

## ARG70327 Human FLT1 / VEGFR1 recombinant protein (ECD) (8X His-tagged, C-ter)

Package: 100 µg

Store at: -20°C

### Summary

Product Description	HEK293 expressed, 8X His-tagged (C-ter) Human FLT1 / VEGFR1 recombinant protein (ECD).
Tested Reactivity	Hu
Tested Application	Binding, SDS-PAGE
Target Name	FLT1 / VEGFR1 (ECD)
Species	Human
A.A. Sequence	Met1 - Asn756 of Human FLT1 / VEGFR1 (NP_002010.1) with 8X His tag at the C-terminus.
Expression System	HEK293
Alternate Names	FLT-1; Vascular permeability factor receptor; Tyrosine-protein kinase receptor FLT; FLT; Vascular endothelial growth factor receptor 1; VEGFR1; VEGFR-1; Fms-like tyrosine kinase 1; EC 2.7.10.1; Tyrosine-protein kinase FRT

### Application Instructions

Application Note	Binding activity test: Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human VEGFR1 at 500ng/ml (100 µl/well) can bind Recombinant Mouse PLGF with a linear range of 12-49 ng/ml.
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### Properties

Form	Powder
Purification Note	0.22 µm filter sterilized. Endotoxin level is 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4)
Reconstitution	Reconstitute to a concentration of 0.1 - 0.5 mg/ml in sterile distilled water.
Storage instruction	For long term, lyophilized protein should be stored at -20°C or -80°C. After reconstitution, aliquot and store at -20°C for up to one month, at 2-8°C for up to one week. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening.
Note	For laboratory research only, not for drug, diagnostic or other use.

### Bioinformation

Gene Symbol	FLT1
Gene Full Name	fms-related tyrosine kinase 1
Function	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. 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, proliferation of some types of cancer cells, but does not promote proliferation of normal fibroblasts (in vitro). 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. Likewise, isoforms lacking a transmembrane domain, such as isoform 2, isoform 3 and isoform 4, may function as decoy receptors for VEGFA. 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 of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leading to 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 and YES1, and may also phosphorylate CBL. Isoform 1 phosphorylates PLCG. Promotes phosphorylation of AKT1 at 'Ser-473'. Promotes phosphorylation of PTK2/FAK1. Isoform 7 has a truncated kinase domain; it increases phosphorylation of SRC at 'Tyr-418' by unknown means and promotes tumor cell invasion. [UniProt]

Calculated Mw

151 kDa

PTM

N-glycosylated.

Ubiquitinated after VEGFA-mediated autophosphorylation, leading to proteolytic degradation.

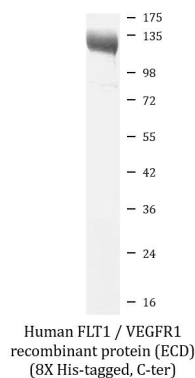
Autophosphorylated on tyrosine residues upon ligand binding. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit. Phosphorylation at Tyr-1169 is important for interaction with PLCG. Phosphorylation at Tyr-1213 is important for interaction with PIK3R1, PTPN11, GRB2, and PLCG. Phosphorylation at Tyr-1333 is important for endocytosis and for interaction with CBL, NCK1 and CRK. Is probably dephosphorylated by PTPRB. [UniProt]

Cellular Localization

Isoform 1: Cell membrane; Single-pass type I membrane protein. Endosome.

Note=Autophosphorylation promotes ubiquitination and endocytosis. Isoform 2: Secreted. Isoform 3: Secreted. Isoform 4: Secreted. Isoform 5: Cytoplasm. Isoform 6: Cytoplasm. Isoform 7: Cytoplasm. [UniProt]

## Images



ARG70327 Human FLT1 / VEGFR1 recombinant protein (ECD) (8X His-tagged, C-ter) SDS-PAGE image

SDS-PAGE analysis of ARG70327 Human FLT1 / VEGFR1 recombinant protein (ECD) (8X His-tagged, C-ter).