGF Receptor α chain
Isotype:	Rat (WF) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The APA5 antibody monoclonal antibody specifically binds to the Platelet-Derived Growth Factor (PDGF) Receptor α chain (CD140a, PDGFR-a), a receptor tyrosine kinase that is widely expressed on cells of mesenchymal origin in the embryo and adult and on several other cell types during embryonic development, but not on hematopoietic cells. PDGFR-a binds to PDGF A and B chains, in contrast to PDGFR-b, that binds only to the PDGF B chain. Biologically active PDGF is a disulphide-linked dimer, forming the AA, AB, and BB isoforms. Ligand binding to the PDGF Receptor induces the formation of receptor dimers (aa, ab, or bb), autophosphorylation, and internalization. The APA5 antibody has been demonstrated to block binding of PDGF-AA to PDGFR-a-expressing cells in vitro and to block some PDGF-mediated developmental events in vivo.



Flow cytometric analysis of CD140a expression on mouse fibroblast NIH/3T3 cells. Fresh NIH/3T3 cells were stained with either APC Rat anti-Mouse CD140a antibody (Cat. No. 562777, solid line histogram) or APC Rat IgG2a, κ Isotype Control (Cat. No. 553932, dashed line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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

The antibody was conjugated to APC under optimum conditions, and unconjugated antibody and free APC were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
553932	APC Rat IgG2a κ Isotype Control	0.1 mg	R35-95

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. 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.
5. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References

Fruttiger M, Calver AR, Krüger WH. PDGF mediates a neuron-astrocyte interaction in the developing retina. *Neuron*. 1996; 17(6):1117-1131. (Clone-specific: Blocking)

Heldin CH. Structural and functional studies on platelet-derived growth factor. *EMBO J*. 1992; 11(12):4251-4259. (Biology)

Takakura N, Yoshida H, Kunisada T, Nishikawa S, Nishikawa SI. Involvement of platelet-derived growth factor receptor-alpha in hair canal formation. *J Invest Dermatol*. 1996; 107(5):770-777. (Immunogen: Blocking, ELISA, Immunohistochemistry, Inhibition, Western blot)

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