

Human VEGFR3 / FLT4 Protein (ECD, Fc Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 10806-H02H

General Information

Gene Name Synonym:

FLT-4; FLT-41; FLT41; LMPH1A; PCL; VEGF Receptor 3; VEGFR-3; VEGFR3

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Ile 776) of human VEGFR3 (NP_002011.2) was expressed with the fused Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA . 1. Immobilized recombinant human VEGFR3 at 5 µg/ml (100 µl/well) can bind recombinant human VEGF-D at a linear range of 62.5-2000 ng/ml. 2. Immobilized recombinant human VEGF-C at 10 µg/ml (100 µl/well) can bind recombinant human VEGFR3 at a linear range of 0.64-80 ng/ml. 3. Scatchard analysis showed the affinity constant (Kd) of recombinant human VEGF-C bound to recombinant human VEGFR3 was 1.4 nM.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: Tyr 25 & Ser 473

Molecular Mass:

The recombinant human VEGFR3/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 990 amino acids and predicts a molecular mass of 111.3 kDa. As a result of glycosylation and proteolytic cleavage, rhVEGFR3/Fc migrates as three bands (160, 85, 75 kDa) corresponding to the full length and the cleaved two polypeptides respectively in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Vascular endothelial growth factor receptor 3 (VEGFR3), also known as FLT-4, together with the other two members VEGFR1 (FLT-1) and VEGFR2 (KDR/Flk-1) are receptors for vascular endothelial growth factors (VEGF) and belong to the class III subfamily of receptor tyrosine kinases (RTKs). The VEGFR3 protein is expressed mainly on lymphatic vessels but it is also up-regulated in tumor angiogenesis. Mutations in VEGFR3 have been identified in patients with primary lymphoedema. The VEGF-C/VEGF-D/VEGFR3 signaling pathway may provide a target for antilymphangiogenic therapy in prostate cancer, breast cancer, gastric cancer, lung cancer, non-small cell lung cancer (NSCLC), and so on.

References

1. Shushanov S, *et al.* (2000) VEGFc and VEGFR3 expression in human thyroid pathologies. *Int J Cancer*. 86(1): 47-52.
2. Iljin K, *et al.* (2001) VEGFR3 gene structure, regulatory region, and sequence polymorphisms. *FASEB J.* 15(6): 1028-36.
3. Liu XE, *et al.* (2004) Expression and significance of VEGF-C and FLT-4 in gastric cancer. *World J Gastroenterol.* 10(3): 352-5.

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