

Recombinant mouse VEGFA

Catalog No: #AG0049

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Description

Product Name	Recombinant mouse VEGFA
Host Species	HEK293
Purification	> 95% by Tris-Bis PAGE; > 95% by SEC-HPLC
Immunogen Description	Ala27-Arg214
Target Name	VEGFA
Other Names	Mouse vascular endothelial growth factor A; Vascular permeability factor; Vasculotropin; VEGF; VEGFA; VEGF-A; VEGFMGC70609; VPF; VPFvascular endothelial growth factor
Accession No.	Uniprot:Q00731 Gene ID:22339
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GeneID	22339
Target Species	mouse
Calculated MW	22.1 kDa
Tag Info	additional amino acid free
Formulation	0.22 µm filtered solution of PBS, pH 7.4.
Storage	Aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

Background

Vascular endothelial growth factor (VEGF or VEGF?A), also known as vascular permeability factor (VPF), is a potent mediator of both angiogenesis and vasculogenesis in the fetus and adult (1-3). It is a member of the PDGF family that is characterized by a cystine knot structure formed by eight conserved cysteine residues (4). Alternately spliced isoforms of 121, 145, 165, 183, 189, and 206?amino acids (aa) have been identified in humans, with 120, 164 and 188 aa isoforms found in mouse (2, 4). Isoforms other than VEGF120?and VEGF121?contain basic heparin-binding regions and are not freely diffusible (4). Mouse VEGF164?shares 97%?aa sequence identity with corresponding regions of rat, 89% with human and porcine, 88% with bovine, and 90% with feline, equine and canine VEGF, respectively. VEGF binds the type I transmembrane receptor tyrosine kinases VEGF R1 (also called Flt-1) and VEGF R2 (Flk-1/KDR) on endothelial cells (4). Although affinity is highest for binding to VEGF R1, VEGF R2 appears to be the primary mediator of VEGF angiogenic activity (3,?4). Human VEGF165?binds the semaphorin receptor, Neuropilin-1 and promotes complex formation with VEGF?R2 (5). VEGF is required during embryogenesis to regulate the proliferation, migration, and survival of endothelial cells (3, 4). In adults, VEGF functions mainly in wound healing and the female reproductive cycle (3). Pathologically, it is involved in tumor angiogenesis and vascular leakage (6, 7). Circulating VEGF levels correlate with disease activity in autoimmune diseases such as rheumatoid arthritis, multiple sclerosis and systemic lupus erythematosus (8). VEGF is induced by hypoxia and cytokines such as IL-1, IL-6, IL-8, oncostatin M and TNF-alpha (3,?4,?9).

Note: This product is for in vitro research use only