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User Manual

Vascular Endothelial Growth Factor $_{165}$,Yeast-derived ($VEGF_{165}$,Yeast-derived)(Human)

Cat. No. HEGFP-2266(1-4)

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 (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 166 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.

Source:

Yeast

Unit:

10 ug / 100 ug / 500 ug / 1 mg

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.

Formulation:

Lyophilized from a 0.2 μm filtered concentrated solution in PBS,pH 7.4,with 0.02% Tween-20,

Storage:

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

Molecular Weight:

Theoretically as a disulfide-linked homodimeric protein, the product consists of two 166 amino acid polypeptide chains. As a result of glycosylation, it migrates to at least three bands with molecular weights ranging from 20-31 kDa in SDS-PAGE under reducing conditions.

Endotoxin:

Less than 0.1 EU/µg of $rHuVEGF_{165}$,Yeast-derived as determined by LAL method.

Usage:

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

Biological Activity:

The ED_{50} determined by a cell proliferation assay using human umbilical vein endothelial cells (HUVEC) is between 1.0-8.0 ng/ml.

Physical Appearance:

Sterile filtered white lyophilized (freeze-dried) powder.

AA Sequence:

MAPMAEGGGQ NHHEVVKFMD VYQRSYCHPI ETLVDIFQEY PDEIEYIFKP SCVPLMRCGG CCNDEGLECV PTEESNITMQ IMRIKPHQGQ HIGEMSFLQH NKCECRPKKD RARQENPCGP CSERRKHLFV QDPQTCKCSC KNTDSRCKAR QLELNERTCR CDKPRR

Purity:

> 97% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.