

# Recombinant human vascular endothelial growth factor 165 (VEGF). Animal and Endotoxin free

CATALOGUE NUMBER: AMS-295

AVAILABLE SIZES: 10µg, 50µg, 100µg, 1000µg

## DESCRIPTION

VEGF (Vascular endothelial growth factor) is the only growth factor that stimulates vascular permeability. It promotes endothelial proliferation and survival, angiogenesis, vasculogenesis and inhibits apoptosis. VEGF mitogenic activity is specific for endothelial cell and that makes it distinct among other growth factors. VEGF is thought to be important in the pathophysiology of neuronal and other tumors, by functioning as a promoter of angiogenesis for human gliomas. Human VEGF occurs in several molecular variants and the 165 form is the most common form in most tissues. Biological activities of VEGF are not species-specific and glycosylation is not required for biological activity.

## SOURCE

Recombinant human VEGF 165 is produced in the endosperm tissue of barley grain (*Hordeum vulgare*), that exhibits up to 50 times less protease activity than *E.coli* or mammalian cells. Barley seed is void of any human or animal viral contaminants that could jeopardize your cell culture.

## FORMULATION

Sterile filtered through a 0.2 µm filter. Lyophilized from PBS pH 7.2

## PURITY

Greater than 95% by SDS-PAGE gel analysis.

## RECONSTITUTION

Note: Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. For long term storage of the reconstituted solution it is recommended to add a carrier protein (0.1% HSA or BSA).

## STABILITY

The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

## BIOLOGICAL ACTIVITY

Each batch of growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of recombinant human VEGF 165 was determined by its dose dependent effect on proliferation of Human Umbilical Vein Endothelial Cells (HUVEC). The ED50 value for this batch of VEGF 165 is 3.1 ng/ml, corresponding to 3.2 x 10<sup>5</sup> U/mg specific activity.

## ENDOTOXIN LEVEL

Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg) as measured by turbidimetric kinetic assay. Ref. Associates of Cape Cod Industries, Deacon Park, Knowsley, Liverpool, UK

## MAT assay

Purified product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction. Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland

## MOLECULAR WEIGHT

Recombinant human VEGF165 contains 165 amino acids and a 16 a.a. Histidine-based tag for a total length of 181 a.a. and has a predicted molecular mass of 21.3 kDa. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 30 kDa in SDS-PAGE.