

PIGF (C-20): sc-1880

BACKGROUND

The onset of angiogenesis is believed to be an early event in tumorigenesis and may facilitate tumor progression and metastasis. Several growth factors with angiogenic activity have been described. These include fibroblast growth factor (FGF), platelet derived growth factor (PDGF), vascular endothelial growth factor (VEGF) and placenta growth factor (PIGF). Like VEGF, several PIGF variants have been shown to arise from alternative mRNA splicings. Evidence has suggested VEGF to be an obligatory component in PIGF signaling. While VEGF homodimers and VEGF/PIGF heterodimers function as potent mediators of mitogenic and chemotactic responses in endothelial cells, PIGF homodimers are effectual only at extremely high concentrations. Indeed, many of the physiological effects attributed to VEGF may actually be a result of VEGF/PIGF. VEGF and PIGF share a common receptor, Flt-1, and may also activate Flk-1/KDR.

CHROMOSOMAL LOCATION

Genetic locus: PGF (human) mapping to 14q24.3.

SOURCE

PIGF (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PIGF of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1880 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIGF (C-20) is recommended for detection of PIGF-1, PIGF-3 and to a lesser extent, PIGF-2 isoforms of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

PIGF (C-20) is also recommended for detection of PIGF-1, PIGF-3 and to a lesser extent, PIGF-2 isoforms in additional species, including equine and porcine.

Suitable for use as control antibody for PIGF siRNA (h): sc-44027, PIGF shRNA Plasmid (h): sc-44027-SH and PIGF shRNA (h) Lentiviral Particles: sc-44027-V.

Molecular Weight of PIGF: 18 kDa.

Positive Controls: JAR cell lysate: sc-2276.

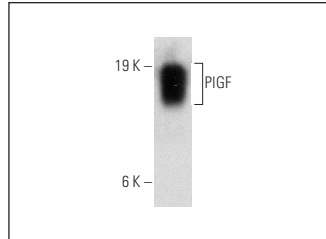
STORAGE

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

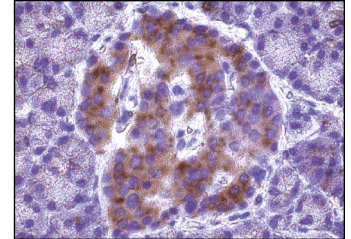
RESEARCH USE

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

DATA



PIGF (C-20): sc-1880. Western blot analysis of PIGF expression in JAR whole cell lysate.



PIGF (C-20): sc-1880. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of islet of langerhans cells.

SELECT PRODUCT CITATIONS

1. Lical, P.M., et al. 2000. Human melanoma cells secrete and respond to placenta growth factor and vascular endothelial growth factor. *J. Invest. Dermatol.* 115: 1000-1007.
2. Failla, C.M., et al. 2000. Placenta growth factor is induced in human keratinocytes during wound healing. *J. Invest. Dermatol.* 115: 388-395.
5. Plaisier, M., et al. 2009. Decidual vascularization and the expression of angiogenic growth factors and proteases in first trimester spontaneous abortions. *Hum. Reprod.* 24: 185-197.
6. Escudero-Esparza, A., et al. 2009. PGF isoforms, PLGF-1 and PGF-2, in colorectal cancer and the prognostic significance. *Cancer Genomics Proteomics* 6: 239-246.
7. Escudero-Esparza, A., et al. 2010. PGF isoforms, PLGF-1 and PGF-2 and the PGF receptor, neuropilin, in human breast cancer: prognostic significance. *Oncol. Rep.* 23: 537-544.
8. Granata, F., et al. 2010. Production of vascular endothelial growth factors from human lung macrophages induced by group IIA and group X secreted phospholipases A₂. *J. Immunol.* 184: 5232-5241.
9. Cheng, S.J., et al. 2010. Expression of placenta growth factor: an independent factor for prediction of progression and prognosis of oral cancer. *Head Neck* 32: 1363-1369.
10. Bhardwaj, S., et al. 2011. Adventitial gene transfer of VEGFR-2 specific VEGF-E chimera induces MCP-1 expression in vascular smooth muscle cells and enhances neointimal formation. *Atherosclerosis* 219: 84-91.


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Try **PIGF (MM0010-2D93): sc-101572**, our highly recommended monoclonal alternative to PIGF (C-20).