

Monoclonal Antibody to CD105 / Endoglin - Purified

Alternate names:	END, ENG, HHT1, ORW, ORW1
Catalog No.:	AM03092PU-N
Quantity:	0.1 mg
Concentration:	1.0 mg/ml
Background:	CD105 (Endoglin) is a homodimeric transmembrane glycoprotein serving in presence of TGF β R-2 as a receptor for TGF β -1 and TGF β -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 TGF β -1 on vascular endothelial cell growth and migration. Normal cellular levels of CD105 are required for formation of new blood vessels.
Uniprot ID:	P17813
NCBI:	9606
Host / Isotype:	Mouse / IgG2a
Clone:	MEM-229
Immunogen:	Recombinant Vaccinia virus containing the Human CD105 (L-isoform) cDNA.
Format:	State: Liquid purified IgG fraction (> 95% pure by SDS-PAGE) Purification: Protein-A Affinity Chromatography Buffer System: PBS, pH~7.4 Preservatives: 15 mM Sodium Azide
Applications:	Flow Cytometry: 10 μ g/ml. <i>Positive Control:</i> Kg1 Human acute myelogenous leukemia cell line. Western Blotting (Non-Reducing Conditions). Immunocytochemistry. Immunohistochemistry on Frozen Sections: 1/200 (Acetone Fixation). Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	The antibody <i>MEM-229</i> recognizes CD105 (Endoglin), a 180 kDa type I integral membrane homodimer 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.
Species Reactivity:	Tested: Human, Porcine.

For research and in vitro use only. Not for diagnostic or therapeutic work.

Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Antibody Hotline - Technical Questions - Antibody Location Service
Free Call: 0800-2274746 (Germany only) - www.acris-antibodies.com



Storage:

Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. 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. Epub 2003 Aug 28. PubMed PMID: 12947156.
2. Li C, Issa R, Kumar P, Hampson IN, Lopez-Novoa JM, Bernabeu C, et al. CD105 prevents apoptosis in hypoxic endothelial cells. *J Cell Sci*. 2003 Jul 1;116(Pt 13):2677-85. Epub 2003 May 13. PubMed PMID: 12746487.
3. Guo B, Slevin M, Li C, Parameshwar S, Liu D, Kumar P, et al. CD105 inhibits transforming growth factor-beta-Smad3 signalling. *Anticancer Res*. 2004 May-Jun;24(3a):1337-45. PubMed PMID: 15274293.
4. 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. PubMed PMID: 16158917.
5. 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. PubMed PMID: 16733295.
6. Plánka L, Necas A, Srnc R, Rauser P, Starý D, Jancár J, et al. Use of allogenic stem cells for the prevention of bone bridge formation in miniature pigs. *Physiol Res*. 2009;58(6):885-93. Epub 2008 Dec 17. PubMed PMID: 19093735.

Pictures:

Immunofluorescence staining of an infarcted porcine heart with anti-CD105 (MEM-229; green); cell nuclei stained with DAPI (blue).

