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Natriuretic Peptide Receptor C Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8113A

Product Information

Application	IF, IHC-P, WB, E
Primary Accession	P17342
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	59808
Antigen Region	67-97

Additional Information

Gene ID	4883
Other Names	Atrial natriuretic peptide receptor 3, Atrial natriuretic peptide clearance receptor, Atrial natriuretic peptide receptor type C, ANP-C, ANPR-C, NPR-C, NPR3, ANPRC, C5orf23, NPRC
Target/Specificity	This Natriuretic Peptide Receptor C antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 67-97 amino acids from the N-terminal region of human Natriuretic Peptide Receptor C.
Dilution	IF~~1:200 IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Natriuretic Peptide Receptor C Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NPR3
Synonyms	ANPRC, C5orf23, NPRC
Function	Receptor for the natriuretic peptide hormones, binding with similar

affinities atrial natriuretic peptide NPPA/ANP, brain natriuretic peptide NPPB/BNP, and C-type natriuretic peptide NPPC/CNP. May function as a clearance receptor for NPPA, NPPB and NPPC, regulating their local concentrations and effects. Acts as a regulator of osteoblast differentiation and bone growth by binding to its ligand osteocrin, thereby preventing binding between NPR3/NPR-C and natriuretic peptides, leading to increase cGMP production (By similarity).

Cellular Location Cell membrane; Single-pass type I membrane protein

Background

ANPC is a receptor for atrial natriuretic peptide. It does not exhibit guanylate cyclase activity. There seem to be at least three ANP receptors: two with guanylate cyclase activity (ANPA and ANPB) and one (ANPC) which is probably responsible for the clearance of ANP from the circulation without a role in signal transduction.

References

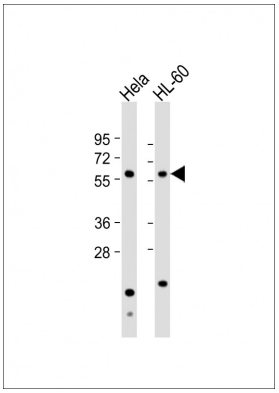
References for protein:
1.Porter, J.G., et al., Biochem. Biophys. Res. Commun. 171(2):796-803 (1990).
2.Lowe, D.G., et al., Nucleic Acids Res. 18 (11), 3412 (1990).

References for HeLa cell line:
1. Scherer WF, Syverton JT, Gey GO (May 1953). "Studies on the propagation in vitro of poliomyelitis viruses. IV. Viral multiplication in a stable strain of human malignant epithelial cells (strain HeLa) derived from an epidermoid carcinoma of the cervix". J. Exp. Med. 97 (5): 695–710. [PubMed:13052828].

2. Macville M, Schr□ck E, Padilla-Nash H, Keck C, Ghadimi BM, Zimonjic D, Popescu N, Ried T (January 1999). "Comprehensive and definitive molecular cytogenetic characterization of HeLa cells by spectral karyotyping". Cancer Res. 59 (1): 141–50. [PubMed: 9892199].
3. Rahbari R, Sheahan T, Modes V, Collier P, Macfarlane C, Badge RM (April 2009). "A novel L1 retrotransposon marker for HeLa cell line identification". BioTechniques 46 (4): 277–84. [PubMed: 19450234].

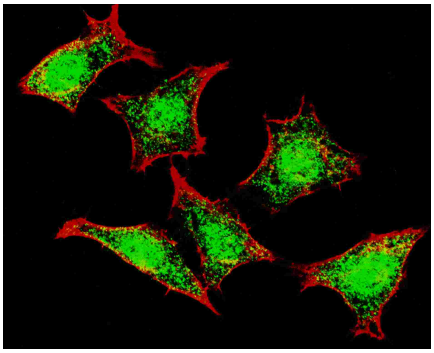
4. Capes-Davis A, Theodosopoulos G, Atkin I, Drexler HG, Kohara A, MacLeod RA, Masters JR, Nakamura Y, Reid YA, Reddel RR, Freshney RI (July 2010). "Check your cultures! A list of cross-contaminated or misidentified cell lines". Int. J. Cancer 127 (1): 1–8. [PubMed:20143388].

Images

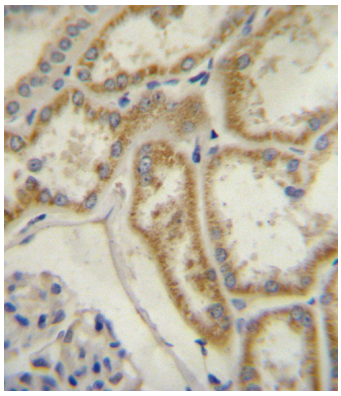


All lanes : Anti-ANPC Antibody (S82) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 60 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Fluorescent confocal image of HeLa cells stained with Natriuretic Peptide Receptor C (N-term) antibody. HeLa



cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP8113a Natriuretic Peptide Receptor C (N-term) primary antibody (1:200, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). Note the highly specific localization of the Natriuretic Peptide Receptor C mainly to the mainly to the nucleus.



Natriuretic Peptide Receptor C (NPR3/ANPC) Antibody (N-term) (Cat. #AP8113A)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Natriuretic Peptide Receptor C (NPR3/ANPC) Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- The C-type natriuretic peptide induces thermal hyperalgesia through a noncanonical Gβγ-dependent modulation of TRPV1 channel.
- Molecular imaging of atherosclerotic plaque with (64)Cu-labeled natriuretic peptide and PET.