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Human VEGF-165 Recombinant Protein

10 µg

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For Research Use Only. Not for Use in Diagnostic Procedures.**MW (kDa):**
19.3**UniProt ID:**
#P15692-1**Entrez-Gene Id:**
7422

Background

VEGF-165 is the most abundant splice variant of VEGF-A (1,2). VEGF-165 is produced by a number of cells including endothelial cells, macrophages, and T cells. VEGF-165 is involved in angiogenesis, vascular endothelial cell survival, growth, migration, and vascular permeability (1). *VEGF* gene expression is induced by hypoxia, inflammatory cytokines, and oncogenes (1,2). VEGF-165 binds to heparan sulfate and is retained on the cell surface and in the extracellular matrix (2,3). VEGF-165 binds to the receptor tyrosine kinases, VEGFR1 and VEGFR2 (1). VEGF-165 is the only splice variant that binds to co-receptors NRP-1 and NRP-2 (1-3) that function to enhance VEGFR2 signaling (1). Binding of VEGF-165 to VEGFR1 and VEGFR2 leads to activation of PI3K/Akt, p38 MAPK, FAK and paxillin (1). VEGF plays a key role in tumor angiogenesis in many cancers (2).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg hVEGF-165.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human VEGF-165 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hVEGF-165 was determined in a HUVEC cell proliferation assay. The ED₅₀ of each lot is less than or equal to 10 ng/ml.

Background References

1. Takahashi, H. and Shibuya, M. (2005) *Clin Sci (Lond)* 109, 227-41.
2. Neufeld, G. et al. (1999) *FASEB J* 13, 9-22.
3. Robinson, C.J. and Stringer, S.E. (2001) *J Cell Sci* 114, 853-65.

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