**Qty:** 100 µL

Mouse anti-STRO-1

**Catalog No.** 39-8401

**Lot No.**

# Mouse anti-STRO-1

## FORM
This monoclonal antibody is supplied as a 100 µL aliquot of mouse ascites.

**CLONE:** Stro-1 **ISOTYPE:** Mouse IgM

## IMMUNOGEN
CD34+ human bone marrow cells

## SPECIFICITY
STRO-1 was originally identified as an antibody that reacts with stromal cells in the adherent layer of long-term bone marrow cultures. [1]

## REACTIVITY
Reactivity has been confirmed with human mesenchymal stem cells by immunocytochemistry. Reactivity in mouse[5] and rat[6] tissues has also been observed.

| Sample | Immuno-cytochemistry | Flow Cytometry[1] |
|---|---|---|
| Human | +++ | +++ |
| Mouse | +++ | ND |
| Rat | +++ | ND |

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

## USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following dilutions are recommended starting points for this product.

**Immunocytochemistry:** 1:25-1:100
**Flow Cytometry[1]:** 1:5-1:10

## STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

## BACKGROUND

The STRO-1 monoclonal antibody identifies a cell surface antigen expressed by stromal elements in human bone marrow.[1] STRO-1 binds to approximately 10% of bone marrow mononuclear cells, greater than 95% of which are nucleated erythroid precursors, but does not react with committed progenitor cells (colony-forming unit granulocyte-macrophage (CFU-GM)), erythroid bursts (BFU-E), and mixed colonies (CFU-Mix).[1] From bone marrow cells, the frequency of fibroblast colony-forming cells (CFU-F) is enriched approximately 100-fold in the STRO-1-positive/Glycophorin A-negative population than in the STRO-1-positive/Glycophorin A-positive population. When plated under long-term BM culture conditions, STRO-1-positive cells generate adherent cell layers containing multiple stromal cell types, including adipocytes, smooth muscle cells, and fibroblastic elements.[1] A STRO-1-positive enriched subset of marrow cells is capable of differentiating into multiple mesenchymal lineages including hematopoiesis-supportive stromal cells with a vascular smooth muscle-like phenotype, adipocytes, osteoblasts and chondrocytes.[2-4] STRO-1 is a valuable antibody for the identification, isolation and functional characterization of human bone marrow stromal cell precursors.[2-4]

## REFERENCES


1. Simmons PJ & Torok-Storb B. *Blood* 78(1):55-62, 1991.
2. Gronthos S, et al. *J Bone Miner Res* 14(1):47-56, 1999.
3. Gronthos S & Simmons PJ. *Blood* 85(4):929-940, 1995.
4. Gronthos S, et al. *Blood* 84(12):4164-4173, 1994.
5. Kemoun P, et al. *Tissue and Cell* 39(4):257-266, 2007.
6. Kaneko, R. et al. Chapter 'Immunohistological study on STRO-1 in developing rat molars', Published in Interface Oral Health Science, Springer Japan, 2007.


## RELATED PRODUCTS

| *Product* | *Conjugate* | *Cat. No.* |
|---|---|---|
| Protein A | Sepharose® 4B | 10-1041 |
| rec-Protein G | Sepharose® 4B | 10-1241 |

| Conjugate | ZyMAX™ Goat x Rabbit IgG (H+L) | ZyMAX™ Goat x Mouse IgG (H+L) |
|---|---|---|
| Purified | 81-6100 | 81-6500 |
| FITC | 81-6111 | 81-6511 |
| TRITC | 81-6114 | 81-6514 |
| Cy™3 | 81-6115 | 81-6515 |
| Cy™5 | 81-6116 | 81-6516 |
| HRP | 81-6120 | 81-6520 |
| AP | 81-6122 | 81-6522 |
| Biotin | 81-6140 | 81-6540 |



**For research use only. CAUTION: Not intended for human or animal therapeutic or diagnostic use.**

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