SANTA CRUZ BIOTECHNOLOGY, INC.

VEGF-C (F-10): sc-74585

SANTA CRUZ BIOTECHNOLOGY

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 co-expressed 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 4q34.3, 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.

CHROMOSOMAL LOCATION

Genetic locus: VEGFC (human) mapping to 4q34.3; Vegfc (mouse) mapping to 8 B1.3.

SOURCE

VEGF-C (F-10) is a mouse monoclonal antibody raised against amino acids 230-419 of VEGF-C of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

VEGF-C (F-10) is recommended for detection of VEGF-C of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for VEGF-C siRNA (h): sc-39842, VEGF-C siRNA (m): sc-39843, VEGF-C shRNA Plasmid (h): sc-39842-SH, VEGF-C shRNA Plasmid (m): sc-39843-SH, VEGF-C shRNA (h) Lentiviral Particles: sc-39842-V and VEGF-C shRNA (m) Lentiviral Particles: sc-39843-V.

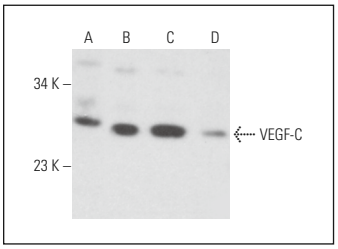
Molecular Weight of VEGF-C: 40/80 kDa.

Positive Controls: VEGF-C (h2): 293T Lysate: sc-116733, Hep G2 cell lysate: sc-2227 or SK-N-MC cell lysate: sc-2237.

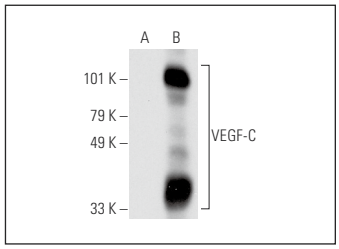
RECOMMENDED SUPPORT REAGENTS

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-C (F-10): sc-74585. Western blot analysis of VEGF-C expression in F9 (**A**), SK-N-MC (**B**), Hep G2 (**C**) and A-10 (**D**) whole cell lysates.



VEGF-C (F-10): sc-74585. Western blot analysis of VEGF-C expression in non-transfected: sc-117752 (**A**) and human VEGF-C transfected: sc-116733 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Doi, Y., et al. 2010. Significance of phospho-vascular endothelial growth factor receptor-2 expression in pancreatic cancer. Cancer Sci. 101: 1529-1535.
2. Huang, K.J. and Sui, L.H. 2012. The relevance and role of vascular endothelial growth factor C, matrix metalloproteinase-2 and E-cadherin in epithelial ovarian cancer. Med. Oncol. 29: 318-323.
3. Sasahira, T., et al. 2013. Trks are novel oncogenes involved in the induction of neovascularization, tumor progression, and nodal metastasis in oral squamous cell carcinoma. Clin. Exp. Metastasis 30: 165-176.
4. Kumagai, Y., et al. 2018. Vascular endothelial growth factors C and D and lymphangiogenesis at the early stage of esophageal squamous cell carcinoma progression. Dis. Esophagus. E-published.

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.

CONJUGATES

See **VEGF-C (E-6): sc-374628** for VEGF-C antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.