Data Sheet (Cat.No.TMPJ-00865)

TargetMol

VEGF121 Protein, Human, Recombinant (His)

General Information

Synonyms:	VEGFA;VEGF-A;Vascular permeability factor;VPF;Vascular endothelial growth factor A;VEGF
Protein Construction:	Ala27-Arg147
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P15692-9
Molecular Weight:	16-18 KDa (reducing condition)
AA Sequence:	Ala27-Arg147

QC Testing

Biological Activity:	Immobilized Human VEGFR1-Fc at 5μg/ml (100 μl/well) can bind Human VEGF 121-His. The ED50 of Human VEGF 121-Hisis 9.44 ng/ml. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. Greater than 94% as determined by SEC-HPLC.
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein 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 permeability, 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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