

Recombinant Human VEGFA protein, His-tagged

Cat. No. VEGFA-382H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human VEGFA protein (Ala27-Arg191), fused to His tag at N-terminus, was expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	165
Description	VEGF165 is the most abundant splice variant of VEGF-A. VEGF165 is produced by a number of cells including endothelial cells, macrophages and T cells. VEGF165 is involved in angiogenesis, vascular endothelial cell survival, growth, migration and vascular permeability. VEGF gene expression is induced by hypoxia, inflammatory cytokines and oncogenes. VEGF165 binds to heparan sulfate and is retained on the cell surface and in the extracellular matrix. VEGF165 binds to the receptor tyrosine kinases, VEGFR1 and VEGFR2. VEGF165 is the only splice variant that binds to co-receptors NRP-1 and NRP-2 that function to enhance VEGFR2 signaling. Binding of VEGF165 to VEGFR1 and VEGFR2 leads to activation of the PI3K/AKT, p38 MAPK, FAK and paxillin. VEGF plays a key role in tumor angiogenesis in many cancers.
Form	Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 21.1 kDa. The protein migrates as 25-27 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

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Endotoxin	Less than 1.0 EU per ug by the LAL method.
Purity	>90% 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
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

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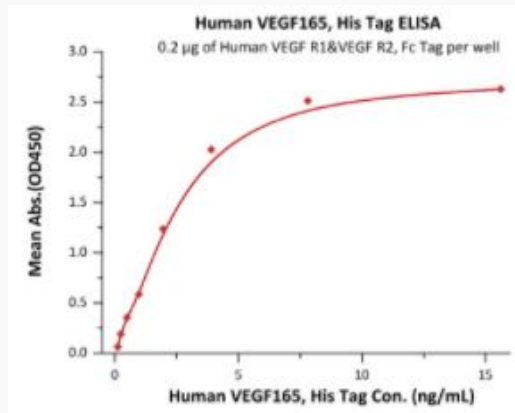
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UniProt ID

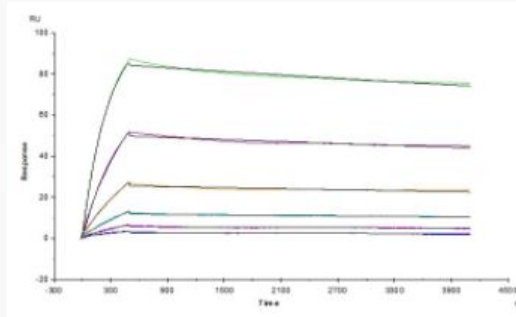
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Bioactivity-ELISA of VEGFA-382H



Immobilized Human VEGF R1&VEGF R2, Fc Tag at 2 µg/mL (100 µL/well) can bind Human VEGF165, His Tag with a linear range of 0.2-4 ng/mL (QC tested).

Bioactivity-SPR of VEGFA-382H



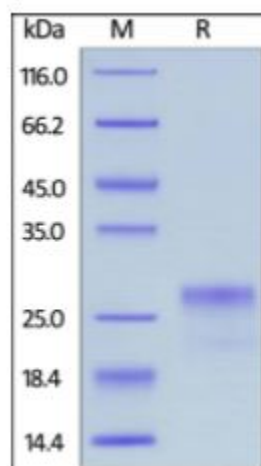
Avastin (Bevacizumab) captured on CM5 chip via anti-human IgG Fc antibodies surface, can bind Human VEGF165 Protein, His Tag with an affinity constant of 1.03 nM as determined in a SPR assay (Routinely tested).

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**SDS-PAGE of
VEGFA-382H**



Human VEGF165, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

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