abcam

ab250024

Anti-NPR-C antibody [EPR12716] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR12716
Purification technique	Affinity purification Protein A
Concentration	0.98 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-

Notes	-

WB

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information NPR3

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).

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab250024 is the carrier-free version of ab177954.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The NPR-C also known as natriuretic peptide receptor C functions as an important regulator in the homeostasis of cardiovascular and renal functions. It is also referred to as atrial natriuretic peptide receptor C (ANPRC). This protein does not possess guanylyl cyclase activity unlike its counterparts NPR-A and NPR-B but instead acts via clearance binding of natriuretic peptides preventing them from binding to other receptors. The receptor has a molecular mass of approximately 60 kDa and is widely expressed in tissues such as vascular endothelium kidney and adipose tissue.

Biological function summary	NPR-C binds multiple natriuretic peptides including ANP BNP and CNP and modulates their effects by facilitating their clearance from circulation. This receptor does not function as part of a larger protein complex unlike other receptor subtypes. It controls blood volume and pressure by influencing the natriuretic diuretic and vasorelaxant actions of its peptide ligands. NPR-C helps maintain fluid balances and prevents overactivation of hormonal pathways linked to cardiovascular conditions.
Pathways	NPR-C serves an important role in the natriuretic peptide signaling pathway primarily through the regulation of peptide availability. It physically interacts with several circulating natriuretic peptides but not through second messenger cascades. NPR-C is integral to maintaining the balance between the ANP receptor pathway and the renin-angiotensin-aldosterone system therefore indirectly modulating the functions of NPR-A and NPR-B which are responsible for cyclic GMP-dependent signaling.
Associated diseases and disorders	NPR-C contributes to the pathophysiology of hypertension and heart failure by overseeing the peptide-hormone balance in the cardiovascular system. Anomalies in NPR-C expression or function can lead to improper regulation of blood pressure and fluid retention. Its interaction with proteins such as angiotensin II receptors can exacerbate the effects of hypertension. Understanding the role of NPR-C in these conditions presents potential therapeutic targets for modulating cardiovascular diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

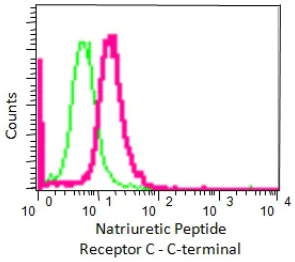
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

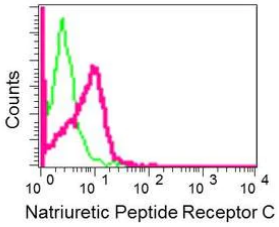
6 product images



Flow Cytometry (Intracellular) - Anti-NPR-C antibody [EPR12716] - BSA and Azide free (ab250024)

NPR-C Flow Cytometry (Intracellular) staining using rabbit Anti-NPR-C antibody

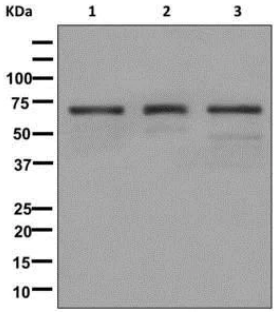
This data was developed using ab177954, the same antibody clone in a different buffer formulation.
Overlay histogram showing HeLa cells fixed in 2% PFA and stained with purified ab177954 at a dilution of 1 in 270 (pink line). The secondary antibody used was FITC goat anti-rabbit at a dilution of 1 in 150. Rabbit monoclonal IgG was used as an isotype control.



Flow Cytometry (Intracellular) - Anti-NPR-C antibody [EPR12716] - BSA and Azide free (ab250024)

NPR-C Flow Cytometry (Intracellular) staining using rabbit Anti-NPR-C antibody

This data was developed using ab177954, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized HeLa cells labeling NPR-C with unpurified ab177954 at 1/100 dilution (red) or a rabbit IgG (negative) (green).



Western blot - Anti-NPR-C antibody [EPR12716] - BSA and Azide free (ab250024)

NPR-C Western blot staining using rabbit Anti-NPR-C antibody

This data was developed using ab177954, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-NPR-C antibody [EPR12716] - C-terminal (ab177954) at 1/1000 dilution

Lane 1:
Human fetal kidney tissue lysate at 10 µg

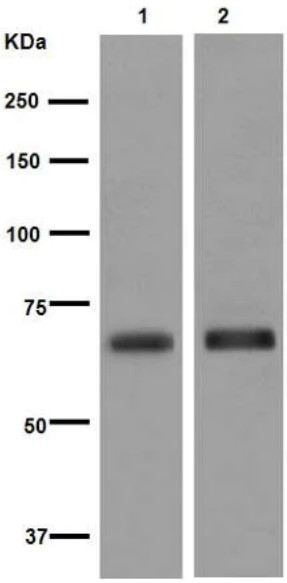
Lane 2:
Human placenta lysate at 10 µg

Lane 3:
HeLa cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 60 kDa



Western blot - Anti-NPR-C antibody [EPR12716] - BSA and Azide free (ab250024)

NPR-C Western blot staining of Human tissue lysate using rabbit Anti-NPR-C antibody

This data was developed using ab177954, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-NPR-C antibody [EPR12716] - C-terminal (ab177954) at 1/1000 dilution

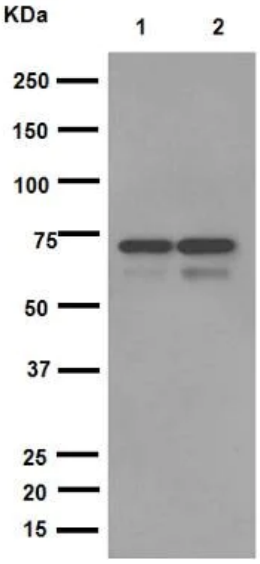
All lanes:
Human tissue lysate at 1/10 dilution

Secondary

All lanes:
HRP anti-rabbit, specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 60 kDa

Observed band size: 70 kDa



Western blot - Anti-NPR-C antibody [EPR12716] - BSA and Azide free (ab250024)

NPR-C Western blot staining using rabbit Anti-NPR-C antibody

This data was developed using ab177954, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-NPR-C antibody [EPR12716] - C-terminal (ab177954) at 1/7000 dilution

Lane 1:
Mouse kidney tissue lysate at 20 µg

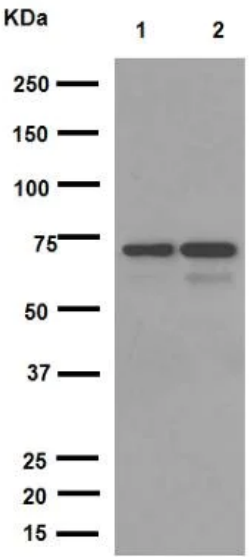
Lane 2:
Rat kidney tissue lysate at 20 µg

Secondary

All lanes:
HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 60 kDa

Observed band size: 70 kDa



Western blot - Anti-NPR-C antibody [EPR12716] - BSA and Azide free (ab250024)

This data was developed using ab177954, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-NPR-C antibody [EPR12716] - C-terminal (ab177954) at 1/1000 dilution

Lane 1:
Mouse kidney tissue lysate at 20 µg

Lane 2:
Rat kidney tissue lysate at 20 µg

Secondary

All lanes:
HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 60 kDa

Observed band size: 70 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.