[Pyr1]-Apelin-13

Cat. No.: HY-P1033

CAS No.: 217082-60-5

Molecular Formula: $C_{69}H_{108}N_{22}O_{16}S$

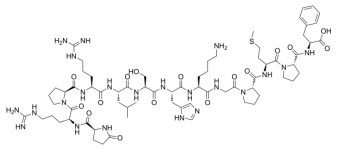
Molecular Weight: 1533.8

Sequence Shortening: {Glp}-RPRLSHKGPMPF

Target: Apelin Receptor (APJ)

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

H_2O : 100 mg/mL (65.20 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	0.6520 mL	3.2599 mL	6.5198 mL
	5 mM	0.1304 mL	0.6520 mL	1.3040 mL
	10 mM	0.0652 mL	0.3260 mL	0.6520 mL

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

In Vivo

1. Add each solvent one by one: PBS
Solubility: 100 mg/mL (65.20 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

[Pyr1]-Apelin-13 is a highly potent, selective endogenous apelin receptor (APJ) agonist.

In Vitro

[Pyr1]-apelin-13 encapsulation in lipoPEG particles (lipoPEG-PA13) results in sustained and extended drug release under physiological conditions[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

[Pyr1]-apelin-13 nanocarriers in a mouse model of pressure-overload induced heart failure demonstrate a sustainable long-term effect of [Pyr1]-apelin-13 in preventing cardiac dysfunction[1]. [Pyr1] apelin-13 (1, 5 μg) improves locomotor activity and reduces pain symptoms, cavity size and caspase-3 levels in rats. [Pyr1] apelin-13 (1, 5 μg) significantly increases thermal paw withdrawal latency. [Pyr1] apelin-13 in 5 μg dose also produces significant attenuation in paw withdrawal threshold compared to SCI animals from the second week post SCI[2].

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

CUSTOMER VALIDATION

- Research Square Print. 2023 Jan 23.

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REFERENCES

[1]. Serpooshan V, et al. [Pyr1]-Apelin-13 delivery via nano-liposomal encapsulation attenuates pressure overload-induced cardiac dysfunction. Biomaterials. 2015 Jan;37:289-98.

[2]. Hajimashhadi Z, et al. Chronic administration of [Pyr1] apelin-13 attenuates neuropathic pain after compression spinal cord injury in rats. Neuropeptides. 2017 Feb;61:15-22.

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