

ARG82340 Mouse DMP1 ELISA Kit

Package: 96 wells
Store at: 4°C

Component

Cat. No.	Component Name	Package	Temp
ARG82340-001	Antibody-coated microplate	8 X 12 strips	4°C. Unused strips should be sealed tightly in the air-tight pouch.
ARG82340-002	Standard	2 X 10 ng/vial	4°C
ARG82340-003	Standard/Sample diluent	30 ml (Ready to use)	4°C
ARG82340-004	Antibody conjugate concentrate (100X)	1 vial (100 µl)	4°C
ARG82340-005	Antibody diluent buffer	12 ml (Ready to use)	4°C
ARG82340-006	HRP-Streptavidin concentrate (100X)	1 vial (100 µl)	4°C
ARG82340-007	HRP-Streptavidin diluent buffer	12 ml (Ready to use)	4°C
ARG82340-008	25X Wash buffer	20 ml	4°C
ARG82340-009	TMB substrate	10 ml (Ready to use)	4°C (Protect from light)
ARG82340-010	STOP solution	10 ml (Ready to use)	4°C
ARG82340-011	Plate sealer	4 strips	Room temperature

Summary

Product Description	ARG82340 Mouse DMP1 ELISA Kit is an Enzyme Immunoassay kit for the quantification of Mouse DMP1 in serum, plasma (EDTA, heparin) and cell culture supernatants.
Tested Reactivity	Ms
Tested Application	ELISA
Target Name	DMP1
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	78 pg/ml
Sample Type	Serum, plasma (EDTA, heparin) and cell culture supernatants.
Standard Range	156 - 10000 pg/ml
Sample Volume	100 µl
Precision	Intra-Assay CV: 6.5% Inter-Assay CV: 7.3%

Alternate Names DMP-1; Dentin matrix protein 1; ARHP; Dentin matrix acidic phosphoprotein 1; ARHR

Application Instructions

Assay Time ~ 5 hours

Properties

Form 96 well

Storage instruction Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol DMP1

Gene Full Name dentin matrix acidic phosphoprotein 1

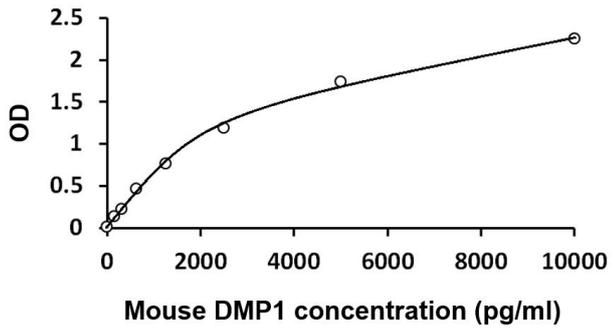
Background Dentin matrix acidic phosphoprotein is an extracellular matrix protein and a member of the small integrin binding ligand N-linked glycoprotein family. This protein, which is critical for proper mineralization of bone and dentin, is present in diverse cells of bone and tooth tissues. The protein 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. [provided by RefSeq, Jul 2008]

Function May have a dual function during osteoblast 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. [UniProt]

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PTM Phosphorylated in the cytosol and extracellular matrix and unphosphorylated in the nucleus. Phosphorylation is necessary for nucleocytoplasmic transport and may be catalyzed by a nuclear isoform of CK2 and can be augmented by calcium. Phosphorylated (in vitro) by FAM20C in the extracellular medium at sites within the S-x-E/pS motif. [UniProt]

Cellular Localization 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. [UniProt]



ARG82340 Mouse DMP1 ELISA Kit standard curve image

ARG82340 Mouse DMP1 ELISA Kit results of a typical standard run with optical density reading at 450 nm.