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ProductInformation

Anti-Vascular Endothelial Growth Factor C
Produced in Goat
Affinity Isolated Antibody

Product Number **V1264**

Product Description

Anti-Human Vascular Endothelial Growth Factor C is produced in goat using as immunogen purified recombinant human vascular endothelial cell growth factor C peptide corresponding to amino acid residues Glu 104 to Ala 330 expressed in *Escherichia coli*. Affinity isolated antigen specific antibody is obtained from goat anti-VEGF C antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-Vascular Endothelial Growth Factor C (VEGF C) recognizes recombinant human VEGF C by immunoblotting and ELISA. The antibody shows approximately 5% cross-reactivity with recombinant human VEGF D and recombinant human connective tissue growth factor (CTGF). There is no cross-reactivity with recombinant human VEGF A, VEGF B, placental growth factor (PlGF), and leukocyte-derived growth factor (LDGF).

Vascular endothelial growth factors (VEGFs), also known as vasculotropins, are a family of closely related growth factors having a conserved pattern of eight cysteine residues and sharing common VEGF receptors. VEGFs stimulate the proliferation of endothelial cells, induce angiogenesis, promote cell migration, increase vascular permeability, and inhibit apoptosis.[1] The mitogenic activity of VEGFs appears to be mediated by specific VEGF receptors. The target cell specificity of VEGF is restricted to vascular endothelial cells.

Vascular Endothelial Growth Factor C (VEGF C) is a member of the VEGF subfamily of PDGF-related growth factors. It is the ligand for Flt4 (VEGFR-3) and KDR (VEGFR-2).[2] VEGF C binds Flt4 and induces tyrosine autophosphorylation of VEGFR-3 and VEGFR-2. VEGF C also stimulates the migration of bovine capillary endothelial cells in collagen gel.[2] It is a specific growth factor for the lymphatic vascular system and mediates lymphangiogenesis.

VEGF C is abundantly expressed in heart and skeletal muscle. Other tissues such as lung and kidney also express VEGF C.[2] The human VEGF C gene is located on chromosome 4q34.[3]

Reagent

Anti-Vascular Endothelial Growth Factor C is supplied as 100 µg of antiserum lyophilized from a 0.2 µm-filtered solution of phosphate buffered saline with 5% trehalose.

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 2-8 °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 frost-free freezer.

Product Profile

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

For ELISAs, a working antibody concentration of 0.5 to 1.0 µg/ml is recommended. The detection limit for recombinant human VEGF C is approximately 0.6 ng/well.

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

Endotoxin level is < 10 ng/mg antibody as determined by the LAL (Limulus amebocyte lysate) method.

References

1. Neufeld, G., et al., Vascular endothelial growth factor (VEGF) and its receptors. FASEB J., **13**, 9-22 (1999).
2. Joukov, V., et al., A novel vascular endothelial growth factor, VEGF-C, is a ligand for the Flt4 (VEGFR-3) and KDR (VEGFR-2) receptor tyrosine kinases. EMBO J., **15**, 290-298 (1996).
3. Paavonen, 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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