

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PDGF-D in Western blots. In this format, less than 1% cross-reactivity with recombinant human (rh) PDGF-AA, rhPDGF-AB and rhPDGF-BB is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human PDGF-D
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. 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	0.1 µg/mL	Recombinant Human PDGF-D

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.
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

The platelet-derived growth factor (PDGF) family consists of four disulfide-linked homodimers and one heterodimer (PDGF-AB). These proteins regulate diverse cellular functions through interactions with PDGF R α and R β (1, 2). Mature PDGF-DD associates with PDGF R β and triggers signaling through PDGF R β homodimers and PDGF R α /R β heterodimers (3 - 5). The human PDGF-DD cDNA encodes a 370 amino acid (aa) precursor that includes a 23 aa signal sequence, one CUB domain, and one PDGF/VEGF domain (3, 4). The PDGF/VEGF domain shares 27 - 35% aa sequence identity with the corresponding regions of other PDGF family members. Human PDGF-DD shares 87% aa sequence identity with mouse and rat PDGF-DD. PDGF-DD is secreted as a 100 kDa latent homodimer which is activated by proteolysis to release a 35 kDa bioactive protein containing the PDGF/VEGF homology domain (3, 4, 6, 7). A splice variant of PDGF-DD has a 6 aa deletion near the N-terminus. A 72 aa deletion within the PDGF/VEGF domain generates an inactive protein in mouse but has not been detected in human (8). PDGF-DD is widely expressed in embryonic and adult tissues (3, 9, 10), and PDGF R β is expressed in a generally complementary pattern (9, 11, 12). PDGF-DD functions as a growth factor for renal artery smooth muscle cells and lens epithelial cells, and as a macrophage chemoattractant (5, 9 - 11). PDGF-DD is overexpressed in and contributes to several disease states, including renal and hepatic fibrosis, mesangial proliferative glomerulopathy, pulmonary lymphoid infiltration, and many cancers (6, 11 - 15). PDGF-DD functions in both paracrine and autocrine manners (6, 7, 14).

References:

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