

Recombinant Rat Vascular Endothelial Growth Factor-A (rr VEGF-A)

Synonyms: Vascular permeability factor, VPF

Introduction: Vascular endothelial growth factor is an important signaling protein involved in both vasculogenesis and angiogenesis. As its name implies, VEGF's activity has been mostly studied on cells of vascular endothelium, although it does have effects on a number of other cell types (e.g. stimulation monocyte/macrophage migration, neurons, cancer cells, kidney epithelial cells). VEGF mediates increased vascular permeability, induces angiogenesis, vasculogenesis and endothelial cell mitogenesis and cell migration. VEGF is also a vasodilator and increases microvascular permeability and was originally referred as vascular permeability factor.

Description: Recombinant rat VEGF-A produced in *E.Coli* is a double, non-glycosylated, polypeptide chain containing 165 amino acids and having a molecular mass of 38.75 kDa. The rr VEGF-A is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: lyophilized from a 0.22 µm filtered solution in PBS, pH 7.2
The aliquotes of 1µg and 2 µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rr VEGF in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rr VEGF-A although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rr VEGF-A should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity: Greater than 95.0% as determined by SDS-PAGE.

Endotoxicity: The endotoxin level is less than 1 EU / µg determined by LAL method

Amino Acid Sequence: MAPTTEGEQK AHEVVKFMDV YQRSYCRPIE TLVDIFQEYP DEIEYIFKPS
CVPLMRCAGC CNDEALECVP TSESNVTMQI MRKPHQSQH IGEMSFLQHS RCECRPKKDR
TKPEKHCEPC SERRKHLFVQ DPQTCKCSCK NTDSRCKARQ LELNERTCRC DKPRR

Biological Activity: Determined by stimulation of proliferation of human umbilical vein endothelial cells (HUVECs). Cell proliferation was induced within a concentration range of 2 - 8 ng/ml.

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<i>small</i>	2 µg	Cat.N°	13343662
<i>medium</i>	10 µg	Cat.N°	13343663
<i>large</i>	50 µg	Cat.N°	13343665
<i>x- large</i>	250 µg	Cat.N°	13343667
<i>xx- large</i>	1000 µg	Cat.N°	13343668

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