EXBIO Antibodies

PRODUCT DATA SHEET

1B-453-C100

Monoclonal Antibody to CD105 Biotin conjugated (0.1 mg)

Clone:	MEM-229
Isotype:	Mouse IgG2a
Specificity:	The antibody MEM-229 recognizes CD105 (Endoglin), a 90 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.
Regulatory Status:	RUO
Immunogen:	Recombinant Vaccinia virus containing the human CD105 (L-isoform) cDNA.
Species Reactivity:	Human, Porcine
Negative Species:	Canine (Dog), Equine (Horse)
Preparation:	The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions. The reagent is free of unconjugated biotin.
Concentration:	1 mg/ml
Storage Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Storage / Stability:	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
Usage:	Biotinylated antibody is designed for indirect immunofluorescence analysis by Flow Cytometry.
Expiration:	See vial label
Lot Number:	See vial label
Background:	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.

For laboratory research only, not for drug, diagnostic or other use.

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz

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.

*Plánka L, Necas A, Srnec R, Rauser P, Starý D, Jancár J, Amler E, Filová E, Hlucilová J, Kren L, Gál P: Use of allogenic stem cells for the prevention of bone bridge formation in miniature pigs. Physiol Res. 2009;58(6):885-93.

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz