

VEGF-B (N-19): sc-1878



The Power to Question

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) and vascular endothelial growth factor (VEGF). VEGF is a dimeric glycoprotein with structural homology to PDGF. Several variants of VEGF have been described that arise by alternative mRNA splicing. It has been speculated that VEGF may function as a tumor angiogenesis factor *in vivo*. Two additional proteins designated VEGF-B and VEGF-C share a significant degree of homology with VEGF. VEGF-B is abundantly expressed in heart and skeletal muscle and is frequently co-expressed with VEGF. VEGF-C binds to and specifically activates Flt-4 and Flk-1. The genes that encode VEGF-B and VEGF-C have been localized to chromosomes 11q13.1 and 4q34.3, respectively.

REFERENCES

1. Folkman, J., et al. 1989. Induction of angiogenesis during the transition from hyperplasia to neoplasia. *Nature* 339: 58-61.
2. Ferrara, N., et al. 1991. The vascular endothelial growth factor family of polypeptides. *J. Cell. Biochem.* 47: 211-218.
3. Plate, K.H., et al. 1992. Vascular endothelial growth factor is a potential tumour angiogenesis factor in human gliomas *in vivo*. *Nature* 359: 845-848.

CHROMOSOMAL LOCATION

Genetic locus: VEGFB (human) mapping to 11q13.1.

SOURCE

VEGF-B (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of VEGF-B 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-1878 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VEGF-B (N-19) is recommended for detection of VEGF-B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

VEGF-B (N-19) is also recommended for detection of VEGF-B in additional species, including bovine and porcine.

Suitable for use as control antibody for VEGF-B siRNA (h): sc-39840, VEGF-B shRNA Plasmid (h): sc-39840-SH and VEGF-B shRNA (h) Lentiviral Particles: sc-39840-V.

Molecular Weight of VEGF-B: 22 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Takahashi, A., et al. 2002. Correlation of vascular endothelial growth factor-C expression with tumor-infiltrating dendritic cells in gastric cancer. *Oncology* 62: 121-127.
2. Möller, B., et al. 2002. Expression of the vascular endothelial growth factors B and C and their receptors in human endometrium during the menstrual cycle. *Acta Obstet. Gynecol. Scand.* 81: 817-824.
3. Bhardwaj, S., et al. 2003. Angiogenic responses of vascular endothelial growth factors in periadventitial tissue. *Hum. Gene Ther.* 14: 1451-1462.
4. Mould, A.W., et al. 2005. Transgenic overexpression of vascular endothelial growth factor-B isoforms by endothelial cells potentiates postnatal vessel growth *in vivo* and *in vitro*. *Circ. Res.* 97: e60-e70.
5. Möller, B., et al. 2005. Expression of vascular endothelial growth factors and their receptors in human endometrium from women experiencing abnormal bleeding patterns after prolonged use of a levonorgestrel-releasing intrauterine system. *Hum. Reprod.* 20: 1410-1417.
6. Tao, L., et al. 2006. Elemene displays anti-cancer ability on laryngeal cancer cells *in vitro* and *in vivo*. *Cancer Chemother. Pharmacol.* 58: 24-34.
7. Kinnunen, K., et al. 2009. Differences between type 1 and type 2 diabetics in retinal neovascular tissue and vitreous humour. *Br. J. Ophthalmol.* 93: 1109-1115.
8. Brar, R., et al. 2009. Breast angiosarcoma: case series and expression of vascular endothelial growth factor. *Case Rep. Oncol.* 2: 242-250.

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.

MONOS
Satisfaction
Guaranteed

Try **VEGF-B (56-1): sc-81670** or **VEGF-B (MM0008-7B43): sc-101581**, our highly recommended monoclonal alternatives to VEGF-B (N-19).