

Technical Data Sheet

Purified Mouse Anti-Human PDGF-AB/BB

Product Information

Material Number:	554284
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	Sis1
Immunogen:	Human PDGF BB Recombinant Protein
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	35-56 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Platelet derived growth factor (PDGF) plays a role in regulating a number of biological processes including cellular proliferation and development. PDGF consists of a disulfide-linked homo- or heterodimer of two chains, A and B, which are encoded by two separate genes. The three possible combinations of the PDGF chains, AA, AB, and BB, are all biologically active. The PDGF receptor (PDGFR) is a protein tyrosine kinase. Ligand binding to the PDGFR leads to tyrosine phosphorylation of numerous intracellular proteins, including the receptor itself. The PDGFR consists of two subunits, α and β , which are encoded by two separate genes. The α subunit binds to both the A and B PDGF chains with high affinity, whereas the β subunit binds only to the B chain with high affinity. Ligand binding results in receptor dimerization, with the PDGF type (AA, AB or BB) influencing the resulting PDGFR subunit composition ($\alpha\alpha$, $\alpha\beta$, or $\beta\beta$). That is, PDGF-AA binds to $\alpha\alpha$ receptors, PDGF-AB binds to $\alpha\alpha$ and $\alpha\beta$ receptors, and PDGF-BB binds to $\alpha\alpha$, $\alpha\beta$, and $\beta\beta$ receptors. This antibody reportedly recognizes B chain-containing human PDGF isoforms and does not recognize the PDGF-AA homodimer. Additionally, this antibody reportedly inhibits PDGFR binding of PDGF-AB and -BB, but not PDGF-AA and is thought to recognize a conformational epitope of the PDGF B chain that is dependent on disulfide linkages. This antibody has been reported to inhibit PDGF receptor-binding and mitogenic effects of PDGF-AB and -BB.

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

Western blot	Routinely Tested
Immunoprecipitation	Reported

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Note: Investigators should note that due to the ability for this antibody to recognize various PDGF isoforms and/or multimers, bands may be observable migrating in a range between 35-56 kDa (e.g 35 kDa, 42 kDa, and/or 56 kDa). In WI-38 cells (Human lung fibroblasts; ATCC CCL-75), for example, a band may be predominantly observable to migrate ~ 50-56 kDa.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
611476	WI-38 Cell Lysate	500 µg	(none)

Product Notices

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

References

Bazenet 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)
 LaRochelle WJ, Robbins KC, Aaronson SA. Immunochemical localization of the epitope for a monoclonal antibody that neutralizes human platelet-derived growth factor mitogenic activity. *Mol Cell Biol*. 1989; 9(8):3538-3542. (Biology: Blocking, Immunoprecipitation, Neutralization, Western blot)

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