

#5677 Store at -20C

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


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

Applications: ChIP	Reactivity: H M	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q01860	Entrez-Gene Id: 5460
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Product Usage Information

For optimal ChIP results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application

Chromatin IP

Dilution

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

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

ChIP: Chromatin IP

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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