

Sox2 antibody (pAb)

Catalog Nos: 39843, 39844

RRID: AB_2750954

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: 42 kDa

Background: Sox2 (SRY related HMG BOX gene 2) is a DNA binding transcription factor and a member of the SOX family of proteins. SOX proteins have an HMG box that binds DNA. Sox2 forms a complex with Oct-4 and controls the expression of a number of genes involved in embryonic. Sox2 is critical for early embryogenesis and for embryonic stem cell pluripotency and thus can serve as a stem cell marker. Overexpression of Sox2 (along with Oct-4, KLF4 and c-Myc) can transform mouse fibroblasts into a state resembling embryonic stem cells (ES cells), referred to as Induced Pluripotency. Defects in Sox2 are the cause of microphthalmia syndromic type 3.

Immunogen: This Sox2 antibody was raised against a peptide within the C-terminal region of human Sox2.

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: 1:500 - 1:1,000 dilution

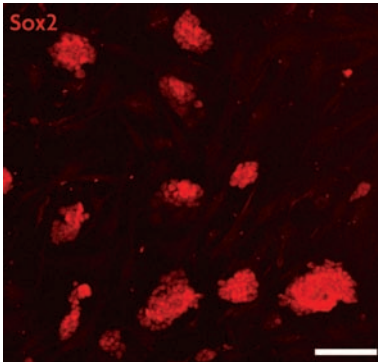
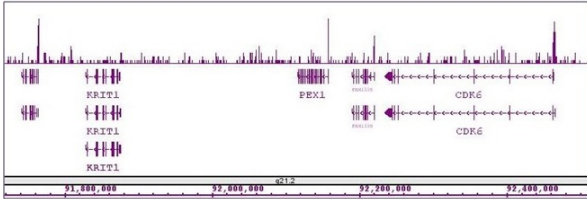
ChIP-Seq validation was performed by Active Motif's Epigenetics Services; the complete data set is available in the UCSC Genome Browser by clicking [here](#).

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.

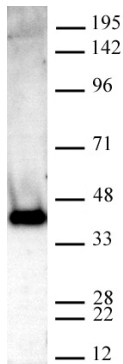
Sox2 antibody (pAb) tested by ChIP-Seq.

ChIP was performed using the ChIP-IT[®] 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 10 million sequence tags were mapped to identify Sox2 binding sites. The image shows binding across a region of chromosome 7. You can view the complete data set in the UCSC Genome Browser, starting at this specific location, [here](#).



Sox2 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 Sox2 antibody (Catalog No. 39843, *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. Cells were visualized using a Zeiss fluorescent microscope at 20X magnification. Images show that Sox2 antibody specifically stains mESC colonies and does not stain MEFs. Absence of Sox2 staining in a subset of cells within the colonies suggests differentiation. Scale bars, 100 µm.



Sox2 antibody (pAb) tested by Western blot.

Nuclear extract of P19 cells (20 µg per lane) probed with Sox2 antibody (pAb) (1:500 dilution).