

Mouse METAP2 / MAP2 Protein (His Tag)

Catalog Number: 50528-M08B



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Biological Solution Specialist

General Information

Gene Name Synonym:

4930584B20Rik; A930035J23Rik; AI047573; AL024412; Amp2; AU014659; Mnpep; p67; p67eIF2

Protein Construction:

A DNA sequence encoding the mouse METAP2 (O08663) (Ala 2-Tyr 478) was expressed, with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 88 % as determined by SDS-PAGE

Bio Activity:

Measure by its ability to remove methionine from a fluorogenic peptide substrate H-Met-Gly-Pro-AMC (Catalog # ES017). The resulting GP-AMC is cleaved by Recombinant Human DPPIV/CD26 (Catalog # 1180-SE). The specific activity is >15 pmol/min/μg.

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: Met

Molecular Mass:

The recombinant mouse METAP2 consists of 488 amino acids and has a calculated molecular mass of 54.3 kDa. It migrates as an approximately 60 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% glycerol

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:

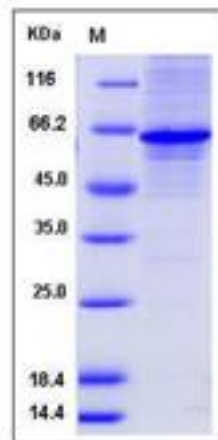
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

METAP2 (Methionine aminopeptidase 2), also known as MAP2 is a protein which belongs to the peptidase M24A family. MAP2 binds 2 cobalt or manganese ions and contains approximately 12 O-linked N-acetylglucosamine (GlcNAc) residues. It is found in all organisms and is especially important because of its critical role in tissue repair and protein degradation. The catalytic activity of human MAP2 toward Met-Val peptides is consistently two orders of magnitude higher than that of METAP1, suggesting that it is responsible for processing proteins containing N-terminal Met-Val and Met-Thr sequences in vivo. This protein functions both by protecting the alpha subunit of eukaryotic initiation factor 2 from inhibitory phosphorylation and by removing the amino-terminal methionine residue from nascent protein. MAP2 protects eukaryotic initiation factor EIF2S1 from translation-inhibiting phosphorylation by inhibitory kinases such as EIF2AK2/PKR and EIF2AK1/HCR. It also plays a critical role in the regulation of protein synthesis.

References

1. Bennett, *et al.* (1997) EPR Studies on the Mono- and Dicobalt (II)-Substituted Forms of the Aminopeptidase from *Aeromonas proteolytica*. Insight into the Catalytic Mechanism of Dinuclear Hydrolases. *J Am Chem Soc.* 119:1923-33.
2. Johansson, *et al.* (2008) Dicobalt II-II, II-III, and III-III Complexes as Spectroscopic Models for Dicobalt Enzyme Active Sites. *Inorg Chem.* 47:5079-92.
3. Bradshaw, *et al.* (2002) Aminopeptidases and angiogenesis. *Essays Biochem.* 38: 5-78.

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