

## Recombinant Mouse Vascular Endothelial Growth Factor A (rm 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 activity has been mostly studied on cells of the vascular endothelium, although it does have effects on a number of other cell types (e.g. stimulation monocyte/macrophagemigration, neurons, cancer cells, kidney epithelial cells ). VEGF mediates increased vascular permeability, induces angiogenesis, vasculogenesis and endothelial cell growth, promotes cell migration and inhibits apoptosis. In vitro VEGF has been shown to stimulate endothelial cell mitogenesis and cell migration. VEGF is also a vasodilator, increases microvascular permeability and was originally referred to as vascular permeability factor. Elevated levels of this protein are linked to POEMS syndrome, also known as Crow-Fukase syndrome. Mutations in this gene have been associated with proliferative and nonproliferative diabetic retinopathy.

**Description:** Recombinant mouse VEGF produced in *E.Coli* is a double, non-glycosylated, polypeptide chain containing 164 amino acids and having a molecular mass of 39 kDa. The rm VEGF 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 7.1. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

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

**Stability:** Lyophilized rm VEGF although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rm VEGF 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 / silver stain.

**Amino Acid Sequence:** MAPTTEGEQK SHEVIKFMDV YQRSYCRPIE TLVDIFQEYP DEIEYIFKPS  
CVPLMRCAGC CNDEALECVP TSESNITMQI MRIKPHQSQH IGEMSFLQHS RCECRPKKDR TKPEKHCEPC  
SERRKHLFVQ DPQTCKCSCCK NTDSRCKARQ LELNERTCRC DKPRR

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

**Biological Activity:** Determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC) using a concentration range of 1.0 – 5.0 ng/ml.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	12343662
<i>medium</i>	10 µg	Cat.N°	12343663
<i>large</i>	50 µg	Cat.N°	12343665
<i>x-large</i>	250 µg	Cat.N°	12343667
<i>xx-large</i>	1000 µg	Cat.N°	12343668

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