

Human Carboxypeptidase E / CPE Protein (His Tag)

Catalog Number: 10069-H08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CPE

Protein Construction:

A DNA sequence encoding the human carboxypeptidase E (CPE) precursor (NP_001864.1) (Met 1-Ser 453) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to cleave a peptide substrate, benzoyl-AR-OH. The product, Arg, reacted with orthophthaldialdehyde (OPA) to form a fluorescent molecule. The specific activity is >12,000 pmoles/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: Glu 26

Molecular Mass:

The recombinant human CPE comprises 439 amino acids and predicts a molecular mass of 49.4 kDa. As a result of glycosylation, the apparent molecular mass of rhCPE is approximately 53 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:

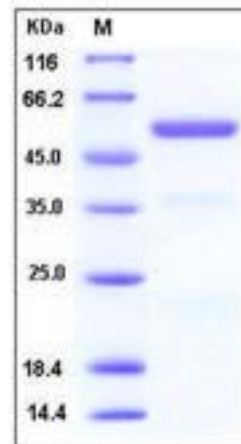
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Carboxypeptidase E (CPE), also known as Carboxypeptidase H, is a peripheral membrane protein and a zinc metallocarboxypeptidase, and the conversion of proCPE into CPE occurs primarily in secretory vesicles. The active form of CPE cleaves C-terminal amino acid residues of the peptide, and is thus involved in the biosynthesis of peptide hormones and neurotransmitters including insulin, enkephalin, etc. The enzymatic activity is enhanced by millimolar concentrations of Co²⁺. It has also been proposed that membrane-associated carboxypeptidase E acts as a sorting receptor for targeting regulated secretory proteins which are mostly prohormones and neuropeptides in the trans-Golgi network of the pituitary and in secretory granules into the secretory pathway. Its interaction with glycosphingolipid-cholesterol rafts at the TGN facilitates the targeting. Mutations in this gene are implicated in type II diabetes due to impaired glucose clearance and insulin resistance.

References

1.Manser, E. et al., 1990, Biochem. J. 267: 517-525. 2.Cool, D.R. et al., 1997, Cell. 88: 73-83. 3.Song, L. and Fricker, L. 1995, J. Neurochem. 65: 444-453.

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