Natriuretic Peptides A Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: N-terminal proatrial natriuretic peptide

Cat. No.:
RD172485100 (0.1 mg)

Description

Total 106 AA. MW: 11.7 kDa (calculated). UniProtKB acc. No. P01160 (Asn26-Arg123). N-terminal His-tag (8 extra AA). Protein identity confirmed by LC-MS/MS.

Introduction to the Molecule

NT-pro ANP (N-terminal proatrial natriuretic peptide) means N-terminal polypeptide of ANP (atrial natriuretic peptide) precursor. In rough microsome of atrial cells prepro ANP with 149 amino acid residues is first produced, and its signal peptide (23 amino acids) is cut off in Golgi apparatus leaving pro ANP of 126 amino acids, which is stored in secretory granules. Before secretion, N-terminal peptide of 98 amino acids (NT-pro ANP) and C-terminal peptide of 28 amino acids (ANP) are separated. ANP is secreted from the atrium with the stimulation of atrial expansion owing to the increased blood volume and/or increase in intra-atrial pressure. ANP is a ring-shaped peptide, the main targets of which are kidney and blood vessels, and causes potent natriuresis, blood vessel expansion, to lower blood pressure. ANP forms natriuretic peptide family with BNP (B-type Natriuretic peptide) and CNP (C-type Natriuretic peptide). Plasma ANP very rapidly disappears owing to binding with its receptor and so-called clearance receptor (half-life about 100seconds in canine), making its exact measurement difficult. On the other hand, NT-pro ANP, because it does not bind clearance receptor, has a long half life (60-120mins in man), and serves as an excellent marker of ANP secretion. The measurement of NT-pro ANP is expected to be useful in the examination of heart diseases in dogs

Research topic

Cardiovascular disease

Amino Acid Sequence

MKHHHHHHNP MYNAVSNADL MDFKNLLDHL EEKMPLEDEV VPPQVLSEPN EEAGAALSPL PEVPPWTGEV SPAQRDGGAL GRGPWDSSDR SALLKSKLRA LLTAPR

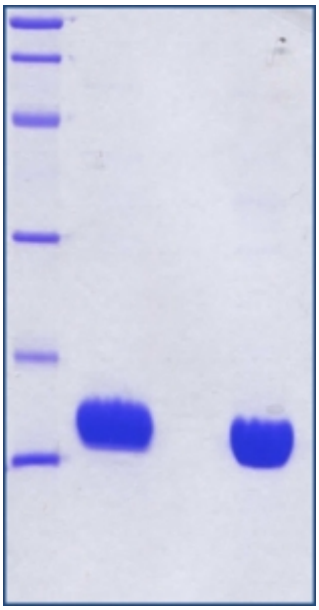
Source

E. coli

Purity

Purity as determined by densitometric image analysis: > 95 %

SDS-PAGE gel



14 % SDS-PAGE separation of Human NT-ANP:

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. Reduced and boiled sample, 2.5 µg/lane

3. Non-reduced and non-boiled sample, 2.5 µg/lane

Endotoxin

< 1.0 EU/µg

Formulation

Filtered (0.4 µm) and lyophilized from 0.5 mg/ml solution in 20 mM Tris buffer, 50 mM NaCl,5%w/v trehalose, pH 7.5.

Reconstitution

Add 200 µl of deionized water to prepare a working stock solution of approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store the lyophilized protein at -80 °C. Lyophilized protein remains stable until the expiry date when stored at -80 °C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80 °C for long term storage. Reconstituted protein can be stored at 4 °C for a week.

Quality Control Test

BCA to determine quantity of the protein.
SDS-PAGE to determine purity of the protein.
LAL TEST to determine endotoxin level.

Applications

ELISA, Western blotting

Note

This product is intended for research use only.

HEADQUARTERS: BioVendor Laboratorní medicína, a.s.	Karasek 1767/1	621 00 Brno CZECH REPUBLIC	Phone: +420-549-124-185 Fax: +420-549-211-460	E-mail: Web:	info@biovendor.com sales@biovendor.com www.biovendor.com
AUSTRIA: BioVendor GesmbH	Nußdorfer Straße 20/10	1090 Vienna AUSTRIA	Phone: +43-1-89090-25 Fax: +43-1-89090-2515	E-mail:	infoAustria@biovendor.com
GERMANY, SWITZERLAND: BioVendor GmbH	Otto-Hahn-Straße 16	34123 Kassel GERMANY	Phone: +49-6221-433-9100 Fax: +49-6221-433-9111	E-mail:	infoEU@biovendor.com
USA, CANADA AND MEXICO: BioVendor LLC	128 Bingham Rd. Suite 1300	Asheville, NC 28806 USA	Phone: +1-828-575-9250 +1-800-404-7807 Fax: +1-828-575-9251	E-mail:	infoUSA@biovendor.com