Data Sheet (Cat.No.TMPJ-00412)

TargetMol

VEGFR1/FLT-1 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	Vascular endothelial growth factor receptor 1;Vascular permeability factor receptor;FLT-1; Fms-like tyrosine kinase 1;Tyrosine-protein kinase FRT;Tyrosine-protein kinase receptor FLT; VEGFR-1
Protein Construction:	Ser27-Asn756
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P17948
Molecular Weight:	150-190 KDa (reducing condition)
AA Sequence:	Ser27-Asn756

QC Testing

Biological Activity:	1. Loaded Biotinylated Human VEGF165 Protein(C-6His-Avi) on HIS1K Biosensor, can bind Recombinant Human VEGFR1 (C-Fc) with an affinity constant of 10.2 pM as determined in BLI assay. (Regularly tested) 2. Immobilized Human VEGF165 at 10μg/ml (100 μl/well) can bind Human VEGFR1-Fc . The ED50 of Recombinant Human VEGFR1-Fc is 36.4 ng/ml. (Regularly tested)
Purity:	Greater than 90% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM PB, 150 mM NaCl, 5%Trehalose, 5%Mannitol, 0.01%Tween 80, pH7.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Human Vascular endothelial growth factor receptor 1(VEGFR-1, FLT-1) is a member of the the class III subfamily of receptor tyrosine kinases (RTKs) and Tyr protein kinase family and CSF-1/PDGF receptor subfamily. VEGFR-1 is widely expressed in human tissues including normal lung, placenta, liver, kidney, heart and brain tissues. It is specifically expressed in most of the vascular endothelial cellsand peripheral blood monocytes. VEGFR-1 contains seven Ig-like C2-type domains and one protein kinase domain. VEGFR-1is an essential receptor tyrosine kinase and plays an important role in theregulation of VEGF family-mediated vasculogenesis, angiogenesis, and lymphangiogenesis. It is also mediators of neurotrophic activity and regulators of hematopoietic development. VEGFR-1 is a receptor for VEGF, VEGFB and PGF. It has a tyrosine-protein kinase activity. Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFB and PGF.It may play an essential role as a negative regulator of embryonic angiogenesis by inhibiting excessive proliferation of endothelial cells and promote endothelial cell proliferation, survival and angiogenesis in adulthood. Its function in promoting cell proliferation seems to be cell-type specific. VEGFR-1 can also promote PGF-mediated proliferation of endothelial cells, proliferation of some types of cancer cells, but does not promote proliferation of normal fibroblasts (in vitro).

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