

PDGF-D (R-20): sc-23573

BACKGROUND

Platelet-derived growth factor (PDGF) refers to a family of disulphide-bonded dimeric isoforms that are important for growth and survival, and which function in several types of connective tissue cell. There are four members of the platelet-derived growth factor (PDGF) family: PDGF-A, PDGF-B, PDGF-C and PDGF-D (spinal cord-derived growth factor-B or iris-expressed growth factor). Their biological effects are mediated via two tyrosine kinase receptors, PDGFR- α and PDGFR- β . PDGF-mediated signaling is critical for development of many organ systems. PDGF-D has a two-domain structure similar to PDGF-C and is secreted as a disulphide-linked homodimer, PDGF-DD. Upon limited proteolysis, PDGF-DD is activated and becomes a specific agonistic ligand for PDGFR- β . PDGF-D is expressed in fibroblastic adventitial cells, cultured endothelial cells and in a variety of tumor cell lines.

REFERENCES

1. Bergsten, E., et al. 2001. PDGF-D is a specific, protease-activated ligand for the PDGF β -receptor. *Nat. Cell Biol.* 3: 512-516.
2. Uutela, M., et al. 2001. Chromosomal location, exon structure, and vascular expression patterns of the human PDGFC and PDGFC genes. *Circulation* 103: 2242-2247.
3. LaRoche, W.J., et al. 2001. PDGF-D, a new protease-activated growth factor. *Nat. Cell Biol.* 3: 517-521.
4. Hamada, T., et al. 2001. Molecular cloning of SCDGF-B, a novel growth factor homologous to SCDGF/PDGF-C/fallotein. *Biochem. Biophys. Res. Commun.* 280: 733-737
5. Aase, K., et al. 2002. Expression analysis of PDGF-C in adult and developing mouse tissues. *Mech. Dev.* 110: 187-191.

CHROMOSOMAL LOCATION

Genetic locus: PDGFD (human) mapping to 11q22.3; Pdgfd (mouse) mapping to 9 A1.

SOURCE

PDGF-D (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PDGF-D 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-23573 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

PDGF-D (R-20) is recommended for detection of PDGF-D of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

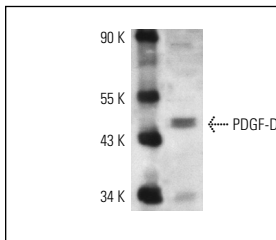
PDGF-D (R-20) is also recommended for detection of PDGF-D in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PDGF-D siRNA (h): sc-39709, PDGF-D siRNA (m): sc-39710, PDGF-D shRNA Plasmid (h): sc-39709-SH, PDGF-D shRNA Plasmid (m): sc-39710-SH, PDGF-D shRNA (h) Lentiviral Particles: sc-39709-V and PDGF-D shRNA (m) Lentiviral Particles: sc-39710-V.

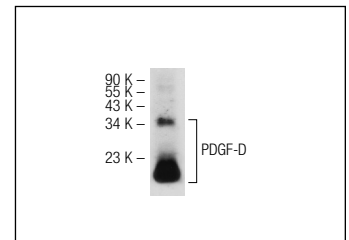
Molecular Weight of PDGF-D: 50 kDa.

Positive Controls: mouse kidney extract: sc-2255.

DATA



PDGF-D (R-20): sc-23573. Western blot analysis of PDGF-D expression in mouse kidney tissue extract.



PDGF-D (R-20): sc-23573. Western blot analysis of human recombinant PDGF-D.

SELECT PRODUCT CITATIONS

1. Liu, M.Y., et al. 2006. Inducible platelet-derived growth factor D-chain expression by angiotensin II and hydrogen peroxide involves transcriptional regulation by Ets-1 and Sp1. *Blood* 107: 2322-2329.
2. Yoon, S.J., et al. 2006. Gene expression profiling of early follicular development in primordial, primary, and secondary follicles. *Fertil. Steril.* 85: 193-203.

RESEARCH USE

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

MONOS
Satisfaction
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Try **PDGF-D (E-7): sc-137029** or **PDGF-D (E-6): sc-137031**, our highly recommended monoclonal alternatives to PDGF-D (R-20).