Mouse Endoglin / CD105 / ENG Protein (His Tag)

Catalog Number: 50407-M08H

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

AI528660; AI662476; CD105; Endo; S-endoglin

Protein Construction:

A DNA sequence encoding the mouse CD105 (NP_031958.2) extracellular domain (Met 1-Gly 580) was expressed, with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.

Bio Activity:

1. Measured by its ability to inhibit BMP9-induced alkaline phosphatase production by MC3T3E1 mouse chondrogenic cells. The ED_{50} for this effect is typically 25-100 ng/mL in the presence of 2 ng/mL of recombinant human BMP9.

Endotoxin:

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

Predicted N terminal: Arg 27

Molecular Mass:

The secreted recombinant mouse CD105 consists of 565 amino acids and has a calculated molecular mass of 61.2 kDa. As a result of glycosylation, the apparent molecular mass of the recombinant protein is approximately 65-70 kDa 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℃ to -80℃.

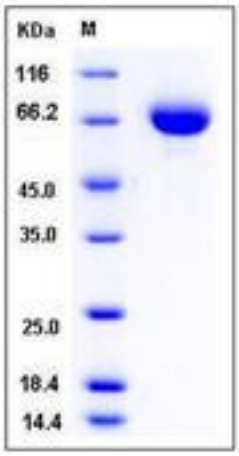
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Endoglin, also known as CD105, is a type I homodimeric transmembrane glycoprotein with a large, disulfide-linked, extracellular region and a short, constitutively phosphorylated cytoplasmic tail. Endoglin contains an RGD tripeptide which is a key recognition structure in cellular adhesion,,suggesting a critical role for endoglin in the binding of endothelial cells to integrins and/or other RGD receptors. Endoglin is highly expressed on vascular endothelial cells, chondrocytes, and syncytiotrophoblasts of term placenta. It is also found on activated monocytes, mesenchymal stem cells and leukemic cells of lymphoid and myeloid lineages. As an accessory receptor for the TGF-β superfamily ligands, endoglin binds TGF-β1 and TGF-β3 with high affinity not by itself but by associating with TGF-β type II receptor (TβRII) and activates the downstream signal pathways. In addition, in human umbilical vein endothelial cells, ALK-1 is also a receptor kinase for endoglin threonine phosphorylation, and mutations in either of the two genes result in the autosomal-dominant vascular dysplasia, hereditary hemorrhagic telangiectasia (HHT). Endoglin has been regarded as a powerful biomarker of neovascularization, and is associated with several solid tumor types.

References

1.Bellon T., *et al.*,(1993), Identification and expression of two forms of the human transforming growth factor-beta-binding protein endoglin with distinct cytoplasmic regions. Eur. J. Immunol. 23:2340-2345. 2.Humphray S.J., *et al.*, (2004), DNA sequence and analysis of human chromosome 9.Nature 429:369-374. 3.Gougos A., *et al.*,(1990), Primary structure of endoglin, an RGD-containing glycoprotein of human endothelial cells.J. Biol. Chem. 265:8361-8364.