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Monoclonal Antibody to CD105 / Endoglin - FITC

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

Catalog No.: AM03092FC-N

Quantity: 100 Tests

Background: CD105 (Endoglin) is a homodimeric transmembrane glycoprotein serving in presence of TGFbR-2 as a receptor for TGFb-1 and TGFb-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 TGFb-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 Ig fraction
Buffer System: PBS
Preservatives: 15 mM Sodium Azide
Stabilizers: 0.2% (w/v) high-grade protease free BSA
Label: FITC – Conjugated with Fluorescein isothiocyanate

Applications: **Flow Cytometry** analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.
The Content of vial (2 ml) is sufficient for 100 Tests.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody 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.

Storage: Store udniluted 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. 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.

Pictures:

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