



11-298-C100

## Monoclonal Antibody to CD105 Purified Antibody (0.1 mg)

<b>Clone:</b>	MEM-226
<b>Isotype:</b>	Mouse IgG2a
<b>Specificity:</b>	The antibody MEM-226 reacts with CD105 (Endoglin), a 90 kDa type I homodimerizing membrane glycoprotein expressed on vascular endothelial cells (small and large vessels), activated monocytes and tissue macrophages, stromal cells of certain tissues including bone marrow, pre-B lymphocytes in fetal marrow and erythroid precursors in fetal and adult bone marrow; it is also present on syncytiotrophoblast on placenta throughout pregnancy.
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	Recombinant Vaccinia virus containing the human CD105 cDNA.
<b>Species Reactivity:</b>	Human, Rat
<b>Application:</b>	Flow Cytometry Recommended dilution: 2 µg/ml Immunoprecipitation Western Blotting Application note: Non-reducing conditions. Mass Cytometry
<b>Purity:</b>	> 95% (by SDS-PAGE)
<b>Purification:</b>	Purified by protein-A affinity chromatography
<b>Concentration:</b>	1 mg/ml
<b>Storage Buffer:</b>	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
<b>Storage / Stability:</b>	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	CD105 (Endoglin) is a homodimeric transmembrane glycoprotein serving in presence of TGFbetaR-2 as a receptor for TGFbeta-1 and TGFbeta-3. CD105 is highly expressed on endothelial cells and promotes angiogenesis during wound healing, infarcts and in a wide range of tumours and its gene expression is stimulated by hypoxia. CD105 prevents apoptosis in hypoxic endothelial cells and also antagonises the inhibitory effects of TGFbeta-1 on vascular endothelial cell growth and migration. Normal cellular levels of CD105 are required for formation of new blood vessels.

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**Antibodies**

- References:**
- \*Zhu Y, Sun Y, Xie L, Jin K, Sheibani N, Greenberg DA: Hypoxic induction of endoglin via mitogen-activated protein kinases in mouse brain microvascular endothelial cells. *Stroke*. 2003 Oct;34(10):2483-8.
  - \*Li C, Issa R, Kumar P, Hampson IN, Lopez-Novoa JM, Bernabeu C, Kumar S: CD105 prevents apoptosis in hypoxic endothelial cells. *J Cell Sci*. 2003 Jul 1;116(Pt 13):2677-85.
  - \*Guo B, Slevin M, Li C, Parameshwar S, Liu D, Kumar P, Bernabeu C, Kumar S: CD105 inhibits transforming growth factor-beta-Smad3 signalling. *Anticancer Res*. 2004 May-Jun;24(3a):1337-45.
  - \*Warrington K, Hillarby MC, Li C, Letarte M, Kumar S: Functional role of CD105 in TGF-beta1 signalling in murine and human endothelial cells. *Anticancer Res*. 2005 May-Jun;25(3B):1851-64.
  - \*Piao M, Tokunaga O: Significant expression of endoglin (CD105), TGFbeta-1 and TGFbeta R-2 in the atherosclerotic aorta: an immunohistological study. *J Atheroscler Thromb*. 2006 Apr;13(2):82-9.
  - \*Schmidt D, Achermann J, Odermatt B, Breyman C, Mol A, Genoni M, Zund G, Hoerstrup SP: Prenatally fabricated autologous human living heart valves based on amniotic fluid derived progenitor cells as single cell source. *Circulation*. 2007 Sep 11;116(11 Suppl):I64-70.
  - \*Asumda FZ, Chase PB: Age-related changes in rat bone-marrow mesenchymal stem cell plasticity. *BMC Cell Biol*. 2011 Oct 12;12:44.

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