

RPCB1252

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## Product Information

<b>Product SKU:</b>	RPCB1252	<b>Gene ID:</b>	14205	<b>Size:</b>	100µg
<b>Tag:</b>	C-6*His	<b>Reactivity:</b>	Mouse		

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## Additional Information

<b>Expression Host:</b>	HEK293 cells	<b>Swissprot:</b>	P97946
<b>Purity:</b>	PBS		

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## Protein Information

**Background:** Vascular endothelia growth factor D (VEGF-D), also known as c-fos-induced growth factor (FIGF), is a secreted glycoprotein of the VEGF/PDGF family. VEGFs regulate angiogenesis and lymphangiogenesis during development and tumor growth, and are characterized by eight conserved cysteine residues that form a cysteine-knot structure. VEGF-C and VEGF-D, which share 23% amino acid (aa) sequence identity, are uniquely expressed as preproteins that contain long N- and C-terminal propeptide extensions around the VEGF homology domain (VHD). Proteolytic processing of either 358 aa or 326 aa splice forms of mouse VEGF-D preproprotein creates a secreted proprotein. Further processing by extracellular serine proteases, such as plasmin or furin-like proprotein convertases, forms mature VEGF-D consisting of non-covalently linked 42 kDa homodimers of the 117 aa VHD. Mature mouse VEGF-D shares 94%, 99%, 93%, 91% and 89% aa identity with the VHD of human, rat, equine, canine and bovine VEGF-D, respectively. It is expressed in adult lung, heart, muscle, and small intestine, and is most abundantly expressed in fetal lungs and skin. Mouse and human VEGF-D are ligands for VEGF receptor 3 (VEGF-R3, also called Flt-4) that are active across species and show enhanced affinity when processed. Unlike human VEGF-D, which is also a ligand for VEGF-R2 (also called Flk-1 or KDR), mouse VEGF-D does not bind to VEGF-R2. VEGF-R3 is strongly expressed in lymphatic endothelial cells and is essential for regulation of the growth and

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differentiation of lymphatic endothelium . While VEGF-C is the critical ligand for VEGF-R3 during embryonic lymphatic development, VEGF-D is most active in neonatal lymphatic maturation and bone growth . Both promote tumor lymphangiogenesis . Consonant with their activity on VEGF receptors, binding of VEGF-C and VEGF-D to neuropilins contributes to VEGF-R3 signaling in lymphangiogenesis, while binding to integrin alpha 9 beta 1 mediates endothelial cell adhesion and migration .

**Protein Description:** High quality, high purity and low endotoxin recombinant Recombinant Mouse VEGF-D/FIGF Protein , tested reactivity in HEK293 cells and has been validated in SDS-PAGE.100% guaranteed.

**Endotoxin:** <0.1EU/μg

**Formulation:** Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

**Storage:** Store at -20°C.Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.