

MEPE Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Osteoregulin;MEPE;OF45
Protein Construction:	Ala25-Asp441
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q8K4L6
Molecular Weight:	45.3 kDa (predicted). The protein is cleaved into 2 chains and due to glycosylation, it migrates to 45-60 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Matrix extracellular phosphoglycoprotein (MEPE) is expressed in bone and teeth where it has multiple functions. The C-terminus of MEPE contains a mineral-binding, acidic serine- and aspartate-rich motif (ASARM) that is also present in other noncollagenous proteins of mineralized tissues. MEPE-derived ASARM peptides function in phosphate homeostasis and direct inhibition of bone mineralization in a phosphorylation-dependent manner.

Reference

Christensen B, et al. FAM20C-Mediated Phosphorylation of MEPE and Its Acidic Serine- and Aspartate-Rich Motif. JBM Plus. 2020 Jun 26;4(8):e10378. doi: 10.1002/jbm4.10378. PMID: 32803110; PMCID: PMC7422707.

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