SANTA CRUZ BIOTECHNOLOGY, INC.

MOX-2 (A-8): sc-376748

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Closely related homeobox proteins, MOX-1 and MOX-2, belong to a family of nonclustered, diverged homeobox genes that are expressed in overlapping patterns in the paraxial mesoderm and its derivatives. MOX-1 and MOX-2 function transiently in the formation of mesodermal and mesenchymal derivatives. MOX-1 and MOX-2 are implicated in the early steps of mesoderm formation during gastrulation. In addition, the MOX proteins are also involved in somatic differentiation. Significantly, MOX-1 associates more strongly with Pax-1, whereas MOX-2 preferentially associates with Pax-3. Specifically, expression of MOX-2 (also known as mesenchyme homeobox 2 or GAX), has been shown to be critical in axial skeleton development. MOX-2 is not needed for the migration of myogenic precursors into the limb bud, but it is essential for normal appendicular muscle formation and for the normal regulation of myogenic genes. MOX-2 is expressed in placental tissue. The human MEOX2 gene maps to chromosome 7p21.2 and encodes the MOX-2 protein. Mutations in the gene may be involved in craniofacial and/or skeletal abnormalities.

REFERENCES

1. Candia, A.F., et al. 1992. MOX-1 and MOX-2 define a novel homeobox gene subfamily and are differentially expressed during early mesodermal patterning in mouse embryos. Development 116: 1123-1136.
2. Candia, A.F., et al. 1996. Differential localization of MOX-1 and MOX-2 proteins indicates distinct roles during development. Int. J. Dev. Biol. 40: 1179-1184.

CHROMOSOMAL LOCATION

Genetic locus: MEOX2 (human) mapping to 7p21.2; Meox2 (mouse) mapping to 12 A3.

SOURCE

MOX-2 (A-8) is a mouse monoclonal antibody raised against amino acids 94-188 mapping within an internal region of MOX-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-376748 X, 200 µg/0.1 ml.

MOX-2 (A-8) is available conjugated to agarose (sc-376748 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376748 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376748 PE), fluorescein (sc-376748 FITC), Alexa Fluor® 488 (sc-376748 AF488), Alexa Fluor® 546 (sc-376748 AF546), Alexa Fluor® 594 (sc-376748 AF594) or Alexa Fluor® 647 (sc-376748 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376748 AF680) or Alexa Fluor® 790 (sc-376748 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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

MOX-2 (A-8) is recommended for detection of MOX-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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MOX-2 (A-8) is also recommended for detection of MOX-2 in additional species, including equine and canine.

Suitable for use as control antibody for MOX-2 siRNA (h): sc-106233, MOX-2 siRNA (m): sc-149520, MOX-2 shRNA Plasmid (h): sc-106233-SH, MOX-2 shRNA Plasmid (m): sc-149520-SH, MOX-2 shRNA (h) Lentiviral Particles: sc-106233-V and MOX-2 shRNA (m) Lentiviral Particles: sc-149520-V.

MOX-2 (A-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

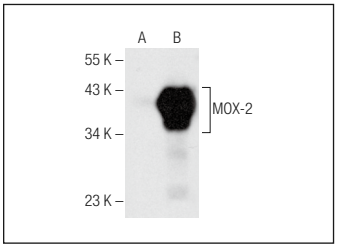
Molecular Weight of MOX-2: 34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or MOX-2 (h): 293T Lysate sc-113256.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MOX-2 (A-8): sc-376748. Western blot analysis of MOX-2 expression in non-transfected: sc-110760 (**A**) and human MOX-2 transfected: sc-113256 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yan, F., et al. 2024. Single-cell multiomics decodes regulatory programs for mouse secondary palate development. Nat. Commun. 15: 821.

RESEARCH USE

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