

Recombinant Human Endoglin/ENG/CD105 Protein

Catalog No.: RP01413 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	2022	P17813

Tags

C-His

Synonyms

END;HHT1;ORW1;CD105;ENG;endoglin

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Calculated MW	Observed MW
61.59 kDa	75-80 kDa

Endotoxin

<0.1EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

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.

Basic Information

Description

Recombinant Human Endoglin/ENG/CD105 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Glu26-Gly586) of human Endoglin/CD105 (Accession #NP_001108225.1) fused with a 6xHis tag at the C-terminus.

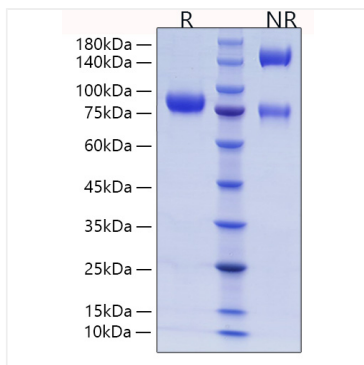
Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Human CD105 at 2 μg/mL (100 μL/well) can bind Human ACVR2B with a linear range of 0.01-1.35 μg/mL. 2. Measured by its binding ability in a functional ELISA. Immobilized Human CD105 at 2 μg/mL (100 μL/well) can bind Human TGFBR2 with a linear range of 0.01-1.72 μg/mL.

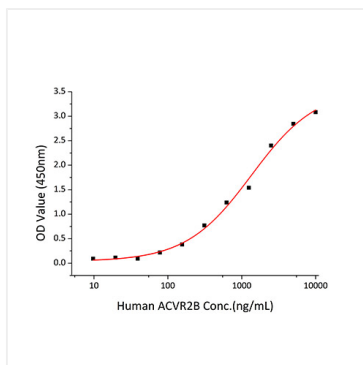
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

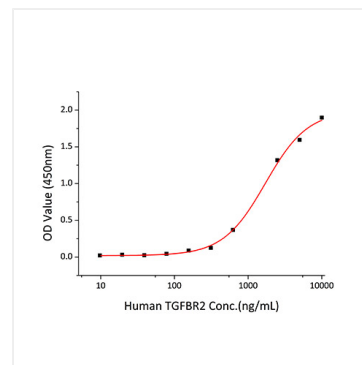
Validation Data



Recombinant Human Endoglin/CD105 Protein was resolved with SDS PAGE under reducing (R) and non-reducing (NR) conditions, showing single bands at 75-80 kDa and 140-160 kDa, respectively.



Immobilized Human CD105 at 2 μ g/mL (100 μ L/well) can bind Human ACVR2B with a linear range of 0.01-1.35 μ g/mL.



Immobilized Human CD105 at 2 μ g/mL (100 μ L/well) can bind Human TGFBR2 with a linear range of 0.01-1.72 μ g/mL.