

Mouse Osteomodulin / OMD Protein (His Tag)



Sino Biological Inc.
Biological Solution Specialist

Catalog Number: 50451-M08H

General Information

Gene Name Synonym:

OSAD; SLRR2C; OSAD; SLRR2C

Protein Construction:

A DNA sequence encoding the mouse OMD (NP_036180.1) (Met 1-Ile 423) precursor was expressed, with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 96 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 21

Molecular Mass:

The secreted recombinant mouse OMD comprises 414 amino acids and has a calculated molecular mass of 48.8 kDa. The apparent molecular mass of the recombinant protein is approximately 60-70 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

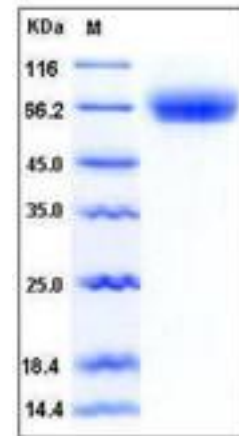
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Osteomodulin (OMD), also known as Osteoadherin (OSAD), Keratan sulfate proteoglycan osteomodulin, KSPG osteomodulin, and SLRR2C, is a secreted protein which belongs to the small leucine-rich proteoglycan (SLRP) family and Class II subfamily. SLRP family proteins are normally found in extracellular matrices, but Osteomodulin is the only member restricted to mineralized tissues. Osteomodulin is primarily expressed by osteoblasts and might have a role in regulation of mineralization. In bone OSAD has been localized in primary spongiosa within the bovine fetal rib growth plate. Moreover, in situ hybridization has shown expression of OSAD in osteoblasts close to the cartilage and bone border in the growth plate of rat femur. OSAD may play an important role during tooth development and biomineralization of dentin. Osteomodulin is a cell binding keratan sulfate proteoglycan which was recently isolated from mineralized bovine bone and subsequently cloned and sequenced. Osteomodulin may be implicated in biomineralization processes. It has a function in binding of osteoblasts via the alpha (V) beta (3)-integrin. It is likely that Osteomodulin is an osteoblast maturation marker that is induced by osteoclast activity. Osteomodulin is also an early marker for terminally differentiated matrix producing osteoblasts.

References

1. Buchaille R, *et al.* (2000) Expression of the small leucine-rich proteoglycan osteoadherin/osteomodulin in human dental pulp and developing rat teeth. *Bone*. 27(2): 265-70.
2. Petersson U, *et al.* (2003) Identification, distribution and expression of osteoadherin during tooth formation. *Eur J Oral Sci*. 111(2): 128-36.
3. Rehn AP, *et al.* (2006) Differential regulation of osteoadherin (OSAD) by TGF-beta1 and BMP-2. *Biochem Biophys Res Commun*. 349(3): 1057-64.

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