



Vascular Endothelial Growth Factor, human recombinant (rHuVEGF-CHO)

Catalog No: 94900
Lot No: XXXXX
Source: CHO cells
Synonyms: Vascular endothelial growth factor A, VEGF-A, Vascular permeability factor, VPF, VEGF, MGC70609

Background

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 and 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

Vascular Endothelial Growth Factor human recombinant produced in CHO cells is a double, glycosylated, polypeptide chain containing 165 amino acids and migrates as 44 kDa in SDS-PAGE under non-reducing conditions. VEGF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized from a phosphate buffered saline, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized VEGF in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Vascular Endothelial Growth Factor Human, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution VEGF Human Recombinant 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 97.0% as determined by SDS-PAGE.

Activity

Determined by its ability to stimulate 3H-Thymidine incorporation in HUVEC cells, the ED50 for this effect was found to be 2 - 6 ng/ml, corresponding to a specific activity of 166,667 - 500,000 IU/mg.

CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51



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