

TECHNICAL DATA SHEET

CyFlow™ STRO1 PE Anti-Hu; Clone STRO-1

REF BA518386

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	STRO1
Alternative Names	—
Clone	STRO-1
Clonality	monoclonal
Format	PE
Host / Isotype	Mouse / IgM
Species Reactivity	Human
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [0.1 mg/ml]
Immunogen	Human CD34 positive bone marrow cells

Specificity

The mouse monoclonal antibody STRO-1 recognizes the cell surface STRO1 antigen expressed by bone marrow mesenchymal stromal cells and nucleated erythroid precursors, but not by committed hematopoietic progenitors.

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Application

The reagent is designed for Flow Cytometry analysis. Working concentrations should be determined by the investigator.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing Tris buffered saline (TBS) solution, pH $\approx$ 8.0, 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

STRO-1 is a cell surface antigen expressed by stromal elements in human bone marrow, identified by monoclonal antibody STRO1. Approximately 10% of mononuclear cells, greater than 95% of which are nucleated erythroid precursors, are STRO-1 positive, whereas the CFU-GM (colony-forming unit granulocyte-macrophage), BFU-E (erythroid burst) and CFU-Mix (mixed colonies) committed progenitor cells are negative. CFU-F (fibroblast colony-forming cells) are present exclusively in the STRO-1 positive population. When plated under long-term bone marrow culture conditions, STRO-1 positive cells generate adherent cell layers containing multiple stromal cell types, including adipocytes, smooth muscle cells, osteoblasts, chondrocytes, and fibroblastic elements. In combination with glycophorin A, STRO-1 is a useful marker for identification of mesenchymal stem cells. STRO-1 and CD117 are markers for osteosarcoma cells.

References

- Simmons PJ, Torok-Storb B: Identification of stromal cell precursors in human bone marrow by a novel monoclonal antibody, STRO-1. Blood. 1991 Jul 1; 78(1):55-62. < PMID: 2070060 >
- Oyajobi BO, Lomri A, Hott M, Marie PJ: Isolation and characterization of human clonogenic osteoblast progenitors immunoselected from fetal bone marrow stroma using STRO-1 monoclonal antibody. J Bone Miner Res. 1999 Mar; 14(3):351-61. < PMID: 10027900 >

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- Stenderup K, Justesen J, Eriksen EF, Rattan SI, Kassem M: Number and proliferative capacity of osteogenic stem cells are maintained during aging and in patients with osteoporosis. J Bone Miner Res. 2001 Jun; 16(6):1120-9. < PMID: 11393789 >
- Gronthos S, Zannettino AC, Hay SJ, Shi S, Graves SE, Kortessidis A, Simmons PJ: Molecular and cellular characterisation of highly purified stromal stem cells derived from human bone marrow. J Cell Sci. 2003 May 1; 116(9):1827-35. < PMID: 12665563 >
- Bensidhoum M, Chapel A, Francois S, Demarquay C, Mazurier C, Fouillard L, Bouchet S, Bertho JM, Gourmelon P, Aigueperse J, Charbord P, Gorin NC, Thierry D, Lopez M: Homing of in vitro expanded Stro-1- or Stro-1+ human mesenchymal stem cells into the NOD/SCID mouse and their role in supporting human CD34 cell engraftment. Blood. 2004 May 1; 103(9):3313-9. < PMID: 14715641 >
- Seo BM, Miura M, Sonoyama W, Coppe C, Stanyon R, Shi S: Recovery of stem cells from cryopreserved periodontal ligament. J Dent Res. 2005 Oct; 84(10):907-12. < PMID: 16183789 >
- Kaneko R, Akita H, Shimauchi H, Sasano Y: Immunohistochemical localization of the STRO-1 antigen in developing rat teeth by light microscopy and electron microscopy. J Electron Microsc (Tokyo). 2009 Dec; 58(6):363-73. < PMID: 19525367 >

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

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