Product Data Sheet

Product Name:	VEGF E (Orf Virus)
Cat. No.:	GP21056
Batch No.:	1

Product Data

Purity	>98%	Source	Escherichia Coli.
Phycical Appearance	solid	Shipping Condition	Shipped at Room temp.
Solubility	The lyophilized oVEGF-E Orf Virusshould be reconstituted in water or medium to a concentration not lower than 50μg/ml. For long term storage we would recommend to add at least 0.1% human or bovine serum albumin.		
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution containing PBS.		

Introduction

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 angiog

Biological Activity

The biological activity was determined (1) by the ability to induce VEGFR-2/KDR receptor phosphorylation in PAE/KDR cells and (2) in a cell proliferation assay using primary HUVECs. The ED50 for this effect is typically 1-5ng/ml.

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Stability

Lyophilized Vascular Endothelial Growth Factor-E Orf Virus although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution VEGF E -OV should be stored at 4°C between 2-7 days and for future use below -18°C .Please prevent freeze-thaw cycles.

Background

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.

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