ISOkine
PREMIUM GRADE GROWTH FACTORS AND CYTOKINES

Animal-Free | Endotoxin-Free | Carrier-Free

# VEGF 165, human, recombinant

**Catalog Number:** IK0500

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

## SOURCE
Produced in the endosperm tissue of barley grain (*Hordeum vulgare*). ISOkine® growth factors and cytokines are animal-free and serum-free and void of antibiotics, endotoxins, viruses, and prions.

## FORMULATION
2xPBS pH 7.2, sterile filtered through 0.22 µm filter.

## PURITY
> 95% by SDS-PAGE gel analysis.

## SHELF LIFE
The lyophilized protein has a shelf life for 3 years when stored at < 20°C.

## RECONSTITUTION
Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile buffered saline 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 a 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 ISOkine® growth factors is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of ISOkine® recombinant human VEGF 165 is assayed by measuring its dose-dependent effect on the proliferation of HUVEC cells. The ED50 for this effect using VEGF 165 is typically <10 ng/ml. Optimal concentration should be determined for specific applications and cell lines.

## ENDOTOXIN LEVEL
Endotoxin level is < 0.0100 EU per µg of ISOkine® product by LAL method.

## MAT ASSAY
Purified ISOkine® 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 VEGF 165 contains 165 amino acids and an N-terminal 6 amino acid histidine tag for a total length of 171 amino acids and has a predicted molecular mass of 20.0 kDa.



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