

Datasheet for ABIN1589577
VEGF189 Protein (Homodimer)



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Overview

Quantity:	2 µg
Target:	VEGF189
Protein Characteristics:	Homodimer
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Purpose:	VEGF189
Sequence:	APMAEGGGQN HHEVVKFMDV YQRSYCHPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCGGC CNDEGLECVP TEESNITMQI MRIKPHQGQH IGEMSFLQHN KCECRPKKDR ARQEKKSVRG KGKGQKRKRK KSRYKSWSPV CGPCSERRKH LRVQDPQTCK CSCKNTDSRC KARQLELNER TCRCDKPRR
Specificity:	Chromosomal location:6p12
Characteristics:	Length (aa):189
Purity:	> 98 % by SDS-PAGE
Endotoxin Level:	< 0.1 ng per µg of human VEGF189

Target Details

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Target Details

Abstract: [VEGF189 Products](#)

Background: Human Vascular Endothelial Growth Factor VEGF189, a 21 kDa protein consisting of 189 amino acid residues, is produced as a homodimer. VEGF is a polypeptide growth factor and a member of the platelet-derived growth factor family. It is a specific mitogen for vascular endothelial cells and a strong angiogenic factor in vivo. Two high-affinity tyrosine kinase receptors for VEGF165 have been identified, VEGFR-1 (FLT-1), and VEGFR-2 (KDR). Consistent with the endothelial cell-specific action of VEGF165, expression of both receptor genes has been found predominantly but not exclusively on endothelial cells. Expression of VEGFR-1 was also found on human monocytes, neutrophils (PMNs), bovine brain pericytes and villous and extra villous trophoblast. In addition to its action as a mitogen it is a potent vascular permeability factor (VPF) in vivo. VEGF165 is also a chemo attractant molecule for monocytes and endothelial cells. 5 different proteins are generated by differential splicing: VEGF121, VEGF145, VEGF165, VEGF189 and VEGF206. The most abundant form is VEGF165. Whereas VEGF121 and VEGF165 are secreted proteins, VEGF145, VEGF189 and VEGF206 are strongly cell-associated. The isoforms VEGF145, VEGF165 and VEGF189 bind to heparin with high affinity. VEGF165 is apparently a homo-dimer, but preparations of VEGF165 show some heterogeneity on SDS gels, depending on the secretion of different glycosylation patterns. All dimeric forms have similar biological activities but their bio-availability is very different. There is good evidence that heterodimeric molecules between the different isoforms also exists and that different cells and tissues express different VEGF isoforms. The other members of this increasing growth factor family are VEGF-B, -C, -D and -E. Another member is the Placenta growth factor PlGF. Synonyms: vascular endothelial growth factor A, VEGFA, VPF, VEGF, MVCD1

Molecular Weight: ~ 42.0 kDa

Gene ID: 7422

NCBI Accession: [NM_001025366](#), [NP_001020537](#)

UniProt: [P15692](#)

Application Details

Application Notes: Measured by the stimulation of cell proliferation in human umbilical vein endothelial cells in the range of 2-20 ng/mL.

Comment: Cytokines & Growth Factors

Restrictions: For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	The lyophilized VEGF189 is soluble in water and most aqueous buffers. The lyophilized VEGF189 should be reconstituted in PBS or medium containing at least 0.1 % human or bovine serum albumin to a concentration not lower than 50 µg/mL.
Buffer:	50 mM acetic acid
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	RT,-20 °C
Storage Comment:	The lyophilized protein is stable for a few weeks at room temperature, but best stored at -20°C. Reconstituted VEGF189 should be stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.