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# Anti-ANP NPPA Monoclonal Antibody

Catalog # ABO14570

## Product Information

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| **Application** | WB, IP |
| **Primary Accession** | P01160 |
| **Host** | Rabbit |
| **Isotype** | Rabbit IgG |
| **Reactivity** | Human |
| **Clonality** | Monoclonal |
| **Format** | Liquid |
| **Description** | Anti-ANP NPPA Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human. |

## Additional Information

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| **Gene ID** | 4878 |
| **Other Names** | Natriuretic peptides A, Atrial natriuretic factor prohormone, proANF, Atrial natriuretic peptide prohormone, preproANP, proANP, Atriopeptigen, Cardiodilatin, CDD, preproCDD-ANF, Long-acting natriuretic peptide, LANP, Long-acting natriuretic hormone, LANH, Pro atrial natriuretic factor 1-30, proANF 1-30, Pro atrial natriuretic peptide 1-30, proANP 1-30, Vessel dilator, VSDL, Pro atrial natriuretic factor 31-67, proANF 31-67, Pro atrial natriuretic peptide 31-67, proANP 31-67, Kaliuretic peptide, KP, Pro atrial natriuretic factor 79-98, proANF 79-98, Pro atrial natriuretic peptide 79-98, proANP 79-98, Urodilatin, URO, CDD 95-126, CDD-ANP (95-126), Pro atrial natriuretic peptide 95-126, proANP 95-126, Auriculin-C, Atrial natriuretic factor 1-33, NPPA, ANP, PND |
| **Calculated MW** | 16396 |
| **Application Details** | WB 1:500-1:2000<br>IP 1:50 |
| **Source** | Eukaryota |
| **Contents** | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA. |
| **Clone Names** | Clone: ADHD-14 |
| **Immunogen** | A synthesized peptide derived from human ANP 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. |
| **Purification** | Affinity-chromatography |

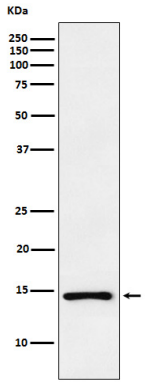
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| **Storage** | Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles. |

## Protein Information

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| **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: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} |

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| **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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