

1P-649-C025

Monoclonal Antibody to STRO-1 Phycoerythrin (PE) conjugated (0.025 mg)

Clone:	STRO-1
Isotype:	Mouse IgM
Specificity:	The mouse monoclonal antibody STRO-1 recognizes the cell surface antigen STRO-1 expressed by bone marrow mesenchymal stromal cells and nucleated erythroid precursors, but not by committed hematopoietic progenitors.
Regulatory Status:	RUO
Immunogen:	Human CD34 positive bone marrow cells
Species Reactivity:	Human
Preparation:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography.
Concentration:	0.1 mg/ml
Storage Buffer:	The reagent is provided in stabilizing Tris buffered saline (TBS) solution containing 15 mM sodium azide.
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
Usage:	The reagent is designed for Flow Cytometry analysis.
Expiration:	See vial label
Lot Number:	See vial label
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.

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**Antibodies****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.
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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.
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- *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.
- *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.

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EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz