

## ARG70253

## Human FLT4 / VEGFR3 recombinant protein (ECD) (Fc-His-tagged, C-ter)

Package: 100 µg

Store at: -20°C

### Summary

|                     |                                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Description | HEK293 expressed, Fc-His-tagged (C-ter) Human FLT4 / VEGFR3 recombinant protein (ECD).                                                                                    |
| Tested Reactivity   | Hu                                                                                                                                                                        |
| Tested Application  | Binding, SDS-PAGE                                                                                                                                                         |
| Target Name         | FLT4 / VEGFR3 (ECD)                                                                                                                                                       |
| Species             | Human                                                                                                                                                                     |
| A.A. Sequence       | Tyr25 - Ile776 of Human FLT4 / VEGFR3 (NP_891555.2) with an Fc-6X His tag at the C-terminus.                                                                              |
| Expression System   | HEK293                                                                                                                                                                    |
| Alternate Names     | FLT-4; FLT41; Vascular endothelial growth factor receptor 3; VEGFR3; VEGFR-3; PCL; Tyrosine-protein kinase receptor FLT4; LMPH1A; EC 2.7.10.1; Fms-like tyrosine kinase 4 |

### Application Instructions

|                  |                                                                                                                                                                                                                                         |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application Note | Binding activity test: Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human VEGF-C, His Tag at 0.5µg/ml (100 µl/well) can bind Recombinant Human VEGFR3, Fc Tag with a linear range of 3.92-15.70ng/ml. |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 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    | FLT4                                                                                                                                                                                                                                                                                              |
| Gene Full Name | fms-related tyrosine kinase 4                                                                                                                                                                                                                                                                     |
| Background     | This gene encodes a tyrosine kinase receptor for vascular endothelial growth factors C and D. The protein is thought to be involved in lymphangiogenesis and maintenance of the lymphatic endothelium. Mutations in this gene cause hereditary lymphedema type IA. [provided by RefSeq, Jul 2008] |
| Function       | Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFC and VEGFD, and plays an essential role in adult lymphangiogenesis and in the development of the vascular network and the cardiovascular                                                                                    |

system during embryonic development. Promotes proliferation, survival and migration of endothelial cells, and regulates angiogenic sprouting. Signaling by activated FLT4 leads to enhanced production of VEGFC, and to a lesser degree VEGFA, thereby creating a positive feedback loop that enhances FLT4 signaling. Modulates KDR signaling by forming heterodimers. The secreted isoform 3 may function as a decoy receptor for VEGFC and/or VEGFD and play an important role as a negative regulator of VEGFC-mediated lymphangiogenesis and angiogenesis. Binding of vascular growth factors to isoform 1 or isoform 2 leads to the activation of several signaling cascades; isoform 2 seems to be less efficient in signal transduction, because it has a truncated C-terminus and therefore lacks several phosphorylation sites. Mediates activation of the MAPK1/ERK2, MAPK3/ERK1 signaling pathway, of MAPK8 and the JUN signaling pathway, and of the AKT1 signaling pathway. Phosphorylates SHC1. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase. Promotes phosphorylation of MAPK8 at 'Thr-183' and 'Tyr-185', and of AKT1 at 'Ser-473'. [UniProt]

Calculated Mw

153 kDa

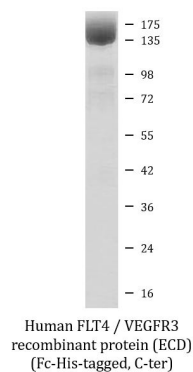
PTM

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 in response to H(2)O(2) is mediated by a process that requires SRC and PRKCD activity. Phosphorylation at Tyr-1068 is required for autophosphorylation at additional tyrosine residues. Phosphorylation at Tyr-1063 and Tyr-1337 is important for interaction with CRK and subsequent activation of MAPK8. Phosphorylation at Tyr-1230, Tyr-1231 and Tyr-1337 is important for interaction with GRB2 and subsequent activation of the AKT1 and MAPK1/ERK2 and/or MAPK3/ERK1 signaling pathways. In response to endothelial cell adhesion onto collagen, can also be phosphorylated in the absence of FLT4 kinase activity by SRC at Tyr-830, Tyr-833, Tyr-853, Tyr-1063, Tyr-1333, and Tyr-1337. [UniProt]

Cellular Localization

Cell membrane; Single-pass type I membrane protein. Cytoplasm. Nucleus. Note=Ligand-mediated autophosphorylation leads to rapid internalization. Isoform 1: Cell membrane; Single-pass type I membrane protein. Note=Ligand-mediated autophosphorylation leads to rapid internalization. Isoform 2: Cell membrane; Single-pass type I membrane protein. Isoform 3: Secreted. Cytoplasm. [UniProt]

## Images



ARG70253 Human FLT4 / VEGFR3 recombinant protein (ECD) (Fc-His-tagged, C-ter) SDS-PAGE image

SDS-PAGE analysis of ARG70253 Human FLT4 / VEGFR3 recombinant protein (ECD) (Fc-His-tagged, C-ter).