

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

Specification

NPPA Antibody (N-term) Blocking Peptide - Product Information

Primary 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, PubMed:7595132, PubMed:2825692, PubMed:7720651, PubMed:8087923, PubMed:2532366, PubMed:22307324, PubMed:>18835931, PubMed:>21672517, PubMed:>15741263, PubMed:>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, PubMed:>9893117, PubMed:>1672777, PubMed:>1660465, PubMed:>2162527, PubMed:>2825692, PubMed:>7720651, PubMed:>22307324, PubMed:>8384600, PubMed:>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, PubMed:>7595132, PubMed:>2825692, PubMed:>7720651, PubMed:>2532366, PubMed:>8087923). 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:>22307324, PubMed:>18835931, PubMed:>21672517, PubMed:>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, PubMed:>18835931, PubMed:>21672517, PubMed:>15741263). 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: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)