

OCT3/4 Monoclonal Antibody (EM92), Alexa Fluor 488, eBioscience™

Product Details	
Size	100 µg
Species	Human, Mouse
Published Species	Mouse
Expression System	Rat / IgG2a, kappa
Recommended Isotype Control	Rat IgG2a kappa Isotype Control (eBR2a), Alexa Fluor 488, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	EM92
Conjugate	Alexa Fluor® 488
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin
Contains	0.09% sodium azide
Storage Conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_1210530

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	1 µg/test	1 Publication
Immunocytochemistry (ICC)	5 µg/mL	1 Publication
Immunofluorescence (IF)	5 µg/mL	-

Product Specific Information

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 trophoectoderm, 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 intracellular staining followed by flow cytometric analysis and immunocytochemistry.

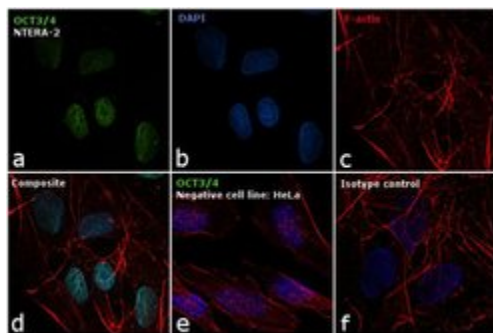
Applications Tested: This EM92 antibody has been tested by microscopy or intracellular staining and flow cytometric analysis of F9 cells using the Foxp3/Transcription Factor Staining Buffer Set (cat. 00-5523) and protocol. Please see Best Protocols for Staining

Protocol (refer to Protocol B: One step protocol for intracellular (nuclear) proteins). This antibody can be used at less than or equal to 1 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. This antibody has also been tested by immunocytochemistry on formaldehyde fixed and permeabilized cells at less than or equal to 10µg/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Excitation: 488 nm; Emission: 519 nm; Laser: Blue Laser.

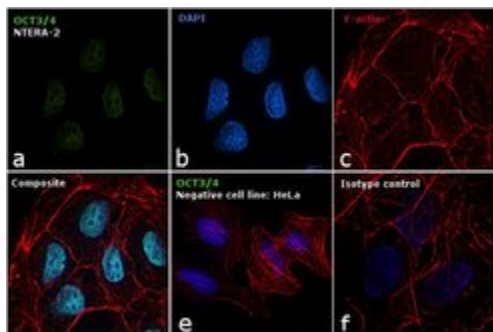
Filtration: 0.2 µm post-manufacturing filtered.

Advanced Verification Data



OCT3/4 Antibody (53-5841-82)

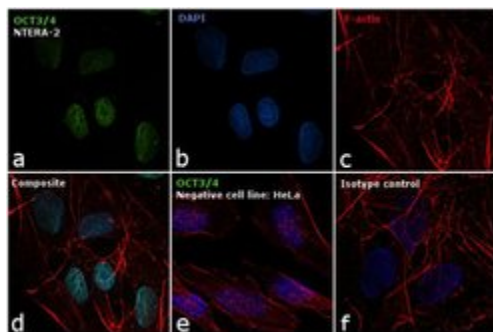
Antibody specificity was demonstrated by detection of differential basal expression of the target across cell models owing to their inherent genetic constitution. Immunofluorescence analysis showed expression of OCT3/4 in NTERA-2 and not in HeLa which is a negative model for OCT3/4 using OCT3/4 Monoclonal Antibody (Product # 53-5841-80). Relative expression validation info.



OCT3/4 Antibody (53-5841-82)

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Product Images For OCT3/4 Monoclonal Antibody (EM92), Alexa Fluor 488, eBioscience™



OCT3/4 Antibody (53-5841-82) in IF

Immunofluorescence analysis of OCT3/4 was performed using 70% confluent log phase NTERA-2 cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with OCT3/4 Mouse Monoclonal Antibody (Product # 53-5841-80) at 5ug/ml in 0.1% BSA, incubated at 4 degree Celsius overnight (Panel a: green). Nuclei (Panel b: blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing nuclear localization. Panel e shows OCT3/4 negative cell line HeLa with no signal. Panel f represents control cells with Isotype control to assess background. The images were captured at 60X magnification.

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Immunocytochemistry (1)

Journal of cellular physiology

Identification of a Hematopoietic Cell Dedifferentiation-Inducing Factor.

"53584182 was used in immunocytochemistry to investigate if conditioned medium from proliferating fibroblasts induce a subset of hematopoietic cells to become adherent fibroblast-like cells"

Authors: Li Y, Adomat H, Guns ET, Hojabrpour P, Duronio V, Curran TA, Jalili RB, Jia W, Delwar Z, Zhang Y, Elizei SS, Ghahary A

Species
Mouse

Dilution
1:50

Year
2016

Flow Cytometry (1)

PloS one

Highly upregulated Lhx2 in the Foxn1^{-/-} nude mouse phenotype reflects a dysregulated and expanded epidermal stem cell niche.

"Published figure using OCT3/4 monoclonal antibody (Product # 53-5841-82) in Flow Cytometry"

Authors: Bohr S, Patel SJ, Vasko R, Shen K, Huang G, Yarmush ML, Berthiaume F

Species
Not Applicable

Dilution
Not Cited

Year
2013

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