

## Recombinant Murine Vascular Endothelial Growth Factor<sub>164</sub>, Yeast (rMuVEGF<sub>164</sub>, Yeast)

## **PrimeGene Technical Data Sheet**

Catalog Number: 125-07Y Source: Yeast

**Molecular Weight:** 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 approximately 40 kDa in SDS-PAGE under non-reducing conditions.

**Quantity:**  $2\mu g/10\mu g/1000\mu g$ 

AA Sequence: MAPTTEGEQK SHEVIKFMDV YQRSYCRPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCAGC

CNDEALECVP TSESNITMQI MRIKPHQSQH IGEMSFLQHS RCECRPKKDR TKPEKHCEPC

SERRKHLFVQ DPQTCKCSCK NTDSRCKARQ LELNERTCRC DKPRR

**Purity:** > 97 % by SDS-PAGE and HPLC analyses.

**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 1.0-5.0 ng/ml.

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4. Endotoxin: Less than 0.01 EU/μg of rMuVEGF<sub>164</sub>, Yeast as determined by LAL method.

**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

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stored at  $\leq$  -20 °C. Further dilutions should be made in appropriate buffered solutions.

**Shipping:** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature

recommended below.

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.

Usage: This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further

evaluation purposes. **NOT FOR HUMAN USE**.

## Murine Vascular Endothelial Growth Factor 164

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.

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