

Active Recombinant Mouse Flt1 Protein, Fc-tagged

Cat. No. Flt1-7210M **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Mouse soluble Vascular Endothelial Growth Factor Receptor-1 (sVEGFR-1(D7) (Tyr23-Asn757) fused with the Fc part of human IgG1 was expressed in insect cells.

Species Mouse

Source Insect Cells

Description Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFB and PGF, and plays an essential role in the development of embryonic vasculature, the regulation of angiogenesis, cell survival, cell migration, macrophage function, chemotaxis, and cancer cell invasion. Acts as a positive regulator of postnatal retinal hyaloid vessel regression. May play an essential role as a negative regulator of embryonic angiogenesis by inhibiting excessive proliferation of endothelial cells. Can promote endothelial cell proliferation, survival and angiogenesis in adulthood. Its function in promoting cell proliferation seems to be cell-type specific. Promotes PGF-mediated proliferation of endothelial cells, and proliferation of some types of cancer cells, but does not promote proliferation of normal fibroblasts. Has very high affinity for VEGFA and relatively low protein kinase activity; may function as a negative regulator of VEGFA signaling by limiting the amount of free VEGFA and preventing its binding to KDR. Modulates KDR signaling by forming heterodimers with KDR. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate and the activation of protein kinase C. Mediates phosphorylation

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of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leading to the activation of phosphatidylinositol kinase and the downstream signaling pathway. Mediates activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Phosphorylates SRC, YES1 and PLCG, and may also phosphorylate CBL. Promotes phosphorylation of AKT1 and PTK2/FAK1.

Form Lyophilized

Bio-activity The activity of sVEGFR-1/Fc was determined by its ability to inhibit the VEGF-dependent proliferation of human umbilical vein endothelial cells. The ED50 for this effect is typically 10-30 ng/mL.


Molecular Mass 130 kDa

AA Sequence

YGGGSKLKVPELSLKGTTQHVMQAGQTLFLKCRGEEAHSWSLPTTVSQEDKRLSITP
 PSACGRDNRQFCSTLTLDTAQANHTGLYTCRYLPTSTSKKKKAESSIYIFVSDAGSP
 FIEMHTDIPKLVHMTTEGRQLIIPCRVTSPNVTVTLKKFPFDLTPDGQRITWDSRRGFI
 IANATYKEIGLLNCEATVNGHLYQNTNYLTHRQNTILDVQIRPPSPVRLHGGQTLVLNC
 TATTELNTRVQMSWNYPGKATKRASIRQRIDRSHSHNNVFHSLKINNVESRDKGLY
 TCRVKSGSSFQSFNTSVHVEKGFISVKHRKQPVQETTAGRRSYRLSMKVKAFPS
 EIVWLKDGSPATLKSARYLVHGYSLIHKDVTTEDAGDYTILLGIKQSRLFKNLTATLIVN
 VKPQIYEKSVSSLPSPPLYPLGSRQVLTCTVYGIPRPTITWLWHPCHHNHNSKERYDF
 CTENEESFILDPSSNLGNRIESISQRMTVIEGTNKTVSTLTVVADSQTPGIYSCRAFNKI
 GTVERNIKFYVTDVPNGFHVSLKMPAEGEDLKLSCVVKFLYRDITWILLRVTNNRT
 MHHSISKQKMATTQDYSITLNLVIKNSLEDSGTYACRARNIYTGEDILRKTEVLVRD
 SEAPHLLQNLSDYEVSISGSTLLDCQARGVPAPQITWFKNNHKKIQQEPGIILGPGNST
 LFIERVTEEDEGVYRCRATNQGAVESAAYLTVQGTSDKSNAASDKTHTCPPCPAP
 ELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAK
 TKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPRE

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PQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPMLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

N-terminal Sequence Analysis

SGSKLKD

Purity

> 95 % by SDS-PAGE and visualised by silver stain

Stability

Shelf life: one year from despatch.

Storage

Store lyophilized at 2-8 centigrade for 6 months or at -20 centigrade long term.
After reconstitution store the antibody undiluted at 2-8 centigrade for one month or (in aliquots) at -20 centigrade long term.
Avoid repeated freezing and thawing.

Storage Buffer

PBS, pH 7.4 without stabilizers

Reconstitution

Restore in water or medium to a concentration not lower than 50 µg/mL. The lyophilised sVEGFR-1/Fc is soluble in water and most aqueous buffers.

GENE INFORMATION

Gene Name

Flt1 FMS-like tyrosine kinase 1 [*Mus musculus* (house mouse)]

Official Symbol


Flt1

Synonyms

Flt1; FMS-like tyrosine kinase 1; sFl; Flt-; VEGF; Flt-1; VEGFR; sFlt1; VEGFR1; VEGFR-1; AI323757; vascular endothelial growth factor receptor 1; embryonic receptor kinase 2; tyrosine-protein kinase receptor FLT; vascular permeability factor receptor; EC 2.7.10.1

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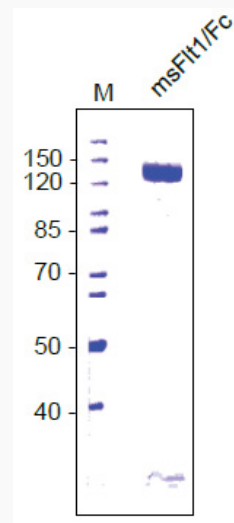
Gene ID 14254

mRNA Refseq NM_010228

Protein Refseq NP_034358

UniProt ID P35969

SDS-PAGE



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