

Recombinant Mouse Endoglin

Cat. No. Eng-982M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Endoglin encoding the extracellular domain of mouse Endoglin (Met 1 - Gly 581) was expressed in <i>insect cells</i> . Mouse Endoglin is a disulfide-linked homodimeric protein. Based on N-terminal sequence analysis, the primary structure of recombinant mature Endoglin starts at Glu 26. Endoglin has a calculated monomeric molecular mass of 61 kDa but as a result of glycosylation, migrates at approximately 75 - 85 kDa under reducing conditions in SDS-PAGE.
Species	Mouse
Source	Insect Cells
Protein Length	1-581 a.a.
Description	Endoglin, also known as CD105, is a Type I integral membrane glycoprotein with a large, disulfide-linked, extracellular region and a short, constitutively phosphorylated, cytoplasmic tail. Endoglin is highly expressed on vascular endothelial cells, chondrocytes, and syncytiotrophoblasts of term placenta. It is also found on activated monocytes, bone marrow pro-erythroblasts, and leukemic cells of lymphoid and myeloid lineages. Human and mouse endoglin share approximately 70% and 97 % amino acid sequence identity in their extracellular and intracellular domains, respectively. In common with betaglycan (also named T β RIII), a proteoglycan that shares regions of sequence similarity, endoglin is an accessory receptor for the TGF- β superfamily ligands. Endoglin does not bind ligands by itself, but does so by associating with a ligand-binding serine/threonine kinase receptor. Endoglin binds

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TGF-1 and TGF-3 but not TGF-2 efficiently by associating with TGF- type II receptor (TβRII). It interacts with activin-A and BMP-7 using either the activin type II or type IIB receptors. In the case of BMP-2 which binds directly to the type I but not the type II BMP receptor, endoglin binds via either BMPRI-IA (ALK-3) or BMPRI-1B (ALK-6).

Purity > 95% (SDS-PAGE and visualized by Silverstain).

Endotoxin level < 0.1 ng per µg of sCD105.

Stabilizer None.

Formulation Lyophilized.

Biologically Activity Measured by its ability to bind with TGF- RII/Fc in a functional ELISA. Optimal dilutions should be determined by each laboratory for each application.

Reconstitution The carrier-free protein should be used immediately upon reconstitution to avoid losses in activity due to non-specific binding to the inside surface of the vial. For long term storage as a dilute solution, a carrier protein (e.g. 0.1% HSA or BSA) should be added to the vial.

Stability Upon reconstitution, this cytokine, in the presence of a carrier protein, can be stored under sterile conditions at -20°C to -70°C for three months without detectable loss of activity. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name Eng endoglin [*Mus musculus*]

Synonyms Eng; endoglin; CD105; AI528660; AI662476; S-endoglin; OTTMUSP00000012838; transmembrane glycoprotein

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Gene ID	13805
mRNA Refseq	NM_001146348
Protein Refseq	NP_001139820
UniProt ID	Q63961
Chromosome Location	2 21.4 cM
Function	Binding; protein binding; protein homodimerization activity; transforming growth factor beta binding

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