

# VEGF (VG76e): sc-53463

## 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. Conn, G., et al. 1990. Purification of a glycoprotein vascular endothelial cell mitogen from a rat glioma-derived cell line. *Proc. Natl. Acad. Sci. USA* 87: 1323-1327.
3. Ferrara, N., et al. 1991. The vascular endothelial growth factor family of polypeptides. *J. Cell. Biochem.* 47: 211-218.
4. Tischer, E., et al. 1991. The human gene for vascular endothelial growth factor. Multiple protein forms are encoded through alternative exon splicing. *J. Biol. Chem.* 266: 11947-11954.
5. Breier, G., et al. 1992. Expression of vascular endothelial growth factor during embryonic angiogenesis and endothelial cell differentiation. *Development* 114: 521-532.

## CHROMOSOMAL LOCATION

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

## SOURCE

VEGF (VG76e) is a mouse monoclonal antibody raised against VEGF189 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

VEGF (VG76e) is recommended for detection of VEGF of mouse, rat and 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

VEGF (VG76e) is also recommended for detection of VEGF in additional species, including 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.

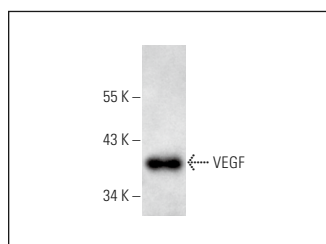
Molecular Weight of VEGF dimer: 42 kDa.

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

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



VEGF (VG76e): sc-53463. Western blot analysis of purified human VEGF.

## SELECT PRODUCT CITATIONS

1. Zhang, Z., et al. 2016. Melittin suppresses cathepsin S-induced invasion and angiogenesis via blocking of the VEGF-A/VEGFR-2/MEK1/ERK1/2 pathway in human hepatocellular carcinoma. *Oncol. Lett.* 11: 610-618.



See **VEGF (C-1): sc-7269** for VEGF antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.