10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MOX1 Antibody

Catalog # ASC11212

Product Information

Application	WB, IF, ICC, E
Primary Accession	P50221
Other Accession	NP_004518, 4758710
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	27997
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	MOX1 antibody can be used for detection of MOX1 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunocytochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	4222
Other Names	Homeobox protein MOX-1, Mesenchyme homeobox 1, MEOX1, MOX1
Target/Specificity	MEOX1;
Reconstitution & Storage	MOX1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	MOX1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MEOX1
Synonyms	MOX1
Function	Mesodermal transcription factor that plays a key role in somitogenesis and is specifically required for sclerotome development. Required for maintenance of the sclerotome polarity and formation of the cranio-cervical joints (PubMed:23290072, PubMed:24073994). Binds specifically to the promoter of target genes and regulates their expression. Activates expression of NKX3-2 in the sclerotome. Activates expression of CDKN1A and CDKN2A in endothelial cells, acting as a regulator of vascular cell proliferation. While it activates CDKN1A in a DNA-dependent manner, it activates CDKN2A in a

	DNA-independent manner. Required for hematopoietic stem cell (HSCs) induction via its role in somitogenesis: specification of HSCs occurs via the deployment of a specific endothelial precursor population, which arises within a sub-compartment of the somite named endotome.
Cellular Location	Nucleus {ECO:0000250|UniProtKB:P32442}. Cytoplasm {ECO:0000250|UniProtKB:P32442}. Note=Localizes predominantly in the nucleus. {ECO:0000250|UniProtKB:P32442}

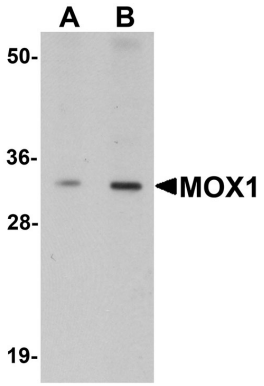
Background

MOX1 Antibody: MOX1, also known as MEOX1, is a member of a subfamily of non-clustered, diverged, antennapedia-like homeobox-containing genes that is first expressed during gastrulation in the early mesoderm and later in presomitic mesoderm, early somites, dermomyotome and sclerotome. Both MOX1 and the related protein MOX2 are required for proper gene expression in all somitic compartments. MOX1 is an upstream regulator of the transcription factors Bapx1, Tbx18, and Uncx and is thus part of a regulatory circuit that functions in the maintenance of rostrocaudal sclerotome polarity and axial skeleton formation.

References

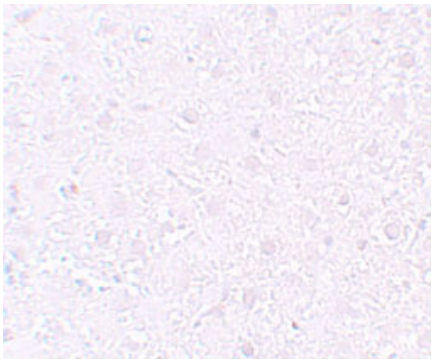
Cadia AF, Hu J, Crosby J, et al. Mox-1 and Mox-2 define a novel homeobox gene subfamily and are differentially expressed during early mesodermal patterning in mouse embryos. Development1992; 116:1123-36.
Candia AF and Wright CV. Differential localization of Mox-1 and Mox-2 proteins indicates distinct roles during development. Int. J. Dev. Biol.1996; 40:1179-84.
Mankoo BS, Skuntz S, Harrigan I, et al. The concerted action of Meox homeobox genes is required upstream of genetic pathways essential for the formation, patterning, and differentiation of somites. Development2003; 130:4655-64.
Skuntz S, Mankoo B, Nguyen MT, et al. Lack of the mesodermal homeodomain protein MEOX1 disrupts sclerotome polarity and leads to a remodeling of the craniocervical joints of the axial skeleton. Dev. Biol.2009; 332:383-95.

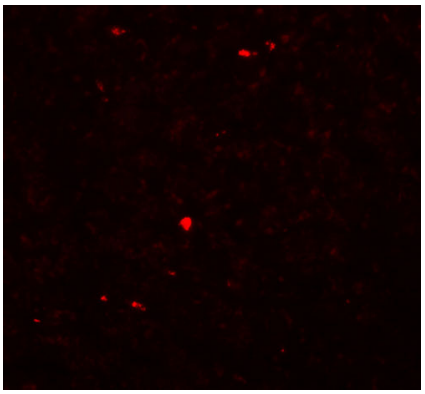
Images



Western blot analysis of MOX1 in human liver tissue lysate with MOX1 antibody at (A) 1 and (B) 2 µg/mL.

Immunohistochemistry of MOX1 in rat liver tissue with MOX1 antibody at 10 µg/mL.





Immunofluorescence of MOX1 in rat liver tissue with MOX1 antibody at 20 µg/mL.

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