

Rat NT-ProANP ELISA Kit ab267803

Recombinant SimpleStep ELISA[®]

6 Images

Overview

Product name	Rat NT-ProANP ELISA Kit				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Plasma	8			3.2%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	Plasma	3			4.1%
Sample type	Cell culture supernatant, Serum, Cell culture media, Hep Plasma, EDTA Plasma, Cit plasma				
Assay type	Sandwich (quantitative)				
Sensitivity	32.2 pg/ml				
Range	62.5 pg/ml - 4000 pg/ml				
Recovery	Sample specific recovery				
	Sample type		Average %	Range	
	Cell culture supernatant		107	103% - 112%	
	Serum		84	80% - 89%	
	Cell culture media		104	99% - 106%	
	Hep Plasma		100	80% - 112%	
	EDTA Plasma		97	82% - 106%	
	Cit plasma		102	86% - 115%	

Assay time	1h 30m
Assay duration	One step assay
Species reactivity	Reacts with: Rat
Product overview	Rat NT-ProANP ELISA Kit (ab267803) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of NT-ProANP protein in cell culture supernatant, edta plasma, hep plasma, serum, cit plasma, and cell culture media. It uses our proprietary SimpleStep ELISA® technology. Quantitate Rat NT-ProANP with 32.2 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Notes	Rat NT-ProANP is the propeptide portion of the 129 amino acids long Atrial Natriuretic Peptide (ANP) preproprotein. ANP is primarily synthesized in the heart and is secreted in response to atrial distention. The ANP proprotein is cleaved by serine protease corin to produce the functional hormone, atrial natriuretic factor (ANF). ANF circulates in plasma; it is involved in cardiovascular homeostasis through the regulation of natriuresis, diuresis, and vasodilation directed toward reduction of body fluid and blood pressure regulation. NT-ProANP circulates at low levels at the early stages of hypertension and increases during chronic heart failure. Rat NT-ProANP is 94% identical to mouse NT-ProANP on amino acid level. This kit recognizes rat NT-ProANP protein (amino acids 25 – 122 of Uniprot # P01161). This kit does not recognize rat ANP proprotein (amino acids 25 – 152 of Uniprot # P01161).
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Platform	Pre-coated microplate (12 x 8 well strips)
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Properties

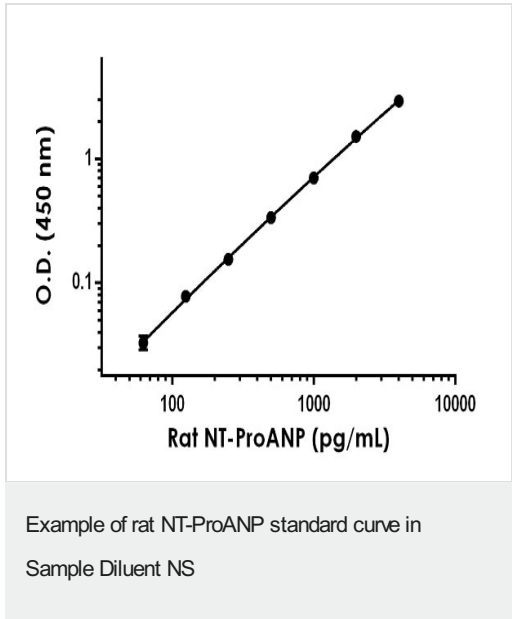
Storage instructions	Store at +4°C. Please refer to protocols.
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Components	1 x 96 tests
10X Rat NT-ProANP Capture Antibody	1 x 600µl
10X Rat NT-ProANP Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BR	1 x 6ml

