full spectrum cell analysis®
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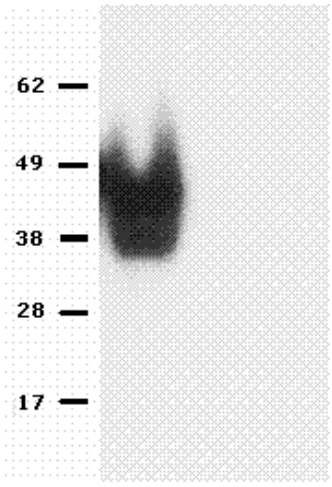
Anti-Mouse Nanog Purified

Catalog Number: 14-5761
RUO: For Research Use Only



Lysates from the F9 cell line (left), the NIH/3T3 cell line (middle), and BALB/c spleen (right) were probed with 1 µg/ml of Anti-Mouse Nanog Purified and revealed with Anti-Rat IgG HRP .

Product Information

Contents: Anti-Mouse Nanog Purified
REF Catalog Number: 14-5761
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.
LOT 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 immunoblotting (WB).

Applications Tested

This eBioMLC-51 antibody has been tested by immunoblotting the F9 cell line. This purified antibody can be used at 2 µg/ml, however should be titrated for optimal performance.

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

Related Products

14-5768 Anti-Human Nanog Purified (hNanog.2)
14-5769 Anti-Human Nanog Purified (hNanog.1)

Tel: 888.999.1371 or 858.642.2058 • Fax: 858.642.2046 • www.eBioscience.com • info@eBioscience.com