

COG 133 TFA

Cat. No.:	HY-P1050A		
Molecular Formula:	C ₉₉ H ₁₈₂ F ₃ N ₃₇ O ₂₁		
Molecular Weight:	2283.78		
Sequence:	Ac-Leu-Arg-Val-Arg-Leu-Ala-Ser-His-Leu-Arg-Lys-Leu-Arg-Lys-Arg-Leu-Leu-NH ₂	Ac-LRVRLASHLRKLRKRL-NH ₂ (TFA salt)	
Sequence Shortening:	Ac-LRVRLASHLRKLRKRL-NH ₂		
Target:	nAChR		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling		
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 ₂ O : 25 mg/mL (10.95 mM); Need ultrasonic					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		0.4379 mL	2.1894 mL	4.3787 mL
		5 mM		0.0876 mL	0.4379 mL	0.8757 mL
	10 mM		0.0438 mL	0.2189 mL	0.4379 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 (43.79 mM); Clear solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	COG 133 TFA is a fragment of Apolipoprotein E (APOE) peptide. COG 133 TFA competes with the ApoE holoprotein for binding the LDL receptor, with potent anti-inflammatory and neuroprotective effects. COG 133 TFA is also a nAChR antagonist with an IC ₅₀ of 445 nM ^{[1][2]} .
IC₅₀ & Target	IC ₅₀ : 445 nM (nAChR) ^[2]
In Vivo	COG 133 (1 mg/kg; intratracheal administration; every other day; for 4 weeks) treatment impairs the resolution of pulmonary fibrosis in mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male C57BL/6 mice (6-week-old) instilled with Bleomycin ^[3]
Dosage:	1 mg/kg
Administration:	Intratracheal administration; every other day; for 4 weeks
Result:	Did blunt the resolution of lung fibrosis.

REFERENCES

- [1]. Orleânco Gomes R Azevedo, et al. Apolipoprotein E COG 133 mimetic peptide improves 5-fluorouracil-induced intestinal mucositis. BMC Gastroenterol. 2012 Jul 13;12:35.
- [2]. Elaine A Gay, et al. Apolipoprotein E-derived peptides block alpha7 neuronal nicotinic acetylcholine receptors expressed in xenopus oocytes. J Pharmacol Exp Ther. 2006 Feb;316(2):835-42.
- [3]. Huachun Cui, et al. Monocyte-derived alveolar macrophage apolipoprotein E participates in pulmonary fibrosis resolution. JCI Insight. 2020 Mar 12;5(5):e134539.
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Caution: Product has not been fully validated for medical applications. For research use only.

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