



DB096: VEGF (VG-1)

Background:

The vascular endothelial growth factor (VEGF) family currently includes VEGF (VEGF-A), VEGF-B, VEGF-C, VEGF-D, VEGF-E, and PlGF (1). VEGF and its receptor system have been shown to be the fundamental regulators in the cell signaling of angiogenesis (2). Most tumors have the absolute requirement of angiogenesis and VEGF has been described as the most potent angiogenic cytokine linked to this process (3&4). To date 5 different isoforms of VEGF have been described, VEGF 121, VEGF 145, VEGF 165, VEGF 165b, and VEGF 189(4&5). These isoforms are generated as the result of alternative splicing from a single VEGF gene. These various isoforms have been shown to bind to two tyrosine-kinase receptors flt-1 (VEGFR-1) and flk-1/KDR (VEGFR-2), which have been found to be expressed almost exclusively on endothelial cells (5).

Origin:

VEGF (VG-1) is provided as a mouse monoclonal IgG₁ antibody derived from BALB/C mice immunized with recombinant VEGF.

Product Details:

Each vial contains 100 µg/ml of mouse monoclonal IgG₁ VEGF DB096 (VG-1), in 1 ml PBS containing 0.1 % sodium azide and 0.2% gelatin.

Specificity:

VEGF DB096 (VG-1) detects the 121, 165, and 189 VEGF isoforms of Human origin by western blotting, ELISA, immunohistochemistry (including paraffin-embedded sections). Western blotting starting dilution 1:200, immunohistochemistry starting dilution 1:50.

Storage:

Store this product at 4° C, do not freeze. The product is stable for one year from the date of shipment.

References:

1. Matsumoto T, Claesson-Welsh L. 2001. VEGF receptor signal transduction. *Sci STKE* 112:RE21.
2. Shibuya M. 2001. Structure and function of VEGF/VEGF-receptor system involved in angiogenesis. *Cell Struct Funct* 26(1):25-35.
3. Hasan J, Jasyson GC. 2001. VEGF antagonists. *Expert Opin Biol Ther* 1(4):703-18.
4. Bates DO, Cui TG, Doughty JM, Winkler M, Sugiono M, Shields JD, Peat D, Gillatt D, Harper SJ. 2002. VEGF165b, an inhibitory splice variant of vascular endothelial growth factor, is down-regulated in renal cell carcinoma. *Cancer Res* 62(14):4123-31.
5. Neufel G, Cohen T, Gengrinovitch S, Poltorak Z. 1999. Vascular endothelial growth factor (VEGF) and its receptors. *FASEB* 13(1):9-22.