

**Anti-VEGF (Clone: SP28)**  
Rabbit monoclonal antibody  
Reference: AP10202



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**INTENDED USE AND PRESENTATION:**

For research use only.

**AP10202, 7ml.** Prediluted antibodies in a synthetic organic linear polymer buffer solution (pH 7.4), with carrier protein and preservative for stabilisation "READY TO USE"

**SUMMARY, EXPLANATION AND LIMITATIONS:**

VEGF (vascular endothelial growth factor) is a homodimeric, disulfide-linked glycoprotein involved in angiogenesis which promotes tumor progression and metastasis. This antibody reacts with the 165, 189 and 121 amino acid splice variants of VEGF of human, to a lesser extent, mouse and rat. Defects in VEGFA are a cause of susceptibility to microvascular complications of diabetes type 1 (MVCD1). These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis. VEGF is a dimeric glycoprotein with structural homology to PDGF (platelet derived growth factor). 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.

Immunohistochemistry (IHC) is a complex technique in which immunological and histological detection methods are combined. In general, the manipulation and processing of tissues before immunostaining, especially different types of tissue fixation and embedding, as well as the nature of the tissues themselves may cause inconsistent results (Nadji and Morales, 1983). Endogenous pseudoperoxidase and peroxidase activity or endogenous biotin and alkaline phosphatase activity can cause non-specific staining results depending on the detection system used. Tissues that contain Hepatitis B surface antigen (HBsAg) can produce false positives when using HRP detection systems (Omata et al, 1980). Insufficient contrast staining and/or improper mounting of the sample may influence the interpretation of results.

**Isotype:** IgG

**Immunogen:** A synthetic peptide derived from N-terminal of human VEGF.

**Staining pattern:** Cytoplasmic, and cell surface in endothelial cells.

The interpretation of the stain results is the full responsibility of the user. Any experimental result must be confirmed by a

medically established diagnostic product or procedure.

**Positive control:** Tissue sample from angiosarcoma.

**External negative control:** Tissue sample homologous to the test sample incubated with an antibody isotype not specific for VEGF.

**APPLICATIONS:**

This antibody is designed for the specific localization of human VEGF using IHC techniques in formalin-fixed, paraffin-embedded tissue sections.

**PRODUCT COMPOSITION:**

Rabbit immunoglobulin IgG, clone SP28, obtained from culture supernatant. The preparation contains saline buffer, stabilising and carriers proteins, and sodium azide as a preservative.

**METHODS AND PROCEDURE:**

**Principles of the procedure:** The demonstrations of antigens by IHC is a sequential procedure with several steps involving first the application of a specific antibody for the antigen of interest (primary antibody), then a secondary antibody which joins to the first, an enzyme complex, and the addition of a chromogenic substrate. The sample is washed between each step. Enzymatic activation of the chromogenic substrate creates a visible product where the antigen is located. The results are interpreted using a light microscope. The primary antibody can be used both in manual IHC and with automated immunostainers.

**Specimen:** Paraffin-embedded tissue samples should be used. The antibody is also useful for immunostaining frozen tissue samples. Western blot techniques are not recommended.

**Staining procedure:**

<b>Antigen retrieval</b>	HIER Citrate Buffer pH 6.5
<b>Working dilution</b> (only for concentrates)	N/A
<b>Incubation</b>	30 min; RT
<b>Control Tissue</b>	Angiosarcoma

**Amplificación y revelado de la inmunotinción:** follow standard procedure and the recommendations given by the manufacturer for the materials used. In the case of using automated immunostainers, use the specified buffers and materials for each instrument.

See our web site at [www.gennova-europe.com](http://www.gennova-europe.com) for detailed protocols ancillary reagents and support products.

**REQUIRED MATERIALS BUT NOT SUPPLIED:**

All reagents, materials, and laboratory equipment for IHC procedures are not provided with this antibody. This includes adhesive slides and cover slips, positive and negative control tissues, Xylene or adequate substitute, ethanol, distilled H<sub>2</sub>O, heat pretreatment equipment (pressure cooker, steamer, microwave), pipettes, Coplin jars, glass jars, moist chamber, histological baths, negative control reagents, counter-staining



Catalog number



Batch code



Research use only



Temperature limitation



Expiration date



Manufacturer



See instruction for use



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solution, mounting materials, and microscope.

