



PDGF-B (MM0014-5F66): sc-101568

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, A and B, 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 A and B receptors. Evidence suggests that PDGF may function as a neurotrophic factor. The fact that PDGF-A receptors are expressed in oligodendrocyte progenitor cells, whereas PDGF-B receptors 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.

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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- Smits, A., et al. 1991. Neurotrophic activity of platelet-derived growth factor (PDGF): rat neural cells possess functional PDGF-B-type receptors and respond to PDGF. *Proc. Natl. Acad. Sci. USA* 88: 8159-8163.

CHROMOSOMAL LOCATION

Genetic locus: PDGFB (human) mapping to 22q13.1.

SOURCE

PDGF-B (MM0014-5F66) is a mouse monoclonal antibody raised against recombinant PDGF-BB of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

PDGF-B (MM0014-5F66) is recommended for detection of PDGF isoform BB of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000); may cross-react with PDGF-AB; non cross-reactive with PDGF-AA.

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

Molecular Weight of PDGF-B monomer: 14 kDa.

Molecular Weight of PDGF-B dimer: 31 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.