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 1p36.22. The gene which encodes for CNP maps to human chromosome 2q24-qter.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: NPPB (human) mapping to 1p36.22.

SOURCE

BNP (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 94-115 near the C-terminus of BNP of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271185 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

BNP (D-8) is recommended for detection of precursor and mature γ-BNP, BNP 32 and natriuretic peptide 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), 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 BNP siRNA (h): sc-43636, BNP shRNA Plasmid (h): sc-43636-SH and BNP shRNA (h) Lentiviral Particles: sc-43636-V.

Molecular Weight of glycosylated BNP precursor: 25-36 kDa.

Molecular Weight of deglycosylated mature BNP: 12 kDa.

Positive Controls: H4 cell lysate: sc-2408, U-87 MG cell lysate: sc-2411 or IMR-32 cell lysate: sc-2409.

STORAGE

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

DATA

BNP (D-8): sc-271185. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS


RESEARCH USE

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

PROTOCOLS

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