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ProductInformation

ANTI-VASCULAR ENDOTHELIAL GROWTH FACTOR B 167/186 (VEGF-B 167/186), HUMAN
Developed in Goat, Affinity Isolated Antibody

Product Number **V 1010**

Product Description
Anti-Human Vascular Endothelial Growth Factor B 167/186 (VEGF-B 167/186) is developed in goat using a purified recombinant human vascular endothelial growth factor B 186 expressed in *E. coli* as immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-VEGF-B 167/186 antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide. VEGF-B 167/186 specific IgG is purified by passing the goat sera over a human VEGF-B 186 affinity column. The bound fraction is then purified on a human VEGF-B 167 affinity column.

Anti-Human Vascular Endothelial Growth Factor B recognizes recombinant human VEGF-B 167 and recombinant human VEGF-B 186 by various immunochemical techniques including immunoblotting and ELISA. In immunoblotting and ELISA, this antibody shows approximately 30% cross-reactivity with recombinant mouse VEGF-B 165 and VEGF-B 186. Anti-human VEGF-B exhibits less than 5% cross-reactivity with recombinant human VEGF-D and no cross-reactivity with recombinant human VEGF and recombinant mouse VEGF.

Vascular endothelial growth factors (VEGFs) are a family of closely related growth factors having a conserved pattern of eight cysteine residues and sharing common VEGF receptors. VEGFs stimulate endothelial cells, induce angiogenesis, promote cell migration, increase vascular permeability, and inhibit apoptosis. VEGF-B has structural similarities to VEGF and PIGF and is frequently co-expressed with VEGF.[1] There are two alternatively spliced isoforms of VEGF-B: VEGF-B 167 and VEGF-B 186. VEGF-B 167, a highly basic heparin-binding protein, remains with the cell or extracellular matrix whereas, VEGF-B 186 is readily secreted.[2] VEGF-B stimulates endothelial cell proliferation. VEGF-B binds to the tyrosine kinase receptor VEGF R1 (flt-1) and does not bind to VEGF R2.[3]

Vascular Endothelial Growth Factor B is widely expressed but is most abundant in heart, skeletal muscle, and pancreas.[1] It has been suggested that VEGF-B expression in human primary breast cancers is associated with lymph node metastasis.[4] The genes that encode VEGF-B have been mapped to chromosome 11q13.[5]

Reagent
Anti-human VEGF-B 167/186 is supplied as 100 µg of antiserum lyophilized from a 0.2 µm filtered solution of phosphate buffered saline (PBS).

Preparation Instructions
To one vial of lyophilized powder, add 1 ml of sterile phosphate buffered saline (PBS) to produce a 0.1 mg/ml stock solution of antibody.

Storage/Stability
Prior to reconstitution, store at –20 °C. Reconstituted product may be stored at 2 °C to 8 °C for at least one month. For prolonged storage, freeze in working aliquots at –20 °C. Avoid repeated freezing and thawing. Do not store in a frost-free freezer.

Product Profile
For immunoblotting, a working concentration of 0.1 to 0.2 µg/ml antibody is recommended. The detection limit for recombinant human VEGF-B 167 is approximately 25 ng/lane under non-reducing and reducing conditions. The detection limit for recombinant human VEGF-B 186 is approximately 5 ng/lane under non-reducing and reducing conditions.

For ELISAs, a working concentration of 0.5 to 1.0 µg/ml antibody is recommended. The detection limit for recombinant human VEGF-B 167 is approximately 0.3 ng/well. The detection limit for recombinant human VEGF-B 186 is approximately 0.03 ng/well.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

Endotoxin level is < 30 ng/mg antibody as determined by the LAL (Limulus amebocyte lysate) method.

References

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4. Gunningham,S.P., et al., VEGF-B expression in human primary breast cancers is associated with lymph node metastasis but not angiogenesis. J. Pathol., **193**, 325-332 (2001).
5. Paavaonen, K., et al., Novel human vascular endothelial growth factor genes VEGF-B and VEGF-C localize to chromosomes 11q13 and 4q34, respectively. Circulation, **93**, 1079-1082 (1996).

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