



Recombinant Protein Technical Manual

Recombinant Human VEGF-C/VEGFC Protein (His Tag)

RPES1131

Product Data:

Product SKU: RPES1131

Size: 10µg

Species: Human

Expression host: Human Cells

Uniprot: P49767

Protein Information:

Molecular Mass: 23.3 kDa

AP Molecular Mass: 28 kDa

Tag: C-His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.2.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Vascular Endothelial Growth Factor C; VEGF-C; Flt4 Ligand; Flt4-L; Vascular Endothelial Growth Factor-Related Protein; VRP; VEGFC

Immunogen Information:

Sequence: Phe32-Arg227

Background:

Vascular Endothelial Growth Factor (VEGF)-C is a member of the VEGF family, a group of polypeptide growth factors which play key roles in the physiology and pathology of many aspects of the cardiovascular system, including vasculogenesis, hematopoiesis, angiogenesis and vascular permeability. While VEGFC is homologous to other members of the VEGF/PDGF family, it contains the C-terminal propeptide which has an unusual structure with tandemly repeated cysteine-rich motifs. Upon biosynthesis, VEGFC is secreted as a non-covalent momodimer in an anti-parallel fashion. VEGF signalling in endothelial cells occurs through three tyrosine kinase receptors (VEGFRs) expressed by endothelial cells and hematopoietic precursors, and VEGF-C is a ligand for two receptors, VEGFR-3 (Flt4), and VEGFR-2. It is indicated that VEGFC undergoes a complex proteolytic maturation generating a variety of processed secreted forms with increased activity toward VEGFR-3, but only the fully processed form could activate VEGFR-2. VEGFC may function in angiogenesis of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults. Knockout of the VEGF-C gene is embryonic lethal late in development, and although cells differentiate into the lymphatic lineage, they fail to sprout and form lymphatic vessels. Inactivation of a single VEGF-C allele results in the development of cutaneous lymphatic hypoplasia and lymphedema.