

Datasheet for ABIN6972459
anti-OCT4 antibody



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Overview

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

Product Details

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

Target:	OCT4 (POU5F1)
Alternative Name:	Oct-4 (POU5F1 Products)
Molecular Weight:	45 kDa
NCBI Accession:	NP_002692
Pathways:	Stem Cell Maintenance

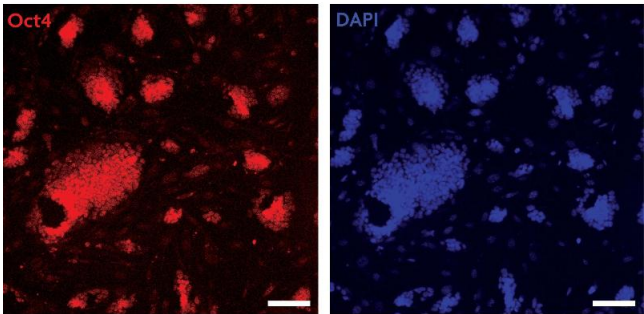
Application Details

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

Handling

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.

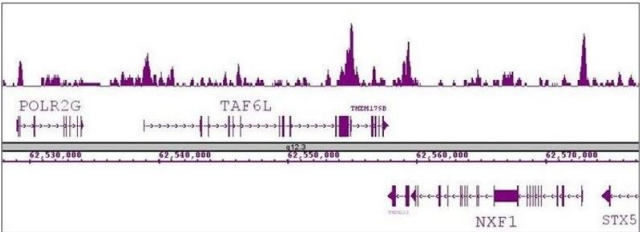
Images



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 and 11 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).

