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#5177

Oct-4A (C30A3) Rabbit mAb (Alexa Fluor® 488 Conjugate)


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

Applications: IF-IC, FC-FP	Reactivity: H M	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q01860	Entrez-Gene Id: 5460
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Product Usage Information	Application Immunofluorescence (Immunocytochemistry) Flow Cytometry (Fixed/Permeabilized)	Dilution 1:200 - 1:800 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
Specificity / Sensitivity	Oct-4A (C30A3) Rabbit mAb (Alexa Fluor® 488 Conjugate) 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.	
Product Description	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometry and immunofluorescent analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Oct-4A (C30A3) Rabbit mAb #2840.	
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	1. Looijenga, L.H. et al. (2003) <i>Cancer Res</i> 63, 2244-50. 2. Pesce, M. and Schöler, H.R. (2001) <i>Stem Cells</i> 19, 271-278. 3. Pan, G. and Thomson, J.A. (2007) <i>Cell Res</i> 17, 42-9. 4. Cheng, L. et al. (2007) <i>J Pathol</i> 211, 1-9. 5. Takeda, J. et al. (1992) <i>Nucleic Acids Res</i> 20, 4613-20. 6. Cauffman, G. et al. (2006) <i>Stem Cells</i> 24, 2685-91. 7. 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	IF-IC: Immunofluorescence (Immunocytochemistry) FC-FP: Flow Cytometry (Fixed/Permeabilized)
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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