

## PRODUCT DESCRIPTION

Vascular endothelial growth factor (VEGF), also known as vasculotropin, is a potent mitogen for vascular endothelial cells that induces angiogenesis. VEGF promotes vascularization of tumors and inhibition of VEGF activity suppresses tumor growth *in vivo*. It regulates the development of erythroids and other cells of hematopoietic lineage from a common precursor. The receptor tyrosine kinase for VEGF, Flt/KDR, is expressed in hematopoietic sites during embryogenesis.

As a result of alternative splicing, four cDNA clones with 121, 165, 189 or 206 amino acid residues have been identified. These clones encode mature monomeric VEGF. Recombinant human VEGF is a glycosylated disulfide-linked homodimer containing 165 amino acid residues per chain. It migrates with an apparent molecular mass of 19 - 21 kDa in SDS-PAGE under reducing conditions.

## SOURCE

A DNA sequence encoding the 165 amino acid residue variant of human VEGF<sup>1</sup> was expressed in Sf21 insect cells using a baculovirus expression system.

## PURITY

Purity is greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is <1.0 EU per 1 µg cytokine, as determined by the LAL method.

## ACTIVITY

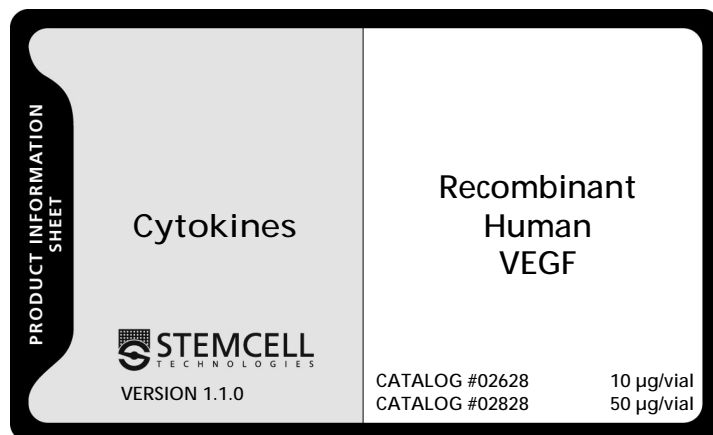
The biological activity of recombinant human VEGF is measured by its ability to induce proliferation of human umbilical vein endothelial cells.<sup>2</sup> The ED<sub>50</sub> for this effect is typically 2.0 - 6.0 ng/mL.

## FORMULATION

Recombinant human VEGF is lyophilized from a 0.2 µm filtered solution in 30% acetonitrile and 0.1% trifluoroacetic acid containing 50 µg bovine serum albumin per 1 µg cytokine.

## RECONSTITUTION

Reconstitute human VEGF at a concentration greater than 10 µg/mL with sterile phosphate buffered saline (PBS) containing at least 0.1% human or bovine serum albumin.



## STABILITY AND STORAGE

Lyophilized human VEGF is stable for up to twelve months from date of receipt at -20°C to -70°C.

Reconstituted human VEGF can be stored under sterile conditions at 2°C - 8°C for one month, or at -20°C to -70°C (in a manual defrost freezer) for three months without detectable loss of activity.

**Avoid repeated freezing and thawing.**

## REFERENCES

1. Leung DW, Cachianes G, Kuang WJ, Goeddel DV, Ferrara N: Vascular endothelial growth factor is a secreted angiogenic mitogen. *Science* 246: 1306-1309, 1989
2. Conn G, Soderman DD, Schaeffer MT, Wile M, Hatcher VB, Thomas KA: Purification of a glycoprotein vascular endothelial cell mitogen from a rat glioma-derived cell line. *Proc Natl Acad Sci USA* 87: 1323-1327, 1990