

Recombinant Human DMP1 Protein (His Tag)

Catalog Number:PKSH032347



Note: Centrifuge before opening to ensure complete recovery of vial contents.

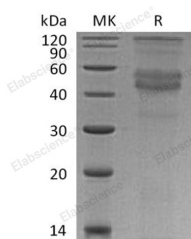
Description

Synonyms	Dentin Matrix Acidic Phosphoprotein 1;DMP-1;Dentin Matrix Protein 1;DMP1;ARHP;ARHR
Species	Human
Expression Host	HEK293 Cells
Sequence	Lys17-Tyr513
Accession	Q13316
Calculated Molecular Weight	55.0 kDa
Observed molecular weight	45-120 kDa
Tag	C-His

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20mM Histidine-HCl, 6% Trehalose, 4% Mannitol, 0.05% Tween 80, pH6.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the speci
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

Dentin Matrix Acidic Phosphoprotein 1 (DMP-1) is an extracellular matrix protein and a member of the small integrin binding ligand N-linked glycoprotein family. DMP-1 is expressed in teeth particularly in odontoblast, ameloblast, and cementoblast. DMP-1 is critical for proper mineralization of bone and dentin. DMP-1 may have a dual function during osteoblast differentiation. In the nucleus of undifferentiated osteoblasts, the unphosphorylated form of DMP-1 acts as a transcriptional component for activation of osteoblast-specific genes like osteocalcin. During the osteoblast to osteocyte transition phase, DMP-1 is phosphorylated and exported into the extracellular matrix, where it regulates nucleation of

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hydroxyapatite. DMP-1 mutations have also been shown to cause rickets hypophosphatemic autosomal recessive type 1 (ARHR1).

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