

VEGF-B (RM0008-6E72): sc-101582

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 and include fibroblast growth factor (FGF), platelet derived growth factor (PDGF) and vascular endothelial growth factors (VEGFs). The VEGF protein family is comprised of VEGF, VEGF-B, VEGF-C and VEGF-D, all of which may exhibit angiogenic function *in vivo*. VEGF-B, which exists as two alternatively spliced isoforms known as VEGF-B167 and VEGF-B186, is abundantly expressed in heart and skeletal muscle and is frequently coexpressed with VEGF. VEGF-C binds to and specifically activates Flt-4 and Fik-1. The genes that encode human VEGF-B and VEGF-C have been localized to chromosomes 11q13.1 and 4q34.3, 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.
3. Breier, G., et al. 1992. Expression of vascular endothelial growth factor during embryonic angiogenesis and endothelial cell differentiation. *Development* 114: 521-532.
4. Berse, B., et al. 1992. Vascular permeability factor (vascular endothelial growth factor) gene is expressed differentially in normal tissues, macrophages and tumors. *Mol. Biol. Cell* 3: 211-220.
5. Plate, K.H., et al. 1992. Vascular endothelial growth factor is a potential tumour angiogenesis factor in human gliomas *in vivo*. *Nature* 359: 845-848.
6. Paavonen, K., et al. 1996. Novel human vascular endothelial growth factor genes VEGF-B and VEGF-C localize to chromosomes 11q13 and 4q34, respectively. *Circulation* 93: 1079-1082.
7. Joukov, V., et al. 1996. A novel vascular endothelial growth factor, VEGF-C, is a ligand for the Flt-4 (VEGFR-3) and KDR (VEGFR-2) receptor tyrosine kinases. *EMBO J.* 15: 290-298.
8. Olofsson, B., et al. 1996. Vascular endothelial growth factor B, a novel growth factor for endothelial cells. *Proc. Natl. Acad. Sci. USA* 93: 2576-2581.

CHROMOSOMAL LOCATION

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

SOURCE

VEGF-B (RM0008-6E72) is a rat monoclonal antibody raised against recombinant VEGF-B186 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG₂ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

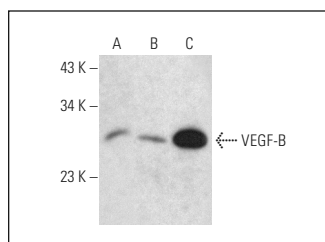
VEGF-B (RM0008-6E72) is recommended for detection of VEGF-B186 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with VEGF-B167.

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.

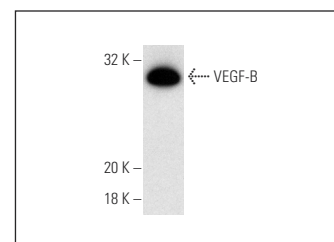
Molecular Weight of VEGF-B: 22 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, LADMAC whole cell lysate: sc-364189 or MIA PaCa-2 cell lysate: sc-2285.

DATA



VEGF-B (RM0008-6E72): sc-101582. Western blot analysis of VEGF-B expression in MCF7 (A) and LADMAC (B) whole cell lysates and mouse heart tissue extract (C).



VEGF-B (RM0008-6E72): sc-101582. Western blot analysis of VEGF-B expression in MIA PaCa-2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Xiao, P., et al. 2018. Neurotensin/IL-8 pathway orchestrates local inflammatory response and tumor invasion by inducing M2 polarization of tumor-associated macrophages and epithelial-mesenchymal transition of hepatocellular carcinoma cells. *Oncoimmunology* 7: e1440166.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.