

CPE (H-5): sc-393761

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.
5. Lou, H., et al. 2005. Sorting and activity-dependent secretion of BDNF require interaction of a specific motif with the sorting receptor carboxypeptidase E. *Neuron* 45: 245-255.

CHROMOSOMAL LOCATION

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

SOURCE

CPE (H-5) 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 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393761 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

CPE (H-5) 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 μ g per 100-500 μ g 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-5) 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.

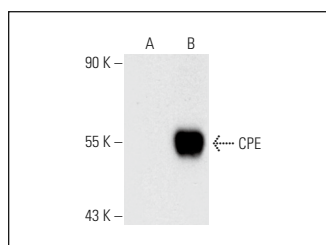
Molecular Weight of CPE: 60 kDa.

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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-5): sc-393761. Western blot analysis of CPE expression in non-transfected: sc-117752 (A) and human CPE transfected: sc-116451 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.