

VEGF (JH121): sc-57496

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 (JH121) is a mouse monoclonal antibody raised against full length VEGF of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

VEGF (JH121) is recommended for detection of all forms 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

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: VEGF (h): 293T Lysate: sc-117031, NIH/3T3 whole cell lysate: sc-2210 or MCF7 whole cell lysate: sc-2206.

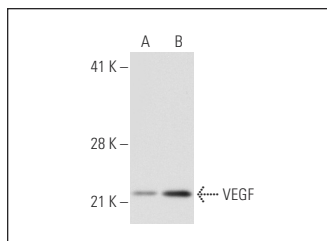
STORAGE

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

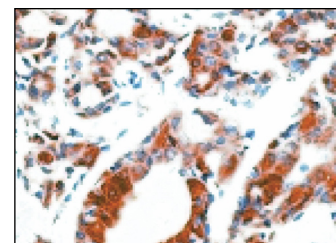
RESEARCH USE

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

DATA



VEGF (JH121): sc-57496. Western blot analysis of VEGF expression in non-transfected: sc-117752 (A) and human VEGF transfected: sc-117031 (B) 293T whole cell lysates.



VEGF (JH121): sc-57496. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human angiosarcoma tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Pugnaroni, A., et al. 2007. *In vitro* study of biofunctional indicators after exposure to asbestos-like fluoro-edenite fibres. *Cell. Mol. Biol.* 53: OL965-OL980.
- Nagaraju, G.P., et al. 2013. Antiangiogenic effects of ganetespib in colorectal cancer mediated through inhibition of HIF-1 α and STAT-3. *Angiogenesis* 16: 903-917.
- Gorman, J.L., et al. 2014. Angiotensin II evokes angiogenic signals within skeletal muscle through co-ordinated effects on skeletal myocytes and endothelial cells. *PLoS ONE* 9: e85537.
- Shang, J., et al. 2015. The role of mechano-growth factor E peptide in the regulation of osteosarcoma. *Oncol. Lett.* 10: 697-704.
- Solmaz, A., et al. 2016. Nesfatin-1 improves oxidative skin injury in normoglycemic or hyperglycemic rats. *Peptides* 78: 1-10.
- Fang, S., et al. 2017. MicroRNA-126 inhibits cell viability and invasion in a diabetic retinopathy model via targeting IRS-1. *Oncol. Lett.* 14: 4311-4318.
- Pratheeshkumar, P., et al. 2018. FoxM1 and β -catenin predicts aggressiveness in Middle Eastern ovarian cancer and their co-targeting impairs the growth of ovarian cancer cells. *Oncotarget* 9: 3590-3604.
- Maisto, R., et al. 2019. ARPE-19-derived VEGF-containing exosomes promote neovascularization in HUVEC: the role of the melanocortin receptor 5. *Cell Cycle* 18: 413-424.
- Yu, D.L., et al. 2020. AAV-mediated expression of 3TSR inhibits tumor and metastatic lesion development and extends survival in a murine model of epithelial ovarian carcinoma. *Cancer Gene Ther.* 27: 356-367.



CONJUGATES

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.