



# Recombinant Protein Technical Manual

## Recombinant Human Endoglin/CD105 Protein (Fc Tag)(Active)

RPES0199

### Product Data:

**Product SKU:** RPES0199

**Size:** 20µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_001108225.1

### Protein Information:

**Molecular Mass:** 87.5 kDa

**AP Molecular Mass:** 11520 kDa

**Tag:** C-Fc

**Bio-activity:** 1. Measured by its ability to bind biotinylated Human TGFRB1 in a functional ELISA. 2. Measured by its ability to bind biotinylated Human ALK1-Fc in functional Elisa.

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Functional ELISA

**Synonyms:** Endoglin; END; CD105; ENG;HHT1;ORW1

## Immunogen Information:

**Sequence:** Met 1-Gly 586

## 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- $\beta$  superfamily ligands, endoglin binds TGF- $\beta$ 1 and TGF- $\beta$ 3 with high affinity not by itself but by associating with TGF- $\beta$  type II receptor (T $\beta$ RII) and activates the downstream signal pathways. In addition, in human umbilical vein endothelial cells, ALK 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.