



Orders: 877-616-CELL (2355)
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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Store at -20C
#5677

Oct-4A (C30A3C1) Rabbit mAb (ChIP Formulated)

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
ChIP	H M	Endogenous	Rabbit IgG	#Q01860	5460
Product Usage Information	For optimal ChIP results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10 ⁶ cells) per IP. This antibody has been validated using SimpleChIP [®] Enzymatic Chromatin IP Kits.				
	Application				Dilution
	Chromatin IP				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 (C30A3C1) Rabbit mAb (ChIP Formulated) detects endogenous levels of total Oct-4A protein.				
Source / Purification	Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human 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	<ol style="list-style-type: none"> Looijenga, L.H. et al. (2003) <i>Cancer Res</i> 63, 2244-50. Pesce, M. and Schöler, H.R. (2001) <i>Stem Cells</i> 19, 271-278. Pan, G. and Thomson, J.A. (2007) <i>Cell Res</i> 17, 42-9. Cheng, L. et al. (2007) <i>J Pathol</i> 211, 1-9. Takeda, J. et al. (1992) <i>Nucleic Acids Res</i> 20, 4613-20. Cauffman, G. et al. (2006) <i>Stem Cells</i> 24, 2685-91. Lee, J. et al. (2006) <i>J Biol Chem</i> 281, 33554-65. 				

Species Reactivity

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

Applications Key

ChIP: Chromatin IP

Cross-Reactivity Key

H: Human **M:** Mouse

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