

# CPN cat (C-20): sc-18966

## BACKGROUND

Carboxypeptidase N (arginine carboxypeptidase or CPN) cleaves basic amino acid residues from the carboxy-terminal 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). The two glycosylated CPN reg subunits protect the two CPN cat subunits and keep them in the circulation. CPN reg is a member of the leucine-rich repeat family of proteins and the gene which encodes CPN reg maps to human chromosome 8p22-p23. CPN cat is a member of the regulatory B-type carboxypeptidase group and the gene which encodes CPN cat maps to human chromosome 10.

## REFERENCES

1. Erdos, E.G. 1990. Some old and some new ideas on kinin metabolism. *J. Cardiovasc. Pharmacol.* 15: 20-24.
2. Tan, F., et al. 1990. The deduced protein sequence of the human carboxypeptidase N high molecular weight subunit reveals the presence of leucine-rich tandem repeats. *J. Biol. Chem.* 265: 13-19.
3. Riley, D.A., et al. 1998. Chromosomal localization of the genes for human carboxypeptidase D (CPD) and the active 50-kilodalton subunit of human carboxypeptidase N (CPN1). *Genomics* 50: 105-108.
4. LocusLink Report (LocusID: 603103). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: CPN1 (human) mapping to 10q24.2; Cpn1 (mouse) mapping to 19 C3.

## SOURCE

CPN cat (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CPN cat 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-18966 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

CPN cat (C-20) is recommended for detection of CPN cat of human and, to a lesser extent, mouse and rat 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).

CPN cat (C-20) is also recommended for detection of CPN cat in additional species, including canine and bovine.

Suitable for use as control antibody for CPN cat siRNA (h): sc-40425, CPN cat siRNA (m): sc-40426, CPN cat shRNA Plasmid (h): sc-40425-SH, CPN cat shRNA Plasmid (m): sc-40426-SH, CPN cat shRNA (h) Lentiviral Particles: sc-40425-V and CPN cat shRNA (m) Lentiviral Particles: sc-40426-V.

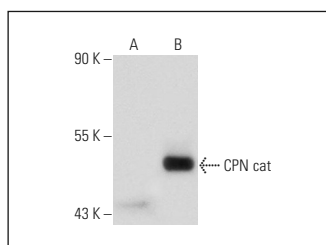
Molecular Weight of CPN cat: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or CPN cat (h4): 293 Lysate: sc-158398.

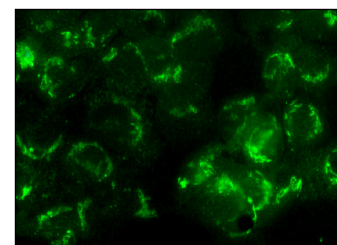
## RECOMMENDED SECONDARY REAGENTS

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



CPN cat (C-20): sc-18966. Western blot analysis of CPN cat expression in non-transfected: sc-110760 (A) and human CPN cat transfected: sc-158398 (B) 293 whole cell lysates.



CPN cat (C-20): sc-18966. Immunofluorescence staining of formalin-fixed Hep G2 cells showing Golgi apparatus localization.

## SELECT PRODUCT CITATIONS

1. Ferrin, G., et al. 2015. Plasma protein biomarkers of hepatocellular carcinoma in HCV-infected alcoholic patients with cirrhosis. *PLoS ONE* 10: 1-14.