SANTA CRUZ BIOTECHNOLOGY, INC.

VEGF (VG-1): sc-53462

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 (VG-1) is a mouse monoclonal antibody raised against recombinant VEGF189 protein of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VEGF (VG-1) is available conjugated to agarose (sc-53462 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53462 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53462 PE), fluorescein (sc-53462 FITC), Alexa Fluor® 488 (sc-53462 AF488), Alexa Fluor® 546 (sc-53462 AF546), Alexa Fluor® 594 (sc-53462 AF594) or Alexa Fluor® 647 (sc-53462 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53462 AF680) or Alexa Fluor® 790 (sc-53462 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

VEGF (VG-1) is recommended for detection of 121, 165 and 189 VEGF isoforms of mouse, rat, human and canine 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).

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.

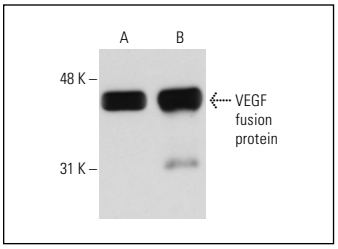
Molecular Weight of VEGF dimer: 42 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, MCF7 whole cell lysate: sc-2206 or mouse liver extract: sc-2256.

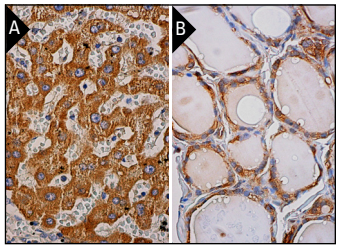
STORAGE

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

DATA



VEGF (VG-1): sc-53462. Western blot analysis of biologically active human recombinant VEGF (**A**) and mouse recombinant VEGF (**B**).



VEGF (VG-1): sc-53462. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Raica, M., et al. 2007. Immunohistochemical expression of vascular endothelial growth factor (VEGF) does not correlate with microvessel density in renal cell carcinoma. Neoplasma 54: 278-284.
2. Ambade, A.S., et al. 2018. Triple-tyrosine kinase inhibition attenuates pulmonary arterial hypertension and neointimal formation. Transl. Res. 203: 15-30.
3. Goldsmith, Z.K., et al. 2018. Targeting the platelet-derived growth factor-β stimulatory circuitry to control retinoblastoma seeds. Invest. Ophthalmol. Vis. Sci. 59: 4486-4495.
4. Duisit, J., et al. 2018. Decellularization of the porcine ear generates a biocompatible, nonimmunogenic extracellular matrix platform for face subunit bioengineering. Ann. Surg. 267: 1191-1201.
5. Mleczko, J., et al. 2018. Extracellular vesicles from hypoxic adipocytes and obese subjects reduce Insulin-stimulated glucose uptake. Mol. Nutr. Food Res. 62: 1700917.
6. Guan, H., et al. 2019. Role of Paip1 on angiogenesis and invasion in pancreatic cancer. Exp. Cell Res. 376: 198-209.
7. Nóbrega, D.F., et al. 2019. Canine cutaneous haemangiosarcoma: biomarkers and survival. J. Comp. Pathol. 166: 87-96.
8. Li, N., et al. 2019. The role of Zeb1 in the pathogenesis of morbidly adherent placenta. Mol. Med. Rep. 20: 2812-2822.
9. Zaniboni, E., et al. 2019. Do electrical current and laser therapies improve bone remodeling during an orthodontic treatment with corticotomy? Clin. Oral Investig. 23: 4083-4097.

RESEARCH USE

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