Data Sheet (Cat.No.TMPY-02727)

TargetMol

METAP2 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Amp2;methionyl aminopeptidase 2;A930035J23Rik;AU014659;AI047573;4930584B20Rik; AL024412;p67;Mnpep;p67eIF2
Protein Construction:	A DNA sequence encoding the mouse METAP2 (O08663) (Ala 2-Tyr 478) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Met
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	O08663
Molecular Weight:	54.3 kDa (predicted); 60 kDa (reducing conditions)

QC Testing

Biological Activity:	Measure by its ability to remove methionine from a fluorogenic peptide substrate H-Met-Gly-Pro-AMC . The resulting GP-AMC is cleaved by Recombinant Human DPPIV/CD26 . The specific activity is >15 pmol/min/μg.
Purity:	> 88 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 50 mM Tris, 100 mM NaCl, pH 8.0, 10% glycerol.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

METAP2 (Methionine aminopeptidase 2), also known as MAP2 is a protein that 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.

Reference

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.

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.

Bradshaw, et al. (2002) Aminopeptidases and angiogenesis. Essays Biochem. 38: 5-78.

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