Human PDGF-BB Antibody

Polyclonal Goat IgG
Catalog Number: AB-220-NA

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PDGF-BB in direct ELISAs and Western blots. In direct ELISAs and Western blots, this antibody will recognize recombinant human PDGF-BB, natural human PDGF-AB, and porcine PDGF-BB. It neutralizes the biological activity of recombinant human PDGF-BB. It will also neutralize the biological activity of natural human PDGF-AB and porcine PDGF-BB. This antibody will neutralize recombinant human PDGF-AA, but 20 times the amount of IgG is required.
Source	Polyclonal Goat IgG
Purification	Protein A or G purified
Immunogen	*E. coli*-derived recombinant human PDGF-BB Ser82-Thr190 Accession # P01127
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

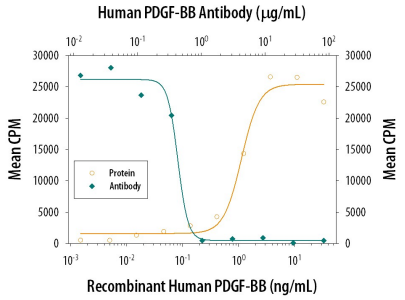
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human PDGF-BB (Catalog # 220-BB)
Neutralization	Measured by its ability to neutralize PDGF-BB-induced proliferation in the NR6R-3T3 mouse fibroblast cell line. Raines, E. W. *et al.* (1985) Methods Enzymol. **109**:749. The Neutralization Dose (ND_{50}) is typically 0.5-1.0 µg/mL in the presence of 10 ng/mL Recombinant Human PDGF-BB.	

DATA

Neutralization



Cell Proliferation Induced by PDGF-BB and Neutralization by Human PDGF-BB Antibody. Recombinant Human PDGF-BB (Catalog # 220-BB) stimulates proliferation in the NR6R-3T3 mouse fibroblast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human PDGF-BB (10 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human PDGF-BB Polyclonal Antibody (Catalog # AB-220-NA). The ND_{50} is typically 0.5-1.0 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 1 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Platelet-derived growth factor (PDGF) was discovered as a major mitogenic factor present in serum but absent from plasma. It was found to be secreted from the α-granules of platelets activated during the coagulation of blood to form serum. Subsequent studies have demonstrated that PDGF is not one molecule but three, each a dimeric combination of two distinct but structurally related peptide chains designated A and B. The dimeric isoforms PDGF-AA, AB and BB are differentially expressed in various cell types and their effects are mediated through two distinct receptors, termed α and β. Differences exist in isoform binding to each receptor. In general, PDGF isoforms are potent mitogens for connective tissue cells, including dermal fibroblasts, glial cells, arterial smooth muscle cells and some epithelial and endothelial cells. In addition to its activity as a mitogen, PDGF is chemotactic for fibroblasts, smooth muscle cells, neutrophils and mononuclear cells. Other reported activities for PDGF include stimulation of granule release by neutrophils and monocytes, facilitation of steroid synthesis by Leydig cells, stimulation of neutrophil phagocytosis, inhibition of natural killer (NK) cell activity, stimulation of collagen synthesis, modulation of thrombospondin expression and secretion, stimulation of collagenase activity and secretion, induction of contraction of rat aorta strips *in vitro*, and transient induction of T cell IL-2 secretion accompanied by a down-regulation of IL-4 and IFN-γ production, temporary effects that may allow clonal expansion of antigen-activated B and T helper lymphocytes prior to differentiation. PDGF also appears to be ubiquitous in neurons throughout the CNS, where it is suggested to play an important role in neuron survival and regeneration, and in mediation of glial cell proliferation and differentiation.