

ANP Antibody

Rabbit mAb

Catalog # AP91605

Product Information

Application	WB, IP
Primary Accession	P01160
Reactivity	Human
Clonality	Monoclonal
Other Names	ANF; ANP; PND; ATFB6; CDD-ANF; NPPA; Natriuretic peptides A; LANP; VSDL;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	16396

Additional Information

Dilution	WB 1:500~1:2000 IP 1:50
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.

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:[15741263](#), PubMed:[18835931](#), PubMed:[21672517](#), PubMed:[22307324](#)). Binds the clearance receptor NPR3 which removes the hormone from circulation (PubMed:[1672777](#)).

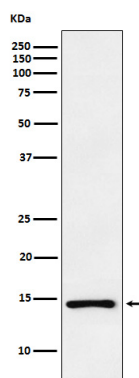
Cellular Location

[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](#)).

Images



Western blot analysis of ANP expression in PC3 cell lysate.

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