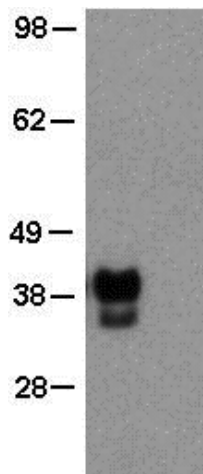


Anti-Human/Mouse OCT3/4 Purified

Catalog Number: 14-5841

Also Known As: OCT3, OCT4, octamer-binding transcription factor, POU5F1

For Research Use Only. Not for use in diagnostic procedures.



F9 mouse embryonal carcinoma cell line (left) and mouse splenocyte (right) lysates were loaded at 1×10^5 cells/lane, probed with 2 $\mu\text{g/mL}$ of Anti-Mouse OCT3/4 Purified and revealed with Anti-Rat IgG HRP.

Product Information

Contents: Anti-Human/Mouse OCT3/4 Purified

REF **Catalog Number:** 14-5841

Clone: EM92

Concentration: 0.5 mg/mL

Host/Isotype: Rat IgG2a, kappa

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



Temperature Limitation: Store at 2-8°C.



Batch Code: Refer to Vial



Use By: Refer to Vial



Contains sodium azide

Description

The EM92 monoclonal antibody reacts with mouse and human Oct3/4, encoded by the Pou5F1 gene. Oct3/4 is a POU domain-containing transcription factor that is critical for maintaining embryonic stem (ES) and induced pluripotent stem (iPS) cells in a pluripotent state, and is expressed by ES, embryonic germ cells and embryonic carcinoma cell lines. In cells of the inner cell mass (ICM), reduction of Oct3/4 expression causes dedifferentiation to trophoblast, whereas increased expression results in differentiation to mesoderm and primitive endoderm. Oct3/4 regulates the expression of several genes, including FGF-4, UTF1, Sox2, Fbx15, Rex1 and osteopontin through distinct mechanisms. Furthermore, Oct3/4 frequently acts synergistically with Sox2 to regulate target gene expression, as is the case with FGF-4. It has been demonstrated that Oct3/4 expression in ES cells can be negatively regulated by either treatment with retinoic acid, or by removal of leukemia-inhibitory factor (LIF).

Applications Reported

This EM92 antibody has been reported for use in immunoblotting (WB).

Applications Tested

This EM92 antibody has been tested by western blot analysis of F9 and P19 embryonal carcinoma cell lysates. For western blotting, this antibody can be used at a starting dilution 2 $\mu\text{g/mL}$. However, the antibody should be titrated for individual experiments.

References

Okamoto K, Okazawa H, Okuda A, Sakai M, Muramatsu M, Hamada H. A novel octamer binding transcription factor is differentially expressed in mouse embryonic cells. *Cell*. 1990 Feb 9;60(3):461-72.

Pikarsky E, Sharir H, Ben-Shushan E, Bergman Y. Retinoic acid represses Oct-3/4 gene expression through several retinoic acid-responsive elements located in the promoter-enhancer region. *Mol Cell Biol*. 1994 Feb;14(2):1026-38.

Takahashi K, Tanabe K, Ohnuki M, Narita M, Ichisaka T, Tomoda K, Yamanaka S. Induction of pluripotent stem cells from adult human fibroblasts by defined factors. *Cell*. 2007 Nov 30;131(5):861-72

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