SANTA CRUZ BIOTECHNOLOGY, INC.

VEGF (F-5): sc-365578

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 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 (F-5) is a mouse monoclonal antibody raised against a peptide mapping at the N-terminus of VEGF-A of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365578 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

VEGF (F-5) is recommended for detection of the 189, 165 and 121 amino acid splice variants of VEGF 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 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: NIH/3T3 whole cell lysate: sc-2210 or MCF7 whole cell lysate: sc-2206.

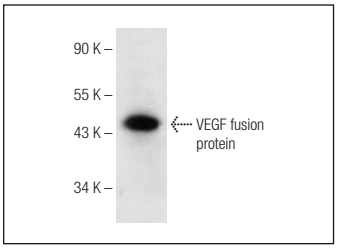
STORAGE

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

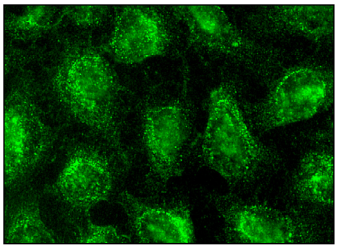
RESEARCH USE

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

DATA



VEGF (F-5): sc-365578. Western blot analysis of human recombinant VEGF fusion protein.



VEGF (F-5): sc-365578. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Yang, X., et al. 2012. Evaluation of a biodegradable graft substitute in rabbit bone defect model. Indian J. Orthop. 46: 266-273.
2. Infante, T., et al. 2015. Polycomb YY1 is a critical interface between epigenetic code and miRNA machinery after exposure to hypoxia in malignancy. Biochim. Biophys. Acta 1853: 975-986.
3. Gravina, G.L., et al. 2016. c-Myc sustains transformed phenotype and promotes radioresistance of embryonal rhabdomyosarcoma cell lines. Radiat. Res. 185: 411-422.
4. Wang, X.B., et al. 2018. Role of osteopontin in decidualization and pregnancy success. Reproduction 155: 423-432.
5. Mazewski, C., et al. 2019. Anthocyanins, delphinidin-3-O-glucoside and cyanidin-3-O-glucoside, inhibit immune checkpoints in human colorectal cancer cells *in vitro* and in silico. Sci. Rep. 9: 11560.
6. Liu, Z., et al. 2020. Overexpression of miR-106a enhances oxaliplatin sensitivity of colorectal cancer through regulation of FOXQ1. Oncol. Lett. 19: 663-670.
7. Shakova, F.M., et al. 2021. Protective effects of PGC-1α activators on ischemic stroke in a rat model of photochemically induced thrombosis. Brain Sci. 11: 325.
8. Panigrahi, B., et al. 2022. Cyclic peptides nanospheres: a "2-in-1" self-assembled delivery system for targeting nucleus and cytoplasm. Eur. J. Pharm. Sci. 171: 106125.
9. Gao, N., et al. 2022. Preliminary research of main components of DII4/Notch-VEGF signaling pathway under high-glucose stimulation *in vitro*. Diabetes Metab. Syndr. Obes. 15: 1165-1171.

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.