# .-online.com antibodies

# Datasheet for ABIN968159 anti-CPE antibody (AA 49-200)

2 Images

4 Publications



## Overview

Quantity:	50 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:	lgG1
Cross-Reactivity:	Rat (Rattus), Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
	2. Please refer to us for technical protocols.
	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.
	4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

Order at www.antibodies-online.com | www.antikoerper-online.de | www.anticorps-enligne.fr | www.antibodies-online.cn International: +49 (0)241 95 163 153 | USA & Canada: +1 877 302 8632 | support@antibodies-online.com Page 1/4 | Product datasheet for ABIN968159 | 02/13/2024 | Copyright antibodies-online. All rights reserved.

## Product Details

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

## Target Details

Target:	CPE
Alternative Name:	Carboxypeptidase E (CPE Products)
Background:	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 Cpe[fat] display endocrine disorders
	such as obesity, infertility, and hyperproinsulinemia. Furthermore, the same endocrine disorders
	are observed in Cpe[fat] mice where the CPE gene has been effaced by antisense RNA.
Molecular Weight:	50 kDa
Pathways:	Peptide Hormone Metabolism, Synaptic Membrane

## Application Details

Application Notes:	Methanol Procedure for a 96 well plate: Remove media from wells. Add 100 $\mu$ l/well fresh 3.7%
	Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and add 100
	$\mu I/well$ 90% methanol. Incubate for 5 minutes at RT. Flick out and wash twice with PBS. Flick
	out PBS and add 100 $\mu\text{I/well}$ 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.
	Triton-X 100 Procedure for a 96 well plate: Remove media from wells. Add 100 $\mu l$ /well fresh
	3.7% Formaldehyde in PBS. Incubate for 10 minutes at room temperature (RT). Flick out and
	add 100 $\mu$ l/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 ul/well blocking buffer (3% FBS in PBS). Incubate for 30

Order at www.antibodies-online.com | www.antikoerper-online.de | www.anticorps-enligne.fr | www.antibodies-online.cn International: +49 (0)241 95 163 153 | USA & Canada: +1 877 302 8632 | support@antibodies-online.com Page 2/4 | Product datasheet for ABIN968159 | 02/13/2024 | Copyright antibodies-online. All rights reserved.

reprivation Detailo	
	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 a hour at RT. Flick out and wash three times with PBS.
Comment:	Related Products: ABIN968545
Restrictions:	For Research Use only

### Handling

Application Details

Format:	Liquid
Concentration:	250 μg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09$ % 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<br/>pathway sorting receptor: genetic obliteration leads to endocrine disorders in Cpe(fat) mice." in:<br/>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:

Order at www.antibodies-online.com | www.antikoerper-online.de | www.anticorps-enligne.fr | www.antibodies-online.cn International: +49 (0)241 95 163 153 | USA & Canada: +1 877 302 8632 | support@antibodies-online.com Page 3/4 | Product datasheet for ABIN968159 | 02/13/2024 | Copyright antibodies-online. All rights reserved. The Biochemical journal, Vol. 267, Issue 2, pp. 517-25, (1990) (PubMed).

### 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.