

VEGFR-3/FLT4 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P74466
Synonyms:	Vascular endothelial growth factor receptor 3; VEGFR-3; FLT-4
Species:	Mouse
Source:	HEK293
Accession:	P35917 (Y25-E775)
Gene ID:	14257
Molecular Weight:	95-105 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

VEGFR-3/FLT4 protein, a tyrosine-protein kinase, functions as a cell-surface receptor for VEGFC and VEGFD, playing a pivotal role in adult lymphangiogenesis and contributing significantly to the development of the vascular network and cardiovascular system during embryonic development. Its diverse functions include promoting the proliferation, survival, and migration of endothelial cells, along with the regulation of angiogenic sprouting. Activation of FLT4 leads to an augmented production of VEGFC and, to a lesser extent, VEGFA, establishing a positive feedback loop that enhances FLT4 signaling. Additionally, VEGFR-3/FLT4 modulates KDR signaling through the formation of heterodimers. Its signaling cascade involves the activation of the MAPK1/ERK2, MAPK3/ERK1, MAPK8, and JUN pathways, as well as the AKT1 pathway. VEGFR-3/FLT4 phosphorylates SHC1 and mediates the phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Furthermore, it promotes the phosphorylation of MAPK8 at 'Thr-183' and 'Tyr-185,' as well as AKT1 at 'Ser-473,' underscoring its integral role in orchestrating complex signaling events crucial for lymphangiogenesis and vascular development.

Caution: Product has not been fully validated for medical applications. For research use only.

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