

Recombinant Rat Vascular Endothelial Growth Factor 164

#R00328

Size: 10 µg/100 µg/500 µg

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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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. Mouse and rat express alternately spliced isoforms of 120, 164, and 188 amino acids (a.a.) in length. Recombinant Rat VEGF165 contains 165 amino acids residues (with an met at N- terminal) and it is a disulfide-linked homodimer. In addition, it shares 97 % a.a. sequence identity with corresponding regions of mouse, 88 % with human and bovine, 89 % with porcine and canine, and 90 % with feline and equine VEGF, respectively.

AA Sequence

MAPTTEGEQKAHEVVVKFMDVYQRSYCRPIETLVDIFQ

EYPDEIEYIFKPSCVPLMRCAGCCNDEALECVPTSES
NVTMQIMRIKPHQSQHIGEMSFLQHSRCECRPKKDR
TKPEKHCEPCSERRKHLFVQDPQTCKCCKNTDSR
CKARQLELNERTCRCDKPRR

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.

Product Specification

Synonyms	VPF
Accession	P16612
GeneID	83785
Species	Rat
Source	Escherichia coli.
Molecular Weight	Approximately 38.7 kDa, a disulfide-linked homodimeric protein, consisting of two 165 amino acid polypeptide chains with Met at N-terminus.
Purity	> 95 % 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 less than 5

ng/ml, corresponding to a specific activity of $> 2.0 \times 10^5$ IU/mg.

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

Formulation Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM Tris, 300 mM NaCl, pH 8.8.

Endotoxin Less than 1 EU/ μ g of rRtVEGF164 as determined by LAL method.
