

# Myeloid lineage (OX82): sc-53093

## BACKGROUND

Hematopoietic stem cells (HSC) are the precursor cells found in the bone marrow which give rise to all the blood cell types of both the Myeloid and Lymphoid lineages, which include monocytes and macrophages, neutrophils, basophils, eosinophils, T-cells, B-cells, NK-cells, microglia, erythrocytes, megakaryocytes and dendritic cells. During the process of hematopoiesis, Myeloid lineage cells originate from the bone marrow, while Lymphoid lineage cells originate from the lymph tissue. BLIMP-1 is a key regulator of the differentiation of the separate hematopoietic Myeloid and Lymphoid lineages. The distinction between Myeloid and Lymphoid lineages is essential to diagnose and treat certain cancers. Myeloid lineage cells induce inflammatory cytokine production upon activation by Kaposi's sarcoma-associated herpesvirus OX2 glycoprotein. At the stage of myelocytes, Myeloid lineage cells express a substantial number of IL-8 receptor homologues.

## REFERENCES

1. Crisan, D. 1994. Molecular diagnostic testing for determination of Myeloid lineage in acute leukemias. *Ann. Clin. Lab. Sci.* 24: 355-363.
2. Cotter, T.G., Fernandes, R.S., Verhaegen, S. and McCarthy, J.V. 1995. Cell death in the Myeloid lineage. *Immunol. Rev.* 142: 93-112.
3. Wang, J., Zhang, Y., Kasahara, T., Harada, A., Matsushima, K. and Mukaida, N. 1996. Detection of mouse IL-8 receptor homologue expression on peripheral blood leukocytes and mature Myeloid lineage cells in bone marrow. *J. Leukoc. Biol.* 60: 372-381.
4. Ito, M., Anan, K., Misawa, M., Kai, S. and Hara, H. 1996. *In vitro* differentiation of murine Sca-1<sup>+</sup>Lin<sup>-</sup> cells T cell lineages. *Stem Cells* 14: 412-418.
5. Chang, D.H., Angelin-Duclos, C. and Calame, K. 2001. Blimp-1: trigger for differentiation of Myeloid lineage. *Nat. Immunol.* 1: 169-176.
6. Chung, Y.H., Means, R.E., Choi, J.K., Lee, B.S. and Jung, J.U. 2002. Kaposi's sarcoma-associated herpesvirus OX2 gl cells to induce inflammatory cytokine production. *J. Virol.* 76: 4688-4698.
7. Cramer, T., Yamanishi, Y., Clausen, B.E., Förster, I., Pawlinski, R., Mackman, N., Haase, V.H., Jaenisch, R., Corr, M., Nizet, V., Firestein, G.S., Gerber, H.P., Ferrara, N. and Johnson, R.S. 2003. HIF-1 $\alpha$  is essential for myeloid cell-mediated inflammation. *Cell* 112: 645-657.
8. Laiosa, C.V., Stadtfeld, M. and Graf, T. 2006. Determinants of lymphoid-Myeloid lineage diversification. *Annu. Rev. Immunol.* 24: 705-738.

## SOURCE

Myeloid lineage (OX82) is a mouse monoclonal antibody which specifically recognizes a 35 kDa molecule on myeloid cells and stromal elements from a variety of tissues of adult rat origin.

## STORAGE

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

## RESEARCH USE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Myeloid lineage (OX82) is available conjugated to agarose (sc-53093 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53093 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53093 PE), fluorescein (sc-53093 FITC), Alexa Fluor® 488 (sc-53093 AF488), Alexa Fluor® 546 (sc-53093 AF546), Alexa Fluor® 594 (sc-53093 AF594) or Alexa Fluor® 647 (sc-53093 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53093 AF680) or Alexa Fluor® 790 (sc-53093 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

## APPLICATIONS

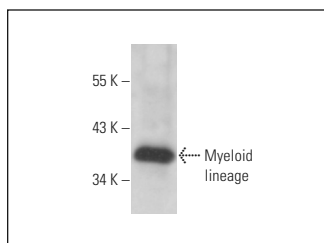
Myeloid lineage (OX82) is recommended for detection of Myeloid lineage of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Positive Controls: mouse liver extract: sc-2256, human heart extract: sc-363763 or NRK whole cell lysate: sc-364197.

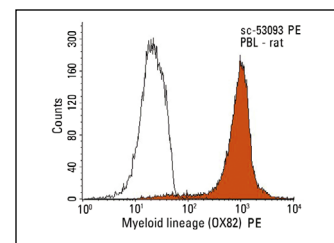
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



Myeloid lineage (OX82): sc-53093. Western blot analysis of Myeloid lineage expression in NRK whole cell lysate.



Myeloid lineage (OX82): sc-53093. Indirect FCM analysis of rat peripheral blood leukocytes stained with Myeloid lineage (OX82), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>: sc-3877.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.