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Goat Anti-DMP1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1332a

Specification

Goat Anti-DMP1 Antibody - Product Information

Application	**WB**
Primary Accession	Q13316
Other Accession	NP_001073380, 1758
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**55782**

Goat Anti-DMP1 Antibody - Additional Information

Gene ID 1758

Other Names
Dentin matrix acidic phosphoprotein 1, DMP-1, Dentin matrix protein 1, DMP1

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-DMP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-DMP1 Antibody - Protein Information

Name DMP1

Function
May have a dual function during osteoblast

AF1332a (1 µg/ml) staining of Human Kidney lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-DMP1 Antibody - Background

Dentin matrix acidic phosphoprotein is an extracellular matrix protein and a member of the small integrin binding ligand N-linked glycoprotein family. This protein, which is critical for proper mineralization of bone and dentin, is present in diverse cells of bone and tooth tissues. The protein contains a large number of acidic domains, multiple phosphorylation sites, a functional arg-gly-asp cell attachment sequence, and a DNA binding domain. In undifferentiated osteoblasts it is primarily a nuclear protein that regulates the expression of osteoblast-specific genes. During osteoblast maturation the protein becomes phosphorylated and is exported to the extracellular matrix, where it orchestrates mineralized matrix formation. Mutations in the gene are known to cause autosomal recessive hypophosphatemia, a disease that manifests as rickets and osteomalacia. The gene structure is conserved in mammals. Two transcript variants encoding different isoforms have been described for this gene.

Goat Anti-DMP1 Antibody - References

differentiation. In the nucleus of undifferentiated osteoblasts, unphosphorylated form acts as a transcriptional component for activation of osteoblast- specific genes like osteocalcin. During the osteoblast to osteocyte transition phase it is phosphorylated and exported into the extracellular matrix, where it regulates nucleation of hydroxyapatite.

Cellular Location

Nucleus. Cytoplasm. Secreted, extracellular space, extracellular matrix. Note=In proliferating preosteoblasts it is nuclear, during early maturation stage is cytoplasmic and in mature osteoblast localizes in the mineralized matrix. Export from the nucleus of differentiating osteoblast is triggered by the release of calcium from intracellular stores followed by a massive influx of this pool of calcium into the nucleus

Tissue Location

Expressed in tooth particularly in odontoblast, ameloblast and cementoblast

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
Human variation in alcohol response is influenced by variation in neuronal signaling genes. Joslyn G, et al. Alcohol Clin Exp Res, 2010 May. PMID 20201926.
Gene-centric association signals for lipids and apolipoproteins identified via the HumanCVD BeadChip. Talmud PJ, et al. Am J Hum Genet, 2009 Nov. PMID 19913121.
Identification of a novel dentin matrix protein-1 (DMP-1) mutation and dental anomalies in a kindred with autosomal recessive hypophosphatemia. Turan S, et al. Bone, 2010 Feb. PMID 19796717.
Patterns of FGF-23, DMP1, and MEPE expression in patients with chronic kidney disease. Pereira RC, et al. Bone, 2009 Dec. PMID 19679205.

Goat Anti-DMP1 Antibody - Protocols

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

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