

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human Atrial Natriuretic Peptide/ANP in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) BNP, rhANF, and rhPTCH-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Atrial Natriuretic Peptide/ANP Asn26-Tyr151 Accession # P01160
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS
Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	3-15 µg/mL	See Below
Simple Western	10 µg/mL	See Below

DATA

Western Blot

Detection of Human Atrial Natriuretic Peptide/ANP by Western Blot. Western blot shows lysates of iBJ6 human induced pluripotent stem cell line untreated (-) or differentiated to cardiomyocytes (+). PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Atrial Natriuretic Peptide/ANP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3366) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Atrial Natriuretic Peptide/ANP at approximately 17 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry

Atrial Natriuretic Peptide/ANP in BG01V Human Embryonic Stem Cells. Atrial Natriuretic Peptide/ANP was detected in immersion fixed BG01V human embryonic stem cells differentiated to cardiomyocytes using Goat Anti-Human Atrial Natriuretic Peptide/ANP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3366) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Stem Cells on Coverslips](#).

Immunohistochemistry

Atrial Natriuretic Peptide/ANP in Human Prostate. Atrial Natriuretic Peptide/ANP was detected in immersion fixed paraffin-embedded sections of human prostate using Goat Anti-Human Atrial Natriuretic Peptide/ANP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3366) at 3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to stromal cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Simple Western

Detection of Human Atrial Natriuretic Peptide/ANP by Simple Western™. Simple Western lane view shows lysates of iBJ6 human induced pluripotent stem cell line untreated (-) or differentiated to cardiomyocytes (+), loaded at 0.2 mg/mL. A specific band was detected for Atrial Natriuretic Peptide/ANP at approximately 21 kDa (as indicated) using 10 µg/mL of Goat Anti-Human Atrial Natriuretic Peptide/ANP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3366) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

ANP (Atrial Natriuretic Peptide; also known as γ -ANP, CDP/cardiostatin-related peptide and CDD-ANF) is a secreted member of the natriuretic peptide family of molecules. It is expressed in multiple cell types, including atrial myocytes, macrophages and select hypothalamic neurons. The C-terminus of ANP (or ANF) is reported to have a wide range of activities. It is best known to promote sodium and water excretion, but is also known to inhibit aldosterone and vasopressin secretion, while promoting testosterone and LH release. Human (pro)ANP is synthesized as a 153 amino acid (aa) prepropeptide that contains a 25 aa signal sequence, cardiostatin-related peptide (aa 26-55), a prosequence (aa 56-123) and a C-terminal atrial natriuretic factor motif (aa 124-151) that may or may not be accompanied by a dibasic Arg fragment. Although multiple enzymes are reported to be active on proANP, transmembrane Corin would appear to be central to normal extracellular proteolytic processing and the generation of ANP. Notably, and depending upon the tissue, proANP can also be cleaved at alternate sites, including Ala120 and Arg126. There is at least one isoform variant that contains a 12 aa addition to the C-terminus of the propeptide, resulting in an ANP that is 40 aa in length. Over aa 26-151 (proANP), human proANP shares 84% aa sequence identity with mouse proANP.