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ProductInformation

VASCULAR ENDOTHELIAL GROWTH FACTOR 120 ($VEGF_{120}$)
Mouse, Recombinant
Expressed in *E. coli*

Product No. **V 3513**

Product Description

Recombinant Mouse Vascular Endothelial Growth Factor 120 ($VEGF_{120}$) is produced from a DNA sequence encoding the mature 120 amino acid residue variant of mouse VEGF.[1] The recombinant disulfide-linked growth factor containing two, 120 amino acid monomers has a predicted molecular mass of approximately 28 kDa.

Vascular Endothelial Growth Factor (VEGF), also known as vasculotropin, is an angiogenic growth factor which is heat and acid stable.[2] VEGF is a basic protein, with an isoelectric point of 8.5.[3] There is over 85% homology between human and rodent VEGF. Rodent VEGF is active on human cells and vice versa.[4]

VEGF promotes the growth of endothelial cells isolated from bovine adrenal cortex, cerebral cortex, fetal and adult aorta, and human umbilical vein.[3] The target cell specificity of VEGF is restricted to vascular endothelial cells.[3] VEGF has no mitogenic effect on cultured corneal endothelial cells, vascular smooth muscle cells, BHK-12 fibroblasts, keratinocytes, human sarcoma cells or lens epithelial cells.[3]

Three mouse cDNA clones have been identified. These arise from alternative splicing and encode mature mouse VEGF monomers of 120, 164, and 188 amino acids.[1] Two receptor tyrosine kinases, Flt-1 and Flk-1, have been shown to bind VEGF with high affinity.[5]

Reagent

Recombinant Mouse $VEGF_{120}$ is supplied as 5 µg of protein lyophilized from a 0.2 µm-filtered solution of 30% acetonitrile and 0.1% trifluoroacetic acid (TFA) with 250 µg of bovine serum albumin as carrier protein.

Preparation Instructions

Reconstitute the contents of the vial using 0.2 µm filtered phosphate buffered saline (PBS) containing 0.1% human serum albumin or bovine serum albumin to a final concentration of not less than 1 µg/ml.

Storage/Stability

Prior to reconstitution, store at –20 °C. After reconstitution, store at 2 to 8 °C for a maximum of 3 months. For extended storage, freeze in working aliquots at –70 °C or –20 °C. Repeated freezing and thawing is not recommended.

Product Profile

The biological activity of Recombinant Mouse $VEGF_{120}$ is measured by its ability to stimulate ^{3}H-thymidine incorporation in human umbilical vein endothelial cells.[6]

The EC_{50} for this effect is approximately 2 to 4 ng/ml.

The ED_{50} is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Purity: > 97% as determined by SDS-PAGE, visualized by silver stain.

Endotoxin level is < 0.1 ng/µg $VEGF_{120}$ as determined by the LAL (Limulus amebocyte lysate) method.

References

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