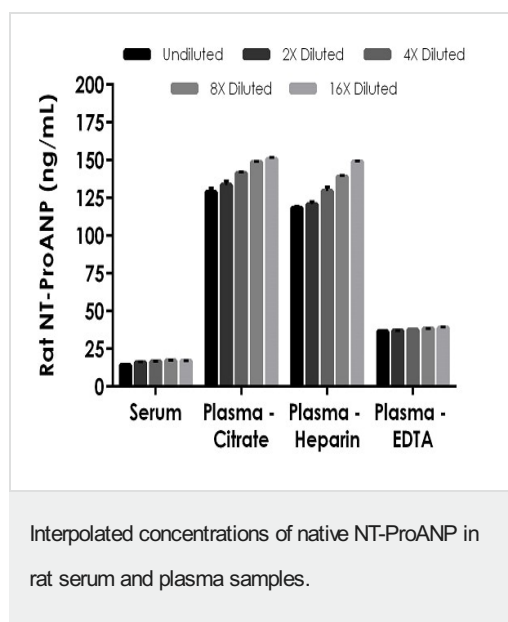
Components	1 x 96 tests
Plate Seals	1 unit
Rat NT-ProANP Lyophilized Recombinant Protein	2 vials
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function	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. Specifically binds and stimulates the cGMP production of the NPR1 receptor. Binds the clearance receptor NPR3.
Involvement in disease	Atrial standstill 2 Atrial fibrillation, familial, 6
Sequence similarities	Belongs to the natriuretic peptide family.
Post-translational modifications	Cleaved by CORIN upon secretion to produce the functional hormone. Atrial natriuretic factor: Cleaved by MME. The cleavage initiates degradation of the factor and thereby regulate its activity.
Cellular localization	Secreted.

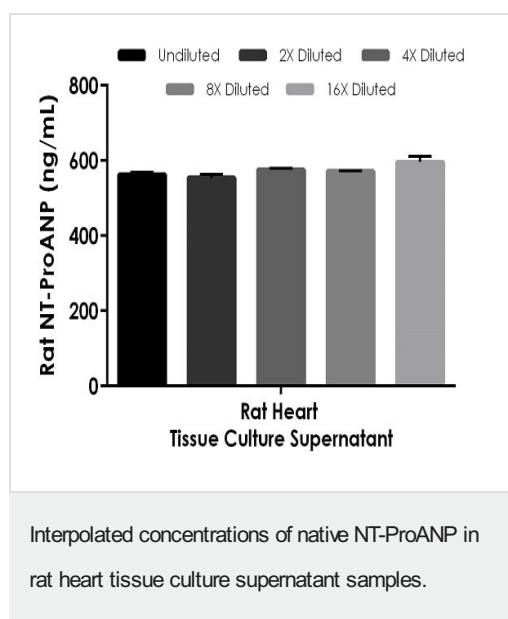
Images



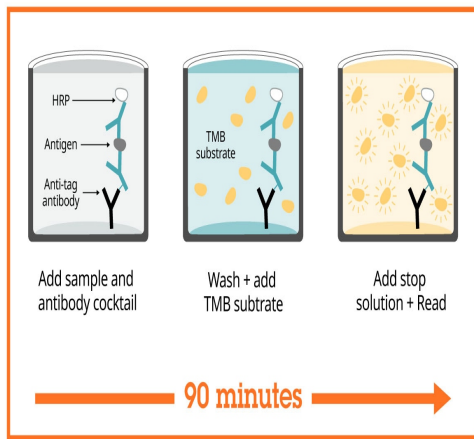
The NT-ProANP standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



The concentrations of NT-ProANP were measured in duplicates, interpolated from the NT-ProANP standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 10%, plasma (citrate) 2.5%, plasma (heparin) 2% and plasma (EDTA) 10%. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean NT-ProANP concentration was determined to be 16.26 ng/mL in neat serum, 140.7 ng/mL in neat plasma (citrate), 131.4 ng/mL in neat plasma (heparin), and 37.69 ng/mL in neat plasma (EDTA).



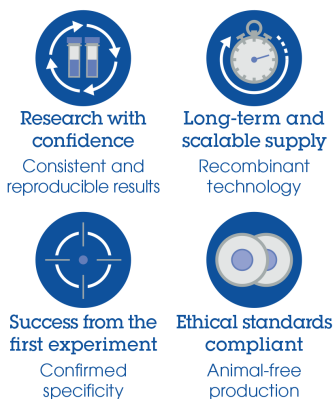
The concentrations of NT-ProANP were measured in duplicates, interpolated from the NT-ProANP standard curves and corrected for sample dilution. Undiluted samples are as follows: rat heart tissue culture supernatant 0.5%. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean NT-ProANP concentration was determined to be 572.2 ng/mL in neat rat heart tissue culture supernatant.



Sandwich ELISA - Rat NT-ProANP ELISA Kit
(ab267803)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Powered by
recombinant antibodies



Sandwich ELISA - Rat NT-ProANP ELISA Kit
(ab267803)

To learn more about the advantages of recombinant antibodies see [here](#).

Get more done with
SimpleStep ELISA



Sandwich ELISA - Rat NT-ProANP ELISA Kit
(ab267803)

To learn more about the advantages of SimpleStep ELISA[®] kits see [here](#).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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