SANTA CRUZ BIOTECHNOLOGY, INC.

VEGF (147): sc-507

SANTA CRUZ BIOTECHNOLOGY

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 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.

CHROMOSOMAL LOCATION

Genetic locus: VEGFA (human) mapping to 6p21.1; Vegfa (mouse) mapping to 17 C.

SOURCE

VEGF (147) is a rabbit polyclonal antibody raised against amino acids 1-140 of VEGF 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.

APPLICATIONS

VEGF (147) is recommended for detection of the 189, 165 and 121 amino acid splice variants of VEGF of mouse, rat, human and *Xenopus* 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).

VEGF (147) is also recommended for detection of the 189, 165 and 121 amino acid splice variants of VEGF in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VEGF siRNA (h): sc-29520, VEGF siRNA (m): sc-36815, VEGF shRNA Plasmid (h): sc-29520-SH, VEGF shRNA Plasmid (m): sc-36815-SH, VEGF shRNA (h) Lentiviral Particles: sc-29520-V and VEGF shRNA (m) Lentiviral Particles: sc-36815-V.

Molecular Weight of VEGF monomer: 21 kDa.

Molecular Weight of VEGF dimer: 42 kDa.

Positive Controls: mouse liver extract: sc-2256, NIH/3T3 whole cell lysate: sc-2210 or MCF7 whole cell lysate: sc-2206.

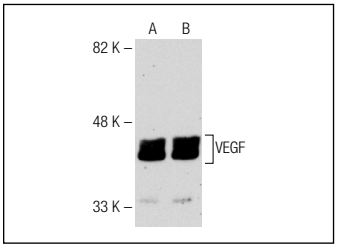
STORAGE

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

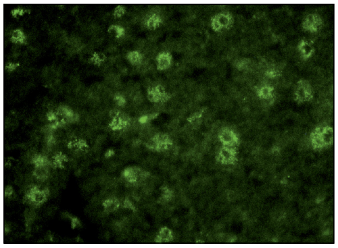
RESEARCH USE

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

DATA



VEGF (147): sc-507. Western blot analysis under non-reducing conditions of VEGF expression in NIH/3T3 whole cell lysates (**A**,**B**).



VEGF (147): sc-507. Immunofluorescence staining of normal mouse liver frozen section showing cytoplasmic and extracellular staining of hepatic arteries.

SELECT PRODUCT CITATIONS

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4. Wu, G.J., et al. 2011. Enforced expression of METCAM/MUC18 increases tumorigenesis of human prostate cancer LNCaP cells in nude mice. J. Urol. 185: 1504-1512.
5. Lin, S.L., et al. 2011. Targeting endothelium-pericyte cross talk by inhibiting VEGF receptor signaling attenuates kidney microvascular rarefaction and fibrosis. Am. J. Pathol. 178: 911-923.
6. Arai, H., et al. 2011. Thalidomide prevents the progression of peritoneal fibrosis in mice. Acta Histochem. Cytochem. 44: 51-60.
7. Renner, N.A., et al. 2012. Microglia activation by SIV-infected macrophages: alterations in morphology and cytokine secretion. J. Neurovirol. 18: 213-221.
8. Clere, N., et al. 2012. Estrogen receptor α as a key target of organochlorines to promote angiogenesis. Angiogenesis 15: 745-760.
9. Martinez-Bello, V.E., et al. 2012. Three weeks of erythropoietin treatment hampers skeletal muscle mitochondrial biogenesis in rats. J. Physiol. Biochem. 68: 593-601.