

PDGF-D (E-3): sc-137030

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 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 homo-dimer, 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. LaRochelle, W.J., et al. 2001. PDGF-D, a new protease-activated growth factor. *Nat. Cell Biol.* 3: 517-521.
3. Hamada, T., et al. 2001. Molecular cloning of SCDGF-B, a novel growth factor homologous to SCDGF/PDGF-C/fallotin. *Biochem. Biophys. Res. Commun.* 280: 733-737.

CHROMOSOMAL LOCATION

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

SOURCE

PDGF-D (E-3) is a mouse monoclonal antibody raised against amino acids 131-270 mapping within an internal region of PDGF-D of human origin.

PRODUCT

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

APPLICATIONS

PDGF-D (E-3) is recommended for detection of PDGF-D 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-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.

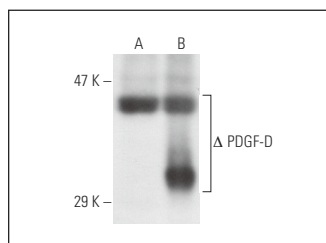
Molecular Weight of PDGF-D: 50 kDa.

Positive Controls: PDGF-D (m): 293T Lysate: sc-122464 or mouse kidney extract: sc-2255.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PDGF-D (E-3): sc-137030. Western blot analysis of PDGF-D expression in non-transfected: sc-117752 (A) and truncated mouse PDGF-D transfected: sc-122464 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Thirunavukkarasu, S., et al. 2016. Cytochrome P450 1B1 contributes to the development of Angiotensin II-induced aortic aneurysm in male ApoE^{-/-} mice. *Am. J. Pathol.* 186: 2204-2219.
2. Xiong, Z., et al. 2021. Platelet-derived growth factor-D activates complement system to propagate macrophage polarization and neovascularization. *Front. Cell Dev. Biol.* 9: 686886.
3. Yang, Y., et al. 2022. circ-0007707/miR-429/PDGFD pathway regulates the progression of gastric cancer by modulating the immune-gene signature. *J. Oncol.* 2022: 2214686.
4. Lu, W., et al. 2022. PDGFD switches on stem cell endothelial commitment. *Angiogenesis* 25: 517-533.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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