Recombinant Human VEGF-A/VEGF121 Protein

Catalog Number: PKSH033207

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

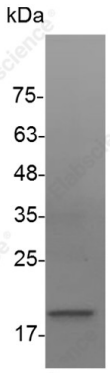
Description

Species	Human
Source	E.coli-derived Human VEGF-A/VEGF121 protein Ala 14-Arg 134, with an C-terminal His
Calculated MW	44 kDa
Observed MW	18 kDa
Accession	PDB: 3V2A_A
Bio-activity	Measure by its ability to induce proliferation in HUVEC cells. The ED_{50} for this effect is < 2.5 ng/mL.

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 0.1 EU per μg of the protein as determined by the LAL method.
Storage	Generally, 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 sterile PBS, pH 8.0. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

Human VEGF121; also known as Vascular endothelial growth factor A; VEGFA; Vascular permeability factor; VPF and VEGF; is a homodimeric; heparin-binding glycoprotein which belongs to the platelet-derived growth factor (PDGF)/ vascular endothelial growth factor (VEGF) family. VEGF-A is a glycosylated mitogen that specifically acts on endothelial cells and has various effects; including mediating increased vascular permeability; inducing angiogenesis; vasculogenesis; permeabilization of blood vessels and endothelial cell growth; increasing microvascular permeabilit y; promoting cell migration and inhibiting apoptosis. Alternatively spliced transcript variants of VEGF-A encod either secreted or cell-associated isoforms. The lymphangiogenesis may be promoted by upregulation of VEGF121; which may in turn act in part via induction of VEGF-C. It binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors; heparan sulfate and heparin. NRP1/Neuropilin-1 binds isoforms VEGF-165 and VEGF-145. Isoform VEGF165B binds to KDR but does not activate downstream signaling pathways; does not activate angiogenesis and inhibits tumor growth.

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