Mouse Carboxypeptidase B2 / CPB2 Protein (His Tag)

Catalog Number: **50963-M08H**

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General Information

Gene Name Synonym:

CPU; PCPB; TAFI; 1110032P04Rik; 4930405E17Rik; AI255929; CPR; Cpu; TAFI

Protein Construction:

A DNA sequence encoding the extracellular domain of mouse CPB2 (Q9JHH6) (Met 1-Thr 422) was expressed, with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 97 % 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 ℃

Predicted N terminal: Phe 22

Molecular Mass:

The secreted recombinant mouse CPB2 (pro form）comprises 412 amino acids and has a calculated molecular mass of 48 kDa. As a result of glycosylation, the apparent molecular mass of rmCPB2 is approximately 60 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:

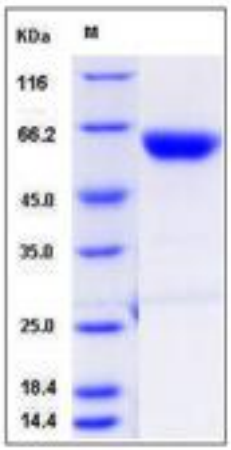
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Carboxypeptidase B2, also known as Carboxypeptidase U, Thrombin-activable fibrinolysis inhibitor, Plasma carboxypeptidase B, CPB2, is a secreted protein which belongs to the peptidase M14 family. Carboxypeptidases are enzymes that hydrolyze C-terminal peptide bonds. The carboxypeptidase family includes metallo-, serine, and cysteine carboxypeptidases. According to their substrate specificity, these enzymes are referred to as carboxypeptidase A (cleaving aliphatic residues) or carboxypeptidase B (cleaving basic amino residues). CPB2 is activated by thrombin and acts on carboxypeptidase B substrates. After thrombin activation, the mature protein downregulates fibrinolysis. CPB2 is synthesized by the liver and circulates in the plasma as a plasminogen-bound zymogen. When it is activated by proteolysis at residue Arg92 by the thrombin / thrombomodulin complex. CPB2 cleaves C-terminal arginine or lysine residues from biologically active peptides such as kinins or anaphylatoxins in the circulation thereby regulating their activities. CPB2 exhibits carboxypeptidase activity and activated CPB2 reduces fibrinolysis by removing the fibrin C-terminal residues that are important for the binding and activation of plasminogen.

References

1.Eaton DL. et al.,1991, J Biol Chem. 266 (32): 21833-8.
2.Boffa MB. et al.,1999, Biochemistry. 38 (20): 6547-58.
3.Liu T. et al., 2005, J. Proteome Res. 4: 2070-80.