SANTA CRUZ BIOTECHNOLOGY, INC.

ANP (F-2): sc-515701

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: NPPA (human) mapping to 1p36.22; Nppa (mouse) mapping to 4 E2.

SOURCE

ANP (F-2) is a mouse monoclonal antibody raised against amino acids 1-153 representing full length ANP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ANP (F-2) is available conjugated to agarose (sc-515701 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515701 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515701 PE), fluorescein (sc-515701 FITC), Alexa Fluor® 488 (sc-515701 AF488), Alexa Fluor® 546 (sc-515701 AF546), Alexa Fluor® 594 (sc-515701 AF594) or Alexa Fluor® 647 (sc-515701 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515701 AF680) or Alexa Fluor® 790 (sc-515701 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ANP (F-2) is recommended for detection of ANP of mouse, rat and 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 ANP siRNA (h): sc-37062, ANP siRNA (m2): sc-270393, ANP shRNA Plasmid (h): sc-37062-SH, ANP shRNA Plasmid (m2): sc-270393-SH, ANP shRNA (h) Lentiviral Particles: sc-37062-V and ANP shRNA (m2) Lentiviral Particles: sc-270393-V.

Molecular Weight of ANP: 17 kDa.

Positive Controls: rat heart extract: sc-2393 or mouse heart extract: sc-2254.

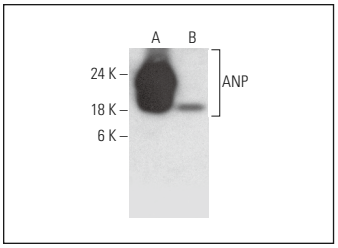
STORAGE

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

RESEARCH USE

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

DATA



ANP (F-2): sc-515701. Western blot analysis of ANP expression in rat heart (**A**) and mouse heart (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Martin, B., et al. 2018. Relaxin reverses inflammatory and immune signals in aged hearts. PLoS ONE 13: e0190935.
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3. Evans, L.W., et al. 2020. Emodin and emodin-rich rhubarb inhibits histone deacetylase (HDAC) activity and cardiac myocyte hypertrophy. J. Nutr. Biochem. 79: 108339.
4. Li, J., et al. 2020. The CaMKII phosphorylation site Thr1604 in the $Ca_V1.2$ channel is involved in pathological myocardial hypertrophy in rats. Channels 14: 151-162.
5. Wang, Y., et al. 2020. P66Shc deletion ameliorates oxidative stress and cardiac dysfunction in pressure overload-induced heart failure. J. Card. Fail. 26: 243-253.
6. Wang, Y., et al. 2020. MD2 activation by direct AGE interaction drives inflammatory diabetic cardiomyopathy. Nat. Commun. 11: 2148.
7. Raveendran, V.V., et al. 2020. Protein arginine methyltransferase 6 mediates cardiac hypertrophy by differential regulation of Histone H3 arginine methylation. Heliyon 6: e03864.
8. Zhang, N., et al. 2020. Selective targeting of ubiquitination and degradation of PARP1 by E3 ubiquitin ligase WWP2 regulates isoproterenol-induced cardiac remodeling. Cell Death Differ. 27: 2605-2619.
9. Li, H., et al. 2020. LncRNA Tincr regulates PKCε expression in a miR-31-5p-dependent manner in cardiomyocyte hypertrophy. Naunyn Schmiedebergs Arch. Pharmacol. 393: 2495-2506.

PROTOCOLS

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