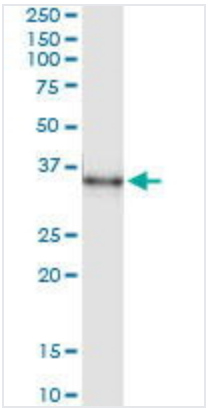
# MSX1 Antibody – Mouse Monoclonal

## PRODUCT OVERVIEW

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| **Product Name** | MSX1, Monoclonal Antibody |
| **Full Product Name** | MSX1 (msh Homeobox 1, HOX7, HYD1) (HRP) |
| **Product Gene Name** | anti-MSX1 antibody |
| **Product Synonym Names** | msh Homeobox 1; HOX7; HYD1 |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2a,k |
| **Clone Number** | 2B12 |
| **Host** | Mouse |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with horseradish peroxidase (HRP). |
| **Purity/Purification** | Purified |
| **Specificity** | Recognizes MSX1. |
| **Preparation and Storage** | Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. |
| **Molecular Weight** | 31kDa |
| **OMIM** | phenotype 608874 |
| **3D Structure** | ModBase 3D Structure for P28360 |
| **Immunogen** | MSX1 (NP_002439, 216aa-297aa) full length recombinant protein with GST tag. MW of the GST tag alone is 26kD. |
| **Conjugate** | HRP |
| **Product Categories/Family for anti-MSX1 antibody** | Antibodies; Transcription Factors; Homeobox (HOX) |
| **Applications Tested/Suitable for anti-MSX1 antibody** | ELISA (EIA), Immunoprecipitation (IP) |
| **Application Notes for anti-MSX1 antibody** | Applications are based on unconjugated antibody. |
| **Related Product Information for anti-MSX1 antibody** | MBS6180276 is an antibody targeting MSX1. Also known as MSX1 (msh Homeobox 1, HOX7, HYD1) (HRP). Host: Mouse. |
| **Other Notes** | Small volumes of anti-MSX1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |




**Immunoprecipitation (IP) of anti-MSX1 antibody**
Immunoprecipitation of MSX1 transfected lysate using anti-MSX1 monoclonal antibody and Protein A Magnetic Bead (U0007), and immunoblotted with MSX1 MaxPab rabbit polyclonal antibody.

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MSX1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 118582284 |
| **NCBI GeneID** | 4487 |
| **NCBI Accession #** | NP_002439 |
| **UniProt Primary Accession #** | P28360 |
| **UniProt Related Accession #** | P28360 |
| **GenBank Nucleotide #** | NM_002448 |
| **NCBI Official Full Name** | homeobox protein MSX-1 |
| **NCBI Official Synonym Full Names** | msh homeobox 1 |
| **NCBI Official Symbol** | MSX1 |
| **NCBI Official Synonym Symbols** | HOX7; HYD1; ECTD3; STHAG1 |
| **UniProt Protein Name** | Homeobox protein MSX-1 |
| **UniProt Synonym Protein Names** | Homeobox protein Hox-7; Msh homeobox 1-like protein |
| **Protein Family** | Homeobox protein |
| **UniProt Gene Name** | MSX1 |
| **UniProt Synonym Gene Names** | HOX7 |
| **UniProt Entry Name** | MSX1_HUMAN |
| **NCBI Protein Information** | homeobox protein MSX-1 |
| **NCBI Summary for MSX1** | This gene encodes a member of the muscle segment homeobox gene family. The encoded protein functions as a transcriptional repressor during embryogenesis through interactions with components of the core transcription complex and other homeoproteins. It may also have roles in limb-pattern formation, craniofacial development, particularly odontogenesis, and tumor growth inhibition. Mutations in this gene, which was once known as homeobox 7, have been associated with nonsyndromic cleft lip with or without cleft palate 5, Witkop syndrome, Wolf-Hirschom syndrome, and autosomoal dominant hypodontia. [provided by RefSeq, Jul 2008] |

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| **UniProt Comments for MSX1** | MSX1: Acts as a transcriptional repressor. May play a role in limb-pattern formation. Acts in cranofacial development and specifically in odontogenesis. Expression in the developing nail bed mesenchyme is important for nail plate thickness and integrity. Expressed in the developing nail bed mesenchyme. Belongs to the Msh homeobox family.<br><br>Protein type: Motility/polarity/chemotaxis; DNA-binding<br><br>Chromosomal Location of Human Ortholog: 4p16.2<br><br>Cellular Component: nucleoplasm; transcription factor complex; cytoplasm; nucleus<br><br>Molecular Function: p53 binding<br><br>Biological Process: embryonic forelimb morphogenesis; negative regulation of striated muscle cell differentiation; transcription from RNA polymerase II promoter; muscle development; protein stabilization; in utero embryonic development; regulation of odontogenesis; mesenchymal cell proliferation; cell morphogenesis; negative regulation of transcription from RNA polymerase II promoter; palate development; middle ear morphogenesis; embryonic hindlimb morphogenesis; odontogenesis of dentine-containing teeth; anterior/posterior pattern formation; negative regulation of cell proliferation; pituitary gland development; midbrain development; positive regulation of transcription from RNA polymerase II promoter; positive regulation of DNA damage response, signal transduction by p53 class mediator; negative regulation of cell growth; positive regulation of BMP signaling pathway; negative regulation of apoptosis<br><br>Disease: Orofacial Cleft 5; Witkop Syndrome; Tooth Agenesis, Selective, 1 |
| **Research Articles on MSX1** | **1.** Gene-gene interaction between MSX1 and TP63 may influence the risk of nonsyndromic cleft lip with or without cleft palate in Asian populations. |
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