Buffered solutions for antigen retrieval, enzyme treatments, highly sensitive detection systems, and other auxiliary reagents are available from Genova Scientific.

**STORAGE AND STABILITY:**

Store at 2-8 °C until the expiration date printed on product label. Do not use after the expiration date. If fresh solutions are required, these must be prepared immediately prior to use, and will be stable for at least one day at room temperature (20-25°C). Unused portion of antibody preparation should be discarded after one day. If the product is stored under different conditions from those stipulated in these technical indications, the new conditions must be verified by the user.

Genova Scientific guarantees that the product will maintain all of the described characteristics from the production date until the expiration date, as long as the product is stored and used as recommended. No other guarantees are provided. Under no circumstances is Genova Scientific obliged to cover damages caused by use of this reagent.

**TROUBLESHOOTING:**

If unusual staining is observed or any other deviations from the expected results, please read these instructions carefully, along with the instructions from the detection system. If this does not solve the problem, please contact Genova Scientific's technical support department or your local distributor.

**PRECAUTIONS:**

Use only by qualified personnel.

Use proper protective equipment in order to avoid contact with reagents and samples in the eyes, skin, and mucosal tissues. In case of contact with sensitive areas, immediately flush the affected area with water. Avoid microbial contamination of the reagent, as this may produce nonspecific staining results. This antibody contains sodium azide (NaN<sub>3</sub>), used as a stabilising agent, which is not considered to be a hazardous material in the concentration used. Concentration of sodium azide in drainage pipes made of lead or copper can cause the formation of highly explosive metallic azides. In order to avoid this, sodium azide must be disposed of along with a large volume of running water. Material safety data sheet (MSDS) for pure sodium azide is available upon request.

**PERFORMANCE CHARACTERISTICS:**

Genova Scientific has performed studies to evaluate the functioning of these antibodies for use with standard detection systems, concluding that the product is both specific and sensitive for the antigen of interest.

**BIBLIOGRAPHY:**

Ancellin, M., et al. 2002. A dynamic shift of VEGF isoforms with a transient and selective

progesterone-induced expression of VEGF189 regulates angiogenesis and vascular permeability in human uterus. *Proc. Natl. Acad. Sci. USA* 99: 6023-6028.  
Thomas, M., et al. 2004. Dual hormonal regulation of endocrine tissue mass and vasculature by adrenocorticotropin in the adrenal cortex. *Endocrinology* 145: 4320-4329.  
Nemetski, S.M., et al. 2007. Hypoxic regulation of Id-1 and activation of the unfolded protein response are aberrant in neuroblastoma. *J. Biol. Chem.* 282: 240-248.  
Ning, X.H., et al. 2007. Short-cycle hypoxia in the intact heart: hypoxia-inducible factor 1 $\alpha$  signaling and the relationship to injury threshold. *Am. J. Physiol.* 292: 333-341.  
Zheng, H., et al. 2008. p53 and PTEN control neural and glioma stem/progenitor cell renewal and differentiation.  
Duncan TJ et al. Vascular endothelial growth factor expression in ovarian cancer: a model for targeted use of novel therapies? *Clin Cancer Res* 14:3030-5 (2008).  
Lee CH et al. Constitutive mTOR activation in TSC mutants sensitizes cells to energy starvation and genomic damage via p53. *EMBO J* 26:4812-23 (2007).  
Nadji M, Morales AR. Immunoperoxidase, part 1: the techniques and its pitfall. *Lab Med* 1983; 14:767-770.  
Omata M, Liew CT, Ashcavai M, Peters RI. Nonimmunologic binding of horseradish peroxidase to hepatitis B surface antigen. A possible source of error in immunohistochemistry. *Am J Clin Pathol.* May, 1980;73(5):626-632.

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