

TECHNICAL DATA SHEET

CyFlow™ CD105 PerCP-Cy5.5 Anti-Hu; Clone MEM-229

REF AT475329

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD105
Alternative Names	Endoglin
Clone	MEM-229
Clonality	monoclonal
Format	PerCP-Cy5.5
Host / Isotype	Mouse / IgG2a
Species Reactivity	Human, Pig
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Recombinant Vaccinia virus containing the human CD105 (L-isoform) cDNA

Specificity

The mouse monoclonal antibody MEM-226 recognizes CD105 antigen, a 90 kDa type I integral membrane homodimer glycoprotein expressed on vascular endothelial cells (small and large vessels),

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

activated monocytes and tissue macrophages, stromal cells of certain tissues including bone marrow, pre-B lymphocytes in fetal bone marrow and erythroid precursors in fetal and adult bone marrow; it is also present on syncytiotrophoblast on placenta throughout pregnancy.

Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD105 (Endoglin) is a homodimeric transmembrane glycoprotein serving in presence of TGFβR-2 as a receptor for TGFβ-1 and TGFβ-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 antagonizes the inhibitory effects of TGFβ-1 on vascular endothelial cell growth and migration. Normal cellular levels of CD105 are required for formation of new blood vessels.

References

- 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(13):2677-85. < PMID: 12746487 >
- 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. < PMID: 12947156 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

- 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. < PMID: 15274293 >
- 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. < PMID: 16158917 >
- 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. < PMID: 16733295 >
- 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. < PMID: 19093735 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

Cy and CyDye are trademarks of GE Healthcare.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com