SANTA CRUZ BIOTECHNOLOGY, INC.

MOX-1 (A-15): sc-10183



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 Pax1, whereas MOX-2 preferentially associates with Pax3. 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 17q21.31 and encodes the MOX-1 protein.

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.
- 3. Stelnicki, E.J., et al. 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/
- Mankoo, B.S., et al. 1999. Mox-2 is a component of the genetic hierarchy controlling limb muscle development. Nature 400: 69-73.
- Stamataki, D., et al. 2001. Homeodomain proteins Mox1 and Mox2 associate with Pax1 and Pax3 transcription factors. FEBS Letts. 499: 274-278.
- 7. LocusLink Report (LocusID: 4222). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: MEOX1 (human) mapping to 17q21.31.

SOURCE

MOX-1 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MOX-1 of human origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10183 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MOX-1 (A-15) is recommended for detection of MOX-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-1 (A-15) is also recommended for detection of MOX-1 in additional species, including canine.

Suitable for use as control antibody for MOX-1 siRNA (h): sc-43938, MOX-1 shRNA Plasmid (h): sc-43938-SH and MOX-1 shRNA (h) Lentiviral Particles: sc-43938-V.

Molecular Weight of MOX-1: 38 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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

MONOS Satisfation Guaranteed

Try MOX-1 (3-RE14): sc-134389, our highly recommended monoclonal alternative to MOX-1 (A-15).