

# **TECHNICAL DATA SHEET**

CyFlow™ CD105 Pacific Blue™ Anti-Hu/Rt; Clone MEM-226



AZ229941

# For Research Use Only. Not for use in diagnostic or therapeutic procedures.

#### **Specifications**

Antigen	CD105
Alternative Names	Endoglin
Clone	MEM-226
Clonality	monoclonal
Format	Pacific Blue™
Host / Isotype	Mouse / IgG2a
Species Reactivity	Human   Rat
Negative Species Reactivity	_
Quantity	100 tests
Immunogen	Recombinant Vaccinia virus containing the human CD105 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), activated monocytes and tissue macrophages, stromal cells of certain tissues including bone marrow,

#### **Contact Information:**

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

Date: 2016-05-26



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  $\mu$ l reagent / 100  $\mu$ l of whole blood or 10<sup>6</sup> 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 TGF $\beta$ R-2 as a receptor for TGF $\beta$ -1 and TGF $\beta$ -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 TGF $\beta$ -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 >



- 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 >
- Schmidt D, Achermann J, Odermatt B, Breymann C, Mol A, Genoni M, Zund G, Hoerstrup SP: Prenatally fabricated autologous human living heart valves based on amniotic fluid derived progenitor cells as single cell source. Circulation. 2007 Sep 11; 116(11 Suppl):164-70. < PMID: 17846327 >

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

This product is provided under an intellectual property license from Life Technologies Corporation. The transfer of this product is conditioned on the buyer using the purchased product solely in research conducted by the buyer, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a pertest basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@lifetech.com.