Datasheet

Cat. No. P1041

VEGF165, human recombinant protein

Information

Gene ID	7422
Accession #	P15692
Alternate Names	Vascular Endothelial Growth Factor Isoform 165
Source	*Escherichia coli.*
M.Wt	Approximately 38.6 kDa, a disulfide-linked homodimeric protein consisting of two 166 amino acid polypeptide chains with Met at N-terminus.
AA Sequence	MAPMAEGGGQ NHHEVVKFMD VYQRSYCHPI ETLVDIFQEY PDEIEYIFKP SCVPLMRCGG CCNDEGLECV PTEESNITMQ IMRIKPHQGQ HIGEMSFLQH NKCECRPKKD RARQENPCGP CSERRKHLFV QDPQTCKCSC KNTDSRCKAR QLELNERTCR CDKPRR
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70 °C as supplied. - 1 month, 2 to 8 °C under sterile conditions after reconstitution. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
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 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by a cell proliferation assay using human umbilical vein endothelial cells(HUVEC) is between 1.0-8.0 ng/ml.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 μg	100 μg	500 μg
VEGF165, human recombinant protein	10 μg	100 μg	500 μg

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- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuVEGF165 as determined by LAL method.

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

Reference

1. Leung DW, Cachianes G, Kuang WJ, et al. 1989. Science. 246:1306-9.

2. Byrne AM, Bouchier-Hayes DJ, Harmey JH. 2005. J Cell Mol Med. 9:777-94.

3. Robinson CJ, Stringer SE. 2001. J Cell Sci. 114:853-65.

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