

rat thymocytes, bone marrow (W3/15): sc-53110

BACKGROUND

A thymocyte is a type of cell produced by the thymus that functions as a precursor cell to the T cells of the immune system. Proliferation of thymocytes and the development of thymic T cells is induced by interleukin-6. Thymocytes are useful for some types of immunosuppressive therapy. Bone marrow refers to the tissue located in the center of large bones. New hematopoietic and mesenchymal cells are produced in the bone marrow. Hematopoietic cells give rise to the three classes of blood cells that are found in the circulation: leukocytes, erythrocytes and thrombocytes. Mesenchymal cells localize around the central sinus in the bone marrow, and they have the capability to differentiate into many types of cells including osteoblasts, chondrocytes and myocytes. Mesenchymal cells function as "gatekeeper" cells of the bone marrow.

REFERENCES

- Williams, A.F., Galfre, G. and Milstein, C. 1977. Analysis of cell surfaces by xenogeneic myeloma-hybrid antibodies: differentiation antigens of rat lymphocytes. *Cell* 12: 663-673.
- Ghyselen, G. and Veys, E. 1994. Stimulation versus silencing of xenoreactive neonatal and fetal rat thymocytes. *Transplant. Proc.* 26: 1092.
- Nishimura, Y., Ishii, A., Kobayashi, Y., Yamasaki, Y. and Yonehara, S. 1995. Expression and function of mouse Fas antigen on immature and mature T cells. *J. Immunol.* 154: 4395-4403.
- Ben-Hur, H., Kossoy, G., Kossoy, N. and Zusman, I. 2002. Response of the immune system of mammary tumor-bearing rats to cyclophosphamide and soluble low-molecular-mass tumor-associated antigens: the bone marrow and thymus. *Int. J. Mol. Med.* 10: 517-521.
- French, M.B., Koch, U., Shaye, R.E., McGill, M.A., Dho, S.E., Guidos, C.J. and McGlade, C.J. 2002. Transgenic expression of numb inhibits notch signaling in immature thymocytes but does not alter T cell fate specification. *J. Immunol.* 168: 3173-3180.
- Li, T.Y., Shu, C., Wong, C.H., Lo, P.S., Zhu, H., Lau, M.C., Chan, M.Y., Tsang, L.L., Gou, Y.L., Chung, Y.W. and Chan, H.C. 2004. Plasticity of rat bone marrow-derived 5-hydroxytryptamine-sensitive neurons: dedifferentiation and redifferentiation. *Cell Biol. Int.* 28: 801-807.
- Shu, S.N., Wei, L., Wang, J.H., Zhan, Y.T., Chen, H.S. and Wang, Y. 2004. Hepatic differentiation capability of rat bone marrow-derived mesenchymal stem cells and hematopoietic stem cells. *World J. Gastroenterol.* 10: 2818-2822.
- Zheng, Q., Wang, Y. and Gu, X. 2006. Wild-type Smad3 gene enhances the osteoblastic differentiation of rat bone marrow-derived mesenchymal stem cells *in vitro*. *J. Huazhong Univ. Sci. Technol. Med. Sci.* 25: 674-678.

SOURCE

rat thymocytes, bone marrow (W3/15) is a mouse monoclonal antibody raised against thymocytes and bone marrow of rat origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

rat thymocytes, bone marrow (W3/15) is available conjugated to agarose (sc-53110 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53110 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53110 PE), fluorescein (sc-53110 FITC), Alexa Fluor® 488 (sc-53110 AF488), Alexa Fluor® 546 (sc-53110 AF546), Alexa Fluor® 594 (sc-53110 AF594) or Alexa Fluor® 647 (sc-53110 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53110 AF680) or Alexa Fluor® 790 (sc-53110 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

rat thymocytes, bone marrow (W3/15) is recommended for detection of thymocytes and bone marrow of mouse and rat origin by flow cytometry (1 µg per 1 x 10⁶ cells).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.