

## Oct-4 antibody (pAb)

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**Catalog Nos:** 39811, 39812

**RRID:** AB\_2793350

**Isotype:** IgG

**Application(s):** ChIP, ChIP-Seq, ICC, IF, WB

**Reactivity:** Human, Mouse

**Volumes:** 100 µl, 10 µl

**Purification:** Affinity Purified

**Host:** Rabbit

**Molecular Weight:** 45 kDa

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**Background:** 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.

**Immunogen:** This Oct-4 antibody was raised against a peptide derived from human Oct-4.

**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. Sodium azide is highly toxic.

**Application Notes:**

Applications Validated by Active Motif:

ChIP: 10 µl per ChIP

ChIP-Seq: 10 µl each

ICC/IF: 1:200 dilution

WB: 1:1,000 - 1:5,000 dilution

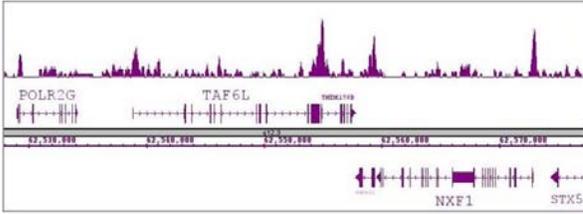
ChIP-Seq validation was performed by Active Motif's Epigenetics Services; the complete data set is available in the UCSC Genome Browser by clicking [here](#).

**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. 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. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

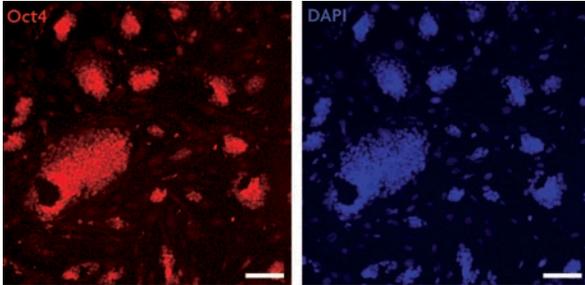
#### Oct-4 antibody (pAb) tested by ChIP-Seq.

ChIP was performed using the ChIP-IT<sup>®</sup> High Sensitivity Kit (Cat. No. 53040) with 30 ug 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](#).



#### 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 (Catalog No. 39811, *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.



#### 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).

