

Recombinant Human FLT1/KDR, Fc-tagged therapeutic protein(Aflibercept)

Cat. No. FLT1 & KDR-P1006H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

The therapeutic protein is a recombinant fusion protein that comprises of two main components: the vascular endothelial growth factor (VEGF) binding portions from the extracellular domains of human VEGF receptors 1 and 2 which is then fused to the Fc portion of human IgG1. Structurally, it is a dimeric glycoprotein with a protein molecular weight of 96.9 kilo Daltons (kDa). It contains approximately 15% glycosylation to give a total molecular weight of 115 kDa. All five putative N-glycosylation sites on each polypeptide chain predicted by the primary sequence can be occupied with carbohydrate and exhibit some degree of chain heterogeneity, including heterogeneity in terminal sialic acid residues, except at the single unsialylated site associated with the Fc domain.

Species Human

Source CHO

Description

Vascular endothelial growth factor is an important signaling protein involved in both vasculogenesis and angiogenesis. As its name implies, VEGF activity has been mostly studied on cells of the vascular endothelium, although it does have effects on a number of other cell types (e.g. stimulation monocyte/macrophage migration, neurons, cancer cells, kidney epithelial cells). VEGF mediates increased vascular permeability, induces angiogenesis, vasculogenesis and endothelial cell growth, promotes cell migration, and inhibits apoptosis. In vitro, VEGF has been shown to stimulate endothelial cell mitogenesis and cell migration. VEGF is also a vasodilator and

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	increases microvascular permeability and was originally referred to as vascular permeability factor.
Form	Normally 10-50mM PB, 50-00mM Sodium Chloride and 3-7% sucrose are added, pH 6.0-6.5.
Molecular Mass	115 kDa(with glycosylation)
AA Sequence	SDTGRPFVEMYSEIPEIIHMTEGRELVIPCRVTSPNITVTLKKFPLDTLIPDGKRIIWDS RKGFIISNATY KEIGLLTCEATVNGHLYKTNLYTHRQTNTIIDVVLSPSHGIELSVGEKL VLNCTARTELVGIDFNWEYPS SKHQHKKLVNRDLKTQSGSEMKKFLSTLTIDGVT RSDQGLYTCAASSGLMTKKNSTFVRVHEKDKTHTCPP CPAPELLGGPSVFLFPPKP KDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNST YRV VSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRDEL KNQVSLTCLVK GFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKS RWQQGNVFSCSVMHEALHNHYT QKSLSLSPG
Endotoxin	<1.0 eu per 10 mg protein as determined by the lal
Purity	>95% as determined by SDS-PAGE and HPLC
Stability	Samples are stable for up to six months from date of receipt at -20 centigrade and are stable for two months at 4 centigrade.
Storage	Store it under sterile conditions at -70 centigrade upon receiving. Recommend to pack the protein intosmaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.
Alias	FLT1; FLT; VEGFR1; FLT-1; VEGFR-1; Aflibercept; Aflibercept (genetical recombination); Ziv-aflibercept

GENE INFORMATION

Gene Name	FLT1 fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor) [Homo sapiens]
Official Symbol	FLT1
Synonyms	FLT1; fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor); FLT; vascular endothelial growth factor receptor 1; VEGFR1; FLT-1; VEGFR-1; fms-like tyrosine kinase 1; tyrosine-protein kinase FRT; tyrosine-protein kinase receptor FLT; vascular permeability factor receptor;
Gene ID	2321
mRNA Refseq	NM_001159920
Protein Refseq	NP_001153392
MIM	165070
UniProt ID	P17948
Chromosome Location	13q12
Pathway	Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Endocytosis, organism-specific biosystem; Endocytosis, conserved biosystem; Focal Adhesion, organism-specific biosystem; Focal adhesion, organism-specific biosystem; Focal adhesion, conserved biosystem;

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Function

ATP binding; growth factor binding; nucleotide binding; protein binding; receptor activity; transmembrane receptor protein tyrosine kinase activity; vascular endothelial growth factor-activated receptor activity; vascular endothelial growth factor-activated receptor activity;

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