



Anti-Oct-4a Rabbit Monoclonal Antibody

Product Information

Catalog Number	ASA-0110
Description	Oct-4 (octamer-binding transcription factor 4), also known as POU5F1 (POU domain, class 5, transcription factor 1), is a homeodomain transcription factor that in humans is encoded by the <i>POU5F1</i> gene ^[1] . Oct4 is reported highly expressed in undifferentiated ESC and embryonic germ cells (EGC) ^[2] . Oct-4a is one isoform of Oct-4 and also one of the key factors to maintain the self-renewal and pluripotency of stem cell ^[3] .
Size	800 µL
Antigen	Human Oct-4a
Classification	Monoclonal antibody
Host	Rabbit
Reactivity	Human, Mouse
Target Isotype	IgG
Concentration	Ready-to-use for ICC
Application	ICC, FC, W
Shipping	Dry ice
Storage and Stability	Store at -20°C. Stable for 6 months at -20°C. Avoid freeze-thaw cycles.
Safety Precaution	PLEASE READ BEFORE HANDLING ANY FROZEN VIALS. Please wear the appropriate Personal Protective Equipment (lab coat, thermal gloves, safety goggles and a face shield) when handling the vials. Handle the frozen vials with due caution.
Restricted Use	This product is for research use only and not intended for human or animal diagnostic or therapeutic uses.

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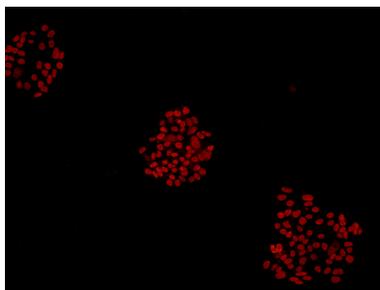


Fig 1. Anti-Oct-4a staining of human ES cells

Protocol

1. Fix cells on a cover slip for 1 hour.
2. Wash with PBS for 5 minutes (3 times).
3. Permeabilize the cells for 30 minutes.
4. Block in blocking solution for 1 hour.
5. Pipette 30 μ L 1^o antibody on the parafilm slide, put the cover slip face-down on it. Place the parafilm in a humidified chamber, 4^oC / overnight.
6. Aspirate the 1st antibody and wash cells with PBS, 10 minutes x 2.
7. Aspirate PBS. Add 1 drop (or 45 μ L) of 2^o antibody (Goat anti-mouse) to each slide, incubate for 1 hour in the dark.
8. Wash cells with PBS for 10 minutes.
9. Aspirate PBS. Add 1 drop (or 45 μ L) of DNA staining solution on cell slide for 8 minutes.
10. Wash cell with PBS in the dark.
11. Place one drop (or 20 μ L) of mounting solution to labeled glass slide. Put the cell cover slip facing down in the mounting solution.
12. Take images immediately, or the slide can be stored at 4^oC for up to 7 days.

References

1. Takeda J, Seino S, Bell GI (1992) Human Oct3 gene family: cDNA sequences, alternative splicing, gene organization, chromosomal location, and expression at low levels in adult tissues. *Nucleic Acids Res.* **20**: 4613–4620.
2. Looijenga LH, Stoop H, de Leeuw HP, de Gouveia Brazao CA, Gillis AJ, van Roozendaal KE, van Zoelen EJ, Weber RF, Wolffenbittel KP, van Dekken H, Honecker F, Bokemeyer C, Perlman EJ, Schneider DT, Kononen J, Sauter G, Oosterhuis JW (2003) POU5F1 (OCT3/4) identifies cells with pluripotent potential in human germ cell tumors. *Cancer Res.* **63**: 2244–2250.
3. Cauffman G, Liebaers I, Van Steirteghem A, Van de Velde H (2006) POU5F1 isoforms show different expression patterns in human embryonic stem cells and preimplantation embryos. *Stem Cells* **24**: 2685-2691.