

Datasheet for ABIN968160  
**anti-CPE antibody (AA 49-200)**[Go to Product page](#)

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## Overview

Quantity:	150 µg
Target:	CPE
Binding Specificity:	AA 49-200
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CPE antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunofluorescence (IF)

## Product Details

Immunogen:	Human Carboxypeptidase E aa. 49-200
Clone:	35-Carboxypeptidase E
Isotype:	IgG1
Cross-Reactivity:	Rat (Rattus), Mouse (Murine)
Characteristics:	<ol style="list-style-type: none"><li>1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.</li><li>2. Please refer to us for technical protocols.</li><li>3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.</li><li>4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.</li></ol>

## Product Details

Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
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## Target Details

Target:	CPE
Alternative Name:	Carboxypeptidase E ( <a href="#">CPE Products</a> )
Background:	<p>Carboxypeptidase E (CPE), also known as carboxypeptidase H and enkephalin convertase, is found as both a membrane-bound and a soluble glycoprotein in neuroendocrine tissues and adrenal-gland chromaffin granules. The C-terminus forms an amphiphilic alpha-helix, suggesting that this region is responsible for the membrane-bound form. Evidence suggests the active form of CPE is located in the secretory vesicles. CPE appears to have several functions. It is an exopeptidase that cleaves neuropeptides with C-terminal basic amino acids, producing an active form of the peptide. It has also been proposed that membrane-bound CPE is a sorting receptor for regulated secretory pathway (RSP) proteins in the TGN pituitary Golgi and secretory granule membranes. RSP proteins primarily consist of hormones and neuropeptides. Mice that carry a mutation in the CPE gene <i>Cpe[fat]</i> display endocrine disorders such as obesity, infertility, and hyperproinsulinemia. Furthermore, the same endocrine disorders are observed in <i>Cpe[fat]</i> mice where the CPE gene has been effaced by antisense RNA.</p>
Molecular Weight:	50 kDa
Pathways:	<a href="#">Peptide Hormone Metabolism</a> , <a href="#">Synaptic Membrane</a>

## Application Details

Application Notes:	<p>Methanol Procedure for a 96 well plate: Remove media from wells. Add 100 µl/well fresh 3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and add 100 µl/well 90% methanol. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick out PBS and add 100 µl/well blocking buffer (3% FBS in PBS). Incubate for 30 minutes at RT. Flick out and add diluted antibody (diluted in blocking buffer). Incubate for 1 hour at RT. Wash three times with PBS. Flick out PBS and add second step reagent. Incubate for 1 hour at RT. Wash three times with PBS.</p> <p>Triton-X 100 Procedure for a 96 well plate: Remove media from wells. Add 100 µl/well fresh 3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and add 100 µl/well 0.1% Triton-X 100. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick out PBS and add 100 µl/well blocking buffer (3% FBS in PBS). Incubate for 30</p>
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## Application Details

minutes at RT. Flick out and add diluted antibody (diluted in blocking buffer). Incubate for 1 hour at RT. Flick out and wash three times with PBS. Flick out and add second step reagent. Incubate for 1 hour at RT. Flick out and wash three times with PBS.

Comment: Related Products: ABIN968545

Restrictions: For Research Use only

## Handling

Format: Liquid

Concentration: 250 µg/mL

Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C

Storage Comment: Store undiluted at -20° C.

## Publications

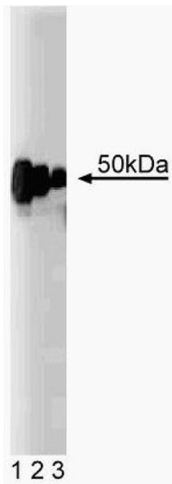
Product cited in: Cool, Normant, Shen, Chen, Pannell, Zhang, Loh: "Carboxypeptidase E is a regulated secretory pathway sorting receptor: genetic obliteration leads to endocrine disorders in Cpe(fat) mice." in: **Cell**, Vol. 88, Issue 1, pp. 73-83, (1997) ([PubMed](#)).

Shen, Loh: "Intracellular misrouting and abnormal secretion of adrenocorticotropin and growth hormone in cpefat mice associated with a carboxypeptidase E mutation." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 94, Issue 10, pp. 5314-9, (1997) ([PubMed](#)).

Varlamov, Fricker: "The C-terminal region of carboxypeptidase E involved in membrane binding is distinct from the region involved with intracellular routing." in: **The Journal of biological chemistry**, Vol. 271, Issue 11, pp. 6077-83, (1996) ([PubMed](#)).

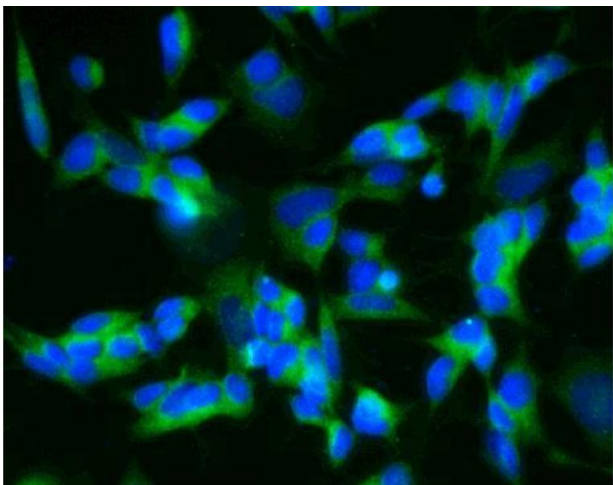
Manser, Fernandez, Loo, Goh, Monfries, Hall, Lim: "Human carboxypeptidase E. Isolation and characterization of the cDNA, sequence conservation, expression and processing in vitro." in:

Images



Western Blotting

**Image 1.** Western blot analysis of Carboxypeptidase E on rat brain lysate (First Panel). Lane 1: 1:2500, lane 2: 1:5000, lane 3: 1:10000 dilution of Carboxypeptidase E,



Immunofluorescence

**Image 2.** Immunofluorescent staining of SH-SY5Y cells (Second Panel). Cells were seeded in a collagen coated 384 well imaging plate at ~ 8,000 cells per well. After overnight incubation, cells were stained using the Triton X100 fix/perm protocol and the anti-Carboxypeptidase E antibody. The second step reagent was Alexa Fluor® 488 goat anti mouse Ig (Invitrogen). The image was taken on a Pathway 855 or 435 imager using a 20x objective. This antibody also stained SK-N-SH and C6 cells using both the Triton X100 and methanol fix/perm protocols.

Image 3.

