

Monoclonal Antibody to CD105 / Endoglin - FITC

Alternate names: END, ENG, HHT1, ORW, ORW1

Catalog No.: DM3612FT

Quantity: 25 µg

Concentration: 0.2 mg/ml

Background: 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 70 - 75 kDa under reducing conditions in SDS-PAGE. 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. Two splice variants of human Endoglin, the S-Endoglin and L-Endoglin that differ in the length of their cytoplasmic tails have been identified. 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. Endoglin binds TGF-β1 and TGF-β3 but not TGF-β2 efficiently by associating with TGF-β type II receptor (TβRII). Endoglin has been shown to be a powerful marker of neovascularization. It is also useful as a functional marker that defines long-term repopulating hematopoietic stem cells.

Uniprot ID: [Q63961](#)

NCBI: [10090](#)

GeneID: [13805](#)

Host / Isotype: Rat / IgG2a

Recommended Isotype Controls: SM15F, SM15FX

Clone: MJ7/18

Immunogen: Murine stromal cell line

Format: **State:** Liquid purified IgG fraction of the Culture Supernatant
Purification: Protein G Chromatography
Buffer System: PBS
Preservatives: 0.02% Sodium Azide
Stabilizers: 1% BSA
Label: FITC

Applications: **FACS analysis:** The suggested use of the antibody is ≤ 0.5 µg in 100 µl volume.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This MJ7/18 Monoclonal unconjugated antibody reacts with the CD105 molecule, also known as Endoglin.

Species: Mouse.

Other species not tested.

Storage:

Store undiluted at 2-8°C.

DO NOT FREEZE!

This product is photosensitive and should be protected from light.

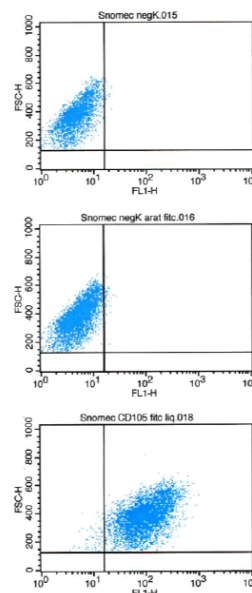
Shelf life: one year from despatch.

General Readings:

1. Cheifetz S, Bellón T, Calés C, Vera S, Bernabeu C, Massagué J, et al. Endoglin is a component of the transforming growth factor-beta receptor system in human endothelial cells. *J Biol Chem.* 1992 Sep 25;267(27):19027-30. PubMed PMID: 1326540.
2. Parker WL, Goldring MB, Philip A. Endoglin is expressed on human chondrocytes and forms a heteromeric complex with betaglycan in a ligand and type II TGFbeta receptor independent manner. *J Bone Miner Res.* 2003 Feb;18(2):289-302. PubMed PMID: 12568406.
3. Barbara NP, Wrana JL, Letarte M. Endoglin is an accessory protein that interacts with the signaling receptor complex of multiple members of the transforming growth factor-beta superfamily. *J Biol Chem.* 1999 Jan 8;274(2):584-94. PubMed PMID: 9872992.
4. McAllister KA, Grogg KM, Johnson DW, Gallione CJ, Baldwin MA, Jackson CE, et al. Endoglin, a TGF-beta binding protein of endothelial cells, is the gene for hereditary haemorrhagic telangiectasia type 1. *Nat Genet.* 1994 Dec;8(4):345-51. PubMed PMID: 7894484.
5. Chen CZ, Li M, de Graaf D, Monti S, Göttgens B, Sanchez MJ, et al. Identification of endoglin as a functional marker that defines long-term repopulating hematopoietic stem cells. *Proc Natl Acad Sci U S A.* 2002 Nov 26;99(24):15468-73. Epub 2002 Nov 15. PubMed PMID: 12438646.
6. Ge AZ, Butcher EC. Cloning and expression of a cDNA encoding mouse endoglin, an endothelial cell TGF-beta ligand. *Gene.* 1994 Jan 28;138(1-2):201-6. PubMed PMID: 8125301.

Pictures:

FACS analysis with mouse endothelial cells. Upper panel: no primary antibody; Middle panel: solely conjugated secondary antibody; Lower panel: FITC-conjugated anti-mouse CD105 antibody.



FACS analysis with mouse endothelial cells.

