Datasheet for ABIN6972459

# anti-OCT4 antibody

3 Images

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## Overview

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|---|---|
| Quantity: | 100 µL |
| Target: | OCT4 (POU5F1) |
| Reactivity: | Human, Mouse |
| Host: | Rabbit |
| Clonality: | Polyclonal |
| Application: | Western Blotting (WB), Immunofluorescence (IF), Immunocytochemistry (ICC), ChIP DNA-Sequencing (ChIP-seq), Chromatin Immunoprecipitation (ChIP) |

## Product Details

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|---|---|
| Immunogen: | This Oct-4 antibody was raised against a peptide derived from human Oct-4. |
| Isotype: | IgG |
| Characteristics: | Oct-4 (Octamer binding protein-4, POU5F1) is a member of the POU family of transcriptional activators. Oct-4 is critical for early embryogenesis and required for embryonic stem cell pluripotency. Oct-4 is expressed at high levels in undifferentiated cells and ectopic expression of Oct-4 (and several other transcription factors) can induce pluripotency in differentiated cells. Oct-4 antibody (pAb) was raised in a Rabbit host. It has been validated for use in Chromatin Immunoprecipitation, ChIP-Seq, Immunocytochemistry, Immunofluorescence and Western blot, it has been shown to react with Human and Mouse samples. |
| Purification: | Affinity Purified |

## Target Details

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|---|---|
| Target: | OCT4 (POU5F1) |

## Target Details

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|---|---|
| Alternative Name: | Oct-4 (POU5F1 Products) |
| Molecular Weight: | 45 kDa |
| NCBI Accession: | NP_002692 |
| Pathways: | Stem Cell Maintenance |

## Application Details

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|---|---|
| Application Notes: | Optimal working dilution should be determined by the investigator. |
| Restrictions: | For Research Use only |

## Handling

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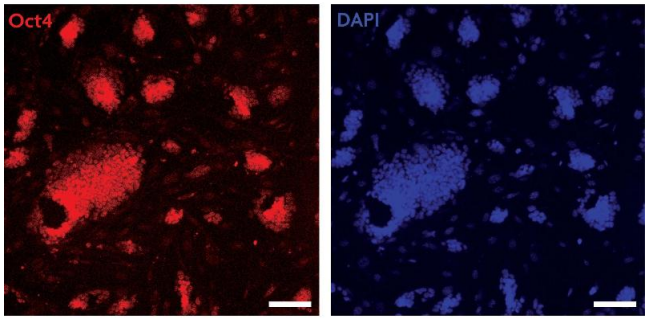
|---|---|
| Buffer: | Purified IgG in 70 mM Tris ( pH 8), 105 mM NaCl, 31 mM glycine, 0.07 mM EDTA, 30 % glycerol and 0.035 % sodium azide. |
| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Storage: | -20 °C |
| Storage Comment: | Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. |

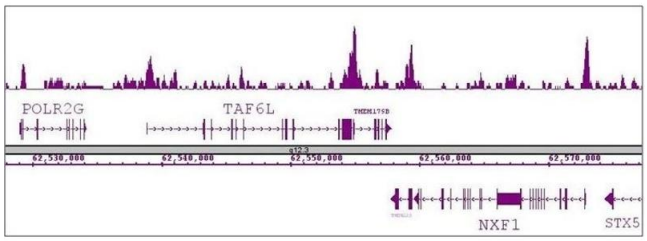
## Images




**Immunofluorescence**

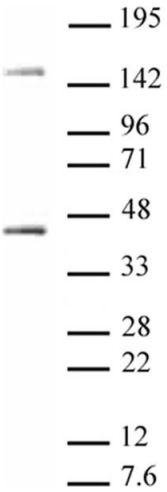
**Image 1.** Oct-4 antibody (pAb) tested by Immunofluorescence Mouse embryonic stem cells (mESCs) grown on mouse embryonic fibroblast feeder cells (MEFs) were fixed with 4 % paraformaldehyde for 10 minutes at room temperature. Cells were then permeabilized and blocked by incubating with Blocking Solution containing 5 % serum/0.1 % Triton X-100 in D-PBS for 2 hours at room temperature. Cells were then incubated with Oct-4 antibody (red) at 1:200 dilution overnight at 4 °C, washed with D-PBS, and incubated for 2 hours at room temperature with goat

anti-mouse Cy3 secondary antibody at 1:250 dilution. Nuclei were stained with DAPI (blue). Cells were visualized using a Zeiss fluorescent microscope at 20X magnification. Images show that Oct-4 antibody specifically stains mESC colonies and does not stain MEFs. Absence of Oct-4 staining in a subset of cells within the colonies suggests differentiation. Scale bars, 100 µm.




## ChIP DNA-Sequencing

**Image 2.** Oct-4 antibody (pAb) tested by ChIP-Seq. ChIP was performed using the ChIP-IT High Sensitivity Kit with 30 µg of chromatin from undifferentiated hESC cells and 7 µL of antibody. ChIP DNA was sequenced on the Illumina HiSeq and11 million sequence tags were mapped to identify Oct-4 binding sites. The image shows binding across a region of chromosome 11. You can view the complete data set in the UCSC Genome Browser, starting at this specific location, here.




## Western Blotting

**Image 3.** Oct-4 antibody tested by Western blot. Detection of Oct-4 by Western blot. P19 cell nuclear extract (25 µg) probed with Oct-4 antibody (pab) (1:1,000 dilution).