

Anti-Natriuretic Peptide Receptor A/GC-A/NPR1 Picoband™ Antibody

Catalog Number: A01042

About NPR1

Natriuretic peptide receptor A/guanylate cyclase A (atrionatriuretic peptide receptor A), also known as NPR1, is an atrial natriuretic peptide receptor. In humans it is encoded by the NPR1 gene. It is mapped to 1q21.3. Guanylyl cyclases, catalyzing the production of cGMP from GTP, are classified as soluble and membrane forms. The membrane guanylyl cyclases, often termed guanylyl cyclases A through F, form a family of cell-surface receptors with a similar topographic structure: an extracellular ligand-binding domain, a single membrane-spanning domain, and an intracellular region that contains a protein kinase-like domain and a cyclase catalytic domain. GC-A and GC-B function as receptors for natriuretic peptides; they are also referred to as atrial natriuretic peptide receptor A (NPR1) and type B. Also see NPR3, which encodes a protein with only the ligand-binding transmembrane and 37-amino acid cytoplasmic domains. NPR1 is a membrane-bound guanylate cyclase that serves as the receptor for both atrial and brain natriuretic peptides and BNP.

Overview

Product Name	Anti-Natriuretic Peptide Receptor A/GC-A/NPR1 Picoband™ Antibody
Reactive Species	Human
Description	Boster Bio Anti-Natriuretic Peptide Receptor A/GC-A/NPR1 Picoband™ Antibody catalog # A01042. Tested in ELISA, IF, ICC, WB applications. This antibody reacts with Human.
Application	ELISA, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P16066

Technical Details

Immunogen	E.coli-derived human Natriuretic Peptide Receptor A/GC-A/NPR1 recombinant protein (Position: A58-K501).
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti- Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.25ug/ml, Human Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Direct ELISA, 0.1-0.5ug/ml, Human

Anti-Natriuretic Peptide Receptor A/GC-A/NPR1 Picoband™ Antibody (A01042) Images

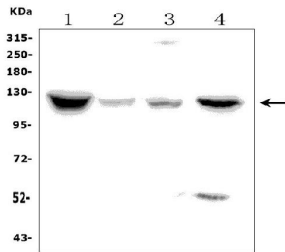


Figure 1. Western blot analysis of NPR1 using anti-NPR1 antibody (A01042).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human HEK293 whole cell lysates,
Lane 2: human HepG2 whole cell lysates,
Lane 3: human Hela whole cell lysates,
Lane 4: human Raji whole cell lysates.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NPR1 antigen affinity purified polyclonal antibody (Catalog # A01042) at 0.25 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for NPR1 at approximately 119KD. The expected band size for NPR1 is at 119KD.

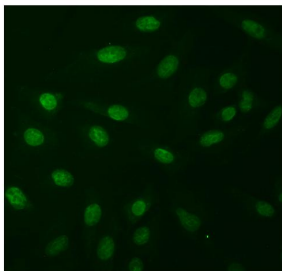


Figure 2. IF analysis of NPR1 using anti-NPR1 antibody (A01042).

NPR1 was detected in immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-NPR1 Antibody (A01042) overnight at 4°C. DyLight®488 conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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