

Human ESM1 / Endocan Protein (His Tag)

Catalog Number: 11578-H08B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

endocan

Protein Construction:

A DNA sequence encoding the human ESM1 (NP_008967.1) (Met1-Arg184) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

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: Trp 20

Molecular Mass:

The secreted recombinant human ESM1 consists of 176 amino acids and predicts a molecular mass of 19.6 KDa. The apparent molecular mass of the protein is approximately 23-27 KDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% glycerol, pH 8.0.

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:

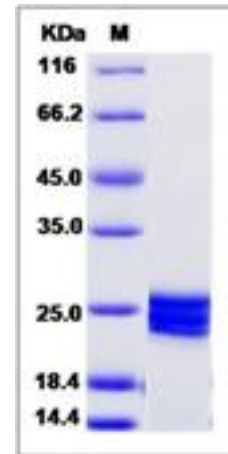
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

ESM1 is a secreted protein which is produced by adipocytes. It has been noticed that ESM1 may play some role in obesity-associated vascular disease since circulating ESM-1 levels are reduced in the overweight and obese. ESM1 is mainly expressed in the endothelial cells in human lung and kidney tissues. The expression of ESM1 gene is regulated by cytokines, suggesting that it may play a role in endothelium-dependent pathological disorders. Recently, ESM1 has been described as a specific biomarker of tip cells during neoangiogenesis. Its expression has been shown to increase in presence of pro-angiogenic growth factors such as VEGF or FGF-2. In hypervascularized cancers, overexpression of endocan has been detected by immunohistochemistry using monoclonal antibodies against ESM1.

References

- 1.Cong R, *et al.* (2006) Hhex is a direct repressor of endothelial cell-specific molecule 1 (ESM-1). *Biochem. Biophys Res Commun.* 346(2):535-45.
- 2.Aitkenhead M, *et al.* (2002) Identification of endothelial cell genes expressed in an in vitro model of angiogenesis: induction of ESM-1, (beta)ig-h3, and NrCAM. *Microvasc Res.* 63(2): 159-71.
- 3.Lassalle P, *et al.* (1996) ESM-1 is a novel human endothelial cell-specific molecule expressed in lung and regulated by cytokines. *J Biol Chem.* 271(34):20458-64.

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