

Sox-2 (E-4): sc-365823



The Power to Question

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 a minimum of 40 different loci that rapidly diverged in various animal lineages. At present 30 Sox genes have been identified, and 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.

CHROMOSOMAL LOCATION

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

SOURCE

Sox-2 (E-4) 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 IgG₁ 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-365823 X, 200 µg/0.1 ml.

Sox-2 (E-4) is available conjugated to agarose (sc-365823 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365823 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365823 PE), fluorescein (sc-365823 FITC), Alexa Fluor® 488 (sc-365823 AF488), Alexa Fluor® 546 (sc-365823 AF546), Alexa Fluor® 594 (sc-365823 AF594) or Alexa Fluor® 647 (sc-365823 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365823 AF680) or Alexa Fluor® 790 (sc-365823 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365823 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 (E-4) 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 (E-4) is also recommended for detection of Sox-2 in additional species, including equine, canine and bovine.

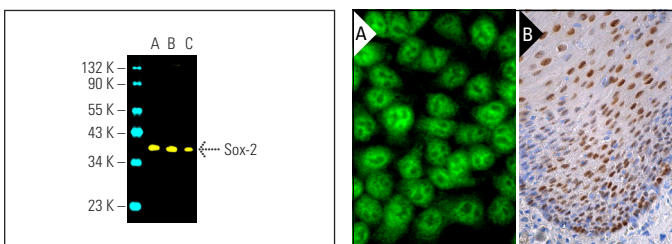
Suitable for use as control antibody for Sox-2 siRNA (h): sc-38408, Sox-2 siRNA (m): sc-38409, Sox-2 shRNA Plasmid (h): sc-38408-SH, Sox-2 shRNA Plasmid (m): sc-38409-SH, Sox-2 shRNA (h) Lentiviral Particles: sc-38408-V and Sox-2 shRNA (m) Lentiviral Particles: sc-38409-V.

Sox-2 (E-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Sox-2: 34 kDa.

Positive Controls: F9 cell lysate: sc-2245, H69AR whole cell lysate: sc-364382 or C6 whole cell lysate: sc-364373.

DATA



Sox-2 (E-4) Alexa Fluor® 488: sc-365823 AF488. Direct fluorescent western blot analysis of Sox-2 expression in F9 (A), H69AR (B) and C6 (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 647: sc-516791.

Sox-2 (E-4) Alexa Fluor® 488: sc-365823 AF488. Direct immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization (A). Sox-2 (E-4): sc-365823. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing nuclear staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

- Luo, W., et al. 2013. Embryonic stem cells markers Sox-2, OCT4 and Nanog expression and their correlations with epithelial-mesenchymal transition in nasopharyngeal carcinoma. *PLoS ONE* 8: e56324.
- Yang, M., et al. 2022. VLDLR disturbs quiescence of breast cancer stem cells in a ligand-independent function. *Front. Oncol.* 12: 887035.
- Kolaj, A., et al. 2023. The P-body protein 4E-T represses translation to regulate the balance between cell genesis and establishment of the postnatal NSC pool. *Cell Rep.* 42: 112242.

RESEARCH USE

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