

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PDGF-C in direct ELISAs and Western blots. In Western blots, approximately 15% cross-reactivity with recombinant mouse PDGF-C is observed, and less than 1% cross-reactivity with human PDGF, recombinant human (rh) PDGF-AA, rhPDGF-BB, rhPDGF-AB, and rhPDGF-D is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human PDGF-C Gly230-Gly345 Accession # Q9NRA1
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. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

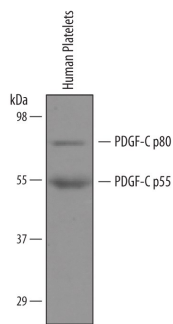
APPLICATIONS

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	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize PDGF-CC-induced proliferation in the NR6R-3T3 mouse fibroblast cell line [Raines, E.W. <i>et al.</i> (1985) <i>Methods Enzymol.</i> 109 :749]. The Neutralization Dose (ND ₅₀) is typically 6-24 µg/mL in the presence of 0.8 µg/mL Recombinant Human PDGF-CC.	

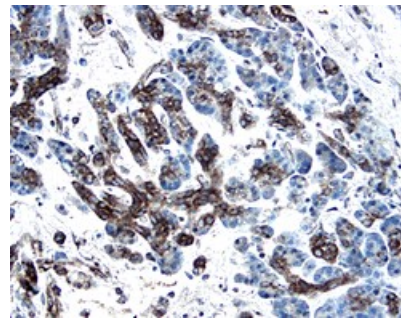
DATA

Western Blot



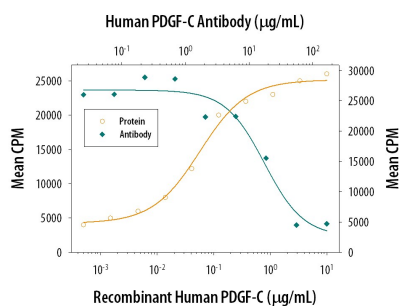
Detection of Human PDGF-C by Western Blot. Western blot shows lysates of human platelets. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human PDGF-C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1560) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). Specific bands were detected for PDGF-C p80 at approximately 80 kDa and PDGF-C p55 at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 8*.

Immunohistochemistry



PDGF-C in Human Pancreatic Cancer Tissue. PDGF-C was detected in immersion fixed paraffin-embedded sections of human pancreatic cancer tissue using 1.7 µg/mL Goat Anti-Human PDGF-C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1560) 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



Cell Proliferation Induced by PDGF-CC and Neutralization by Human PDGF-C Antibody. Recombinant Human PDGF-CC (Catalog # 1687-CC) stimulates proliferation in the NR6R-3T3 mouse fibroblast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human PDGF-CC (0.8 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human PDGF-C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1560). The ND₅₀ is typically 6-24 µg/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	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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

Platelet-derived growth factor C (PDGF-C), also named spinal cord derived growth factor (SCDGF) and follotain, is a member of the PDGF family that binds to the PDGF receptor $\alpha\alpha$ and $\alpha\beta$. PDGF-C is a growth factor that plays an essential role in the regulation of embryonic development, cell proliferation, cell migration, survival and chemotaxis. It is a potent mitogen and chemoattractant for cells of mesenchymal origin. It is also required for normal skeleton formation during embryonic development, especially for normal development of the craniofacial skeleton and for normal development of the palate. In addition, PDGF-C is required for normal skin morphogenesis during embryonic development. PDGF-C plays an important role in angiogenesis and blood vessel development and is involved in fibrotic processes, in which transformation of interstitial fibroblasts into myofibroblasts plus collagen deposition occurs. The CUB domain has mitogenic activity in coronary artery smooth muscle cells, suggesting a role beyond the maintenance of the latency of the PDGF domain. In the nucleus, PDGFC seems to have additional function. Western blot analysis of platelets identified 55 kDa and 80 kDa PDGF C forms that were secreted on platelet activation (1).

References:

Fang L. et al. (2004) Arterioscler Thromb Vasc Biol. 24:787