

Recombinant Human CPE, His-tagged, C13&N15 Labeled

Cat. No. CPE-199H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CPE MS Standard Protein, C13 and N15-labeled (CPE, Heavy Labeled) Glu 26 - Ser 453 (Accession # NP_001864.1) was produced in human 293 cells (HEK293) with fully chemically defined cell culture medium to obtain >99% incorporation efficiency
Species	Human
Source	HEK293
Protein Length	26-453 a.a.
Description	Carboxypeptidase E (CPE) is also known as Carboxypeptidase H or enkephalin convertase. Carboxypeptidase E cleaves C-terminal amino acid residues and is involved in neuropeptide processing. It is a peripheral membrane protein. CPE specifically binds regulated secretory pathway proteins, including prohormones, but not constitutively secreted proteins. Carboxypeptidase E appears to have several functions. The active form of carboxypeptidase E was shown to be in secretory vesicles, where it acts as an exopeptidase to activate neuropeptides. It does that by cleaving off basic C-terminal amino acids, producing the active form of the peptide. Products of carboxypeptidase E include insulin, enkephalin, and most other neuroendocrine peptides. It has also been proposed that membrane-associated carboxypeptidase E acts as a sorting signal for regulated secretory proteins in the trans-Golgi network of the pituitary and in secretory granules; regulated secretory proteins are mostly hormones and neuropeptides. Mice with mutant carboxypeptidase

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	E Cpe, display endocrine disorders like obesity and infertility.
Predicted N Terminal	Glu 26
Form	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Molecular Mass	CPE, Heavy Labeled is fused with polyhistidine tag at the C-terminus, and has a calculated MW of 49 kDa. The predicted N-terminus is Glu 26. DTT-reduced Protein migrates as 53 kDa in SDS-PAGE. CPE, Heavy Labeled is labeled with [U- ¹³ C ₆ , ¹⁵ N ₄]-L-Arginine
Endotoxin	Less than 1.0 EU per µg of the CPE, Heavy Labeled by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Applications	MS Standard Protein
Storage	Avoid repeated freeze-thaw cycles. No activity loss was observed after storage at: In lyophilized state for 1 year (4oC); After reconstitution under sterile conditions for 3 months (-70oC).

GENE INFORMATION

Gene Name	CPE carboxypeptidase E [Homo sapiens]
Official Symbol	CPE
Synonyms	CPE; carboxypeptidase E; carboxypeptidase H; cobalt stimulated chromaffin granule carboxypeptidase; enkephalin convertase; insulin granule associated carboxypeptidase; CPH; prohormone-processing carboxypeptidase; insulin granule-

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	associated carboxypeptidase; cobalt-stimulated chromaffin granule carboxypeptidase;
Gene ID	1363
mRNA Refseq	NM_001873
Protein Refseq	NP_001864
MIM	114855
UniProt ID	P16870
Chromosome Location	4q32.3
Pathway	Arf6 trafficking events, organism-specific biosystem; Diabetes pathways, organism-specific biosystem; Disease, organism-specific biosystem; Insulin Synthesis and Processing, organism-specific biosystem; Type I diabetes mellitus, organism-specific biosystem; Type I diabetes mellitus, conserved biosystem;
Function	carboxypeptidase activity; cell adhesion molecule binding; metal ion binding; metallocarboxypeptidase activity; metalloproteinase activity; neurexin family protein binding; peptidase activity; zinc ion binding;