

NPR-B (C-19): sc-16870

BACKGROUND

The natriuretic peptides are a group of structurally similar peptides that are genetically distinct and play a role in several processes, including cardiovascular, renal and endocrine homeostasis. The atrial natriuretic peptide (ANP) and brain natriuretic peptide (BNP) are derived from myocardial cell origin and are cardiac hormones secreted from the atrium and ventricle of the heart, respectively. The C-type natriuretic peptide (CNP) is derived from endothelial cell origin and acts as an endothelium-derived relaxing factor (EDRF). These peptides mediate their effects through three receptors. NPR-A (also designated GC-A) binds both ANP and BNP, which stimulates 3', 5'-cyclic guanosine monophosphate (cGMP) to mediate natriuresis, vasodilation, renin inhibition, antimutagenesis and lusitropic properties. NPR-B (also designated GC-B) binds CNP and also stimulates cGMP to facilitate vasodilation and growth inhibition. NPR-C, also designated the "clearance" receptor, clears all three peptides, which are subsequently degraded by the ectoenzyme neutral endopeptidase. The natriuretic peptide system plays an important role in hypertension, congestive heart failure, atherosclerosis and renal diseases, and may be therapeutic targets in the treatment of these diseases.

REFERENCES

1. Itoh, H., et al. 1993. Molecular biology and pharmacology of natriuretic peptide system. *Nippon Rinsho* 51: 1548-1556.
2. Itoh, H. and Nakao, K. 1997. Natriuretic peptide system. *Nippon Rinsho* 55: 1923-1936.
3. Anand-Srivastava, M.B. 1997. Atrial natriuretic peptide-C receptor and membrane signalling in hypertension. *J. Hypertens.* 15: 815-826.

CHROMOSOMAL LOCATION

Genetic locus: NPR2 (human) mapping to 9p13.3; Npr2 (mouse) mapping to 4 B1.

SOURCE

NPR-B (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NPR-B 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-16870 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.

PROTOCOLS

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

APPLICATIONS

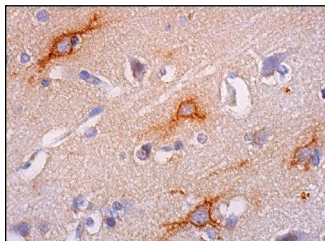
NPR-B (C-19) is recommended for detection of NPR-B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NPR-B (C-19) is also recommended for detection of NPR-B in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for NPR-B siRNA (h): sc-40127, NPR-B siRNA (m): sc-40128, NPR-B shRNA Plasmid (h): sc-40127-SH, NPR-B shRNA Plasmid (m): sc-40128-SH, NPR-B shRNA (h) Lentiviral Particles: sc-40127-V and NPR-B shRNA (m) Lentiviral Particles: sc-40128-V.

Molecular Weight of NPR-B: 120 kDa.

DATA



NPR-B (C-19): sc-16870. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing membrane staining of subset of neuronal cells.

SELECT PRODUCT CITATIONS

1. Rahmutula, D. and Gardner, D.G. 2005. C-type natriuretic peptide down-regulates expression of its cognate receptor in rat aortic smooth muscle cells. *Endocrinology* 146: 4968-4974.
2. Kishimoto, I., et al. 2008. C-type natriuretic peptide is a Schwann cell-derived factor for development and function of sensory neurones. *J. Neuroendocrinol.* 20: 1213-1223.
3. Chen, Y., et al. 2013. Inducible NOS mediates CNP-induced relaxation of intestinal myofibroblasts. *Am. J. Physiol. Gastrointest. Liver Physiol.* 304: G673-G679.

RESEARCH USE

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