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Anti-ANP NPPA Monoclonal Antibody
Catalog # ABO14570

Specification

Anti-ANP NPPA Monoclonal Antibody - Product Information

Application	**WB, IP**
Primary Accession	P01160
Host	**Rabbit**
Isotype	**Rabbit IgG**
Reactivity	**Human**
Clonality	**Monoclonal**
Format	**Liquid**

Description
Anti-ANP NPPA Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human.

Anti-ANP NPPA Monoclonal Antibody - Additional Information

Gene ID 4878

Other Names
Natriuretic peptides A, Atrial natriuretic factor prohormone, proANF, Atrial natriuretic peptide prohormone, preproANP, proANP, Atriopeptigen, Cardiodilatin, CDD, preproCDD-ANF, Long-acting natriuretic peptide, LANP, Long-acting natriuretic hormone, LANH, Pro atrial natriuretic factor 1-30, proANF 1-30, Pro atrial natriuretic peptide 1-30, proANP 1-30, Vessel dilator, VSDL, Pro atrial natriuretic factor 31-67, proANF 31-67, Pro atrial natriuretic peptide 31-67, proANP 31-67, Kaliuretic peptide, KP, Pro atrial natriuretic factor 79-98, proANF 79-98, Pro atrial natriuretic peptide 79-98, proANP 79-98, Urodilatin, URO, CDD 95-126, CDD-ANP (95-126), Pro atrial natriuretic peptide 95-126, proANP 95-126, Auriculin-C, Atrial natriuretic factor 1-33, NPPA, ANP, PND

Application Details
WB 1:500-1:2000
IP 1:50

Contents
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen
A synthesized peptide derived from human ANP Hormone playing a key role in cardiovascular homeostasis through regulation of natriuresis, diuresis, and vasodilation. Also plays a role in female pregnancy by promoting trophoblast invasion and spiral artery remodeling in uterus.

Purification
Affinity-chromatography

Storage	**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated**

freeze-thaw cycles.

Anti-ANP NPPA Monoclonal Antibody - Protein Information

Name NPPA

Synonyms ANP, PND

Function
[Atrial natriuretic peptide]: Hormone that plays a key role in mediating cardio-renal homeostasis, and is involved in vascular remodeling and regulating energy metabolism (PubMed:15741263, PubMed:16875975, PubMed:18835931, PubMed:21672517, PubMed:22307324, PubMed:2532366, PubMed:2825692, PubMed:7595132, PubMed:7720651, PubMed:8087923, PubMed:8653797). Acts by specifically binding and stimulating NPR1 to produce cGMP, which in turn activates effector proteins, such as PRKG1, that drive various biological responses (PubMed:1660465, PubMed:1672777, PubMed:21098034, PubMed:2162527, PubMed:22307324, PubMed:25401746, PubMed:2825692, PubMed:7720651, PubMed:8384600, PubMed:9893117). Regulates vasodilation, natriuresis, diuresis and aldosterone synthesis and is therefore essential for regulating blood pressure, controlling the extracellular fluid volume and maintaining the fluid-electrolyte balance (PubMed:2532366, PubMed:2825692, PubMed:7595132, PubMed:7720651, PubMed:8087923, PubMed:8653797). Also involved in inhibiting cardiac remodeling and cardiac hypertrophy by inducing cardiomyocyte apoptosis and attenuating the growth of cardiomyocytes and fibroblasts (PubMed:16875975). Plays a role in female pregnancy by promoting trophoblast invasion and spiral artery remodeling in uterus, and thus prevents pregnancy-induced hypertension (By similarity). In adipose tissue, acts in various cGMP- and PKG-dependent pathways to regulate lipid metabolism and energy homeostasis (PubMed:15741263, PubMed:18835931, PubMed:21672517, PubMed:22307324). This includes up-regulating lipid metabolism and mitochondrial oxygen utilization by activating the AMP-activated protein kinase (AMPK), and increasing energy expenditure by acting via MAPK11 to promote the UCP1-dependent thermogenesis of brown adipose tissue (PubMed:<a

href="http://www.uniprot.org/citations/15741263" target="_blank">15741263, PubMed:18835931, PubMed:21672517, PubMed:22307324). Binds the clearance receptor NPR3 which removes the hormone from circulation (PubMed:1672777).

Cellular Location
[Long-acting natriuretic peptide]: Secreted. Note=Detected in blood. [Kaliuretic peptide]: Secreted. Note=Detected in blood [Atrial natriuretic peptide]: Secreted. Perikaryon. Cell projection. Note=Detected in blood (PubMed:15741263, PubMed:18835931, PubMed:2532366, PubMed:7955907, PubMed:7984506, PubMed:8351194, PubMed:8653797, PubMed:8779891). Detected in urine in one study (PubMed:8351194). However, in another study, was not detected in urine (PubMed:7984506). Detected in cytoplasmic bodies and neuronal processes of pyramidal neurons (layers II-VI) (PubMed:30534047) Increased secretion in response to the vasopressin AVP (By similarity) Likely to be secreted in response to an increase in atrial pressure or atrial stretch (PubMed:2532366). In kidney cells, secretion increases in response to activated guanylyl cyclases and increased intracellular cAMP levels (PubMed:9893117). Plasma levels increase 15 minutes after a high-salt meal, and decrease back to normal plasma levels 1 hr later (PubMed:8779891). {ECO:0000250|UniProtKB:P01161, ECO:0000269|PubMed:15741263, ECO:0000269|PubMed:18835931, ECO:0000269|PubMed:2532366, ECO:0000269|PubMed:30534047, ECO:0000269|PubMed:7955907, ECO:0000269|PubMed:7984506, ECO:0000269|PubMed:8351194, ECO:0000269|PubMed:8653797, ECO:0000269|PubMed:8779891, ECO:0000269|PubMed:9893117}

Tissue Location
[Urodilatin]: Detected in the kidney distal tubular cells (at protein level) (PubMed:8384600, PubMed:9794555). Present in urine (at protein level) (PubMed:2972874, PubMed:8351194, PubMed:8779891, PubMed:9794555).

Anti-ANP NPPA Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-ANP NPPA Monoclonal Antibody - Images

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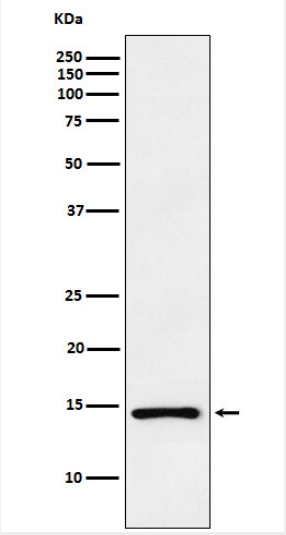

Western blot analysis of ANP expression in PC3 cell lysate.