

Rat natriuretic peptide precursor A ELISA Kit | NPPA elisa kit

Rat Atrial Natriuretic Peptide, ANP ELISA Kit

CATALOG #
AAA79463

REACTIVITY
Rat

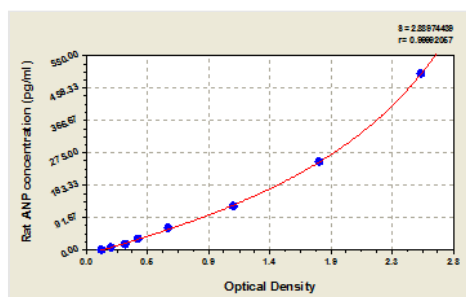
PRODUCT SYNONYMS

natriuretic peptide precursor A; Rat Atrial Natriuretic Peptide; ANP ELISA Kit; ANF; ANP; ATFB6; CDD-ANF; PND; atrial natriuretic factor; atriopeptin; cardionatrin; prepronatriodilatin; NPPA elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Rat
Specificity	This assay has high sensitivity and excellent specificity for detection of Rat NPPA. No significant cross-reactivity or interference between Rat NPPA and analogues was observed.
Sequence Length	153
Samples	Serum, plasma, cell culture supernates, tissue homogenates and Cell lysates
Detection Range	7.8 pg/ml-500 pg/ml
Sensitivity	1.95 pg/ml
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV% is less than 8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV% is less than 10% Three samples of known concentration were tested in twenty assays to assess.
Detection Wavelength	450 nm
Sample Volume	50-100ul
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for NPPA elisa kit

Introduction: Atrial natriuretic peptide (ANP), atrial natriuretic factor (ANF), or atriopeptin, is a polypeptide hormone involved in the homeostatic control of body water, sodium, and adiposity. It is released by atrial myocytes, muscle cells in the atria of the heart, in response to high blood pressure. ANP acts to reduce the water, sodium and adipose loads on the circulatory system, thereby reducing blood pressure. ANP is a 28 amino acid peptide with a 17 amino acid ring in the middle of the molecule. The ring is formed by a disulfide bond between two cysteine residues at positions 7 and 23. ANP is closely related to BNP (brain natriuretic peptide) and CNP (C-type natriuretic peptide) which all share the same amino acid ring. ANP was discovered in 1981 by a team in Ottawa led by Adolfo J. de Bold after they made the seminal observation that injection of atrial (but not ventricular) tissue extracts into rats caused copious natriuresis. ANP is produced, stored and released by atrial myocytes, 3 muscle cells in the atria of the heart. It is released in response to a variety of signals induced by hypervolaemia, exercise or caloric restriction. The hormone is constitutively expressed in the ventricle in response to stress induced by increased afterload (eg. increased ventricular pressure from aortic stenosis) or injury (eg. myocardial infarction). Neutral endopeptidase (NEP) is the enzyme that metabolizes natriuretic peptides. Several inhibitors of NEP are currently being developed to treat disorders ranging from hypertension to heart failure. Most of them are dual inhibitors. Omapatrilat (dual inhibitor of NEP and Angiotensin Converting Enzyme) developed by BMS did not receive FDA approval due to angioedema safety concerns. Other dual inhibitors of NEP with ACE / angiotensin receptor are currently being developed by pharmaceutical companies.

Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to ANP. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific for ANP and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain ANP, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of ANP in the samples is then determined by comparing the O.D. of the samples to the standard curve.

NCBI AND UNIPROT INFORMATION

NCBI GI #	126723777
NCBI GeneID	100009087
NCBI Accession #	NP_001075731.1
NCBI GenBank Nucleotide #	NM_001082262.1
UniProt Accession #	P07500
Molecular Weight	16,843 Da
NCBI Official Full Name	natriuretic peptides A
NCBI Official Symbol	NPPA
NCBI Protein Information	natriuretic peptides A; ANF; ANP; prepronatriodilatin; atrial natriuretic factor; atrial natriuretic peptide; natriuretic peptide precursor A
UniProt Protein Name	Natriuretic peptides A
UniProt Gene Name	NPPA
UniProt Synonym Gene Names	ANF; ANP
UniProt Entry Name	ANF_RABIT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.