

DA3518**Mouse VEGF-A (Isoform 164) - Purified****Alternate names:**

VEGF, VEGFA, VPF, Vascular endothelial growth factor A, Vascular permeability factor

Quantity:

2 µg

Background:

Mouse Vascular Endothelial Growth Factor164 (VEGF164) 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 VEGF164 have been identified, VEGFR-1 (FLT-1), and VEGFR-2 (Flk-1). Consistent with the endothelial cell-specific action of VEGF164, 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: VEGF120, VEGF164 and VEGF188. The most abundant form is VEGF164. Whereas VEGF120 and VEGF164 are secreted proteins, VEGF188 is strongly cell-associated. In addition, the isoforms VEGF164 and VEGF188 bind to heparin with high affinity. VEGF is apparently a homodimer, but preparations of VEGF show some heterogeneity on SDS gels depending on the secretion of different forms and the varying degrees of glycosylation. All dimeric forms possess similar biological activities. There is evidence that heterodimeric molecules between the different isoforms exist 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](#)**NCBI:**[NP_001020421.2](#)**GeneID:**[22339](#)**Species:**

Mouse

Source:

Insect cells

Format:**State:** Lyophilized without stabilizer.**Purity:** >95% > 95%, by SDS-PAGE and visualised by silver stain.**Endotoxin Level:** < 0.1 ng/µg of VEGF**Reconstitution:** Restore in PBS or medium containing at least 0.1% human or bovine serum albumin to a concentration not lower than 50 µg/ml.**Description:**

Recombinant Murine VEGF164 is produced as a homodimer consisting of 164 amino acid residues.

Biological Activity: The ED50 for stimulation of 3H-thymidine incorporation and cell proliferation by human umbilical vein endothelial cells for VEGF164 has been determined to be in the range of 1-2 ng/ml.

Specific Activity: 1 x 10⁶ units/mg

Molecular weight: 48 kDa 48 kDa

Storage:

Store VEGF164 Lyophilized at -20°C to -70°C.

Reconstituted VEGF164 should be stored in working aliquots at -20°C.

Avoid repeated freeze-thaw cycles!

Shelf life: One year from despatch.

General Readings:

1. Breier et al., Dev 114:521, 1992.
2. Fiebig et al., Eur J Biochem 211:19, 1993.
3. Flamme et al., Dev Biol 162:699, 1995.
4. Kremer et al., Cancer Res 57:3852, 1997.