Bradykinin (2-9)

Cat. No.: HY-P1490

CAS No.: 16875-11-9

Molecular Formula: $C_{44}H_{61}N_{11}O_{10}$

Molecular Weight: 904.02

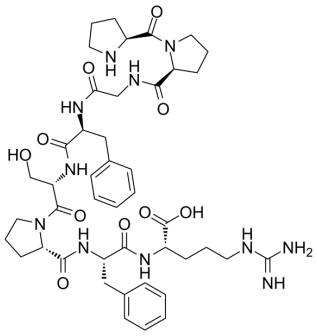
Sequence: Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg

Sequence Shortening: PPGFSPFR

Target: Bradykinin Receptor

Pathway: GPCR/G Protein

Storage: Sealed storage, away from moisture
Powder -80°C 2 years
-20°C 1 year
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (110.62 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1062 mL	5.5309 mL	11.0617 mL
	5 mM	0.2212 mL	1.1062 mL	2.2123 mL
	10 mM	0.1106 mL	0.5531 mL	1.1062 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.77 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.77 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.77 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Bradykinin (2-9) is an amino-truncated Bradykinin peptide. Bradykinin (2-9) is a metabolite of Bradykinin, cleaved by Aminopeptidase P.

In Vitro

The Bradykinin peptide system is a tissue-based system with potent cardiovascular and renal effects. To investigate the regulation of this system, a highly sensitive amino terminal-directed radioimmunoassay that, with high performance liquid

chromatography, enables the measurement of Bradykinin-(1-7), Bradykinin-(1-8), and Bradykinin-(1-9), is developed. Together with a carboxy terminal-directed radioimmunoassay, Bradykinin peptides in rat kidney and blood are characterized. The predominant Bradykinin peptides in kidney are Bradykinin-(1-9) (~100 fmol/g wet weight of tissue) and Bradykinin-(1-7) (~70 fmol/g), with low levels of Bradykinin-(1-8) (~8 fmol/g) and Bradykinin-(4-9) (~12 fmol/g) detectable; Bradykinin-(2-9) and Bradykinin-(3-9) are below the limits of detection. In blood, the levels of Bradykinin-(1-9) are very low (~2 fmol/ml), and other Bradykinin peptides are below the limits ofdetection. Administration of the angiotensin converting enzyme (ACE) inhibitor Perindopril is associated with an approximate twofold increase in renal levels of Bradykinin-(1-8) and Bradykinin-(1-9) and a decrease in the Bradykinin-(1-7)/Bradykinin-(1-9) ratio. The amino terminal-directed radioimmunoassay is also applied to heart, aorta, brown adipose tissue, adrenal, lung, and brain. For these tissues, Bradykinin-(1-7) and Bradykinin-(1-9) are of similar abundance (16-340 fmol/g), with lower levels of Bradykinin-(1-8)[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Campbell DJ, et al. Bradykinin peptides in kidney, blood, and other tissues of the rat. Hypertension. 1993 Feb;21(2):155-65.

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