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MSX1 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI11126

Product Information

Application	WB
Primary Accession	P13297
Other Accession	NM_010835, NP_034965
Reactivity	Human, Mouse, Rat, Pig, Dog, Bovine
Predicted	Human, Mouse, Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	31672

Additional Information

Gene ID	17701
Alias Symbol	msh, Hox7, Hox-7, Hox7.1, AA675338, AI324650
Other Names	Homeobox protein MSX-1, Homeobox protein Hox-7, Hox-7.1, Msh homeobox 1-like protein, Msx1, Hox7, Hox7.1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 100 ul of distilled water. Final anti-MSX1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	MSX1 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Msx1 {ECO:0000312|MGI:MGI:97168}
Function	Acts as a transcriptional repressor (PubMed: 23371388, PubMed:7823952). Capable of transcription autoinactivation (PubMed:10215616). Binds to the consensus sequence 5'-C/GTAAT-3' in downstream activin regulatory elements (DARE) in the gene promoter, thereby repressing the transcription of CGA/alpha-GSU and GNRHR (PubMed:23371388). Represses transcription of myoblast differentiation factors (PubMed:16600910). Binds to core enhancer regions in target gene promoters of myoblast differentiation factors with binding specificity facilitated by interaction with PIAS1 (PubMed:16600910). Regulates, in a stage-specific manner, a developmental program of gene expression in the fetal tooth bud that controls odontoblast differentiation and

proliferation of dental mesenchymal cells (PubMed:24028588, PubMed:27713059, PubMed:29148101, PubMed:7914451, PubMed:8898217). At the bud stage, required for mesenchymal molar tooth bud development via facilitating reciprocal signaling between dental epithelial and mesenchymal cells (PubMed:8898217). May also regulate expression of Wnt antagonists such as DKK2 and SFPR2 in the developing tooth mesenchyme (PubMed:27713059). Required for BMP4 expression in dental mesenchyme cells (PubMed:8898217). Also, in response to BMP4, required for BMP4 expression in neighboring dental epithelial cells (PubMed:8898217). Required for maximal FGF4-induced expression of SDC1 in dental mesenchyme cells (PubMed:8898217). Also in response to SDC1, required for SDC1 expression in neighboring dental epithelial cells (PubMed:8898217). At the early bell stage, acts to drive proliferation of dental mesenchyme cells, however during the late bell stage acts as a homeostatic regulator of the cell cycle (PubMed:24028588, PubMed:29148101). Regulates proliferation and inhibits premature mesenchymal odontogenesis during the bell stage via inhibition of the Wnt signaling component CTNNB1 and subsequent repression of the odontoblast differentiation factors BMP2, BMP4, LEF1, ALPL and BGLAP/OCN (PubMed:24028588, PubMed:29148101). Additionally, required for correct development and fusion of the palatal shelves and embryonic mandibular formation (PubMed:7914451). Plays a role in embryonic bone formation of the middle ear, skull and nasal bones (PubMed:7914451). Required for correct formation and thickness of the nail plate (PubMed:11369996). May play a role in limb-pattern formation (PubMed:1677742).

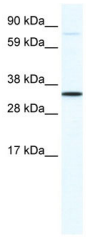
Cellular Location

Nucleus. Note=Interaction with PIAS1 is required for localization to the nuclear periphery (PubMed:16600910)

References

Lee,H., et al., (2006) Genes Dev. 20 (7), 784-794Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.

Images



WB Suggested Anti-MSX1 Antibody Titration: 1.25µg/ml
ELISA Titer: 1:62500
Positive Control: SP2/0 cell lysate