SOX2 monoclonal antibody

Catalog: MB66993 Host: Mouse Reactivity: Human

BackGround:

Embryonic stem cells (ESC) derived from the inner cell mass of the blastocyst are unique in their pluripotent capacity and potential for self-renewal . Research studies demonstrate that a set of transcription factors that includes Oct-4, Sox2, and Nanog forms a transcriptional network that maintains cells in a pluripotent state . Chromatin immunoprecipitation experiments show that Sox2 and Oct-4 bind to thousands of gene regulatory sites, many of which regulate cell pluripotency and early embryonic development . siRNA knockdown of either Sox2 or Oct-4 results in loss of pluripotency . Induced overexpression of Oct-4 and Sox2, along with additional transcription factors Klf4 and c-Myc, can reprogram both mouse and human somatic cells to a pluripotent state . Additional evidence demonstrates that Sox2 is also present in adult multipotent progenitors that give rise to some adult epithelial tissues, including several glands, the glandular stomach, testes, and cervix. Sox2 is thought to regulate target gene expression important for survival and regeneration of these tissues .

Product:

Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 35 kDa

Swiss-Prot:

P48431

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/200), IF/ICC (1/10 - 1/50), FC (1/10 - 1/50)

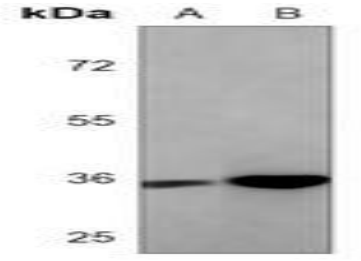
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

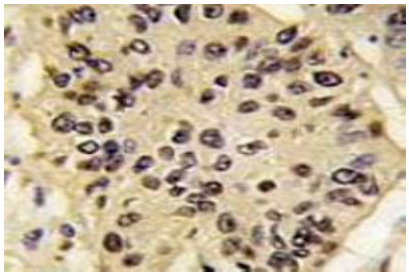
Specificity:

Recognizes endogenous levels of SOX2 protein.

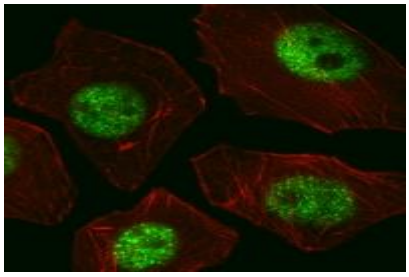
DATA:



Western blot analysis of SOX2 expression in 293 (A), transiently transfected with the SOX2 (B) whole cell lysates.



Immunohistochemical analysis of SOX2 staining in human lung carcinoma formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of SOX2 staining in A549 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room

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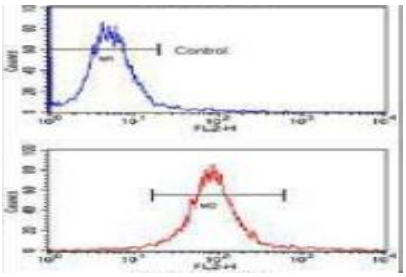
temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 ℃ in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF555 was used to stain the cytoplasm (red). DAPI was used to stain the cell nuclei (blue).



Note:

For research use only, not for use in diagnostic procedure.

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