ACTIVE BIOSCIENCE
PROTEINS · CELLS · ANTIBODIES

Orv virus VEGF-E

Synonyms: Vascular Endothelial Growth Factor-E

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
5 µg	2015.900.005		
20 µg	2015.900.020		

Please enquire for bulk quantities and other vial sizes

Description

A DNA sequence encoding the mature variant of ov-VEGF-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 cannot 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** *E. Coli*
- **Purity** ≥ 90 % (SDS-PAGE, silver stained)
- **Endotoxin level** < 0.1 ng per µg of ov-VEGF-E

Biological Activity

Measured in a cell proliferation assay using primary HUVECs. The ED_{50} for this effect is typically 1 – 5 ng/mL.

Reconstitution

The lyophilised ovVEGF-E should be reconstituted in water or medium to a concentration not lower than 50 µg/ml. For long term storage we would recommend to add at least 0.1% human or bovine serum albumin.

Amino Acid Sequence

MGSSHHHHHH SSGLVPRGSH DSTKTWSEVF ENSGCKPRPM VFRVHDEHPE LTSQRFNPPC VTLMRCGGCC NDESLECVPT EEANVTMQLM GASVSGGNGM QHLSFVEHKK CDCKPPLTTT PPTTTRPPRR RR

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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