

BACKGROUND

Vascular Endothelial Growth Factor-A (VEGF-A) was originally isolated from tumor cells and is produced by a wide variety of cell types. In addition to stimulating vascular growth and vascular permeability, VEGF-A may play a role in stimulating vasodilatation via nitric oxide-dependent pathways. VEGF-A has several variants, VEGF-165 being the most abundant. Rat and bovine VEGF are one amino acid shorter than the human factor, and the bovine and human sequences show a homology of 95%.

Recombinant rat VEGF-165 is a disulfide linked homodimer, containing two 165 amino acids peptides that total to a size of 38.8 kDa.

Alternative Names:

VEGF-A, VPF, glioma-derived endothelial cell mitogen

Amino Acid Sequence:

MAPTTEGEQK AHEVVKFMDV YQRSYCRPIE TLVDIFQEYP
DEIEYIFKPS CVPLMRCAGC CNDEALECVP TSESNTMQI
MRIKPHQSQH IGEMSFLQHS RCECRPKKDR TKPEKHCEPC
SERRKHLFVQ DPQTCKCSCK NTDSRCKARQ LELNERTCRC DKPRR

TECHNICAL INFORMATION

Source: *E.coli*

Physical Appearance:

Sterile Filtered white lyophilized (freeze-dried) powder.

Formulation:

Recombinant rat VEGF-165 is lyophilized with from 10 mM Na₂PO₄, pH 7.5.

Stability:

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

Reconstitution:

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

Protein Content and Purity determined by:

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

Endotoxin Level:

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

Biological Activity:

The activity is determined by the dose-dependent induced proliferation of Human umbilical vein endothelial cells (HUVECs) and is typically 4.0-8.0 ng/mL.

Products are for research use only. They are not intended for human, animal, or diagnostic applications.

