Antibodies

Anti-Mouse OCT4 (OCT3) Antibody, Clone 40

Mouse monoclonal IgG1 antibody against human, mouse OCT4 (OCT3), unconjugated

Catalog #60059 50 µg 0.25 mg/mL

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

The 40 antibody clone reacts with OCT-3/4, also known as POU5F1, a transcription factor that is essential for the formation of the inner cell mass during mouse development and for the maintenance of undifferentiated mouse and human embryonic stem (ES) and induced pluripotent stem (iPS) cells. It is expressed at high levels in undifferentiated mouse and human ES and iPS cells and in embryonic germ cells (EGCs), and exhibits decreased expression during differentiation. It is commonly used as a marker for the assessment of undifferentiated ES and iPS cells, and EGCs from multiple species.

Target Antigen Name:	OCT4 (OCT3)
Alternative Names:	Oct3, OTF3, Oct4, OTF4, POU5F1
Gene ID:	18999 (mouse), 5460 (human)
Species Reactivity:	Human, Mouse
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	40
Isotype:	IgG1, kappa
Immunogen:	Recombinant protein comprising amino acids 252 - 372 of mouse OCT4 (OCT3)
Conjugate:	Unconjugated

Applications

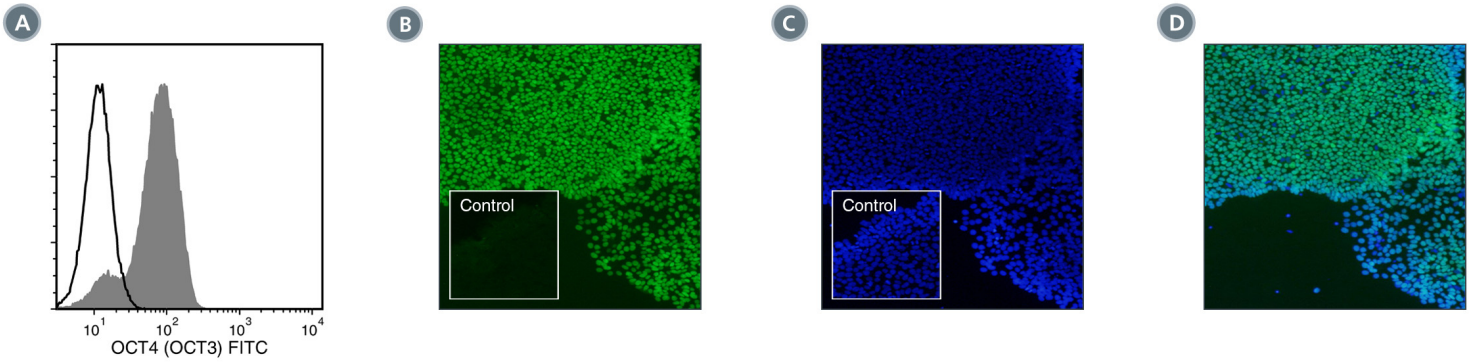
Verified:	FC, IF, WB
Reported:	Bioimaging, FC, IF, IHC, WB

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Aqueous buffer containing ≤ 0.09% sodium azide, glycerol, and bovine serum albumin
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at -20°C when stored undiluted. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	The suggested use of this antibody is: FC, ≤ 3 µg/mL per 1 x 10^6 cells in 100 µL; IF, ≤ 3 µg/mL. It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) Flow cytometry analysis of human ES cells labeled with Anti-Mouse OCT4 (OCT3) Antibody, Clone 40, followed by Goat Anti-Mouse IgG (H+L) Antibody, Polyclonal, FITC (Catalog #60138FI) (filled histogram), or a mouse IgG1, kappa isotype control antibody (Anti-Dextran Antibody, Clone DX1; Catalog #60026), followed by Goat Anti-Mouse IgG (H+L) Antibody, Polyclonal, FITC (solid line histogram).
(B) H1 cells were labeled with Anti-Mouse OCT4 (OCT3) Antibody, Clone 40, followed by a goat anti-mouse IgG, FITC. Inset shows cells labeled with a mouse IgG1 isotype control antibody, followed by a goat anti-mouse IgG, FITC.
(C) H1 cell nuclei stained with DAPI.
(D) H1 cells were labeled with Anti-Mouse OCT4 (OCT3) Antibody, Clone 40, followed by a goat anti-mouse IgG, FITC. Nuclei were counter stained with DAPI.

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Sawant S et al. (2015) Prognostic role of Oct4, CD44 and c-Myc in radio-chemo-resistant oral cancer patients and their tumourigenic potential in immunodeficient mice. Clin Oral Investig 20(1): 43–56. (FC, IHC)
2. Boyette LB et al. (2014) Human bone marrow-ferived mesenchymal stem cells display enhanced clonogenicity but impaired differentiation with hypoxic preconditioning. Stem Cells Transl Med 3(2): 241–54. (FC)
3. Alvarez-Gonzalez C et al. (2013) Cord blood Lin(-)CD45(-) embryonic-like stem cells are a heterogeneous population that lack self-renewal capacity. PLoS One 8(6): e67968. (FC)
4. Nichols J et al. (1998) Formation of pluripotent stem cells in the mammalian embryo depends on the POU transcription factor Oct4. Cell 95(3): 379–91.
5. Rosfjord E et al. (1995) Phosphorylation and DNA binding of the octamer binding transcription gactor OCT-3. Biochem Biophys Res Commun 212(3): 847–53.

Please refer to the Safety Data Sheet (SDS) for hazard information.