

Product: ov-Vascular Endothelial Growth Factor-E (Orf Virus), Recombinant
Catalog #: 11-ovVEGF-E
Amount: 5 µg

DESCRIPTION:

A DNA sequence encoding the mature variant of ovVEGF-E isolate D1701 (Dehio et al., 1999; GenBank accession No. AF106020) was expressed in *E. coli* as a 132 amino acid residue fusion protein with an N-terminal His-tag sequence and a thrombin cleavage site. Recombinant VEGF-E homodimer was dimerized *in vitro* and has a predicted mass of approximately 35 kDa. Based on sequence similarity to VEGF-A, a gene encoding a VEGF homologue has recently been discovered in the genome of Orf virus (OV) (Lyttle et al., 1994). Different isolates of Orf virus show significant amino acid sequence similarity to VEGF-A and described as a viral virulence factor that appears to be derived from captured host genes. All eight cysteine residues of the central cysteine knot motif characteristic of members of the VEGF family are conserved among other residues in the VEGF-E proteins (Dehio et al., 1999; Wise et al., 1999). Alignment of all mammalian VEGF sequences indicated that VEGF-E is distinct from the previously described VEGFs but most closely related to VEGF-A. Like VEGF-A, VEGF-E was found to bind with high affinity to VEGF receptor-2 (KDR) resulting in receptor autophosphorylation, whilst in contrast to VEGF-A, VEGF-E can not bind to VEGF receptor-1 (Flt-1). Furthermore VEGF-E can also not bind to VEGF receptor-3 (FLT-4). Therefore VEGF-E is a potent angiogenic factor selectively binding to VEGF receptor -2/KDR

SOURCE:

Insect cells (Sf9)

PURITY:

Greater than 90.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver-Stained gel.

ENDOTOXIN:

Less than 0.1 ng/µg (IEU/µg) of ruovVEGF-E

DIMERS & AGREGATES:

Less than 1% as determined by silver-stained SDS-PAGE gel analysis

FORM:

Purified

PROTEIN CONTENT:

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280

2. Analysis by RP-HPLC, using a calibrated solution of ovVEGF-E as a Reference Standard.

STORAGE:

-20°C (aliquot), avoid repeated freeze and thaw cycles.

BIOLOGICAL ACTIVITY:

rHuovVEGF-E is fully biologically active when compared to standards

The ED50 for stimulation of 3H-thymidine incorporation and cell proliferation by human umbilical vein endothelial cells for ov-VEGF-E has been determined to be in the range of 5 - 20 ng/ml, corresponding to a specific activity of 5×10^3 Units/mg

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