

Recombinant Mouse MEP1A/PPHA Protein (His Tag)

Catalog No. PKSM040881

Note: Centrifuge before opening to ensure complete recovery of vial contents.

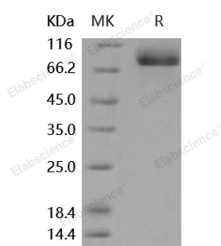
Description

Synonyms	AI098089;AW107200;Mep-1;Mep-1a;Mep1
Species	Mouse
Expression Host	HEK293 Cells
Sequence	Met 1-Arg 615
Accession	NP_032611.2
Calculated Molecular Weight	69.0 kDa
Observed molecular weight	80-90 kDa
Tag	C-His
Bioactivity	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)

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

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Background

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).

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