

Active Recombinant Rat Vascular Endothelial Growth Factor-165

Cat. No. Vegfa-586R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant rat VEGF is a disulfide linked polypeptide containing two 165 amino acids peptides that total to a size of 38,750 Da.
Species	Rat
Source	E.coli
Description	Vascular Endothelial Growth Factor (VEGF) is an important cytokine involved in growth, angiogenesis and vascular permeability. It is produced by cells under hypoxic conditions or by cells exposed to cytokines such as IL-1, IL-6, IL-8 or TNF- μ . VEGF predominantly signals through type I transmembrane receptor tyrosine kinases, VEGF R1 (also called flt-1) and the VEGF R2 (also called Flk-1/KDR). VEGF retains high sequence identity between most mammals.
Form	Lyophilized from 10 mM NaP, pH 7.5.
Purity	Purity Greater than 97% as determined by: Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.
Bio-activity	As determined by the dose-dependent induced proliferation of Human umbilical vein endothelial cells (HUVECs) when compared to a standard. The expected ED50 is 4.0-8.0 ng/ml.
Physical Appearance	Sterile Filtered white lyophilized (freeze-dried) powder.

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Solubility	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.
Purity Greater than 97% as determined by	Analysis by RP-HPLC. Reducing and non-reducing SDS-PAGE.
Protein Content determined by	UV spectroscopy at 280 nm. Analysis by RP-HPLC calibrated against a known standard. Quantitation on SDS-PAGE against a known standard.
Endotoxin Level	Endotoxin level as measured by LAL is <0.01ng/ug or <0.1EU/ug.
Amino acid sequence	MAPTTEGEQK AHEVVKFMDV YQRSYCRPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCAGC CNDEALECVP TSESNVTMQI MRIKPHQSQH IGEMSFLQHS RCECRPKKDR TKPEKHCEPC SERRKHLFVQ DPQTCKCSCK NTDSRCKARQ LELNERTCRC DKPRR
Storage	Lyophilized product is very stable at -20 degrees. Reconstituted material should be aliquoted and frozen at -20. It is recommended to add a carrier protein (0.1% HSA or BSA) for long term storage.

GENE INFORMATION

Gene Name	Vegfa vascular endothelial growth factor A [Rattus norvegicus]
Official Symbol	Vegfa
Synonyms	Vegfa; vascular endothelial growth factor A; Vegf; VEGF164; VPF; VEGF-A; vascular permeability factor
Gene ID	83785

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mRNA Refseq	NM_001110333
Protein Refseq	NP_001103803
UniProt ID	B5DEK7
Pathway	Bladder cancer; Endochondral Ossification; Focal adhesion; Formation of Platelet plug; Hemostasis; Hypertrophy Mode; Id Signaling Pathway; Pancreatic cancer; Pathways in cancer; Platelet Activation; Renal cell carcinoma
Function	cell surface binding; chemoattractant activity; cytokine activity; fibronectin binding; growth factor activity; heparin binding; platelet-derived growth factor receptor binding; protein homodimerization activity; vascular endothelial growth factor receptor 1 binding; vascular endothelial growth factor receptor 2 binding; vascular endothelial growth factor receptor binding
PDB rendering based on 1bj1	