

Recombinant Rat Vegfa protein

Cat. No. Vegfa-44R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Vegfa protein was expressed in Escherichia coli.
Species	Rat
Source	E.coli
ProteinLength	165
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 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.
Form	Lyophilized from a 0.2µm filtered concentrated solution in 20 mM Tris, 300 mM NaCl, pH 8.8.
Bio-activity	Fully biologically active when compared to standard. The ED50 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 ×

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	10 ⁵ IU/mg.
Molecular Mass	Approximately 38.7 kDa, a disulfide-linked homodimeric protein, consisting of two 165 amino acid polypeptide chains with Met at N-terminus.
AA Sequence	MAPTTEGEQKAHEVVKFMDVYQRSYCRPIETLVDIFQEYPDEIEYIFKPSCVPLMRC AGCCNDEALECVPTSESNVTMQIMRIKPHQSQHIGEMSFLQHSRCECRPKKDRTKP EKHCEPCSEERRKHLFVQDPQTCKSCKNTDSRCKARQLELNERTCRCDKPRR
Endotoxin	Less than 1 EU/μg of rRtVEGF164 as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
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 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	Vegfa
Official Symbol	Vegfa
Synonyms	VPF

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Gene ID	83785
mRNA Refseq	NM_001110333
Protein Refseq	NP_001103803
UniProt ID	P16612

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