

## Active Recombinant Mouse Vegfa Protein

**Cat. No.** Vegfa-7428M    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Product Overview</b> | Recombinant Murine Vascular Endothelial Growth Factor144 without tag was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>      | <p>This gene is a member of the PDGF/VEGF growth factor family. It encodes a heparin-binding protein, which exists as a disulfide-linked homodimer. This growth factor induces proliferation and migration of vascular endothelial cells, and is essential for both physiological and pathological angiogenesis. Disruption of this gene in mice resulted in abnormal embryonic blood vessel formation. This gene is upregulated in many known tumors and its expression is correlated with tumor stage and progression. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. There is also evidence for alternative translation initiation from upstream non-AUG (CUG) codons resulting in additional isoforms. A recent study showed that a C-terminally extended isoform is produced by use of an alternative in-frame translation termination codon via a stop codon readthrough mechanism, and that this isoform is antiangiogenic. Expression of some isoforms derived from the AUG start codon is regulated by a small upstream open reading frame, which is located within an internal ribosome entry site.</p> |
| <b>Form</b>             | Lyophilized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bio-activity</b>   | 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.                         |
| <b>Molecular Mass</b> | 33.8 kDa                                                                                                                                                                               |
| <b>Endotoxin</b>      | < 0.1 ng/μg of VEGF144                                                                                                                                                                 |
| <b>Purity</b>         | > 95 % by SDS-PAGE and Silver staining                                                                                                                                                 |
| <b>Stability</b>      | Shelf life: one year from despatch.                                                                                                                                                    |
| <b>Storage</b>        | Store (following reconstitution in aliquots) at -20 centigrade or below. Avoid repeated freezing and thawing.                                                                          |
| <b>Storage Buffer</b> | 50 mM acetic acid without stabilizer                                                                                                                                                   |
| <b>Reconstitution</b> | The lyophilized VEGF144 is soluble in water and most aqueous buffers. The lyophilized VEGF144 should be reconstituted in 50 mM acetic acid to a concentration not lower than 50 μg/mL. |

## GENE INFORMATION

|                        |                                                                                                                                                            |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Vegfa vascular endothelial growth factor A [ Mus musculus (house mouse) ]                                                                                  |
| <b>Official Symbol</b> | Vegfa                                                                                                                                                      |
| <b>Synonyms</b>        | Vegfa; vascular endothelial growth factor A; V; Veg; Vpf; Vegf; VEGF12; VEGF16; VEGF18; vascular endothelial growth factor A; vascular permeability factor |
| <b>Gene ID</b>         | 22339                                                                                                                                                      |

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|----------------|------------------------------|
| mRNA Refseq    | <a href="#">NM_001025250</a> |
| Protein Refseq | <a href="#">NP_001020421</a> |
| UniProt ID     | <a href="#">Q00731</a>       |

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