

Human EGFL7 / VE-statin Protein (His Tag)

Catalog Number: 11979-H07B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

NEU1; VE-STATIN; ZNEU1

Protein Construction:

A DNA sequence encoding the mature form of human EGFL7 (NP_057299.1) (Tyr 24-Ser 273) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

1. Measured by the ability of the immobilized protein to support the adhesion of NIH-3T3 mouse embryonic fibroblast cells. When 5×10^4 cells/well are added to EGFL7-His coated plates (1.25 µg/mL and 100 µL/well), approximately >45% will adhere specifically after 30 minutes at 37°C.

Endotoxin:

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

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: His

Molecular Mass:

The recombinant human EGFL7 consists of 268 amino acids and predicts a molecular mass of 29.4 kDa. It migrates as an approximately 31 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 100mM Glycine, 10mM NaCl, 10% glycerol, pH 7.0

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

Storage:

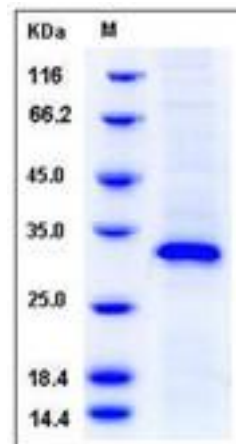
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Epidermal growth factor-like protein 7, also known as EGF-like protein 7, Multiple epidermal growth factor-like domains protein 7, Multiple EGF-like domains protein 7, Vascular endothelial statin, NOTCH4-like protein and EGFL7, is a secreted protein which contains two EGF-like domains and one EMI domain. EGFL7 was identified by a number of groups as a putative secreted factor produced by the vascular endothelial cells (ECs). EGFL7 is described as a novel endothelial cell-derived factor involved in the regulation of the spatial arrangement of cells during vascular tube assembly. With its impact on tubulogenesis and vessel shape EGFL7 joined the large family of molecules governing blood vessel formation. EGFL7 regulates midline angioblast migration in zebrafish embryos—a key step in vascular tubulogenesis. EGFL7 is tightly associated with the extracellular matrix (ECM), and it supports EC migration either as a single factor or in combination with other ECM molecules. EGFL7 provides a proper microenvironment for endothelial cell migration, thereby enabling accurate patterning. Our study indicates that the molecular composition of the ECM influences vascular morphogenesis. EGFL7 also regulates vascular tubulogenesis. It inhibits platelet-derived growth factor (PDGF)-BB-induced smooth muscle cell migration and promotes endothelial cells adhesion to the substrate.

References

1. Fitch, M.J. et al., 2004, Dev Dyn. 230 (2):316-24. 2. Schmidt, M. et al., 2007, Novartis Found Symp. 283 :18-28. 3. Campagnolo, L. et al., 2008, Gene Expr Patterns 8 (6):389-96.

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For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

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