

ANP Antibody
Rabbit mAb
Catalog # AP91605

Specification

ANP Antibody - Product Information

Application	WB, IP
Primary Accession	P01160
Clonality	Monoclonal
Other Names	
ANF; ANP; PND; ATRFB6; CDD-ANF; NPPA; Natriuretic peptides A; LANP; VSDL;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	16396 Da

ANP Antibody - Additional Information

Dilution	WB~~~1:1000 IP~~~N/A
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human ANP
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

ANP 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:<a

[22307324](http://www.uniprot.org/citations/22307324), PubMed: [2532366](http://www.uniprot.org/citations/2532366), PubMed: [2825692](http://www.uniprot.org/citations/2825692), PubMed: [7595132](http://www.uniprot.org/citations/7595132), PubMed: [7720651](http://www.uniprot.org/citations/7720651), PubMed: [8087923](http://www.uniprot.org/citations/8087923), PubMed: [8653797](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/1660465), PubMed: [1672777](http://www.uniprot.org/citations/1672777), PubMed: [21098034](http://www.uniprot.org/citations/21098034), PubMed: [2162527](http://www.uniprot.org/citations/2162527), PubMed: [22307324](http://www.uniprot.org/citations/22307324), PubMed: [25401746](http://www.uniprot.org/citations/25401746), PubMed: [2825692](http://www.uniprot.org/citations/2825692), PubMed: [7720651](http://www.uniprot.org/citations/7720651), PubMed: [8384600](http://www.uniprot.org/citations/8384600), PubMed: [9893117](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/2532366), PubMed: [2825692](http://www.uniprot.org/citations/2825692), PubMed: [7595132](http://www.uniprot.org/citations/7595132), PubMed: [7720651](http://www.uniprot.org/citations/7720651), PubMed: [8087923](http://www.uniprot.org/citations/8087923), PubMed: [8653797](http://www.uniprot.org/citations/8653797)). Also involved in inhibiting cardiac remodeling and cardiac hypertrophy by inducing cardiomyocyte apoptosis and attenuating the growth of cardiomyocytes and fibroblasts (PubMed: [16875975](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/15741263), PubMed: [18835931](http://www.uniprot.org/citations/18835931), PubMed: [21672517](http://www.uniprot.org/citations/21672517), PubMed: [22307324](http://www.uniprot.org/citations/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: [15741263](http://www.uniprot.org/citations/15741263), PubMed: [18835931](http://www.uniprot.org/citations/18835931), PubMed: [21672517](http://www.uniprot.org/citations/21672517), PubMed: [22307324](http://www.uniprot.org/citations/22307324)). Binds the clearance receptor NPR3 which removes the hormone from circulation (PubMed: [1672777](http://www.uniprot.org/citations/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

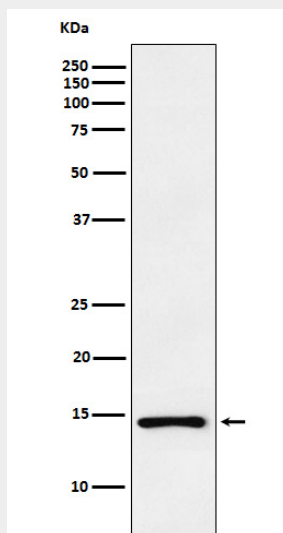
[Urodilatin]: Detected in the kidney distal tubular cells (at protein level) (PubMed:8384600, PubMed:9794555). Present in urine (at protein level) (PubMed:2972874, PubMed:8351194, PubMed:8779891, PubMed:9794555).

ANP 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 Cytometry](#)
- [Cell Culture](#)

ANP Antibody - Images



Western blot analysis of ANP expression in PC3 cell lysate.