

Recombinant Human VEGFA protein

Cat. No. VEGFA-17H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human VEGFA protein was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	166
Description	Vascular Endothelial Growth Factor is a sub-family of growth factors produced by cells, which stimulates vasculogenesis and angiogenesis. VEGF's normal function is to create new blood vessels during embryonic development, new blood vessels after injury, muscle following exercise, and new vessels (collateral circulation) to bypass blocked vessels. Humans express alternately spliced isoforms of 121, 145, 165, 183, 189, and 206 amino acids (a.a.) in length. VEGF production can be induced in cells that are not receiving enough oxygen. VEGF165 appears to be the most abundant and potent isoform, followed by VEGF121 and VEGF189. Recombinant human VEGF165 contains 165 amino acids residues and it is a disulfide-linked homodimer. In addition, it shares 88 % a.a. with corresponding regions of mouse and rat, 96 % with porcine, 95 % with canine, and 93 % with feline, equine and bovine VEGF, respectively
Form	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
Bio-activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human umbilical vein endothelial cells(HUVEC) is

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	between 1.0-8.0 ng/ml.
Molecular Mass	Approximately 38.6 kDa, a disulfide-linked homodimeric protein consisting of two 166 amino acid polypeptide chains with Met at N-terminus.
AA Sequence	MAPMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYPDEIEYIFKPSCVPLMR CGGCCNDEGLECVPTESNITMQIMRIKPHQGQHIGEMSFLQHNKCECRPKKDRAR QENPCGPCSERRKHLFVQDPQTCKCSCKNTDSRCKARQLELNERTCRCDKPRR
Endotoxin	Less than 1 EU/μg of rHuVEGF165 as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	VEGFA
Official Symbol	VEGFA
Synonyms	VEGFA; vascular endothelial growth factor A; vascular endothelial growth factor ,

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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

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