

PDGF-B (C-5): sc-74494

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, AB and 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 a 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. Receptors for PDGF-A are expressed in oligodendrocyte progenitor cells whereas receptors for PDGF-B are expressed on neurons. These facts suggest that the different isoforms of PDGF may regulate growth and differentiation of different cell types in the developing central nervous system through paracrine and autocrine routes.

REFERENCES

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- Heldin, C.H., et al. 1989. Dimerization of B-type platelet-derived growth factor receptors occurs after ligand binding and is closely associated with receptor kinase activation. *J. Biol. Chem.* 264: 8905-8912.
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- Hackett, D., et al. 1992. Effectiveness and safety of a single intravenous bolus injection of tissue-type plasminogen activator in acute myocardial infarction. Bolus Dose-Escalation Study of Tissue-Type Plasminogen Activator (BEST) Investigators. *Am. J. Cardiol.* 69: 1393-1398.

CHROMOSOMAL LOCATION

Genetic locus: PDGFB (human) mapping to 22q13.1; Pdgfb (mouse) mapping to 15 E1.

SOURCE

PDGF-B (C-5) is a mouse monoclonal antibody raised against amino acids 136-190 of PDGF-B of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PDGF-B (C-5) is recommended for detection of precursor and mature PDGF-B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

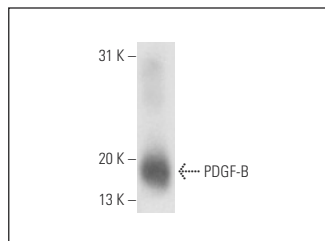
Suitable for use as control antibody for PDGF-B siRNA (h): sc-39705, PDGF-B siRNA (m): sc-39706, PDGF-B shRNA Plasmid (h): sc-39705-SH, PDGF-B shRNA Plasmid (m): sc-39706-SH, PDGF-B shRNA (h) Lentiviral Particles: sc-39705-V and PDGF-B shRNA (m) Lentiviral Particles: sc-39706-V.

Molecular Weight of PDGF-B dimer: 31-35 kDa.

Molecular Weight of monomeric PDGF-B chain: 14 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

DATA



PDGF-B (C-5): sc-74494. Western blot analysis of human recombinant PDGF-B.

SELECT PRODUCT CITATIONS

- Sharma, V.K., et al. 2016. Increased expression of platelet-derived growth factor associated protein-1 is associated with PDGF-B mediated glioma progression. *Int. J. Biochem. Cell Biol.* 78: 194-205.
- Liu, X., et al. 2020. Cystine transporter regulation of pentose phosphate pathway dependency and disulfide stress exposes a targetable metabolic vulnerability in cancer. *Nat. Cell Biol.* 22: 476-486.

STORAGE

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



See **PDGF-B (F-3): sc-365805** for PDGF-B antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.