Vascular Endothelial Growth Inhibitor

Human, Recombinant (rHuVEGI, VEGI-192)
Expressed in E. coli
Cat. No. CRP0807
Lot. No. (See product label)

PRODUCT INFORMATION

**Description:** Vascular endothelial growth inhibitor (VEGI; TNFSF-15) is a new member of the tumor necrosis factor family. VEGI is predominantly an endothelial cell-specific gene, and recombinant VEGI is a potent inhibitor of endothelial cell proliferation, angiogenesis and tumor growth. VEGI exerts two activities on endothelial cells: early G1 arrest of G0/G1-cells responding to growth stimuli, and programmed death of proliferating cells. These activities are highly specific to endothelial cells. VEGI is also able to regulate the expression of several important genes involved in angiogenesis. These findings are consistent with the view that VEGI functions as an autocrine cytokine to inhibit angiogenesis and stabilize the vasculature.

**Amino-Acid Sequence:** 192 aa
The sequence of the first five N-terminal amino acids was determined and was found to be Met-Gln-Leu-Thr-Lys., non-glycosylated

**M. W.:** 21,858Da

**Recombinant:** Expressed in E. coli

**Purity:** >95% as determined by SDS-PAGE and RP-HPLC.

**Formulation:** Lyophilized after extensive dialysis against 0.5M NaCl, 50mM Tris-HCl buffer, pH 7.5.

**Specific Activity:** The ED50 as determined by the dose-dependent inhibition of the proliferation of HUVEC (Human Umbilical Vein Endothelial Cells) is less than 5μg/ml.

**Endotoxin:** Less than 0.1 ng/μg (1 IEU/μg) of rHuVEGI

**Reconstitution:** It is recommended to reconstitute the lyophilized VEGI-192 in sterile 18MΩ-cm H2O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

**Storage:** Lyophilized VEGI-192 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution VEGI-192 should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Aliquot to avoid repeated freeze-thaw cycles.

GENE INFORMATION

**Gene Name:** TNFSF15
**Gene Alias:** MGC129934; MGC129935; TL1; TL1A; VEGI; VEGI192A
**Gene Type:** protein coding
**mRNA Refseq:** NM_005118.2
**Protein Refseq:** NP_005109.2
**MIM:** 604052
**GeneID:** 9966
**Chromosome Location:** 9p32

**Summary:** The protein encoded by this gene is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. This protein is abundantly expressed in endothelial cells, but is not expressed in either B or T cells. The expression of this protein is inducible by TNF and IL-1 alpha. This cytokine is a ligand for receptor TNFRSF25 and decoy receptor TNFRSF21/DR6. It can activate NF-kappaB and MAP kinases, and acts as an autocrine factor to induce apoptosis in endothelial cells. This cytokine is also found to inhibit endothelial cell proliferation, and thus may function as an angiogenesis inhibitor. An additional isoform encoded by an alternatively spliced transcript variant has been reported but the sequence of this transcript has not been determined.

**Pathway:** Cytokine-cytokine receptor interaction

**Function:** cytokine activity, tumor necrosis factor receptor binding

REFERENCES


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