

NPPA Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP8534a**Specification**

NPPA Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P01160](#)**NPPA Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 4878**Other Names**

Natriuretic peptides A, CDD-ANF, Prepronatriodilatin, Cardiodilatin-related peptide, CDP, Atrial natriuretic factor, ANF, Atrial natriuretic peptide, ANP, NPPA, ANP, PND

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8534a](/products/AP8534a) was selected from the N-term region of human NPPA. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NPPA Antibody (N-term) Blocking Peptide - 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:[8653797](http://www.uniprot.org/citations/8653797), PubMed:[7595132](http://www.uniprot.org/citations/7595132), PubMed:[2825692](http://www.uniprot.org/citations/2825692), PubMed:[7720651](http://www.uniprot.org/citations/7720651), PubMed:[8087923](http://www.uniprot.org/citations/8087923), PubMed:[2532366](http://www.uniprot.org/citations/2532366), PubMed:[22307324](http://www.uniprot.org/citations/22307324), PubMed:

[18835931](http://www.uniprot.org/citations/18835931), PubMed: [21672517](http://www.uniprot.org/citations/21672517), PubMed: [15741263](http://www.uniprot.org/citations/15741263), PubMed: [16875975](http://www.uniprot.org/citations/16875975)). 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: [25401746](http://www.uniprot.org/citations/25401746), PubMed: [9893117](http://www.uniprot.org/citations/9893117), PubMed: [1672777](http://www.uniprot.org/citations/1672777), PubMed: [1660465](http://www.uniprot.org/citations/1660465), PubMed: [2162527](http://www.uniprot.org/citations/2162527), PubMed: [2825692](http://www.uniprot.org/citations/2825692), PubMed: [7720651](http://www.uniprot.org/citations/7720651), PubMed: [22307324](http://www.uniprot.org/citations/22307324), PubMed: [8384600](http://www.uniprot.org/citations/8384600), PubMed: [21098034](http://www.uniprot.org/citations/21098034)). 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: [8653797](http://www.uniprot.org/citations/8653797), PubMed: [7595132](http://www.uniprot.org/citations/7595132), PubMed: [2825692](http://www.uniprot.org/citations/2825692), PubMed: [7720651](http://www.uniprot.org/citations/7720651), PubMed: [2532366](http://www.uniprot.org/citations/2532366), PubMed: [8087923](http://www.uniprot.org/citations/8087923)). 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: [22307324](http://www.uniprot.org/citations/22307324), PubMed: [18835931](http://www.uniprot.org/citations/18835931), PubMed: [21672517](http://www.uniprot.org/citations/21672517), PubMed: [15741263](http://www.uniprot.org/citations/15741263)). 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: [22307324](http://www.uniprot.org/citations/22307324), PubMed: [18835931](http://www.uniprot.org/citations/18835931), PubMed: [21672517](http://www.uniprot.org/citations/21672517), PubMed: [15741263](http://www.uniprot.org/citations/15741263)). 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:8351194, PubMed:8779891, PubMed:7955907, PubMed:8653797, PubMed:15741263, PubMed:18835931, PubMed:2532366, PubMed:7984506). 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:9794555, PubMed:8384600). Present in urine (at protein level) (PubMed:2972874, PubMed:9794555, PubMed:8351194, PubMed:8779891).

NPPA Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

NPPA Antibody (N-term) Blocking Peptide - Images

NPPA Antibody (N-term) Blocking Peptide - Background

NPPA belongs to the natriuretic peptide family. Natriuretic peptides are implicated in the control of extracellular fluid volume and electrolyte homeostasis. This protein is synthesized as a large precursor(containing a signal peptide), which is processed to release a peptide from the N-terminus with similarity to vasoactive peptide, cardiodilatin, and another peptide from the C-terminus with natriuretic-diuretic activity.

NPPA Antibody (N-term) Blocking Peptide - References

Watanabe,Y., et.al., Biochem. Mol. Med. 61 (1), 47-51 (1997)Suga,S., et.al., Endocrinology 130 (1), 229-239 (1992)