SANTA CRUZ BIOTECHNOLOGY, INC.

MOX-1 (A-10): sc-515653

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. Specifically, MOX-1 and MOX-2 are implicated in the early steps of mesoderm formation during gastrulation and are also involved in somatic differentiation. Significantly, MOX-1 associates more strongly with Pax-1, whereas MOX-2 preferentially associates with Pax-3. Expression of MOX-1, also known as Mesenchyme homeobox 1 and MFOX1, was first detected in the newly formed mesoderm of primitive streak stage mouse embryos. MOX-1 has been shown to be critical in axial skeleton development. The human MEOX1 gene maps to chromosome 17q21 and encodes the MOX-1 protein.

REFERENCES

1. Candia, A.F., Hu, J., Crosby, J., Lalley, P.A., Noden, D., Nadeau, J.H. and Wright, C.V. 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. and Wright, C.V. 1996. Differential localization of MOX-1 and MOX-2 proteins indicates distinct roles during development. Int. J. Dev. Biol. 40: 1179-1184.
3. Stelnicki, E.J., Komuves, L.G., Holmes, D., Clavin, W., Harrison, M.R., Adzick, N.S. and Largman, C. 1997. The human homeobox genes MSX-1, MSX-2, and MOX-1 are differentially expressed in the dermis and epidermis in fetal and adult skin. Differentiation 62: 33-41.
4. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 600147. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Mankoo, B.S., Collins, N.S., Ashby, P., Grigorieva, E., Pevny, L.H., Candia, A., Wright, C.V., Rigby, P.W. and Pachnis, V. 1999. MOX-2 is a component of the genetic hierarchy controlling limb muscle development. Nature 400: 69-73.
6. Stamataki, D., Kastrinaki, M., Mankoo, B.S., Pachnis, V. and Karagogeos, D. 2001. Homeodomain proteins MOX-1 and MOX-2 associate with Pax-1 and Pax-3 transcription factors. FEBS Lett. 499: 274-278.
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CHROMOSOMAL LOCATION

Genetic locus: Meox1 (mouse) mapping to 11 D.

SOURCE

MOX-1 (A-10) is a mouse monoclonal antibody raised against amino acids 1-173 mapping at the N-terminus of MOX-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MOX-1 (A-10) is recommended for detection of MOX-1 of mouse 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).

Suitable for use as control antibody for MOX-1 siRNA (m): sc-149519, MOX-1 shRNA Plasmid (m): sc-149519-SH and MOX-1 shRNA (m) Lentiviral Particles: sc-149519-V.

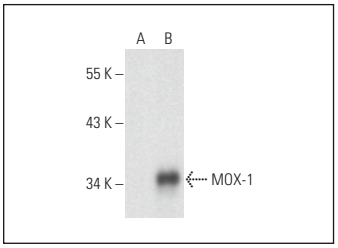
Molecular Weight of MOX-1: 38 kDa.

Positive Controls: MOX-1 (m): 293T Lysate: sc-125630.

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-1 (A-10): sc-515653. Western blot analysis of MOX-1 expression in non-transfected: sc-117752 (**A**) and mouse MOX-1 transfected: sc-125630 (**B**) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.