Human Endoglin / CD105 / ENG Protein (His Tag)

Catalog Number: **10149-H08H**

General Information

Gene Name Synonym:

END; HHT1; ORW1

Protein Construction:

A DNA sequence encoding the extracellular domain of human CD105 (NP_001108225.1) (Met 1-Gly 586) was expressed, with C-terminal fused polyhistidine tag.

Source: Human

Expression Host: HEK293 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 ℃

Predicted N terminal: Glu 26

Molecular Mass:

The recombinant human CD105 consists of 572 amino acids after removal of the signal peptide and predicts a molecular mass of 62.3 kDa. As a result of glycosylation, rh CD105 migrates as an approximately 80-90 kDa protein 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

Storage:

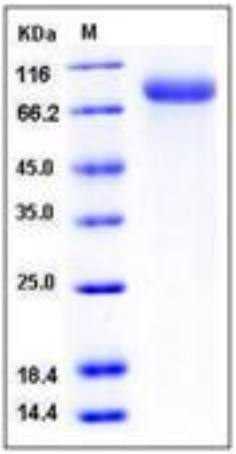
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.