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Msx2 Rabbit pAb

Catalog # AP99193

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P35548
Other Accession	P35548
Predicted	Rat, Human, Mouse, Rabbit, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	28897
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Msx2/Hox8
Epitope Specificity	101-200/267
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the Msh homeobox family.Contains 1 homeobox DNA-binding domain.
SUBUNIT	Interacts with MINT. Interacts with XRCC6 (Ku70) and XRCC5 (Ku80).
DISEASE	Defects in MSX2 are the cause of parietal foramina 1 (PFM1) [MIM:168500]; also known as foramina parietalia permagna (FPP). PFM1 is an autosomal dominant disease characterized by oval defects of the parietal bones caused by deficient ossification around the parietal notch, which is normally obliterated during the fifth fetal month. Defects in MSX2 are the cause of parietal foramina with cleidocranial dysplasia (PFMCCD) [MIM:168550]; also known as cleidocranial dysplasia with parietal foramina. PFMCCD combines skull defects in the form of enlarged parietal foramina and deficient ossification of the clavicles. Defects in MSX2 are the cause of craniosynostosis type 2 (CRS2) [MIM:604757]; also known as craniosynostosis Boston-type (CSB). CRS2 is an autosomal dominant disorder characterized by the premature fusion of calvarial sutures. The craniosynostosis phenotype is either fronto-orbital recession, or frontal bossing, or turribrachycephaly, or cloverleaf skull. Associated features include severe headache, high incidence of visual problems (myopia or hyperopia), and short first metatarsals. Intelligence is normal.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a member of the muscle segment homeobox gene family. The encoded protein is a transcriptional repressor whose normal activity may establish a balance between survival and apoptosis of neural crest-derived cells required for proper craniofacial morphogenesis. The encoded protein may also have a role in promoting cell growth under certain conditions and may be an important target for the RAS signaling pathways. Mutations in this gene are associated with parietal foramina 1 and craniosynostosis type 2. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	4488
Other Names	CRS2; FPP; HOX8; MSH; PFM; PFM1; MSX2_HUMAN; MSX2; Homeobox protein Hox-8; msh homeobox 2; msh (Drosophila) homeo box homolog 2; parietal foramina 1; msh homeobox homolog 2 (Drosophila); craniosynostosis, type 2
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	MSX2
Synonyms	HOX8
Function	Acts as a transcriptional regulator in bone development. Represses the ALPL promoter activity and antagonizes the stimulatory effect of DLX5 on ALPL expression during osteoblast differentiation. Probable morphogenetic role. May play a role in limb-pattern formation. In osteoblasts, suppresses transcription driven by the osteocalcin FGF response element (OCFRE). Binds to the homeodomain-response element of the ALPL promoter.
Cellular Location	Nucleus.

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