Cortistatin 29

Cat. No.: HY-P3618

Molecular Formula: $C_{161}H_{242}N_{46}O_{41}S_2$

Molecular Weight: 3539.77

Sequence Shortening: {Glp}-ERPPLQQPPHRDKKPCKNFFWKTFSSCK

{Glp}-ERPPLQQPPHRDKKPCKNFFWKTFSSCK

Target: Somatostatin Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Sealed storage, away from moisture and light

Powder -80°C 2 years

-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)

SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (28.25 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	0.2825 mL	1.4125 mL	2.8250 mL
5 mM	0.0565 mL	0.2825 mL	0.5650 mL
10 mM	0.0283 mL	0.1413 mL	0.2825 mL

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

BIOLOGICAL ACTIVITY

Description

Cortistatin 29 is a neuropeptide. Cortistatin 29 alleviates neuropathic pain. Cortistatin 29 binds with high affinity all somatostatin (SS) receptor subtypes and shows IC_{50} values of 2.8, 7.1, 0.2, 3.0, 13.7 nM for SSTR1, SSTR2, SSTR3, SSTR4, SSTR5, respectively. Cortistatin 29 shows anti-fibrotic effects[1][2][3][4].

IC_{50} & Target

SSTR1	SSTR2	SSTR3	SSTR4
2.8 nM (IC_{50})	7.1 nM (IC_{50})	0.2 nM (IC_{50})	3.0 nM (IC_{50})

SSTR5

13.7 nM (IC_{50})

In Vivo

Cortistatin 29 (1-2 μg) alleviates chronic neuropathic pain in mouse[1].

Cortistatin 29 (1 nmol/mouse; i.p.; three times weekly) shows anti-fibrotic effects in mouse[4].

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

Animal Model:	20-24 g body weight, 8-12 weeks-old mice[1]
Dosage:	1 μg in 20 μL for s.c.; 2 μg in 200 μL for i.p.; 20 ng in 10 μL for i.t.
Administration:	Every other day for 12 days
Result:	Ameliorated hyperalgesia and allodynia, regulated the nerve damageinduced hypersensitization of primary nociceptors, inhibited neuroinflammatory responses, and enhanced the production of neurotrophic factors both at the peripheral and central levels.

Animal Model:	20-24g body weight, 8-10 weeks-old C57BL/6 mice (CST+/+, CST+/- and CST-/- mice)[4].
Dosage:	1 nmol/mouse
Administration:	I.p., three times weekly from 5 or 14 days
Result:	Reversed in vivo and in vitro these exaggerated fibrogenic phenotypes and protected from progression to severe liver fibrosis in response to hepatic injury.

REFERENCES

[1]. Falo CP, et al. The Neuropeptide Cortistatin Alleviates Neuropathic Pain in Experimental Models of Peripheral Nerve Injury. Pharmaceutics. 2021 Jun 24;13(7):947.

[2]. Baranowska B, et al. Direct effect of cortistatin on GH release from cultured pituitary cells in the rat. Neuro Endocrinol Lett. 2006 Feb-Apr;27(1-2):153-6.

[3]. Spier AD, et al. Cortistatin: a member of the somatostatin neuropeptide family with distinct physiological functions. Brain Res Brain Res Rev. 2000 Sep;33(2-3):228-41.

[4]. Benitez R, et al. Cortistatin regulates fibrosis and myofibroblast activation in experimental hepatotoxic- and cholestatic-induced liver injury. Br J Pharmacol. 2022 May;179(10):2275-2296.

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