bs-12359R **[Primary Antibody]**

DMP1 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 1758 **SWISS:** Q13316

Target: DMP1

Immunogen: KLH conjugated synthetic peptide derived from human DMP1: 221-320/513.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: DMP-1 is a member of the small integrin ligand N-linked glycoprotein family. It is important for the mineralization of bone and dentin. DMP-1 is expressed in bone, tooth and hypertrophic cartilage. It is synthesized by preosteoblasts and contains a large number of acidic domains. DMP-1 localizes to the nucleus of undifferentiated osteoblasts where it functions as a transcriptional regulator for osteoblast-specific gene activation and induces osteoblast differentiation. During osteoblast maturation, DMP-1 undergoes a conformational change and becomes phosphorylated by casein kinase II in response to an influx of calcium ions to the nucleus. DMP-1 is then exported to the extracellular matrix (ECM) where it regulates the nucleation of hydroxyapatite and the formation of calcified tissue. DMP-1 is proteolytically processed into N- and C-terminal fragments in the ECM of bone and dentin. The protein has also been identified in bone as a high molecular weight proteoglycan comprised of the N-terminal DMP-1 fragment and chondroitin sulfate.The loss of DMP-1 can result in hypomineralized bone.

Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)
ICC/IF (1:100-500)
ELISA (1:5000-10000)

Reactivity: (predicted: Human)

Predicted MW.: 54 kDa

Subcellular Location: Secreted ,Extracellular matrix ,Cytoplasm ,Nucleus

SELECTED CITATIONS

- **[IF=10.8]** Li Ye. et al. Mandible-derived extracellular vesicles regulate early tooth development in miniature swine via targeting KDM2B. INT J ORAL SCI. 2025 Apr;17(1):1-10 WB,IF ;Pig. 40289114
- **[IF=8.5]** Haoqing Yang. et al. miR615-3p inhibited FBLN1 and osteogenic differentiation of umbilical cord mesenchymal stem cells by associated with YTHDF2 in a m6A-miRNA interaction manner. CELL PROLIFERAT. 2024 Feb;:e13607 WB,IF ;Human. 38353178
- **[IF=8.079]** Luo Bin. et al. Residual periodontal ligament in the extraction socket promotes the dentin regeneration potential of DPSCs in the rabbit jaw. STEM CELL RES THER. 2023 Dec;14(1):1-14 IHC ;Rabbit. 36941706
- **[IF=7.5]** Luo Xinghong. et al. Odontoblasts release exosomes to regulate the odontoblastic differentiation of dental pulp stem cells. STEM CELL RES THER. 2023 Dec;14(1):1-16 WB ;Mouse. 37422687
- **[IF=6.684]** Ning Wang. et al. miR-6807-5p Inhibited the Odontogenic Differentiation of Human Dental Pulp Stem Cells Through Directly Targeting METTL7A. Front Cell Dev Biol. 2021; 9: 759192 IHC ;Mouse. 34790668