ORFV132
Recombinant Orf Virus VEGF-E, His-Tag

Catalog No.	CRV007A	**Quantity:**	2 µg
	CRV007B		5 µg
	CRV007C		20 µg

Alternate Names: orf virus VEGF, Vascular endothelial growth factor homolog E, PP283

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. 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.

UniProt ID: Q2F842

Source: *E. coli*

Molecular Weight: 35 kDa (132 aa)

Formulation: Lyophilized from PBS.

Purity: > 90%, by SDS-PAGE, visualized by silver stain

Endotoxin Level: < 1 EU/µg

Biological Activity: This product demonstrates the ability to:
1.) induce VEGFR-2/KDR receptor phosphorylation in PAE/KFR cells
2.) cell proliferation using primary HUVECs.
ED_{50} for this effect is typically 1 - 5 nglml.

Amino Acid Sequence: MGSSHHHHHH SSGLVPRGSH DSTKTWSEVF ENSGCKPRPM VFRVHDEHPE LTSQRFNPPC VTLMRCGGCC NDESLECVPT EEANVTMQLM GASVSGGNGM QHLSFVEHKK CDCKPPLTTT PPTTTRPPRR RR

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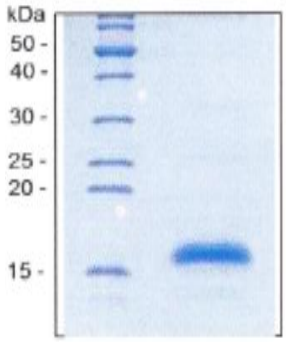
Reconstitution: **Centrifuge vial prior to opening.** Add sterile water to the vial to a concentration of 0.1 - 1.0 mg/mL. **Do not vortex.** After complete solubilization of the protein, it may be further diluted with other solutions containing a carrier protein such as 0.1 % BSA.

Storage & Stability: The lyophilized protein is stable at -20°C to -80° for up to 1 year. Reconstituted working aliquots are stable for 1 week at 2-8°C and for 3 months at -20°C to -80°C. **Avoid repeated freeze/thaw cycles.**

SDS-PAGE analysis of recombinant ov-VEGF-E. Sample was loaded in 15% SDS-polyacrylamide gel under reducing conditions and stained with Coomassie blue.



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