Product Data Sheet

Product Name: BNP-45 rat (Brain natriuretic peptide-45 rat)
Cat. No.: GC32612

Chemical Properties

Cas. No.	123337-89-3		
SMILES	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)		
Formula	$C_{213}H_{349}N_{71}O_{65}S_3$	M.Wt	5040.67
Solubility	Soluble in Water	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Protocol

Animal experiment:

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].

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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.

Background

BNP-45 (rat), a 45-amino acid brain natriurctic peptide isolated from rat heart, is a circulating hormone, with natriuretic andhypotensive activities.

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BNP-45 (rat) (0.1, O.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). BNP-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 BNP-45 (rat) cuases prolonged lowering of blood pressure and urinary cGMP excretion in WKY[1].

[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

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