

## Recombinant Rat VEGF164, Yeast

### Information

<b>Gene ID</b>	
<b>Accession #</b>	
<b>Alternate Names</b>	
<b>Source</b>	Yeast
<b>M.Wt</b>	Theoretically as a disulfide-linked homodimeric protein, the product consists of two 165 amino acid polypeptide chains. As a result of glycosylation, it migrates to at least two bands with molecular weights ranging from 25.7 kDa in SDS-PAGE under reducing conditions.
<b>AA Sequence</b>	MAPTTEGEQK AHEVVKFMDV YQRSYCRPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCAGC CNDEALECVP TSESNTVMQI MRIKPHQSQH IGEMSFLQHS RCECRPKKDR TKPEKHCEPC SERRKHLFVQ DPQTCKCCK NTDSRCKARQ LELNERTCRC DKPRR
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	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.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	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.
<b>Biological Activity</b>	Fully biologically active when compared to standard. Measured in a cell proliferation assay using HUVEC human umbilical vein endothelial cells. The ED <sub>50</sub> for this effect is 0.75-3.75 ng/mL.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	10 µg	100 µg	500 µg
Recombinant Rat VEGF164, Yeast	10 µg	100 µg	500 µg

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## Quality Control

Purity	> 95 % by SDS-PAGE and 90% by SEC-HPLC analyses.
Endotoxin	Less than 0.1 EU/μg of rRtVEGF164, Yeast as determined by LAL method.

## Description

Vascular endothelial growth factor (VEGF or VEGF-A)/vascular permeability factor (VPF), is an important signaling protein as a potent mediator of both angiogenesis and vasculogenesis. It is a member of the platelet-derived growth factor (PDGF) family, and characterized by a cysteine-knot structure and disulfide-linked homodimer. Alternately spliced isoforms of 121, 145, 165, 183, 189, and 206 amino acids (aa) have been identified in humans, with 120, 164 and 188 aa isoforms found in mouse. VEGF binds the type I transmembrane receptor tyrosine kinases VEGF R1 (also called Flt-1) and VEGF R2 (Flk-1/KDR) on endothelial cells. VEGF is required during embryogenesis to regulate the proliferation, migration, and survival of endothelial cells. In adults, VEGF functions mainly in wound healing and the female reproductive cycle. Pathologically, it is involved in tumor angiogenesis and vascular leakage. Circulating VEGF levels correlate with disease activity in autoimmune diseases such as rheumatoid arthritis, multiple sclerosis and systemic lupus erythematosus.

**APExBIO Technology**

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