

## SCIENTIFIC BACKGROUND:

Oct-3/4, also known as Pou5f1, is a transcription factor that is essential for the formation of the inner cell mass during mouse development and for the maintenance of undifferentiated mouse embryonic stem cells (ESC)<sup>1</sup>. It is expressed at high levels in undifferentiated mouse<sup>2</sup> and human ESC<sup>3</sup> and embryonic germ cells (EGC)<sup>2</sup> and exhibits decreased expression during differentiation<sup>3,4</sup>. It is commonly used as a marker for the assessment of undifferentiated ESC and EGC from multiple species.

## SPECIFICITY:

This mouse antibody reacts with mouse and human Oct-3/4.

**CLONE:** 40

**ISOTYPE:** IgG<sub>1</sub> (mouse)

## FORMAT:

Aqueous buffered solution containing BSA, glycerol and sodium azide (<0.09%).

## STABILITY AND STORAGE:

Store at -20°C.

## APPLICATIONS AND DIRECTIONS FOR USE:

Refer to Material Safety Data Sheet for more information.

Centrifuge tube briefly to ensure recovery of entire contents.

The antibody is suitable for flow cytometry at a dilution of 1:100 and western blot analysis at a dilution of 1:1000. Also suitable for immunofluorescence. Note: Concentrations are recommendations only. Optimal working dilutions should be determined for each specific application.


## REFERENCES:

1. Nichols J, Zevnik B, Anastasiadis K, Niwa H, Klewe-Nebenius D, Chambers I, Schöler H, Smith A. Formation of pluripotent stem cells in the mammalian embryo depends on the POU transcription factor Oct4. *Cell* 95(3):379-91, 1998.
2. Rosner MH, Vigano MA, Ozato K, Timmons PM, Poirier F, Rigby PW, Staudt LM. A POU-domain transcription factor in early stem cells and germ cells of the mammalian embryo. *Nature* 345(6277):686-92, 1990.
3. Reubinoff BE, Pera MF, Fong CY, Trounson A, Bongso A. Embryonic stem cell lines from human blastocysts: somatic differentiation in vitro. *Nature Biotechnology* 18(4):399-404, 2000.
4. Pesce M, Wang X, Wolgemuth DJ, Schöler H. Differential expression of the Oct-4 transcription factor during mouse germ cell differentiation. *Mechanisms of Development* 71(1-2):89-98, 1998.

**THIS REAGENT IS FOR RESEARCH USE ONLY.  
IT IS NOT TO BE ADMINISTERED TO HUMANS.**

**Hazardous Ingredient: Sodium Azide.** Avoid exposure to skin and eyes, ingestion, and contact with heat, acids and metals. Wash exposed skin with soap and water. Flush eyes with water. Dilute with running water before discharging into plumbing.

**ANTI-OCT-3/4**



Version 1.0.0

Mouse Monoclonal Antibody  
Clone 40

Catalog #01550      50 µg  
Catalog #01551      150 µg

## StemCell Technologies

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