

# Sox-2 (A-5): sc-365964

## BACKGROUND

Sox genes comprise a family of genes that are related to the mammalian sex determining gene SRY. These genes similarly contain sequences that encode for the HMG-box domain, which is responsible for the sequence-specific DNA-binding activity. Sox genes encode putative transcriptional regulators implicated in the decision of cell fates during development and the control of diverse developmental processes. The highly complex group of Sox genes cluster at least 40 different loci that rapidly diverged in various animal lineages. At present, 30 Sox genes have been identified. Members of this family have been shown to be conserved during evolution and to play key roles during animal development. Some are involved in human diseases, including sex reversal.

## REFERENCES

- Laudet, V., et al. 1993. Ancestry and diversity of the HMG box superfamily. *Nucleic Acids Res.* 21: 2493-2501.
- Kuhlbrodt, K., et al. 1998. Sox-10, a novel transcriptional modulator in glial cells. *J. Neurosci.* 18: 237-250.
- Arsic, N., et al. 1998. Characterisation and mapping of the human SOX14 gene. *Cytogenet. Cell Genet.* 83: 139-146.

## CHROMOSOMAL LOCATION

Genetic locus: SOX2 (human) mapping to 3q26.33; Sox2 (mouse) mapping to 3 A3.

## SOURCE

Sox-2 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 170-201 within an internal region of Sox-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-365964 X, 200 µg/0.1 ml.

Sox-2 (A-5) is available conjugated to agarose (sc-365964 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365964 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365964 PE), fluorescein (sc-365964 FITC), Alexa Fluor® 488 (sc-365964 AF488), Alexa Fluor® 546 (sc-365964 AF546), Alexa Fluor® 594 (sc-365964 AF594) or Alexa Fluor® 647 (sc-365964 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365964 AF680) or Alexa Fluor® 790 (sc-365964 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365964 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Sox-2 (A-5) is recommended for detection of Sox-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Sox-2 (A-5) is also recommended for detection of Sox-2 in additional species, including equine, canine and bovine.

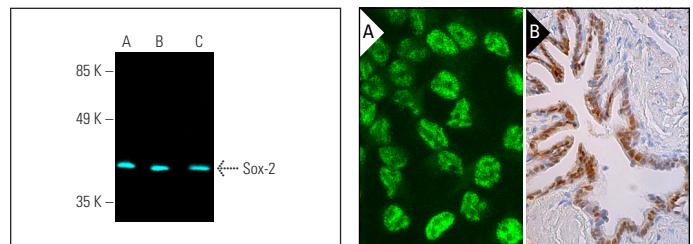
Suitable for use as control antibody for Sox-2 siRNA (h): sc-38408, Sox-2 siRNA (m): sc-38409, Sox-2 shRNA Plasmid (h): sc-38408-SH, Sox-2 shRNA Plasmid (m): sc-38409-SH, Sox-2 shRNA (h) Lentiviral Particles: sc-38408-V and Sox-2 shRNA (m) Lentiviral Particles: sc-38409-V.

Sox-2 (A-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Sox-2: 34 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, U-251-MG whole cell lysate: sc-364176 or H69AR whole cell lysate: sc-364382.

## DATA



Sox-2 (A-5) Alexa Fluor® 647: sc-365964 AF647. Direct fluorescent western blot analysis of Sox-2 expression in H69AR (A), NTERA-2 cl.D1 (B) and U-251-MG (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

Sox-2 (A-5): sc-365964. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing nuclear staining of respiratory epithelial cells (B).

## SELECT PRODUCT CITATIONS

- German-Castelan, L., et al. 2014. Progesterone induces the growth and infiltration of human astrocytoma cells implanted in the cerebral cortex of the rat. *Biomed Res. Int.* 2014: 393174.
- Wu, R., et al. 2019. m<sup>6</sup>A methylation controls pluripotency of porcine induced pluripotent stem cells by targeting SOCS3/JAK2/Stat3 pathway in a YTHDF1/YTHDF2-orchestrated manner. *Cell Death Dis.* 10: 171.
- Piña-Medina, A.G., et al. 2020. Effects of progesterone on the cell number of gliomaspheres derived from human glioblastoma cell lines. *Life Sci.* 249: 117536.

## RESEARCH USE

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