



MOX-2 (K-20): sc-10188

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 Pax1, whereas MOX-2 preferentially associates with Pax3. Specifically, expression of MOX-2, also known as Mesenchyme homeobox 2 and 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 7p22.1-p21.3 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.
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. Mankoo, B.S., et al. 1999. Mox2 is a component of the genetic hierarchy controlling limb muscle development. *Nature* 400: 69-73.
5. Quinn, L.M., et al. 2000. The homeobox genes MSX2 and MOX2 are candidates for regulating epithelial-mesenchymal cell interactions in the human placenta. *Placenta* 21 Suppl. A: 50-54.
6. Stamatakis, 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: 4223). <http://www.ncbi.nlm.nih.gov/LocusLink/>

SOURCE

MOX-2 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MOX-2 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-10188 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

MOX-2 (K-20) is recommended for detection of MOX-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-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.

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) 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.

STORAGE

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

PROTOCOLS

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