

CNP (C-9): sc-374043

BACKGROUND

Natriuretic peptides comprise a family of three structurally related molecules: atrial natriuretic peptide (ANP), brain natriuretic peptide (BNP) and C-type natriuretic peptide (CNP). ANP and BNP act mainly as cardiac hormones, produced primarily by the atrium and ventricle, respectively, while the gene encoding C-type natriuretic peptide is expressed mainly in the brain. These peptides possess potent natriuretic, diuretic, and vasodilating activities and are implicated in body fluid homeostasis and blood pressure control. ANP, BNP and CNP are highly homologous within the 17-residue ring structure formed by an intramolecular disulfide linkage. The genes which encode for ANP and BNP map to human chromosome 1p36.2. The gene which encodes for CNP maps to human chromosome 2q37.1.

REFERENCES

1. Yang-Feng, T.L., Floyd-Smith, G., Nemer, M., Drouin, J. and Francke, U. 1985. The pronatriodilatin gene is located on the distal short arm of human chromosome 1 and on mouse chromosome 4. *Am. J. Hum. Genet.* 37: 1117-1128.
2. Ogawa, Y., Itoh, H., Yoshitake, Y., Inoue, M., Yoshimasa, T., Serikawa, T. and Nakao, K. 1994. Molecular cloning and chromosomal assignment of the mouse C-type natriuretic peptide (CNP) gene (Nppc): comparison with the human CNP gene (NPPC). *Genomics* 24: 383-387.
3. LocusLink Report (LocusID: 108780). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: NPPC (human) mapping to 2q37.1.

SOURCE

CNP (C-9) is a mouse monoclonal antibody raised against amino acids 1-115 of CNP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CNP (C-9) is available conjugated to agarose (sc-374043 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374043 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374043 PE), fluorescein (sc-374043 FITC), Alexa Fluor[®] 488 (sc-374043 AF488), Alexa Fluor[®] 546 (sc-374043 AF546), Alexa Fluor[®] 594 (sc-374043 AF594) or Alexa Fluor[®] 647 (sc-374043 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374043 AF680) or Alexa Fluor[®] 790 (sc-374043 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CNP (C-9) is recommended for detection of CNP precursor and all active peptides of 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).

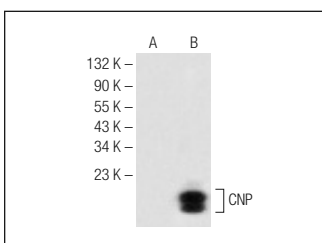
Suitable for use as control antibody for CNP siRNA (h): sc-43690, CNP shRNA Plasmid (h): sc-43690-SH and CNP shRNA (h) Lentiviral Particles: sc-43690-V.

Positive Controls: human CNP transfected HEK293T whole cell lysate.

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



CNP (C-9): sc-374043. Western blot analysis of CNP expression in non-transfected (A) and human CNP transfected (B) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yang, J., et al. 2019. Transforming growth factor-β is involved in maintaining oocyte meiotic arrest by promoting natriuretic peptide type C expression in mouse granulosa cells. *Cell Death Dis.* 10: 558.

RESEARCH USE

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

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA