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Store at -20C
#5378

Msx1 (P5) Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 32	Source/Isotype: Rabbit	UniProt ID: #P28360	Entrez-Gene Id: 4487
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Msx1 (P5) Antibody detects endogenous levels of total Msx1 protein.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acid sequences surrounding Pro5 of human Msx1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Msh homeobox 1 (Msx1) is a Muscle Segment Homeobox (Msh) gene family member that acts as a transcriptional repressor during embryonic development, playing an important role in limb pattern formation, craniofacial development, and tooth development (1-3). Msx1 is expressed in the mesenchyme of the developing nail bed (2) and in fetal hair follicles, epidermis and fibroblasts; reduced expression is seen in adult epithelial-derived tissues (4). Msx1 acts in concert with the Wnt1 network to establish the midbrain dopaminergic progenitor domain, a region that gives rise to neurons that are critical for normal brain function and are the cells affected in Parkinson disease (5). Mutation in the corresponding Msx1 gene correlates with abnormal tooth development in patients diagnosed with Wolf-Hirschhorn syndrome (6). Other genetic changes in the Msx1 gene result in Witkop Syndrome ("tooth and nail syndrome") and cases of abnormal tooth development associated with non-syndromic orofacial clefting (2,7).

Background References

1. Jezewski, P.A. et al. (2003) *J Med Genet* 40, 399-407.
2. Jumlongras, D. et al. (2001) *Am J Hum Genet* 69, 67-74.
3. Lidral, A.C. and Reising, B.C. (2002) *J Dent Res* 81, 274-8.
4. Stelnicki, E.J. et al. (1997) *Differentiation* 62, 33-41.
5. Andersson, E. et al. (2006) *Cell* 124, 393-405.
6. Nieminen, P. et al. (2003) *J Dent Res* 82, 1013-7.
7. van den Boogaard, M.J. et al. (2000) *Nat Genet* 24, 342-3.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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