

VEGF (A-20): sc-152



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 (A-20) is available as either rabbit (sc-152) or goat (sc-152-G) polyclonal affinity purified antibody raised against a peptide mapping at the N-terminus of VEGF-A 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-152 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-152 AC, 500 µg/0.25 ml agarose in 1 ml; available azide-free for biological studies, sc-152 L, 200 µg/0.1 ml; available as biotin conjugate, sc-152 B, 200 µg/ml.

APPLICATIONS

VEGF (A-20) is recommended for detection of the 189, 165 and 121 amino acid splice variants of VEGF of human and, to a lesser extent, 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 and immunohistochemistry (including paraffin-embedded sections) (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 (A-20) is also recommended for detection of the 189, 165 and 121 amino acid splice variants of VEGF in additional species, including bovine.

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.

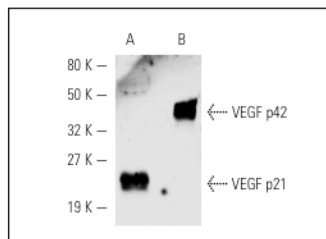
Molecular Weight of VEGF dimer: 42 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, SK-BR-3 + PMA cell lysate: sc-24773 or human kidney tissue.

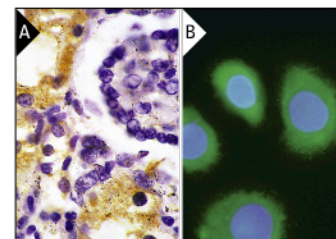
STORAGE

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

DATA



VEGF (A-20): sc-152. Western blot analysis of reduced (A) and unreduced (B) purified VEGF protein (20 ng).



VEGF (A-20): sc-152. Immunoperoxidase staining of formalin-fixed, paraffin-embedded normal human kidney showing diffuse cytoplasmic staining of kidney tubules (A). Immunofluorescence staining of PMA-treated, methanol-fixed SK-BR-3 cells, showing cytoplasmic fluorescein immunostaining and nuclear DAPI counter-stain (B).

SELECT PRODUCT CITATIONS

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- Grant, D.S., et al. 2002. Decorin suppresses tumor cell-mediated angiogenesis. *Oncogene* 21: 4765-4777.
- Duyndam, M.C., et al. 2002. Vascular endothelial growth factor 165 overexpression stimulates angiogenesis and induces cyst formation and macrophage infiltration in human ovarian cancer xenografts. *Am. J. Pathol.* 160: 537-548.
- Ancelin, M., et al. 2002. A dynamic shift of VEGF isoforms with a transient and selective progesterone-induced expression of VEGF189 regulates angiogenesis and vascular permeability in human uterus. *Proc. Natl. Acad. Sci. USA* 99: 6023-6028.
- Thomas, M., et al. 2004. Dual hormonal regulation of endocrine tissue mass and vasculature by adrenocorticotropin in the adrenal cortex. *Endocrinology* 145: 4320-4329.
- Nemetski, S.M., et al. 2007. Hypoxic regulation of Id-1 and activation of the unfolded protein response are aberrant in neuroblastoma. *J. Biol. Chem.* 282: 240-248.
- Ning, X.H., et al. 2007. Short-cycle hypoxia in the intact heart: hypoxia-inducible factor 1 α signaling and the relationship to injury threshold. *Am. J. Physiol.* 292: 333-341.
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RESEARCH USE

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