

PDGF-A (N-30): sc-128

BACKGROUND

PDGF is a mitogen for mesenchyme- and glia-derived cells. It consists of two disulfide-bonded polypeptide chains, A and B, and occurs as three isoforms, PDGF AA, PDGF AB and PDGF BB. The three isoforms bind with different affinities to two receptor types, α and β , which are structurally related and endowed with protein-tyrosine kinase domains. Ligand binding induces activation of the receptor kinases by formation of receptor dimers; the A subunit of PDGF binds only to α receptors with high affinity, whereas the B subunit can bind to both α and β receptors. Evidence suggests that PDGF may function as a neurotrophic factor. The fact that receptors for PDGF-A are expressed in oligodendrocyte progenitor cells whereas receptors for PDGF-B are expressed on neurons suggests that the different isoforms of PDGF may regulate growth and differentiation of different cell types in the developing central nervous system by paracrine and autocrine routes.

CHROMOSOMAL LOCATION

Genetic locus: PDGFA (human) mapping to 7p22.3; Pdgfa (mouse) mapping to 5 G2.

SOURCE

PDGF-A (N-30) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of PDGF-A of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-128 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose (sc-128 AC) conjugate for immunoprecipitation, 500 μ g/0.25 ml agarose in 1 ml.

APPLICATIONS

PDGF-A (N-30) is recommended for detection of precursor and mature PDGF-A of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PDGF-A siRNA (h): sc-39703, PDGF-A siRNA (m): sc-39704, PDGF-A shRNA Plasmid (h): sc-39703-SH, PDGF-A shRNA Plasmid (m): sc-39704-SH, PDGF-A shRNA (h) Lentiviral Particles: sc-39703-V and PDGF-A shRNA (m) Lentiviral Particles: sc-39704-V.

Molecular Weight of PDGF-A dimer: 31 kDa.

Molecular Weight of PDGF-A monomeric A chain: 17 kDa.

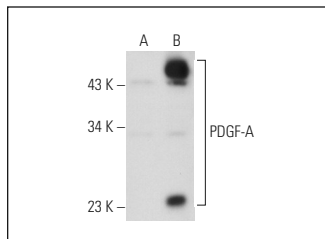
RESEARCH USE

For research use only, not for use in diagnostic procedures.

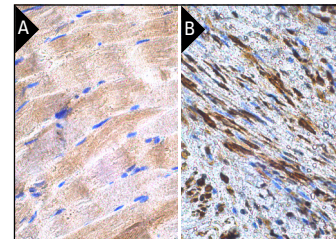
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



PDGF-A (N-30): sc-128. Western blot analysis of PDGF-A expression in non-transfected: sc-117752 (A) and mouse PDGF-A transfected: sc-122461 (B) 293T whole cell lysates.



PDGF-A (N-30): sc-128. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of smooth muscle cells (B).

SELECT PRODUCT CITATIONS

- Alpers, C.E., et al. 1995. Platelet-derived growth factor A-chain expression in developing and mature human kidneys and in Wilms' tumor. *Kidney Int.* 48: 146-154.
- Yamamoto, S., et al. 2008. Expression of platelet-derived growth factors and their receptors in ovarian clear-cell carcinoma and its putative precursors. *Mod. Pathol.* 21: 115-124.
- Perros, F., et al. 2008. Platelet-derived growth factor expression and function in idiopathic pulmonary arterial hypertension. *Am. J. Respir. Crit. Care Med.* 178: 81-88.
- Abdeen, A., et al. 2009. Correlation between clinical outcome and growth factor pathway expression in osteogenic sarcoma. *Cancer* 115: 5243-5250.
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- Dingemann, J., et al. 2010. Abnormal platelet-derived growth factor signaling accounting for lung hypoplasia in experimental congenital diaphragmatic hernia. *J. Pediatr. Surg.* 45: 1989-1994.
- Savikko, J., et al. 2011. Early short-term imatinib treatment is sufficient to prevent the development of chronic allograft nephropathy. *Nephrol. Dial. Transplant.* 26: 3026-3032.
- Li, P., et al. 2011. IGF signaling directs ventricular cardiomyocyte proliferation during embryonic heart development. *Development* 138: 1795-1805.

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Try **PDGF-A (E-10): sc-9974** or **PDGF-A (A-1): sc-390392**, our highly recommended monoclonal alternatives to PDGF-A (N-30).