VEGFA
Recombinant Human VEGF-121

Catalog No.	CRV001A	**Quantity:**	2 µg
	CRV001B		10 µg
	CRV001C		1.0 mg

Alternate Names: Vascular endothelial growth factor A, VEGF-A, Vascular permeability factor, VPF

Description: 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 of monocyte/ macrophage migration, 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 and increases microvascular permeability and was originally referred to as vascular permeability factor.

Alternatively spliced transcript variants encoding different isoforms have been described: VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a signicant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin.

Recombinant Human Vascular Endothelial Growth Factor 121 is a homodimer containing two non-glycosylated, polypeptide chains of 121 amino acids each.

Gene ID: 7422

Protein Accession No: P15692-9

Source: *E. coli*

Molecular Mass: 28.4 kDa

Formulation: Lyophilized from a concentrated (1 mg/ml) solution with no additives.

Purity: > 98.0% as determined by RP-HPLC and SDS-PAGE.

Biological Activity: As determined by the dose-dependent proliferation of human umbilical vein endothelial cells (HUVEC), in the concentration range of 0.2-0.4 ng/ml.

Amino Acid Sequence: APMAEGGGQN HHEVVKFMDV YQRSYCHPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCGGC CNDEGLECVP TEESNITMQI MRIKPHQGQH IGEMSFLQHN KCECRPKKDR ARQENCDKPR R

Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water to a concentration of at least 0.1 mg/ml, which can then be further diluted to other aqueous solutions.

Storage & Stability: Lyophilized proteins are stable at room temperature for shipping purposes. Upon receipt, store desiccated below -20°C. Upon reconstitution the protein may be stored at 2-8°C for 1 week. For long term storage, aliquot and freeze at -20 to -80°C. For long term storage, it is recommended to add a carrier protein (0.1% HSA or BSA). **Avoid repeated freeze-thaw cycles.**

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