

Technical Data Sheet

Purified Mouse Anti-Human CD140a

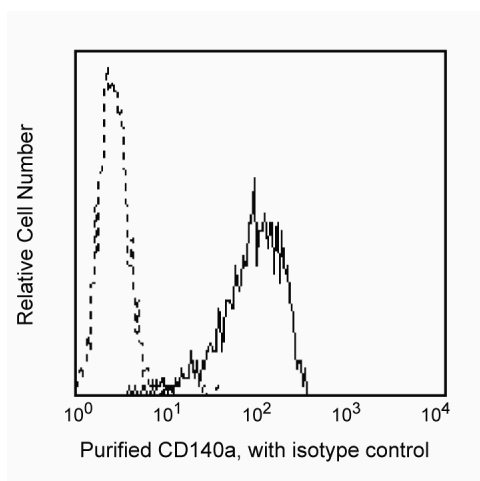
Product Information

Material Number:	556001
Alternate Name:	PDGF receptor α chain
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	α R1
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

Reacts with platelet derived growth factor (PDGF) receptor α , CD140a, a 170 kD single transmembrane glycoprotein expressed on fibroblasts, smooth muscle cells, glial cells and chondrocytes. PDGF receptors, α and β , are single glycoproteins with intracellular tyrosine kinase domain. They are structurally similar to M-CSF receptor and CD117 (c-kit). Their ligand, PDGF, is a mitogen for connective tissue cells and glial cells. PDGF plays a role in wound healing and it also acts as a chemoattractant for fibroblasts, smooth muscle cells, glial cells, monocytes and neutrophils. Functional PDGF is secreted as a dimer, disulfide linked, A and B chains (PDGFAA, PDGF-BB or PDGF-AB). Binding of divalent PDGF induces receptor dimerization with three possible forms: $\alpha\alpha$, $\alpha\beta$, $\beta\beta$. The PDGF receptor α -subunit binds both PDGF A and B chains, whereas the receptor β -subunit binds only PDGF B chains. Both receptor subunits can stimulate mitogenic responses, only the β subunit can induce chemotaxis. α R1 is specific for α PDGFR and does not cross react with β PDGFR. It immunoprecipitates human, monkey, rabbit, pig, dog and cat α PDGFR. It does not recognize hamster, rat or mouse α PDGFR.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Profile of MG-63 (osteosarcoma cell line) cells analyzed by flow cytometry

Preparation and Storage

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

Store undiluted at 4° C.

Application Notes

Application

Flow cytometry	Routinely Tested
Functional assay	Reported
Immunoprecipitation	Reported

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Recommended Assay Procedure:

This product is tested on MG-63 cell line. The histogram is an example of the expected reactivity.

Suggested Companion Products

Catalog Number	Name	Size	Clone
555571	Purified Mouse IgG2a, κ Isotype Control	0.1 mg	G155-178
555988	FITC Goat Anti-Mouse IgG/IgM	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
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.

References

Bazenot CE, Kazlauskas A. The PDGF receptor alpha subunit activates p21ras and triggers DNA synthesis without interacting with rasGAP. *Oncogene*. 1993; 9(2):517-525.(Biology)

Callard R, Gearing A. Callard R, Gearing A. *The Cytokine Facts Book*. San Diego: Academic Press; 1994.(Biology)

LaRochelle WJ, Jensen RA, Heidaran MA, et al. Inhibition of platelet-derived growth factor autocrine growth stimulation by a monoclonal antibody to the human alpha platelet-derived growth factor receptor. *Cell Growth Differ*. 1993; 4(7):547-553.(Clone-specific: Flow cytometry, Functional assay, Immunoprecipitation)