

# Mouse MEP1A Protein (His Tag)

Catalog Number: 50057-M08H



**Sino Biological Inc.**  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

AI098089; AW107200; Mep-1; Mep-1a; Mep1

### Protein Construction:

A DNA sequence encoding the mouse MEP1A (NP\_032611.2) (Met 1-Arg 615) was expressed, fused with a polyhistidine tag at the C-terminus.

**Source:** Mouse

**Expression Host:** Human Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Bio Activity:

Measured by its ability to cleave a fluorogenic peptide substrate, Mca-YVADAPK(Dnp)-OH, R&D Systems, Catalog # ES007. The specific activity is >400 pmoles/min/μg. (Activation description: The proenzyme needs to be activated by Trypsin for an activated form)

### 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:** Cys 21

### Molecular Mass:

The recombinant mouse MEP1A consists of 606 amino acids after removal of the signal peptide and has a predicted molecular mass of 69 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rm MEP1A is approximately 80-90 kDa due to glycosylation.

### 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:

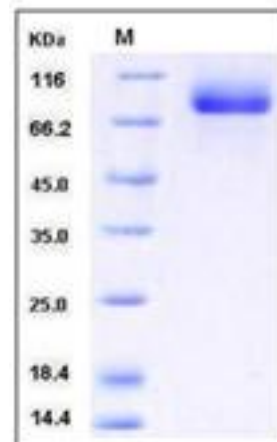
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Meprin A subunit alpha, also known as MEP1A, and Endopeptidase-2, is a single-pass type I membrane protein which belongs to the peptidase M12A family. MEP1A contains one EGF-like domain, one MAM domain, and one MATH domain. Meprins are unique plasma membrane and secreted metalloproteinases that are highly regulated at the transcriptional and post-translational levels. Meprin alpha and beta subunits are abundantly expressed in kidney and intestinal epithelial cells, are secreted into the urinary tract and intestinal lumen, and are found in leukocytes and cancer cells under certain conditions. Meprins are capable of proteolytically degrading extracellular matrix proteins, proteolytically processing bioactive proteins, and play a role in inflammatory processes. Meprin A and B are highly regulated, secreted and cell-surface homo- and hetero-oligomeric enzymes. Meprins are abundantly expressed in kidney and intestine. The multidomain alpha and beta subunits have high sequence identity. They have very different substrate specificities, oligomerization potentials and are differentially regulated. Meprin A appears to be an important therapeutic target and urinary excretion appears to be a potential biomarker of acute kidney injury (AKI).

## References

1.Bertenshaw,GP. et al., 2002, Biol Chem. 383 (7-8):1175-83. 2.Bond, JS. et al., 2005, FEBS Lett. 579 (15): 3317-22. 3.Herzog, C. et al., 2007, Kidney Int. 71 (10): 1009-18.

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