SANTA CRUZ BIOTECHNOLOGY, INC.

CPE (H-6): sc-393760

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Carboxypeptidase N (arginine carboxypeptidase or CPN) cleaves basic amino acid residues from the C-terminus of peptides and proteins. The enzyme plays a central role in regulating the biologic activity of peptides such as kinins and anaphylatoxins and therefore is also known as kininase-1 and anaphylatoxin inactivator. CPN is a tetrameric complex consisting of two identical regulatory subunits (CPN reg) and two identical catalytic subunits (CPN cat). CPN reg is a member of the leucine-rich repeat family of proteins and CPN cat is a member of the regulatory B-type carboxypeptidase group. Carboxypeptidase E (CPE) is important for removing any remaining C-terminal Arg or Lys after initial endoprotease cleavage during prohormone processing. CPE is also crucial in proinsulin processing, and required for normal-sized photoreceptor synaptic terminal and normal signal transmission to the inner retina.

REFERENCES

1. Zhu, X., et al. 2005. Carboxypeptidase E is required for normal synaptic transmission from photoreceptors to the inner retina. J. Neurochem. 95: 1351-1362.
2. Hosaka, M., et al. 2005. Interaction between secretogranin III and carboxypeptidase E facilitates prohormone sorting within secretory granules. J. Cell Sci. 118: 4785-4795.
3. Johnston, R.A., et al. 2005. Augmented responses to ozone in obese carboxypeptidase E deficient mice. Am. J. Physiol. Regul. Integr. Comp. Physiol. 290: R126-R133.
4. Marzban, L., et al. 2005. Role of carboxypeptidase E in processing of pro-islet amyloid polypeptide in β cells. Endocrinology 146: 1808-1817.

CHROMOSOMAL LOCATION

Genetic locus: CPE (human) mapping to 4q32.3; Cpe (mouse) mapping to 8 B3.1.

SOURCE

CPE (H-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 171-199 near the N-terminus of CPE of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CPE (H-6) is available conjugated to agarose (sc-393760 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393760 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393760 PE), fluorescein (sc-393760 FITC), Alexa Fluor® 488 (sc-393760 AF488), Alexa Fluor® 546 (sc-393760 AF546), Alexa Fluor® 594 (sc-393760 AF594) or Alexa Fluor® 647 (sc-393760 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393760 AF680) or Alexa Fluor® 790 (sc-393760 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393760 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CPE (H-6) is recommended for detection of precursor and mature CPE of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CPE (H-6) is also recommended for detection of precursor and mature CPE in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CPE siRNA (h): sc-45378, CPE siRNA (m): sc-45379, CPE shRNA Plasmid (h): sc-45378-SH, CPE shRNA Plasmid (m): sc-45379-SH, CPE shRNA (h) Lentiviral Particles: sc-45378-V and CPE shRNA (m) Lentiviral Particles: sc-45379-V.

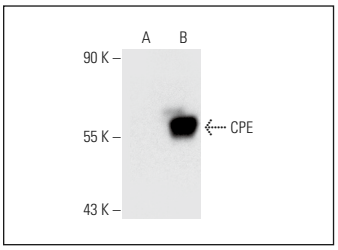
Molecular Weight of CPE: 60 kDa.

Positive Controls: CPE (h2): 293T Lysate: sc-116451.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CPE (H-6): sc-393760. Western blot analysis of CPE expression in non-transfected: sc-117752 (**A**) and human CPE transfected: sc-116451 (**B**) 293T whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.