

**ANP Antibody**  
Rabbit mAb  
Catalog # AP91605

## Specification

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### ANP Antibody - Product Information

Application	<b>WB, IP</b>
Primary Accession	<a href="#">P01160</a>
Clonality	<b>Monoclonal</b>
<b>Other Names</b>	
ANF; ANP; PND; ATRFB6; CDD-ANF; NPPA; Natriuretic peptides A; LANP; VSDL;	

Isotype	<b>Rabbit IgG</b>
Host	<b>Rabbit</b>
Calculated MW	<b>16396 Da</b>

### ANP Antibody - Additional Information

Purification	<b>Affinity-chromatography</b>
Immunogen	<b>A synthesized peptide derived from human ANP</b>
Description	<b>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.</b>
Storage Condition and Buffer	<b>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.</b>

### 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:<a href="http://www.uniprot.org/citations/15741263" target="\_blank">15741263</a>, PubMed:<a href="http://www.uniprot.org/citations/16875975" target="\_blank">16875975</a>, PubMed:<a href="http://www.uniprot.org/citations/18835931" target="\_blank">18835931</a>, PubMed:<a href="http://www.uniprot.org/citations/21672517" target="\_blank">21672517</a>, PubMed:<a href="http://www.uniprot.org/citations/22307324" target="\_blank">22307324</a>, PubMed:<a href="http://www.uniprot.org/citations/2532366" target="\_blank">2532366</a>, PubMed:<a

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

### 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

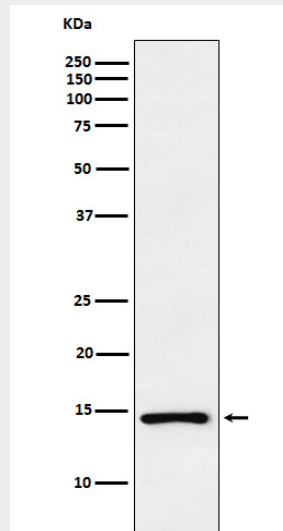
[Urodilatin]: Detected in the kidney distal tubular cells (at protein level) (PubMed:8384600, PubMed:9794555). Present in urine (at protein level) (PubMed:2972874, PubMed:8351194, PubMed:8779891, PubMed:9794555).

### 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.