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#83932**Oct-4A (D6C8T) Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, IP, IF-IC, FC-FP, ChIP, C&R	<b>Reactivity:</b> M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 45	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P20263	<b>Entrez-Gene Id:</b> 18999
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**Product Usage Information**

For optimal ChIP results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10<sup>6</sup> cells) per IP. This antibody has been validated using SimpleChIP<sup>®</sup> Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

<b>Application</b>	<b>Dilution</b>
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (Immunocytochemistry)	1:800
Flow Cytometry (Fixed/Permeabilized)	1:200
Chromatin IP	1:50
CUT&RUN	1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Oct-4A (D6C8T) Rabbit mAb recognizes endogenous levels of total murine Oct-4A protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val80 of murine Oct-4A protein.

**Background**

Oct-4 (POU5F1) is a transcription factor highly expressed in undifferentiated embryonic stem cells and embryonic germ cells (1). A network of key factors that includes Oct-4, Nanog, and Sox2 is necessary for the maintenance of pluripotent potential, and downregulation of Oct-4 has been shown to trigger cell differentiation (2,3). Research studies have demonstrated that Oct-4 is a useful germ cell tumor marker (4). Oct-4 exists as two splice variants, Oct-4A and Oct-4B (5). Recent studies have suggested that the Oct-4A isoform has the ability to confer and sustain pluripotency, while Oct-4B may exist in some somatic, non-pluripotent cells (6,7).

**Background References**

- Looijenga, L.H. et al. (2003) *Cancer Res* 63, 2244-50.
- Pesce, M. and Schöler, H.R. (2001) *Stem Cells* 19, 271-278.
- Pan, G. and Thomson, J.A. (2007) *Cell Res* 17, 42-9.
- Cheng, L. et al. (2007) *J Pathol* 211, 1-9.
- Takeda, J. et al. (1992) *Nucleic Acids Res* 20, 4613-20.
- Cauffman, G. et al. (2006) *Stem Cells* 24, 2685-91.
- Lee, J. et al. (2006) *J Biol Chem* 281, 33554-65.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **ChIP:** Chromatin IP **C&R:** CUT&RUN

**Cross-Reactivity Key**

**M:** Mouse

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