10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Sox2 Antibody

Catalog # AN1962

Product Information

Application	WB, ICC
Primary Accession	P48431
Reactivity	Rat
Host	Mouse
Clonality	Mouse Monoclonal
Isotype	IgG2b
Clone Names	M551
Calculated MW	34310

Additional Information

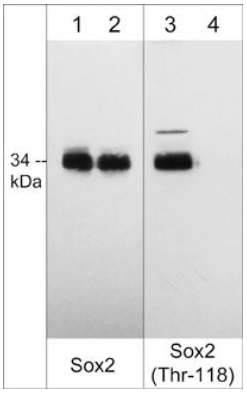
Gene ID	6657
Other Names	SRY (sex determining region Y) box-2, ANOP3, MCOPS3, SOX-2
Dilution	WB~~1:1000 ICC~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Sox2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

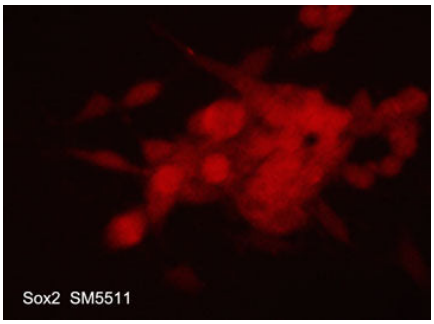
Embryonic stem cells can maintain a pluripotent state that is controlled by a set of transcription factors that include Oct-4, Sox2, and Nanog. Chromatin immunoprecipitation experiments show that Sox2 and Oct-4 bind to thousands of gene regulatory sites, many of which regulate cell pluripotency and early embryonic development. siRNA knockdown of either Sox2 or Oct-4 results in loss of pluripotency, while overexpression of Oct-4 and Sox2, along with additional transcription factors Klf4 and c-Myc, can reprogram somatic cells to a pluripotent state. Sox2 also regulates adult multipotent progenitors in various epithelial tissues, and may be important for survival and regeneration of these tissues. The activity of Sox2 may be regulated by phosphorylation and methylation. Akt1 phosphorylates Thr-118 and enhances Sox2 transcriptional activity, while Set7 can monomethylate Lys-119 leading to inhibition of Sox2 transcriptional activity, as well as Sox2 ubiquination and degradation. In addition, Sox2 Thr-128 is constituitively phoshorylated in the F9 mouse stem cell line.

Images

Western blot image of mouse F9 stem cells treated with with calyculin A (100 nM, 30 min.) (lanes 1-4) then Sox2



was dephosphorylated with lambda phosphatase (lanes 2 & 4). The blot was probed with mouse monoclonal Sox2 (lanes 1 & 2) and rabbit polyclonal anti-Sox2 (Thr-118) phospho-specific antibody (lanes 3 & 4).



Immunocytochemical labeling of Sox2 in aldehyde fixed and NP-40 permeabilized human NCI-H446 lung carcinoma cells. The cells were labeled with mouse monoclonal anti-Sox2 (AN1962). The antibody was detected using goat anti-mouse DyLight® 594.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.