

Recombinant Human Vascular Endothelial Growth Factor 121 (rh VEGF-121)

Synonyms: Vascular permeability factor, VPF, VEGF

Introduction: Vascular endothelial growth factor is important signaling protein involved in both vasculogenesis and angiogenesis. As its name implies, VEGF 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. Elevated levels of this protein is linked to POEMS syndrome, also known as Crow- Fukase syndrome. Mutations in this gene have been associated with proliferative and nonproliferative diabetic retinopathy. VEGF121 circulates more freely than other VEGF forms which bind more tightly with vascular heparin sulfates.

Description: Recombinant human VEGF-121 produced in *E. Coli* is a double, non-glycosylated, polypeptide chain containing 121 amino acids and having a molecular mass of 28.4 kDa. The rh VEGF-121 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*

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

Formulation: Lyophilized from a concentrated solution with no additives. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rh VEGF-121 in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh VEGF-121 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh VEGF-121 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.

Amino Acid Sequence: MPMAEGGGQNHHEVVKFMDV YQRSYCHPIETLVDIFQEYYPDEIEYIFKPCVPLMRCGGC CNDEGLECVPTTEESNITMQI MRIKPHQGQHIGEMSFLQHN KCECRPKKDRARQEKCCKPRR

Biological Activity: Determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC) using a concentration range of 0.2 - 0.4 ng/ml.

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

This material is offered for **research use 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°	11344682
<i>medium</i>	10 µg	Cat.N°	11344683
<i>large</i>	50 µg	Cat.N°	11344685
<i>x-large</i>	250 µg	Cat.N°	11344687

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