Oct-4A (C30A3) Rabbit mAb (Alexa Fluor® 647 Conjugate)



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Applications: Reactivity: Sensitivity: Source/Isotype: **UniProt ID:** Entrez-Gene Id: IF-IC, FC-FP HMEndogenous Rabbit IgG #Q01860 5460 **Product Usage Application** Dilution Information Immunofluorescence (Immunocytochemistry) 1:50 - 1:200 Flow Cytometry (Fixed/Permeabilized) 1:50 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 **Storage** antibody. Protect from light. Do not freeze. Oct-4A (C30A3) Rabbit mAb (Alexa Fluor® 647 Conjugate) detects endogenous levels of total Oct-4A Specificity / Sensitivity Source / Purification Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human Oct-4A protein. This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 647 fluorescent dye and tested in-**Product Description** 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, nonpluripotent cells (6,7). **Background References** 1. Looijenga, L.H. et al. (2003) Cancer Res 63, 2244-50.

- 2. Pesce, M. and Schöler, H.R. (2001) Stem Cells 19, 271-278.
- 3. Pan, G. and Thomson, J.A. (2007) Cell Res 17, 42-9.
- 4. Cheng, L. et al. (2007) J Pathol 211, 1-9.
- 5. Takeda, J. et al. (1992) Nucleic Acids Res 20, 4613-20.
- 6. Cauffman, G. et al. (2006) Stem Cells 24, 2685-91.
- 7. 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).

Applications Key Cross-Reactivity Key IF-IC: Immunofluorescence (Immunocytochemistry) FC-FP: Flow Cytometry (Fixed/Permeabilized)

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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