SANTA CRUZ BIOTECHNOLOGY, INC.

# NPR-B (H-80): sc-25486

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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, antimitogenesis 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

NPR-B (H-80) is a rabbit polyclonal antibody raised against amino acids 171-250 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.

## RESEARCH USE

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

## APPLICATIONS

NPR-B (H-80) 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), 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).

NPR-B (H-80) 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.

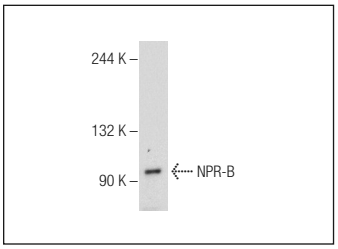
Molecular Weight of NPR-B: 120 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260.

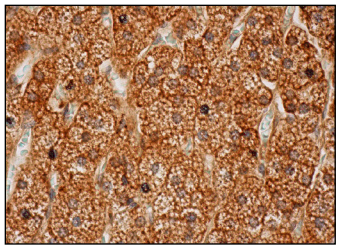
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA




NPR-B (H-80): sc-25486. Western blot analysis of NPR-B expression in WI-38 whole cell lysate.



NPR-B (H-80): sc-25486. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and membrane staining of glandular cells.

## SELECT PRODUCT CITATIONS


1. Tezcan, B., et al. 2010. Dose dependent effect of C-type natriuretic peptide signaling in glycosaminoglycan synthesis during TGF-β1 induced chondrogenic differentiation of mesenchymal stem cells. J. Mol. Histol. 41: 247-258.
2. Kocamaz, E., et al. 2012. Implication of C-type natriuretic peptide-3 signaling in glycosaminoglycan synthesis and chondrocyte hypertrophy during TGF-β1 induced chondrogenic differentiation of chicken bone marrow-derived mesenchymal stem cells. J. Mol. Histol. 43: 497-508.
3. Wu, Y.S., et al. 2013. Diabetes-induced loss of gastric ICC accompanied by up-regulation of natriuretic peptide signaling pathways in STZ-induced diabetic mice. Peptides 40: 104-111.


## STORAGE

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