SANTA CRUZ BIOTECHNOLOGY, INC.

CPA2 (B-5): sc-393547

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the M14 metallocarboxypeptidase protein family serve many diverse functions and are divided into three subfamilies based on structure, function and amino acid sequence similarity. As a member of the A/B subfamily, CPA2 (carboxypeptidase A2) is a 417 amino acid zinc-binding secreted protein that contains a characteristic propetide at the amino-terminus, which is cleaved off upon enzyme activation. CPA2 is similar to CPA1, a pancreatic exopeptidase that catalyzes the release of C-terminal amino acids from a variety of proteins, thereby playing a key role in protein digestion and degradation. CPA1 and CPA2 differ in their substrate specificities with CPA2 preferring bulkier C-terminal residues. Expression of CPA2 has been detected in pancreas, brain, lung and testis.

REFERENCES

1. Gardell, S.J., et al. 1988. A novel rat carboxypeptidase, CPA2: characterization, molecular cloning, and evolutionary implications on substrate specificity in the carboxypeptidase gene family. J. Biol. Chem. 263: 17828-17836.
2. Clauser, E., et al. 1988. Structural characterization of the rat carboxypeptidase A1 and B genes. Comparative analysis of the rat carboxypeptidase gene family. J. Biol. Chem. 263: 17837-17845.
3. Moulard, M., et al. 1990. Further studies on the human pancreatic binary complexes involving procarboxypeptidase A. FEBS Lett. 261: 179-183.
4. Faming, Z., et al. 1991. Structural evolution of an enzyme specificity. The structure of rat carboxypeptidase A2 at 1.9-A resolution. J. Biol. Chem. 266: 24606-24612.

CHROMOSOMAL LOCATION

Genetic locus: CPA2 (human) mapping to 7q32.2; Cpa2 (mouse) mapping to 6 A3.3.

SOURCE

CPA2 (B-5) is a mouse monoclonal antibody raised against amino acids 1-56 mapping at the N-terminus of CPA2 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.

CPA2 (B-5) is available conjugated to agarose (sc-393547 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393547 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393547 PE), fluorescein (sc-393547 FITC), Alexa Fluor® 488 (sc-393547 AF488), Alexa Fluor® 546 (sc-393547 AF546), Alexa Fluor® 594 (sc-393547 AF594) or Alexa Fluor® 647 (sc-393547 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393547 AF680) or Alexa Fluor® 790 (sc-393547 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CPA2 (B-5) is recommended for detection of CPA2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CPA2 siRNA (h): sc-89757, CPA2 siRNA (m): sc-105240, CPA2 shRNA Plasmid (h): sc-89757-SH, CPA2 shRNA Plasmid (m): sc-105240-SH, CPA2 shRNA (h) Lentiviral Particles: sc-89757-V and CPA2 shRNA (m) Lentiviral Particles: sc-105240-V.

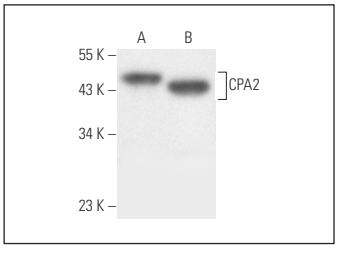
Molecular Weight of CPA2: 47 kDa.

Positive Controls: mouse pancreas extract: sc-364244 or rat pancreas extract: sc-364806.

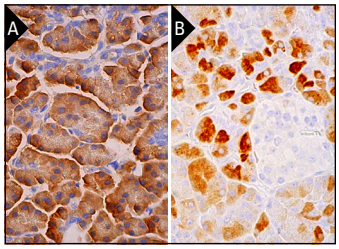
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CPA2 (B-5): sc-393547. Western blot analysis of CPA2 expression in mouse pancreas (**A**) and rat pancreas (**B**) tissue extracts.



CPA2 (B-5): sc-393547. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

STORAGE

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