VN10A-05
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Monoclonal Antibody to CD105 / Endoglin - FITC -

Catalog No.: VN10A-05

Quantity: 0.5 mg

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.

Host / Isotype: Mouse / IgG2a

Clone: N10-A

Immunogen: Recombinant Vaccinia virus containing the human CD105 cDNA

Format: **State:** Liquid purified Ig fraction
Buffer System: Phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent.
Label: Conjugated with Fluorescein isothiocyanate (FITC)

Applications: Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10e6 cells in a suspension.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

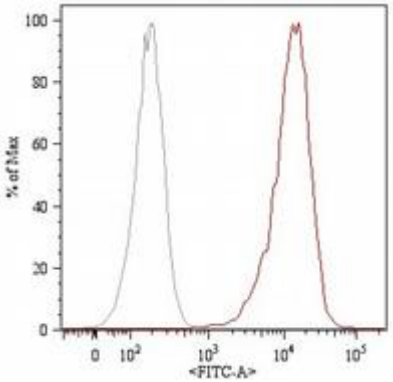
Specificity: The antibody MEM-226 reacts with CD105 (Endoglin), a 180 kDa type I homodimerizing membrane glycoprotein expressed on vascular endothelial cells (small and large vessels), activated monocytes and tissue macrophages, stromal cells of certain tissues including bone marrow, pre-B lymphocytes in fetal marrow and erythroid precursors in fetal and adult bone marrow; it is also present on syncytiotrophoblast on placenta throughout pregnancy.
Species: Human.
Others not tested.

Storage: Store the antibody at 2 - 8 °C. DO NOT FREEZE! This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General References:
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.
2. 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.

3. 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.
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.
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.

Pictures:



Surface staining of HUVEC (human umbilical vein endothelial cells) with anti-human CD105 (MEM-226) FITC. Total viable cells were used for analysis.