cellsciences.com

Vegfa
Recombinant Mouse VEGF 164

Catalog No.	CRV005-002	**Quantity:**	2 µg
	CRV005A		5 µg
	CRV005B		20 µg
	CRV005C		1.0 mg

Alternate Names: Vascular endothelial growth factor A, VEGF-A, Vascular permeability factor, VPF

Description: Mouse Vascular Endothelial Growth Factor$_{164}$ (VEGF$_{164}$) 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 VEGF$_{164}$ have been identified, VEGFR-1 (FLT-1), and VEGFR-2 (Flk-1). Consistent with the endothelial cell-specific action of VEGF$_{164}$, 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 chemoattractant for monocytes and endothelial cells. At least three different proteins are generated by differential splicing of the mouse VEGF gene: VEGF$_{120}$, VEGF$_{164}$ and VEGF$_{188}$. The most abundant form is VEGF$_{164}$. Whereas VEGF$_{120}$ and VEGF$_{164}$ are secreted proteins, VEGF$_{188}$ is strongly cell-associated. In addition, the isoforms VEGF$_{164}$ and VEGF$_{188}$ bind to heparin with high affinity. VEGF is apparently a homodimer, but preparations of VEGF show some heterogeneity on SDS gels depending of the secretion of different forms and the varying degrees of glycosylation. All dimeric forms posses similar biological activities. There is evidence that heterodimeric molecules between the different isoforms exists and that different cells and tissues express different VEGF isoforms. A related protein of VEGF is placenta growth factor (PlGF) with about 53% homology and VEGF-B with similar biological activities.

UniProt ID: Q00731-2

GeneID: 22339

Source: Insect cells

Molecular Weight: 48 kDa (164 aa) homodimer

Formulation: Lyophilized from acetic acid

Purity: > 95%, by SDS-PAGE, visualized by silver stain

Endotoxin Level: < 1 EU/µg

Biological Activity: ED$_{50}$ typically 1-5 ng/ml, determined by the dose-dependent proliferation of human umbilical vein endothelial cells.

Cell Sciences®
65 Parker Street
Unit 11
Newburyport, MA 01950

Toll Free: 888-769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Website: www.cellsciences.com

Amino Acid Sequence: APTTEGEQKS HEVIKFMDVY QRSYCRPIET LVDIFQEYPD EIEYIFKPSC VPLMRCAGCC NDEALECVPT SESNITMQIM RIKPHQSQHI GEMSFLQHSR CECRPKKDRT KPENHCEPCS ERRKHLFVQD PQTCKCSCKN TDSRCKARQL ELNERTCRCD KPRR

Reconstitution: **Centrifuge vial prior to opening.** Add 50 mM acetic acid 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.**

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

Cell Sciences®
65 Parker Street
Unit 11
Newburyport, MA 01950

Toll Free: 888-769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Website: www.cellsciences.com