

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human PDGF R β in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant mouse PDGF R β is observed, and less than 1% cross-reactivity with recombinant human PDGF sR α is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human PDGF R β Leu33-Phe530 (Glu241Asp) Accession # P09619
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μ m filtered solution in PBS.

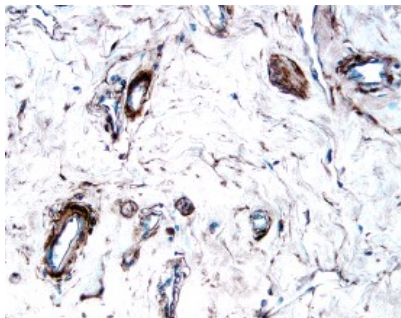
APPLICATIONS

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	0.1 μ g/mL	Recombinant Human PDGF R β Fc Chimera (Catalog # 385-PR)
Flow Cytometry	2.5 μ g/10 ⁶ cells	BUD-8 human fibroblast cell line
Immunohistochemistry	5-15 μ g/mL	See Below
CytoF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Neutralization	Measured by its ability to neutralize PDGF R β inhibition of PDGF-BB-dependent proliferation in the NR6R-3T3 mouse fibroblast cell line. The Neutralization Dose (ND ₅₀) is typically 10-40 μ g/mL in the presence of 2 μ g/mL Recombinant Human PDGF R β Fc Chimera and 4 ng/mL Recombinant Human PDGF-BB.	

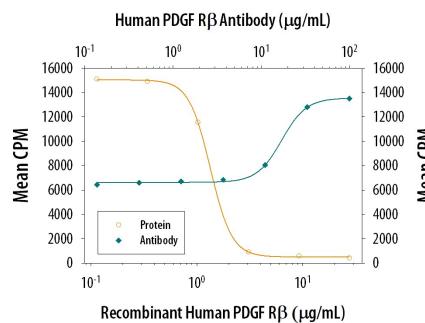
DATA

Immunohistochemistry



PDGF R β in Human Breast Cancer Tissue.
PDGF R β was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using 15 μ g/mL Goat Anti-Human PDGF R β Antigen Affinity-purified Polyclonal Antibody (Catalog # AF385) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Neutralization



PDGF R β Inhibition of PDGF-BB-dependent Cell Proliferation and Neutralization by Human PDGF R β Antibody.
Recombinant Human PDGF R β Fc Chimera (Catalog # 385-PR) inhibits Recombinant Human PDGF-BB (Catalog # 220-BB) induced proliferation in the NR6R-3T3 mouse fibroblast cell line in a dose-dependent manner (orange line). Inhibition of Recombinant Human PDGF-BB (4 ng/mL) activity elicited by Recombinant Human PDGF R β Fc Chimera (2 μ g/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human PDGF R β Antigen Affinity-purified Polyclonal Antibody (Catalog # AF385). The ND₅₀ is typically 10-40 μ g/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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

PDGF is a major serum mitogen that can exist as a homo or hetero-dimeric protein consisting of disulfide-linked PDGF-A and PDGF-B chains. The PDGF-AA, PDGF-BB, and PDGF-AB isoforms have been shown to bind to two distinct cell surface PDGF receptors with different affinities. Where as PDGF R α binds all three PDGF isoforms with high affinity, PDGF R β binds PDGF-BB only with high-affinity. Both PDGF R α and PDGF R β are members of the class III subfamily of receptor tyrosine kinases (RTK) that also includes the receptors for M-CSF, SCF, and Flt-3 ligand. All class III RTKs are characterized by the presence of five immunoglobulin-like domains in their extracellular region and a split kinase domain in their intracellular region. PDGF binding induces receptor homo-and hetero-dimerization and signal transduction. The expression of the α and β receptors is independently regulated in various cell types. Recombinant soluble PDGF R β binds PDGF with high affinity and is potent PDGF antagonist.

References:

1. Heldin, C.H. and L. Claesson-Welsh (1994) in *Guidebook to Cytokines and Their Receptors*, Nicola, N.A. ed. Oxford University Press, New York, p. 202.