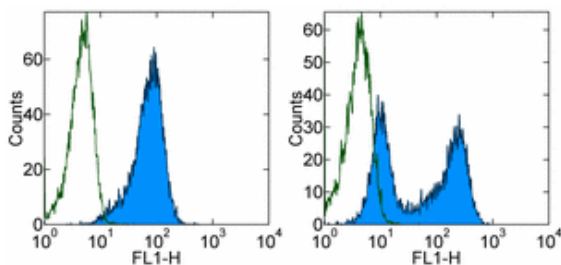


Anti-Mouse Nanog Alexa Fluor® 488

Catalog Number: 53-5761

RUO: For Research Use Only




Staining of fixed and permeabilized F9 cells (using the Foxp3 Buffer Set, cat. 00-5523).

Left: Staining with 0.06 µg of Rat IgG2a κ Isotype Control Alexa Fluor® 488 (cat. 53-4321) (open histogram) or 0.06 µg of Anti-Mouse Nanog Alexa Fluor® 488. (filled histogram).

Right: F9 cells were cultured for 3 days with 1 µM All-Trans-Retinoic Acid and stained using 0.06 µg of Rat IgG2a κ Isotype Control Alexa Fluor® 488 (open histogram) or 0.06 µg of Anti-Mouse Nanog Alexa Fluor® 488. (filled histogram).

Product Information

Contents: Anti-Mouse Nanog Alexa Fluor® 488


 Catalog Number: 53-5761


Clone: eBioMLC-51

Concentration: 0.5 mg/ml


Host/Isotype: Rat IgG2a

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

 Temperature Limitation: Store at 2-8°C. Do not freeze. Light sensitive material.

 Batch Code: Refer to Vial

 Use By: Refer to Vial

 Caution, contains Azide

Description

The eBioMLC51 monoclonal antibody recognizes mouse Nanog. Nanog is a multidomain homeobox transcription factor that has been shown to maintain pluripotency of embryonic stem cells, independent of LIF/Stat3. Expression of Nanog in the mouse is specific to early embryos, the ICM of the blastocyst, embryonic stem (ES) cells, and embryonic germ (EG) cells. Nanog expression often overlaps, but is not identical to, that of Oct4. Nanog is downregulated upon cellular differentiation and loss of pluripotency, making it a suitable marker in determining the undifferentiated state of stem cells.

Nanog acts as a transcriptional activator and has two activation domains in the C-terminus, called CD2 and WR, and one activation domain in the N terminus. The CD2 domain is unique to Nanog, whereas the NK2 DNA binding domain is well conserved.

Immunoblotting using eBioMLC51 reveals a band at ~ 45 kDa in F9 (an embryonal carcinoma cell line) lysate, but not in lysate from the NIH3T3 cell line or mouse spleen.

Preliminary data using fluorochrome-conjugated eBioMLC51 suggests that it is essential to use the eBioscience Foxp3 Staining Buffer Set, Cat. 00-5523, for intracellular staining of mouse Nanog.

Applications Reported

This eBioMLC-51 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested

This eBioMLC-51 antibody has been tested by intracellular staining followed by flow cytometric analysis of the F9 cell line using the Foxp3 Staining Buffer Set (cat. 00-5523) and protocol. Please click [here](#) for Staining Protocol (refer to Protocol B: One-step protocol for intracellular (nuclear) proteins). This antibody can be used at less than or equal to 0.06 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10⁵ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

References

Mitsui, K., Tokuzawa, Y., Itoh, H., Segawa, K., Murakami, M., Takahashi, K., Maruyama, M., Maeda, M., Yamanaka, S. 2003. The Homeoprotein Nanog is Required for Maintenance of Pluripotency in Mouse Epiblast and ES Cells. *Cell* 113:631-642

Yanmei Chen, Zhongwei Du, Zhen Yao. 2006. Roles of the Nanog Protein in Murine F9 Embryonal Carcinoma Cells and Their Endoderm-Differentiated Counterparts. *Cell Research* 16:641-650.

Guangjin Pan and Duanqing Pei. 2005. The Stem Cell Pluripotency Factor NANOG Activates Transcription with Two Unusually Potent

Subdomains at Its C Terminus. The Journal of Biological Chemistry Vol.280, No.2, 1401-1407.

Related Products

00-5521 Foxp3 Fixation/Permeabilization Concentrate and Diluent

00-5523 Foxp3 Staining Buffer Set

14-5761 Anti-Mouse Nanog Purified (eBioMLC-51)

51-5761 Anti-Mouse Nanog Alexa Fluor® 647 (eBioMLC-51)

53-4321 Rat IgG2a K Isotype Control Alexa Fluor® 488

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