

AM26067RP-N**Monoclonal Antibody to STRO-1 - PE**

Quantity:	0.1 mg
Concentration:	0.1 mg/ml
Background:	STRO-1 is a cell surface antigen expressed by stromal elements in human bone marrow, identified by monoclonal antibody STRO-1. 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.
Host / Isotype:	Mouse / IgM
Clone:	STRO-1
Immunogen:	Human CD34 positive bone marrow cells
Format:	State: Liquid purified Ig fraction Buffer System: Tris buffered saline (TBS) Preservatives: 15 mM sodium azide Stabilizers: 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) Label: PE – Conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography.
Applications:	Flow cytometry. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody recognizes the cell surface antigen STRO-1 expressed by bone marrow mesenchymal stromal cells and nucleated erythroid precursors, but not by committed hematopoietic progenitors.
Species Reactivity:	Tested: Human
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 Readings:	1. 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. PubMed PMID: 2070060. 2. 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. PubMed PMID: 16183789.

3. 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(Pt 9):1827-35.
4. 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. PubMed PMID: 11393789.
5. 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. doi: 10.1093/jmicro/dfp029. Epub 2009 Jun 12. PubMed PMID: 19525367.
6. Bensidhoum M, Chapel A, Francois S, Demarquay C, Mazurier C, Fouillard L, et al. 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. Epub 2004 Jan 8. PubMed PMID: 14715641.
7. 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. PubMed PMID: 10027900.

Pictures:

Surface staining of Kg1a cells with anti-STRO-1 (STRO-1) purified.

