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Product Information

Vascular Endothelial Growth Factor 121 ($VEGF_{121}$), human recombinant, expressed in HEK293 cells

Catalog Number **V5890**
Storage Temperature –20 °C

Synonyms: $VEGF_{121}$, VEGF-A, Vascular Permeability Factor (VPF)

Product Description

$VEGF_{121}$ belongs to the PDGF/VEGF growth factor family characterized by the presence of eight conserved cysteine residues and a cystine knot structure.[1] VEGF is secreted by the majority of tumor cells and initiates angiogenesis by activating endothelial cells of existing blood vessels and promoting their migration.[2] VEGF has also been implicated in correlation with poor prognosis in breast cancer.[2] In addition, VEGF is released in rheumatoid arthritis in response to TNF-α, increasing endothelial permeability and stimulating angiogenesis (formation of capillaries).[3,4]

This recombinant human $VEGF_{121}$ product is expressed in human 293 cells as a glycosylated homodimer and homotrimer of 121 amino acids, with a molecular mass of 18 kDa (monomer).

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein to a final concentration of 100 µg/ml in sterile ultrapure water containing 0.1% endotoxin-free recombinant human serum albumin.

Storage/Stability

Store product at –20 °C. The product retains activity for at least 3 years as supplied.

After initial thawing it is recommended to store the protein in working aliquots at –20 °C.

References

1. Robinson, C.J., and Stringer, S.E., The splice variants of vascular endothelial growth factor (VEGF) and their receptors. *J. Cell Sci.*, **114**, 853-865 (2001).
2. Tang, X., Tumor-associated macrophages as potential diagnostic and prognostic biomarkers in breast cancer. *Cancer Lett.,* **332**, 3-10 (2013).
3. Ellis, L.M., Epidermal growth factor receptor in tumor angiogenesis. *Hematol. Oncol. Clin. North Am.,* **18**, 1007–1021 (2004).
4. Afuwape, A.O. et al., The role of the angiogenic molecule VEGF in the pathogenesis of rheumatoid arthritis. *Histol. Histopathol.,* **17**, 961-972 (2002).

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