Brain Natriuretic Peptide-45, rat

Cat. No.:	HY-P1573
CAS No.:	123337-89-3
Molecular Formula:	$C_{213}H_{349}N_{71}O_{65}S_3$
Molecular Weight:	5040.67
Sequence:	Ser-Gln-Asp-Ser-Ala-Phe-Arg-Ile-Gln-Glu-Arg-Leu-Arg-Asn-Ser-Lys-Met-Ala-His-Ser-Ser-Ser-Cys-Phe-Gly-Gln-Lys-Ile-Asp-Arg-Ile-Gly-Ala-Val-Ser-Arg-Leu-Gly-Cys-Asp-Gly-Leu-Arg-Leu-Phe (Disulfide bridge: Cys23-Cys39)
Sequence Shortening:	SQDSAFRIQERLRNSKMAHSSSCFGQKIDRIGAVSRLGCDGLRLF (Disulfide bridge: Cys23-Cys39)
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Brain Natriuretic Peptide-45, rat (BNP-45, rat) is a circulating form of rat brain natriuretic peptide isolated from rat heart with potent hypotensive and natriuretic potency[1].
In Vivo	Brain Natriuretic Peptide-45, rat (BNP-45, rat; 0.1, 0.2, 0.5, 1.0 and 2.0 nmol/kg, i.v.) shows potent natriuretic and hypotensive activities in anesthetized spontaneously hypertensive rats (SHR) and Wistar-Kyoto rats (WKY). Brain Natriuretic Peptide-45, rat with high concentration decreases blood pressure in SHR. But WKY is more susceptible than SHR to BNP-45 for diuresis, natriuresis and urinary cGMP excretion. In addition, high dose of Brain Natriuretic Peptide-45, rat cuases prolonged lowering of blood pressure and urinary cGMP excretion in WKY[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Rats[1] Male anesthetized spontaneously hypertensive rats (SHR) and Wistar-Kyoto rats (WKY) (20- to 25 week-old) are used in the assay. Isotonic saline (20 μL/min) is infused throughout the esperiment. After equilibration for at least 60 min, urine is collected every 10 min during a 20-min control period. Rat BNP-45 or rat α-ANP (0.1, O.2, 0.5, 1.0 and 2.0 nmol/kg) dissolved in saline containing 1% bacitracin is injected i.v., and urine is collected continuously for three to six 10-min periods following each dose. There is a 30- to 60-min rest interval between each injection, to allow the urine volume to return to a steady baseline value. Urine volume is determined by weight. Urinary sodium and potassium are measured by flame photometry. The concentration of cGMP in urine is measured by radioimmunoassay, using cGMP assay kit[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kita T, et al. Effects of brain natriuretic peptide-45, a circulating form of rat brain natriuretic peptide, in spontaneously hypertensive rats. Eur J Pharmacol. 1991 Sep 4;202(1):73-9.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA