



Monoclonal Anti-human CNP (propeptide) Antibody

ORDERING INFORMATION

Catalog Number: MAB3739

Clone: 347625

Lot Number: XRQ01

Size: 100 µg

Formulation: 0.2 µm filtered solution in PBS
with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

Specificity: human CNP propeptide

Immunogen: *E.coli*-derived rhCNP precursor

Ig class: rat IgG_{2A}

Recommended Application:
Western blot
Immunohistochemistry

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, *E.coli*-derived, recombinant human C-type natriuretic peptide precursor (rhCNP; aa 24 - 126: Accession # NP_077720). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. CNP belongs to the natriuretic peptide family and functions in an autocrine or paracrine fashion. CNP interacts with the GC-B/NPR-B receptor to promote vasorelaxation, vascular remodeling, and the growth and differentiation of bone and neural tissue. CNP is synthesized as a prohormone that is cleaved intracellularly by furin, yielding a 49 aa propeptide (aa 24 - 72) and a 53 aa mature peptide (aa 74 - 126). Additional cleavage of the mature peptide generates 29 aa (aa 98 - 126) and 22 aa (aa 105 - 126) peptides, which have comparable activity in some assays. The human CNP prohormone shares 91% and 94% aa sequence identity with mouse and rat, respectively.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody detects CNP precursor (aa 24 - 126) and propeptide (aa 24 - 72) in direct ELISAs and Western blots. In these formats, this antibody shows no cross-reactivity with rhANP precursor or rhBNP precursor.

Applications

Western Blot - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human CNP propeptide. Using a colorimetric detection system, the detection limit for rhCNP precursor is approximately 1 ng/lane under non-reducing and reducing conditions. Chemiluminescent detection with WesternGlo™ Chemiluminescent Detection Substrate (R&D Systems Catalog # AR004) will increase sensitivity by 5 to 50 fold.

Immunohistochemistry - This antibody was used at a concentration of 25 µg/mL with appropriate secondary reagents to detect CNP in paraffin-embedded normal human kidney tissue sections. For chromogenic detection of labeling, the use of R&D Systems Cell and Tissue Staining Kits (CTS Series) is recommended.

For immunohistochemistry images, please refer to our website at <http://www.RnDSystems.com/go/ihc>.

Optimal dilutions should be determined by each laboratory for each application.

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