

# VEGF-B (H-70): sc-13083



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 factor (FGF), 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*. Two additional proteins designated VEGF-B and VEGF-C share a significant degree of homology with VEGF. VEGF-B is abundantly expressed in heart and skeletal muscle and is frequently coexpressed with VEGF. VEGF-C binds to and specifically activates Flt-4 and Flk-1. The genes that encode VEGF-B and VEGF-C have been localized to chromosomes 11q13.1 and 4q34, respectively.

## 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: VEGFB (human) mapping to 11q13.1; Vegfb (mouse) mapping to 19 A.

## SOURCE

VEGF-B (H-70) is a rabbit polyclonal antibody raised against amino acids 1-70 of VEGF-B 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-B (H-70) is recommended for detection of VEGF-B 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

VEGF-B (H-70) is also recommended for detection of VEGF-B in additional species, including bovine and porcine.

Suitable for use as control antibody for VEGF-B siRNA (h): sc-39840, VEGF-B siRNA (m): sc-39841, VEGF-B shRNA Plasmid (h): sc-39840-SH, VEGF-B shRNA Plasmid (m): sc-39841-SH, VEGF-B shRNA (h) Lentiviral Particles: sc-39840-V and VEGF-B shRNA (m) Lentiviral Particles: sc-39841-V.

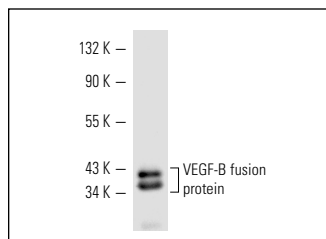
Molecular Weight of VEGF-B: 22 kDa.

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

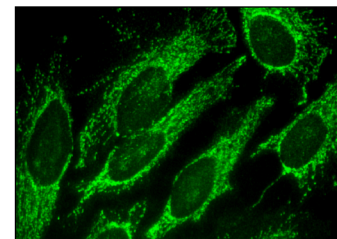
## STORAGE

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

## DATA



VEGF-B (H-70): sc-13083. Western blot analysis of human recombinant VEGF-B fusion protein.



VEGF-B (H-70): sc-13083. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Al-Rawi, M.A., et al. 2005. Interleukin-7 upregulates vascular endothelial growth factor-D in breast cancer cells and induces lymphangiogenesis *in vivo*. *Br. J. Surg.* 92: 305-310.
2. Al-Rawi, M.A., et al. 2005. The effects of interleukin-7 on the lymphangiogenic properties of human endothelial cells. *Int. J. Oncol.* 27: 721-730.
3. Detoraki, A., et al. 2009. Vascular endothelial growth factors synthesized by human lung mast cells exert angiogenic effects. *J. Allergy Clin. Immunol.* 123: 1142-1149, 1149.e1-1149.e5.
4. Müller-Deile, J., et al. 2009. The balance of autocrine VEGF-A and VEGF-C determines podocyte survival. *Am. J. Physiol. Renal Physiol.* 297: F1656-F1667.
5. Carrillo de Santa Pau, E., et al. 2009. Prognostic significance of the expression of vascular endothelial growth factors A, B, C, and D and their receptors R1, R2, and R3 in patients with nonsmall cell lung cancer. *Cancer* 115: 1701-1712.
6. Roudier, E., et al. 2010. Angio-adaptation in unloaded skeletal muscle: new insights into an early and muscle type-specific dynamic process. *J. Physiol.* 588: 4579-4591.
7. Granata, F., et al. 2010. Production of vascular endothelial growth factors from human lung macrophages induced by group IIA and group X secreted phospholipases A2. *J. Immunol.* 184: 5232-5241.

## RESEARCH USE

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



Try **VEGF-B (56-1): sc-81670** or **VEGF-B (MM0008-7B43): sc-101581**, our highly recommended monoclonal alternatives to VEGF-B (H-70).