

## Sox-9 (E-9): sc-166505



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 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

1. Laudet, V., et al. 1993. Ancestry and diversity of the HMG box superfamily. *Nucleic Acids Res.* 21: 2493-2501.
2. Kuhlbrodt, K., et al. 1998. Sox-10, a novel transcriptional modulator in glial cells. *J. Neurosci.* 18: 237-250.
3. Arsic, N., et al. 1998. Characterisation and mapping of the human Sox-14 gene. *Cytogenet. Cell Genet.* 83: 139-146.

## CHROMOSOMAL LOCATION

Genetic locus: SOX9 (human) mapping to 17q24.3; Sox9 (mouse) mapping to 11 E2.

## SOURCE

Sox-9 (E-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 22-62 near the N-terminus of Sox-9 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-166505 X, 200 µg/0.1 ml.

Sox-9 (E-9) is available conjugated to agarose (sc-166505 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166505 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166505 PE), fluorescein (sc-166505 FITC), Alexa Fluor® 488 (sc-166505 AF488), Alexa Fluor® 546 (sc-166505 AF546), Alexa Fluor® 594 (sc-166505 AF594) or Alexa Fluor® 647 (sc-166505 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166505 AF680) or Alexa Fluor® 790 (sc-166505 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166505 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-9 (E-9) is recommended for detection of Sox-9 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Sox-9 (E-9) is also recommended for detection of Sox-9 in additional species, including equine, canine, bovine, porcine and avian.

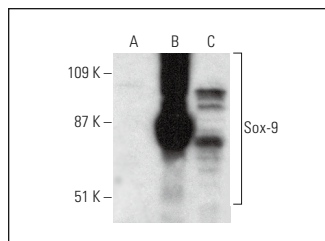
Suitable for use as control antibody for Sox-9 siRNA (h): sc-36533, Sox-9 siRNA (m): sc-36534, Sox-9 shRNA Plasmid (h): sc-36533-SH, Sox-9 shRNA Plasmid (m): sc-36534-SH, Sox-9 shRNA (h) Lentiviral Particles: sc-36533-V and Sox-9 shRNA (m) Lentiviral Particles: sc-36534-V.

Sox-9 (E-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

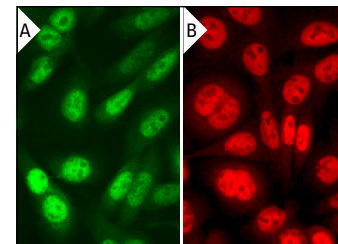
Molecular Weight of Sox-9: 65 kDa.

Positive Controls: Sox-9 (h): 293T Lysate: sc-116634, SW480 nuclear extract: sc-2155 or SW480 cell lysate: sc-2219.

## DATA



Sox-9 (E-9) HRP: sc-166505 HRP. Direct western blot analysis of Sox-9 expression in non-transfected: sc-117752 (A) and human Sox-9 transfected: sc-116634 (B) 293T whole cell lysates and SW480 nuclear extract (C).



Sox-9 (E-9) Alexa Fluor® 488: sc-166505 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). Sox-9 (E-9) Alexa Fluor® 594: sc-166505 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (B).

## SELECT PRODUCT CITATIONS

1. Caron, M.M.J., et al. 2012. Activation of NFκB/p65 facilitates early chondrogenic differentiation during endochondral ossification. *PLoS ONE* 7: e33467.
2. Kim, S., et al. 2019. Tankyrase inhibition preserves osteoarthritic cartilage by coordinating cartilage matrix anabolism via effects on Sox-9 PARylation. *Nat. Commun.* 10: 4898.
3. Qiao, Z., et al. 2020. Proteoglycan 4 predicts tribological properties of repaired cartilage tissue. *Theranostics* 10: 2538-2552.

## RESEARCH USE

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