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MSX1 antibody - N-terminal region
Rabbit Polyclonal Antibody
Catalog # AI11126

Specification

MSX1 antibody - N-terminal region - Product Information

Application	**WB**
Primary Accession	P13297
Other Accession	NM_010835, NP_034965
Reactivity	**Human, Mouse, Rat, Pig, Bovine, Dog**
Predicted	**Human, Mouse, Rat, Pig, Bovine, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**33kDa KDa**

MSX1 antibody - N-terminal region - 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.

MSX1 antibody - N-terminal region - Protein Information

Name Msx1 {ECO:0000312|MGI:MGI:97168}

Function
Acts as a transcriptional repressor (PubMed:7823952, PubMed:22629437, PubMed:23371388). 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:<a

href="http://www.uniprot.org/citations/23371388" target="_blank">23371388). Represses transcription of myoblast differentiation factors (PubMed:16600910, PubMed:22629437). Binds to core enhancer regions in target gene promoters of myoblast differentiation factors with binding specificity facilitated by interaction with PIAS1 (PubMed:16600910). Recruits histone H3 methyltransferases such as EHMT2/G9a to gene promoter regions which leads to inhibition of myoblast differentiation via transcriptional repression of differentiation factors (PubMed:22629437). 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:7914451, PubMed:8898217, PubMed:24028588, PubMed:27713059, PubMed:29148101). 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 an 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 EHMT2/G9a is required for localization to the nuclear periphery (PubMed:22629437). Interaction with PIAS1 is required for localization to the nuclear periphery (PubMed:16600910)

MSX1 antibody - N-terminal region - Protocols

Provided below are standard protocols that you may find useful for product applications.

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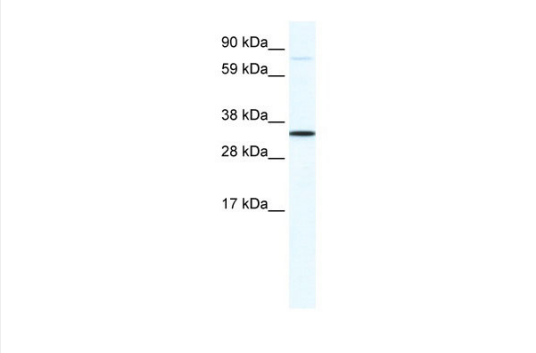
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

MSX1 antibody - N-terminal region - Images



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

MSX1 antibody - N-terminal region - 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.