



Recombinant Human VEGF-D

20190828DS

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

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|------------------|----------------------------|
| Cat.-no.: | 100-374 |
| Size: | 10 µg |
| Lot. No.: | According to product label |

Scientific Background

| | |
|------------------------|-----------------------------------------------------------|
| Gene-ID (NCBI): | 2277 |
| Synonyms: | vascular endothelial growth factor D; FIGF; VEGFD; VEGF-D |

VEGF-D, a member of the VEGF/PDGF family of structurally related proteins, is a potent angiogenic cytokine. It promotes endothelial cell growth, promotes lymph angiogenesis, and can also affect vascular permeability. VEGF-D is highly expressed in the lung, heart, small intestine and fetal lung, and at lower levels in the skeletal muscle, colon, and pancreas. It forms cell surfaced-associated non-covalent disulfide linked homodimers, and can bind and activate both VEGFR-2 (flk1) and VEGFR-3 (flt4) receptors. During embryogenesis, VEGF-D may play a role in the formation of the venous and lymphatic vascular systems. It also participates in the growth and maintenance of differentiated lymphatic endothelium in adults. Both VEGF-C and VEGF-D are over-expressed in certain cancers, and the resulting elevated levels of VEGF-C or VEGF-D tend to correlate with increased lymphatic metastasis. Recombinant human VEGF-D is a 13.1 kDa non-disulfide linked homodimeric protein consisting of two 117 amino acid polypeptide chains. Due to glycosylation the protein migrates as a 20.0-22.0 kDa band under non-reducing condition.

Sequence

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FAATFYDIET LKVIDEEWQR TQCSPRETCV EVASELGKST  
NTFFKPPCVN VFRCGGCCNE ESLICMNTST SYISKQLFEI  
SVPLTSVPEL VPKVANHTG CKCLPTAPRH PYSIIRR
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Database References

| | |
|------------------------|-------------|
| Protein RefSeq: | NP_004460.1 |
| Uniprot ID: | O43915 |
| mRNA RefSeq: | NM_004469 |

Product Specifications

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|-------------------------------|------------------------------------|
| Expressed in | HEK 293 cells |
| Purity | > 95% by SDS-PAGE & HPLC analyses |
| Structural Information | non disulfide-linked homodimer |
| Endotoxin level | < 0.1 ng /µg of protein (<1EU/µg). |
| Formulation | lyophilized |
| Length (aa): | 117 |
| MW: | 26.2 kDa |

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

Reconstitution: Reconstitute in water to a concentration of 0.1-1.0 mg/mL. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Biological Activity: Measured by its ability to bind recombinant human VEGFR3/Flt-4 Fc in a functional ELISA.