

CPA2 (Q-14): sc-104174

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 secreted, zinc-binding protein that contains a characteristic propeptide 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

- 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.
- 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.
- Moulard, M., et al. 1990. Further studies on the human pancreatic binary complexes involving procarboxypeptidase A. *FEBS Lett.* 261: 179-183.
- 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.
- Linder, D., et al. 1993. Separation of human pancreatic carboxypeptidase A isoenzymes by high performance liquid chromatography. *Biomed. Chromatogr.* 7: 143-145.

CHROMOSOMAL LOCATION

Genetic locus: CPA2 (human) mapping to 7q32.2.

SOURCE

CPA2 (Q-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CPA2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104174 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

CPA2 (Q-14) is recommended for detection of CPA2 of human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other CPA family members.

CPA2 (Q-14) is also recommended for detection of CPA2 in additional species, including canine.

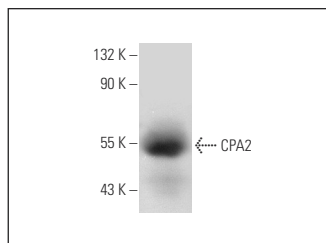
Suitable for use as control antibody for CPA2 siRNA (h): sc-89757, CPA2 shRNA Plasmid (h): sc-89757-SH and CPA2 shRNA (h) Lentiviral Particles: sc-89757-V.

Molecular Weight of CPA2: 47 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CPA2 (Q-14): sc-104174. Western blot analysis of CPA2 expression in rat pancreas tissue extract.

PROTOCOLS

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



Try **CPA2 (D-1): sc-515450**, our highly recommended monoclonal alternative to CPA2 (Q-14).