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Product Information

Anti-Vascular Endothelial Growth Factor

Developed in Goat
Affinity Isolated Antibody

Product No. **V 1253**

Product Description

Anti-Mouse Vascular Endothelial Growth Factor (VEGF) was developed in goat using purified 164 amino acid residue variant of recombinant mouse VEGF, expressed in the insect line *Sf21*, as the immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-mouse VEGF antiserum by immunospecific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to mouse VEGF.

Anti-Mouse Vascular Endothelial Growth Factor has the ability to neutralize the biological activity of recombinant mouse VEGF₁₆₄ and recombinant mouse VEGF₁₂₀. Additionally, it can be used as a capture antibody in mouse VEGF 164 or 120 sandwich ELISAs. The antibody also may be used in immunoblotting and immunohistochemistry.

Vascular Endothelial Growth Factor (VEGF) also known as vasculotropin, is an angiogenic growth factor, which is heat and acid stable. VEGF is a dimeric, heparin-binding glycoprotein with a molecular weight of approximately 46 kDa

Reagents

The antibody is provided lyophilized from a 0.2 µm-filtered solution in phosphate buffered saline, pH 7.4, with 5% trehalose.

Reconstitution and Use

To one vial of lyophilized powder, add 0.5 ml of 0.2 µm-filtered PBS to produce a 200 µg/ml stock solution of Anti-Mouse VEGF. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Product Profile

Anti-Mouse VEGF is tested for its ability to neutralize the biological activity of recombinant mouse VEGF on human umbilical vein endothelial (HUVE) cells. The ND₅₀ of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of the cytokine, which is present at a concentration just high enough to elicit a maximum response. In this bioassay, 10 ng/ml rmVEGF₁₆₄ was incubated with various dilutions of the antibody for 1 hour at room temperature in a 96-well plate. After the preincubation, HUVE cells were added to the antigen-antibody mixture. The assay mixture was incubated at 37 °C for 72 hours in a humidified CO₂ incubator and pulsed for the final 24 hours with ³H-thymidine. Cells were harvested onto glass filters and the ³H-thymidine incorporation into DNA was measured.

For capture ELISAs, the antibody can be used as the capture antibody in a mouse VEGF ELISA in combination with biotinylated, mouse VEGF affinity purified polyclonal detection antibody. Using plates coated with 100 µl/well of the capture antibody at 0.4 µg/ml, in combination with 100 µl/well of the detection antibody, an ELISA for sample volumes of 100 µl can be obtained. Titrate each preparation of the recombinant protein for standard preparation to arrive at the most suitable dose range. For this antibody pair, a two-fold dilution series starting at 2 ng/ml is suggested. In this format, less than 0.04% cross-reactivity with recombinant human VEGF₁₂₁, recombinant human VEGF₁₆₅, and recombinant VEGF/PiGF was observed.

By immunoblotting, a working antibody concentration of 1-2 µg/ml detects mouse VEGF at 2 ng/lane and 5 ng/lane under non-reducing and reducing conditions, respectively. In this format, the antibody shows ~ 25% cross-reactivity with recombinant human VEGF₁₆₅.

By immunohistochemistry, a working antibody dilution of 15 µg/ml detects VEGF in cells and tissues.

Endotoxin: <0.1 EU per 1 µg of the antibody as determined by the LAL method.

References

1. Ferrara, N., et al., Biochem. Biophys. Res. Commun., **161**, 851 (1989).
2. Ferrara, N., et al., Endocrine Reviews, **13**, 18 (1992).
3. Conn, G., et al., Proc. Natl. Acad. Sci. USA, **87**, 1323 (1990).

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