

# Recombinant Human Vascular Endothelial Growth Factor-A (rh VEGF-A)

**Synonyms:** VEGF-165, Vascular permeability factor (VPF)

**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.

**Description:** Recombinant human VEGF-A produced in *E.Coli* is a double, non-glycosylated, polypeptide chain containing 165 amino acids and having a molecular mass of 38.2 kDa. The rh VEGF-A is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*

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

**Formulation:** Lyophilized from a concentrated (1 mg/ml) solution containing 50mM acetic acid. The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

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

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

**Biological Activity:** The ED<sub>50</sub> for stimulation of <sup>3</sup>H-thymidine incorporation and cell proliferation by human umbilical vein endothelial cells for VEGF-A has been determined to be in the range of 1-2 ng/ml.

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°	11343662
<i>medium</i>	10 µg	Cat.N°	11343663
<i>large</i>	50 µg	Cat.N°	11343665
<i>x-large</i>	250 µg	Cat.N°	11343667

**ImmunoTools** Excellent Quality - Advantageously priced

Gladiolenweg 2; 26169 Friesoythe; Germany  
 phone:+49-(0)4491-400997, fax:+49-(0)4491-400998, [info@immunotools.com](mailto:info@immunotools.com)  
[www.immunotools.com](http://www.immunotools.com)