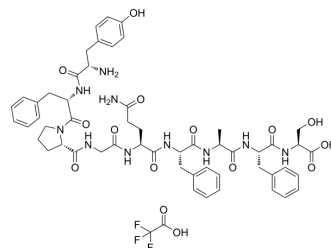


Chemerin-9 (149-157) (TFA)

Cat. No.:	HY-P1844A
Molecular Formula:	C ₅₆ H ₆₇ F ₃ N ₁₀ O ₁₅
Molecular Weight:	1177.18
Sequence Shortening:	YFPGQFAFS
Target:	Akt; ERK; Reactive Oxygen Species; Amyloid-β; Chemerin Receptor
Pathway:	PI3K/Akt/mTOR; MAPK/ERK Pathway; Stem Cell/Wnt; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Neuronal Signaling; 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

H₂O : 100 mg/mL (84.95 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		0.8495 mL	4.2474 mL	8.4949 mL
	5 mM		0.1699 mL	0.8495 mL	1.6990 mL
	10 mM		0.0849 mL	0.4247 mL	0.8495 mL

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

BIOLOGICAL ACTIVITY

Description

Chemerin-9 (149-157) TFA is a potent agonist of chemokine-like receptor 1 (CMKLR1). Chemerin-9 (149-157) TFA has anti-inflammatory activity. Chemerin-9 (149-157) TFA stimulates phosphorylation of Akt and ERK as well as ROS production. Chemerin-9 (149-157) TFA ameliorates Aβ₁₋₄₂-induced memory impairment. Chemerin-9 (149-157) TFA regulates immune responses, adipocyte differentiation, and glucose metabolism^{[1][2][3][4]}.

In Vitro

Chemerin-9 (149-157) TFA (0.1 nM; 24 h; cardiac fibroblasts) stimulates migration in cardiac fibroblasts and stimulates phosphorylation of Akt and ERK as well as ROS production^[4].

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

Western Blot Analysis^[4]

Cell Line:	Cardiac fibroblasts
Concentration:	0.1 nM

Incubation Time:	24 hours
Result:	Stimulated phosphorylation of Akt and ERK.

In Vivo

Chemerin-9 (149-157) TFA (0.2 mg/kg; i.p.; daily, for 42 days) alleviates glucose intolerance and IR in PDM mice^[1].
 Chemerin-9 (149-157) TFA (7.7 µg /kg; i.h.; daily, for 28 days) has anti-inflammatory and anti-angiogenic effects in ApoE^{-/-} mice and protects the abdominal aorta from MMP damage^[2].
 Chemerin-9 (149-157) TFA (8 µg/kg; ICV; daily; for 14 d; male Kunming mice) ameliorates Aβ₁₋₄₂-induced memory impairment^[3].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	PDM mice ^[1]
Dosage:	0.2 mg/kg
Administration:	Intraperitoneal injection; daily, for 42 days
Result:	Increased expression of chemerin, GLUT2, and PDX1, which led to the alleviation of glucose intolerance and IR in PDM model mice.

Animal Model:	ApoE ^{-/-} mice ^[2]
Dosage:	7.7 µg /kg
Administration:	Subcutaneous injection; daily, for 28 days
Result:	Suppressed the enlargement of abdominal aorta and reversed the SMC loss.

Animal Model:	ApoE ^{-/-} mice ^[2]
Dosage:	7.7 µg /kg
Administration:	Subcutaneous injection; daily, for 28 days
Result:	Down-regulated MMP2 and MMP-9 expression and decreased the levels of chemerin and CMKLR1.

Animal Model:	Male Kunming mice ^[3]
Dosage:	8 µg/kg
Administration:	Intracerebroventricular injection; daily; for 14 days
Result:	Increased in the levels of pro-inflammatory cytokines such as interleukin-1β (IL-1β), tumor necrosis factor (TNF-α) and interleukin-6 (IL-6) in the hippocampus.

CUSTOMER VALIDATION

- Eur J Pharmacol. 2022 Oct 25;175343.

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REFERENCES

- [1]. Tu J, et, al. Regulatory effect of chemerin and therapeutic efficacy of chemerin 9 in pancreatogenic diabetes mellitus. Mol Med Rep. 2020 Mar;21(3):981-988.
- [2]. Chen S, et, al. Chemerin-9 Attenuates Experimental Abdominal Aortic Aneurysm Formation in ApoE^{-/-} Mice. J Oncol. 2021 Apr 17;2021:6629204.
- [3]. Lei Z, et, al. Chemerin-9 Peptide Enhances Memory and Ameliorates A β 1-42-Induced Object Memory Impairment in Mice. Biol Pharm Bull. 2020 Feb 1;43(2):272-283.
- [4]. Yamamoto A, et, al. Chemerin-9 stimulates migration in rat cardiac fibroblasts in vitro. Eur J Pharmacol. 2021 Dec 5;912:174566.
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Caution: Product has not been fully validated for medical applications. For research use only.

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