Technical Data Sheet

# Purified Mouse Anti- Human CD105

## Product Information

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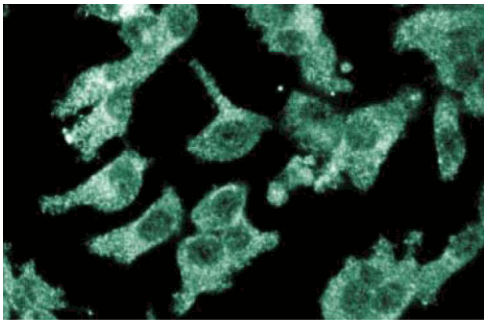
|---|---|
| **Material Number:** | **611314** |
| **Alternate Name:** | Endoglin |
| **Size:** | 50 µg |
| **Concentration:** | 250 µg/ml |
| **Clone:** | 35/CD105 |
| **Immunogen:** | Human S-Endoglin aa. 24-144 |
| **Isotype:** | Mouse IgG1, κ |
| **Reactivity:** | QC Testing: Human |
| **Target MW:** | 95 kDa |
| **Storage Buffer:** | Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide. |

## Description

Endoglin (CD105), a major glycoprotein of human vascular endothelium, is a type I integral membrane protein with a large extracellular region, a hydrophobic transmembrane region, and a short cytoplasmic tail. It also contains an RGD tripeptide that may be important for cellular adhesion. There are two forms of endoglin (S-endoglin and L-endoglin) that differ in the length of their cytoplasmic tails. However, the isoforms may have similar functional activity. When overexpressed in fibroblasts, both form disulfide-linked homodimers via their extracellular domains. Endoglin binds TGF-β1 and TGF-β3 by associating with TGF-β type II receptor and binds BMP-7 by associating with activin type II receptor. Thus, endoglin is an accessory protein of multiple TGF-β superfamily kinase receptor complexes. Loss of function mutations in the human *endoglin* gene cause hereditary hemorrhagic telangiectasia, which is characterized by vascular malformations. Deletion of endoglin in mice leads to death due to defective vascular development. Thus, endoglin is an endothelial specific cell surface protein that may regulate angiogenesis through interactions with TGF-β superfamily kinase receptors.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.


***Western blot analysis of CD105 on human endothelial cell lysate.*** *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-CD105.*



***Immunofluorescent staining of ES2 cells with anti-CD105/endoglin antibody.***

## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

**BD Biosciences**

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## Application Notes

**Application**

| | |
|---|---|
| Western blot | Routinely Tested |
| Immunofluorescence | Tested During Development |

## Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|---|---|---|---|
| 611450 | Human Endothelial Cell Lysate | 500 µg | (none) |
| 554001 | FITC Goat Anti-Mouse Ig | 0.5 mg | Polyclonal |
| 554002 | HRP Goat Anti-Mouse Ig | 1.0 ml | (none) |

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

## References


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; 274(2):584-594.(Biology)

Bellon T, Corbi A, Lastres P. Identification and expression of two forms of the human transforming growth factor-beta-binding protein endoglin with distinct cytoplasmic regions. *Eur J Biochem.* 1993; 23(9):2340-2345.(Biology)

Gougos A, Letarte M. Primary structure of endoglin, an RGD-containing glycoprotein of human endothelial cells. *J Biol Chem.* 1990; 265(15):8361-8364.(Biology)

Li DY, Sorensen LK, Brooke BS. Defective angiogenesis in mice lacking endoglin. *Science.* 1999; 284(5419):1534-1537.(Biology)