

VEGF (P-20): sc-1836

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 factors (FGFs), 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* because the expression pattern of VEGF is consistent with a role in embryonic angiogenesis. VEGF mRNA is formed in some primary tumors, VEGF is produced by tumor cell lines *in vitro* and VEGF mitogenic activity appears to be restricted to endothelial cells. A member of the PDGF receptor family, Flt, has been identified as a high-affinity receptor for VEGF.

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.

CHROMOSOMAL LOCATION

Genetic locus: Vegfa (mouse) mapping to 17 C.

SOURCE

VEGF (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of VEGF of mouse 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-1836 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VEGF (P-20) is recommended for detection of the 189, 165 and 121 amino acid splice variants of VEGF of mouse and rat 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).

Suitable for use as control antibody for VEGF siRNA (m): sc-36815, VEGF shRNA Plasmid (m): sc-36815-SH and VEGF shRNA (m) Lentiviral Particles: sc-36815-V.

Molecular Weight of VEGF monomer: 21 kDa.

Molecular Weight of VEGF dimer: 42 kDa.

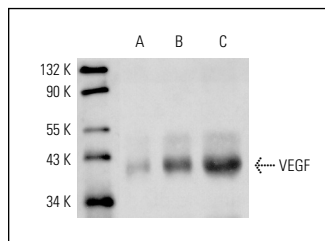
RESEARCH USE

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

STORAGE

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

DATA



VEGF (P-20): sc-1836. Western blot analysis of mouse recombinant VEGF at 25 ng (A), 50 ng (B) and 100 ng (C).

SELECT PRODUCT CITATIONS

1. Rivard, A., et al. 1999. Rescue of diabetes-related impairment of angiogenesis by intramuscular gene therapy with adeno-VEGF. *Am. J. Pathol.* 154: 355-363.
2. Guimarães-Fernandes, F., et al. 2011. Effect of methylprednisolone on perivascular pulmonary edema, inflammatory infiltrate, VEGF and TGF-β immunoeexpression in the remaining lungs of rats after left pneumonectomy. *Braz J. Med. Biol. Res.* 44: 647-651.
3. Vieira, R.P., et al. 2011. Airway epithelium mediates the anti-inflammatory effects of exercise on asthma. *Respir. Physiol. Neurobiol.* 175: 383-389.
4. Liu, G., et al. 2011. Critical role of SDF-1α-induced progenitor cell recruitment and macrophage VEGF production in the experimental corneal neovascularization. *Mol. Vis.* 17: 2129-2138.
5. Pascal, L.E., et al. 2011. EAF2 loss enhances angiogenic effects of Von Hippel-Lindau heterozygosity on the murine liver and prostate. *Angiogenesis* 14: 331-343.
6. Sugiyama, M., et al. 2011. Dental pulp-derived CD31⁺/CD146⁺ side population stem/progenitor cells enhance recovery of focal cerebral ischemia in rats. *Tissue Eng. Part A* 17: 1303-1311.
7. Silva, A.C., et al. 2012. Exercise inhibits allergic lung inflammation. *Int. J. Sports Med.* 33: 402-409.
8. Bai, Q., et al. 2012. VEGF is involved in the increase of dermal microvascular permeability induced by tryptase. *ISRN Dermatol.* 2012: 941465.


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