

## Technical Data Sheet

## PE Mouse Anti-Human CD140b

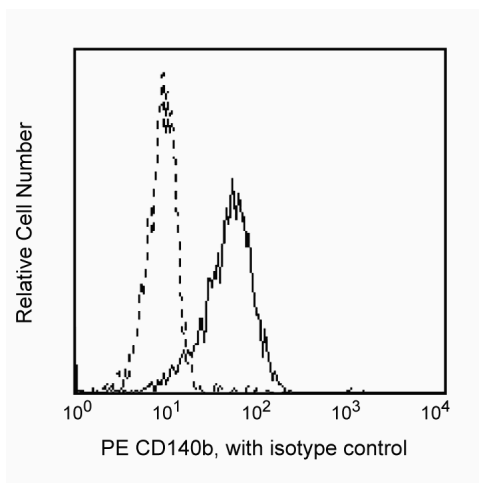
## Product Information

<b>Material Number:</b>	558821
<b>Alternate Name:</b>	PDGF Receptor $\beta$ chain
<b>Size:</b>	100 tests
<b>Vol. per Test:</b>	20 $\mu$ l
<b>Clone:</b>	28D4
<b>Isotype:</b>	Mouse IgG2a, $\kappa$
<b>Reactivity:</b>	QC Testing: Human
<b>Workshop:</b>	VI E023
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.

## Description

Reacts with platelet derived growth factor (PDGF) receptor  $\beta$ , a 170-190 kDa single transmembrane glycoprotein expressed on fibroblasts, smooth muscle cells, glial cells and chondrocytes. PDGF receptors,  $\alpha$  and  $\beta$ , are single glycoproteins with intracellular tyrosine kinase domains. 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 acts as a chemoattractant for fibroblasts, smooth muscle cells, glial cells, monocytes and neutrophils. Functional PDGF is secreted as a disulfide-linked dimer of A and B chains (PDGF-AA, 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  $\alpha$ -subunit binds both PDGF A and B chains, whereas the receptor  $\beta$ -subunit binds only PDGF B chain. Both receptor subunits can stimulate mitogenic responses, only the  $\beta$  subunit can induce chemotaxis. 28D4 is specific for PDGFR $\beta$  and does not cross-react with PDGFR $\alpha$ .

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 697 (pre B cell line) cells analyzed by flow cytometry

## Preparation and Storage

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

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed by gel filtration chromatography.

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

## Application Notes

## Application

Flow cytometry	Routinely Tested
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**Recommended Assay Procedure:**

This product is routinely tested on 697 cell line. The histogram is an example of the expected reactivity.

**Suggested Companion Products**

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
555574	PE Mouse IgG2a, $\kappa$ Isotype Control	100 tests	G155-178

**Product Notices**

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 X 10<sup>6</sup> cells in a 100- $\mu$ l experimental sample (a test).
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Please refer to [www.bdbiosciences.com/pharmlingen/protocols](http://www.bdbiosciences.com/pharmlingen/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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

**References**

- Claesson-Welsh L. Platelet-derived growth factor receptor signals. *J Biol Chem.* 1994; 269(51):32023-32026.(Biology)
- Ebert M, Kasper HU, Hernberg S, et al. Overexpression of platelet-derived growth factor (PDGF) B chain and type beta PDGF receptor in human chronic pancreatitis. *Dig Dis Sci.* 1998; 43(3):567-574.(Biology)
- Yang M, Khachigian LM, Hicks C, Chesterman CN, Chong BH. Identification of PDGF receptors on human megakaryocytes and megakaryocytic cell lines. *Thromb Haemost.* 1997; 78(2):892-896.(Biology)