#4900 Store at -20°C

Sox2 (L1D6A2) Mouse mAb

Cell Signaling TECHNOLOGY®

☑ 100 µl
(10 western blots)

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New 03/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #6657
Swiss-Prot Acc. #P48431

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IF-IC, F Endogenous	H, M, (R, B, Dg, Hr)	35 kDa	Mouse IgG1**

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-mouse secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:50
Flow Cytometry	1:400

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

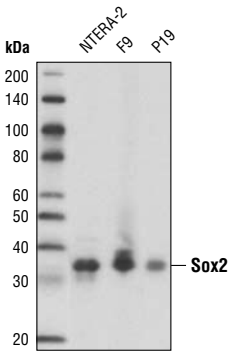
Background: Embryonic stem cells are derived from the inner cell mass of the blastocyst and are unique in their pluripotent capacity and potential for self-renewal. Sox2 is one of a set of transcription factors that are crucial for the maintenance of pluripotency (1). Sox2, Oct-4 and Nanog cooperate in this network (1-3) and siRNA knockdown of either Sox2 or Oct-4 results in loss of pluripotency (4,5). Chromatin immunoprecipitation experiments have shown that Sox2 and Oct-4 bind to thousands of gene regulatory sites, highlighting the importance of these transcription factors in early embryonic development (6,7). It has recently been shown that Sox2 is amplified in lung and esophageal squamous cell tumors (8).

Specificity/Sensitivity: Sox2 (L1D6A2) Mouse mAb detects endogenous levels of total Sox2 protein.

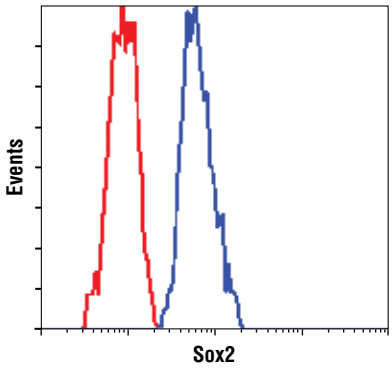
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to amino acids surrounding Gly179 of human Sox2 protein.

Background References:

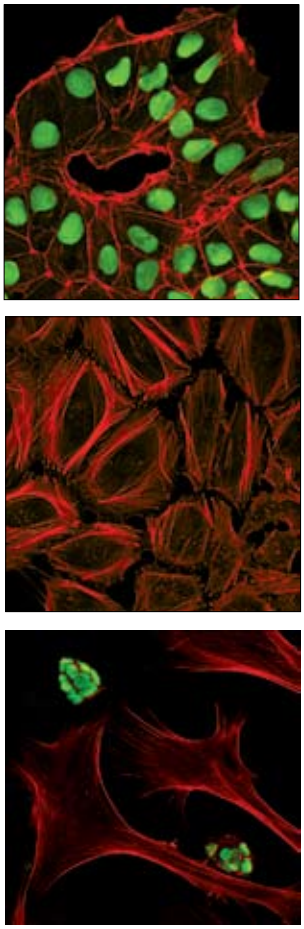
(1) Nichols, J. et al. (1998) *Cell* 95, 379-391.
(2) Avilion, A.A. et al. (2003) *Genes Dev.* 17, 126-140.
(3) Rodda, D.J. et al. (2005) *J. Biol. Chem.* 280, 24731-24737.
(4) Matin, M.M. et al. (2004) *Stem Cells* 22, 659-668.
(5) Niwa, H. et al. (2000) *Nat. Genet.* 24, 372-376.
(6) Boyer, L.A. et al. (2005) *Cell* 122, 947-956.
(7) Loh, Y.H. et al. (2006) *Nat. Genet.* 38, 431-440.
(8) Bass, A.J. et al. (2009) *Nat Genet* 41, 1238-42.



Western blot analysis of extracts from NTERA-2, F9 and P16 cells using Sox2 (L1D6A2) Mouse mAb.



Flow cytometric analysis of HeLa (red) and NTERA-2 cells (blue) using Sox2 (L1D6A2) Mouse mAb.



Confocal immunofluorescent analysis of NTERA-2 (upper), HeLa (middle) and mouse ES cells growing on MEF feeder cells (lower) using Sox2 (L1D6A2) Mouse mAb (green). Actin filaments were labeled with DY-554 phalloidin (red).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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