

## Datasheet for ABIN1589530 **VEGFA Protein (Homodimer)**



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### Overview

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

### Product Details

Purpose:	VEGF120
Sequence:	APTTEGEQKA HEVVKFMDVY QRSYCRPIET LVDIFQEYPD EIEYIFKPSC VPLMRCAGCC NDEALECVPT SESNVTMQIM RIKPHQSQHI GEMSFLQHSR CECRPKKDRT KPEKCDKPRR
Characteristics:	Length (aa):120
Purity:	> 95 % by SDS-PAGE

### Target Details

Target:	VEGFA
Alternative Name:	VEGF120 ( <a href="#">VEGFA Products</a> )
Background:	Rat Vascular Endothelial Growth Factor120 (VEGF120), a 14.1 kDa protein consisting of 120 amino acid residues, is produced as a homodimer. VEGF120 is a polypeptide growth factor and a member of the platelet-derived growth factor family. It is a specific mitogen for vascular

## Target Details

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endothelial cells and a strong angiogenic factor in vivo. Two high-affinity tyrosine kinase receptors for VEGF120 have been identified, VEGFR-1 (FLT-1), and VEGFR-2 (Flk-1). Consistent with the endothelial cell-specific action of VEGF120, 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 extravillous trophoblasts. In addition to its action as a mitogen it is a potent vascular permeability factor (VPF) in vivo and is also a chemo attractant for monocytes and endothelial cells. At least four different proteins are generated by differential splicing of the mouse VEGF gene: VEGF120, VEGF144, VEGF164 and VEGF188. The most abundant form is VEGF164. Whereas VEGF120, VEGF144 and VEGF164 are secreted proteins, VEGF188 is strongly cell-associated. In addition, the isoforms VEGF164 and VEGF188 bind to heparin with high affinity. All dimeric forms possess similar biological activities. A related protein of VEGF is placenta growth factor (PlGF) with about 53% homology and VEGF-B with similar biological activities. The full ORF of native rat VEGF120 (Ala27-Arg146) was cloned from total RNA of rat sinusoidal endothelial cells using standard protocols.

Synonyms: Vascular Endothelial Growth Factor A, Vegfa, Vegf, VEGF120

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Molecular Weight: 14.02 kDa

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Gene ID: 83785

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NCBI Accession: [NM\\_031836](#)

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UniProt: [P16612](#)

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Pathways: [RTK Signaling](#), [Glycosaminoglycan Metabolic Process](#), [Regulation of Cell Size](#), [Tube Formation](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Platelet-derived growth Factor Receptor Signaling](#), [VEGFR1 Specific Signals](#), [VEGF Signaling](#)

## Application Details

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Application Notes: Determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC) using a concentration range of 2-10 ng/mL.

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Comment: Cytokines & Growth Factors

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Restrictions: For Research Use only

## Handling

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Format: Lyophilized

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## Handling

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Reconstitution:	The lyophilized VEGF120 should be reconstituted in ddH <sub>2</sub> O to a concentration not lower than 50 µg/mL.
Buffer:	PBS
Storage:	-20 °C,-80 °C
Storage Comment:	Lyophilized samples are stable for greater than six months at -20°C to -70°C. Reconstituted VEGF120 should be stored in working aliquots at -20°C.
Expiry Date:	6 months