

Recombinant Human VEGFA protein

Cat. No. VEGFA-522H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human VEGFA protein (Ala27-Arg147) carries no tag and was expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	121
Description	Vascular endothelial growth factor (VEGF) is also known as vascular permeability factor (VPF) and VEGF-A, and is a member of the platelet-derived growth factor (PDGF)/vascular endothelial growth factor (VEGF) family and encodes a protein that is often found as a disulfide linked homodimer. This protein is a glycosylated mitogen that specifically acts on endothelial cells and has various effects, including mediating increased vascular permeability, inducing angiogenesis, vasculogenesis and endothelial cell growth, promoting cell migration, and inhibiting apoptosis. Alternatively spliced transcript variants, encoding either freely secreted or cell-associated isoforms, have been characterized. Alternatively spliced isoforms of 121,145,165,183,189 and 206 amino acids in length are expressed in humans. VEGF165 appears to be the most abundant and potent isoform, followed by VEGF121 and VEGF189. VEGF121 is the only form that lacks a basic heparinbinding region and is freely diffusible. Mouse embryos expressing only the corresponding isoform (VEGF120) do not survive to term, and show defects in skeletogenesis. Human VEGF121 shares 87% aa sequence identity with corresponding regions of

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mouse and rat, 93% with feline, equine and bovine, and 91%, 95% and 96% with ovine, canine and porcine VEGF, respectively. VEGF121 induces the proliferation of lymphatic endothelial cells. The lymphangiogenesis may be promoted by upregulation of VEGF121, which may in turn act in part via induction of VEGF-C.

Form Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.

Molecular Mass The protein has a calculated MW of 14 kDa (monomer). As a result of glycosylation, the protein migrates as 19 kDa and 20kDa under reducing (R) condition, and 40-45 kDa (homodimer) under non-reducing (NR) condition (SDS-PAGE).

Endotoxin Less than 1.0 EU per ug by the LAL method.

Purity >95% as determined by SDS-PAGE.

Storage For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.
Please avoid repeated freeze-thaw cycles.
This product is stable after storage at:
-20 centigrade to -70 centigrade for 12 months in lyophilized state;
-70 centigrade for 3 months under sterile conditions after reconstitution.

Reconstitution It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

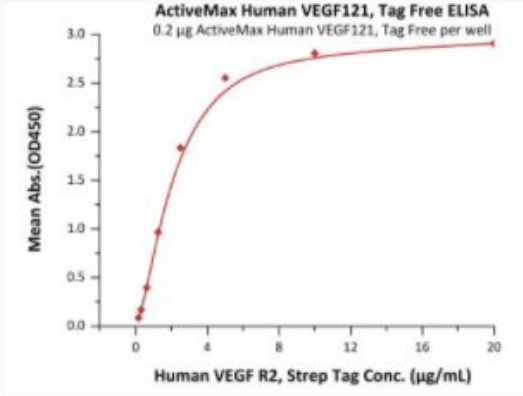
Gene Name VEGFA

Official Symbol VEGFA

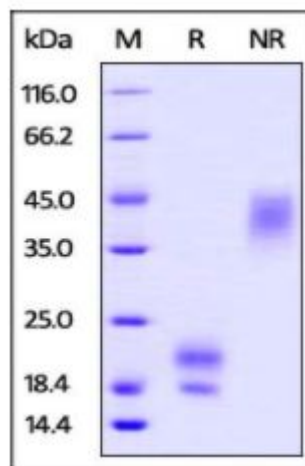
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Synonyms	VEGFA; vascular endothelial growth factor A; vascular endothelial growth factor , VEGF; VEGF A; VPF; vascular permeability factor; VEGF; MVCD1; MGC70609
Gene ID	7422
mRNA Refseq	NM_001025366
Protein Refseq	NP_001020537
MIM	192240
UniProt ID	P15692
Bioactivity-ELISA of VEGFA-522H	 Immobilized Human VEGF121, Tag Free at 2 µg/mL (100 µL/well) can bind Human VEGF R2, Strep Tag with a linear range of 0.15-2.5 µg/mL (QC tested).

**SDS-PAGE of
VEGFA-522H**



Human VEGF121, Tag Free on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.